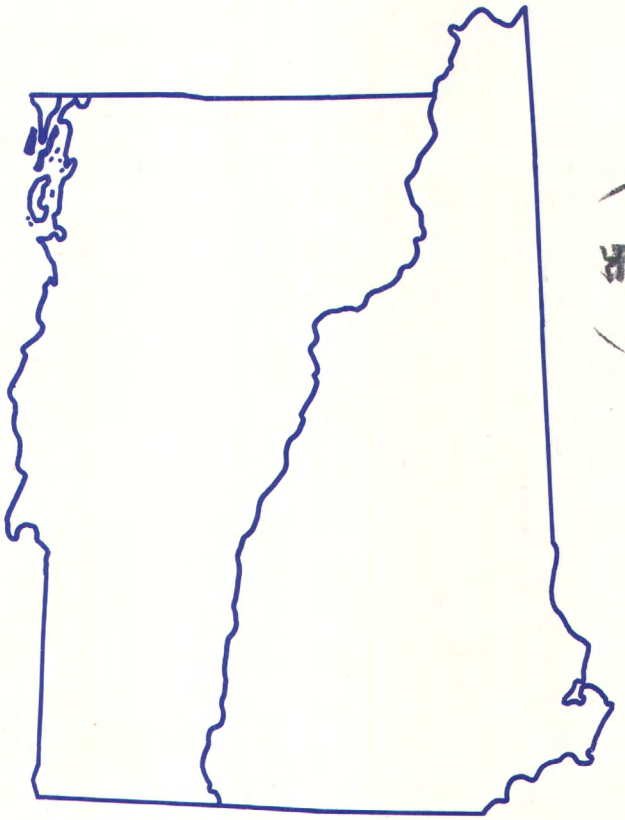
Water Resources Data New Hampshire and Vermont Water Year 1981



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-81-1
Prepared in cooperation with the States of New Hampshire and Vermont and with other agencies

CALENDAR FOR WATER YEAR 1981

1980

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
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NOVEMBER

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1981

JANUARY

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APRIL

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31						

JUNE

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JULY

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AUGUST

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23	24	25	26	27	28	29
30	31					

SEPTEMBER

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20	21	22	23	24	25	26
27	28	29	30			

Water Resources Data New Hampshire and Vermont Water Year 1981

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-81-1

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

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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Boston, MA 02114

1982

PREFACE

This report was prepared by personnel of the New England District of the Water Resources Division of the U. S. Geological Survey in cooperation with the States of New Hampshire and Vermont, and with other agencies. District personnel directly responsible for the collection, evaluation, and compilation of the data contained herein are: F. E. Blackey, M. F. Coakley, J. E. Cotton, N. E. Kelso, J. E. King, K. E. McKenna, S. C. Shore, K. B. Smith, K. W. Toppin, and B. T. White. This report is one of a series issued by State.

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15. Supplementary Notes

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

16. Abstract (Limit: 200 words)

Water-resources data for the 1981 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 75 gaging stations, stage records for 3 lakes, monthend contents for 25 lakes and reservoirs, water-quality data for 4 gaging stations, and water levels for 30 observation wells. 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. Document Analysis a. Descriptors

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

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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, 1981

INTRODUCTION

Water-resources data for the 1981 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 75 gaging stations, stage records for 3 lakes, monthend contents for 25 lakes and reservoirs, water-quality data for 4 gaging stations, and water levels for 30 observation wells. 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 collected 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 Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

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-81-1." 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 1981 are:

New Hampshire: State Water Resources Board, G. M. McGee, Sr., chairman, succeeded by D. F. Downing.

Vermont: State Department of Water Resources, J. P. Ponsetto, commissioner; town of Springfield, M. J. Valuk, town manager.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 43 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."

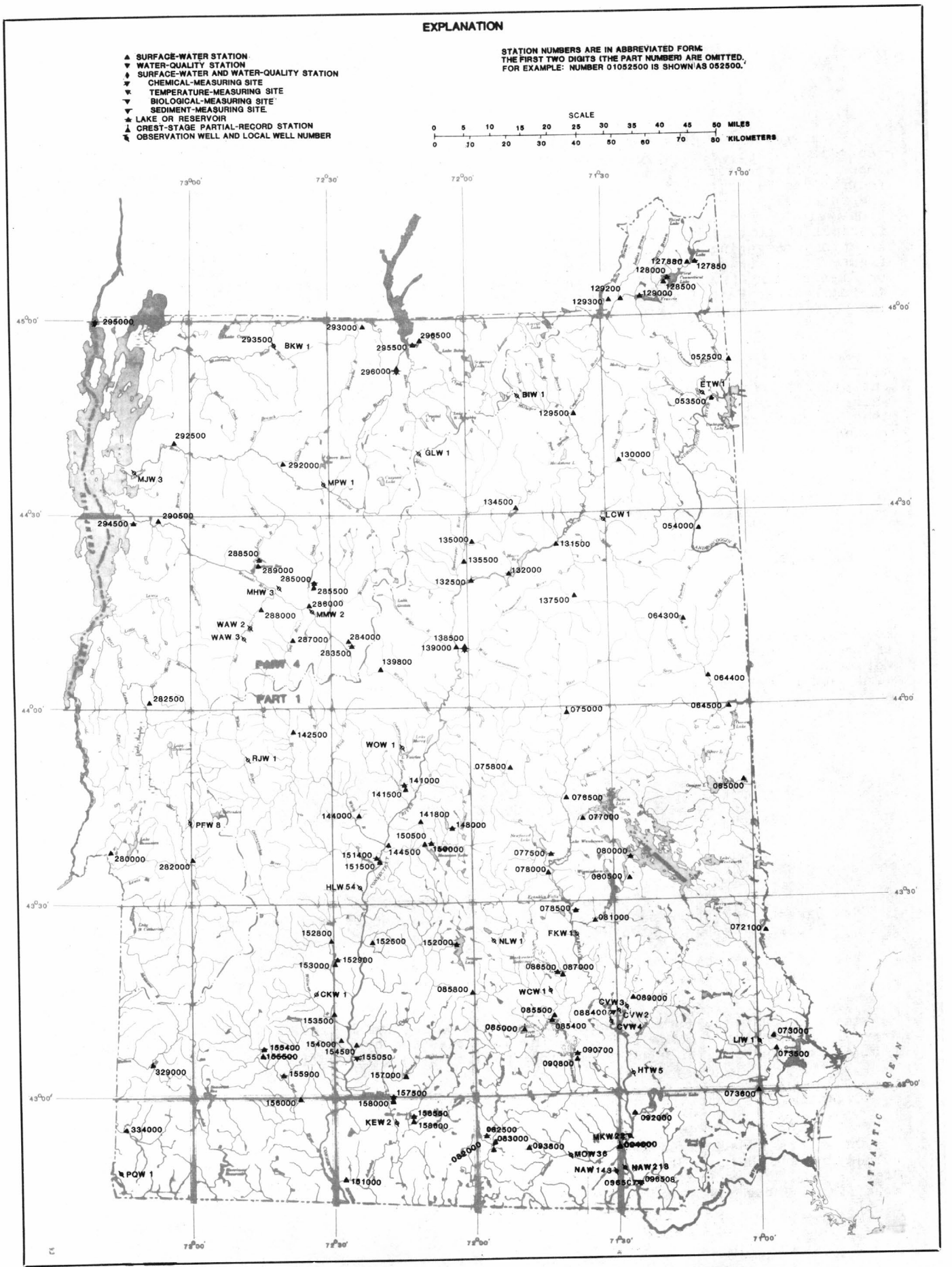

FIGURE 1. LOCATION OF DATA-COLLECTION SITES

SUMMARY OF HYDROLOGIC CONDITIONS

Early in the 1981 water year, the northern fringe of the drought-affected area of the eastern coastal States covered New Hampshire and Vermont. In midwinter, deficient precipitation caused the two States to be considered within the potential drought area. Above average precipitation in February and near average precipitation the rest of the water year resulted in normal or above normal surface-water and ground-water conditions at the end of the water year, and the two States were no longer considered to be affected by drought. Summaries of surface-water and water-quality conditions in both States and of ground-water conditions in Vermont follow.

Surface-Water Conditions

The 1981 water year began with normal runoff throughout the two States. Runoff was normal during most of the water year, only four months had other than normal runoff. January and April were in the deficient range. The deficient runoff in January was followed by runoff in February that was 851 percent of median at the index station in central New Hampshire. Excessive runoff caused ice jams and minor flooding. Runoff in September was again excessive except in the extreme southern part of the region, where it was normal.

Figure 2, for which records of two long-term gaging stations were used, shows a comparison of the monthly and yearly mean discharges for the 1981 water year with the medium discharge for the period 1951-80.

Water-Quality Conditions

Miscellaneous measurements of specific conductance at surface-water sites ranged from 20 to 280 micromhos. Based on these data, concentrations of dissolved solids in streamflow during the water year are similar to those of previous years.

Chemical analyses of surface water sampled at three of the four NASQAN (National Stream Quality Accounting Network) stations showed dissolved-solids concentrations slightly lower than those in the 1980 water year, probably due to a slightly higher runoff in the 1981 water year. Records from the fourth station, on the Merrimack River at Concord, N.H., indicated that the streamflow was slightly higher in dissolved solids in 1981 than in 1980. Construction at various locations in and along the Merrimack River was probably the cause of the increase.

Concentrations of all trace elements for which samples at the four NASQAN sites were analyzed were less than EPA criteria except for a total chromium concentration of 90 micrograms per liter determined from a sample collected at the Connecticut River at North Walpole, N.H., on July 21. Analyses of water samples collected at the two NWQSS (National Water Quality Surveillence Survey) sites on the Merrimack and Nashua Rivers in Nashua, N.H., showed no significant concentrations of trace elements in most samples. One total chromium concentration of 100 micrograms per liter was found in a sample collected on July 27 at the Nashua River site during a low-flow period. No pesticides or PCB's were detected from two samplings of each of the NWQSS sites.

New Hampshire Ground-Water Conditions

At the beginning of the water year, ground-water levels were in the below normal range except in the southern border townships, where levels were in the normal range. By the end of October, however, ground-water levels were in the below normal range throughout the State. This continued through January except in the northern part, where levels reached normal range by the end of November.

Above normal precipitation and some warm weather during February resulted in an early beginning of the recharge normally expected during the spring. Water levels were in the above normal range by the end of the month except in the southeast, where levels were in the normal range. Ground-water recharge continued through March in the southern half and through April in the northern half; nonetheless, by the end of April, water levels were in the below normal range throughout the State.

Seasonal water-level declines during the summer were temporarily reversed in the southern part in July, and in the northern part in August. By the end of August, water levels were in the normal range throughout the State, and remained near normal to the end of the water year.

Vermont Ground-Water Conditions

At the beginning of the water year, ground-water levels were generally in the normal range except in the east-central and northeastern parts, where levels were in the below normal range, but, as in New Hampshire, water levels were in the below normal range throughout the State by the end of October. This continued through January, except that, at the end of December, water levels in the northern and southern parts were in the normal range.

Recharge began early in response to above normal precipitation and a warm period during February. By the end of the month, water levels were in the above normal range throughout the State. Water levels declined during March, and, although they rose slightly during April, were in the below normal range throughout the State by the end of April.

Water levels generally declined seasonally from May through July. In August, in response to above normal precipitation, levels rose, and, by the end of the month, were in the normal range throughout the State. Water levels declined during September, but were still in the normal range at the end of the water year.

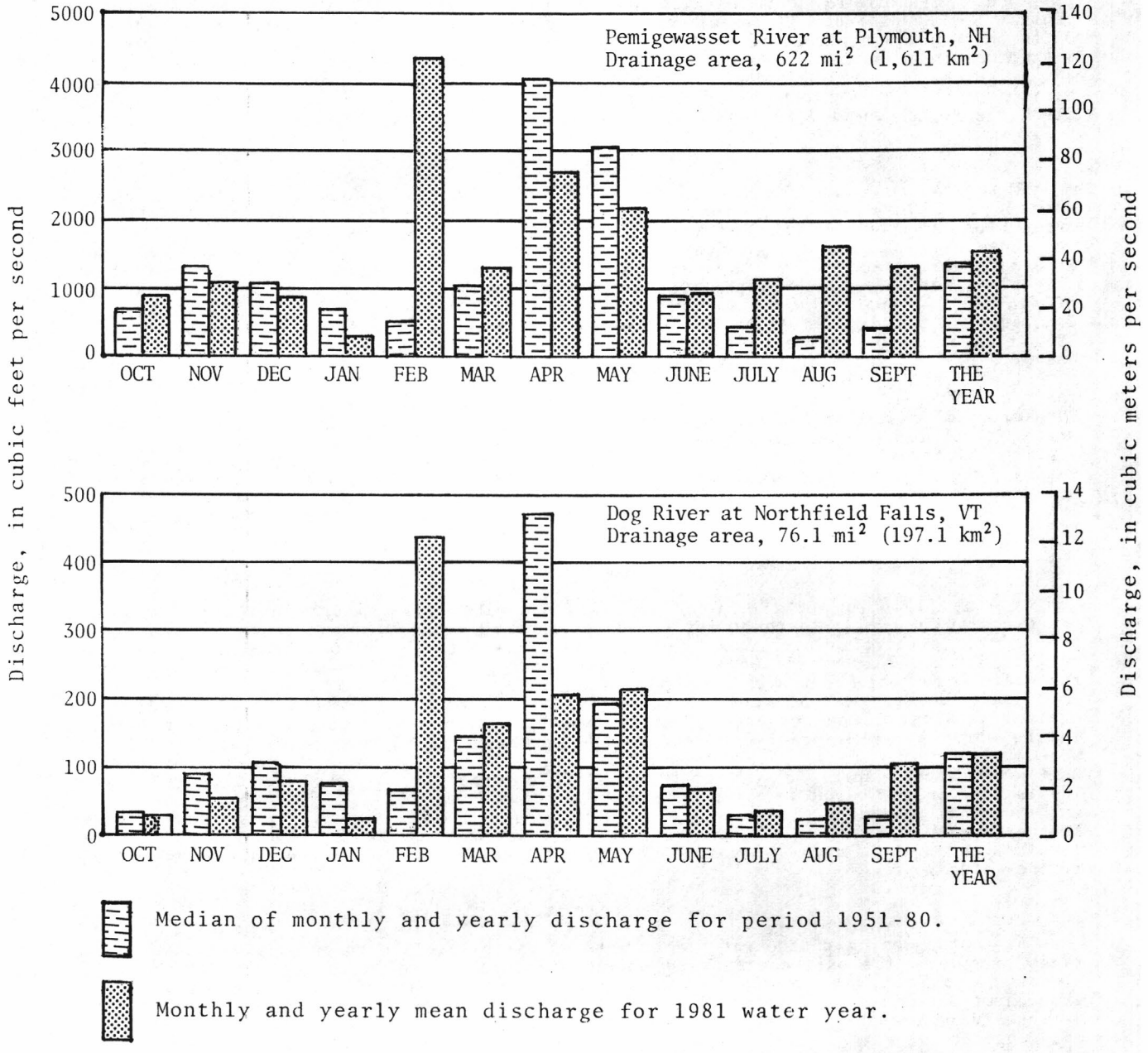

Figure 2.--Comparison of discharge at two long-term index gaging stations during 1981 water year with median discharge for period 1951-80.

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined on the following pages. See also the table for converting inch-pound 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.

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 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 KF Streptococcus agar (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. Ash-mass values of zooplankton and phytoplankton are expressed in g/m^3 (grams per cubic meter), and 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.

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

Total in bottom material is the total amount of a given constituent in a representative sample of bottom material. This term is used only when analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as analytical methodology used, is required to judge when results should be reported as "total in bottom material."

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

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

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

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

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 kilogram (UG/KG, ug/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) 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 milligrams per liter and is based on the mass of sediment per liter of water-sediment mixture.

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

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

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, concentration of dissolved solids (in milligrams per liter) is about 65 percent of 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 flow of a canal, the word "streamflow" uniquely describes 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.

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

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

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

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

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

Taxonomy is the division of biology concerning classification and naming of organisms. 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, 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):

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

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

WDR is used as an abbreviation for "Water-Data Report" 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 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 wells or other sites within a 1-second grid. See figure 3 below.

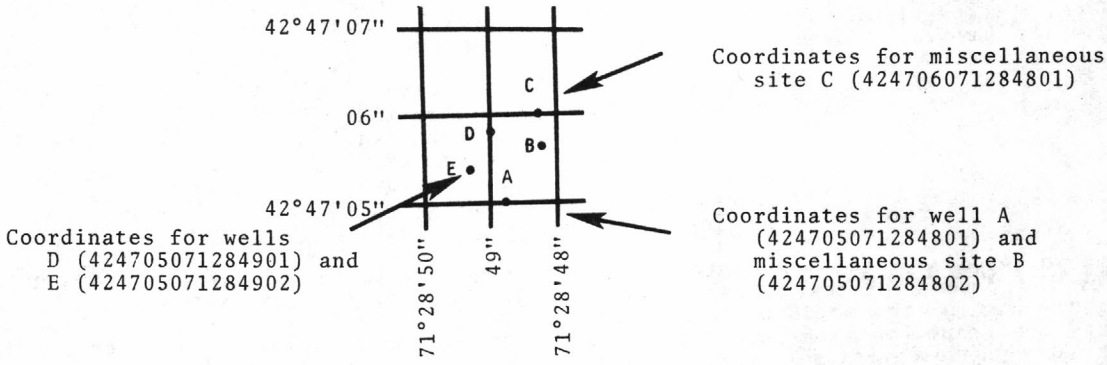

Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude)

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.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

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 discharge for any stage are prepared from stage-discharge relation curves. If extensions to 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. 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 current records in one of the annual or compilation reports. For ease in finding 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 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 referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." "National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS."

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and to supplemental water-quality data collected during the year 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." Attention is called to 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. Methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

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, extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, 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, minimum is the instantaneous minimum unless otherwise qualified. For some stations, supplemental 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. 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. Minimums for these stations are published in a separate paragraph following the table of peaks.

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

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

Accuracy of streamflow data depends primarily on (1) stability of the stage-discharge relation or, if the control is unstable, frequency of discharge measurements, and (2) 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 adjustments for changes in reservoir contents. Even at those stations where adjustments are made, large errors in computed runoff may occur if the 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 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. 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 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 water-quality stations. In addition, water temperatures are taken at time of most discharge measurements for surface-water stations. Large streams have a small diurnal 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 30 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 land-surface datum above National Geodetic Vertical Datum of 1929 is given in the well description. Height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom); 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-eight manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. Material is grouped under major subject headings called books and further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. Reports listed below are for sale by U.S. Geological Survey, Eastern Distribution Branch, Text Products Section, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices, effective September 1982, are subject to change. When ordering these publications, please give the series (U.S. Geological Survey Techniques of Water-Resources Investigations), title, book number, and chapter number.

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

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

2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: Book 2, Chapter D1. 1974. 116 pages. $6.50.

2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: Book 2, Chapter E1. 1971. 126 pages. $6.00.

3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: Book 3, Chapter A1. 1967. 30 pages. $1.75.

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

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

3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: Book 3, Chapter A4. 1967. 44 pages. $1.75.

3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chapter A5. 1967. 29 pages. $0.75.

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

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

3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chapter A8. 1969. 65 pages. $2.00.

3-A9 Measurement of time-of-travel and dispersion in streams by dye tracing, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: Book 3, Chapter A9. 1982. 44 pages. $5.00.

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

3-A12 Fluorometric procedures for dye tracing, by J. F. Wilson, Jr.: 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: Book 3, Chapter B1. 1971. 26 pages. $1.75.

3-B2 Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: Book 3, Chapter B2. 1976. 172 pages. $3.75.

3-B3 Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: Book 3, Chapter B3. 1980. 106 pages. $6.50.

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

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

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

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

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

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

4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: Book 4, Chapter B2. 1973. 20 pages. $2.75.

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

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

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

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

5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: Book 5, Chapter A3. 1972. 40 pages. $1.75.

5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: Book 5, Chapter A4. 1977. 332 pages. $10.00.

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

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

7-C1 Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: Book 7, Chapter C1. 1976. 116 pages. $2.75.

7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J. D. Bredehoeft: Book 7, Chapter C2. 1978. 90 pages. $5.00

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

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

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

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.--152 mi^2 (394 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.--40 years, 349 ft^3/s (9.883 m^3/s), 31.18 in/yr (792 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 (120 m^3/s); maximum gage height, 12.23 ft (3.728 m) Feb. 21, 1981 (ice jam); minimum discharge, 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 (100 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)
Feb. 21	0700	*3620	103	*a12.23	3.728						

a Ice jam.

Minimum discharge, 38 ft^3/s (1.08 m^3/s) July 26, gage height, 1.35 ft (0.411 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	286	266	110	51	457	1290	421	689	117	122	84
2	158	265	244	110	100	384	1510	424	396	104	84	77
3	458	225	524	105	250	330	1190	366	308	92	67	69
4	1100	227	371	100	215	265	1640	311	399	86	106	63
5	1020	303	292	100	180	254	2240	284	798	90	860	58
6	531	329	272	97	160	277	2180	272	450	137	2200	55
7	384	265	253	93	145	260	1130	275	825	123	1170	51
8	314	742	267	89	135	227	822	241	598	99	511	49
9	265	625	605	85	125	208	869	211	604	72	346	257
10	229	420	485	82	115	196	1080	192	758	63	412	185
11	220	344	314	77	105	184	817	184	486	54	305	166
12	292	284	225	73	850	177	785	213	416	47	287	134
13	395	265	215	71	700	170	635	534	442	81	224	103
14	312	255	205	66	580	161	611	465	358	345	192	82
15	252	232	195	63	460	133	667	308	288	270	164	76
16	229	204	190	62	370	159	602	1140	351	128	844	74
17	227	184	180	60	320	124	582	2230	304	83	954	65
18	252	195	170	60	285	126	702	1060	251	67	1210	61
19	289	188	165	59	800	134	914	623	200	66	518	64
20	249	184	165	59	1850	132	652	469	206	60	343	131
21	239	168	160	58	3260	122	619	382	444	75	264	137
22	222	178	155	57	3100	116	581	351	453	77	208	376
23	206	154	150	57	2130	116	573	350	693	60	179	1090
24	184	170	145	58	1670	123	627	286	375	49	160	2370
25	184	638	140	59	1660	122	670	251	260	43	170	1350
26	1070	462	135	59	1120	126	560	491	231	39	138	516
27	886	257	130	60	678	145	460	436	270	57	118	379
28	506	254	125	61	503	145	360	358	204	68	112	646
29	398	366	120	59	---	257	410	284	161	384	98	559
30	326	330	115	58	---	815	538	270	135	605	89	384
31	292	---	115	53	---	1640	---	860	---	233	85	---
TOTAL	11861	8999	7093	2260	21917	8085	26316	14542	12353	3874	12540	9711
MEAN	383	300	229	72.9	783	261	877	469	412	125	405	324
MAX	1100	742	605	110	3260	1640	2240	2230	825	605	2200	2370
MIN	158	154	115	53	51	116	360	184	135	39	67	49
CFSM	2.52	1.97	1.51	.48	5.15	1.72	5.77	3.09	2.71	.82	2.66	2.13
IN.	2.90	2.20	1.74	.55	5.36	1.98	6.44	3.56	3.02	.95	3.07	2.38

CAL YR 1980 TOTAL 101009 MEAN 276 MAX 1930 MIN 32 CFSM 1.82 IN 24.72
WTR YR 1981 TOTAL 139551 MEAN 382 MAX 3260 MIN 39 CFSM 2.51 IN 34.15

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.--1,046 mi² (2,709 km²), revised.

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) National Geodetic Vertical Datum of 1929. 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 ft³ (796,000,000 m³), with final regulation at Errol Dam. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--76 years, 1,900 ft³/s (53.81 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 16,100 ft³/s (456 m³/s) May 22, 1969; minimum daily, leakage only at various times when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 6,180 ft³/s (175 m³/s) Feb. 24; minimum daily, 352 ft³/s (9.97 m³/s) Apr. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1320	1270	1890	1680	2460	352	991	2020	1850	1770	1970
2	1330	1520	1270	1890	1630	1780	397	973	1800	1880	1860	1990
3	1220	1530	1260	1830	1530	1560	434	982	1790	2080	1970	1970
4	1030	1530	1270	1840	1610	1500	593	1120	1770	2080	1850	1960
5	756	1460	1420	1870	1620	1500	1070	1240	1760	2060	1740	1940
6	1010	1520	1490	1910	1620	1370	2860	1280	1760	2010	1450	2090
7	1230	1520	1410	1870	1620	1420	2600	1280	1760	1910	1490	2060
8	1170	2270	1410	1830	1630	1470	1960	1330	1770	1990	1490	2050
9	1180	2120	1410	1870	1610	1410	1380	1320	1950	2070	1630	2000
10	1260	1350	1420	1870	1580	1520	1260	1380	2140	2130	1710	1990
11	1270	1380	1480	1880	1510	1440	1260	1410	2180	2120	1710	1990
12	1210	1410	1530	1910	938	1450	1300	1400	2170	2110	1680	2000
13	1210	1400	1520	1910	1200	1450	1510	1130	2130	2100	1730	2010
14	1220	1400	1540	1900	1220	1430	1700	1050	2150	1980	1730	1990
15	1290	1380	1580	1880	1230	1460	1390	1110	2470	2050	1720	1970
16	1300	1370	1590	1870	1290	1500	905	1010	2880	2060	1550	1990
17	1300	1380	1640	1880	1340	1490	1750	610	2890	2090	1410	1930
18	1280	1360	1710	1880	1340	1500	1280	503	2270	2080	1460	2030
19	1220	1380	1720	1850	1270	1560	1030	857	1990	2090	1500	1950
20	1290	1450	1720	1820	1050	1560	1010	1060	1810	2090	1670	1830
21	1290	1470	1750	1800	1930	1510	1130	1130	1740	2090	1740	1920
22	1290	1490	1820	1800	4960	1490	1330	1230	1730	2070	1750	1920
23	1330	1500	1810	1800	5260	1560	1330	1430	1580	2070	1760	1330
24	1350	1520	1800	1800	6180	1560	1230	1410	1690	2060	1770	559
25	1350	1260	1800	1800	4860	1520	1070	1350	1880	2070	1800	855
26	1370	1140	1820	1800	1560	1480	1010	1420	1950	2090	1920	1440
27	917	1250	1860	1800	1630	1470	1130	1420	1890	2100	2000	1540
28	931	1250	1880	1810	2030	1460	1240	1400	1880	2090	1990	1720
29	1080	1260	1890	1810	---	1450	1260	1400	1880	1920	1990	1680
30	1050	1270	1840	1770	---	787	1030	1400	1860	1690	1960	1670
31	1260	---	1810	1700	---	412	---	1870	---	1790	1950	---
TOTAL	37314	43460	49740	57140	56928	45529	37801	37496	59540	62870	53750	54344
MEAN	1204	1449	1605	1843	2033	1469	1260	1210	1985	2028	1734	1811
MAX	1370	2270	1890	1910	6180	2460	2860	1870	2890	2130	2000	2090
MIN	756	1140	1260	1700	938	412	352	503	1580	1690	1410	559

CAL YR 1980 TOTAL 509108 MEAN 1391 MAX 2300 MIN 536
WTR YR 1981 TOTAL 595912 MEAN 1633 MAX 6180 MIN 352

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.--1,361 mi² (3,525 km²), revised.

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

GAGE.--Water-stage recorder. Datum of gage is 832.88 ft (253.862 m) National Geodetic Vertical Datum of 1929. 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 ft³ (796,000,000 m³), 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.--68 years, 2,458 ft³/s (69.62 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 20,000 ft³/s (566 m³/s) June 18, 1917, Apr. 30, 1923; minimum daily, 795 ft³/s (22.5 m³/s) Mar. 15, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft³/s (292 m³/s) Feb. 25, gage height, 7.66 ft (2.335 m); minimum daily, 1,510 ft³/s (42.8 m³/s) Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	1810	2030	1950	1810	3310	2610	1950	3310	2000	2040	2060
2	1570	1890	1900	2080	1970	2930	2890	1990	2620	1950	1940	2090
3	1670	1960	2160	1970	2040	2240	2490	1870	2340	1910	2060	2110
4	2100	1920	2010	1890	2020	2120	2400	1790	2250	2100	2080	2060
5	2220	1960	1860	1910	1950	1870	2670	1830	2360	2230	2180	2090
6	1590	1940	2110	1940	1880	2100	4800	1920	2350	2380	2660	2090
7	1640	1960	1960	2100	1870	1670	4350	1890	2380	2280	2340	2170
8	1650	2350	1950	2000	1860	1920	3380	1850	2330	2050	2050	2160
9	1510	3500	2130	1940	1860	1920	2810	1840	2400	2140	1910	2320
10	1520	2600	2180	1970	1800	1820	2550	1780	2940	2290	2010	2340
11	1580	2040	1950	1960	2030	1830	2380	1810	2740	2260	1990	2270
12	1600	1920	1880	1950	2550	1770	2270	1900	2680	2160	1950	2270
13	1640	1890	1980	1970	1910	1750	2210	2390	2570	2240	1890	2250
14	1610	1870	1890	1950	1840	1780	2360	2070	2540	2370	1900	2220
15	1580	1840	1820	1970	1770	1700	2650	1800	2530	2310	1890	2170
16	1610	1800	1910	1960	1720	1790	2180	2260	3060	2240	2430	2120
17	1600	1730	1930	2000	1810	1760	1890	4370	3350	2170	2410	2180
18	1640	1780	1930	1990	1890	1740	2340	3040	2980	2180	2420	2020
19	1730	1720	2010	2020	2010	1780	2490	2190	2300	2180	2080	2270
20	1680	1770	1940	2010	2420	1860	2040	1980	2170	2180	1950	2140
21	1670	1780	1890	1900	5770	1820	1910	1910	2110	2240	1980	2060
22	1630	1830	1970	1960	7470	1690	2000	1890	2080	2260	1950	2430
23	1600	1800	2060	1950	7940	1760	1990	2010	2260	2200	1940	3900
24	1630	1840	2100	1950	7820	1830	2220	2030	2010	2150	1950	4540
25	1710	2320	2310	1940	9300	1820	2380	1870	2000	2140	2030	3260
26	3870	2260	2610	1940	4720	1800	2170	1890	2120	2150	2030	2550
27	3360	1850	2330	1940	3100	1830	1980	1900	2170	2190	2100	2320
28	2110	1910	2030	1950	2600	1810	1940	1900	2100	2180	2140	2750
29	1940	2360	2110	1930	---	1980	2060	1830	2090	2440	2100	2850
30	1770	2300	2150	1940	---	3100	2260	1830	2150	2470	2110	2550
31	1730	---	1990	1820	---	3640	---	2370	---	2110	2080	---
TOTAL	56310	60500	63080	60750	87730	62740	74670	63950	73290	68150	64590	72610
MEAN	1816	2017	2035	1960	3133	2024	2489	2063	2443	2198	2084	2420
MAX	3870	3500	2610	2100	9300	3640	4800	4370	3350	2470	2660	4540
MIN	1510	1720	1820	1820	1720	1670	1890	1780	2000	1910	1890	2020

CAL YR 1980 TOTAL 667050 MEAN 1823 MAX 3870 MIN 1290
WTR YR 1981 TOTAL 808370 MEAN 2215 MAX 9300 MIN 1510

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 mi² (28.2 km²).

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 fair except those for winter period and periods of no gage-height record May 13 to June 23, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1965-81), 33.7 ft³/s (0.954 m³/s), 41.99 in/yr (1,067 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,500 ft³/s (127 m³/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 ft³/s (11 m³/s) on basis of slope-area measurement at gage height 10.34 ft (3.152 m); minimum not determined, occurred during ice effect in March 1980. Minimum daily, 2.2 ft³/s (0.062 m³/s) Mar. 2-4, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 400 ft³/s (11 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Oct. 26	0045	476	13.5	3.33	1.015	Feb. 24	1500	735	20.8	3.95	1.204
Feb. 2	1815	758	21.5	4.00	1.219	May 12	1630	687	19.5	3.84	1.170
Feb. 11	2100	ice jam		*6.47	1.972	May 16	--	1000	28.0	--	--
Feb. 21	0230	a*1510	42.8	5.36	1.634	Sept. 24	--	800	23.0	--	--

a From rating curve extended as explained above.

Minimum discharge not determined, occurred during period of ice effect; minimum daily, 3.1 ft³/s (0.09 m³/s) Jan. 30, 31, Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	24	5.0	3.1	26	70	58	28	15	21	17
2	15	19	20	4.8	266	24	95	58	26	14	18	17
3	17	17	17	4.7	60	22	67	54	25	14	21	17
4	46	18	15	6.3	25	21	110	61	27	14	22	16
5	30	21	14	8.0	22	19	220	78	23	21	89	15
6	23	18	14	7.0	20	19	135	68	22	35	76	14
7	19	18	13	6.4	18	18	50	50	21	24	43	14
8	17	24	13	5.7	17	17	41	42	26	18	33	13
9	16	20	12	5.2	16	16	69	41	31	16	30	50
10	14	20	11	5.0	14	15	71	44	22	15	44	24
11	16	16	10	4.8	400	14	98	66	20	14	31	26
12	18	16	9.0	4.6	150	13	68	180	19	13	29	20
13	16	15	9.4	4.5	35	13	45	80	18	18	26	18
14	14	15	8.0	4.3	25	13	41	70	17	21	22	17
15	13	14	7.4	4.2	20	13	38	110	16	17	25	17
16	13	13	7.0	4.1	17	12	35	250	15	15	126	17
17	14	13	7.0	4.1	15	12	33	170	14	14	72	16
18	21	14	7.4	4.0	25	12	83	80	13	13	61	16
19	24	14	7.0	4.0	35	12	65	65	14	13	42	17
20	18	13	6.6	3.9	288	12	45	58	34	16	34	19
21	16	16	7.0	3.8	810	12	33	52	26	49	31	23
22	15	12	8.4	3.7	168	12	34	47	40	24	26	83
23	13	11	8.0	3.5	70	12	29	45	25	23	22	163
24	13	15	7.5	3.5	331	12	57	37	20	16	20	212
25	30	53	7.0	3.4	89	12	48	34	23	14	19	82
26	154	27	6.6	3.4	51	12	38	32	22	14	18	57
27	42	27	6.2	3.3	37	13	35	31	20	30	17	65
28	31	24	6.0	3.2	33	13	37	30	19	23	16	85
29	27	65	5.6	3.2	---	47	65	31	17	61	16	59
30	23	28	5.4	3.1	---	174	67	33	16	41	16	43
31	22	---	5.2	3.1	---	207	---	35	---	27	17	---
TOTAL	766	617	304.7	137.8	3060.1	849	1922	2090	659	662	1083	1252
MEAN	24.7	20.6	9.83	4.45	109	27.4	64.1	67.4	22.0	21.4	34.9	41.7
MAX	154	65	24	8.0	810	207	220	250	40	61	126	212
MIN	13	11	5.2	3.1	3.1	12	29	30	13	13	16	13
CFSM	2.27	1.89	.90	.41	10.0	2.51	5.88	6.18	2.02	1.96	3.20	3.83
IN.	2.61	2.11	1.04	.47	10.44	2.90	6.56	7.13	2.25	2.26	3.70	4.27

CAL YR 1980 TOTAL 7832.2 MEAN 21.4 MAX 350 MIN 2.2 CFSM 1.96 IN 26.73
WTR YR 1981 TOTAL 13402.6 MEAN 36.7 MAX 810 MIN 3.1 CFSM 3.37 IN 45.74

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 poor. No gage-height record Oct. 1-6, Oct. 8 to Nov. 17, Nov. 19 to Jan. 5, Jan. 9 to Feb. 17, May 19 to Aug. 11. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 11.1 ft^3/s (0.314 m^3/s), 32.21 in/yr (818 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft^3/s (37.4 m^3/s) Apr. 27, 1979, recorded gage height, 8.49 ft (2.588 m), affected by drawdown, river stage unknown, from rating curve extended above 140 ft^3/s (4.0 m^3/s) on basis of slope-area measurement at gage height, 8.14 ft (2.481 m) recorded, 9.20 ft^3/s (2.804 m) from floodmarks; 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 (5.4 m^3/s) and maximum (*):

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)
Feb. 11	--	300	8.5	--	--	Aug. 16	0300	a511	14.5	7.40	2.256
Feb. 20	1800	a*1050	29.7	8.21	2.502						

a From rating curve extended as explained above.

Minimum discharge not determined, occurred during period of ice effect; minimum daily, 0.96 ft^3/s (0.027 m^3/s) Jan. 29 to Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	2.4	7.6	1.4	.96	22	25	17	13	7.0	10	5.0
2	1.4	2.2	5.8	1.3	62	19	35	20	12	6.5	8.0	4.7
3	1.6	2.0	5.0	1.3	20	19	25	15	11	6.4	9.4	4.3
4	4.1	2.1	4.6	1.7	8.0	13	40	12	12	6.6	10	4.3
5	2.5	2.4	4.4	2.2	7.0	12	80	11	11	10	40	4.3
6	1.8	2.2	4.2	1.8	6.6	11	30	11	10	15	30	4.1
7	1.7	2.2	3.8	1.7	5.8	9.9	12	8.9	9.4	11	25	3.9
8	1.5	2.9	3.7	1.6	5.4	9.6	11	8.9	12	8.0	18	3.9
9	1.4	2.4	3.4	1.6	5.0	8.9	10	8.2	14	7.5	14	13
10	1.3	2.5	3.3	1.5	4.8	8.5	11	8.2	11	7.0	18	6.6
11	1.5	2.1	3.0	1.5	130	8.2	9.9	8.2	9.5	6.5	15	5.8
12	1.7	1.9	2.8	1.4	50	8.0	9.6	36	9.0	6.0	14	5.5
13	1.4	1.8	2.6	1.3	10	7.6	9.2	85	8.4	7.5	10	4.7
14	1.3	1.8	2.4	1.3	7.0	7.4	10	32	7.8	9.4	8.5	4.5
15	1.2	1.7	2.2	1.3	6.0	7.2	13	20	7.4	8.0	8.2	5.5
16	1.2	1.6	2.0	1.3	5.4	7.1	10	51	7.0	7.0	146	4.5
17	1.4	1.6	2.0	1.2	5.0	7.0	9.9	73	6.5	6.4	42	4.5
18	1.9	1.8	2.1	1.2	13	6.8	12	32	6.0	6.0	22	4.3
19	2.8	1.7	2.2	1.2	50	6.8	12	27	7.0	5.8	15	4.5
20	2.2	1.6	1.9	1.2	300	6.8	10	23	14	7.0	13	4.7
21	1.9	1.9	1.9	1.1	104	6.6	9.9	21	12	23	11	4.1
22	1.7	1.6	2.4	1.1	46	6.6	8.5	20	18	13	8.9	20
23	1.6	1.3	2.2	1.1	85	6.6	8.5	19	12	9.0	8.5	78
24	1.6	3.0	2.1	1.1	118	6.6	12	16	9.6	7.5	7.8	56
25	5.0	6.2	2.0	1.0	72	6.6	13	15	10	7.0	7.5	28
26	18	3.3	1.9	1.0	70	6.8	11	14	9.5	6.5	6.6	17
27	8.0	3.3	1.8	1.0	42	7.0	9.9	14	9.0	13	6.6	13
28	3.3	3.0	1.7	.98	31	7.2	9.2	13	8.5	11	6.0	18
29	3.2	12	1.6	.96	---	15	13	14	8.0	26	5.5	13
30	2.8	9.0	1.5	.96	---	60	16	15	7.4	15	5.2	10
31	2.6	---	1.4	.96	---	72	---	16	---	11	5.0	---
TOTAL	85.0	85.5	89.5	40.26	1269.96	406.8	495.6	684.4	302.0	296.6	554.7	359.7
MEAN	2.74	2.85	2.89	1.30	45.4	13.1	16.5	22.1	10.1	9.57	17.9	12.0
MAX	18	12	7.6	2.2	300	72	80	85	18	26	146	78
MIN	1.2	1.3	1.4	.96	.96	6.6	8.5	8.2	6.0	5.8	5.0	3.9
CFSM	.59	.61	.62	.28	9.70	2.80	3.53	4.72	2.16	2.05	3.83	2.56
IN.	.68	.68	.71	.32	10.09	3.23	3.94	5.44	2.40	2.36	4.41	2.86

CAL YR 1980 TOTAL 2264.56 MEAN 6.19 MAX 250 MIN .45 CFSM 1.32 IN 18.00
WTR YR 1981 TOTAL 4670.02 MEAN 12.8 MAX 300 MIN .96 CFSM 2.74 IN 37.11

SACO RIVER BASIN

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.--385 mi² (997 km²).

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

REVISED RECORDS.--WSP 756: Drainage area. WSP 1301: 1908-9.

GAGE.--Water-stage recorder. Datum of gage is 418.19 ft (127.464 m) National Geodetic Vertical Datum of 1929. 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.--58 years (water years 1904-9, 1930-80), 930 ft³/s (26.34 m³/s), 32.72 in/yr (831 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 43,900 ft³/s (1,240 m³/s) Mar. 27, 1953, gage height, 17.20 ft (5.243 m), from rating curve extended above 23,000 ft³/s (650 m³/s) on basis of slope-area measurement of peak flow; maximum gage height, 19.03 ft (5.800 m) Mar. 7, 1979, ice jam; minimum discharge, 40 ft³/s (1.13 m³/s) Mar. 16, 1932, gage height, 1.61 ft (0.491 m).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 8,700 ft³/s (250 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 2	2230	11800	334	8.99	2.740	Feb. 24	2300	11800	334	8.98	2.737
Feb. 12	0630	13400	379	9.46	2.883	Aug. 16	0900	10000	283	8.41	2.563
Feb. 21	2000	*16000	453	10.21	3.112						

Minimum discharge not determined; minimum daily, 172 ft³/s (4.87 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	185	466	1120	310	250	2180	2130	1310	883	322	506	395
2	183	428	929	310	1970	1770	2320	1400	691	305	414	396
3	172	383	830	300	4870	1510	1960	1300	619	290	371	380
4	176	366	980	300	2080	1200	1940	1180	604	278	398	380
5	264	366	929	300	1670	1170	2700	1190	650	376	674	370
6	528	411	807	300	1640	1100	3540	1170	568	913	1720	350
7	349	401	785	295	1450	1020	1950	1070	552	876	1010	340
8	285	366	702	290	1370	928	1480	914	514	542	683	340
9	247	423	829	290	1240	861	1480	852	552	420	578	500
10	215	383	763	285	1150	811	1850	814	761	370	1230	800
11	201	375	632	280	1260	757	1520	867	605	328	941	620
12	237	328	492	275	8910	707	1750	2070	516	294	923	530
13	237	314	566	270	2430	677	1260	4670	487	289	724	450
14	218	303	481	265	1680	651	1210	2300	462	341	605	410
15	201	299	394	260	1370	546	1550	1690	424	323	543	370
16	187	281	392	250	1160	638	1210	2840	408	290	6070	420
17	190	240	471	245	1050	513	1110	6050	387	262	2940	400
18	195	288	401	240	1210	502	1330	2960	355	246	2080	380
19	366	274	482	240	1420	515	1610	2120	328	236	1360	400
20	303	250	370	235	2310	512	1210	1700	338	240	1070	380
21	247	257	370	230	12800	481	1070	1450	828	776	904	380
22	224	260	390	230	7270	459	938	1280	643	690	774	529
23	212	243	430	225	3990	454	890	1180	978	451	690	3580
24	207	257	450	220	5560	462	1340	1040	641	354	626	3540
25	3550	1570	420	220	7370	450	1360	938	503	304	636	2380
26	1910	1190	390	215	4590	430	1200	864	572	275	580	1600
27	1000	749	370	215	3960	477	1100	800	516	366	522	1300
28	700	695	350	215	2730	487	1050	774	438	433	486	1100
29	600	2730	340	215	---	568	1360	723	382	841	446	1600
30	572	1620	330	210	---	2070	1610	728	346	1040	419	1300
31	512	---	320	210	---	3310	---	813	---	706	400	---
TOTAL	14673	16516	17515	7945	88760	28216	47028	49057	16551	13777	31323	25920
MEAN	473	551	565	256	3170	910	1568	1582	552	444	1010	864
MAX	3550	2730	1120	310	12800	3310	3540	6050	978	1040	6070	3580
MIN	172	240	320	210	250	430	890	723	328	236	371	340
CFSM	1.23	1.43	1.47	.67	8.23	2.36	4.07	4.11	1.43	1.15	2.62	2.24
IN.	1.42	1.60	1.69	.77	8.58	2.73	4.54	4.74	1.60	1.33	3.03	2.50

CAL YR 1980 TOTAL 233115 MEAN 637 MAX 11400 MIN 104 CFSM 1.66 IN 22.52
WTR YR 1981 TOTAL 357281 MEAN 979 MAX 12800 MIN 172 CFSM 2.54 IN 34.52

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, Jan. 11 to Feb. 16. 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 687 ft^3/s (19.46 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, 3,720 ft^3/s (105 m^3/s) Feb. 27, gage height, 7.93 ft (2.417 m); minimum, 151 ft^3/s (4.28 m^3/s) Oct. 23-25; minimum daily, 151 ft^3/s (4.28 m^3/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	263	414	1280	231	231	3240	1000	617	446	316	878	206
2	261	413	1250	231	231	2870	1500	536	446	315	750	202
3	261	411	1220	231	231	2540	1500	542	376	242	408	195
4	261	410	1200	231	231	2210	1300	687	312	193	219	194
5	261	409	1100	231	231	1890	1300	784	313	197	218	194
6	261	406	999	231	231	1560	1290	657	315	197	219	193
7	261	405	979	231	231	1370	1260	549	319	219	220	192
8	260	403	848	231	231	1280	1180	551	322	253	220	190
9	258	400	773	231	231	1080	1110	549	323	294	221	192
10	257	399	774	231	350	958	934	549	324	1220	225	194
11	257	397	773	231	430	800	821	388	325	852	328	195
12	255	395	477	231	510	800	788	296	322	664	268	195
13	254	391	231	231	735	800	668	723	319	519	315	195
14	252	337	233	231	885	800	616	878	319	485	304	195
15	250	268	234	231	810	800	706	978	312	440	304	194
16	250	268	234	231	735	800	725	1160	308	320	688	195
17	249	227	234	231	735	580	748	1170	306	285	1120	194
18	248	173	234	231	738	580	763	1170	304	282	1110	247
19	247	174	291	231	736	580	767	1160	256	349	1050	286
20	189	174	378	231	839	580	763	1040	217	218	1030	284
21	153	174	377	231	1800	580	753	976	218	225	864	351
22	153	174	374	231	3310	580	723	787	220	229	643	392
23	153	174	373	231	3470	580	687	664	222	230	635	614
24	151	175	371	231	3170	580	691	661	223	231	501	757
25	154	309	371	231	3310	580	718	657	223	233	413	896
26	293	424	289	231	3540	580	744	530	251	232	291	994
27	525	433	231	231	3660	580	742	449	318	233	204	977
28	617	547	231	231	3540	580	727	447	319	235	205	873
29	616	1200	232	231	---	580	716	446	318	396	206	795
30	613	1280	231	231	---	640	740	446	317	498	206	783
31	510	---	231	231	---	800	---	446	---	711	206	---
TOTAL	8993	11764	17053	7161	35382	32778	26980	21493	9113	11313	14469	11564
MEAN	290	392	550	231	1264	1057	899	693	304	365	467	385
MAX	617	1280	1280	231	3660	3240	1500	1170	446	1220	1120	994
MIN	151	173	231	231	231	580	616	296	217	193	204	190

CAL YR 1980 TOTAL 171289 MEAN 468 MAX 3820 MIN 136
WTR YR 1981 TOTAL 208063 MEAN 570 MAX 3660 MIN 151

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 mi² (280 km²).

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. 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 ft³ (36,250,000 m³). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--13 years, 197 ft³/s (5.579 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,500 ft³/s (99.1 m³/s) Mar. 15, 1977, gage height, 6.50 ft (1.981 m); minimum daily, 19 ft³/s (0.54 m³/s) Aug. 30, Sept. 13, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft³/s (34.0 m³/s) Feb. 27, gage height, 5.03 ft (1.533 m); minimum daily, 47 ft³/s (1.33 m³/s) Feb. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	126	224	129	47	977	207	164	56	54	88	53
2	105	114	293	119	47	775	242	164	60	51	100	53
3	126	124	305	109	51	656	265	161	64	50	88	53
4	136	136	301	98	73	582	214	155	69	50	80	53
5	139	121	277	92	90	408	235	134	88	50	75	53
6	139	105	242	84	94	313	250	116	100	51	64	53
7	136	98	228	82	96	326	224	92	98	72	55	51
8	124	88	221	78	96	343	204	65	79	84	55	86
9	116	80	201	77	96	309	201	57	58	88	54	116
10	111	78	179	69	96	273	194	57	57	96	54	116
11	111	75	164	65	94	281	194	57	57	90	54	116
12	109	105	155	65	121	301	188	57	58	78	54	116
13	92	124	167	64	167	301	161	57	60	73	67	116
14	78	109	176	78	185	301	109	64	60	70	80	114
15	72	102	158	78	185	301	65	91	61	67	80	150
16	70	90	144	77	185	301	65	136	61	62	80	188
17	67	114	134	77	176	289	75	144	59	60	82	194
18	64	147	121	77	170	273	107	150	55	57	84	194
19	64	129	144	62	167	273	134	150	49	54	84	194
20	62	114	150	48	176	273	150	144	49	51	78	194
21	60	100	134	48	531	269	155	142	49	51	72	188
22	62	92	124	48	1000	257	150	129	49	51	72	182
23	60	88	111	48	923	194	142	121	49	55	72	182
24	57	119	105	48	751	139	147	114	49	58	65	182
25	55	161	100	48	897	147	167	87	49	58	58	182
26	78	173	121	48	1070	164	161	57	53	58	58	182
27	116	173	144	48	1180	188	173	57	57	57	57	182
28	131	173	134	48	1170	194	176	57	60	57	57	239
29	142	173	116	48	---	207	170	55	60	58	57	289
30	139	170	124	48	---	221	167	55	58	67	54	281
31	136	---	144	48	---	218	---	55	---	70	53	---
TOTAL	3051	3601	5341	2156	9934	10054	5092	3144	1831	1948	2131	4352
MEAN	98.4	120	172	69.5	355	324	170	101	61.0	62.8	68.7	145
MAX	142	173	305	129	1180	977	265	164	100	96	100	289
MIN	55	75	100	48	47	139	65	55	49	50	53	51

CAL YR 1980 TOTAL 44710 MEAN 122 MAX 1560 MIN 39
WTR YR 1981 TOTAL 52635 MEAN 144 MAX 1180 MIN 47

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, and period of no-gage-height record Feb. 26 to Mar. 29, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 19.3 ft^3/s (0.547 m^3/s), 21.66 in/yr (550 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 (4.8 m^3/s) and maximum (*):

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)
Feb. 21	1115	222	6.29	3.51	1.070						
Feb. 27	--	*615	17.4	a5.30	1.615						

a From peak-stage indicator.

Minimum discharge, 1.2 ft^3/s (0.034 m^3/s) Oct. 10, 20, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.2	27	4.0	1.8	150	17	18	10	2.1	4.5	2.0
2	2.5	3.8	22	3.7	11	100	54	15	7.0	2.0	4.9	1.8
3	3.5	3.6	18	3.5	21	90	64	13	5.6	2.1	6.3	1.8
4	13	3.7	15	2.9	13	70	50	12	5.5	2.0	5.4	1.8
5	9.3	3.7	12	2.7	7.6	60	40	11	5.8	9.5	4.8	1.7
6	6.8	3.6	11	2.6	6.1	55	54	11	4.7	33	5.1	1.9
7	6.7	3.4	10	2.5	5.4	50	41	10	5.0	15	5.0	1.7
8	7.2	3.2	12	2.3	5.7	48	32	9.0	3.7	10	4.4	1.4
9	4.0	3.1	6.0	2.3	6.3	47	26	8.2	6.6	6.8	5.8	1.5
10	1.7	3.7	10	2.3	6.5	44	23	7.7	9.5	5.5	6.0	1.7
11	2.6	3.7	8.8	2.2	15	43	20	7.6	5.8	9.1	5.4	1.7
12	3.6	3.5	7.5	2.1	51	40	18	8.1	4.5	8.5	4.8	1.7
13	3.8	3.2	7.8	2.1	22	38	15	11	3.8	7.5	4.5	1.8
14	3.4	2.8	6.9	2.0	15	36	16	9.0	3.3	7.5	4.1	1.8
15	3.7	3.0	6.0	2.0	11	34	21	7.8	2.9	6.1	3.8	1.6
16	3.5	2.8	5.5	2.0	10	31	16	17	2.6	4.2	4.5	1.6
17	3.6	2.7	5.4	1.9	12	29	15	30	2.5	3.7	5.4	2.0
18	4.8	3.2	5.6	1.9	15	27	16	20	2.0	3.6	6.4	1.9
19	5.3	3.2	5.2	1.9	17	25	15	15	1.8	5.0	6.4	2.3
20	1.5	3.5	5.0	2.0	41	23	14	12	2.5	4.6	6.6	2.8
21	1.5	3.4	4.8	2.0	196	22	12	18	6.2	11	4.5	2.2
22	1.5	3.5	4.6	2.0	95	22	11	22	5.3	8.2	4.0	2.5
23	1.5	3.9	4.7	2.0	52	23	11	18	9.3	5.8	3.6	22
24	1.5	4.4	4.5	1.9	90	23	21	14	5.1	5.0	3.3	15
25	9.0	41	4.4	1.8	400	22	26	11	5.1	4.0	3.7	9.7
26	38	28	4.2	1.9	440	21	24	9.6	9.0	2.9	4.1	7.0
27	12	18	4.3	1.9	500	25	19	8.4	5.8	5.8	2.9	6.4
28	7.3	94	4.3	1.9	300	30	16	8.2	3.9	4.9	2.4	5.5
29	6.4	56	4.5	1.8	---	35	16	8.8	3.0	11	2.3	4.4
30	5.5	37	4.6	1.8	---	23	22	10	2.5	10	2.1	3.4
31	4.9	---	4.2	1.8	---	19	---	11	---	6.3	1.9	---
TOTAL	181.3	356.8	255.8	69.7	2366.4	1305	745	391.4	150.3	222.7	138.9	114.6
MEAN	5.85	11.9	8.25	2.25	84.5	42.1	24.8	12.6	5.01	7.18	4.48	3.82
MAX	38	94	27	4.0	500	150	64	30	10	33	6.6	22
MIN	1.5	2.7	4.2	1.8	1.8	19	11	7.6	1.8	2.0	1.9	1.4
CFSM	.48	.98	.68	.19	6.98	3.48	2.05	1.04	.41	.59	.37	.32
IN.	.56	1.10	.79	.21	7.27	4.01	2.29	1.20	.46	.68	.43	.35

CAL YR 1980 TOTAL 4181.89 MEAN 11.4 MAX 157 MIN .62 CFSM .94 IN 12.86
WTR YR 1981 TOTAL 6297.90 MEAN 17.3 MAX 500 MIN 1.4 CFSM 1.43 IN 19.36

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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 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 (88 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 (0.03 m^3/s) Oct. 21, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,670 ft^3/s (104 m^3/s) Feb. 27, gage height, 10.26 ft (3.127 m); minimum daily, 16 ft^3/s (0.45 m^3/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	177	734	110	43	2230	259	348	116	81	103	48
2	17	155	588	107	88	1620	436	331	117	71	85	44
3	18	135	468	100	177	1270	554	300	105	67	70	43
4	33	126	350	89	176	996	575	269	95	61	61	43
5	37	120	306	80	182	816	483	242	85	87	55	42
6	29	109	242	73	156	702	533	223	78	202	60	45
7	28	100	287	70	127	658	541	205	75	207	67	42
8	27	110	273	67	110	653	506	187	69	191	64	32
9	26	126	250	65	104	615	422	167	75	160	77	35
10	26	119	235	62	102	570	362	149	83	122	80	40
11	27	108	225	60	139	521	305	140	80	99	70	40
12	31	100	215	57	337	483	317	142	81	79	60	43
13	33	92	201	53	313	452	294	169	76	67	54	44
14	29	87	180	50	314	426	285	208	67	67	49	44
15	26	81	148	50	258	388	314	222	59	71	45	39
16	28	76	148	48	210	370	318	273	54	67	51	39
17	48	72	153	48	196	350	315	460	47	58	67	43
18	75	77	145	47	211	304	301	548	43	53	76	45
19	73	131	155	48	218	265	281	476	39	64	77	45
20	70	205	142	49	280	249	264	364	41	54	64	50
21	65	174	131	49	824	243	253	310	65	85	53	47
22	60	150	126	49	1070	250	234	242	66	98	46	47
23	56	132	128	48	1010	251	211	207	98	85	42	128
24	52	120	130	46	977	245	253	173	102	71	39	180
25	85	271	124	44	2000	237	322	151	108	59	43	188
26	302	375	111	44	2750	226	389	134	126	53	49	177
27	292	381	114	46	3460	233	389	117	136	61	50	159
28	284	385	116	47	3010	268	340	103	135	64	59	135
29	231	688	119	47	---	293	307	98	114	97	55	115
30	187	787	123	47	---	284	339	109	96	129	49	98
31	175	---	117	45	---	272	---	107	---	123	46	---
TOTAL	2486	5769	6784	1845	18842	16740	10702	7174	2531	2853	1866	2120
MEAN	80.2	192	219	59.5	673	540	357	231	84.4	92.0	60.2	70.7
MAX	302	787	734	110	3460	2230	575	548	136	207	103	188
MIN	16	72	111	44	43	226	211	98	39	53	39	32
CFSM	.44	1.05	1.20	.33	3.68	2.95	1.95	1.26	.46	.50	.33	.39
IN.	.51	1.17	1.38	.38	3.83	3.40	2.18	1.46	.51	.58	.38	.43

CAL YR 1980 TOTAL 64759.0 MEAN 177 MAX 1580 MIN 3.7 CFSM .97 IN 13.16
WTR YR 1981 TOTAL 79712.0 MEAN 218 MAX 3460 MIN 16 CFSM 1.19 IN 16.20

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 good except those for winter period and period of no gage-height record, Feb. 26 to Apr. 1, which are fair, and those below 0.5 ft^3/s, (0.01 m^3/s), which are poor.

AVERAGE DISCHARGE.--19 years, 7.00 ft^3/s (0.198 m^3/s), 19.13 in/yr (486 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 (5.9 m^3/s); no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 250 ft^3/s (7.08 m^3/s) Feb. 27. No other peak above base of 100 ft^3/s (2.8 m^3/s); minimum discharge not determined; minimum daily, 0.07 ft^3/s (0.002 m^3/s) Oct. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.78	8.6	.30	.18	40	4.8	6.1	2.1	.30	1.0	.13
2	.14	.65	5.0	.30	4.3	30	29	4.7	1.2	.25	.54	.12
3	.15	.53	3.7	.25	18	23	31	3.4	.83	.24	.39	.12
4	.45	.48	5.4	.22	7.4	19	13	2.8	.70	.24	.29	.13
5	.66	.50	1.4	.21	1.8	16	8.3	2.6	.58	2.3	.25	.14
6	.39	.51	.95	.20	.44	15	19	2.6	.56	17	.50	.12
7	.26	.45	.93	.20	.40	14	19	2.2	.98	11	.62	.12
8	.24	.45	.94	.19	.50	14	9.9	1.9	.75	3.6	.51	.11
9	.21	.48	1.3	.18	.55	13	7.2	1.5	.58	.91	5.7	.23
10	.19	.69	1.5	.16	.55	12	5.8	1.3	.59	.55	11	.23
11	.24	.67	1.3	.16	11	11	4.9	1.2	.47	.44	4.7	.26
12	.37	.54	.92	.15	51	11	4.5	1.4	.38	.29	1.7	.22
13	.30	.46	.83	.14	13	10	3.9	2.2	.37	.23	.88	.21
14	.19	.39	.77	.13	2.6	10	3.7	1.9	.34	.45	.59	.20
15	.15	.39	.69	.13	1.5	9.0	6.3	1.3	.29	.47	.51	.39
16	.12	.35	.59	.13	1.3	9.0	5.7	5.2	.26	.31	2.3	.48
17	.09	.31	.58	.13	1.9	8.4	4.5	16	.22	.23	3.5	.62
18	.09	.27	.55	.13	4.1	7.5	4.3	11	.22	.22	1.5	.58
19	.16	.34	.54	.14	4.8	6.8	4.2	4.9	.20	.34	.73	.66
20	.16	.45	.52	.15	10	6.3	3.6	2.7	.26	.35	.46	.88
21	.11	.41	.50	.15	77	5.8	3.1	1.5	.99	1.0	.32	.74
22	.08	.48	.45	.15	34	5.8	2.6	1.2	1.1	2.3	.24	.62
23	.08	.59	.44	.13	15	5.9	2.2	1.1	2.3	2.0	.22	16
24	.07	.72	.44	.14	24	6.0	5.4	.85	2.3	.93	.20	22
25	.70	14	.47	.15	160	5.8	10	.69	1.6	.51	.22	9.5
26	14	24	.44	.15	170	5.6	10	.57	6.1	.36	.24	4.9
27	14	9.7	.42	.15	180	7.0	6.8	.53	4.8	.39	.24	2.6
28	5.6	8.3	.39	.17	75	9.0	4.8	.44	1.6	.39	.22	1.4
29	2.9	45	.35	.18	---	7.0	4.0	.52	.62	1.3	.20	.93
30	1.7	21	.35	.18	---	6.6	6.1	1.5	.37	3.7	.16	.70
31	1.1	---	.33	.18	---	5.4	---	1.6	---	2.6	.15	---
TOTAL	45.04	133.89	41.59	5.33	870.32	354.9	247.6	87.40	33.66	55.20	40.08	65.34
MEAN	1.45	4.46	1.34	.17	31.1	11.4	8.25	2.82	1.12	1.78	1.29	2.18
MAX	14	45	8.6	.30	180	40	31	16	6.1	17	11	22
MIN	.07	.27	.33	.13	.18	5.4	2.2	.44	.20	.22	.15	.11
CFSM	.29	.90	.27	.03	6.26	2.29	1.66	.57	.23	.36	.26	.44
IN.	.34	1.00	.31	.04	6.51	2.66	1.85	.65	.25	.41	.30	.49

CAL YR 1980 TOTAL 1534.36 MEAN 4.19 MAX 89 MIN .02 CFSM .84 IN 11.48
WTR YR 1981 TOTAL 1980.35 MEAN 5.43 MAX 180 MIN .07 CFSM 1.09 IN 14.82

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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 4.73 ft^3/s (0.134 m^3/s), 21.85 in/yr (555 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 (3.4 m^3/s); minimum, 0.01 ft^3/s (<0.001 m^3/s) several days in 1963-65, 1971, 1975, 1977, 1978.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft^3/s (2.5 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)
Feb. 11	2100	ice jam		*5.26	1.603	Feb. 24	1900	*285	8.07	3.98	1.213
Feb. 20	2215	184	5.21	3.52	1.073	Sept. 23	1530	113	3.20	3.10	0.945

Minimum discharge not determined, occurred during a period of ice effect; minimum daily, 0.15 ft^3/s (0.004 m^3/s) Jan. 17-24, 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.38	1.4	5.1	.54	.20	7.9	23	7.5	6.5	1.4	3.1	.98
2	.34	1.4	4.1	.53	12	6.5	37	15	4.2	1.2	2.3	.98
3	.90	1.2	15	.52	6.0	5.0	17	9.0	3.2	1.1	1.9	.98
4	10	1.2	8.2	.48	3.4	13	15	6.8	3.2	1.0	1.7	.92
5	7.5	1.2	7.2	.44	2.2	6.5	23	5.2	3.0	2.4	1.6	.86
6	2.4	1.1	3.3	.37	1.6	4.2	26	4.8	2.8	26	2.4	.81
7	1.4	.98	2.5	.35	1.3	4.0	11	4.0	4.0	7.9	2.0	.81
8	1.1	.98	2.5	.34	.86	3.8	7.9	3.7	4.2	3.2	1.6	.71
9	.73	.98	2.8	.33	.76	3.5	7.2	3.1	5.7	2.6	1.6	4.6
10	.65	1.1	2.8	.32	.71	3.4	6.5	3.0	6.8	6.5	3.4	2.5
11	.59	1.2	2.4	.31	40	3.4	6.2	2.8	4.6	2.7	2.6	3.0
12	4.0	1.2	2.6	.29	35	3.8	6.2	5.7	3.8	1.9	4.2	2.3
13	2.0	1.2	1.9	.25	30	3.1	5.4	18	3.8	2.2	2.7	1.9
14	1.0	1.1	1.4	.20	20	3.2	6.8	8.2	3.4	4.0	2.1	1.6
15	.58	1.1	1.3	.17	15	4.8	11	5.9	3.0	7.5	2.0	1.5
16	.54	.98	1.2	.16	9.0	3.5	6.5	46	2.4	3.4	39	1.3
17	.59	.65	1.2	.15	6.5	5.0	5.0	28	2.1	2.2	10	1.2
18	.98	.73	1.1	.15	6.8	3.7	7.2	13	1.7	1.7	11	1.2
19	3.9	.73	1.1	.15	14	3.2	9.8	8.2	1.5	1.6	4.6	1.6
20	3.3	.73	1.0	.15	55	2.8	6.8	5.7	2.6	1.5	3.4	3.0
21	1.8	.81	.96	.15	81	2.6	5.9	4.6	5.7	14	2.5	2.3
22	1.0	.73	.84	.15	30	2.5	5.2	3.8	4.0	13	2.0	15
23	.98	.65	.78	.15	15	3.5	4.8	3.8	3.2	4.4	1.8	67
24	.81	1.6	.76	.15	95	3.1	12	3.2	2.3	2.7	1.6	40
25	7.8	29	.74	.16	51	3.2	12	3.0	3.2	2.1	1.6	12
26	27	9.2	.68	.15	30	4.0	10	2.6	9.8	1.7	1.5	5.7
27	6.1	4.5	.64	.15	17	6.8	7.5	2.3	4.6	4.0	1.2	5.0
28	3.5	5.8	.60	.16	10	7.2	5.4	2.2	2.7	3.0	1.2	35
29	2.5	22	.58	.18	---	21	8.2	2.2	2.1	17	1.1	9.8
30	1.9	8.2	.56	.17	---	57	9.8	2.2	1.7	11	.98	5.2
31	1.7	---	.55	.16	---	50	---	7.9	---	5.0	.98	---
TOTAL	97.97	103.65	76.39	7.93	589.33	255.2	325.3	241.4	111.8	159.9	119.66	229.75
MEAN	3.16	3.46	2.46	.26	21.0	8.23	10.8	7.79	3.73	5.16	3.86	7.66
MAX	27	29	15	.54	95	57	37	46	9.8	26	39	67
MIN	.34	.65	.55	.15	.20	2.5	4.8	2.2	1.5	1.0	.98	.71
CFSM	1.08	1.18	.84	.09	7.14	2.80	3.67	2.65	1.27	1.76	1.31	2.61
IN.	1.24	1.31	.97	.10	7.45	3.23	4.11	3.05	1.41	2.02	1.51	2.91

CAL YR 1980 TOTAL 816.46 MEAN 2.23 MAX 70 MIN .04 CFSM .76 IN 10.33
WTR YR 1981 TOTAL 2318.28 MEAN 6.35 MAX 95 MIN .15 CFSM 2.16 IN 29.32

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 mi² (1,611 km²).
PERIOD OF RECORD.--Discharge: October 1903 to current year. Records for April 1886 to September 1903, published in WSP 124, are unreliable and should not be used.
Water-quality records: Water years 1953, 1967-74, 1976-79.
REVISED RECORDS.--WSP 471: 1912-14. WSP 726: Drainage area. WSP 1231: 1904-11, 1913-14, 1917-18, 1919(M), 1920-25, 1926-27(M), 1929-31(M). WSP 1721: 1959(M). See also PERIOD OF RECORD.
GAGE.--Water-stage recorder. Datum of gage is 457.07 ft (139.315 m) National Geodetic Vertical Datum of 1929. 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 and specific conductance were made during the year.
AVERAGE DISCHARGE.--78 years, 1,357 ft³/s (38.43 m³/s), 29.63 in/yr (753 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 65,400 ft³/s (1,850 m³/s) Mar. 19, 1936, gage height, 29.0 ft (8.84 m), from floodmarks, from rating curve extended above 43,000 ft³/s (1,220 m³/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 ft³/s (1.10 m³/s) Oct. 1, 3, 4, 1948; minimum daily, 45 ft³/s (1.27 m³/s) Sept. 20, 1923.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,600 ft³/s (357 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0800	18000	510	a*20.01	6.100	Feb. 25	0100	19400	549	12.43	3.789
Feb. 21	--	*23000	651	ice jam		Aug. 16	1000	14300	405	10.00	3.048

a Ice jam.

Minimum discharge not determined, occurred during a period of ice effect; minimum daily, 245 ft³/s (6.94 m³/s) Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	890	1470	370	245	3060	4230	1910	1380	512	1040	518
2	340	800	1140	440	600	2520	4380	2020	974	472	819	509
3	401	706	2510	400	2900	2050	3720	1770	837	445	706	486
4	974	665	2070	370	2200	1550	3190	1490	805	426	638	462
5	1090	669	1300	340	1300	1500	4070	1360	886	678	705	438
6	713	658	1000	320	760	1390	7570	1340	787	4240	1190	417
7	594	592	1100	410	540	1280	3700	1250	914	2350	1140	398
8	522	638	1200	370	480	1180	2660	1110	890	1110	842	386
9	464	790	1350	340	440	1100	2290	1010	1010	826	744	1090
10	415	721	1450	350	410	1050	2840	954	1650	910	2950	939
11	397	778	1050	290	450	995	2260	943	1310	745	1710	849
12	507	669	580	320	10000	942	2800	1630	1140	615	1920	748
13	553	599	730	320	7000	917	1950	5030	1180	613	1290	630
14	500	570	840	290	4000	876	1750	3140	1040	774	999	547
15	438	569	620	265	2400	779	3200	2080	880	917	834	526
16	399	534	600	270	1900	862	2180	9160	809	742	9450	519
17	381	469	700	295	1750	682	1750	9130	738	589	5910	471
18	383	515	590	290	1650	709	2030	4550	672	517	3900	458
19	675	558	600	290	1850	706	3060	3050	605	476	2410	469
20	604	600	560	275	2700	699	2110	2320	602	456	1650	564
21	536	547	490	275	17500	666	1720	1830	1290	1860	1260	572
22	491	599	460	280	15000	646	1420	1520	961	1850	1060	866
23	453	526	510	275	6800	638	1310	1330	1000	1010	930	5620
24	418	400	520	265	7800	669	2160	1180	794	748	845	5330
25	441	4040	520	275	14700	674	2600	1050	691	623	866	3540
26	5330	2870	450	290	8090	677	2450	955	1290	551	751	2170
27	2750	1460	430	290	5410	758	1940	871	998	1080	679	1430
28	1750	1170	450	285	3740	795	1620	832	769	1010	643	3620
29	1400	3930	420	285	---	919	1810	793	640	2500	588	2920
30	1140	2480	450	280	---	3250	2510	800	561	2980	555	2040
31	987	---	410	260	---	6080	---	1110	---	1680	531	---
TOTAL	26416	31012	26570	9675	122615	40619	81280	67518	28103	34305	49555	39532
MEAN	852	1034	857	312	4379	1310	2709	2178	937	1107	1599	1318
MAX	5330	4040	2510	440	17500	6080	7570	9160	1650	4240	9450	5620
MIN	340	400	410	260	245	638	1310	793	561	426	531	386
CFSM	1.37	1.66	1.38	.50	7.04	2.11	4.36	3.50	1.51	1.78	2.57	2.12
IN.	1.58	1.85	1.59	.58	7.33	2.43	4.86	4.04	1.68	2.05	2.96	2.36

CAL YR 1980 TOTAL 337687 MEAN 923 MAX 17400 MIN 160 CFSM 1.48 IN 20.20
WTR YR 1981 TOTAL 557200 MEAN 1527 MAX 17500 MIN 245 CFSM 2.46 IN 33.32

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 mi² (149.2 km²).

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 good except those for periods of no gage-height record, Oct. 1-23, June 3 to July 29, and those below 20 ft³/s (0.57 m³/s), which are fair. Flow completely regulated by Squam and Little Squam Lakes. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 88.7 ft³/s (2.484 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s (30.9 m³/s) July 4, 1973, gage height, 14.29 ft (4.356 m); minimum daily, 1.0 ft³/s (0.029 m³/s) July 4-7, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 235 ft³/s (6.66 m³/s) Aug. 21, gage height, 11.15 ft (3.399 m); minimum daily, 6.0 ft³/s (0.17 m³/s) Oct. 17-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	89	88	87	84	94	60	62	60	7.0	111	115
2	91	89	88	87	85	94	60	62	60	7.0	111	114
3	35	89	88	86	86	94	60	62	60	7.4	111	114
4	6.9	87	89	86	85	94	60	61	61	7.4	111	114
5	6.9	87	88	86	84	94	60	61	61	7.9	111	84
6	6.9	87	88	86	71	94	60	60	62	8.4	112	72
7	6.9	87	89	86	60	94	60	60	62	7.4	111	72
8	6.9	87	89	86	60	94	59	60	63	27	111	72
9	7.4	87	89	86	60	94	59	60	63	10	111	72
10	7.4	87	88	86	60	94	59	61	63	43	111	72
11	7.4	87	87	86	61	94	59	63	63	62	113	72
12	7.9	87	87	86	62	94	59	63	63	62	113	72
13	7.9	87	87	86	60	94	59	63	63	80	77	72
14	7.9	87	87	86	60	94	59	62	63	98	19	72
15	7.4	87	87	86	60	94	59	61	63	80	110	71
16	6.9	87	87	86	60	94	59	63	63	62	167	71
17	6.0	87	87	86	60	94	59	63	63	62	165	71
18	6.0	87	87	86	61	94	59	63	63	62	175	71
19	6.0	87	87	86	61	94	59	63	63	63	183	71
20	63	87	87	86	63	94	58	63	63	63	182	71
21	91	87	87	86	66	94	60	63	63	63	208	71
22	91	87	87	86	63	94	62	62	63	63	233	72
23	91	88	87	86	63	94	63	62	63	63	228	72
24	91	87	87	86	67	94	63	61	63	63	216	72
25	90	87	87	85	66	94	63	61	62	63	217	72
26	89	87	87	84	82	94	63	60	34	63	161	72
27	89	89	87	84	94	94	63	60	6.5	63	115	72
28	89	87	87	84	94	94	62	60	6.5	63	115	72
29	89	88	87	84	---	94	63	60	6.5	87	115	71
30	89	88	87	84	---	71	62	60	6.5	110	115	71
31	89	---	87	84	---	60	---	60	---	109	115	---
TOTAL	1380.7	2621	2711	2655	1938	2857	1810	1905	1619.0	1636.5	4253	2332
MEAN	44.5	87.4	87.5	85.6	69.2	92.2	60.3	61.5	54.0	52.8	137	77.7
MAX	91	89	89	87	94	94	63	63	63	110	233	115
MIN	6.0	87	87	84	60	60	58	60	6.5	7.0	19	71

CAL YR 1980 TOTAL 18435.7 MEAN 50.4 MAX 111 MIN 3.8
WTR YR 1981 TOTAL 27718.2 MEAN 75.9 MAX 233 MIN 6.0

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 mi² (222.2 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft (137.099 m) National Geodetic Vertical Datum of 1929 (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.--Records 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years, 143 ft³/s (4.050 m³/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft³/s (229 m³/s) Mar. 19, 1936, gage height, 16.09 ft (4.904 m), from floodmarks, from rating curve extended above 2,700 ft³/s (76 m³/s) on basis of contracted-opening measurement of peak flow; minimum daily, 2.7 ft³/s (0.076 m³/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 ft³/s (33 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0330	1300	36.8	5.87	1.789	Feb. 24	2200	1690	47.9	6.60	2.011
Feb. 22	0030	*2060	58.3	7.23	2.204						

Minimum daily discharge, 16 ft³/s (0.45 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	67	239	40	24	501	696	158	151	25	69	30
2	16	60	186	39	50	355	678	202	108	23	53	29
3	20	53	243	37	373	279	631	185	85	23	42	29
4	53	51	196	36	360	213	436	155	80	22	36	28
5	83	50	187	34	237	201	338	137	85	46	55	26
6	56	47	155	33	169	185	321	125	80	90	371	25
7	41	44	122	33	120	172	269	113	83	68	180	22
8	33	44	120	33	94	175	221	102	74	45	108	21
9	27	43	125	33	79	162	196	94	77	37	90	73
10	23	46	123	32	69	155	180	92	108	41	105	94
11	23	48	94	31	103	150	165	89	89	37	87	78
12	43	46	84	30	907	138	158	176	74	29	68	69
13	39	43	82	30	824	135	143	384	63	29	61	56
14	30	42	68	29	650	134	147	277	56	38	51	46
15	26	40	54	29	394	129	208	197	51	42	46	39
16	24	37	55	28	230	133	184	517	47	37	211	35
17	24	34	55	28	180	115	158	885	42	30	422	34
18	25	35	53	28	206	111	188	673	38	26	273	32
19	31	39	52	28	294	105	258	372	33	24	161	32
20	42	39	49	28	682	93	208	249	31	26	109	42
21	34	38	48	28	1880	89	169	197	31	77	83	48
22	30	37	49	27	1690	88	145	165	40	105	67	52
23	26	37	51	27	917	89	131	142	58	68	58	266
24	24	41	52	27	1070	97	196	124	48	49	54	470
25	89	234	48	27	1420	102	267	109	39	39	62	342
26	511	298	46	27	1310	106	286	97	44	33	50	206
27	348	171	45	26	1100	140	227	86	45	43	44	141
28	180	168	44	26	754	179	183	76	38	50	40	125
29	125	487	43	26	---	237	167	69	32	115	36	118
30	95	398	43	26	---	552	172	70	27	155	33	97
31	78	---	42	25	---	739	---	109	---	106	32	---
TOTAL	2217	2817	2853	931	16186	6059	7726	6426	1857	1578	3157	2705
MEAN	71.5	93.9	92.0	30.0	578	195	258	207	61.9	50.9	102	90.2
MAX	511	487	243	40	1880	739	696	885	151	155	422	470
MIN	16	34	42	25	24	88	131	69	27	22	32	21
CFSM	.83	1.09	1.07	.35	6.74	2.27	3.01	2.41	.72	.59	1.19	1.05
IN.	.96	1.22	1.24	.40	7.02	2.63	3.35	2.79	.81	.68	1.37	1.17

CAL YR 1980 TOTAL 34152.3 MEAN 93.3 MAX 1630 MIN 7.4 CFSM 1.09 IN 14.81
WTR YR 1981 TOTAL 54512.0 MEAN 149 MAX 1880 MIN 16 CFSM 1.74 IN 23.63

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 mi² (940 km²) at outlet at Lakeport.
PERIOD OF RECORD.--Gage heights: September 1933 to current year. Prior to November 1937, monthend contents only, published in WSP 1301. Prior to October 1970, published as "at The Weirs."
REVISED RECORDS.--WDR NH-VT-78-1: 1938-77 (datum correction).
GAGE.--Water-stage recorder. Datum of gage is 499.92 ft (152.376 m) National Geodetic Vertical Datum of 1929. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.63 ft (0.192 m), corrected, 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 ft³ (204,000,000 m³) between elevations 500.65 ft (152.598 m) and 504.32 ft (153.717 m) National Geodetic Vertical Datum of 1929. Stage regulated at outlet and by Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Contents given herein are computed from gage height at 2400 on last day of month, eliminating the effect of seiche and wind action.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 5.86 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, 4.53 ft (1.381 m) May 18; minimum daily, 2.50 ft (0.762 m) Feb. 1.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.25	2.88	3.00	2.97	2.50	4.02	3.81	4.32	4.43	4.34	4.08	3.82
2	3.24	2.86	3.04	3.00	2.57	4.03	3.89	4.32	4.43	4.33	4.07	3.80
3	3.23	2.86	3.06	3.00	2.60	4.04	3.92	4.35	4.42	4.31	4.06	3.79
4	3.26	2.85	2.95	3.00	2.61	4.05	3.98	4.35	4.41	4.31	4.05	3.77
5	3.26	2.83	3.00	3.04	2.59	4.06	4.00	4.34	4.43	4.42	4.07	3.75
6	3.24	2.83	3.00	2.98	2.59	4.07	4.00	4.38	4.42	4.49	4.05	3.75
7	3.23	2.83	3.01	2.98	2.59	4.08	4.04	4.40	4.39	4.49	4.04	3.73
8	3.20	2.79	3.04	2.92	2.60	4.09	4.04	4.32	4.39	4.49	4.03	3.72
9	3.16	2.80	3.01	2.92	2.62	4.09	4.06	4.31	4.43	4.48	4.05	3.78
10	3.14	2.79	3.05	2.90	2.64	4.07	4.04	4.30	4.41	4.51	4.05	3.78
11	3.15	2.73	3.07	2.89	2.66	4.04	4.05	4.32	4.43	4.49	4.04	3.79
12	3.12	2.71	3.07	2.87	2.76	4.01	4.05	4.32	4.42	4.46	4.02	3.78
13	3.07	2.72	3.07	2.87	2.77	4.00	4.03	4.39	4.42	4.46	4.00	3.75
14	3.02	2.72	3.07	2.85	2.77	3.98	4.06	4.41	4.41	4.50	3.98	3.75
15	3.01	2.72	3.07	2.84	2.80	3.94	4.02	4.41	4.41	4.50	3.99	3.75
16	3.00	2.66	3.10	2.79	2.80	3.94	4.09	4.47	4.40	4.48	4.02	3.74
17	2.99	2.68	3.08	2.79	2.78	3.90	4.11	4.45	4.38	4.43	3.98	3.73
18	2.99	2.73	3.08	2.78	2.77	3.87	4.18	4.53	4.37	4.38	3.97	3.72
19	2.98	2.71	3.07	2.75	2.77	3.87	4.15	4.45	4.35	4.33	3.97	3.71
20	2.96	2.73	3.06	2.72	2.80	3.80	4.18	4.45	4.34	4.30	3.96	3.68
21	2.95	2.73	3.05	2.71	3.04	3.78	4.14	4.44	4.35	4.33	3.94	3.66
22	2.91	2.70	3.05	2.69	3.15	3.75	4.16	4.43	4.38	4.27	3.93	3.67
23	2.86	2.72	3.05	2.67	3.20	3.72	4.15	4.42	4.35	4.21	3.92	3.77
24	2.86	2.75	3.05	2.66	3.28	3.71	4.21	4.41	4.35	4.16	3.91	3.78
25	2.94	2.80	3.03	2.64	3.55	3.70	4.26	4.40	4.36	4.07	3.94	3.73
26	2.96	2.77	3.02	2.62	3.78	3.69	4.25	4.40	4.42	4.05	3.90	3.76
27	2.97	2.81	3.04	2.60	3.93	3.70	4.26	4.39	4.40	4.05	3.88	3.78
28	2.97	2.88	3.00	2.58	4.01	3.71	4.28	4.39	4.38	4.03	3.87	3.78
29	2.96	2.96	3.02	2.56	---	3.73	4.30	4.39	4.37	4.12	3.85	3.72
30	2.94	2.98	3.00	2.52	---	3.74	4.31	4.38	4.35	4.10	3.84	3.67
31	2.93	---	2.98	2.51	---	3.76	---	4.41	---	4.08	3.83	---
MEAN	3.06	2.78	3.04	2.79	2.91	3.90	4.10	4.39	4.39	4.32	3.98	3.75
MAX	3.26	2.98	3.10	3.04	4.01	4.09	4.31	4.53	4.43	4.51	4.08	3.82
MIN	2.86	2.66	2.95	2.51	2.50	3.69	3.81	4.30	4.34	4.03	3.83	3.66
(†)	15650	15840	15810	14840	17860	17440	18460	18660	18540	18000	17480	17200
(‡)	-258	+73.3	-11.2	-347	+1232	-157	+394	+74.7	-46.3	-202	-194	-108

CAL YR 1980 MEAN 3.51 MAX 4.45 MIN 2.66 (†) -19.9
WTR YR 1981 MEAN 3.62 MAX 4.53 MIN 2.50 (‡) +27.3

† 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) National Geodetic Vertical 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. Flow completely regulated by Winnipesaukee (station 01080000), Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Daily discharge computed from relation between discharge, stage, and deflection of vane in measuring flume.

AVERAGE DISCHARGE.--48 years, 530 ft^3/s (15.01 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, 1,150 ft^3/s (32.6 m^3/s) July 16; minimum daily, 255 ft^3/s (7.22 m^3/s) Feb. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	275	275	280	280	490	1020	330	630	340	345	325	305
2	275	275	280	280	495	1030	330	630	340	340	325	315
3	275	275	280	270	495	1030	335	630	340	330	325	315
4	275	275	280	265	495	1030	340	640	340	325	325	315
5	275	275	290	340	495	1030	340	630	340	330	325	320
6	275	285	280	445	335	1030	335	460	340	330	335	320
7	270	285	280	455	255	1030	335	360	340	335	335	320
8	280	280	280	470	255	1030	335	350	340	335	325	315
9	280	275	280	480	270	1030	330	345	340	335	325	325
10	285	275	285	485	270	1030	330	345	340	345	325	315
11	270	265	285	480	270	1040	330	345	340	345	325	315
12	270	265	290	480	280	1030	330	350	340	340	325	310
13	265	265	280	480	285	1050	330	535	340	705	325	310
14	275	265	280	480	285	1030	330	645	340	900	320	310
15	275	265	280	485	285	1020	335	650	340	1060	330	310
16	280	260	285	485	285	1040	335	660	340	1150	330	310
17	280	260	275	485	285	1040	335	660	340	1140	330	310
18	270	275	265	485	290	1030	330	660	340	1110	335	305
19	270	270	265	490	295	1030	330	660	340	1110	330	310
20	270	270	265	500	300	1030	330	670	310	1100	330	305
21	275	270	265	505	300	1020	330	670	310	1080	330	310
22	275	265	265	505	305	1020	340	480	310	1080	320	315
23	275	265	265	505	310	740	340	365	320	1090	320	320
24	275	265	265	495	320	605	345	365	330	795	320	320
25	285	265	265	490	325	605	335	365	335	625	320	485
26	280	265	265	500	335	600	335	360	340	610	325	585
27	270	265	280	500	675	420	335	360	335	430	320	585
28	270	270	280	500	1020	325	335	355	345	325	320	580
29	280	280	280	500	---	325	520	355	350	325	310	590
30	280	280	280	500	---	325	630	340	345	325	305	420
31	280	---	280	490	---	330	---	340	---	325	305	---
TOTAL	8535	8125	8575	14110	10305	26945	10500	15210	10090	19320	10045	10770
MEAN	275	271	277	455	368	869	350	491	336	623	324	359
MAX	285	285	290	505	1020	1050	630	670	350	1150	335	590
MIN	265	260	265	265	255	325	330	340	310	325	305	305

CAL YR 1980 TOTAL 126830 MEAN 347 MAX 1290 MIN 250
WTR YR 1981 TOTAL 152530 MEAN 418 MAX 1150 MIN 255

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 mi² (1,220 km²).

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) National Geodetic Vertical Datum of 1929.

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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 696 ft³/s (19.71 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,810 ft³/s (108 m³/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 ft³/s (1.36 m³/s) Aug. 31, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,060 ft³/s (58.3 m³/s) Feb. 27, gage height, 5.89 ft (1.795 m); minimum daily, 258 ft³/s (7.31 m³/s) Oct. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	292	483	315	500	1890	524	884	500	384	375	382
2	275	289	452	313	580	1790	585	887	473	381	371	378
3	282	285	452	320	692	1720	661	866	459	374	369	373
4	310	281	410	500	675	1640	643	834	476	376	364	373
5	315	288	400	570	644	1590	604	738	497	537	365	370
6	315	288	390	600	546	1540	609	525	524	893	413	366
7	303	285	386	570	354	1520	600	403	515	1060	404	360
8	293	289	374	570	341	1500	570	376	488	897	388	352
9	288	290	379	565	350	1450	545	380	489	731	398	417
10	278	292	379	560	346	1380	529	390	513	575	417	438
11	279	290	371	555	395	1370	489	403	493	536	418	427
12	284	279	360	555	619	1360	482	476	469	503	406	410
13	278	271	355	550	626	1360	469	732	457	560	394	392
14	271	266	350	550	519	1350	464	962	442	796	385	376
15	262	267	355	547	471	1340	522	916	427	981	385	370
16	258	264	356	545	444	1330	516	922	419	1290	448	366
17	263	260	353	547	434	1310	492	995	414	1320	464	361
18	271	287	345	545	439	1300	497	966	404	1320	437	348
19	280	301	340	544	447	1290	521	903	372	1310	412	346
20	279	294	335	541	515	1280	507	873	338	1320	394	337
21	276	290	330	539	822	1270	487	838	350	1360	382	328
22	272	288	330	535	891	1270	468	718	375	1380	366	347
23	268	286	325	521	765	1210	450	452	453	1370	356	453
24	259	296	324	521	845	969	490	424	447	1260	364	538
25	267	387	270	521	1340	760	528	417	419	968	471	618
26	323	417	360	517	1600	614	535	415	470	888	473	833
27	343	391	350	507	1960	596	518	417	466	781	449	811
28	327	401	330	509	2010	529	501	419	431	469	432	781
29	308	529	331	513	---	516	597	424	410	373	417	753
30	303	533	320	514	---	528	874	430	394	397	404	641
31	298	---	320	515	---	549	---	468	---	384	393	---
TOTAL	8902	9476	11215	16074	20170	38121	16277	19853	13384	25774	12514	13645
MEAN	287	316	362	519	720	1230	543	640	446	831	404	455
MAX	343	533	483	600	2010	1890	874	995	524	1380	473	833
MIN	258	260	270	313	341	516	450	376	338	373	356	328

CAL YR 1980 TOTAL 165733 MEAN 453 MAX 1910 MIN 241
WTR YR 1981 TOTAL 205405 MEAN 563 MAX 2010 MIN 258

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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 83.4 ft^3/s (2.362 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 (11 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, 496 ft^3/s (14.0 m^3/s) Feb. 27, gage height, 3.77 ft (1.149 m); minimum daily, 5.0 ft^3/s (0.14 m^3/s) Aug. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	16	105	12	20	473	150	160	79	24	56	15
2	37	20	198	11	20	457	198	124	86	24	44	11
3	36	20	90	15	57	446	227	121	71	25	32	29
4	38	17	60	17	104	303	237	90	47	25	25	29
5	37	15	48	16	85	189	219	77	37	43	16	37
6	36	12	48	14	70	126	129	83	46	67	5.8	46
7	24	9.8	31	12	68	93	124	83	59	87	5.2	36
8	25	9.8	21	8.2	68	94	124	82	48	89	5.0	23
9	30	11	21	8.2	66	87	115	66	29	81	5.4	22
10	36	11	21	8.8	35	77	113	46	29	52	5.8	24
11	40	10	34	25	7.6	64	99	40	40	29	7.4	11
12	40	8.5	43	39	40	69	92	46	47	21	17	31
13	31	7.2	42	28	135	54	76	124	35	21	43	58
14	25	7.2	29	28	142	54	63	197	28	21	43	64
15	19	7.2	21	28	141	54	98	157	23	12	35	49
16	12	7.2	21	23	137	55	125	94	16	16	30	37
17	6.9	7.2	20	20	138	55	125	134	16	17	25	28
18	7.2	7.9	20	19	127	55	95	299	16	12	20	28
19	7.6	7.9	20	19	110	55	62	344	16	11	16	37
20	7.2	7.9	20	17	119	45	48	283	17	12	14	42
21	7.2	7.2	20	14	132	46	48	194	23	22	10	32
22	7.2	7.2	20	14	138	46	48	150	33	42	6.6	20
23	7.2	7.2	14	22	155	47	38	97	49	43	11	38
24	6.9	8.2	13	39	68	46	50	69	69	32	16	98
25	11	20	11	46	154	46	66	58	70	31	17	161
26	8.2	26	11	40	288	45	119	57	75	26	18	180
27	7.9	26	13	24	397	46	171	57	83	24	28	156
28	7.9	30	16	20	477	53	178	56	88	22	13	118
29	7.9	47	17	21	---	72	169	56	69	23	32	74
30	7.9	77	14	19	---	95	165	46	30	36	37	53
31	7.9	---	13	18	---	139	---	58	---	56	25	---
TOTAL	618.1	475.6	1075	645.2	3498.6	3586	3571	3548	1374	1046	664.2	1587
MEAN	19.9	15.9	34.7	20.8	125	116	119	114	45.8	33.7	21.4	52.9
MAX	40	77	198	46	477	473	237	344	88	89	56	180
MIN	6.9	7.2	11	8.2	7.6	45	38	40	16	11	5.0	11

CAL YR 1980 TOTAL 22417.4 MEAN 61.2 MAX 572 MIN 4.2
WTR YR 1981 TOTAL 21688.7 MEAN 59.4 MAX 477 MIN 5.0

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 winter period, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward Macdowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River during periods of high flow in March 1968, April 1969, March 1977, and March 1979. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1963-80), 688 ft^3/s (19.48 m^3/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,620 ft^3/s (187 m^3/s) Mar. 17, 1977, 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, 4,060 ft^3/s (115 m^3/s) Mar. 2, gage height, 7.25 ft (2.210 m); minimum daily discharge, 42 ft^3/s (1.19 m^3/s) Oct. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	159	257	1010	140	100	3150	1270	1030	494	248	170	136
2	273	189	811	140	120	3800	1750	1010	444	287	130	243
3	258	170	718	140	180	3870	1930	941	409	215	140	138
4	240	99	586	130	350	3850	2010	826	444	206	165	129
5	182	120	663	125	520	3270	1720	678	424	160	187	155
6	82	91	538	120	450	1750	1570	636	377	542	269	138
7	115	62	465	120	400	1190	1480	551	373	402	251	93
8	87	125	422	120	300	1160	1290	472	292	426	215	75
9	45	126	417	120	260	794	1080	462	389	369	149	119
10	99	52	415	120	250	718	1150	421	371	352	234	178
11	101	136	443	115	400	723	922	421	342	298	318	345
12	49	101	390	110	700	700	834	528	363	288	242	632
13	69	99	389	105	1200	686	645	871	288	326	191	632
14	126	121	308	105	1100	544	683	1120	260	385	185	361
15	66	101	256	100	1000	550	762	1190	189	301	285	238
16	44	97	230	98	850	559	987	1540	131	173	347	133
17	80	94	220	98	700	554	814	2160	160	192	346	116
18	104	113	210	98	600	593	641	2280	108	169	328	110
19	42	176	200	100	580	581	620	2070	94	114	277	108
20	130	136	190	100	700	512	589	1520	108	113	342	115
21	55	133	180	100	1000	490	559	1320	140	234	484	122
22	47	138	180	100	1300	421	596	1070	169	240	215	158
23	92	109	180	100	1600	452	532	771	226	212	123	252
24	88	114	180	100	2000	458	589	645	234	250	106	597
25	50	342	170	100	2780	536	730	537	248	212	266	808
26	394	566	160	100	1820	568	1100	565	317	205	194	858
27	526	550	155	100	1560	477	1110	518	419	329	151	808
28	367	523	150	100	2600	511	1060	461	474	299	149	686
29	305	749	150	100	---	566	1040	375	539	442	102	677
30	285	1080	150	100	---	758	1010	373	388	356	80	477
31	268	---	140	100	---	997	---	392	---	246	83	---
TOTAL	4828	6769	10676	3404	25420	35788	31073	27754	9214	8591	6724	9637
MEAN	156	226	344	110	908	1154	1036	895	307	277	217	321
MAX	526	1080	1010	140	2780	3870	2010	2280	539	542	484	858
MIN	42	52	140	98	100	421	532	373	94	113	80	75

CAL YR 1980 TOTAL 171212 MEAN 468 MAX 4480 MIN 42
WTR YR 1981 TOTAL 179878 MEAN 493 MAX 3870 MIN 42

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 mi² (14.89 km²).

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, and periods of no gage-height record, Mar. 5 to Apr. 28, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years, 11.3 ft³/s (0.320 m³/s) 26.69 in/yr (678 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 603 ft³/s (17.1 m³/s) Apr. 1, 1976, gage height, 8.49 ft (2.588 m), from rating curve extended above 210 ft³/s (5.9 m³/s); minimum, about 0.06 ft³/s (0.002 m³/s) about Sept. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 110 ft³/s (3.1 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 11	2230	*436	12.3	8.04	2.451	Feb. 24	1915	283	8.01	7.26	2.213
Feb. 20	2300	253	7.16	7.08	2.158						

Minimum discharge not determined. Minimum daily, 0.53 ft³/s (0.015 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.54	2.6	15	2.6	1.7	27	7.2	14	6.5	.90	1.8	.69
2	.54	2.4	11	2.5	30	22	25	13	4.2	.80	1.4	.69
3	.61	2.0	13	2.3	45	18	20	11	3.8	1.5	1.2	.78
4	2.8	2.0	15	2.0	25	20	17	9.7	3.7	4.1	1.4	.83
5	1.7	2.4	11	1.9	11	18	15	9.0	3.1	4.8	3.1	.73
6	1.1	2.1	8.7	1.9	7.0	15	20	8.7	2.7	2.5	2.0	.64
7	.98	2.0	7.8	1.9	4.5	12	17	7.8	2.5	1.6	1.5	.64
8	.80	2.1	7.8	2.0	4.0	20	15	6.9	2.0	1.1	1.9	.60
9	.76	2.2	12	2.0	3.8	18	14	6.3	5.1	.90	2.0	5.6
10	.56	2.9	10	2.0	3.5	16	13	5.4	5.0	3.0	1.4	3.0
11	.58	2.8	7.5	2.0	65	14	12	6.0	2.9	2.7	1.2	2.1
12	.60	2.4	6.5	1.9	124	13	11	34	2.2	.90	1.1	1.7
13	.64	2.2	6.4	1.9	56	12	10	58	2.0	.84	.94	1.3
14	.64	2.1	5.3	1.9	25	12	9.0	24	1.7	3.2	.78	1.1
15	.63	2.0	4.3	1.9	14	11	23	18	1.6	2.5	2.8	.94
16	.68	2.0	4.2	1.9	11	10	17	66	1.6	1.7	3.2	.83
17	.53	1.8	4.2	1.9	14	10	13	41	1.4	1.2	2.0	.83
18	.66	2.0	4.0	1.8	32	9.6	16	23	1.3	1.0	1.3	.83
19	.80	2.2	3.8	1.8	33	9.2	13	16	1.0	.84	1.1	.83
20	.80	2.2	3.6	1.8	95	9.0	15	13	1.1	.70	1.0	1.2
21	.70	2.0	3.6	1.8	126	8.6	13	11	1.8	2.3	.88	1.3
22	.66	2.1	3.5	1.8	68	8.4	12	9.2	5.0	1.6	.73	1.1
23	.64	2.1	3.3	1.8	39	8.2	10	7.8	9.2	1.2	.69	3.2
24	.58	2.2	3.3	1.8	168	7.8	35	6.3	3.2	1.0	1.1	18
25	10	14	3.2	1.7	96	7.6	40	5.3	2.6	.83	1.3	25
26	27	16	2.9	1.7	96	7.4	19	4.4	13	1.7	1.1	11
27	8.3	9.6	2.9	1.7	55	15	15	3.8	5.3	1.3	.88	6.0
28	5.0	9.6	2.8	1.7	34	12	14	3.5	2.9	18	.78	4.5
29	3.8	25	2.9	1.7	---	9.5	17	3.3	1.9	9.5	.73	6.3
30	2.9	21	3.2	1.7	---	8.5	18	4.5	1.1	4.2	.69	4.7
31	2.6	---	3.0	1.7	---	7.8	---	10	---	2.5	.69	---
TOTAL	79.13	148.0	195.7	59.0	1286.5	396.6	495.2	459.9	101.4	80.91	42.69	106.96
MEAN	2.55	4.93	6.31	1.90	45.9	12.8	16.5	14.8	3.38	2.61	1.38	3.57
MAX	27	25	15	2.6	168	27	40	66	13	18	3.2	25
MIN	.53	1.8	2.8	1.7	1.7	7.4	7.2	3.3	1.0	.70	.69	.60
CFSM	.44	.86	1.10	.33	7.98	2.23	2.87	2.57	.59	.45	.24	.62
IN.	.51	.96	1.27	.38	8.32	2.57	3.20	2.97	.66	.52	.28	.69

CAL YR 1980 TOTAL 2705.76 MEAN 7.39 MAX 251 MIN .41 CFSM 1.29 IN 17.50
WTR YR 1981 TOTAL 3451.99 MEAN 9.46 MAX 168 MIN .53 CFSM 1.65 IN 22.33

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 mi² (334 km²).

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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years, 212 ft³/s (6.004 m³/s), 22.32 in/yr (567 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Mar. 19, 1936, gage height, 11.78 ft (3.591 m), from floodmarks, from rating curve extended above 6,700 ft³/s (190 m³/s) on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 ft³/s (0.085 m³/s) Sept. 17, 1941; minimum daily, 7.6 ft³/s (0.22 m³/s) Sept. 29, 1964. Maximum discharge since construction of Blackwater Reservoir in 1941, 2,390 ft³/s (67.7 m³/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, 1,820 ft³/s (51.5 m³/s) Feb. 25, gage height, 6.59 ft (2.009 m); minimum, 22 ft³/s (0.62 m³/s) Oct. 15-18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	119	444	70	49	1710	750	264	174	67	120	42
2	26	109	310	68	55	1730	831	271	187	62	93	40
3	24	101	252	66	81	1710	797	290	158	57	75	39
4	27	94	196	64	171	1200	770	268	139	54	64	37
5	30	86	189	61	251	1000	586	236	127	88	60	36
6	49	76	165	60	220	800	485	215	117	119	108	35
7	61	69	183	58	176	520	445	200	109	122	157	34
8	55	64	199	56	147	450	392	185	91	123	150	33
9	45	60	200	56	127	370	337	171	117	88	114	46
10	36	60	180	56	113	330	305	160	136	76	97	55
11	30	59	154	54	112	310	283	154	144	67	94	66
12	27	59	120	52	180	290	263	176	127	60	99	72
13	26	58	132	50	382	270	242	333	108	57	88	71
14	23	55	123	50	593	250	228	437	95	56	77	71
15	22	53	111	49	555	240	257	385	87	54	68	67
16	22	51	105	48	358	230	301	423	82	51	72	63
17	22	47	100	49	267	220	289	735	77	46	102	41
18	22	51	95	49	245	210	265	1120	72	44	176	56
19	24	53	95	50	287	205	266	950	65	42	152	53
20	26	55	90	51	383	200	269	562	59	40	112	55
21	30	53	87	51	667	195	245	408	57	50	90	53
22	32	52	87	50	1080	190	220	332	59	65	76	54
23	33	52	85	50	1320	190	206	287	100	69	67	76
24	32	53	82	50	1340	200	219	255	132	68	61	181
25	35	75	78	52	1530	200	308	229	120	60	68	354
26	91	159	77	50	1330	210	394	211	112	52	66	358
27	300	240	76	50	1180	220	385	195	123	52	60	255
28	312	204	77	50	1590	230	313	163	122	50	56	193
29	209	260	75	50	---	260	271	137	99	73	52	168
30	160	418	75	50	---	350	265	129	80	113	47	155
31	135	---	72	50	---	500	---	140	---	143	44	---
TOTAL	1993	2945	4314	1670	14789	14990	11187	10021	3275	2168	2765	2859
MEAN	64.3	98.2	139	53.9	528	484	373	323	109	69.9	89.2	95.3
MAX	312	418	444	70	1590	1730	831	1120	187	143	176	358
MIN	22	47	72	48	49	190	206	129	57	40	44	33
MEAN†	64.5	99.3	138	53.9	640	387	369	323	109	70.1	88.9	95.6
CFSN†	.50	.77	1.07	.42	4.96	3.00	2.86	2.50	.84	.54	.69	.74
IN.†	.58	.86	1.23	.48	5.17	3.46	3.19	2.89	.94	.63	.80	.83

CAL YR 1980 TOTAL 50341 MEAN 138 MAX 1730 MIN 13 MEAN† 138 CFSN 1.07 IN 14.51
WTR YR 1981 TOTAL 72976 MEAN 200 MAX 1730 MIN 22 MEAN† 200 CFSN 1.55 IN 21.04

† Adjusted for change in contents in Blackwater Reservoir.

01088400 MERRIMACK RIVER AT CONCORD, NH
(National stream-quality accounting network station)

LOCATION.--Lat 43°12'32", long 71°31'51", Merrimack County, Hydrologic Unit 01070002, on downstream side of bridge on State Highway 4 in Concord.
DRAINAGE AREA.--2,300 mi² (5,957 km²).
PERIOD OF RECORD.--Water years 1979 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1979 to current year.
WATER TEMPERATURES: November 1979 to current year.
INSTRUMENTATION:.--Water-quality monitor since November 1979.
REMARKS:.--Interruptions in the record were due to malfunction of the instrument.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 143 micromhos Feb. 2, 1981; minimum recorded, 25 micromhos Apr. 11, 12, 1980.
WATER TEMPERATURES: Maximum recorded, 27.5°C July 21, 1980; minimum recorded, 0.0°C on many days during winter periods.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 143 micromhos Feb. 2; minimum recorded, 26 micromhos July 13.
WATER TEMPERATURES: Maximum recorded, 15.5°C May 24; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
NOV												
26...	1015	E3500	49	6.4	1.6	.30	15.4	113	K10500	1930	13	1
MAR												
30...	1400	E3500	62	5.6	7.2	1.0	11.9	99	196	58	13	--
MAY												
27...	1030	3670	51	5.3	14.3	.95	10.0	98	K2230	204	11	--
JUL												
20...	1030	E3000	58	5.6	24.3	1.0	7.3	89	--	4000	13	--
SEP												
28...	1130	4440	37	5.7	14.8	1.7	9.1	90	4200	740	12	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS L)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
NOV											
26...	3.9	.8	5.9	48	.7	.8	12	8.1	8.5	.2	7.1
MAR											
30...	3.9	.7	6.2	50	.8	.8	10	6.7	11	.1	6.5
MAY											
27...	3.5	.5	5.3	50	.7	.7	5.0	5.4	7.3	.2	5.3
JUL											
20...	4.0	.8	6.4	50	.8	.7	12	5.4	9.4	.1	3.2
SEP											
28...	3.6	.6	5.7	50	.8	.7	14	5.0	5.4	.2	6.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
NOV											
26...	42	44	.18	.20	.100	.110	.08	.17	.39	.27	.08
MAR											
30...	48	43	.18	.17	.020	.060	.29	.30	.52	.32	.00
MAY											
27...	32	32	.14	.13	.070	.080	.18	.24	.39	.31	.05
JUL											
20...	46	38	.11	.12	.050	.050	.14	.50	.31	.55	.36
SEP											
28...	42	37	.15	.15	.050	.060	.25	.57	.46	.62	.31

E, ESTIMATED.
K, NON-IDEAL COLONY COUNT.

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 26...	.19	.45	.060	.18	.030	--	.5	4.4	14	132	83
MAR 30...	.35	.50	.030	.09	.010	3.2	--	--	7	66	68
MAY 27...	.26	.45	.020	.06	<.010	--	.4	3.1	10	99	47
JUL 20...	.19	.66	.020	.06	<.010	--	.3	2.4	3	24	100
SEP 28...	.31	.77	.020	.06	<.010	--	.4	4.2	7	84	57

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
NOV 26...	0	0	0	<50	--	20	0	0	2	20	--
MAY 27...	0	0	1	100	90	10	1	--	<1	20	--
JUL 20...	1	0	1	<50	--	10	1	0	1	10	0
SEP 28...	1	0	1	100	90	8	1	--	<1	20	--

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV 26...	<10	0	0	0	2	2	0	490	370	120	5
MAY 27...	<10	3	3	0	1	0	1	370	240	130	1
JUL 20...	10	1	0	2	<1	--	3	310	170	140	2
SEP 28...	<10	1	--	<1	7	1	6	890	760	130	4

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
NOV 26...	1	4	60	20	40	.1	.0	.1	0	0
MAY 27...	1	0	50	10	40	<.1	--	<.1	3	3
JUL 20...	0	6	30	10	20	<.1	--	.2	1	0
SEP 28...	0	4	260	240	20	<.1	--	<.1	4	2

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 26...	0	0	0	0	3	0	4	10	2	8
MAY 27...	0	0	0	0	0	0	0	10	3	7
JUL 20...	1	<1	--	<1	<1	--	<1	10	0	10
SEP 28...	2	<1	--	<1	1	--	<1	20	8	12

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE	NOV 26,80	MAR 30,81	MAY 27,81	JUL 20,81	SEP 28,81
TIME	1015	1400	1030	1030	1130
TOTAL CELLS/ML	620	210	13	170	290
DIVERSITY: DIVISION	1.3	0.3	0.0	1.0	0.0
.CLASS	1.3	0.3	0.0	1.0	0.0
..ORDER	1.9	0.3	0.0	1.0	1.0
...FAMILY	1.9	0.3	0.0	2.1	1.0
....GENUS	2.0	1.2	0.0	2.1	1.0

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)										
.BACILLARIOPHYCEAE										
..ACHNANTHALES										
...ACHNANTHACEAE										
....ACHNANTHES	13	2	--	-	--	-	--	-	--	-
..BACILLARIALES										
...NITZSCHIACEAE										
....NITZSCHIA	77	13	--	-	--	-	14	8	120#	43
..FRAGILARIALES										
...FRAGILARIACEAE										
....ASTERIONELLA	13	2	120#	56	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	13#	100	--	-	--	-
....TABELLARIA	77	13	77#	38	--	-	--	-	--	-
..NAVICULALES										
...NAVICULACEAE										
....NAVICULA	39	6	--	-	--	-	--	-	160#	57
CHLOROPHYTA (GREEN ALGAE)										
.CHLOROPHYCEAE										
..CHLOROCOCCALES										
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	57#	33	--	-
...OOCYSTACEAE										
....OOCYSTIS	--	-	--	-	--	-	14	8	--	-
....SELENASTRUM	26	4	--	-	--	-	--	-	--	-
...SCENEDESMACEAE										
....SCENEDESMUS	--	-	--	-	--	-	57#	33	--	-
CRYPTOPHYTA (CRYPTOMONADS)										
.CRYPTOPHYCEAE										
..CRYPTOMONADALES										
...CRYPTOMONADACEAE										
....CRYPTOMONAS	--	-	13	6	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..OSCILLATORIALES										
...OSCILLATORIACEAE										
....OSCILLATORIA	360#	58	--	-	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)										
.EUGLENOPHYCEAE										
..EUGLENALES										
...EUGLENACEAE										
....TRACHELOMONAS	13	2	--	-	--	-	--	-	--	-
PYRRHOPHYTA (FIRE ALGAE)										
.DINOPHYCEAE										
..DINOKONTAE										
...PERIDINIACEAE										
....PERIDINIUM	--	-	--	-	--	-	29#	17	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	51	49	51	127	71	108
2				---	---	---	52	51	51	124	72	94
3				---	---	---	53	51	52	88	68	82
4				---	---	---	52	48	50	87	71	82
5				---	---	---	56	47	50	88	75	82
6				---	---	---	56	52	54	89	75	82
7				---	---	---	57	55	56	99	78	88
8				---	---	---	58	55	56	91	76	85
9				---	---	---	59	53	55	84	76	80
10				63	61	62	60	55	56	90	78	83
11				64	60	61	57	54	55	83	75	78
12				64	59	62	58	57	57	89	70	82
13				65	61	63	64	56	59	89	69	83
14				66	61	64	61	58	59	90	76	81
15				67	62	64	62	59	61	88	76	84
16				67	63	65	62	59	61	90	78	82
17				65	63	64	61	59	60	90	77	84
18				74	64	69	73	59	61	92	80	85
19				76	67	70	63	61	62	95	79	84
20				74	65	68	64	62	62	91	80	84
21				70	64	67	62	61	61	93	74	87
22				67	63	64	63	61	63	94	80	88
23				64	62	63	65	63	64	92	74	79
24				65	63	64	76	62	65	93	73	82
25				69	63	66	94	64	77	94	74	84
26				62	58	60	84	67	77	96	74	88
27				63	59	61	88	72	81	112	76	87
28				59	52	55	86	68	76	94	77	87
29				52	48	50	96	72	87	99	77	89
30				51	47	49	93	78	82	100	75	84
31				---	---	---	90	73	85	112	78	90
MONTH				76	47	62	96	47	63	127	68	85

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	104	84	89	42	39	40	51	39	46	52	50	51
2	143	93	112	45	42	44	39	38	38	53	50	52
3	107	87	100	45	43	44	39	37	38	---	---	---
4	102	87	92	47	45	46	40	38	39	---	---	---
5	92	86	89	52	47	50	41	38	39	---	---	---
6	103	86	92	52	50	51	41	39	40	---	---	---
7	95	76	82	53	50	52	40	37	39	---	---	---
8	89	77	82	54	51	53	39	37	38	---	---	---
9	91	77	83	56	53	55	43	39	41	---	---	---
10	90	81	86	58	54	56	44	41	43	---	---	---
11	101	78	86	58	54	56	45	42	43	---	---	---
12	95	79	87	59	56	57	47	45	46	---	---	---
13	79	57	68	60	57	58	48	46	47	---	---	---
14	---	---	---	60	57	59	49	45	47	---	---	---
15	---	---	---	61	58	59	50	48	49	---	---	---
16	---	---	---	65	58	61	48	46	47	---	---	---
17	---	---	---	66	60	61	50	47	49	---	---	---
18	---	---	---	62	59	61	50	48	49	---	---	---
19	---	---	---	64	60	61	49	47	48	---	---	---
20	55	50	53	62	58	60	49	46	48	---	---	---
21	51	43	48	85	60	65	54	50	52	---	---	---
22	43	32	36	62	59	60	54	50	52	58	56	56
23	32	31	32	62	59	60	51	50	51	60	57	59
24	36	32	34	63	59	61	51	49	50	60	56	58
25	57	36	43	63	61	62	52	49	50	---	---	---
26	44	36	39	64	61	62	51	46	50	---	---	---
27	41	36	38	88	61	66	51	49	50	---	---	---
28	40	39	39	70	61	63	54	50	52	---	---	---
29	---	---	---	61	58	60	53	49	51	---	---	---
30	---	---	---	62	58	59	54	51	52	---	---	---
31	---	---	---	58	51	54	---	---	---	---	---	---
MONTH	143	31	69	88	39	57	54	37	46	60	50	55

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1				---	---	---						
2				---	---	---						
3				---	---	---						
4				---	---	---						
5				---	---	---						
6				---	---	---						
7				---	---	---						
8				58	55	57						
9				60	49	52						
10				55	50	52						
11				55	49	52						
12				54	47	50						
13				57	26	39						
14				69	51	53						
15				56	51	53						
16				---	---	---						
17				---	---	---						
18				---	---	---						
19				---	---	---						
20				---	---	---						
21				---	---	---						
22				---	---	---						
23				---	---	---						
24				---	---	---						
25				---	---	---						
26				---	---	---						
27				---	---	---						
28				---	---	---						
29				---	---	---						
30				---	---	---						
31				---	---	---						
MONTH				69	26	51						
YEAR	143	26	63									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1				---	---	---	1.5	1.0	1.5	.0	.0	.0
2				---	---	---	2.0	1.5	2.0	.0	.0	.0
3				---	---	---	2.5	1.0	2.0	.0	.0	.0
4				---	---	---	1.0	.0	.5	.0	.0	.0
5				---	---	---	.0	.0	.0	.0	.0	.0
6				---	---	---	.0	.0	.0	.0	.0	.0
7				---	---	---	.0	.0	.0	.0	.0	.0
8				---	---	---	.0	.0	.0	.0	.0	.0
9				---	---	---	.5	.0	.0	.0	.0	.0
10				4.5	4.0	4.5	.5	.0	.5	.0	.0	.0
11				4.0	3.0	3.5	.5	.0	.0	.0	.0	.0
12				3.0	2.5	3.0	.0	.0	.0	.0	.0	.0
13				3.0	2.5	2.5	.0	.0	.0	.0	.0	.0
14				3.5	3.0	3.0	.0	.0	.0	.0	.0	.0
15				3.5	3.0	3.5	.0	.0	.0	.0	.0	.0
16				3.0	2.0	2.5	.0	.0	.0	.0	.0	.0
17				2.0	1.5	2.0	.0	.0	.0	.0	.0	.0
18				2.0	1.0	1.0	.0	.0	.0	.0	.0	.0
19				5.0	.0	1.0	.0	.0	.0	.0	.0	.0
20				2.5	.0	1.0	.0	.0	.0	.0	.0	.0
21				1.5	.5	1.0	.0	.0	.0	.0	.0	.0
22				1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
23				1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
24				1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
25				2.5	1.5	2.0	.0	.0	.0	.0	.0	.0
26				2.0	1.0	1.5	.0	.0	.0	.0	.0	.0
27				1.0	.5	.5	.0	.0	.0	.0	.0	.0
28				1.0	.5	.5	.0	.0	.0	.0	.0	.0
29				1.5	1.0	1.5	.0	.0	.0	.0	.0	.0
30				1.5	1.0	1.0	.0	.0	.0	.0	.0	.0
31				---	---	---	.0	.0	.0	.0	.0	.0
MONTH				5.0	.0	2.0	2.5	.0	.0	.0	.0	.0

MERRIMACK RIVER BASIN

01088400 MERRIMACK RIVER AT CONCORD, NH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

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

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 which are fair and period of backwater from debris, Oct. 1 to Nov. 25, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years, 109 ft^3/s (3.087 m^3/s), 19.27 in/yr (489 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.--Maximum discharge, 1,420 ft^3/s (40.2 m^3/s) Feb. 27, gage height, 10.35 ft (3.15 m), no other peak above base of 700 ft^3/s (20 m^3/s); minimum discharge not determined, minimum daily, 5.8 ft^3/s (0.16 m^3/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	22	111	16	6.4	534	160	143	96	14	45	16
2	6.0	20	87	15	32	425	295	159	66	13	34	15
3	7.0	18	86	14	88	348	321	159	54	12	28	14
4	12	17	66	13	64	274	246	135	45	11	24	13
5	13	16	66	12	46	238	203	111	38	38	30	13
6	11	14	54	11	38	209	214	100	34	246	155	12
7	10	13	50	10	35	193	185	86	36	185	102	12
8	9.6	15	49	9.5	32	201	161	79	31	93	58	11
9	9.4	17	51	9.5	30	175	147	82	37	58	54	69
10	9.2	15	46	9.0	28	166	140	65	72	47	55	100
11	9.8	14	36	9.0	51	162	129	62	53	36	50	51
12	11	13	31	8.5	286	157	118	118	42	28	46	45
13	12	12	27	8.0	206	151	102	333	34	26	44	38
14	10	11	25	7.5	161	149	100	232	28	37	31	31
15	9.4	10	23	7.5	161	120	167	161	25	33	26	29
16	10	10	22	7.0	147	110	149	177	24	24	42	33
17	17	10	23	7.0	100	114	129	330	22	20	62	52
18	27	11	22	7.0	106	106	131	259	18	17	45	44
19	26	15	23	7.0	106	94	149	180	16	22	33	41
20	24	26	21	7.0	140	88	122	146	15	21	27	46
21	23	21	20	7.2	441	83	106	118	19	51	22	39
22	22	19	18	7.2	528	84	91	94	20	71	20	40
23	20	17	19	7.0	345	86	83	80	33	45	17	269
24	19	16	18	6.8	368	84	133	69	26	30	17	301
25	40	75	18	6.6	1040	84	177	60	22	23	43	245
26	80	75	17	6.4	1140	80	175	54	44	19	43	168
27	45	59	18	6.8	1270	87	147	46	36	37	31	125
28	35	54	18	6.8	799	120	131	41	25	43	26	107
29	30	206	18	6.8	---	143	118	37	20	89	22	100
30	26	155	19	6.6	---	151	152	36	16	118	19	84
31	23	---	17	6.6	---	169	---	58	---	67	17	---
TOTAL	612.2	996	1119	269.3	7794.4	5185	4681	3810	1047	1574	1268	2163
MEAN	19.7	33.2	36.1	8.69	278	167	156	123	34.9	50.8	40.9	72.1
MAX	80	206	111	16	1270	534	321	333	96	246	155	301
MIN	5.8	10	17	6.4	6.4	80	83	36	15	11	17	11
CFSM	.26	.43	.47	.11	3.62	2.17	2.03	1.60	.45	.66	.53	.94
IN.	.30	.48	.54	.13	3.78	2.51	2.27	1.85	.51	.76	.61	1.05

CAL YR 1980 TOTAL 21999.9 MEAN 60.1 MAX 850 MIN 4.7 CFSM .78 IN 10.66
WTR YR 1981 TOTAL 30518.9 MEAN 83.6 MAX 1270 MIN 5.8 CFSM 1.09 IN 14.78

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 Sept. 23-30, which are fair. Flow regulated by Everett Lake (Reservoirs in Merrimack River basin). Diversion from Hopkinton Lake on Contoocook River to Everett Lake during periods of high flow in the spring of 1968, 1969, 1977, and 1979. Occasional regulation by small reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 92.9 ft^3/s (2.631 m^3/s), 19.99 in/yr (508 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, Oct. 4, 1978, 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, 1,020 ft^3/s (28.9 m^3/s) Mar. 2, gage height, 7.93 ft (2.417 m); minimum daily, 5.4 ft^3/s (0.153 m^3/s) Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	133	90	23	14	802	161	81	50	29	30	19
2	5.4	106	78	23	22	923	198	80	47	24	25	17
3	5.4	98	85	22	63	502	218	80	41	23	21	15
4	6.7	97	81	21	63	232	181	81	40	22	18	15
5	8.2	95	80	19	54	203	161	78	35	22	18	14
6	8.6	91	72	18	45	187	156	77	33	190	22	13
7	8.2	88	68	18	39	176	139	70	28	120	22	12
8	7.4	86	63	18	39	184	124	65	42	80	19	13
9	7.4	81	59	18	36	176	110	68	80	50	21	57
10	7.8	80	59	17	33	173	97	68	61	40	34	69
11	7.8	77	57	16	34	168	77	63	62	32	39	72
12	7.8	73	47	15	46	163	68	59	65	27	47	91
13	7.8	72	47	14	93	156	62	97	53	22	51	97
14	40	70	48	13	93	153	53	90	47	30	43	100
15	50	66	40	13	93	146	66	68	39	35	35	104
16	52	63	38	12	91	146	66	69	32	25	33	97
17	70	61	36	12	90	139	59	124	28	21	32	95
18	108	63	33	12	88	133	57	139	25	19	24	91
19	118	58	33	12	78	128	53	168	25	17	19	90
20	118	57	31	13	83	124	50	179	50	17	16	90
21	114	57	28	13	95	122	45	126	124	31	14	84
22	114	50	44	13	153	120	44	98	122	41	13	100
23	112	45	24	13	198	120	43	81	90	35	12	110
24	110	44	15	13	128	120	58	68	69	28	13	120
25	116	56	21	13	97	120	104	61	57	22	38	130
26	144	61	22	14	114	118	128	54	45	20	42	110
27	126	54	22	14	293	126	102	47	32	24	35	100
28	98	57	22	14	642	144	83	42	26	25	28	110
29	85	106	22	14	---	146	75	38	33	33	22	96
30	85	112	23	14	---	161	81	57	35	39	20	90
31	137	---	23	14	---	168	---	54	---	36	19	---
TOTAL	1891.2	2257	1411	478	2917	6479	2919	2530	1516	1179	825	2221
MEAN	61.0	75.2	45.5	15.4	104	209	97.3	81.6	50.5	38.0	26.6	74.0
MAX	144	133	90	23	642	923	218	179	124	190	51	130
MIN	5.4	44	15	12	14	118	43	38	25	17	12	12
MEAN†	65.0	73.1	44.3	15.2	153	168	96.0	81.0	50.3	38.0	26.2	75.3
CFSM†	1.03	1.16	.70	.24	2.42	2.66	1.52	1.28	.80	.60	.42	1.19
IN.†	1.19	1.29	.81	.28	2.53	3.06	1.70	1.48	.89	.70	.48	1.33

CAL YR 1980 TOTAL 22693.8 MEAN 62.0 MAX 860 MIN 3.1 MEAN† 61.9 CFSM† .98 IN† 13.35
WTR YR 1981 TOTAL 26623.2 MEAN 72.9 MAX 923 MIN 5.4 MEAN† 73.1 CFSM† 1.16 IN† 15.73

† Adjusted for change in contents in Everett Lake.

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 mi² (8,008 km²).

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No gage-height record, Oct. 1-22. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream (Reservoirs in Merrimack River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 5,234 ft³/s (148.2 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 102,500 ft³/s (2,900 m³/s) Sept. 23, 1938, gage height, 25.87 ft (7.885 m), from rating curve extended above 48,000 ft³/s (1,400 m³/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 ft³/s (2.78 m³/s) Oct. 11, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft³/s (4,250 m³/s) Mar. 20, 1936, gage height, 35.19 ft (10.726 m), from floodmarks, from rating curve extended above 48,000 ft³/s (1,400 m³/s) by method explained above.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34,200 ft³/s (969 m³/s) Feb. 26, gage height, 11.55 ft (3.520 m), no other peak above base of 22,000 ft³/s (620 m³/s); minimum daily discharge, 819 ft³/s (23.2 m³/s) Jan. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	920	2530	8000	1400	1440	25800	11000	6930	4020	1980	4300	1620
2	1300	2070	6000	2200	1980	21700	12700	7440	4130	1700	3200	1760
3	1500	1820	5200	1900	2690	19900	13600	7200	3910	1770	2700	1570
4	1700	1870	5000	1700	4650	18000	12800	7150	3110	1430	2600	1580
5	2000	1250	3760	950	4890	15200	11600	6510	2990	2740	3340	1570
6	2800	1760	4910	1300	4490	12300	12000	5770	2840	4820	3300	1470
7	2100	2370	4430	1500	3560	10100	13600	5120	3010	6690	3770	1170
8	1600	2000	3830	1610	2580	9230	11300	3830	2640	6590	3940	1150
9	1450	2100	3700	2240	2740	8580	8950	4310	3350	4590	2440	1870
10	1400	1900	3370	1800	2180	7480	7640	3530	3600	3310	2560	2360
11	1250	2100	3350	1730	2920	7270	7680	3440	3570	3170	4300	3100
12	1000	1900	3130	1610	5680	7010	6910	3920	3430	3010	4220	2510
13	880	1700	3470	1720	10900	6680	6640	5830	2790	3380	3810	2750
14	1000	1600	2470	1530	14500	6410	6050	10000	2970	2370	3380	2820
15	1500	1800	2690	1540	10400	5850	5780	9780	3110	2440	2890	1830
16	1300	1600	2540	1560	7570	5530	6560	9290	2020	3240	3040	1990
17	1400	1400	2690	819	6180	5690	6850	16100	2360	2910	8040	1850
18	1100	1800	2510	1590	5370	5210	6250	19200	2170	3500	8950	1950
19	1500	1900	2070	1380	5360	4990	6060	16000	1830	2920	6850	1170
20	1700	1900	2140	1350	5900	4840	6280	12000	1600	2790	4700	1570
21	1600	1500	2220	1560	12300	4630	6230	9200	1740	2890	3840	1480
22	1700	1500	1900	1250	24900	4570	5560	7610	2810	4670	3400	2100
23	1800	1700	2200	1390	26700	4540	5240	6260	3100	4000	3330	3660
24	1220	1600	2200	1420	25000	4360	4920	5080	3140	3670	3340	7730
25	1590	3000	1900	1430	28100	3750	5820	5020	2620	3580	2690	9610
26	3240	5000	1600	1310	32200	3780	7750	4140	2690	2580	2700	8220
27	5350	6500	1600	1480	32900	4260	8160	3530	3310	2480	2520	7020
28	6100	5000	1800	1250	29000	4130	7070	3360	3660	2980	1960	5860
29	4060	6000	2200	1410	---	5050	6690	3080	2670	3970	2350	5450
30	2330	8500	1800	1570	---	5160	6660	2470	2560	4300	1970	5680
31	2450	---	1800	1340	---	7480	---	3250	---	4500	1690	---
TOTAL	60840	77670	96480	46839	317080	259480	244350	216350	87750	104970	112120	94470
MEAN	1963	2589	3112	1511	11320	8370	8145	6979	2925	3386	3617	3149
MAX	6100	8500	8000	2240	32900	25800	13600	19200	4130	6690	8950	9610
MIN	880	1250	1600	819	1440	3750	4920	2470	1600	1430	1690	1150

CAL YR 1980 TOTAL 1218767 MEAN 3330 MAX 28500 MIN 517
WTR YR 1981 TOTAL 1718399 MEAN 4708 MAX 32900 MIN 819

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 poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 6.83 ft^3/s (0.193 m^3/s), 25.76 in/yr (654 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 (2.6 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.--Maximum discharge, 87 ft^3/s (2.46 m^3/s) Nov. 28, gage height, 5.52 ft (1.682 m), no peak above base of 110 ft^3/s (3.1 m^3/s); minimum, 0.36 ft^3/s (0.010 m^3/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	1.4	9.5	2.7	2.0	27	24	17	4.9	1.1	1.2	.65
2	.36	1.2	7.7	2.6	4.0	23	37	16	4.1	1.2	.95	.69
3	.36	1.2	8.2	2.4	7.0	20	25	14	3.8	12	.84	.76
4	1.3	1.2	9.0	2.3	13	23	21	12	3.6	15	.79	.79
5	.74	1.4	8.2	2.2	20	15	19	12	3.0	5.9	.79	.74
6	.56	1.2	5.3	2.1	17	13	30	11	3.2	3.2	.84	.65
7	.56	1.2	5.0	2.0	14	12	21	10	3.3	2.1	.74	.65
8	.51	1.2	4.7	2.1	10	11	18	9.5	2.7	2.3	.69	.65
9	.51	1.2	4.2	2.1	8.5	9.7	18	8.7	2.7	1.6	.90	3.5
10	.45	1.4	5.3	2.1	7.5	9.2	17	8.5	2.3	1.3	2.0	1.5
11	.51	1.4	6.4	2.0	6.5	8.7	16	8.2	2.0	1.4	1.2	1.1
12	.87	1.4	5.5	2.0	11	8.2	15	21	1.8	2.5	4.6	.95
13	.80	1.3	5.0	1.9	28	7.3	15	20	1.7	1.9	1.9	.84
14	.74	1.3	4.6	1.9	25	8.7	17	14	1.6	1.7	1.2	.95
15	.74	1.3	4.2	1.8	21	14	18	12	1.6	1.5	.95	1.1
16	.62	1.2	3.9	1.9	19	9.0	16	26	1.5	1.2	1.9	1.1
17	.56	1.1	3.7	1.9	16	14	17	29	1.2	.95	1.3	1.2
18	.62	2.2	3.5	1.9	14	13	18	14	1.1	1.2	1.0	1.0
19	1.1	1.4	3.4	2.0	12	12	16	11	1.0	2.9	.79	1.1
20	.93	1.2	3.3	2.0	11	9.5	15	9.5	1.2	2.7	.69	1.3
21	.93	1.2	3.2	2.0	14	8.2	15	8.7	2.0	5.9	.65	1.0
22	.93	1.2	3.0	1.9	18	8.2	14	7.7	3.5	3.0	.61	1.6
23	.87	1.2	2.9	1.8	23	8.5	14	7.0	4.2	1.9	.61	9.0
24	.80	2.1	2.9	1.7	33	9.0	20	6.1	2.3	1.3	.65	5.1
25	29	16	2.8	1.7	45	9.2	22	5.5	2.2	1.1	2.3	4.5
26	20	7.5	2.7	1.7	54	9.0	19	4.9	1.9	.95	1.3	4.0
27	5.2	4.6	2.6	1.6	45	13	16	4.2	1.3	1.8	.95	3.5
28	3.1	25	2.6	1.6	32	14	15	3.9	1.0	1.2	.79	3.2
29	2.3	25	2.6	1.6	---	18	15	4.1	.95	3.8	.69	3.0
30	1.9	13	2.7	1.5	---	32	21	4.2	1.0	2.8	.65	2.9
31	1.6	---	2.7	1.5	---	37	---	6.1	---	1.8	.69	---
TOTAL	79.87	123.2	141.3	60.5	530.5	433.4	564	345.8	68.65	89.20	35.16	59.02
MEAN	2.58	4.11	4.56	1.95	18.9	14.0	18.8	11.2	2.29	2.88	1.13	1.97
MAX	29	25	9.5	2.7	54	37	37	29	4.9	15	4.6	9.0
MIN	.36	1.1	2.6	1.5	2.0	7.3	14	3.9	.95	.95	.61	.65
CFSM	.72	1.14	1.27	.54	5.25	3.89	5.22	3.11	.64	.80	.31	.55
IN.	.83	1.27	1.46	.62	5.48	4.48	5.83	3.57	.71	.92	.36	.61

CAL YR 1980 TOTAL 1728.02 MEAN 4.72 MAX 82 MIN .12 CFSM 1.31 IN 17.85
WTR YR 1981 TOTAL 2530.60 MEAN 6.93 MAX 54 MIN .36 CFSM 1.93 IN 26.14

01096507 NASHUA RIVER AT NASHUA, NH

LOCATION.--Lat 42°45'49", long 71°27'19", Hillsborough County, Hydrologic Unit 07020002, on downstream side of Canal Street Bridge in Nashua, and 0.5 mi (0.8 km) upstream from mouth.

PERIOD OF RECORD.--Water years 1979 to September 1981 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MATERIAL (MG/KG)
DEC										
30...	0945	250	6.8	1.0	1.2	2	14.2	100	19	--
JAN										
15...	1330	295	6.6	.5	1.5	5	14.1	99	--	--
28...	0930	303	6.6	.8	--	--	14.1	99	--	--
FEB										
10...	0910	127	6.5	.5	1.2	8	13.8	98	10	--
23...	0930	133	6.7	1.2	1.9	15	13.8	99	25	--
MAR										
16...	0915	173	6.5	4.1	2.0	15	11.6	91	27	--
30...	0945	188	6.6	8.7	2.2	5	11.3	98	21	--
APR										
21...	0915	165	6.9	10.9	23	10	10.5	96	24	--
29...	0945	143	6.3	12.2	1.1	17	10.9	102	29	14000
MAY										
12...	0915	185	6.1	15.8	5.0	10	9.5	97	20	--
26...	0900	184	6.1	19.4	1.3	17	8.9	97	--	--
JUN										
23...	0920	208	6.2	22.0	1.9	15	8.4	98	18	--
29...	0950	148	6.0	21.6	.70	30	8.5	96	19	--
JUL										
14...	0920	143	6.3	24.8	.60	30	8.1	100	16	--
27...	0940	180	6.5	23.5	2.0	10	9.1	107	470	15000
AUG										
13...	1220	178	6.9	25.3	1.7	15	8.7	106	,10	--
31...	1000	232	6.9	21.6	1.8	5	9.1	105	,10	--
SEP										
15...	0915	238	6.8	20.5	1.0	10	9.0	100	30	--

01096507 NASHUA RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLATILE IN BOTTOM MATERIAL (MG/KG)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
DEC										
30...	20	45	--	--	--	1	155	--	--	--
JAN										
15...	177	180	--	--	--	6	181	--	--	--
28...	222	192	--	--	--	--	--	--	--	--
FEB										
10...	177	71	--	--	--	8	88	--	--	--
23...	580	2800	--	--	--	4	97	--	--	--
MAR										
16...	K14	1200	--	--	--	4	97	--	--	--
30...	K23	600	--	--	--	8	104	--	--	--
APR										
21...	18	21	--	--	--	8	104	--	--	--
29...	153	52	25	14	19	--	82	13500	.43	.250
MAY										
12...	200	5700	--	--	--	7	110	--	--	--
26...	K47	184	--	--	--	20	115	--	--	--
JUN										
23...	200	1670	--	--	--	16	134	--	--	--
29...	70	1040	--	--	--	12	105	--	--	--
JUL										
14...	--	1000	--	--	--	16	99	--	--	--
27...	--	740	--	18	27	11	120	15000	.91	.110
AUG										
13...	111	900	--	--	--	6	131	--	--	--
31...	K50	600	--	--	--	16	60	--	--	--
SEP										
15...	46	1660	--	--	--	11	2580	--	--	--

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHENOLS (UG/L)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)
DEC										
30...	--	--	--	--	.240	.74	--	1.91	.000	0
JAN										
15...	--	--	--	--	.500	1.5	--	2.45	.760	--
28...	--	--	--	--	--	--	--	1.37	.050	--
FEB										
10...	--	--	--	--	.110	.34	--	4.04	.000	1
23...	--	--	--	--	.120	.37	--	12.9	.630	1
MAR										
16...	--	--	--	--	.130	.40	--	3.77	.000	0
30...	--	--	--	--	.150	.46	--	10.4	.780	1
APR										
21...	--	--	--	--	.140	.43	--	17.0	2.37	2
29...	.69	.94	1.4	6.1	.120	.37	--	6.89	.000	0
MAY										
12...	--	--	--	--	.120	.37	--	33.8	6.87	1
26...	--	--	--	--	.110	.34	--	19.6	4.84	0
JUN										
23...	--	--	--	--	.120	.37	--	8.54	.550	1
29...	--	--	--	--	.140	.43	--	6.70	1.24	1
JUL										
14...	--	--	--	--	.140	.43	--	13.3	3.77	<3
27...	.67	.78	1.7	7.5	.120	.37	2	10.1	3.12	<1
AUG										
13...	--	--	--	--	.080	.25	--	9.75	.000	<1
31...	--	--	--	--	.070	.21	--	43.0	10.7	1
SEP										
15...	--	--	--	--	.090	.28	--	19.4	4.53	0

K, NON-IDEAL COLONY COUNT.

01096507 NASHUA RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
DEC											
30...	--	--	--	20	--	--	--	--	--	--	--
JAN											
15...	--	--	--	20	--	--	--	--	--	--	--
FEB											
10...	--	--	--	10	--	--	--	--	--	--	--
23...	--	--	--	20	--	--	--	--	--	--	--
MAR											
16...	--	--	--	10	--	--	--	--	--	--	--
30...	--	--	--	10	--	--	--	--	--	--	--
APR											
21...	--	--	--	20	--	--	--	--	--	--	--
29...	0	1	30	10	5	400	5	100	<.1	0	40
MAY											
12...	--	--	--	20	--	--	--	--	--	--	--
26...	--	--	--	20	--	--	--	--	--	--	--
JUN											
23...	--	--	--	20	--	--	--	--	--	--	--
29...	--	--	--	<10	--	--	--	--	--	--	--
JUL											
14...	--	--	--	10	--	--	--	--	--	--	--
27...	4	1	20	100	9	590	5	90	<.1	<1	30
AUG											
13...	--	--	--	20	--	--	--	--	--	--	--
31...	2	--	--	10	--	--	--	--	--	--	--
SEP											
15...	--	--	--	30	--	--	--	--	--	--	--

DATE	PCB, TOTAL (UG/L)	NAPH-THA-LENES, POLY-CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR-DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI-ELDRIN TOTAL (UG/L)	ENDO-SULFAN, TOTAL (UG/L)
APR									
29...	<.10	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01
JUL									
27...	<.10	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L)	HEPTA-CHLOR, TOTAL (UG/L)	HEPTA-CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METH-OXY-CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER-THANE TOTAL (UG/L)	TOX-APHENE, TOTAL (UG/L)
APR								
29...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.10
JUL								
27...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.10

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 (0.5 km) downstream from Nashua River.

DRAINAGE AREA.--3,480 mi² (9,013 km²), approximately.

PERIOD OF RECORD.--Water years 1974 to September 1981 (discontinued).

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	COLOR (PLATINUM-COBALT UNITS)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MATERIAL (MG/KG)
FEB										
10...	1030	63	6.6	.1	.50	5	14.0	98	<10	--
23...	1045	67	6.5	1.0	2.0	10	14.0	100	24	--
MAR										
16...	1030	67	6.2	3.2	.90	15	11.8	90	22	--
30...	1100	76	6.5	7.5	1.5	10	11.8	100	14	--
APR										
21...	1030	56	6.6	7.9	2.0	15	10.3	88	17	--
29...	1040	59	5.9	10.5	1.0	12	11.0	99	19	26000
MAY										
12...	1030	79	5.5	15.2	5.0	10	9.2	91	<10	--
26...	1015	60	5.4	17.9	1.2	20	8.8	94	--	--
JUN										
23...	1040	73	5.5	22.9	1.3	5	6.9	82	10	--
29...	1055	73	5.7	22.4	.80	5	8.0	91	10	--
JUL										
14...	1045	60	5.6	24.6	2.0	15	7.0	86	25	--
27...	1050	64	5.8	23.7	1.0	8	8.4	100	460	10000
AUG										
13...	1340	58	6.3	25.0	1.0	15	8.2	100	<10	--
31...	1110	69	6.3	21.8	1.2	10	8.2	94	<10	--
SEP										
15...	1030	67	6.5	21.2	.70	5	8.8	99	20	--

DATE	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	ALKALINITY FIELD (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUSPENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLATILE IN BOTTOM MATERIAL (MG/KG)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
FEB										
10...	137	94	--	--	--	8	48	--	--	--
23...	3700	970	--	--	--	1	73	--	--	--
MAR										
16...	580	212	--	--	--	5	63	--	--	--
30...	767	144	--	--	--	10	56	--	--	--
APR										
21...	450	120	--	--	--	11	87	--	--	--
29...	1133	199	15	6.9	9.1	--	48	21700	.18	.070
MAY										
12...	800	410	--	--	--	4	62	--	--	--
26...	569	109	--	--	--	45	115	--	--	--
JUN										
23...	3100	1870	--	--	--	14	62	--	--	--
29...	137	128	--	--	--	20	44	--	--	--
JUL										
14...	--	680	--	--	--	8	49	--	--	--
27...	420	96	--	6.7	11	6	52	10100	.21	.040
AUG										
13...	110	960	--	--	--	4	58	--	--	--
31...	1100	99	--	--	--	13	140	--	--	--
SEP										
15...	967	204	--	--	--	5	49	--	--	--

01096508 MERRIMACK RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITROGEN, ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS NO3)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHENOLS (UG/L)	CHLOR-A PHYTOPLANKTON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTOPLANKTON CHROMO FLUOROM (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVIMETRIC (MG/L)
FEB										
10...	--	--	--	--	.030	.09	--	1.36	.000	1
23...	--	--	--	--	.080	.25	--	3.91	.000	1
MAR										
16...	--	--	--	--	.030	.09	--	1.38	.000	1
30...	--	--	--	--	.050	.15	--	2.31	.060	2
APR										
21...	--	--	--	--	.050	.15	--	.000	.000	0
29...	.15	.22	.40	1.8	.050	.15	--	3.47	.000	7
MAY										
12...	--	--	--	--	.050	.15	--	7.61	.000	--
26...	--	--	--	--	.030	.09	--	4.05	.000	0
JUN										
23...	--	--	--	--	.100	.31	--	4.75	.000	0
29...	--	--	--	--	.030	.09	--	14.1	1.21	0
JUL										
14...	--	--	--	--	.070	.21	--	3.45	.430	0
27...	.28	.32	.53	2.3	.050	.15	<1	2.50	.410	--
AUG										
13...	--	--	--	--	.050	.15	--	3.03	.000	1
31...	--	--	--	--	.050	.15	--	5.42	.880	<1
SEP										
15...	--	--	--	--	.050	.15	--	2.69	.310	--

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
FEB											
10...	--	--	--	10	--	--	--	--	--	--	--
23...	--	--	--	20	--	--	--	--	--	--	--
MAR											
16...	--	--	--	10	--	--	--	--	--	--	--
30...	--	--	--	20	--	--	--	--	--	--	--
APR											
21...	--	--	--	10	--	--	--	--	--	--	--
29...	0	1	30	<10	4	250	1	40	<.1	0	30
MAY											
12...	--	--	--	10	--	--	--	--	--	--	--
26...	--	--	--	10	--	--	--	--	--	--	--
JUN											
23...	--	--	--	20	--	--	--	--	--	--	--
29...	--	--	--	20	--	--	--	--	--	--	--
JUL											
14...	--	--	--	10	--	--	--	--	--	--	--
27...	1	1	30	20	3	370	2	30	<.1	<1	90
AUG											
13...	--	--	--	20	--	--	--	--	--	--	--
31...	--	--	--	10	--	--	--	--	--	--	--
SEP											
15...	--	--	--	20	--	--	--	--	--	--	--

01096508 MERRIMACK RIVER AT NASHUA, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	PCB, TOTAL (UG/L)	NAPHTHALENES, POLYCHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLORDANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DIELDRIN TOTAL (UG/L)	ENDOSULFAN, TOTAL (UG/L)
APR 29...	<.10	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01
JUL 27...	<.10	<.10	<.01	<.10	<.01	<.01	<.01	<.01	<.01

DATE	ENDRIN, TOTAL (UG/L)	HEPTACHLOR, TOTAL (UG/L)	HEPTACHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	METHOXYCHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PERTHANE TOTAL (UG/L)	TOXAPHENE, TOTAL (UG/L)
APR 29...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.10
JUL 27...	<.01	<.01	<.01	<.01	<.01	<.01	<.01	<.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 ft³ (47,900,000 m³). 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 ft³ (190,000,000 m³). Records furnished by Corps of Engineers.

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

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 ft³ (15,800,000 m³). 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 ft³ (87,340,000 m³). 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 ft³ (56,750,000 m³). 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 ft³ (106,700,000 m³). 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, and March 1977.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

	Newfound Lake	Falls Reservoir	MacDowell Reservoir
Sept. 30, 1980	1044	108.9	7.3
Oct. 31	1107	124.2	14.4
Nov. 30	1272	211.7	25.8
Dec. 31	1054	115.4	12.2
Jan. 31, 1981	903	115.4	13.7
Feb. 28	163	868.6	97.7
Mar. 31	1438	264.0	19.1
Apr. 30	1507	154.6	10.1
May 31	1522	113.3	7.9
June 30	1453	104.5	3.7
July 31	1459	193.4	10.1
Aug. 31	1246	117.6	6.1
Sept. 30	1331	177.7	4.9

	Hopkinton Lake	Blackwater Reservoir	Everett Lake
Sept. 30, 1980	10.7	.2	45.3
Oct. 31	21.8	.9	56.0
Nov. 30	58.7	3.9	50.4
Dec. 31	21.8	.5	47.0
Jan. 31, 1981	17.4	.5	46.4
Feb. 28	839.6	271.8	164.7
Mar. 31	114.8	13.2	53.8
Apr. 30	45.3	2.2	50.4
May 31	23.6	1.0	48.7
June 30	15.3	.5	48.1
July 31	20.6	1.0	48.1
Aug. 31	11.0	.3	47.0
Sept. 30	0	1.0	50.4

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 mi² (16.47 km²).

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 and period of no gage-height record, Dec. 6 to Jan. 11, and Jan. 14 to Feb. 23, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1965-80), 15.9 ft³/s (0.450 m³/s), 33.95 in/yr (862 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft³/s (12.5 m³/s) May 3, 1967, gage height, 3.61 ft (1.100 m), from rating curve extended above 110 ft³/s (3.1 m³/s); maximum gage height, 5.02 ft (1.530 m) Dec. 27, 1969, ice jam; minimum discharge, about 0.90 ft³/s (0.025 m³/s) about Aug. 20, 21, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 180 ft³/s (5.1 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21	--	a*250	7.1	b*4.50	1.372	Aug. 17	1900	182	5.15	3.28	1.00

a From rating curve extended above 110 ft³/s (3.1 m³/s).
b Ice jam.

Minimum discharge, 2.4 ft³/s (0.068 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	16	11	4.9	2.9	28	43	10	25	8.4	8.4	3.9
2	7.6	14	10	4.7	7.0	13	60	11	18	7.2	6.4	3.9
3	10	15	20	4.6	16	12	48	9.6	15	6.4	7.6	3.7
4	18	12	53	4.4	13	23	66	9.2	25	9.2	30	3.2
5	30	15	59	4.3	9.2	21	101	9.8	29	16	57	3.0
6	18	16	36	4.1	7.0	18	80	11	23	16	80	2.8
7	13	14	25	4.0	6.0	7.2	40	12	25	13	42	2.6
8	12	36	18	3.9	5.4	6.0	32	9.0	23	9.6	26	2.4
9	11	28	15	3.8	4.5	5.6	40	8.0	29	6.8	22	7.1
10	10	23	14	3.7	4.0	5.6	58	7.2	28	6.4	37	5.6
11	9.6	19	13	3.7	20	5.6	34	6.4	24	4.6	25	7.1
12	12	17	11	3.6	35	4.6	27	6.8	23	3.8	28	5.6
13	14	16	9.6	3.6	25	4.6	18	12	23	17	20	4.4
14	12	15	8.4	3.5	19	4.6	16	13	20	31	17	3.7
15	11	13	7.6	3.5	15	10	20	10	18	21	14	3.4
16	9.5	12	7.0	3.4	13	5.2	14	17	17	13	51	3.0
17	8.5	12	6.8	3.4	11	4.6	11	38	17	9.2	97	2.8
18	10	11	6.7	3.4	12	5.6	20	26	17	8.0	83	2.8
19	13	10	6.6	3.3	14	6.4	23	20	14	7.2	33	3.2
20	12	9.6	6.6	3.3	30	6.4	16	17	13	6.0	22	6.5
21	11	12	6.5	3.3	200	5.6	12	15	12	5.6	16	5.9
22	11	7.6	6.4	3.3	100	4.0	8.4	13	23	5.6	13	10
23	11	10	6.3	3.2	70	3.8	7.6	13	83	4.6	11	27
24	9.2	9.6	6.2	3.2	53	3.3	10	11	33	3.5	9.7	58
25	11	31	6.0	3.2	56	3.3	11	10	24	3.3	9.0	26
26	64	24	5.8	3.2	41	3.8	11	17	21	3.0	7.4	15
27	45	30	5.7	3.1	28	3.5	9.2	15	20	9.6	6.8	14
28	29	14	5.5	3.1	28	3.3	7.6	13	16	4.9	6.2	19
29	23	16	5.4	3.1	---	3.8	7.6	11	12	25	5.3	17
30	19	13	5.3	3.0	---	13	8.8	14	10	27	5.0	12
31	17	---	5.1	3.0	---	53	---	31	---	13	3.9	---
TOTAL	499.8	490.8	408.5	111.8	845.0	297.4	860.2	426.0	680	324.9	799.7	284.6
MEAN	16.1	16.4	13.2	3.61	30.2	9.59	28.7	13.7	22.7	10.5	25.8	9.49
MAX	64	36	59	4.9	200	53	101	38	83	31	97	58
MIN	7.6	7.6	5.1	3.0	2.9	3.3	7.6	6.4	10	3.0	3.9	2.4
CFSM	2.53	2.58	2.08	.57	4.75	1.51	4.51	2.15	3.57	1.65	4.06	1.49
IN.	2.92	2.87	2.39	.65	4.94	1.74	5.03	2.49	3.98	1.90	4.68	1.66

CAL YR 1980 TOTAL 4907.6 MEAN 13.4 MAX 150 MIN 1.3 CFSM 2.11 IN 28.70
WTR YR 1981 TOTAL 6028.7 MEAN 16.5 MAX 200 MIN 2.4 CFSM 2.59 IN 35.26

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 except those for period of no gage-height record July 6 to Aug. 19, which are fair. Flow completely regulated by First Connecticut and Second Connecticut Lakes (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--64 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 (54 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, 566 ft^3/s (16.03 m^3/s) Feb. 5, gage height, 3.17 ft (0.966 m); minimum daily, 11 ft^3/s (0.31 m^3/s) Feb. 25 to Mar. 2, Apr. 3-9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	304	218	139	199	491	11	12	13	57	296	349	146
2	304	218	139	199	484	11	12	13	241	168	349	146
3	304	217	139	199	524	100	11	13	312	70	349	145
4	304	216	142	199	552	209	11	13	222	70	349	146
5	305	217	254	198	550	210	11	13	154	70	349	146
6	305	216	312	196	540	209	11	13	154	70	349	145
7	384	216	312	196	540	209	11	13	154	70	349	145
8	419	216	314	196	525	209	11	13	154	70	349	145
9	419	216	313	196	516	209	11	13	154	70	349	145
10	417	216	312	196	338	209	12	13	154	70	349	143
11	415	216	312	196	227	209	12	13	154	70	484	151
12	416	216	429	196	228	209	12	13	210	70	500	151
13	415	216	520	196	230	243	12	13	256	70	500	151
14	416	216	520	196	230	302	12	13	256	70	500	151
15	415	216	524	196	231	303	12	13	316	70	500	151
16	413	216	522	196	231	302	12	13	356	70	500	150
17	411	216	524	196	231	223	12	13	348	70	500	149
18	406	216	514	193	231	143	12	15	348	70	500	195
19	405	176	514	191	231	143	12	15	283	70	500	216
20	402	151	514	191	233	142	12	16	204	158	516	216
21	401	151	514	189	235	142	12	16	204	299	516	215
22	283	151	507	189	238	142	13	16	204	199	513	227
23	216	151	386	189	188	142	13	16	206	199	512	227
24	216	93	318	189	64	142	13	16	206	199	510	197
25	216	139	319	189	11	142	13	16	206	199	488	148
26	216	139	317	355	11	142	13	17	209	199	499	148
27	216	139	317	520	11	142	13	15	261	199	509	148
28	217	139	317	514	11	142	13	13	298	199	507	150
29	217	139	312	511	---	142	13	13	298	199	503	151
30	217	139	246	505	---	65	13	13	297	332	502	151
31	217	---	199	498	---	12	---	14	---	349	323	---
TOTAL	10211	5601	11021	7769	8132	5160	362	432	6876	4374	13872	4895
MEAN	329	187	356	251	290	166	12.1	13.9	229	141	447	163
MAX	419	218	524	520	552	303	13	17	356	349	516	227
MIN	216	93	139	189	11	11	11	13	57	70	323	143

CAL YR 1980 TOTAL 67009 MEAN 183 MAX 524 MIN 10
WTR YR 1981 TOTAL 78705 MEAN 216 MAX 552 MIN 11

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

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

REMARKS.--Records good. 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--25 years, 570 ft^3/s (16.14 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 (74 m^3/s); minimum daily, 30 ft^3/s (0.85 m^3/s) Aug. 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft^3/s (68.5 m^3/s) Feb. 21, gage height, 5.48 ft (1.670 m); minimum daily, 116 ft^3/s (3.29 m^3/s) May 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	668	690	415	880	750	869	695	217	378	830	567	543
2	661	680	400	870	540	831	880	209	232	508	550	538
3	559	655	547	870	340	863	655	189	179	259	542	532
4	500	655	559	865	385	957	595	170	286	254	603	529
5	628	547	609	520	415	990	790	152	531	452	562	525
6	559	430	642	520	480	1140	990	143	353	619	755	521
7	795	396	655	520	522	1130	421	182	538	449	616	518
8	967	571	628	520	508	1110	354	163	511	355	579	652
9	1030	590	901	510	556	1120	377	141	674	343	797	892
10	997	500	830	510	602	1120	644	147	831	288	808	897
11	858	467	795	510	550	1110	420	121	916	214	809	689
12	635	430	1100	510	570	1120	386	116	895	201	809	372
13	728	523	1000	505	961	1090	290	139	877	216	809	344
14	879	616	1050	500	1000	748	290	178	821	469	809	331
15	1020	603	1040	500	922	595	446	141	916	408	755	330
16	997	584	845	500	874	619	323	181	1030	281	808	326
17	982	571	640	500	889	539	286	315	1030	238	809	322
18	974	571	710	500	970	420	354	257	1030	221	809	319
19	974	440	690	520	1020	413	457	208	822	212	626	322
20	960	349	685	585	1030	380	323	177	493	249	805	334
21	960	340	680	610	1690	287	257	154	519	372	1140	343
22	960	349	680	595	1870	282	213	139	589	369	1160	383
23	565	332	740	642	1330	278	189	129	920	364	1130	466
24	555	349	775	725	1060	284	230	120	601	358	1110	854
25	975	675	780	755	1100	280	300	116	702	356	1100	399
26	445	578	720	749	977	280	257	157	668	354	1080	250
27	505	478	780	748	984	300	218	162	693	374	1070	224
28	535	450	780	750	884	295	194	137	652	372	1060	254
29	760	478	760	750	---	310	192	133	725	463	1050	225
30	720	450	880	750	---	405	251	136	847	620	1040	452
31	695	---	880	750	---	775	---	445	---	610	821	---
TOTAL	24046	15347	23196	19539	23779	20940	12277	5374	20259	11678	25988	13686
MEAN	776	512	748	630	849	675	409	173	675	377	838	456
MAX	1030	690	1100	880	1870	1140	990	445	1030	830	1160	897
MIN	445	332	400	500	340	278	189	116	179	201	542	224

CAL YR 1980 TOTAL 171683 MEAN 469 MAX 1310 MIN 68
WTR YR 1981 TOTAL 216109 MEAN 592 MAX 1870 MIN 116

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 and specific conductance were made during the year.

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

AVERAGE DISCHARGE.--33 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 (590 m^3/s) by slope-area method at site 0.5 mi (0.8 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft^3/s (99.12 m^3/s) Feb. 21, gage height, unknown; minimum daily, 15 ft^3/s (0.42 m^3/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	104	176	44	30	187	477	154	238	48	56	35
2	82	102	160	44	80	156	794	180	139	41	40	31
3	334	87	516	44	180	127	438	150	100	37	34	32
4	533	93	322	44	300	101	410	119	431	37	66	27
5	498	130	232	43	230	99	470	102	561	72	253	25
6	273	121	190	42	180	97	441	104	381	53	916	23
7	202	105	159	38	160	88	254	168	618	43	381	21
8	171	364	177	35	140	85	194	118	307	35	216	19
9	143	238	597	32	130	78	240	95	349	29	167	65
10	123	218	306	30	120	74	459	79	329	27	270	59
11	109	184	270	28	250	68	277	71	218	22	169	81
12	170	156	230	27	1000	56	264	71	178	18	216	64
13	206	138	200	26	900	54	180	92	168	53	129	48
14	159	129	170	24	700	50	191	93	132	249	110	37
15	130	114	150	24	600	49	286	74	111	139	99	33
16	113	103	130	23	540	46	165	139	105	65	851	31
17	106	94	120	22	480	42	162	278	121	41	1720	26
18	99	97	110	22	450	42	334	163	119	34	1550	23
19	102	89	98	21	600	40	343	130	83	30	448	23
20	101	84	90	21	1500	40	215	102	72	26	262	36
21	92	81	82	20	3430	39	182	87	132	24	174	43
22	93	83	76	20	1750	38	142	78	206	25	133	167
23	94	72	70	20	1070	38	127	70	438	23	106	381
24	84	90	66	19	872	40	208	64	167	20	94	1350
25	84	643	60	19	681	48	280	58	112	18	97	417
26	195	356	56	18	406	64	212	115	97	15	76	233
27	260	231	53	18	276	90	159	105	133	46	67	238
28	169	187	50	18	204	84	129	82	87	39	64	261
29	144	294	48	18	---	177	154	85	66	172	53	214
30	120	225	47	18	---	420	197	101	56	242	46	156
31	108	---	46	17	---	742	---	403	---	97	41	---
TOTAL	5182	5012	5057	839	17259	3359	8384	3730	6254	1820	8904	4199
MEAN	167	167	163	27.1	616	108	279	120	208	58.7	287	140
MAX	533	643	597	44	3430	742	794	403	618	249	1720	1350
MIN	82	72	46	17	30	38	127	58	56	15	34	19
CFSM	1.97	1.97	1.92	.32	7.25	1.27	3.28	1.41	2.45	.69	3.38	1.65
IN.	2.27	2.19	2.21	.37	7.55	1.47	3.67	1.63	2.74	.80	3.90	1.84

CAL YR 1980 TOTAL 51194.6 MEAN 140 MAX 1490 MIN 6.6 CFSM 1.65 IN 22.40
WTR YR 1981 TOTAL 69999.0 MEAN 192 MAX 3430 MIN 15 CFSM 2.26 IN 30.63

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 mi² (2,069 km²).

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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of no gage-height record Jan. 13 to Feb. 23, 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 1,580 ft³/s (44.75 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,700 ft³/s (813 m³/s) June 16, 1943, gage height, 14.67 ft (4.471 m) from rating curve extended above 15,000 ft³/s (420 m³/s); maximum gage height, 20.60 ft (6.279 m) Mar. 6, 1979, from floodmark in gage well (ice jam); minimum daily discharge, 108 ft³/s (3.06 m³/s) Sept. 29, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,000 ft³/s (480 m³/s) Feb. 21, maximum gage height, 16.4 ft (4.999 m) Feb. 12, from floodmark in gage well, ice jam; minimum daily discharge, 458 ft³/s (13.0 m³/s) July 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1530	1770	1230	1010	2410	3740	1330	2600	1180	1020	989
2	1150	1510	1560	1220	1010	2120	4290	1330	1530	1110	872	892
3	2160	1400	2630	1180	1180	1910	3990	1250	1100	640	840	851
4	2680	1380	2260	1090	1810	1780	3170	1050	1120	546	1290	813
5	3080	1640	1650	820	1400	1740	3660	933	3380	594	2290	789
6	2090	1530	1650	780	1300	1950	4290	888	2170	1400	4330	769
7	1840	1290	1640	750	1200	1930	2620	1110	3710	1340	3120	750
8	1820	2420	1770	730	1150	1850	1910	1040	2680	867	1830	737
9	1840	2560	3150	720	1100	1770	1710	866	2590	700	1620	1630
10	1730	2010	2960	710	1050	1750	2490	767	3370	979	2060	1600
11	1660	1770	2060	700	1050	1710	2170	721	2490	589	2040	1800
12	1520	1530	1620	690	2000	1670	2030	770	2170	458	2250	1190
13	1830	1400	1690	680	4000	1680	1590	1030	2130	474	2060	896
14	1660	1510	1780	680	3300	1420	1440	1170	1870	1500	1900	760
15	1800	1460	1620	690	2800	991	2160	940	1640	1550	1790	708
16	1720	1370	1540	690	2300	1200	1660	1330	1950	905	4370	667
17	1670	1270	1400	700	2200	959	1400	2720	1890	642	5580	628
18	1680	1300	1320	710	3100	812	1680	2010	1790	536	7620	605
19	1810	1250	1220	730	3900	828	2520	1450	1600	500	4880	602
20	1710	1040	1200	750	3000	869	1870	1150	1150	463	3030	747
21	1670	982	1160	770	7000	731	1550	960	1410	540	2270	740
22	1610	1000	1150	800	13000	685	1280	832	1460	656	2090	1050
23	1270	932	1160	830	9000	661	1130	807	2750	608	1910	2610
24	1160	989	1170	850	7000	687	1340	718	1740	555	1820	5500
25	984	3070	1180	880	6100	701	2080	648	1440	528	2050	3850
26	1940	2840	1200	890	4410	739	1910	919	1340	509	1770	2010
27	2630	1850	1220	900	3340	850	1520	1010	1520	633	1630	1470
28	2050	1730	1240	900	2550	846	1280	876	1330	655	1600	1830
29	1930	2420	1250	910	---	1030	1210	733	1130	1130	1520	1680
30	1710	2180	1250	910	---	2310	1470	707	1230	2060	1460	1360
31	1570	---	1240	920	---	4090	---	2180	---	1440	1420	---
TOTAL	55154	49163	49710	25810	92260	44679	65160	34245	58280	26287	74332	40523
MEAN	1779	1639	1604	833	3295	1441	2172	1105	1943	848	2398	1351
MAX	3080	3070	3150	1230	13000	4090	4290	2720	3710	2060	7620	5500
MIN	984	932	1150	680	1010	661	1130	648	1100	458	840	602

CAL YR 1980 TOTAL 467199 MEAN 1277 MAX 7800 MIN 308
WTR YR 1981 TOTAL 615603 MEAN 1687 MAX 13000 MIN 458

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 November 1980 (discontinued).
Water-quality records: Water year 1955.

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

REMARKS.--Records 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 473 ft^3/s (13.40 m^3/s), 27.69 in/yr (703 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 (160 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV
1	313	426
2	295	403
3	392	365
4	798	360
5	805	421
6	521	432
7	444	381
8	403	668
9	365	700
10	326	555
11	308	501
12	345	432
13	392	392
14	345	371
15	308	350
16	295	331
17	295	308
18	313	304
19	450	326
20	403	322
21	403	317
22	350	313
23	341	291
24	313	299
25	317	790
26	929	660
27	1130	494
28	432	456
29	562	521
30	488	507
31	444	---
TOTAL	13825	12996
MEAN	446	433
MAX	1130	790
MIN	295	291
CFSM	1.92	1.87
IN.	2.22	2.08
(†)	1.95	3.06

† 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) National Geodetic Vertical Datum of 1929. 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 and period of no gage-height record, Jan. 19 to Feb. 24, Aug. 25 to Sept. 30, 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--54 years, 2,903 ft^3/s (82.21 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, 20,700 ft^3/s (586 m^3/s) Feb. 24, gage height, 18.00 ft (5.486 m); from floodmark; minimum daily, 714 ft^3/s (20.2 m^3/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2140	2790	3400	1700	1350	4730	8970	3430	5470	1350	2060	1580
2	1880	2670	3300	1700	1850	4190	8580	3110	3860	1100	1690	1740
3	2640	2460	4500	1600	2500	3690	9040	3050	2550	1640	1160	1400
4	4850	2210	5600	1400	3650	3070	7160	2920	2210	980	1160	1100
5	5960	2310	2600	1200	2500	2860	7200	2470	3180	1200	1470	1300
6	4650	2660	2750	1140	2600	3150	9200	2350	4140	1500	3210	1200
7	3600	2510	3000	1160	2240	3160	8110	2310	4070	2750	5120	1100
8	3100	2820	2800	1100	1950	3020	5300	2360	5100	1800	3200	1240
9	3030	5390	3650	1020	1950	2850	4400	2270	4080	1600	2700	1320
10	2740	4280	4790	1100	1800	2250	4840	2030	5470	900	2600	2710
11	2630	3610	4360	1000	1750	2580	5480	1970	4830	1350	2800	2250
12	2670	3180	3150	960	5550	2600	4880	2140	3580	1100	2810	2370
13	2830	2930	2710	840	7950	2540	4240	1660	3740	900	3060	2010
14	2740	2620	2700	720	6950	2530	3410	2660	3570	1500	2410	1530
15	2580	2330	2400	980	5750	2060	4430	2520	2950	2200	2690	1330
16	2680	2380	2200	740	4650	1930	4340	3110	2690	2100	4200	1090
17	2610	2110	2100	850	4050	1940	3370	7090	3300	1120	8200	910
18	2560	2110	2050	900	5450	1500	3470	6930	2700	1180	8320	1200
19	2950	2090	1950	850	5850	1330	5080	4430	2400	1000	8460	932
20	3130	2010	1900	950	5450	1530	4840	3520	2500	940	6630	1110
21	2860	1890	1800	890	8540	1580	3880	2790	2400	950	3850	1220
22	2610	1700	1680	950	11400	1600	3270	2530	2700	1400	3380	1290
23	2480	1680	1650	900	14600	1350	2840	2380	3300	1200	3040	6460
24	2070	1750	1650	900	18900	1320	3070	2260	3500	1080	2760	7120
25	1990	4500	1900	1050	17500	1500	4560	2040	2200	803	2770	8340
26	3240	7000	1880	900	10700	1490	4690	1870	2000	816	2780	6150
27	5800	4500	1800	1150	7610	1590	3910	1940	2200	1070	2420	3700
28	4660	3400	1750	1200	5560	1720	3300	2110	2250	714	2270	3840
29	3950	5000	1700	1100	---	1830	3010	1660	2050	1400	2170	4490
30	3340	5600	1750	950	---	4510	3440	1400	1810	2020	2090	3770
31	2910	---	1780	900	---	8020	---	2480	---	2720	1960	---
TOTAL	97880	92490	81250	32800	170600	80020	152310	85790	96800	42383	103440	75802
MEAN	3157	3083	2621	1058	6093	2581	5077	2767	3227	1367	3337	2527
MAX	5960	7000	5600	1700	18900	8020	9200	7090	5470	2750	8460	8340
MIN	1880	1680	1650	720	1350	1320	2840	1400	1810	714	1160	910

CAL YR 1980 TOTAL 841508 MEAN 2299 MAX 11100 MIN 465
WTR YR 1981 TOTAL 1111565 MEAN 3045 MAX 18900 MIN 714

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 mi² (194.7 km²).

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period and period of no gage-height record Sept. 27-30, which are fair.

AVERAGE DISCHARGE.--34 years, 142 ft³/s (4.021 m³/s), 25.64 in/yr (651 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft³/s (123 m³/s) July 1, 1973, gage height, 12.04 ft (3.670 m); minimum, 2.6 ft³/s (0.10 m³/s) Aug. 21, 22, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,000 ft³/s (28 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	--	1200	34.0	ice jam		Feb. 21	2400	*1570	44.5	8.67	2.643
Feb. 13	1200	ice jam		*10.04	3.060						

Minimum discharge, 12 ft³/s (0.34 m³/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	112	219	54	20	198	593	177	301	35	36	28
2	103	107	177	46	50	165	506	206	139	32	24	27
3	274	96	340	41	600	141	462	180	97	26	19	25
4	402	94	270	37	240	117	348	142	79	25	33	22
5	498	132	230	34	180	109	361	125	177	30	73	20
6	277	136	200	30	160	107	405	121	129	174	166	18
7	192	111	170	31	160	101	258	151	266	146	98	17
8	158	306	160	33	140	95	196	128	226	66	63	16
9	132	369	310	32	120	86	189	111	203	43	59	169
10	114	229	210	31	110	83	301	101	251	39	77	148
11	107	192	170	30	150	80	241	105	168	31	63	153
12	136	154	120	31	950	75	258	157	121	24	71	120
13	154	132	130	31	600	73	190	282	198	24	57	125
14	127	123	110	31	400	69	174	276	149	46	40	78
15	109	114	82	30	300	69	260	175	106	42	38	61
16	100	102	86	29	260	71	181	226	115	32	499	52
17	97	90	92	28	240	56	155	431	130	24	575	44
18	100	92	86	28	320	56	229	307	103	20	377	40
19	141	90	84	27	400	53	345	201	79	19	149	38
20	118	86	80	27	600	51	228	159	66	18	93	61
21	103	84	82	26	1330	49	189	134	96	28	72	64
22	93	81	80	26	1270	50	151	120	102	42	55	126
23	86	77	78	25	826	52	135	110	138	27	45	464
24	79	84	74	25	609	57	204	99	87	20	47	345
25	75	395	70	24	742	59	278	89	64	16	112	194
26	194	486	64	24	637	70	260	108	64	13	76	129
27	329	265	62	23	369	83	196	97	89	17	51	100
28	210	195	60	22	241	86	161	90	70	19	43	160
29	159	386	58	21	---	117	171	79	51	42	37	150
30	131	353	58	20	---	400	229	74	41	117	32	110
31	115	---	56	20	---	637	---	236	---	66	29	---
TOTAL	5027	5273	4068	917	12024	3515	7854	4997	3905	1303	3209	3104
MEAN	162	176	131	29.6	429	113	262	161	130	42.0	104	103
MAX	498	486	340	54	1330	637	593	431	301	174	575	464
MIN	75	77	56	20	20	49	135	74	41	13	19	16
CFSM	2.15	2.34	1.74	.39	5.71	1.50	3.48	2.14	1.73	.56	1.38	1.37
IN.	2.49	2.61	2.01	.45	5.95	1.74	3.89	2.47	1.93	.64	1.59	1.54

CAL YR 1980 TOTAL 46994 MEAN 128 MAX 1190 MIN 12 CFSM 1.70 IN 23.25
WTR YR 1981 TOTAL 55196 MEAN 151 MAX 1330 MIN 13 CFSM 2.01 IN 27.30

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 mi² (332 km²).

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 fair except those for winter period and periods of no gage-height record, Dec. 26 to Mar. 31, May 18 to July 2, which are poor.

AVERAGE DISCHARGE.--53 years, 219 ft³/s (6.202 m³/s), 23.23 in/yr (590 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,820 ft³/s (165 m³/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 ft³/s (0.18 m³/s) Sept. 17, 18, 1948, Aug. 27, 28, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,700 ft³/s (48 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 2	1830	ice jam		*5.79	1.765	Feb. 21	--	*2300	65	unknown	
Feb. 12	--	1800	51	ice jam							

Minimum discharge, 22 ft³/s (0.62 m³/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	153	337	64	25	280	900	273	430	50	54	39
2	145	147	240	54	76	240	776	293	200	45	37	37
3	319	133	400	48	900	190	693	267	140	38	30	34
4	572	131	370	44	370	160	501	205	112	36	40	31
5	667	156	260	40	270	150	520	174	248	44	51	28
6	405	171	230	36	250	135	584	163	185	120	158	26
7	266	155	200	37	240	130	397	183	375	237	124	25
8	216	426	190	39	210	125	280	169	325	105	76	24
9	186	458	330	38	180	120	261	144	290	69	70	169
10	163	316	250	37	170	115	413	129	360	67	137	226
11	151	259	200	36	230	115	367	133	240	47	96	177
12	174	212	145	37	1400	110	382	210	175	37	76	153
13	203	188	150	37	920	105	286	473	280	36	72	148
14	174	176	130	37	700	100	243	438	200	57	51	106
15	151	166	98	36	450	97	346	273	150	59	76	89
16	136	150	105	34	400	100	267	438	165	48	861	71
17	130	128	110	34	370	80	215	655	180	38	834	58
18	137	129	100	33	500	78	306	510	140	31	561	52
19	181	130	99	32	610	72	491	300	110	29	232	53
20	170	125	94	32	900	69	339	240	95	28	139	71
21	148	113	98	31	2000	67	261	190	140	40	105	79
22	133	123	96	31	1880	65	205	170	148	52	78	191
23	122	107	92	30	1200	70	183	153	195	44	63	667
24	111	142	88	30	900	78	293	140	126	32	63	551
25	121	587	82	29	1070	80	421	140	92	26	137	325
26	299	679	76	28	940	100	397	152	93	23	115	195
27	383	337	74	27	520	120	300	140	126	24	73	158
28	256	315	70	27	340	120	237	130	100	26	59	280
29	206	633	69	26	---	170	249	112	70	43	51	261
30	175	556	70	26	---	600	346	108	59	129	45	177
31	159	---	66	25	---	990	---	340	---	102	41	---
TOTAL	6816	7501	4919	1095	18021	5031	11459	7445	5549	1762	4605	4501
MEAN	220	250	159	35.3	644	162	382	240	185	56.8	149	150
MAX	667	679	400	64	2000	990	900	655	430	237	861	667
MIN	111	107	66	25	25	65	183	108	59	23	30	24
CFSM	1.72	1.95	1.24	.28	5.03	1.27	2.98	1.88	1.45	.44	1.16	1.17
IN.	1.98	2.18	1.43	.32	5.24	1.46	3.33	2.16	1.61	.51	1.34	1.31

CAL YR 1980 TOTAL 64649 MEAN 177 MAX 1550 MIN 16 CFSM 1.38 IN 18.79
WTR YR 1981 TOTAL 78704 MEAN 216 MAX 2000 MIN 23 CFSM 1.69 IN 22.87

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 mi² (1.129 km²).

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 good except those for winter period, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 735 ft³/s (20.82 m³/s), 22.89 in/yr (581 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,200 ft³/s (515 m³/s) July 1, 1973, gage height, 23.49 ft (7.160 m), from rating curve extended above 14,000 ft³/s (400 m³/s) on basis of computation of flow over dam at gage height 21.23 ft (6.471 m); minimum daily, 13 ft³/s (0.37 m³/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 ft³/s (140 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	--	5200	147	ice jam		Feb. 21	1315	*8900	252	a*15.13	4.612

a Ice jam.

Minimum discharge, 15 ft³/s (0.42 m³/s) July 25, Sept. 5, 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	429	552	1050	360	190	1200	1880	891	1280	232	211	181
2	393	536	830	310	1000	1030	2320	963	753	226	143	164
3	1030	492	1690	280	2300	878	1700	917	611	165	163	157
4	1540	478	1350	250	1200	717	1430	723	679	209	161	175
5	1510	551	1050	230	910	841	1490	678	990	214	360	124
6	981	605	1000	200	810	828	1560	652	777	406	838	118
7	730	548	830	210	880	763	1170	717	1350	574	527	140
8	619	1390	800	220	820	700	956	673	1120	302	310	145
9	542	1320	1550	200	760	657	904	613	1010	232	311	620
10	488	988	1330	190	600	636	1300	521	1090	294	609	701
11	451	868	860	180	1200	619	1140	531	835	263	478	613
12	489	717	790	190	4700	585	1190	970	653	146	368	551
13	599	628	820	180	3000	574	943	2850	872	157	348	539
14	514	613	680	180	2000	552	841	1770	760	283	245	412
15	466	567	550	190	1500	401	1080	1110	603	311	253	341
16	425	539	580	190	1300	590	859	2230	551	248	2360	269
17	430	448	620	190	1200	375	768	2450	618	133	1630	262
18	417	442	580	190	1600	423	1070	1540	538	146	1250	224
19	565	526	560	200	2000	466	1310	1140	439	149	713	224
20	514	604	540	190	3000	401	990	960	345	159	514	400
21	465	592	540	200	7500	391	859	835	527	186	360	388
22	428	642	560	190	7000	391	740	775	579	254	358	705
23	399	556	580	200	5200	380	717	682	702	161	272	1770
24	352	453	520	190	2960	457	1100	651	516	146	277	1310
25	333	1880	450	190	4380	452	1330	589	404	130	409	880
26	1080	1510	430	190	2790	486	1170	634	336	126	387	603
27	1540	846	420	200	1770	552	943	654	475	132	239	533
28	967	892	400	210	1260	601	804	587	429	145	237	810
29	763	2060	390	210	---	792	859	535	354	203	212	729
30	638	1450	390	200	---	1760	1090	490	272	583	197	532
31	573	---	380	190	---	2510	---	1260	---	433	199	---
TOTAL	20670	24293	23120	6500	63830	22008	34513	30591	20468	7348	14939	14620
MEAN	667	810	746	210	2280	710	1150	987	682	237	482	487
MAX	1540	2060	1690	360	7500	2510	2320	2850	1350	583	2360	1770
MIN	333	442	380	180	190	375	717	490	272	126	143	118
CFSM	1.53	1.86	1.71	.48	5.23	1.63	2.64	2.26	1.56	.54	1.11	1.12
IN.	1.76	2.07	1.97	.55	5.45	1.88	2.94	2.61	1.75	.63	1.27	1.25

CAL YR 1980 TOTAL 232873 MEAN 636 MAX 4280 MIN 86 CFSM 1.46 IN 19.87
WTR YR 1981 TOTAL 282900 MEAN 775 MAX 7500 MIN 118 CFSM 1.78 IN 24.14

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 mi² (226.9 km²).

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

AVERAGE DISCHARGE.--42 years, 208 ft³/s (5.891 m³/s), 32.24 in/yr (819 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,800 ft³/s (306 m³/s) Oct. 24, 1959, gage height, 12.09 ft (3.685 m), from rating curve extended above 4,100 ft³/s (116 m³/s) on basis of slope-area measurement of peak flow; minimum, 16 ft³/s (0.45 m³/s) Nov. 14, 1952 (caused by anchor ice upstream).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76.5 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0100	*5830	165	9.00	2.74	Feb. 21	0500	4960	140	8.35	2.55

Minimum discharge, 40 ft³/s (1.13 m³/s) Jan. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	194	232	87	42	210	632	287	267	77	118	88
2	100	176	207	87	150	190	953	290	187	73	98	83
3	166	156	422	84	600	180	575	270	160	69	88	77
4	379	155	257	76	200	169	827	259	151	67	99	73
5	271	194	197	72	140	172	1380	293	182	97	113	69
6	194	164	180	66	110	177	1080	315	166	477	350	65
7	164	147	167	67	95	175	508	278	247	244	336	62
8	143	235	194	68	85	158	386	225	194	141	223	63
9	130	221	392	64	80	147	429	205	424	112	176	215
10	119	205	251	61	75	141	606	194	502	110	251	134
11	106	181	168	61	700	136	555	221	299	91	192	124
12	114	156	141	66	2300	131	592	409	232	82	199	106
13	155	143	145	62	900	127	366	696	265	94	155	93
14	127	140	125	56	400	119	329	401	212	141	138	84
15	113	134	100	55	200	110	366	297	183	139	124	159
16	106	122	130	54	150	119	265	1270	171	100	1010	103
17	104	110	125	55	110	103	250	1640	165	83	1030	88
18	125	118	120	56	150	100	377	671	144	77	658	86
19	212	109	100	54	400	104	442	452	126	80	357	87
20	160	108	90	53	1000	103	305	349	121	76	265	128
21	148	104	100	51	2700	99	260	292	173	141	218	136
22	130	104	100	50	2000	96	226	261	156	136	185	496
23	118	100	105	50	1400	95	221	242	168	107	165	800
24	109	125	100	49	1800	99	389	216	129	86	150	767
25	165	903	100	49	2200	98	499	196	113	76	164	722
26	1900	391	98	48	1000	100	395	186	120	70	134	376
27	556	237	92	49	600	110	319	175	121	139	120	283
28	337	230	90	48	350	106	283	164	104	109	114	811
29	267	597	94	44	---	226	322	154	91	158	102	443
30	226	310	96	46	---	905	360	156	83	243	95	309
31	203	---	90	43	---	1270	---	315	---	168	90	---
TOTAL	7251	6269	4808	1831	19937	6075	14497	11379	5656	3863	7517	7130
MEAN	234	209	155	59.1	712	196	483	367	189	125	242	238
MAX	1900	903	422	87	2700	1270	1380	1640	502	477	1030	811
MIN	100	100	90	43	42	95	221	154	83	67	88	62
CFSM	2.67	2.39	1.77	.68	8.13	2.24	5.51	4.19	2.16	1.43	2.76	2.72
IN.	3.08	2.66	2.04	.78	8.47	2.58	6.16	4.83	2.40	1.64	3.19	3.03

CAL YR 1980 TOTAL 56429 MEAN 154 MAX 2020 MIN 25 CFSM 1.76 IN 23.96
WTR YR 1981 TOTAL 96213 MEAN 264 MAX 2700 MIN 42 CFSM 3.01 IN 40.86

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 mi² (6,848 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 399.75 ft (121.844 m) National Geodetic Vertical Datum of 1929.

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 ft³ (419,000,000 m³).

AVERAGE DISCHARGE.--32 years, 4,692 ft³/s (132.9 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft³/s (1,620 m³/s) July 1, 1973, gage height, 17.35 ft (5.288 m), from peak-stage indicator; minimum daily, 152 ft³/s (4.30 m³/s) Aug. 28, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,200 ft³/s (827 m³/s) Feb. 25, gage height, 9.71 ft (2.960 m); maximum gage height, 13.47 ft (4.106 m); Feb. 12, ice jam; minimum daily, 517 ft³/s (14.6 m³/s) July 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3790	3610	7140	1500	790	12900	8470	5450	6510	3670	2980	3220
2	4110	2750	6840	1200	4000	8810	9470	4490	6140	3650	2240	3420
3	4250	3770	8350	1100	7000	6520	8240	3770	5420	1640	1620	3480
4	5120	3990	8300	2700	4500	6460	8180	5230	4720	618	1540	2200
5	5660	4420	7030	3800	4300	6410	9200	6160	5840	748	2180	1230
6	6450	3330	5640	2400	3500	6720	10300	5600	4170	2590	3480	1120
7	6330	3560	3980	2100	2500	5040	9010	4490	4910	3950	4810	661
8	6310	4320	5410	2300	1500	4210	9140	4660	6760	4130	4270	1860
9	5760	5790	6600	2500	4000	5050	8640	2770	6700	3100	4350	2920
10	4700	4910	6780	1000	4700	5240	8180	1490	7800	3010	6040	3220
11	3530	5950	6720	600	5000	5000	7610	4410	7180	1320	5420	2650
12	1740	4880	6200	2600	17000	4950	7950	6130	6900	904	5510	1980
13	2660	4940	4180	1700	14000	5030	7420	8920	6720	2650	4350	1560
14	4510	4620	2540	2100	12000	4810	7190	7750	6530	2960	4180	2690
15	4290	3100	4600	1800	10000	4580	7290	6350	5140	2510	3270	3590
16	4070	1820	4400	1700	8400	4250	7020	8270	4780	2080	8340	3340
17	4460	3410	4200	900	7100	4790	6950	9030	5880	2050	10600	2480
18	3880	3840	4400	880	6600	4490	5290	8610	3720	517	13000	2270
19	2050	4000	4500	1300	6400	4230	4880	7570	4660	602	11700	2080
20	5170	3630	3300	1250	8000	2850	7150	7190	1790	2630	10100	1140
21	5000	3550	2700	1400	18000	1850	6880	7020	1890	1760	6900	3250
22	4800	3310	4000	1300	19000	2050	4930	6880	2950	1810	5050	4420
23	5000	1680	3500	1350	19000	2450	5450	4930	4930	1180	3210	11200
24	4700	3080	2900	1050	23000	3440	7290	2330	4540	1060	4700	11500
25	4210	6410	3100	660	25700	5010	7970	2140	4680	597	5130	13700
26	4940	7980	4100	1750	18800	5540	7220	4580	4690	670	4390	10100
27	6370	7050	2900	1900	13600	5950	7360	4730	3500	2410	3790	7060
28	6970	6710	2400	1700	13000	4890	6980	5970	1850	2210	3260	7970
29	6630	8170	2800	1500	---	3150	6060	3730	2760	2420	1250	8160
30	6130	7700	3000	1400	---	6690	5660	1580	4270	4490	742	7520
31	6200	---	2800	1150	---	10600	---	2930	---	4100	3210	---
TOTAL	149790	136280	145310	50590	281390	163960	223380	165160	148330	68036	151612	131991
MEAN	4832	4543	4687	1632	10050	5289	7446	5328	4944	2195	4891	4400
MAX	6970	8170	8350	3800	25700	12900	10300	9030	7800	4490	13000	13700
MIN	1740	1680	2400	600	790	1850	4880	1490	1790	517	742	661

CAL YR 1980 TOTAL 1343220 MEAN 3670 MAX 17000 MIN 246
WTR YR 1981 TOTAL 1815829 MEAN 4975 MAX 25700 MIN 517

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1957, 1979 to current year.
PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1979 to current year.
WATER TEMPERATURE: October 1979 to current year.
INSTRUMENTATION.--Water-quality monitor since October 1979.
REMARKS.--Interruptions in the record were due to malfunctions of the instrument.
EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 159 micromhos June 22, 23, 1981; minimum recorded, 45 micromhos Feb. 12, 1981.
WATER TEMPERATURES: Maximum recorded, 23.0°C July 24, Aug. 4, 1981; minimum recorded, 0.0°C on many days during winter periods.
EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 159 micromhos June 22, 23; minimum recorded, 45 micromhos Feb. 12.
WATER TEMPERATURES: Maximum recorded, 23.0°C July 24, Aug. 4; minimum recorded, 0.0°C on many days during winter period.
REVISIONS.--The minimum and mean daily specific conductance values for the 1980 water year have been revised, as shown in the table on a following page, superseding values published in the report for 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
02...	1400	4380	--	--	12.0	--	--	--	--	--	--	--
24...	1200	3530	--	--	6.0	--	--	--	--	--	--	--
NOV												
25...	1230	8040	69	6.6	3.0	.50	13.2	100	208	403	25	11
JAN												
21...	1030	--	--	--	.0	--	--	--	--	--	--	--
MAR												
02...	1300	7560	--	--	2.0	--	--	--	--	--	--	--
31...	1215	10800	54	6.9	3.2	150	13.1	99	157	90	38	--
MAY												
27...	1330	6130	77	6.7	13.0	1.3	10.0	96	K64	K10	23	--
27...	1345	--	--	--	--	--	--	--	--	--	--	--
JUL												
14...	1230	2380	--	--	23.0	--	--	--	--	--	--	--
28...	1130	1410	107	7.3	21.3	1.3	8.6	99	470	108	35	--
AUG												
18...	1200	12700	--	--	19.5	--	--	--	--	--	--	--
SEP												
09...	0915	1850	--	--	19.5	--	--	--	--	--	--	--
30...	1100	7430	58	6.1	13.1	2.4	11.2	108	370	150	30	--

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
25...	8.3	1.1	3.8	24	.3	.9	14	7.9	5.4	.1	7.3
JAN											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
31...	12	1.9	1.9	10	.1	1.1	27	6.1	3.6	<.1	4.6
MAY											
27...	7.5	1.0	3.0	21	.3	.8	17	6.5	3.7	<.1	5.6
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
28...	12	1.2	5.6	25	.4	1.1	24	7.0	8.1	.1	5.8
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
30...	9.7	1.3	4.2	23	.3	.9	20	6.2	3.5	<.1	6.9

K, NON-IDEAL COLONY COUNT.

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
25...	56	45	.30	.32	.040	.010	.18	.32	.51	.36	.17
JAN											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
31...	60	47	.49	--	.060	--	--	1.0	--	1.10	--
MAY											
27...	40	40	.34	.31	.040	.030	.13	.27	.47	.31	.15
27...	--	--	--	--	--	--	--	--	--	--	--
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
28...	69	56	.23	.22	.050	.010	.29	.42	.52	.47	.17
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
30...	61	46	.26	.26	.040	.060	.35	.52	.67	.56	.15

DATE	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS TOTAL (MG/L AS PO4)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
02...	--	--	--	--	--	--	--	--	--	--	--
24...	--	--	--	--	--	--	--	--	--	--	--
NOV											
25...	.19	.66	.030	.09	.000	--	1.5	6.7	105	2280	67
JAN											
21...	--	--	--	--	--	--	--	--	--	--	--
MAR											
02...	--	--	--	--	--	--	--	--	--	--	--
31...	--	1.6	.090	.28	--	5.8	--	--	24	700	87
MAY											
27...	.16	.65	.010	.03	<.010	--	.4	5.0	--	--	--
27...	--	--	--	--	--	--	--	--	6	--	91
JUL											
14...	--	--	--	--	--	--	--	--	--	--	--
28...	.30	.70	.050	.15	.030	--	.3	2.8	3	11	100
AUG											
18...	--	--	--	--	--	--	--	--	--	--	--
SEP											
09...	--	--	--	--	--	--	--	--	--	--	--
30...	.41	.82	.010	.03	<.010	--	.5	5.2	7	140	60

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS-PENDED TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, SUS-PENDED RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM SUS-PENDED RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)
NOV										
25...	1	0	2	100	80	20	0	0	0	20
MAY										
27...	0	0	1	100	80	20	1	--	<1	20
JUL										
28...	1	0	2	100	80	20	1	0	1	<10
SEP										
30...	1	0	1	100	90	9	2	--	<1	30

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
NOV 25...	<10	4	1	3	0	0	0	540	450	90
MAY 27...	<10	3	3	0	2	0	3	260	210	50
JUL 28...	10	1	0	1	5	2	3	380	340	40
SEP 30...	<10	1	--	<1	10	7	3	440	320	120

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
NOV 25...	5	0	5	60	40	20	<.1	<.1	2	0
MAY 27...	2	2	0	20	10	10	<.1	<.1	13	6
JUL 28...	16	8	8	30	20	8	<.1	<.1	5	0
SEP 30...	17	--	<1	50	20	28	<.1	<.1	7	--

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 25...	2	0	0	0	0	0	2	10	5	5
MAY 27...	7	0	0	0	0	0	0	10	3	7
JUL 28...	5	<1	--	<1	<1	--	<1	20	20	4
SEP 30...	<1	<1	--	<1	1	--	<1	70	--	<4

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE	NOV 25,80	MAR 31,81	MAY 27,81	JUL 28,81	SEP 30,81
TIME	1230	1215	1330	1130	1100
TOTAL CELLS/ML	1000	77	240	1800	2900
DIVERSITY: DIVISION	1.3	0.7	0.0	1.5	0.6
.CLASS	1.3	0.7	0.0	1.5	0.6
..ORDER	1.4	0.7	0.0	2.1	0.6
...FAMILY	1.8	1.8	0.6	3.1	1.8
....GENUS	2.6	2.3	1.3	3.3	1.8

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	--	-	--	-	--	-	14	1	--	-
...HYDRODICTYACEAE										
....PEDIASTRUM	--	-	--	-	--	-	--	-	310	11
...MICRACTINIACEAE										
....MICRACTINIUM	--	-	--	-	--	-	14	1	--	-
...OOCYSTACEAE										
....ANKISTRODESMUS	--	-	--	-	--	-	98	6	--	-
....GLOEOACTINIUM	--	-	--	-	--	-	--	-	1600#	56
....TREUBARIA	--	-	--	-	--	-	28	2	--	-
...SCENEDESMACEAE										
....CRUCIGENIA	--	-	--	-	--	-	--	-	570#	19
....SCENEDESMUS	100	10	--	-	--	-	310#	17	--	-
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	13	1	--	-	--	-	56	3	--	-
CHRYSOPHYTA										
.BACILLARIOPHYCEAE										
..CENTRALES										
...COSCINODISCACEAE										
....CYCLOTELLA	--	-	--	-	--	-	130	7	--	-
....MELOSIRA	--	-	--	-	--	-	140	8	--	-
..PENNALES										
...ACHNANTHACEAE										
....ACHNANTHES	13	1	--	-	--	-	56	3	--	-
...CYMBELLACEAE										
....CYMBELLA	--	-	--	-	13	5	28	2	--	-
...DIATOMACEAE										
....DIATOMA	--	-	13#	17	--	-	--	-	--	-
...FRAGILARIACEAE										
....ASTERIONELLA	13	1	--	-	--	-	--	-	--	-
....FRAGILARIA	64	6	26#	33	170#	68	--	-	260	9
....SYNEDRA	130	13	13#	17	52#	21	250	14	--	-
...GOMPHONEMATACEAE										
....GOMPHONEMA	--	-	--	-	13	5	--	-	--	-
...NAVICULACEAE										
....NAVICULA	51	5	--	-	--	-	110	6	--	-
...NITZSCHIACEAE										
....NITZSCHIA	26	3	13#	17	--	-	28	2	160	6
...TABELLARIACEAE										
....TABELLARIA	--	-	--	-	--	-	70	4	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)										
.CYANOPHYCEAE										
..CHROOCOCCALES										
...CHROOCOCCACEAE										
....ANACYSTIS	--	-	13#	17	--	-	430#	25	--	-
..HORMOGONALES										
...OSCILLATORIACEAE										
....LYNGBYA	300#	29	--	-	--	-	--	-	--	-
....OSCILLATORIA	310#	30	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1979 TO SEPTEMBER 1980

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	102	79	86	85	68	72	107	69	86
2	---	---	---	101	82	92	87	73	78	90	69	76
3	---	---	---	83	72	78	94	72	80	90	74	83
4	---	---	---	105	66	80	82	70	72	86	70	77
5	---	---	---	107	75	85	84	69	73	76	69	72
6	---	---	---	78	68	71	83	71	74	80	70	75
7	---	---	---	84	70	75	81	72	74	95	75	85
8	---	---	---	85	70	73	88	73	81	81	70	73
9	---	---	---	85	72	75	87	78	81	85	73	77
10	---	---	---	85	72	78	110	88	96	90	79	84
11	---	---	---	86	71	79	106	77	92	87	78	83
12	---	---	---	103	70	82	88	77	82	91	78	84
13	---	---	---	93	77	84	97	77	86	90	71	81
14	---	---	---	86	72	78	98	77	85	141	79	108
15	---	---	---	88	73	82	91	74	81	102	69	81
16	---	---	---	87	76	80	79	73	76	107	86	94
17	---	---	---	85	79	81	103	73	81	108	76	87
18	---	---	---	86	81	84	99	73	81	79	69	73
19	---	---	---	97	80	87	85	68	75	75	68	71
20	---	---	---	106	81	96	76	66	69	88	76	82
21	---	---	---	90	79	84	76	69	71	91	70	78
22	---	---	---	84	79	81	83	69	77	77	67	71
23	99	87	94	82	77	79	93	79	87	75	67	70
24	93	81	86	93	75	79	91	75	85	80	70	76
25	80	75	78	105	88	96	97	74	78	91	73	81
26	91	78	87	102	89	95	128	97	111	92	80	89
27	100	71	85	90	65	76	98	71	79	89	76	85
28	82	71	77	88	74	82	79	67	71	118	73	85
29	96	75	83	76	70	72	73	66	69	119	68	81
30	103	81	95	84	69	72	81	74	77	84	68	76
31	92	79	84	---	---	---	99	71	77	81	67	76
MONTH	103	71	85	107	65	81	128	66	80	141	67	81
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	81	68	74	83	74	77	84	79	81			
2	78	71	74	93	81	86	82	80	81			
3	83	69	76	86	70	79	91	81	86			
4	88	66	74	111	75	95	92	82	86			
5	99	69	85	86	70	76	88	81	83			
6	78	67	72	82	70	75	90	86	89			
7	77	66	71	97	81	87	101	85	93			
8	76	68	73	97	82	89	103	89	97			
9	87	71	80	122	86	99	97	86	90			
10	90	77	82	124	85	95	88	76	82			
11	88	69	78	143	75	104	92	84	89			
12	110	72	89	89	74	79	84	75	79			
13	75	69	72	89	79	83	80	74	77			
14	75	69	71	92	78	83	78	72	76			
15	79	71	74	109	85	98	75	71	73			
16	87	74	82	114	94	102	74	70	72			
17	94	85	89	111	81	96	71	68	70			
18	93	82	88	121	81	98	72	68	69			
19	87	75	80	105	88	94	74	68	72			
20	119	79	98	132	96	110	82	74	78			
21	78	69	63	134	89	110	89	77	83			
22	80	70	75	101	86	92	97	74	85			
23	86	72	80	109	82	91	83	74	76			
24	101	79	93	104	84	92	79	71	73			
25	88	71	79	93	79	85	75	68	70			
26	116	75	93	94	80	87	75	67	70			
27	114	72	95	91	76	81	80	67	72			
28	81	70	74	94	77	82	67	64	65			
29	79	70	73	95	80	85	67	64	65			
30	---	---	---	94	77	85	64	63	64			
31	---	---	---	95	83	92	---	---	---			
MONTH	119	66	80	143	70	90	103	63	78			
YEAR	143	63	82									

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	70	65	68	71	62	66	87	74	79
2	---	---	---	86	65	76	74	64	66	86	76	82
3	---	---	---	98	75	83	74	62	66	93	77	81
4	---	---	---	84	69	73	79	66	72	103	82	96
5	---	---	---	84	72	75	67	59	62	97	68	84
6	---	---	---	83	72	75	65	59	61	76	65	70
7	---	---	---	92	78	85	77	65	71	77	66	71
8	---	---	---	75	69	71	80	65	74	77	68	72
9	---	---	---	92	80	86	86	63	68	76	69	72
10	---	---	---	88	71	78	83	65	72	74	68	71
11	---	---	---	86	68	72	75	61	66	81	75	79
12	---	---	---	81	69	73	70	58	62	88	72	78
13	---	---	---	84	69	75	63	58	61	98	78	91
14	---	---	---	82	68	73	77	61	69	79	73	77
15	---	---	---	80	72	77	89	71	79	78	71	74
16	---	---	---	76	71	74	69	60	63	78	73	76
17	---	---	---	96	75	86	75	62	68	77	74	75
18	---	---	---	92	70	82	76	61	67	80	74	77
19	---	---	---	80	70	74	75	62	67	83	76	80
20	---	---	---	84	71	78	74	63	67	100	77	86
21	---	---	---	85	73	79	83	64	76	101	89	97
22	82	62	69	82	74	79	87	68	76	89	83	86
23	79	63	67	84	74	79	77	64	69	87	83	85
24	87	62	69	95	81	87	78	68	72	84	80	83
25	73	62	64	90	63	76	78	68	73	86	80	84
26	81	52	62	81	72	77	82	72	77	86	81	84
27	114	59	91	72	63	66	75	67	69	96	85	89
28	78	69	72	71	60	63	72	65	69	88	82	85
29	83	67	71	84	63	68	92	68	79	84	78	81
30	86	67	71	79	67	72	93	65	76	86	81	83
31	82	65	70	---	---	---	81	65	75	89	83	86
MONTH	114	52	71	98	60	76	93	58	70	103	65	81

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	88	85	86	56	55	55	57	53	55	64	59	61
2	88	84	86	62	54	57	55	52	53	65	60	62
3	118	87	93	66	61	63	59	53	56	66	62	64
4	120	97	107	63	60	62	57	53	54	74	63	68
5	99	85	92	63	60	61	56	53	55	65	60	62
6	87	79	82	63	58	60	56	51	53	65	60	61
7	83	76	79	61	59	60	58	54	55	68	61	62
8	80	75	77	68	61	65	55	53	54	67	63	64
9	97	78	84	72	63	67	57	53	54	68	65	66
10	91	74	81	64	59	60	61	53	56	71	66	68
11	80	71	77	65	59	61	59	55	56	78	69	73
12	76	45	62	66	59	61	60	53	55	70	64	66
13	66	60	62	65	59	61	58	54	56	73	63	66
14	61	58	60	65	58	60	59	54	56	73	69	71
15	63	58	61	65	57	59	61	55	57	74	68	70
16	67	60	63	64	57	60	59	55	57	70	65	66
17	74	61	65	63	57	59	59	54	56	75	66	71
18	85	66	70	61	55	57	57	56	56	74	68	70
19	87	73	76	60	56	57	68	57	61	69	66	68
20	81	70	74	66	59	63	67	58	60	71	66	68
21	71	66	68	67	61	65	60	56	58	70	66	68
22	68	57	62	66	62	64	62	56	58	71	67	68
23	56	53	54	76	64	70	62	57	59	70	68	69
24	54	51	53	77	63	71	63	57	59	76	70	73
25	55	51	54	67	60	64	65	57	59	77	75	76
26	56	53	55	61	55	58	65	57	60	88	77	82
27	57	55	56	58	55	56	60	56	58	118	74	85
28	57	55	56	58	54	56	62	56	57	100	79	85
29	---	---	---	67	58	63	62	57	58	83	77	80
30	---	---	---	69	59	63	65	57	60	99	83	90
31	---	---	---	62	54	56	---	---	---	107	87	93
MONTH	120	45	71	77	54	61	68	51	57	118	59	71

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	152	84	123	91	72	79	100	67	74	90	71	81
2	97	76	81	93	76	83	81	66	76	91	69	78
3	102	74	81	89	85	87	83	74	78	88	67	75
4	101	77	84	95	83	89	102	78	89	82	65	74
5	128	77	90	92	84	88	81	67	76	88	67	81
6	109	86	90	117	86	94	87	73	78	89	79	84
7	138	88	107	136	91	114	103	77	91	96	79	89
8	119	88	97	121	79	96	88	64	69	97	84	90
9	97	78	83	93	73	79	79	64	67	104	75	94
10	111	77	86	89	75	82	88	65	71	89	75	85
11	103	75	84	98	86	94	99	70	78	118	86	97
12	97	73	80	92	84	90	88	71	76	93	84	88
13	104	73	81	136	84	100	83	70	74	89	76	83
14	108	76	85	117	75	86	89	71	80	116	79	96
15	97	77	84	99	76	91	80	70	74	115	75	90
16	114	77	85	115	84	97	108	70	78	94	75	83
17	106	74	81	108	88	93	114	78	93	92	74	84
18	112	80	87	89	88	89	78	74	76	83	74	79
19	106	75	82	105	89	92	77	74	75	84	76	80
20	95	84	87	102	81	94	76	74	75	90	81	85
21	91	83	88	124	99	105	82	74	76	98	79	85
22	159	86	108	96	82	89	82	76	77	99	77	92
23	159	83	108	93	84	89	87	80	83	109	75	86
24	110	82	87	97	82	86	90	79	83	92	75	81
25	99	75	82	99	95	96	83	73	76	74	72	73
26	100	75	82	107	99	102	81	75	77	74	71	73
27	97	78	83	108	99	103	87	74	80	84	71	74
28	103	88	95	114	87	102	85	72	78	81	69	73
29	125	85	94	87	75	80	90	73	85	87	73	76
30	115	79	94	103	71	82	92	86	90	73	70	71
31	---	---	---	103	77	84	111	84	93	---	---	---
MONTH	159	73	89	136	71	91	114	64	79	118	65	83
YEAR	159	45	75									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.5	.0	.5	4.0	2.5	3.5	8.0	7.0	7.5
2	.0	.0	.0	1.0	.0	.5	3.5	3.0	3.0	8.0	7.5	7.5
3	.0	.0	.0	.5	.0	.5	4.0	2.0	3.0	9.5	7.5	8.5
4	.0	.0	.0	.5	.0	.0	5.0	3.5	4.0	10.5	8.5	9.0
5	.0	.0	.0	.5	.0	.5	5.5	4.0	4.5	11.0	8.5	9.5
6	.0	.0	.0	.5	.0	.0	5.0	3.0	4.0	10.0	9.0	9.5
7	.0	.0	.0	1.0	.5	.5	4.0	2.5	3.0	9.5	8.0	9.0
8	.0	.0	.0	1.0	.5	.5	4.5	3.0	4.0	10.5	8.0	9.5
9	.0	.0	.0	1.0	.5	.5	5.0	4.0	4.5	11.5	9.5	10.5
10	.0	.0	.0	1.0	.5	.5	6.5	4.0	5.0	14.0	11.0	12.5
11	.0	.0	.0	1.0	.5	1.0	5.5	4.5	5.0	13.0	10.0	12.0
12	.0	.0	.0	1.0	.5	1.0	5.5	4.0	4.5	11.5	9.5	10.0
13	.0	.0	.0	1.5	.5	1.0	5.5	4.0	4.5	11.0	9.5	10.0
14	.0	.0	.0	1.0	.0	.5	4.5	4.0	4.0	11.0	9.5	10.0
15	.0	.0	.0	1.0	.0	.5	4.5	3.5	4.0	12.0	10.0	10.5
16	.0	.0	.0	1.0	.5	1.0	4.0	3.5	3.5	12.0	10.5	11.5
17	.0	.0	.0	1.0	.0	.5	3.5	3.5	3.5	11.5	10.0	11.0
18	.5	.0	.0	1.0	.0	.5	5.5	4.0	4.5	10.0	9.0	9.5
19	.5	.0	.5	1.0	.0	.5	6.5	5.0	6.0	10.5	8.5	9.5
20	1.0	.5	.5	1.5	.0	.5	6.0	4.5	5.0	11.5	9.5	10.5
21	1.0	.5	1.0	1.5	.5	1.0	5.0	4.0	4.5	11.5	10.5	11.0
22	1.0	.5	.5	2.5	1.0	2.0	5.5	3.5	4.5	12.0	10.5	11.5
23	1.0	.5	.5	2.5	1.5	2.0	5.0	4.5	5.0	13.0	11.0	12.0
24	.5	.0	.5	3.0	2.0	2.5	5.5	5.0	5.0	15.5	11.5	13.0
25	.5	.0	.5	3.0	1.5	2.0	5.0	5.0	5.0	16.5	14.0	15.0
26	.5	.5	.5	2.5	1.5	2.0	6.5	4.5	5.5	16.0	13.5	14.5
27	.5	.5	.5	2.0	1.5	1.5	7.5	5.5	6.5	14.5	13.0	13.5
28	.5	.0	.0	3.0	1.0	2.0	8.0	6.5	7.0	14.5	12.0	13.0
29	---	---	---	5.5	2.5	4.0	8.0	7.0	7.5	14.0	13.0	13.5
30	---	---	---	5.0	3.5	4.5	8.5	7.0	8.0	16.0	14.0	15.5
31	---	---	---	4.0	3.0	3.0	---	---	---	17.0	15.5	16.0
MONTH	1.0	.0	.0	5.5	.0	1.0	8.5	2.0	4.5	17.0	7.0	11.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	16.0	13.5	15.5	19.0	18.0	18.5	21.5	19.0	20.5	19.0	18.5	18.5
2	14.0	12.5	13.5	20.0	18.5	19.0	22.5	19.5	21.0	19.5	18.5	19.0
3	14.0	13.0	13.5	21.0	19.0	19.5	22.5	21.5	22.0	19.5	18.5	19.0
4	14.0	13.0	13.5	21.5	20.5	21.0	23.0	21.5	22.0	19.5	18.0	18.5
5	16.0	13.0	14.5	21.0	20.5	20.5	22.5	21.0	22.0	20.5	18.5	19.5
6	16.0	14.5	15.5	22.0	20.0	20.5	21.5	20.0	20.5	21.0	19.0	20.0
7	16.5	15.5	16.0	21.5	20.0	20.5	20.0	19.0	19.5	21.5	19.5	20.5
8	15.5	13.5	14.5	20.5	19.5	20.0	19.0	18.5	19.0	21.0	20.0	20.5
9	15.0	14.0	14.0	20.5	20.0	20.5	20.5	19.0	19.5	20.5	18.5	19.5
10	15.5	13.5	14.5	21.5	20.0	21.0	21.0	19.0	20.0	18.5	17.0	17.5
11	16.0	14.0	15.0	22.0	20.5	21.5	21.0	20.0	20.5	17.5	15.5	16.5
12	15.5	14.0	15.0	22.5	21.0	21.5	21.0	20.0	20.5	17.5	16.0	17.0
13	16.5	14.5	15.5	21.5	20.5	21.5	20.5	20.0	20.0	19.0	16.0	17.5
14	16.0	15.0	15.5	20.0	18.0	18.5	21.0	18.5	19.5	18.0	17.0	17.5
15	16.5	15.0	15.5	20.5	17.5	19.0	19.5	19.0	19.5	19.0	17.0	18.0
16	18.0	16.0	17.0	20.5	18.0	19.5	19.5	17.0	18.0	18.0	17.0	18.0
17	18.0	16.0	16.5	20.5	19.5	20.0	17.5	16.5	17.0	18.0	16.5	17.5
18	19.0	16.5	17.5	21.0	20.5	20.5	19.0	18.0	18.5	18.0	17.0	17.5
19	18.5	16.5	17.5	22.5	20.5	21.0	19.5	18.5	19.0	18.0	16.5	17.0
20	19.0	17.5	18.0	21.5	20.0	20.5	19.5	18.5	19.0	16.5	15.5	16.0
21	19.0	17.5	18.5	21.0	20.0	21.5	19.5	18.5	19.0	16.5	16.0	16.5
22	18.0	17.0	17.5	21.0	20.0	20.5	19.5	19.0	19.0	16.0	13.5	14.5
23	17.5	16.0	16.5	21.0	20.0	20.0	20.5	18.5	19.5	14.0	12.0	13.0
24	17.0	15.5	16.5	23.0	19.0	20.0	19.5	18.5	19.0	15.0	12.5	14.0
25	16.5	16.0	16.5	22.0	20.0	21.0	19.5	18.0	18.5	15.5	14.5	15.0
26	16.0	16.0	16.0	22.5	21.0	22.0	19.5	18.0	18.5	15.5	14.5	15.0
27	17.5	15.5	16.5	22.0	21.0	21.5	18.5	18.0	18.0	15.5	15.0	15.5
28	19.5	16.5	17.5	21.5	20.0	20.5	19.0	17.5	18.0	15.0	13.5	14.5
29	19.5	18.5	19.0	21.0	19.0	19.5	19.5	17.5	18.5	14.0	12.5	13.0
30	19.0	17.5	18.0	19.5	18.0	19.0	19.5	18.5	19.0	13.0	12.5	13.0
31	---	---	---	20.5	18.0	19.5	19.5	18.5	19.5	---	---	---
MONTH	19.5	12.5	16.0	23.0	17.5	20.5	23.0	16.5	19.5	21.5	12.0	17.0
YEAR	23.0	.0	8.5									

01139000 WELLS RIVER AT WELLS RIVER, VT

LOCATION.--Lat 44°09'03", long 72°03'55", Orange County, Hydrologic Unit 01080103, on right bank, 0.8 mi (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) National Geodetic Vertical Datum of 1929 (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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 140 ft^3/s (3.965 m^3/s), 19.32 in/yr (491 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 (40 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 (28 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)
Feb. 12	0130	1350	38.2	a*6.14	1.871	May 13	0900	1080	30.6	4.60	1.402
Feb. 25	0200	*1510	42.8	5.26	1.603	Aug. 16	1000	1020	28.9	4.51	1.375

a Ice jam

Minimum discharge, 33 ft^3/s (0.93 m^3/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	67	141	60	34	305	374	189	176	56	64	52
2	40	64	127	59	300	254	494	189	125	52	52	49
3	62	58	287	58	420	222	383	173	105	49	44	44
4	141	55	168	54	250	183	348	156	105	49	39	42
5	122	60	125	50	190	189	353	142	125	58	48	40
6	91	59	120	46	175	178	377	136	116	134	127	37
7	72	55	115	46	180	179	294	138	248	92	81	35
8	62	110	115	45	165	165	253	122	170	69	66	34
9	54	110	155	45	160	155	246	110	238	61	60	173
10	49	107	135	44	150	149	309	103	242	118	172	111
11	45	110	120	43	420	145	278	120	189	73	128	164
12	48	92	170	42	780	137	284	245	142	58	332	113
13	47	80	140	41	270	136	234	786	147	53	150	91
14	44	74	120	41	230	127	232	451	116	98	99	74
15	40	70	100	43	190	123	268	316	101	81	110	138
16	37	64	105	43	170	124	207	511	95	66	813	99
17	36	74	100	43	160	105	198	406	98	54	427	80
18	38	91	96	43	180	102	290	306	88	47	264	70
19	66	93	92	46	220	99	287	251	74	45	170	75
20	55	88	86	47	410	97	198	207	69	43	126	121
21	54	82	90	48	720	96	186	181	110	72	99	101
22	50	77	92	47	600	95	173	165	108	66	85	398
23	46	70	85	45	440	99	168	151	271	50	83	959
24	43	72	76	45	290	105	342	132	153	42	72	848
25	41	245	73	47	1150	111	346	118	114	37	80	471
26	160	172	72	49	720	124	303	110	120	34	70	315
27	176	114	72	48	445	148	248	103	105	79	62	246
28	131	120	69	43	348	147	210	98	86	56	61	376
29	101	274	66	38	---	231	213	93	73	116	58	299
30	85	186	64	37	---	459	219	93	64	138	54	223
31	74	---	63	36	---	496	---	198	---	85	57	---
TOTAL	2155	2993	3439	1422	9767	5285	8315	6499	3973	2131	4153	5878
MEAN	69.5	99.8	111	45.9	349	170	277	210	132	68.7	134	196
MAX	176	274	287	60	1150	496	494	786	271	138	813	959
MIN	36	55	63	36	34	95	168	93	64	34	39	34
CFSM	.71	1.01	1.13	.47	3.55	1.73	2.82	2.13	1.34	.70	1.36	1.99
IN.	.81	1.13	1.30	.54	3.69	2.00	3.14	2.46	1.50	.81	1.57	2.22

CAL YR 1980 TOTAL 34440 MEAN 94.1 MAX 910 MIN 12 CFSM .96 IN 13.02
WTR YR 1981 TOTAL 56010 MEAN 153 MAX 1150 MIN 34 CFSM 1.56 IN 21.17

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 mi² (23.18 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 1,180 ft (360 m), from topographic map.

REMARKS.--Records poor. Occasional diurnal fluctuation at low flow caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--23 years, 15.6 ft³/s (0.442 m³/s), 23.67 in/yr (601 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 672 ft³/s (19.0 m³/s) June 30, 1973, gage height, 5.55 ft (1.692 m), from rating curve extended above 44 ft³/s (1.2 m³/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 ft³/s (0.003 m³/s) Sept. 9, 19, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 140 ft³/s (4.0 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 11	1945	150	4.25	b*4.75	1.448	May 13	0115	a*369	10.5	4.45	1.356
Feb. 20	--	170	4.81	ice jam							

a From rating curve extended above 44 ft³/s (1.2 m³/s) on basis of slope-area measurement at gage height 5.55 ft (1.692 m).
b Ice jam.

Minimum discharge, 2.1 ft³/s (0.059 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.5	10	7.5	5.1	51	40	21	15	4.3	4.0	3.4
2	2.8	3.5	10	7.4	43	48	49	21	13	3.9	3.4	3.2
3	6.9	3.2	18	7.3	44	45	36	19	12	3.6	2.9	3.1
4	20	3.5	14	7.2	23	57	36	18	16	3.9	2.9	3.0
5	6.9	3.6	14	7.0	18	60	46	17	12	13	9.8	2.7
6	4.0	3.2	9.1	6.9	12	49	39	17	17	12	11	2.6
7	3.4	3.4	8.6	6.8	14	32	32	16	24	5.5	5.1	2.5
8	2.8	7.9	9.7	6.7	14	26	31	14	12	4.0	4.3	2.6
9	2.5	5.3	20	6.6	12	24	38	14	31	4.8	4.6	26
10	2.4	7.9	14	6.5	11	23	37	13	14	6.3	9.2	10
11	3.2	6.5	9.8	6.4	34	22	40	22	15	3.6	24	11
12	4.0	4.8	11	6.4	90	25	31	52	13	3.1	16	5.1
13	4.0	4.3	10	6.2	40	21	27	93	16	5.9	6.3	4.2
14	3.1	4.6	9.7	6.2	27	18	39	40	10	7.2	5.1	3.6
15	2.8	5.1	9.3	6.3	23	25	31	52	9.8	6.7	25	3.7
16	2.6	4.2	9.6	6.3	20	17	26	62	8.4	3.9	47	3.4
17	2.6	3.6	9.3	6.5	34	23	25	51	11	3.2	14	3.2
18	4.9	5.5	9.1	6.3	50	22	45	47	7.2	3.0	8.9	3.2
19	4.3	6.3	9.0	6.5	105	20	30	42	6.1	3.1	6.3	8.4
20	3.7	4.6	9.1	6.5	140	15	28	39	8.6	4.0	5.5	6.3
21	3.2	4.5	9.2	6.3	78	14	27	35	11	12	5.1	4.6
22	3.0	5.1	9.4	6.1	54	13	27	33	13	4.9	4.8	54
23	2.7	4.2	9.0	6.1	47	15	30	30	14	3.7	4.3	61
24	2.5	5.5	8.6	6.1	100	14	48	26	7.4	3.0	4.2	37
25	8.6	30	8.4	5.9	70	15	42	25	9.2	2.7	4.5	21
26	16	16	8.2	5.7	63	17	27	21	10	2.6	4.0	17
27	6.1	11	8.0	5.7	59	16	23	18	7.6	25	3.6	21
28	5.1	12	7.9	5.5	59	16	22	17	5.9	4.5	3.7	28
29	4.5	23	7.8	5.5	---	40	30	16	5.3	24	3.5	24
30	3.9	16	7.7	5.1	---	52	24	15	4.8	11	3.5	22
31	3.6	---	7.6	4.9	---	49	---	28	---	5.1	3.5	---
TOTAL	148.5	221.8	315.1	196.4	1289.1	884	1006	934	359.3	203.5	260.0	400.8
MEAN	4.79	7.39	10.2	6.34	46.0	28.5	33.5	30.1	12.0	6.56	8.39	13.4
MAX	20	30	20	7.5	140	60	49	93	31	25	47	61
MIN	2.4	3.2	7.6	4.9	5.1	13	22	13	4.8	2.6	2.9	2.5
CFSM	.54	.83	1.14	.71	5.14	3.18	3.74	3.36	1.34	.73	.94	1.50
IN.	.62	.92	1.31	.82	5.36	3.67	4.18	3.88	1.49	.85	1.08	1.67

CAL YR 1980 TOTAL 3689.6 MEAN 10.1 MAX 95 MIN 1.0 CFSM 1.13 IN 15.33
WTR YR 1981 TOTAL 6218.5 MEAN 17.0 MAX 140 MIN 2.4 CFSM 1.90 IN 25.84

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, May 13 to Sept. 30, which are fair, and period of backwater from rocks and boulders Oct. 1 to Nov. 30, which are poor. Flow regulated by Union Village Reservoir (Reservoirs in Connecticut River basin) since October 1949. Some regulation by Lake Fairlee. Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 193 ft^3/s (5.466 m^3/s), 20.16 in/yr (512 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 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 (4.42 m) in November 1927, from information by local resident (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft^3/s (50.1 m^3/s) May 13, gage height, 7.31 ft (2.228 m); minimum, 21 ft^3/s (0.59 m^3/s) Oct. 2; minimum daily, 21 ft^3/s (0.59 m^3/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	40	239	64	40	1290	785	272	200	61	86	50
2	21	39	231	62	130	862	741	255	166	56	72	47
3	28	39	236	58	515	385	581	239	155	50	64	44
4	90	39	239	54	444	287	491	217	180	48	61	43
5	64	42	220	52	266	287	487	205	220	82	76	40
6	44	42	176	54	318	290	631	197	172	101	112	38
7	37	42	166	54	195	287	475	191	191	69	86	37
8	32	56	182	52	152	278	398	178	155	54	74	35
9	29	64	202	52	147	236	376	168	189	61	71	140
10	26	65	185	52	168	223	398	163	172	108	101	82
11	27	74	165	54	182	225	354	170	157	71	90	101
12	33	57	132	52	653	207	340	313	142	59	157	76
13	33	56	82	52	780	191	305	1480	137	61	103	65
14	29	57	130	52	635	195	281	1160	116	94	88	57
15	26	59	170	54	479	170	385	554	112	76	80	53
16	28	54	125	53	233	176	343	862	106	62	349	50
17	34	54	120	52	247	180	302	572	145	54	272	47
18	29	50	115	50	293	178	395	451	112	51	185	47
19	44	54	110	47	354	174	366	389	92	51	140	53
20	37	54	100	40	305	172	316	346	84	54	110	78
21	33	54	120	43	207	168	287	310	121	110	92	59
22	31	56	110	40	357	155	264	287	112	108	80	373
23	29	57	100	39	708	150	252	258	116	80	71	1020
24	28	59	96	40	703	155	389	231	92	64	64	785
25	31	78	90	45	922	180	515	193	92	56	72	483
26	76	114	86	43	1700	191	398	187	145	51	69	343
27	64	155	82	40	1600	223	340	187	103	90	62	302
28	51	165	80	37	1460	231	308	180	82	78	59	578
29	46	205	78	36		261	321	182	72	187	54	379
30	44	239	75	36	---	590	308	168	65	166	51	308
31	42	---	69	37	---	892	---	233	---	108	50	---
TOTAL	1189	2219	4311	1496	14193	9489	12132	10798	4003	2421	3101	5813
MEAN	38.4	74.0	139	48.3	507	306	404	348	133	78.1	100	194
MAX	90	239	239	64	1700	1290	785	1480	220	187	349	1020
MIN	21	39	69	36	40	150	252	163	65	48	50	35
MEAN†	38.4	89.5	130	49.6	551	276	388	348	133	78.1	99.6	195
CFSM†	.30	.69	1.00	.38	4.24	2.12	2.98	2.68	1.02	.60	.77	1.50
IN.†	.34	.77	1.15	.44	4.41	2.45	3.33	3.04	1.14	.69	.88	1.67

CAL YR 1980 TOTAL 39202.2 MEAN 107 MAX 1290 MIN 8.8 MEAN† 107 CFSM† .82 IN† 11.23
WTR YR 1981 TOTAL 71165.0 MEAN 195 MAX 1700 MIN 21 MEAN† 195 CFSM† 1.50 IN† 20.38

† Adjusted for change in contents in Union Village Reservoir.

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.

REMARKS.--Records poor. No gage-height record Oct. 1-22, Feb. 28 to Apr. 10. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years, 7.31 ft^3/s (0.207 m^3/s), 21.58 in/yr (548 mm/yr).

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 (3.7 m^3/s) on basis of slope-area measurement at gage heights 3.50 ft (1.067 m) and 3.75 ft (1.143 m); maximum gage height, 4.28 ft (1.305 m) Jan. 9, 1978, 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 (160 m^3/s) and maximum (*):

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)
Feb. 2	1415	ice jam		*3.25	0.991	Feb. 24	1700	147	4.16	2.72	0.829
Feb. 20	--	100	2.8	ice jam							

Minimum discharge, 0.18 ft^3/s (0.005 m^3/s) Oct. 23, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	.90	4.1	1.0	.80	9.0	15	9.7	5.6	.99	1.6	.59
2	.20	.73	4.1	.98	3.7	6.0	22	9.2	3.8	.73	1.1	.59
3	1.0	.59	20	.95	10	4.5	15	7.9	3.3	.73	.90	.52
4	2.5	.59	15	.90	4.5	10	11	7.1	3.8	.73	.73	.52
5	2.3	.59	9.0	.88	2.5	5.4	13	6.7	5.6	1.8	.99	.40
6	1.6	.59	7.0	.83	2.0	4.2	17	6.3	6.7	2.0	2.5	.34
7	.90	.59	5.4	.80	1.7	3.5	12	6.0	6.7	1.2	1.4	.30
8	.60	.59	4.5	.76	1.5	3.1	8.0	5.3	4.1	.81	1.2	.30
9	.40	.66	4.0	.74	1.4	2.8	7.8	5.0	7.9	.73	1.1	5.0
10	.31	.99	3.5	.70	1.3	2.5	7.6	4.7	6.0	2.0	.90	1.6
11	.80	.99	3.2	.68	7.0	2.2	7.4	4.1	6.3	.81	.90	2.7
12	1.2	.81	3.0	.66	25	2.5	7.0	6.0	4.1	.52	2.0	1.6
13	.70	.66	2.8	.64	21	2.0	6.4	24	3.8	.81	.99	1.1
14	.35	.66	2.6	.63	16	2.5	10	11	3.6	1.8	.81	.90
15	.26	.66	2.5	.62	12	3.3	13	8.7	3.3	1.1	1.4	.81
16	.25	.59	2.4	.60	8.0	2.5	10	19	2.7	.73	21	.73
17	.30	.46	2.2	.59	7.0	3.5	11	15	2.3	.46	7.9	.73
18	.60	.52	2.1	.58	9.0	3.0	15	11	1.8	.34	5.3	.73
19	1.2	.59	2.0	.58	21	2.4	14	9.2	1.6	.34	3.3	2.3
20	1.1	.59	1.9	.58	50	2.0	11	7.9	1.4	.81	2.5	3.1
21	.70	.59	1.8	.57	30	1.6	10	7.1	1.7	2.7	1.8	1.4
22	.35	.59	1.7	.57	18	1.5	8.7	6.3	2.5	2.7	1.6	13
23	.32	.59	1.6	.57	13	2.5	8.7	5.6	3.6	1.3	1.4	26
24	.18	1.8	1.5	.57	60	2.2	18	5.0	2.2	.73	1.2	18
25	1.6	18	1.4	.56	44	2.4	22	4.1	3.6	.52	1.2	12
26	6.0	6.0	1.4	.56	26	4.0	16	3.8	4.4	.40	1.2	7.1
27	2.0	4.7	1.3	.55	22	7.0	13	3.6	2.7	2.3	.99	7.9
28	1.6	4.7	1.2	.54	13	10	10	3.3	1.8	1.1	.99	18
29	1.3	12	1.2	.53	---	15	11	3.1	1.4	10	.81	8.7
30	.99	5.6	1.1	.53	---	30	11	2.9	1.1	5.0	.73	6.3
31	.90	---	1.1	.52	---	20	---	10	---	2.5	.73	---
TOTAL	32.72	67.92	116.6	20.77	431.40	173.1	361.6	238.6	109.4	48.69	71.17	143.26
MEAN	1.06	2.26	3.76	.67	15.4	5.58	12.1	7.70	3.65	1.57	2.30	4.78
MAX	6.0	18	20	1.0	60	30	22	24	7.9	10	21	26
MIN	.18	.46	1.1	.52	.80	1.5	6.4	2.9	1.1	.34	.73	.30
CFSM	.23	.49	.82	.15	3.35	1.21	2.63	1.67	.79	.34	.50	1.04
IN.	.26	.55	.94	.17	3.49	1.40	2.92	1.93	.88	.39	.58	1.16

CAL YR 1980 TOTAL 1219.44 MEAN 3.33 MAX 65 MIN .04 CFSM .72 IN 9.86
WTR YR 1981 TOTAL 1815.23 MEAN 4.97 MAX 60 MIN .18 CFSM 1.08 IN 14.68

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 mi² (79.0 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 630.50 ft (192.176 m) Vermont State Department of Highways datum. 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, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years (water years 1940-75, 1977-81), 46.1 ft³/s (1.306 m³/s), 20.53 in/yr (521 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft³/s (73.6 m³/s) June 30, 1973, gage height, 10.37 ft (3.161 m), present datum, from rating curve extended above 500 ft³/s (14.2 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 0.6 ft³/s (0.017 m³/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 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	--	400	11.3	ice jam		May 13	0145	*1170	33.1	8.26	2.518
Feb. 25	--	445	12.6	ice jam		Sept. 23	1715	376	10.6	5.18	1.579

Minimum discharge, 4.7 ft³/s (0.13 m³/s) Nov. 17, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	12	34	14	7.6	146	86	67	47	20	23	14
2	6.0	12	34	13	110	132	187	66	40	18	20	14
3	8.7	11	49	12	100	102	132	62	37	18	17	13
4	26	10	39	11	54	97	110	56	48	18	17	13
5	20	10	28	10	50	88	116	52	62	28	20	12
6	14	10	26	9.5	44	77	128	49	43	36	23	11
7	10	9.9	25	9.0	49	71	106	49	48	25	18	11
8	8.7	18	25	8.8	43	67	93	46	40	20	16	10
9	7.7	18	41	8.6	36	63	89	43	47	17	16	62
10	7.3	18	34	8.6	33	61	94	40	44	18	16	29
11	7.0	20	23	8.6	35	60	77	42	37	17	14	36
12	7.0	17	22	8.2	230	54	71	124	34	14	21	26
13	6.8	16	26	8.2	125	55	66	548	33	14	16	22
14	6.8	15	23	8.2	80	52	81	195	30	21	14	19
15	6.6	15	18	8.2	60	46	92	150	30	19	40	18
16	6.6	14	20	8.6	54	54	71	153	29	15	108	16
17	6.6	9.9	21	8.6	70	45	68	128	28	13	45	15
18	7.0	12	20	8.6	104	51	87	106	26	12	32	15
19	11	13	19	8.9	170	46	82	96	24	12	25	18
20	9.6	12	18	9.4	370	38	74	86	26	13	23	22
21	8.7	12	18	9.7	330	36	69	81	55	25	21	18
22	8.5	13	19	9.4	230	36	65	76	39	23	19	115
23	8.0	11	18	9.0	170	34	63	69	42	17	18	241
24	7.5	13	18	9.0	320	38	96	63	31	14	16	172
25	8.0	36	17	9.5	310	41	125	57	28	11	16	109
26	26	28	17	10	256	41	91	53	36	11	15	86
27	20	20	16	9.4	206	47	79	49	31	43	14	80
28	17	25	16	8.6	163	44	71	48	26	23	14	103
29	15	59	16	8.4	---	56	80	46	24	69	14	80
30	14	39	16	8.0	---	89	76	45	22	46	14	68
31	12	---	15	7.6	---	102	---	54	---	29	14	---
TOTAL	334.5	528.8	731	288.6	3809.6	1969	2725	2799	1087	679	699	1468
MEAN	10.8	17.6	23.6	9.31	136	63.5	90.8	90.3	36.2	21.9	22.5	48.9
MAX	26	59	49	14	370	146	187	548	62	69	108	241
MIN	6.0	9.9	15	7.6	7.6	34	63	40	22	11	14	10
CFSM	.35	.58	.77	.31	4.46	2.08	2.98	2.96	1.19	.72	.74	1.60
IN.	.41	.64	.89	.35	4.65	2.40	3.32	3.41	1.33	.83	.85	1.79

CAL YR 1980 TOTAL 10983.0 MEAN 30.0 MAX 272 MIN 2.9 CFSM .98 IN 13.40
WTR YR 1981 TOTAL 17118.5 MEAN 46.9 MAX 548 MIN 6.0 CFSM 1.54 IN 20.88

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) National Geodetic Vertical Datum of 1929. 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 and specific conductance were made during the year.
AVERAGE DISCHARGE.--66 years, 1,181 ft^3/s (33.45 m^3/s), 23.24 in/yr (590 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 (820 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)
Feb. 21	0230	*16500	467	12.48	3.804	Feb. 24	2200	14000	396	11.64	3.548

Minimum discharge not determined, occurred during period of backwater from ice; minimum daily, 200 ft^3/s (5.66 m^3/s) Jan. 31, Feb. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	398	988	370	200	2650	3450	1480	968	387	600	294
2	213	378	961	360	1000	2280	5010	1580	738	350	469	286
3	254	352	1460	330	3200	2000	3440	1450	663	325	395	278
4	486	334	1050	300	1800	1700	2840	1290	713	321	372	274
5	697	338	780	270	1430	1640	2870	1200	1200	432	384	267
6	481	345	780	250	1240	1600	4010	1130	888	694	720	247
7	383	327	780	240	1390	1630	2730	1090	1040	486	578	235
8	335	420	820	235	1400	1580	2280	1000	924	376	454	225
9	287	693	1320	230	1160	1370	2050	937	888	321	415	745
10	260	722	1220	230	1050	1340	2070	883	1230	399	432	694
11	243	738	880	230	1310	1330	1840	912	931	346	427	669
12	264	609	520	220	6060	1210	1870	1840	791	279	615	595
13	268	530	740	220	2550	1200	1620	7240	764	260	525	461
14	258	491	680	220	2070	1200	1600	3370	669	381	421	390
15	243	500	490	220	1680	1060	2020	2580	616	385	380	351
16	231	458	540	230	1450	1120	1620	3280	593	359	2690	325
17	225	370	560	230	1490	874	1530	2640	968	283	2030	300
18	233	390	540	230	2670	870	2070	2130	853	252	1490	290
19	361	416	500	240	3840	792	2360	1860	627	246	990	315
20	373	395	470	250	8300	874	1860	1660	538	257	755	459
21	324	372	480	260	12100	800	1630	1500	853	358	628	381
22	321	382	500	250	6240	745	1480	1380	751	642	543	1810
23	316	354	490	240	4160	731	1390	1260	805	416	486	7620
24	288	368	470	240	8140	854	2020	1160	675	308	442	6620
25	283	1310	460	250	9630	910	2910	1100	571	261	429	3310
26	933	1240	450	270	5670	985	2330	968	860	238	405	2170
27	913	813	440	250	3840	1150	1910	888	738	546	368	1760
28	638	821	430	230	3010	1130	1680	853	604	594	348	3000
29	541	1690	420	220	---	1640	1670	811	496	1560	332	2120
30	472	1280	420	210	---	4480	1700	771	432	1460	314	1680
31	425	---	380	200	---	5360	---	910	---	866	305	---
TOTAL	11781	17834	21019	7725	98080	47105	67860	51153	23387	14388	19742	38171
MEAN	380	594	678	249	3503	1520	2262	1650	780	464	637	1272
MAX	933	1690	1460	370	12100	5360	5010	7240	1230	1560	2690	7620
MIN	213	327	380	200	200	731	1390	771	432	238	305	225
CFSM	.55	.86	.98	.36	5.08	2.20	3.28	2.39	1.13	.67	.92	1.84
IN.	.64	.96	1.13	.42	5.29	2.54	3.66	2.76	1.26	.78	1.06	2.06

CAL YR 1980 TOTAL 270694 MEAN 740 MAX 8370 MIN 104 CFSM 1.07 IN 14.59
WTR YR 1981 TOTAL 418245 MEAN 1146 MAX 12100 MIN 200 CFSM 1.66 IN 22.55

01144500 CONNECTICUT RIVER AT WEST LEBANON, NH

LOCATION.--Lat 43°38'46", long 72°18'46", Grafton County, Hydrologic Unit 01080104, on left bank 50 ft (15 m) downstream from railroad bridge at West Lebanon, 500 ft (150 m) downstream from White River, and at mile 215.0 (345.9 km).
DRAINAGE AREA.--4,092 mi² (10,598 km²).
PERIOD OF RECORD.--Discharge: October 1911 to November 1976 (published as "at White River Junction, VT"), November 1978 to current year.
Water-quality records: Water year 1954.
REVISED RECORDS.--WSP 741: 1932 (adjusted monthly and yearly figures only). WSP 781: 1928(M). WSP 891: Drainage area. WSP 1301: 1922-26(M).
GAGE.--Water-stage recorder. Datum of gage is 321.52 ft (97.999 m) National Geodetic Vertical Datum of 1929. 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 except those for winter period, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Union Village Reservoir (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 17,200,000,000 ft³ (487,000,000 m³). Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--67 years (water years 1912-76, 80-81), 7,120 ft³/s (201.6 m³/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft³/s (3,850 m³/s) Nov. 4, 1927, gage height, 35.0 ft (10.67 m), present site, from rating curve extended above 70,000 ft³/s (1,980 m³/s); minimum daily, 82 ft³/s (2.32 m³/s) Aug. 8, 1965.
Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1760.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 34,000 ft³/s (963 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0445	ice jam		*23.90	7.285	Feb. 25	0245	*47600	1350	18.50	5.639
Feb. 21	--	38800	1100	ice jam							

Minimum daily discharge, 1,050 ft³/s (29.7 m³/s) Jan. 31

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4940	2680	10400	1250	1920	20300	17300	8900	8830	7150	4010	4920
2	5050	3030	9830	2520	5900	17600	19000	9820	9240	5280	2400	4900
3	5690	5680	10900	2350	11800	11700	16500	7900	9920	2340	4260	4380
4	5370	4770	12400	3500	9400	10500	14900	8300	7960	2580	3200	4010
5	6780	4630	10400	4650	5600	9700	15000	9470	7980	2670	3410	2350
6	7910	3650	7650	2880	5200	11000	19800	9600	7650	5030	5820	2130
7	8210	4810	5920	2620	5800	8920	15000	10000	7140	5280	7140	2310
8	6130	6350	8390	2440	3700	8680	14500	6140	10200	6300	7360	2170
9	6050	6550	9150	2320	6500	9240	14400	4590	10200	6270	4970	4140
10	6540	7470	9120	1450	7000	9340	14300	5730	10900	2460	7430	4300
11	5110	6200	8890	1800	9000	8600	13000	7540	11100	1770	7260	3390
12	2100	5830	8530	3000	27000	8400	12900	9420	11100	2040	7080	3810
13	3530	6310	4740	2600	20100	7700	11900	20100	9100	5970	7080	2680
14	4710	6320	4300	2280	15200	7600	12000	16600	9500	3390	7050	5390
15	4720	3860	5750	2440	13200	7300	12600	14500	8400	3320	4500	4310
16	5160	2930	5600	2400	13000	5180	12600	14700	8000	3130	12500	4540
17	5340	5230	5650	2300	9000	7000	12000	14800	7000	2870	18400	4190
18	5110	4710	6000	2280	12500	7000	8810	14900	5700	2440	18800	3410
19	1890	4870	6300	2200	13700	5950	10800	13900	6000	1830	18000	2860
20	5700	4790	5000	2450	19400	5600	12000	12900	2150	3640	14500	3230
21	6190	5370	2900	2080	38400	4000	9870	8500	5100	3960	12500	4890
22	6850	3020	5000	2180	34800	3250	9810	9490	6100	3550	7500	8240
23	6440	2100	4750	1800	33400	4200	10100	10400	5400	2940	4400	25100
24	6370	5920	4100	1450	38100	5900	11100	6330	6400	2420	8050	23600
25	6670	8520	4700	1100	45300	6300	14500	4110	6500	1720	8000	20900
26	5190	10900	5900	3000	39200	6400	14400	7810	6800	1660	6000	16700
27	7500	11200	2650	2900	28500	9150	13300	8450	6810	4650	5090	12600
28	8930	8840	2150	1800	21600	8100	11400	8830	4870	4720	5890	14900
29	8740	9540	5000	1650	---	5600	9350	7250	4980	6300	1680	13800
30	8780	11200	4500	1400	---	16000	11000	2700	5110	7510	2400	11500
31	8210	---	2650	1050	---	23000	---	5690	---	7180	3670	---
TOTAL	185910	177280	199220	70140	494220	279210	394140	299370	226140	122370	230350	225650
MEAN	5997	5909	6426	2263	17650	9007	13140	9657	7538	3947	7431	7522
MAX	8930	11200	12400	4650	45300	23000	19800	20100	11100	7510	18800	25100
MIN	1890	2100	2150	1050	1920	3250	8810	2700	2150	1660	1680	2130

CAL YR 1980 TOTAL 1906270 MEAN 5208 MAX 26000 MIN 900
WTR YR 1981 TOTAL 2904000 MEAN 7956 MAX 45300 MIN 1050

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 except those for period of no gage-height record Oct. 28 to Dec. 3, May 29 to July 6, Aug. 25 to Sept. 30, which are poor. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--58 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 (71 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, 1,450 ft^3/s (41.06 m^3/s) occurred between Feb. 22 and Feb. 27, gage height, 3.91 ft (1.192 m); minimum daily, 28 ft^3/s (0.79 m^3/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	145	345	58	32	950	1220	301	64	100	106	55
2	28	140	340	55	41	668	1240	190	64	100	120	55
3	29	130	335	53	72	478	997	198	64	100	100	55
4	34	120	328	50	102	431	805	204	64	100	93	55
5	45	110	315	48	114	321	498	204	175	100	88	55
6	48	105	266	47	117	230	450	205	175	72	87	55
7	49	100	259	46	117	238	450	151	175	71	83	55
8	49	97	235	44	118	238	450	110	175	72	78	55
9	47	94	217	42	140	215	453	119	175	71	74	55
10	47	91	207	40	132	196	351	127	215	70	71	55
11	43	88	190	39	144	202	834	186	215	74	68	55
12	41	85	182	39	210	204	819	232	215	77	67	55
13	41	82	180	38	558	203	446	360	215	80	65	55
14	41	79	172	38	760	203	201	463	215	82	62	55
15	41	76	157	37	670	196	206	445	215	82	59	55
16	41	73	170	37	526	198	217	449	215	81	67	55
17	41	70	102	36	563	193	225	725	125	79	103	55
18	41	67	100	36	522	185	237	895	125	76	164	55
19	41	64	96	35	482	178	273	698	125	75	189	55
20	41	60	93	35	491	173	295	556	125	72	182	55
21	55	426	92	35	700	165	289	361	125	69	164	55
22	56	426	88	34	1380	158	276	139	125	73	153	55
23	57	426	86	34	1340	152	258	106	125	75	128	235
24	58	269	84	34	1150	91	253	110	125	76	99	235
25	58	377	82	33	1230	45	442	112	125	76	55	630
26	81	370	79	33	1320	47	566	114	125	74	55	630
27	127	365	77	33	1240	53	535	115	125	73	55	630
28	157	360	72	33	1140	72	499	94	125	73	55	630
29	175	355	67	32	---	125	474	64	125	77	55	225
30	165	350	63	32	---	386	457	64	100	87	55	225
31	155	---	63	32	---	1200	---	64	---	102	55	---
TOTAL	1960	5600	5142	1218	15411	8394	14716	8161	4361	2489	2855	4650
MEAN	63.2	187	166	39.3	550	271	491	263	145	80.3	92.1	155
MAX	175	426	345	58	1380	1200	1240	895	215	102	189	630
MIN	28	60	63	32	32	45	201	64	64	69	55	55

CAL YR 1980 TOTAL 44382 MEAN 121 MAX 1120 MIN 24
WTR YR 1981 TOTAL 74957 MEAN 205 MAX 1380 MIN 28

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

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

AVERAGE DISCHARGE.--51 years, 396 ft^3/s (11.21 m^3/s), 24.33 in/yr (623 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 (180 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, 4,520 ft^3/s (128 m^3/s) Feb. 23, gage height, 7.62 ft (2.323 m); minimum, 41.1 ft^3/s (1.16 m^3/s) July 19, 20, Sept. 19; minimum daily, 49 ft^3/s (1.39 m^3/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	81	429	155	84	2210	2020	425	297	83	154	78
2	57	81	376	140	400	1290	1650	429	227	65	121	74
3	56	96	380	130	825	804	1730	445	193	70	77	70
4	116	103	387	115	559	596	1060	445	203	87	70	70
5	158	113	380	105	293	597	936	395	250	130	118	70
6	163	118	320	92	242	589	1260	313	258	193	203	70
7	161	125	233	89	208	584	1410	313	247	195	120	66
8	121	142	294	86	215	574	970	313	213	108	96	64
9	72	172	380	96	208	376	943	313	198	71	87	84
10	57	181	387	98	202	279	1070	313	270	62	78	136
11	76	195	387	98	205	354	869	313	301	92	83	216
12	81	198	264	98	671	387	793	594	222	106	97	148
13	78	183	216	98	1250	391	387	1460	154	108	96	110
14	76	152	185	98	1180	391	279	757	140	99	96	120
15	75	142	135	96	773	327	837	584	142	92	120	127
16	75	142	125	84	563	301	518	1080	150	92	433	120
17	78	142	145	85	460	301	645	745	152	92	354	78
18	90	132	160	85	680	301	787	514	152	88	238	51
19	96	113	160	85	1190	317	1020	470	152	60	211	49
20	116	105	160	85	1610	344	793	425	152	65	132	110
21	120	121	145	85	997	351	441	402	156	115	93	148
22	110	129	155	84	1900	334	100	369	167	106	105	307
23	103	129	155	84	3090	294	264	354	211	121	110	1630
24	97	200	160	86	2400	276	722	317	172	129	110	1960
25	165	492	160	88	1830	279	896	267	146	106	110	1040
26	640	555	155	88	3130	297	902	250	158	84	111	546
27	509	422	145	85	3630	395	688	247	176	77	108	384
28	238	256	140	84	3600	441	609	241	156	84	85	837
29	227	483	140	94	---	694	565	216	129	594	77	640
30	224	584	155	90	---	1830	505	206	120	297	78	422
31	138	---	160	92	---	2890	---	320	---	193	78	---
TOTAL	4449	6087	7173	2978	32395	19394	25669	13835	5664	3864	4049	9825
MEAN	144	203	231	96.1	1157	626	856	446	189	125	131	328
MAX	640	584	429	155	3630	2890	2020	1460	301	594	433	1960
MIN	56	81	125	84	84	276	100	206	120	60	70	49
MEAN†	136	214	230	93.8	1237	571	803	480	188	125	131	326
CFSM†	.62	.97	1.04	.42	5.60	2.58	3.63	2.17	.85	.57	.59	1.48
IN.†	.71	1.08	1.20	.49	5.83	2.98	4.06	2.50	.95	.65	.68	1.65

CAL YR 1980	TOTAL	95939	MEAN 262	MAX 2540	MIN 23	MEAN† 263	CFSM† 1.19	IN† 16.23
WTR YR 1981	TOTAL	135382	MEAN 371	MAX 3630	MIN 49	MEAN† 371	CFSM† 1.68	IN† 22.78

† Adjusted for change in contents in North Hartland Reservoir.

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 mi² (697 km²).

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) National Geodetic Vertical Datum of 1929 (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 good except those for winter period and those for period of lagging intake Mar. 1 to Apr. 13, 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.

AVERAGE DISCHARGE.--53 years, 402 ft³/s (11.38 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Mar. 19, 1936, gage height, 10.92 ft (3.328 m), from rating curve extended above 6,700 ft³/s (190 m³/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 ft³/s (0.40 m³/s) Aug. 26, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,000 ft³/s (85 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0330	3400	96	a*12.19	3.716	Mar. 31	--	3400	96	--	--
Feb. 25	0500	*3570	101	5.63	1.716						

a Ice jam.

Minimum daily discharge, 66 ft³/s (1.87 m³/s) Oct. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	138	435	150	100	1500	2000	465	318	96	137	85
2	71	130	387	145	600	1300	2400	447	247	89	141	95
3	78	121	650	145	1890	1100	2000	419	210	85	95	90
4	134	115	500	140	1210	900	1600	373	192	84	156	88
5	161	113	520	135	965	800	1400	340	186	126	146	85
6	132	109	550	130	877	700	1300	323	167	131	120	88
7	114	104	650	130	842	620	1200	304	164	115	113	78
8	101	102	550	125	796	580	1000	278	161	98	121	125
9	89	105	350	125	719	520	900	259	200	88	134	210
10	84	119	250	120	619	480	800	245	256	88	117	150
11	84	124	190	120	1620	440	700	242	199	82	108	120
12	69	115	150	120	2770	400	600	308	168	77	97	142
13	66	108	190	115	1250	370	584	861	151	82	90	141
14	80	105	170	115	878	350	474	677	139	126	125	132
15	81	102	150	115	699	330	628	588	134	115	519	126
16	80	101	170	115	576	320	522	1110	127	92	500	113
17	80	93	160	110	514	300	472	1320	111	80	600	102
18	85	143	135	110	544	290	518	1080	106	75	400	94
19	91	103	150	110	642	280	535	880	98	73	300	113
20	96	108	160	110	1030	280	470	735	94	76	220	146
21	95	106	170	110	2260	270	406	633	100	127	160	149
22	93	105	160	110	2160	270	352	425	111	171	140	156
23	86	93	155	110	1770	260	338	346	175	121	130	464
24	84	120	150	110	1910	270	579	303	145	93	115	925
25	84	459	145	105	3250	270	1030	266	128	85	135	700
26	435	500	140	105	2620	260	881	241	231	97	120	600
27	331	339	135	105	2500	350	676	216	207	130	105	475
28	244	326	135	105	2000	450	553	201	149	534	100	775
29	205	743	145	100	---	900	518	178	123	483	90	600
30	173	579	155	100	---	2000	529	172	107	287	95	475
31	150	---	155	100	---	2700	---	259	---	183	85	---
TOTAL	3828	5628	8112	3645	37611	19860	25965	14494	4904	4189	5514	7642
MEAN	123	188	262	118	1343	641	866	468	163	135	178	255
MAX	435	743	650	150	3250	2700	2400	1320	318	534	600	925
MIN	66	93	135	100	100	260	338	172	94	73	85	78

CAL YR 1980 TOTAL 95217 MEAN 260 MAX 3230 MIN 32
WTR YR 1981 TOTAL 141392 MEAN 387 MAX 3250 MIN 66

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 September 1981 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 565.33 ft (172.313 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1977, at datum 2.00 ft (0.610 m) lower.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by powerplant and mills upstream. High flow slightly affected by retarding reservoirs. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--5 years, 251 ft^3/s (759 m^3/s), 29.90 in/yr (759 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s (323 m^3/s) Mar. 14, 1977, gage height, 8.75 ft (2.667 m), present datum, from rating curve extended above 4,100 ft^3/s (120 m^3/s); maximum gage height, 11.81 ft (3.600 m) Mar. 6, 1979 (ice jam); maximum gage height unaffected by backwater, 10.64 ft (3.234 m), present datum, Aug. 10, 1976; minimum daily discharge, 8.0 ft^3/s (0.23 m^3/s) Sept. 14, 1980.

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 (71 m^3/s) and maximum (*):

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)
Feb. 20	--	2800	79.3	--	--	Feb. 24	1745	a*5320	151	7.08	2.158

a From rating curve extended above 4,100 ft^3/s (120 m^3/s).

Minimum daily discharge, 27 ft^3/s (0.76 m^3/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	128	321	54	32	520	1030	243	130	40	68	30
2	44	118	306	54	500	409	995	253	94	30	65	31
3	43	107	551	52	450	355	710	246	84	46	54	33
4	104	100	368	52	380	260	536	208	107	32	48	32
5	112	100	277	50	300	257	578	186	98	105	38	28
6	128	94	232	50	190	239	729	177	94	157	46	30
7	86	84	239	50	160	232	520	168	84	84	51	28
8	78	80	232	50	140	218	409	128	82	63	43	27
9	65	96	291	48	130	208	350	135	86	67	35	80
10	52	111	270	48	170	210	317	128	154	70	48	68
11	63	116	220	48	800	208	306	157	128	57	37	60
12	58	102	130	48	900	189	321	372	107	36	44	57
13	71	102	110	46	750	180	291	793	84	35	37	46
14	74	100	100	46	600	183	306	515	73	52	38	65
15	113	96	96	45	320	165	346	404	94	55	40	68
16	80	94	92	44	290	192	277	468	79	51	102	58
17	79	92	88	43	270	151	270	368	66	46	186	51
18	54	100	85	42	600	143	368	302	70	36	177	40
19	107	114	80	40	550	138	404	246	55	43	130	47
20	102	116	78	38	2500	138	338	208	58	46	75	68
21	80	92	76	38	2100	135	288	189	60	77	73	63
22	77	98	74	38	1500	133	250	165	65	90	51	94
23	73	100	70	38	1000	130	229	151	88	86	50	473
24	57	92	68	37	3150	128	355	138	66	68	42	786
25	116	414	66	37	2480	135	468	123	68	55	48	428
26	651	310	66	36	1450	148	428	116	80	47	46	270
27	414	232	64	35	915	198	346	96	65	55	40	180
28	267	291	62	35	634	183	291	96	55	58	37	329
29	189	735	60	34	---	372	250	84	61	162	32	321
30	154	438	58	33	---	1070	250	77	51	174	33	218
31	125	---	56	33	---	1570	---	165	---	118	30	---
TOTAL	3761	4852	4886	1342	23261	8797	12556	7105	2486	2141	1844	4109
MEAN	121	162	158	43.3	831	284	419	229	82.9	69.1	59.5	137
MAX	651	735	551	54	3150	1570	1030	793	154	174	186	786
MIN	43	80	56	33	32	128	229	77	51	30	30	27
CFSM	1.06	1.42	1.39	.38	7.29	2.49	3.68	2.01	.73	.61	.52	1.20
IN.	1.23	1.58	1.59	.44	7.59	2.87	4.10	2.32	.81	.70	.60	1.34

CAL YR 1980 TOTAL 69068.0 MEAN 189 MAX 4700 MIN 8.0 CFSM 1.66 IN 22.54
WTR YR 1981 TOTAL 77140.0 MEAN 211 MAX 3150 MIN 27 CFSM 1.85 IN 25.17

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 mi² (409 km²).

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) National Geodetic Vertical Datum of 1929 (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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 290 ft³/s (8.213 m³/s), 24.93 in/yr (633 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s (439 m³/s) Sept. 22, 1938, gage height, 17.68 ft (5.389 m), from rating curve extended above 3,200 ft³/s (91 m³/s) on basis of computations of flow over dams at gage heights 16.41 ft (5.00 m) and 17.68 ft (5.389 m); minimum daily, 7.0 ft³/s (0.20 m³/s) Nov. 13, 1973. Maximum discharge since construction of North Spingfield Dam in 1960, 3,550 ft³/s (101 m³/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, 3,270 ft³/s (92.6 m³/s) Feb. 23, gage height, 7.04 ft (2.146 m); minimum daily, 35 ft³/s (0.99 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	145	600	80	45	2810	854	283	217	52	100	39
2	48	136	386	78	60	2520	1440	297	147	37	87	42
3	52	122	514	76	900	1720	1450	280	128	50	66	41
4	95	117	577	74	950	504	736	253	135	48	62	40
5	138	115	334	72	500	374	556	226	149	85	55	38
6	145	104	259	72	307	357	432	220	130	173	59	37
7	103	110	248	70	239	340	963	214	114	117	69	36
8	89	77	242	70	230	320	950	174	97	87	52	35
9	71	101	301	70	209	297	441	173	114	73	50	85
10	58	119	317	68	160	290	413	167	173	81	63	106
11	58	131	260	68	341	280	378	180	197	79	49	75
12	58	120	175	66	1180	263	395	392	142	48	55	70
13	73	115	160	66	1330	253	348	729	87	49	62	60
14	65	108	150	64	1030	253	361	778	108	60	45	62
15	119	104	140	62	819	223	441	417	110	60	54	75
16	109	102	135	60	420	260	353	628	142	59	139	66
17	95	88	130	58	392	214	324	489	104	51	214	56
18	73	88	125	58	556	202	427	365	62	41	217	42
19	113	96	120	58	809	194	479	294	56	46	170	49
20	115	99	115	56	958	197	395	273	51	44	97	72
21	95	91	110	56	807	191	336	229	59	100	88	66
22	87	91	105	56	1260	186	290	217	72	112	63	78
23	80	91	100	54	2060	180	276	202	108	104	59	391
24	68	93	98	54	1400	183	413	186	88	82	59	693
25	76	384	96	52	1600	191	578	165	92	62	73	669
26	622	427	94	50	2650	199	514	165	110	52	69	386
27	546	310	92	50	2790	257	400	132	95	56	55	217
28	317	254	90	48	2830	247	344	128	73	59	48	305
29	226	665	86	48	---	328	301	117	70	167	41	340
30	190	733	84	46	---	669	297	112	60	244	42	244
31	148	---	82	45	---	806	---	188	---	167	43	---
TOTAL	4183	5336	6325	1905	26832	15308	15885	8673	3290	2545	2405	4515
MEAN	135	178	204	61.5	958	494	530	280	110	82.1	77.6	151
MAX	622	733	600	80	2830	2810	1450	778	217	244	217	693
MIN	48	77	82	45	45	180	276	112	51	37	41	35
MEAN†	135	191	191	60.9	1341	183	496	278	109	83.2	76.2	152
CFSM†	.85	1.21	1.21	.39	8.49	1.16	3.14	1.76	.69	.53	.48	.96
IN.†	.99	1.35	1.40	.44	8.84	1.34	3.51	2.03	.77	.61	.56	1.08

CAL YR 1980 TOTAL 83123 MEAN 227 MAX 2470 MIN 30 MEAN† 227 CFSM† 1.44 IN† 19.56
WTR YR 1981 TOTAL 97202 MEAN 266 MAX 2830 MIN 35 MEAN† 266 CFSM† 1.68 IN† 22.90

† 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 mi² (267 km²).
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) National Geodetic Vertical Datum of 1929 (levels by private engineer).
REMARKS.--Records fair except those for winter period and period of doubtful gage-height record Apr. 15 to July 15, which are poor. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--41 years, 172 ft³/s (4.871 m³/s), 22.68 in/yr (576 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s (334 m³/s) Aug. 10, 1976, gage height, 15.85 ft (4.831 m), from rating curve extended above 3,300 ft³/s (93 m³/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 ft³/s (0.10 m³/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 ft³/s (74 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	2230	*5220	148	9.92	3.024	Feb. 24	1700	3670	104	8.30	2.530

Minimum discharge, 11 ft³/s (0.31 m³/s) Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	29	136	29	24	394	391	134	86	27	35	20
2	18	27	138	28	409	337	539	155	62	25	29	21
3	21	26	280	23	341	280	348	127	57	25	27	22
4	35	26	132	21	92	224	288	113	58	26	28	22
5	29	26	90	20	86	217	388	105	54	64	31	20
6	24	24	120	20	84	205	447	104	50	71	38	18
7	23	24	160	21	84	190	302	104	48	45	29	17
8	22	24	110	23	88	179	248	91	42	34	26	17
9	21	24	140	24	100	171	229	84	84	27	29	71
10	19	34	120	26	146	167	221	79	82	41	33	47
11	20	33	70	25	599	160	212	89	54	31	29	37
12	23	29	60	20	966	143	196	243	45	25	30	32
13	23	26	52	18	281	145	173	337	41	24	27	32
14	21	26	42	17	212	145	202	183	38	24	24	29
15	20	26	45	18	197	130	253	183	42	24	24	29
16	20	24	47	19	177	143	179	331	42	20	91	28
17	20	19	50	21	193	119	165	212	36	18	58	26
18	22	19	44	22	667	109	248	160	31	17	42	24
19	26	27	42	24	617	102	198	136	28	17	33	30
20	24	28	47	25	2510	104	167	117	28	22	28	47
21	22	27	34	25	1930	100	145	104	34	76	25	35
22	22	26	33	25	763	94	132	96	37	63	23	39
23	20	27	32	26	481	94	130	111	54	42	22	130
24	18	29	29	26	2300	102	256	89	37	32	22	214
25	43	243	28	25	1660	109	293	79	37	28	26	107
26	343	132	29	25	1330	119	205	69	122	26	30	71
27	84	78	31	26	726	157	169	65	58	37	24	62
28	51	132	33	26	484	160	148	59	42	37	22	111
29	41	450	35	26	---	305	153	55	34	107	20	81
30	34	185	37	26	---	610	143	56	29	73	20	64
31	31	---	32	25	---	656	---	104	---	45	20	---
TOTAL	1158	1850	2278	725	17547	6170	7168	3974	1492	1173	945	1503
MEAN	37.4	61.7	73.5	23.4	627	199	239	128	49.7	37.8	30.5	50.1
MAX	343	450	280	29	2510	656	539	337	122	107	91	214
MIN	18	19	28	17	24	94	130	55	28	17	20	17
CFSM	.36	.60	.71	.23	6.09	1.93	2.32	1.24	.48	.37	.30	.49
IN.	.42	.67	.82	.26	6.34	2.23	2.59	1.44	.54	.42	.34	.54

CAL YR 1980 TOTAL 43047 MEAN 118 MAX 3350 MIN 12 CFSM 1.15 IN 15.55
WTR YR 1981 TOTAL 45983 MEAN 126 MAX 2510 MIN 17 CFSM 1.22 IN 16.61

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 mi² (187.0 km²).
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) National Geodetic Vertical Datum of 1929 (levels by private engineer).
REMARKS.--Records fair. No gage-height record July 3 to Sept. 9. Occasional diurnal fluctuation at low flow prior to 1962; fluctuation more frequent prior to 1946. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--41 years, 120 ft³/s (3.398 m³/s), 22.57 in/yr (573 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft³/s (240 m³/s) Aug. 10, 1976, gage height, 14.06 ft (4.285 m), from rating curve extended above 2,000 ft³/s (57 m³/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 ft³/s (0.054 m³/s) July 25, 1949; minimum daily, 2.4 ft³/s (0.068 m³/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 ft³/s (50 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	2030	ice jam		*7.86	2.396	Feb. 24	1530	*2060	58.3	7.52	2.292

Minimum discharge not determined, minimum daily discharge, 6.8 ft³/s (0.193 m³/s) Sept. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	25	95	27	13	259	276	97	64	18	16	8.0
2	7.5	22	92	26	230	224	319	178	53	17	13	8.2
3	10	20	153	25	280	191	245	128	50	18	12	8.6
4	36	21	98	24	150	163	203	107	51	17	13	8.4
5	27	20	78	23	65	159	224	97	46	52	15	7.8
6	17	19	90	23	60	151	276	92	42	56	17	7.2
7	22	18	105	24	55	142	205	88	41	35	14	6.8
8	13	18	85	27	52	132	174	79	35	28	12	6.8
9	12	19	62	30	50	126	157	74	46	20	14	10
10	11	30	50	27	65	126	151	70	49	20	20	21
11	12	27	35	25	450	124	140	78	36	18	13	18
12	17	22	36	24	500	116	138	169	29	16	14	15
13	15	19	39	23	350	116	122	193	28	17	15	13
14	11	19	30	22	200	118	149	130	27	18	11	11
15	8.6	21	32	21	160	111	180	128	29	20	11	11
16	8.6	18	34	20	140	116	140	306	29	17	40	11
17	9.4	15	35	20	130	102	128	200	24	15	30	10
18	12	21	27	19	150	98	142	153	20	14	22	9.8
19	15	35	23	18	400	95	130	132	19	14	18	13
20	12	40	25	17	1000	93	114	116	24	17	15	23
21	11	39	24	17	850	87	104	104	30	50	13	16
22	12	27	23	17	750	85	97	95	32	32	12	20
23	12	31	22	16	650	82	93	104	35	20	10	70
24	12	27	21	16	1450	85	147	88	26	15	10	111
25	31	126	23	15	914	88	167	76	50	13	15	60
26	161	87	21	15	706	90	140	68	95	12	12	42
27	67	66	23	15	416	113	118	62	46	11	10	34
28	46	98	25	14	306	118	105	57	33	25	8.2	66
29	37	235	28	14	---	163	105	56	25	45	8.0	50
30	31	126	30	14	---	335	107	55	20	35	8.0	37
31	27	---	28	13	---	396	---	78	---	21	8.0	---
TOTAL	731.0	1311	1492	631	10542	4404	4796	3458	1134	726	449.2	733.6
MEAN	23.6	43.7	48.1	20.4	377	142	160	112	37.8	23.4	14.5	24.5
MAX	161	235	153	30	1450	396	319	306	95	56	40	111
MIN	7.5	15	21	13	13	82	93	55	19	11	8.0	6.8
CFSM	.33	.61	.67	.28	5.22	1.97	2.22	1.55	.52	.32	.20	.34
IN.	.38	.68	.77	.33	5.43	2.27	2.47	1.78	.58	.37	.23	.38

CAL YR 1980 TOTAL 27842.0 MEAN 76.1 MAX 2330 MIN 4.9 CFSM 1.05 IN 14.34
WTR YR 1981 TOTAL 30407.8 MEAN 83.3 MAX 1450 MIN 6.8 CFSM 1.15 IN 15.67

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 mi² (14,227 km²), 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) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for winter period, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 24,800,000,000 ft³ (702,000,000 m³).

AVERAGE DISCHARGE.--39 years, 9,329 ft³/s (264.2 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 97,000 ft³/s (2,750 m³/s) Mar. 27, 1953, gage height, 30.37 ft (9.257 m); minimum daily, 115 ft³/s (3.26 m³/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.--Maximum discharge, 58,500 ft³/s (1,657 m³/s) Feb. 25, gage height, 22.12 ft (6.742 m); minimum daily, 1,200 ft³/s (34.0 m³/s) Jan. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5290	5930	12500	2380	2500	29400	27900	12100	8310	5350	4380	3900
2	5060	3280	11900	4700	4500	26000	27800	11400	9290	5170	2260	5330
3	6610	4800	12400	1660	10700	17600	26900	9660	9810	2320	4570	4970
4	4100	4390	14300	2420	11800	16900	21600	9680	8790	2640	3450	3770
5	7380	4990	12800	7640	8500	11400	20600	10200	8210	2760	3400	2290
6	8100	3980	10900	3400	6500	12000	24100	11500	9090	5440	5570	1990
7	8000	5530	7060	3450	4650	12800	22300	10500	6170	5360	5870	2000
8	7910	6320	7810	2850	5200	10600	19200	8600	9050	6200	5970	1980
9	6050	6690	9470	2900	5800	11400	18000	5250	10200	4830	6620	4600
10	6410	7150	11600	2700	6600	11200	17800	5690	11300	3600	6940	3030
11	6070	7060	10100	1350	11000	9950	16400	7900	11200	1940	7500	3960
12	2850	6410	9820	3200	28000	9670	15900	9700	11000	2420	6640	3140
13	2390	6010	8040	3000	27000	10400	14700	22900	11100	4800	6710	2840
14	5070	6990	3890	2700	20000	9720	14400	20800	10100	3480	6590	5570
15	4390	4000	6550	2900	17500	8950	15700	17900	8980	2660	5970	5920
16	5410	3600	5360	2200	15000	8310	14800	20900	7770	3010	8530	4930
17	5470	5350	6070	1650	12500	8440	14700	20000	8090	2330	16300	2800
18	5430	5470	6620	1600	12000	8560	12500	17800	6810	1900	17200	2270
19	2010	5080	6820	2600	17000	7760	12200	17400	5490	1250	17100	2430
20	5990	5520	6160	2650	24500	8110	14400	15900	2740	4200	13400	3020
21	5820	5360	3350	1900	32500	6040	13600	12000	5180	4200	13000	4570
22	6980	2570	5790	2100	44800	4250	10900	11200	6510	2800	8990	7100
23	6830	2140	5300	2700	44600	7010	11400	11100	6160	2940	4150	23200
24	6590	6010	4840	2000	48300	5550	12100	9780	6200	2400	7160	30400
25	6810	8740	6880	1200	57800	8030	18700	4910	6630	1720	8200	24000
26	7680	12200	5480	3400	55200	9700	19000	7350	7040	1250	7840	21100
27	8120	12500	5040	3250	42300	8270	15700	8040	6770	5000	5840	15600
28	8200	11800	3840	1850	34000	10600	14000	8960	4450	4070	4390	16400
29	9550	11800	5680	1550	---	10200	13500	7920	4490	6150	3310	16700
30	8820	13500	6280	1900	---	19300	11900	4680	5070	8610	2370	14600
31	9830	---	4010	1600	---	31200	---	5690	---	7090	2330	---
TOTAL	195220	195170	236660	81400	610750	369320	512700	357410	232000	117890	222550	244410
MEAN	6297	6506	7634	2626	21810	11910	17090	11530	7733	3803	7179	8147
MAX	9830	13500	14300	7640	57800	31200	27900	22900	11300	8610	17200	30400
MIN	2010	2140	3350	1200	2500	4250	10900	4680	2740	1250	2260	1980

CAL YR 1980 TOTAL 2411610 MEAN 6589 MAX 43000 MIN 1200
WTR YR 1981 TOTAL 3375480 MEAN 9248 MAX 57800 MIN 1200

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued
(National stream-quality accounting network station)

PERIOD OF RECORD.--Water years 1975 to September 1980 (published as "at Walpole"), October 1980 to September 1981.

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

INSTRUMENTATION.--Water-quality monitor since October 1981.

REMARKS.--Interruptions in the record were due to malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 175 micromhos Sept. 18, 1978; minimum recorded, 55 micromhos Jan. 5, 1981.
WATER TEMPERATURES: Maximum recorded, 28.0°C July 30, Aug. 5, 1979; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 137 micromhos June 2; minimum recorded, 55 micromhos Jan. 5.
WATER TEMPERATURES: Maximum recorded, 27.5°C July 26; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
28...	1055	10600	99	6.5	7.7	.50	11.0	93	K750	204	37	14
NOV												
24...	1045	10500	88	6.9	2.4	.30	12.8	94	270	27	34	16
DEC												
29...	1045	12000	92	6.6	.2	.50	14.3	98	175	120	35	13
JAN												
15...	1000	5900	113	6.9	.1	.50	14.0	96	546	74	47	21
MAR												
03...	1320	16100	70	6.1	1.2	.50	14.0	100	130	35	28	--
24...	1000	6710	113	6.8	2.8	1.9	12.9	98	200	26	39	--
APR												
22...	0900	10700	91	6.6	6.1	3.0	11.0	89	101	20	35	--
MAY												
13...	1045	--	--	--	--	--	--	--	440	1040	--	--
JUN												
24...	1145	10300	109	6.5	20.6	1.3	7.3	83	97	K14	41	--
JUL												
21...	1030	9270	133	6.5	24.3	1.5	8.6	104	--	108	52	--
AUG												
11...	1200	10600	98	6.3	24.0	.80	7.5	89	103	30	38	--
SEP												
16...	1215	--	--	--	--	--	--	--	105	27	--	--

K, NON-IDEAL COLONY COUNT.

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
28...	12	1.7	5.1	22	.4	1.1	23	7.5	6.5	.1	5.3
NOV											
24...	11	1.5	4.2	21	.3	.9	18	8.9	6.0	.1	6.3
DEC											
29...	12	1.3	4.1	20	.3	.9	22	9.8	6.1	.1	6.8
JAN											
15...	16	1.6	4.6	17	.3	1.0	26	9.5	7.6	<.1	7.4
MAR											
03...	8.7	1.4	3.4	21	.3	.8	21	8.0	6.1	<.1	5.4
24...	13	1.6	4.4	19	.3	1.0	27	8.9	8.6	<.1	6.1
APR											
22...	12	1.3	4.0	19	.3	.9	22	8.8	5.4	<.1	5.6
MAY											
13...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	14	1.5	4.1	17	.3	1.0	32	7.0	6.3	5.1	5.1
JUL											
21...	18	1.8	5.5	18	.3	1.2	40	9.2	8.1	<.1	4.6
AUG											
11...	13	1.4	4.4	20	.3	1.0	28	8.2	6.2	<.1	4.6
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT											
28...	71	54	.23	.24	.020	.030	.16	.12	.43	.14	.00
NOV											
24...	64	51	.29	.31	.040	.110	.08	.20	.50	.24	.05
DEC											
29...	62	56	.41	.41	.010	.030	.07	.10	.51	.11	.01
JAN											
15...	80	65	.45	.46	<.010	.060	.05	--	.57	.27	.16
MAR											
03...	54	48	.45	.45	.040	.030	.19	.12	.67	.16	.00
24...	62	62	.49	.48	.020	.060	.22	.30	.76	.32	.04
APR											
22...	53	53	.39	.41	.030	.040	.22	1.8	.67	1.80	1.5
MAY											
13...	--	--	--	--	--	--	--	--	--	--	--
JUN											
24...	74	65	.30	.30	.010	.030	.23	.46	.56	.47	.21
JUL											
21...	83	73	.21	.21	.040	.010	.33	.33	.55	.37	.03
AUG											
11...	71	56	.23	.16	.010	.020	.21	.33	.39	.34	.11
SEP											
16...	--	--	--	--	--	--	--	--	--	--	--

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
28...	.19	.37	.030	.09	.020	--	.2	5.2	1	29	100
NOV											
24...	.19	.53	.010	.03	.000	3.9	--	--	3	85	100
DEC											
29...	.10	.52	.010	.03	.020	4.5	--	--	5	162	80
JAN											
15...	.11	.72	.050	.15	.020	--	.1	--	5	80	72
MAR											
03...	.22	.61	.020	.06	<.010	--	--	--	14	609	86
24...	.28	.81	.020	.06	.010	2.7	--	--	21	380	55
APR											
22...	.26	2.2	<.010	.03	<.010	--	--	2.6	8	231	88
MAY											
13...	--	--	--	--	--	--	--	--	103	--	58
JUN											
24...	.26	.77	.010	.03	.020	3.8	--	--	7	195	100
JUL											
21...	.34	.58	.020	.06	<.010	--	.3	2.6	3	75	100
AUG											
11...	.23	.57	.010	.03	<.010	3.5	--	--	7	200	68
SEP											
16...	--	--	--	--	--	--	--	--	5	--	70

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT											
28...	--	--	0	100	80	20	2	2	0	20	10
JAN											
15...	0	0	0	100	80	20	0	--	<1	10	0
APR											
22...	0	0	0	<50	--	20	1	--	<1	10	0
JUL											
21...	1	0	1	<50	--	10	2	0	2	90	80

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
OCT											
28...	10	0	0	0	4	2	2	380	270	110	5
JAN											
15...	10	0	0	0	3	2	1	230	170	60	0
APR											
22...	10	1	1	0	2	0	2	270	210	60	1
JUL											
21...	10	1	0	1	5	0	5	340	320	20	23

CONNECTICUT RIVER BASIN

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUSPENDED RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
OCT										
28...	3	2	30	20	10	--	--	.1	7	6
JAN										
15...	0	0	10	0	20	.1	.0	.1	4	4
APR										
22...	0	1	30	0	30	<.1	--	<.1	3	2
JUL										
21...	16	7	60	50	10	<.1	--	.1	2	0

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT										
28...	1	--	--	0	0	0	0	9	8	1
JAN										
15...	0	0	0	0	0	0	0	10	--	<4
APR										
22...	1	0	0	0	0	0	0	10	--	<4
JUL										
21...	2	<1	--	<1	<1	--	<1	10	6	4

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE	NOV 24,80		MAR 24,81		MAY 13,81		JUN 24,81	
TIME	1045		1000		1045		1145	
TOTAL CELLS/ML	77		680		400		2000	
DIVERSITY: DIVISION	1.3		0.1		0.7		1.5	
.CLASS	1.3		0.1		0.7		1.5	
..ORDER	1.3		0.1		2.3		2.7	
...FAMILY	1.3		0.1		2.5		2.8	
....GENUS	2.3		0.1		2.7		2.9	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)								
.BACILLARIOPHYCEAE								
..BACILLARIALES								
...NITZSCHIACEAE								
....NITZSCHIA	--	-	--	-	90#	23	39	2
..EUPODISCALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	39	10	320#	16
..FRAGILARIALES								
...FRAGILARIACEAE								
....ASTERIONELLA	26#	33	--	-	52	13	--	-
....DIATOMA	--	-	13	2	--	-	--	-
....FRAGILARIA	13#	17	--	-	--	-	--	-
....SYNEDRA	13#	17	--	-	26	6	26	1
....TABELLARIA	--	-	--	-	--	-	90	5
..NAVICULALES								
...CYMBELLACEAE								
....CYMBELLA	--	-	--	-	13	3	--	-
...NAVICULACEAE								
....NAVICULA	--	-	--	-	130#	32	--	-
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...CHLOROCOCCACEAE								
....SCHROEDERIA	--	-	--	-	--	-	--	-
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	--	-	--	-	120	6
...OOCYSTACEAE								
....ANKISTRODESMUS	13#	17	--	-	--	-	77	4
....FRANCEIA	--	-	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-	13	1
....TREUBARIA	--	-	--	-	--	-	13	1
...SCENEDESMACEAE								
....GLOEOACTINIUM	--	-	--	-	--	-	--	-
....SCENEDESMUS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	--	-	13	3	190	10
CHRYSOPHYTA								
.CHRYSOPHYCEAE								
..OCHROMONADALES								
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	26	6	13	1
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	13	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	--	-	670#	34
..NOSTOCALES								
...NOSTOCACEAE								
....APHANIZOMENON	--	-	--	-	--	-	90	5
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....LYNGBYA	--	-	670#	98	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-	310#	16
EUGLENOPHYTA (EUGLENOIDS)								
.EUGLENOPHYCEAE								
..EUGLENALES								
...EUGLENACEAE								
....TRACHELOMONAS	13#	17	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

PHYTOPLANKTON

DATE	JUL 21,81	AUG 11,81	SEP 16,81
TIME	1030	1200	1215
TOTAL CELLS/ML	590	140	1200
DIVERSITY: DIVISION	2.0	1.0	1.4
.CLASS	2.0	1.0	1.4
..ORDER	2.4	1.8	2.0
...FAMILY	2.4	2.1	2.1
....GENUS	2.7	2.1	2.1

ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)						
.BACILLARIOPHYCEAE						
..BACILLARIALES						
...NITZSCHIACEAE						
....NITZSCHIA	--	-	--	-	82	7
..EUPODISCALES						
...COSCINODISCACEAE						
....CYCLOTELLA	42	7	29#	20	200#	17
..FRAGILARIALES						
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....DIATOMA	--	-	--	-	--	-
....FRAGILARIA	--	-	--	-	--	-
....SYNEDRA	--	-	--	-	200#	17
....TABELLARIA	--	-	--	-	--	-
..NAVICULALES						
...CYMBELLACEAE						
....CYMBELLA	14	2	--	-	--	-
...NAVICULACEAE						
....NAVICULA	--	-	29#	20	--	-
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...CHLOROCOCCACEAE						
....SCHROEDERIA	--	-	14	10	--	-
...DICTYOSPHAERIACEAE						
....DICTYOSPHAERIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	70	12	--	-	14	1
....FRANCEIA	14	2	--	-	--	-
....KIRCHNERIELLA	56	10	--	-	--	-
....OOCYSTIS	--	-	--	-	--	-
....TREUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
....GLOEOACTINIUM	--	-	--	-	550#	46
....SCENEDESMUS	--	-	57#	40	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	56	10	14	10	--	-
CHRYSOPHYTA						
.CHRYSOPHYCEAE						
..OCHROMONADALES						
...OCHROMONADACEAE						
....OCHROMONAS	210#	36	--	-	140	11
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	--	-	--	-
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	98#	17	--	-	--	-
..NOSTOCALES						
...NOSTOCACEAE						
....APHANIZOMENON	--	-	--	-	--	-
..OSCILLATORIALES						
...OSCILLATORIACEAE						
....LYNGBYA	--	-	--	-	--	-
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
.EUGLENOPHYCEAE						
..EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	28	5	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%.

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	104	97	100	95	86	92	87	77	80	88	64	81
2	98	91	95	91	85	89	78	76	77	82	68	77
3	95	88	92	85	81	83	80	77	78	88	71	75
4	96	90	91	87	81	83	84	80	81	61	60	61
5	96	91	94	90	87	89	82	76	78	82	55	71
6	98	91	94	90	81	86	---	---	---	94	83	90
7	104	92	97	86	80	83	---	---	---	104	92	100
8	95	88	91	86	82	85	---	---	---	97	78	93
9	95	91	93	89	82	87	---	---	---	91	80	86
10	100	95	97	90	82	86	---	---	---	93	78	87
11	101	92	97	94	84	89	---	---	---	93	92	93
12	93	88	90	86	83	85	---	---	---	99	77	93
13	90	86	88	89	83	86	---	---	---	102	99	100
14	87	81	84	90	85	88	---	---	---	103	100	101
15	88	83	86	92	85	88	---	---	---	111	103	107
16	93	89	91	92	90	91	---	---	---	113	110	111
17	92	87	90	92	86	90	---	---	---	113	111	112
18	92	88	90	88	84	86	---	---	---	111	110	111
19	91	87	89	89	85	87	---	---	---	112	107	109
20	90	87	89	91	82	87	---	---	---	107	103	105
21	99	89	94	87	84	86	---	---	---	104	99	102
22	108	94	101	89	86	88	---	---	---	100	78	97
23	95	86	90	88	87	88	---	---	---	106	98	102
24	89	83	86	89	85	87	---	---	---	99	97	98
25	87	82	85	98	86	90	---	---	---	99	99	99
26	95	87	90	101	89	94	---	---	---	105	88	100
27	90	83	86	90	84	87	---	---	---	105	104	104
28	97	84	90	88	82	85	---	---	---	108	95	103
29	96	82	87	89	80	84	78	64	73	108	98	104
30	83	80	81	88	82	86	91	78	86	104	95	99
31	85	72	77	---	---	---	98	80	90	100	87	95
MONTH	108	72	90	101	80	87	98	64	80	113	55	96

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	87	80	82	75	70	73	85	81	82	96	91	95
2	107	101	104	74	70	72	89	80	84	93	89	91
3	122	108	115	72	71	72	82	79	80	101	92	97
4	120	93	107	81	73	78	85	80	82	100	93	95
5	92	90	91	81	76	78	85	81	83	102	96	99
6	91	88	89	86	78	82	94	85	89	102	99	100
7	93	71	89	91	81	86	92	85	87	101	98	99
8	93	76	89	91	85	87	87	84	85	105	98	101
9	94	83	91	92	87	89	89	84	85	108	102	105
10	98	92	94	90	86	89	92	88	89	113	104	108
11	105	96	101	90	87	88	92	90	91	113	102	107
12	101	87	91	94	88	90	93	89	91	112	100	107
13	92	72	81	98	90	93	94	89	92	104	97	101
14	72	64	67	101	95	97	95	87	91	97	92	94
15	77	67	74	106	92	99	96	90	93	99	90	94
16	75	72	74	101	93	96	98	89	94	91	86	88
17	75	72	74	101	94	97	94	89	91	100	90	97
18	77	74	75	104	96	99	95	89	93	99	90	94
19	80	76	78	106	95	100	103	90	95	94	82	87
20	78	72	77	105	97	100	99	90	96	91	82	86
21	75	67	72	106	98	102	92	88	90	98	93	96
22	70	65	68	108	101	103	93	88	91	103	90	95
23	65	61	63	111	104	107	96	91	93	98	90	94
24	67	62	65	117	111	113	102	94	99	98	92	95
25	68	62	65	120	103	111	94	88	92	98	95	96
26	68	62	65	110	103	105	95	89	92	104	96	99
27	70	68	69	111	101	106	91	87	89	118	103	110
28	71	67	70	116	106	110	92	86	89	114	97	102
29	---	---	---	115	110	113	96	87	92	108	98	102
30	---	---	---	114	95	104	95	89	91	107	101	104
31	---	---	---	102	84	90	---	---	---	109	100	103
MONTH	122	61	81	120	70	94	103	79	90	118	82	98

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	130	108	113	121	116	119	117	110	114	103	98	99
2	137	111	126	118	111	115	111	108	110	108	98	102
3	113	104	107	117	110	114	112	110	111	113	102	108
4	105	98	101	111	106	109	112	109	111	106	98	102
5	107	102	103	109	103	105	112	93	106	105	100	102
6	121	108	118	107	102	104	118	110	113	109	105	108
7	121	102	114	120	108	112	117	114	116	109	107	108
8	104	99	102	127	121	123	115	109	113	108	105	106
9	111	100	104	128	120	124	107	102	105	108	102	105
10	104	94	98	123	116	119	103	98	102	109	103	106
11	109	102	105	119	116	115	103	96	100	117	105	110
12	109	102	105	114	106	111	104	99	102	122	117	120
13	102	95	98	110	106	108	103	98	100	121	113	116
14	98	92	94	113	101	109	99	92	96	114	107	110
15	100	95	98	128	115	121	95	90	93	111	107	109
16	101	95	97	133	128	131	94	90	92	110	105	108
17	99	95	97	131	122	127	105	92	98	113	104	107
18	102	95	98	123	118	120	93	90	91	110	1100	106
19	105	98	102	124	119	121	92	87	89	112	108	110
20	106	101	103	127	122	124	94	90	92	112	109	111
21	108	103	105	128	124	126	89	82	84	113	108	110
22	106	103	105	127	122	124	86	81	83	113	108	110
23	119	104	110	120	118	119	87	82	84	114	99	106
24	117	104	110	118	116	117	88	81	84	98	93	95
25	112	103	107	118	114	115	91	84	88	93	89	91
26	110	106	107	115	112	113	93	86	89	93	89	91
27	107	103	105	121	112	115	92	87	89	92	90	91
28	110	108	109	125	119	121	95	88	91	91	89	90
29	122	110	115	125	120	124	98	89	94	94	91	92
30	123	117	122	125	113	118	103	97	100	93	92	93
31	---	---	---	119	116	118	106	99	102	---	---	---
MONTH	137	92	106	133	101	117	118	81	98	122	89	104
YEAR	137	55	96									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	1.0	.5	1.0	6.0	5.0	5.5	11.0	10.5	10.5
2	.0	.0	.0	1.0	1.0	1.0	6.0	5.5	6.0	11.0	10.5	10.5
3	.0	.0	.0	1.0	.5	1.0	5.5	5.0	5.5	11.0	10.5	11.0
4	.0	.0	.0	1.0	.5	1.0	6.5	5.5	6.0	12.0	11.0	11.5
5	.0	.0	.0	1.0	.5	.5	7.0	6.5	7.0	13.0	12.0	12.5
6	.0	.0	.0	1.0	.5	.5	7.0	6.5	6.5	13.0	12.5	12.5
7	.0	.0	.0	1.0	.5	1.0	6.5	6.0	6.0	12.5	12.0	12.0
8	.0	.0	.0	1.0	1.0	1.0	6.5	6.0	6.5	12.5	12.0	12.5
9	.0	.0	.0	1.5	1.0	1.5	7.5	6.5	7.0	13.5	12.0	13.0
10	.0	.0	.0	1.5	1.5	1.5	8.0	6.5	7.5	14.0	12.5	15.0
11	.0	.0	.0	2.0	1.5	2.0	8.0	7.5	7.5	14.0	14.0	14.0
12	.0	.0	.0	2.0	1.5	2.0	7.5	7.0	7.5	14.5	14.0	14.0
13	.0	.0	.0	2.0	2.0	2.0	7.5	7.0	7.5	14.0	13.5	13.5
14	.0	.0	.0	2.0	2.0	2.0	7.5	7.0	7.5	13.5	13.0	13.0
15	.0	.0	.0	2.0	1.5	2.0	7.0	6.0	6.5	13.5	13.0	13.5
16	.0	.0	.0	2.0	1.5	2.0	6.5	6.0	6.0	13.0	13.0	13.0
17	.0	.0	.0	2.0	1.5	2.0	6.5	6.0	6.0	13.5	13.0	13.0
18	.0	.0	.0	2.0	1.5	1.5	7.0	5.5	6.5	13.5	13.0	13.0
19	.0	.0	.0	2.0	1.5	1.5	8.0	6.5	7.0	13.5	12.5	13.0
20	.0	.0	.0	2.0	1.0	1.5	8.0	7.0	7.5	13.5	12.0	13.0
21	.0	.0	.0	2.0	1.5	1.5	7.0	6.0	6.5	13.5	12.5	13.0
22	.0	.0	.0	2.0	1.5	2.0	7.0	6.0	6.5	14.0	13.0	13.5
23	.0	.0	.0	2.5	2.0	2.5	7.0	6.5	7.0	14.5	13.5	14.0
24	1.0	.5	.5	3.0	2.0	3.0	7.0	6.5	6.5	15.0	14.0	14.5
25	1.0	.5	1.0	3.5	3.0	3.0	6.5	6.0	6.5	16.5	15.0	16.0
26	.5	.5	.5	4.0	3.0	3.5	7.0	6.0	6.5	17.5	16.0	16.5
27	1.0	.5	1.0	4.0	3.5	4.0	8.0	7.0	7.5	18.5	17.0	17.5
28	1.0	.5	1.0	4.5	4.0	4.0	9.0	8.0	8.5	18.0	17.0	17.5
29	---	---	---	5.5	4.5	5.0	9.5	8.5	9.0	18.0	18.0	18.0
30	---	---	---	7.0	5.5	6.0	10.5	9.5	10.0	18.5	18.0	18.5
31	---	---	---	6.0	5.0	5.5	---	---	---	19.0	18.0	18.5
MONTH	1.0	.0	.0	7.0	.5	2.0	10.5	5.0	7.0	19.0	10.5	14.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.0	18.0	19.0	22.5	21.0	22.0	22.5	22.0	22.5	21.0	21.0	21.0
2	19.5	18.0	19.0	22.5	22.0	22.5	23.5	22.5	23.0	21.0	21.0	21.0
3	18.0	17.0	17.5	23.0	22.5	23.0	24.0	23.0	23.0	21.0	20.5	21.0
4	18.0	17.0	17.5	23.0	22.0	22.5	25.0	20.5	24.0	21.0	20.5	20.5
5	19.5	18.0	18.5	23.0	22.5	22.5	25.0	24.5	25.0	21.5	20.5	21.0
6	19.5	19.5	19.5	23.5	22.0	23.0	25.0	24.0	24.5	22.0	21.0	21.0
7	19.5	19.0	18.5	24.0	23.0	23.5	24.5	23.5	24.0	21.0	20.5	21.0
8	19.0	18.5	18.5	25.0	24.0	24.5	24.0	23.0	23.0	21.0	20.5	21.0
9	19.0	18.5	18.5	26.0	25.0	25.5	23.0	22.5	23.0	21.0	20.5	21.0
10	19.0	18.5	18.5	26.5	25.0	26.0	24.0	23.0	23.5	21.0	20.0	20.5
11	19.5	18.5	19.0	27.0	25.0	25.5	24.5	23.5	24.0	21.0	20.5	21.0
12	19.0	18.5	18.5	26.5	26.0	26.0	24.5	24.0	24.5	22.5	20.0	20.5
13	19.0	18.0	18.5	26.0	25.5	26.0	24.0	23.0	23.5	23.0	20.0	20.5
14	19.0	18.0	18.5	25.5	25.0	25.0	23.5	22.5	23.0	20.0	19.5	20.0
15	18.5	18.5	18.5	25.0	25.0	25.0	23.0	22.5	23.0	20.0	20.0	20.0
16	20.0	18.5	19.0	25.0	24.0	24.5	23.0	22.5	23.0	20.0	19.5	20.0
17	21.0	20.0	20.5	25.0	24.5	24.5	22.5	20.5	21.5	19.5	19.5	19.5
18	21.5	20.0	21.0	25.0	24.5	24.5	20.0	19.5	20.0	19.5	19.5	19.5
19	22.0	20.5	21.5	24.5	24.0	24.0	19.5	19.0	19.5	19.5	18.5	19.0
20	21.5	20.5	21.0	24.5	24.0	24.5	19.5	18.5	19.0	19.0	18.0	18.5
21	22.0	21.5	22.0	24.5	24.0	24.5	20.5	19.0	19.5	18.5	18.0	18.0
22	22.0	21.0	21.5	25.0	24.0	24.5	21.0	20.5	20.5	17.5	16.5	17.0
23	21.5	21.0	21.0	24.5	23.5	24.5	22.0	20.5	21.5	16.5	14.5	16.0
24	21.0	20.0	20.5	24.5	23.5	24.5	21.5	21.0	21.5	14.5	13.0	13.5
25	20.5	20.0	20.0	25.0	23.5	24.5	21.5	21.0	21.5	13.0	11.0	12.5
26	20.5	20.0	20.0	27.5	24.5	25.5	21.0	20.5	21.0	13.5	13.0	13.0
27	20.5	19.5	20.0	24.5	24.0	24.5	21.0	20.5	21.0	15.0	13.5	14.0
28	21.0	20.0	20.5	24.5	23.0	24.0	21.5	20.5	21.0	15.5	15.0	15.0
29	21.0	20.0	20.5	24.0	23.0	23.5	21.5	21.0	21.0	15.0	14.0	14.5
30	22.0	20.5	21.5	23.0	22.0	22.5	21.0	21.0	21.0	14.0	13.5	14.0
31	---	---	---	23.0	21.0	22.0	21.5	21.0	21.0	---	---	---
MONTH	22.0	17.0	19.5	27.5	21.0	24.0	25.0	18.5	22.0	23.0	11.0	18.5
YEAR	27.5	.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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--35 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 (280 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, 10.43 ft (3.179 m) Mar. 9, 1979, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,780 ft^3/s (107 m^3/s) Feb. 25, gage height, 8.58 ft (2.615 m); maximum gage height, 10.21 ft (3.112 m) Feb. 19, ice jam; minimum discharge, 29 ft^3/s (0.82 m^3/s) Aug. 22 to Sept. 8, gage height, 3.94 ft (1.201 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	148	573	100	60	3050	1590	321	78	77	102	29
2	37	128	452	100	200	2550	1370	805	78	67	102	29
3	37	102	635	80	1000	1120	1300	793	120	67	101	29
4	43	87	624	80	800	359	1040	285	142	68	100	29
5	40	101	315	80	500	369	841	281	173	78	200	29
6	77	111	234	70	300	357	1250	239	149	118	264	29
7	101	109	248	60	200	329	962	156	95	126	169	29
8	100	105	283	60	160	314	461	124	95	115	76	29
9	71	79	467	80	140	276	391	124	82	141	48	63
10	52	128	624	80	140	235	395	124	119	140	48	182
11	578	197	263	80	140	224	343	127	144	137	48	179
12	747	145	125	80	500	224	394	692	142	96	48	115
13	59	107	220	60	1500	224	434	1160	142	75	47	74
14	75	107	306	35	1000	223	393	872	140	79	47	74
15	87	105	250	40	800	194	383	423	140	77	48	73
16	86	104	180	40	450	181	385	300	104	52	96	58
17	85	75	130	60	300	182	383	371	82	36	271	34
18	84	88	100	60	230	180	518	409	66	37	289	34
19	84	100	140	60	350	184	593	342	55	37	293	36
20	84	86	140	60	500	178	584	199	56	39	182	36
21	84	94	120	60	800	178	421	139	56	51	91	35
22	102	108	140	60	1290	164	240	139	57	65	48	37
23	112	106	140	60	1970	162	182	168	116	95	29	93
24	109	105	140	60	1700	157	194	179	148	105	29	342
25	121	471	120	60	2720	159	202	178	149	104	29	514
26	246	797	100	60	3680	211	204	175	274	103	29	380
27	477	405	100	60	3510	246	288	132	316	105	29	234
28	665	297	100	60	3320	278	324	74	187	104	29	45
29	580	711	100	60	---	327	324	74	113	145	29	111
30	264	913	100	60	---	1330	324	75	100	142	29	157
31	139	---	100	60	---	2210	---	78	---	104	29	---
TOTAL	5503	6219	7569	2025	28260	16375	16713	9558	3718	2785	2979	3138
MEAN	178	207	244	65.3	1009	528	557	308	124	89.8	96.1	105
MAX	747	913	635	100	3680	3050	1590	1160	316	145	293	514
MIN	37	75	100	35	60	157	182	74	55	36	29	29
MEAN†	138	219	231	65	1224	384	580	266	125	107	80	108
CFSM†	.77	1.22	1.29	.36	6.84	2.15	3.24	1.49	.70	.60	.45	.60
IN.†	.89	1.37	1.49	.42	7.12	2.48	3.62	1.71	.78	.69	.52	.67

CAL YR 1980 TOTAL 92127 MEAN 252 MAX 2590 MIN 25 MEAN† 252 CFSM† 1.41 IN† 19.15
WTR YR 1981 TOTAL 104842 MEAN 287 MAX 3680 MIN 29 MEAN† 287 CFSM† 1.60 IN† 21.75

† 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 mi² (798 km²).

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) National Geodetic Vertical Datum of 1929. 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 winter period, which are fair. 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 627 ft³/s (17.76 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,300 ft³/s (1,480 m³/s) Sept. 21, 1938, gage height, 22.81 ft (6.952 m), from floodmarks, from rating curve extended above 20,000 ft³/s (570 m³/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 ft³/s (0.22 m³/s) Aug. 24, 25, 26, 1962; minimum daily, 8.2 ft³/s (0.23 m³/s) Aug. 25, 1962. Maximum discharge since construction of Ball Mountain and Townshend Reservoirs in 1961, 10,300 ft³/s (292 m³/s) May 25, 1979, gage height, 10.07 ft (3.069 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 ft³/s (1,270 m³/s), gage height, 23.0 ft (7.01 m), from floodmarks, at nonrecording-gage site, from rating curve extended above 20,000 ft³/s (570 m³/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, 6,760 ft³/s (191 m³/s) Feb. 28, gage height, 8.83 ft (2.691 m); minimum, 41 ft³/s (1.16 m³/s) June 2; minimum daily, 48 ft³/s (1.36 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	160	1000	178	80	6510	2940	465	252	130	154	54
2	81	167	592	172	270	5960	2190	961	147	104	140	54
3	70	155	833	162	760	4500	2050	909	158	95	159	55
4	77	138	910	154	1080	698	1620	432	223	107	279	58
5	102	146	557	146	890	617	1250	389	136	133	274	60
6	84	139	390	140	480	594	1890	361	101	260	277	64
7	105	141	344	138	300	561	1540	292	129	270	282	72
8	110	143	338	136	270	513	880	229	122	150	164	82
9	110	141	526	134	254	480	684	217	121	168	101	107
10	81	143	777	130	246	425	661	212	134	164	95	197
11	413	214	526	122	240	392	595	215	163	157	110	175
12	679	218	263	112	900	381	600	1040	169	150	98	160
13	202	154	215	104	2600	367	606	1740	162	104	95	91
14	94	146	294	98	1400	365	606	1220	154	115	86	78
15	92	145	292	94	800	327	849	792	163	110	84	126
16	95	142	216	92	560	340	860	551	146	96	95	221
17	95	136	197	88	475	299	622	565	107	71	312	67
18	98	141	265	84	425	294	684	591	97	61	338	52
19	109	162	260	82	390	280	818	524	81	67	312	48
20	116	131	240	80	430	289	788	390	124	63	312	54
21	110	129	240	80	560	278	676	290	136	127	164	53
22	107	128	244	80	866	277	427	266	114	197	110	52
23	117	129	248	78	2350	245	334	260	148	139	76	70
24	145	131	240	78	3180	244	410	258	172	136	61	247
25	254	615	220	78	3820	248	438	264	172	135	58	472
26	548	1040	200	80	5490	266	413	260	440	129	58	492
27	497	628	190	80	6210	368	408	264	427	144	58	340
28	703	811	186	82	6580	416	446	165	360	150	56	168
29	625	1240	184	82	---	531	452	99	172	208	55	122
30	454	1160	182	80	---	1720	465	64	150	342	53	206
31	157	---	180	80	---	3410	---	141	---	196	53	---
TOTAL	6649	9073	11349	3324	41906	32195	27202	14426	5180	4478	4569	4097
MEAN	214	302	366	107	1497	1039	907	465	173	144	147	137
MAX	703	1240	1000	178	6580	6510	2940	1740	440	342	338	492
MIN	70	128	180	78	80	244	334	64	81	61	53	48

CAL YR 1980 TOTAL 143299 MEAN 392 MAX 4080 MIN 45
WTR YR 1981 TOTAL 164448 MEAN 451 MAX 6580 MIN 48

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 mi² (262 km²).

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) Corps of Engineers datum.

REMARKS.--Records good. Flow regulated by Surry Mountain Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--36 years, 173 ft³/s (4.899 m³/s), 23.26 in/yr (591 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,320 ft³/s (37.4 m³/s) Oct. 28, 1959, gage height, 9.60 ft (2.926 m); minimum daily, 0.4 ft³/s (0.011 m³/s) Sept. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 892 ft³/s (25.3 m³/s) Mar. 2, gage height, 8.29 ft (2.527 m); minimum daily, 15 ft³/s (0.42 m³/s) Nov. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	62	302	42	18	847	506	267	201	75	142	22
2	18	61	262	38	59	871	572	244	179	61	108	22
3	18	40	192	31	221	815	590	216	153	52	86	20
4	18	27	175	27	209	745	596	175	133	48	70	19
5	18	27	174	27	122	387	594	179	118	63	65	18
6	18	27	146	22	128	258	646	159	102	85	105	18
7	18	27	132	19	129	193	704	141	91	85	101	16
8	18	27	108	19	128	191	685	125	79	74	84	16
9	18	27	89	19	106	190	693	113	75	63	73	25
10	24	27	89	19	77	188	677	103	81	61	75	40
11	30	27	90	19	493	186	632	98	80	57	68	39
12	30	38	65	19	818	189	553	107	72	49	75	36
13	30	44	52	19	834	187	330	203	67	43	81	32
14	29	44	52	19	793	148	235	300	60	43	71	28
15	29	39	52	19	741	113	261	298	55	42	60	26
16	29	27	52	19	682	105	267	363	51	37	66	24
17	29	27	52	19	465	105	245	479	46	33	88	22
18	28	24	52	19	256	105	224	528	41	30	84	23
19	28	20	52	19	417	105	206	407	36	34	70	27
20	28	20	52	19	482	105	190	321	34	38	59	27
21	28	21	35	19	684	105	172	258	40	112	49	27
22	28	21	27	19	729	105	156	211	43	156	42	38
23	27	21	27	19	18	104	141	177	65	122	39	100
24	27	21	27	19	644	89	159	152	71	87	36	193
25	27	21	27	19	297	82	267	127	67	65	39	215
26	27	15	27	18	711	82	396	109	149	51	36	199
27	35	15	42	18	767	82	382	95	182	63	31	186
28	45	71	49	18	811	106	325	84	156	76	29	181
29	55	94	49	18	---	142	281	78	122	121	27	167
30	62	184	49	18	---	241	276	94	94	191	24	147
31	62	---	49	18	---	370	---	148	---	176	24	---
TOTAL	899	1146	2648	656	11839	7541	11961	6359	2743	2293	2007	1953
MEAN	29.0	38.2	85.4	21.2	423	243	399	205	91.4	74.0	64.7	65.1
MAX	62	184	302	42	834	871	704	528	201	191	142	215
MIN	18	15	27	18	18	82	141	78	34	30	24	16
MEAN†	23.2	61.6	82.9	20.7	547	155	374	200	91.0	76.3	58.8	70.7
CFSM†	.23	.61	.82	.20	5.41	1.54	3.71	1.98	.90	.76	.58	.70
IN.†	.26	.68	.95	.24	5.64	1.77	4.14	2.29	1.01	.87	.67	.78

CAL YR 1980 TOTAL 39411.0 MEAN 108 MAX 922 MIN 7.8 MEAN† 107 CFSM† 1.06 IN† 14.48
WTR YR 1981 TOTAL 52045.0 MEAN 143 MAX 871 MIN 15 MEAN† 142 CFSM† 1.41 IN† 19.13

† 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 mi² (122.2 km²).
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) Corps of Engineers datum.
REMARKS.--Records good except those for period of no gage-height record, Dec. 12 to Jan. 25, which are fair. Flow regulated by Otter Brook Lake (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--23 years, 77.6 ft³/s (2.198 m³/s), 22.33 in/yr (567 mm/yr), adjusted for storage.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) Apr. 20, 1959, gage height, 8.59 ft (2.618 m); maximum gage height, 8.61 ft (2.624 m) Apr. 26, 1972, Oct 20, 1977; minimum discharge, 0.1 ft³/s (0.003 m³/s) Nov. 28, 1959; minimum daily, 0.3 ft³/s (0.008 m³/s) Sept. 27 to Oct. 2, Oct. 9, 10, 12-20, 1964.
EXTREMES FOR CURRENT YEAR.--Maximum discharge, 447 ft³/s (12.7 m³/s) Apr. 20, gage height, 8.02 ft (2.444 m); minimum, not determined; minimum daily, 4.2 ft³/s (0.119 m³/s) Oct. 5-25.
REVISIONS.--Revised 1980 adjusted figures for change in contents in Otter Brook Lake are given in the table below.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT
MEAN†	142	85.0	78.7	41.0	14.7	166	208	59.4	26.6	10.6	3.58	3.74
CFSM†	3.02	1.80	1.67	.87	.31	3.53	4.41	1.26	.56	.22	.08	.08
IN†	3.48	2.01	1.92	1.00	.34	4.07	4.92	1.45	.63	.26	.09	.09

CAL YR 1979 MEAN† 120 CFSM† 2.54 IN† 34.45
WTR YR 1980 MEAN† 70.2 CFSM† 1.49 IN† 20.25

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	18	94	17	7.2	345	348	163	71	24	45	15
2	4.4	18	81	17	29	345	370	142	55	21	36	15
3	4.4	18	69	15	74	345	367	115	47	18	30	14
4	4.3	18	70	8.4	74	345	348	60	44	19	26	10
5	4.2	18	70	8.4	74	312	227	40	40	38	23	10
6	4.2	18	56	8.4	47	142	217	41	36	57	30	25
7	4.2	18	25	8.4	34	118	232	42	34	43	32	31
8	4.2	18	25	8.4	34	87	148	42	29	32	29	32
9	4.2	18	25	8.4	31	74	133	29	30	25	27	54
10	4.2	18	25	8.4	30	74	129	24	39	24	41	54
11	4.2	18	25	8.4	30	74	119	24	33	20	44	47
12	4.2	18	25	8.4	140	74	119	24	27	17	66	42
13	4.2	18	25	8.4	179	73	108	115	25	15	56	39
14	4.2	18	25	8.4	227	54	112	150	22	16	44	36
15	4.2	18	25	8.4	224	44	157	112	20	19	36	36
16	4.2	18	20	8.4	163	44	135	168	20	18	65	35
17	4.2	18	11	8.4	101	44	117	192	18	15	77	33
18	4.2	18	10	8.4	97	44	110	146	16	15	61	32
19	4.2	18	8.8	8.4	83	56	101	113	14	20	47	33
20	4.2	18	8.4	8.4	82	61	274	97	12	20	38	36
21	4.2	18	17	8.4	103	58	159	81	15	57	31	32
22	4.2	18	17	8.4	148	50	81	71	20	63	27	35
23	4.2	18	17	8.4	248	44	81	62	50	45	24	104
24	4.2	18	17	8.4	96	45	103	55	38	33	22	195
25	4.2	37	17	8.4	246	46	153	47	35	26	30	209
26	10	43	17	8.0	300	46	207	42	113	21	30	190
27	18	39	17	7.6	308	61	188	37	80	40	25	103
28	18	43	17	7.2	344	89	137	34	51	48	22	92
29	18	77	17	7.2	---	101	123	31	38	70	20	85
30	18	94	17	7.2	---	129	142	31	31	81	17	74
31	18	---	17	7.2	---	246	---	56	---	61	16	---
TOTAL	205.7	765	910.2	278.2	3553.2	3670	5245	2386	1103	1021	1117	1748
MEAN	6.64	25.5	29.4	8.97	127	118	175	77.0	36.8	32.9	36.0	58.3
MAX	18	94	94	17	344	345	370	192	113	81	77	209
MIN	4.2	18	8.4	7.2	7.2	44	81	24	12	15	16	10
MEAN†	7.16	28	26.4	8.71	158	137	160	83	36.5	33.5	35.4	59
CFSM†	.15	.59	.56	.18	3.35	2.90	3.39	1.76	.77	.71	.75	1.25
IN.†	.17	.66	.64	.21	3.49	3.34	3.77	2.03	.86	.82	.86	1.39

CAL YR 1980 TOTAL 18209.2 MEAN 49.8 MAX 594 MIN 1.8 MEAN† 49.6 CFSM† 1.05 IN† 14.32
WTR YR 1981 TOTAL 22002.3 MEAN 60.3 MAX 370 MIN 4.2 MEAN† 60.4 CFSM† 1.28 IN† 17.37

† Adjusted for change in contents in Otter Brook Lake.

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) National Geodetic Vertical Datum of 1929 (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 and period of no gage-height record Sept. 17-30, 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 and specific conductance were made during the year.

AVERAGE DISCHARGE.--71 years, 666 ft^3/s (18.86 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, 3,840 ft^3/s (109 m^3/s) Feb. 26, gage height, 6.92 ft (2.109 m); maximum gage height, 7.23 ft (2.204 m) Feb. 12, ice jam; minimum daily, 53 ft^3/s (1.50 m^3/s) Jan. 15-17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	163	580	190	70	2420	1480	1200	813	267	331	98
2	71	155	500	170	150	2190	1750	1150	748	221	268	98
3	71	146	400	160	500	2040	1920	1040	600	194	212	96
4	86	133	600	140	1300	1900	1800	903	511	184	179	94
5	99	122	500	120	900	1800	1660	742	435	255	161	91
6	91	117	400	110	650	1660	1570	676	375	498	153	85
7	86	117	46	95	450	1230	1650	659	366	551	176	83
8	80	123	282	80	400	999	1590	596	318	385	192	87
9	75	125	264	75	380	860	1430	499	279	285	189	121
10	71	137	252	65	380	812	1410	436	283	235	187	165
11	73	144	257	62	1000	777	1340	401	296	204	187	163
12	80	140	289	58	2900	745	1270	464	260	181	247	153
13	83	136	233	56	2030	715	1110	1080	229	163	277	153
14	82	140	217	55	1860	701	872	1360	207	169	240	142
15	80	137	299	53	1750	600	1010	1150	186	167	201	139
16	80	129	225	53	1550	574	1010	1360	179	156	208	131
17	82	110	219	55	1410	522	896	1920	169	140	258	150
18	104	116	253	60	1300	494	831	1820	156	131	257	145
19	119	125	218	62	1090	458	763	1490	142	159	219	140
20	119	122	210	65	1040	463	729	1190	134	178	186	130
21	119	118	210	68	1670	445	850	985	143	258	164	125
22	113	117	210	70	1700	429	623	832	187	431	145	120
23	110	110	200	74	1730	407	566	726	428	377	132	220
24	106	110	200	76	2370	402	705	630	450	277	122	500
25	113	450	200	78	3240	388	1110	524	397	216	127	1100
26	170	300	190	78	3650	375	1420	433	772	181	133	700
27	201	220	180	78	3170	406	1380	381	901	172	129	520
28	192	270	180	78	2650	524	1160	316	671	208	120	430
29	178	450	190	76	---	615	1050	284	471	256	111	380
30	169	650	200	73	---	783	1140	294	348	385	105	350
31	169	---	200	70	---	1180	---	520	---	408	101	---
TOTAL	3348	5432	8704	2603	41290	27914	36095	26061	11454	7892	5717	6909
MEAN	108	181	281	84.0	1475	900	1203	841	382	255	184	230
MAX	201	650	600	190	3650	2420	1920	1920	901	551	331	1100
MIN	71	110	180	53	70	375	566	284	134	131	101	83

CAL YR 1980 TOTAL 158775 MEAN 434 MAX 3960 MIN 49
WTR YR 1981 TOTAL 183419 MEAN 503 MAX 3650 MIN 53

CONNECTICUT RIVER BASIN

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 ft³ (14,300,000 m³); First Lake, 5.6 mi (9.0 km) northeast of Pittsburg, NH, 3,330,000,000 ft³ (94,300,000 m³). 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 ft³ (122,500,000 m³). 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 ft³ (141,000,000 m³); Comerford Reservoir, 5 mi (8 km) northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft³ (36,220,000 m³). 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 ft³ (47,000,000 m³). 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 ft³ (14,400,000 m³); Grafton Pond, 8.5 mi (13.7 km) southeast of Mascoma, 144,000,000 ft³ (4,080,000 m³); Crystal Lake, 5.8 mi (9.3 km) southeast of Mascoma, 75,000,000 ft³ (2,100,000 m³); 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³ (9,540,000 m³); total usable capacity of the four reservoirs, 1,060,000,000 ft³ (30,000,000 m³). 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 ft³ (88,100,000 m³). 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 ft³ (24,400,000 m³). Records furnished by New Hampshire Water Resources Board.

01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, VT, completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft³ (63,200,000 m³). 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 ft³ (67,400,000 m³). 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 ft³ (41,300,000 m³). 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 ft³ (40,200,000 m³). 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 ft³ (22,600,000 m³). Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

Date	First and Second Connecticut Lakes	Lake Francis	Moore and Comerford Reservoirs	Union Village Reservoir	Lakes and Ponds in Mascoma River basin	North Hartland Reservoir
Sept. 30, 1980	3174.6	3455.5	5769.0	1.4	855.0	122.0
Oct. 31	2685.5	3415.0	5348.0	1.4	864.8	102.8
Nov. 30	2685.5	3389.1	5932.8	41.6	787.5	131.0
Dec. 31	2107.2	3089.0	5202.8	17.3	663.6	127.0
Jan. 31, 1981	1571.8	2237.1	5084.9	20.9	637.5	121.0
Feb. 28	1779.4	2994.2	4861.7	127.2	920.8	313.6
Mar. 31	1606.3	2342.0	2658.8	47.5	1024.0	167.6
Apr. 30	2853.5	3257.7	5664.3	4.5	1058.2	32.4
May 31	3399.1	3886.2	5744.3	3.9	1086.6	122.0
June 30	3511.5	3835.6	5767.2	2.4	1088.8	119.0
July 31	3475.1	3606.6	5571.3	2.4	1050.5	120.0
Aug. 31	3018.8	3751.7	5738.0	1.4	1043.5	121.0
Sept. 30	2964.5	3688.6	5523.6	4.8	975.1	117.0

Date	Sunapee Lake	North Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1980	354	23.3	124.6	35.2	43.6	35.8
Oct. 31	301	24.0	17.7	24.4	28.1	37.2
Nov. 30	309	57.2	48.4	42.5	88.8	43.8
Dec. 31	349	23.3	14.4	36.6	82.0	35.8
Jan. 31, 1981	301	21.8	12.4	35.5	80.7	35.1
Feb. 28	641	947.4	530.8	1309.1	380.6	110.6
Mar. 31	522	114.9	145.1	59.6	145.1	61.1
Apr. 30	632	29.1	205.3	38.6	82.0	21.7
May 31	638	25.4	92.4	35.2	69.3	37.9
June 30	612	24.0	96.1	36.9	68.1	37.2
July 31	556	26.9	142.7	38.0	74.4	38.6
Aug. 31	515	23.3	100.4	35.5	58.6	36.8
Sept. 30	478	28.4	109.8	.1	73.1	38.6

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 596.68 ft (181.868 m), National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1941, nonrecording gage at downstream side of bridge at same datum.

REMARKS.--Records good except those for winter period, which are poor. 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.--53 years, 339 ft^3/s (9.600 m^3/s), 30.29 in/yr (769 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 (170 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 m^3/s) and maximum (*):

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)
Feb. 21	1400	*2860	81.0	8.30	2.530	No other peak above base.					

Minimum discharge, 83 ft^3/s (2.35 m^3/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	164	352	150	110	580	1120	358	308	143	145	100
2	83	153	328	145	446	509	1320	323	212	134	125	98
3	97	142	581	120	932	440	925	301	192	134	116	96
4	230	140	440	110	571	374	654	279	192	134	151	94
5	244	148	330	100	353	354	1080	261	178	222	187	90
6	158	139	280	105	260	331	1550	251	165	350	209	88
7	127	131	264	110	210	316	963	246	175	231	153	86
8	113	133	281	120	193	305	639	231	155	170	125	87
9	103	144	562	120	189	293	556	219	275	141	126	288
10	95	260	453	110	192	275	560	209	358	129	184	171
11	96	199	314	105	317	268	505	212	225	117	141	131
12	121	164	259	100	1080	258	523	634	180	108	150	117
13	121	150	281	100	755	248	440	723	165	117	130	112
14	109	142	241	100	467	244	478	474	155	167	117	105
15	100	138	237	100	355	219	584	387	180	145	148	110
16	96	129	219	100	318	228	452	419	189	123	620	101
17	96	116	202	105	359	203	411	407	172	106	508	95
18	134	128	236	105	443	200	483	358	145	101	280	95
19	254	132	214	110	591	189	470	316	132	106	199	97
20	173	134	200	100	1320	194	403	290	127	121	161	117
21	141	130	195	100	2660	186	370	265	148	308	138	106
22	142	131	190	105	2030	180	339	248	167	275	128	116
23	130	127	185	110	1370	175	323	231	206	173	123	234
24	119	211	173	110	1430	183	478	219	160	132	131	500
25	136	946	170	110	1600	183	478	203	258	114	144	383
26	758	593	170	110	1290	180	457	192	889	106	126	250
27	454	376	165	109	859	231	391	180	423	215	116	195
28	280	350	165	100	639	231	350	173	261	170	110	299
29	225	675	165	97	---	261	350	167	192	340	104	243
30	191	474	169	88	---	806	407	173	160	299	105	189
31	174	---	160	92	---	1400	---	320	---	188	103	---
TOTAL	5386	6999	8181	3346	21339	10044	18059	9269	6744	5319	5303	4793
MEAN	174	233	264	108	762	324	602	299	225	172	171	160
MAX	758	946	581	150	2660	1400	1550	723	889	350	620	500
MIN	83	116	160	88	110	175	323	167	127	101	103	86
CFSM	1.15	1.53	1.74	.71	5.01	2.13	3.96	1.97	1.48	1.13	1.13	1.05
IN.	1.32	1.71	2.00	.82	5.22	2.46	4.42	2.27	1.65	1.30	1.30	1.17

CAL YR 1980 TOTAL 87143 MEAN 238 MAX 2140 MIN 57 CFSM 1.57 IN 21.33
WTR YR 1981 TOTAL 104782 MEAN 287 MAX 2660 MIN 83 CFSM 1.89 IN 25.64

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 mi² (287 km²).

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.--50 years, 221 ft³/s (6.259 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,450 ft³/s (239 m³/s) Sept. 21, 1938, gage height, 12.04 ft (3.670 m), from rating curve extended above 2,800 ft³/s (79 m³/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 ft³/s (0.1 m³/s) Sept. 27, 1932; minimum daily, 21 ft³/s (0.59 m³/s) Sept. 22, 23, 1964, July 12, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,000 ft³/s (57 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 11	2300	2520	71.4	6.29	1.917	Feb. 20	2215	*4570	129	8.62	2.627

Minimum discharge, about 45 ft³/s (1.27 m³/s) Jan. 30, caused by freezeup; minimum daily, 51 ft³/s (1.44 m³/s) Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	107	200	82	70	396	491	219	182	75	99	59
2	60	102	190	80	630	342	876	195	124	72	88	58
3	81	95	360	70	481	289	483	185	111	72	80	57
4	206	93	216	64	235	242	379	166	110	73	103	58
5	149	92	166	62	165	232	531	153	100	164	138	55
6	102	88	160	62	150	214	625	150	127	340	194	54
7	88	86	153	66	140	208	400	152	164	156	114	51
8	83	86	172	70	136	199	327	137	110	108	94	52
9	76	98	337	70	115	190	298	128	173	87	93	218
10	72	154	232	68	115	181	318	123	169	79	112	99
11	74	113	164	60	690	178	288	124	126	72	100	74
12	79	98	145	60	1170	173	274	454	105	67	118	67
13	77	91	164	60	467	169	231	425	97	67	93	66
14	74	89	130	60	340	165	233	265	92	73	89	99
15	70	87	120	60	274	151	247	219	92	70	84	111
16	69	83	133	60	237	160	208	262	90	63	294	82
17	68	76	115	58	282	141	197	239	83	58	167	70
18	110	86	130	60	339	127	202	199	76	57	120	64
19	152	84	115	60	446	122	183	176	71	60	98	66
20	103	81	110	58	1900	124	173	163	90	101	87	75
21	89	81	110	60	2220	121	163	148	126	479	79	67
22	84	78	105	62	1070	116	150	138	100	242	76	71
23	79	76	105	68	675	115	153	128	95	133	75	134
24	76	120	100	70	1140	119	337	121	80	99	86	411
25	102	540	96	66	1010	123	279	113	154	87	98	215
26	432	340	96	62	679	125	246	105	331	81	81	137
27	206	220	94	62	508	165	205	99	180	193	73	114
28	154	200	92	60	427	156	183	94	120	120	67	213
29	137	400	92	58	---	214	209	92	95	220	64	145
30	121	270	94	53	---	508	284	97	84	179	66	114
31	113	---	90	60	---	754	---	270	---	119	63	---
TOTAL	3446	4214	4586	1971	16111	6519	9173	5539	3657	3866	3193	3156
MEAN	111	140	148	63.6	575	210	306	179	122	125	103	105
MAX	432	540	360	82	2220	754	876	454	331	479	294	411
MIN	60	76	90	53	70	115	150	92	71	57	63	51

CAL YR 1980 TOTAL 56631 MEAN 155 MAX 2100 MIN 46
WTR YR 1981 TOTAL 65431 MEAN 179 MAX 2220 MIN 51

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 mi² (484 km²).

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, which are poor. Flow regulated by powerplant upstream and by Lake Bomoseen. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 249 ft³/s (7.052 m³/s), 18.08 in/yr (459 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s (419 m³/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 ft³/s (74 m³/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 ft³/s (0.059 m³/s) Aug. 8, 1965, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,980 ft³/s (84.4 m³/s) Sept. 24, gage height, 12.18 ft (3.712 m), no other peak above base of 2,600 ft³/s (74 m³/s); minimum daily discharge, 20 ft³/s (0.57 m³/s) Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	127	410	115	160	1020	433	378	164	116	43	36
2	81	140	374	98	460	935	749	298	128	67	64	36
3	52	141	463	88	980	857	596	201	104	58	50	37
4	74	149	401	72	620	757	462	176	101	81	48	29
5	101	145	322	60	370	556	447	170	93	85	42	20
6	86	136	308	62	270	467	729	166	95	91	200	35
7	56	134	278	64	220	432	531	157	94	76	162	34
8	82	149	268	66	200	420	449	135	93	76	92	32
9	68	144	244	66	195	408	380	137	81	64	52	110
10	66	155	246	62	200	371	440	110	103	61	51	120
11	58	172	202	58	330	301	478	127	89	52	42	94
12	58	143	155	55	1100	287	464	306	78	53	78	96
13	61	150	170	55	740	264	363	864	76	51	63	105
14	57	111	150	55	460	255	258	639	76	48	57	89
15	53	115	140	54	350	221	293	521	75	51	54	80
16	54	91	135	55	320	239	242	624	80	49	264	86
17	50	96	150	58	360	206	227	636	838	50	298	80
18	37	58	140	58	440	199	330	478	815	36	291	58
19	84	66	145	60	580	179	346	330	777	34	226	49
20	64	54	150	58	1300	187	352	276	675	54	136	53
21	51	50	160	56	1650	178	426	227	581	41	74	77
22	59	50	165	58	1250	167	349	213	271	71	74	335
23	61	54	150	60	1100	174	260	186	178	70	74	2150
24	55	69	165	59	1150	176	290	178	128	142	116	2690
25	60	418	170	60	1600	184	429	137	117	44	89	1930
26	68	397	180	60	1750	185	429	149	130	26	77	1300
27	124	279	190	58	1410	233	358	127	135	57	58	1040
28	130	263	170	54	1170	289	316	111	128	68	51	1140
29	123	647	150	52	---	285	341	113	139	196	41	1030
30	123	496	155	49	---	491	411	110	199	175	52	688
31	117	---	130	48	---	545	---	124	---	87	58	---
TOTAL	2255	5199	6636	1933	20735	11468	12178	8404	6641	2230	3077	13659
MEAN	72.7	173	214	62.4	741	370	406	271	221	71.9	99.3	455
MAX	130	647	463	115	1750	1020	749	864	838	196	298	2690
MIN	37	50	130	48	160	167	227	110	75	26	41	20
CFSM	.39	.93	1.14	.33	3.96	1.98	2.17	1.45	1.18	.38	.53	2.43
IN.	.45	1.03	1.32	.38	4.12	2.28	2.42	1.67	1.32	.44	.61	2.72

CAL YR 1980 TOTAL 65435.3 MEAN 179 MAX 2500 MIN 6.0 CFSM .96 IN 13.02
WTR YR 1981 TOTAL 94415.0 MEAN 259 MAX 2690 MIN 20 CFSM 1.39 IN 18.78

04282000 OTTER CREEK AT CENTER RUTLAND, VT

LOCATION.--Lat 43°36'13", long 73°00'49", Rutland County, Hydrologic Unit 02010002, on right bank 200 ft (60 m) downstream from dam, 500 ft (150 m) upstream from bridge on U.S. Highway 4 at Center Rutland, 1.2 mi (1.9 km) downstream from East Creek, and 1.5 mi (2.4 km) west of Rutland.

DRAINAGE AREA.--307 mi² (795 km²).

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) National Geodetic Vertical Datum of 1929; 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 prior to December and poor thereafter. No gage-height record Dec. 21 to Jan. 25. Flow regulated by powerplants and Chittenden Reservoir 14 mi (22.5 km) upstream on East Creek, usable capacity, 819,800,000 ft³ (23,220,000 m³). Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150,000,000 ft³ (4,250,000 m³). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 550 ft³/s (15.58 m³/s), 24.33 in/yr (618 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,700 ft³/s (388 m³/s) Sept. 22, 1938, gage height, 13.45 ft (4.100 m), present datum, from rating curve extended above 7,400 ft³/s (210 m³/s) on basis of computation of peak flow over dam; minimum daily, 45 ft³/s (1.27 m³/s) Sept. 21, 1947, Aug. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,400 ft³/s (96 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 2	2030	3520	99.7	7.71	2.350	Feb. 25	1430	3490	98.8	7.67	2.338
Feb. 21	0545	*6910	196	11.05	3.368						

Minimum daily discharge, 120 ft³/s (3.40 m³/s) Jan. 30, 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	211	586	195	125	1030	1520	563	537	160	200	189
2	180	174	574	190	1410	930	1700	497	366	151	168	187
3	218	168	877	160	1990	769	1410	473	319	140	157	184
4	410	182	668	145	1440	645	968	439	289	144	191	178
5	456	176	414	130	793	637	1090	400	310	216	286	178
6	337	168	414	140	483	597	1590	379	286	322	439	166
7	301	180	442	145	396	582	1170	334	301	289	337	138
8	262	195	504	155	386	559	909	328	226	209	216	170
9	218	209	708	155	340	526	817	284	366	166	176	497
10	168	286	597	145	275	537	852	275	473	236	236	360
11	184	267	417	135	529	526	745	353	379	166	241	343
12	206	223	304	130	2180	519	793	1050	307	138	379	353
13	226	228	439	130	1970	515	677	2140	251	149	254	334
14	218	236	376	130	1200	515	650	1270	226	204	243	256
15	187	200	325	130	750	462	740	827	241	241	337	246
16	174	162	350	130	582	540	613	778	270	178	1350	211
17	204	166	328	140	642	410	605	713	526	145	1120	228
18	193	200	316	135	940	439	946	637	259	149	764	216
19	231	162	340	145	1270	393	930	537	241	127	526	241
20	221	164	278	135	2680	407	708	490	214	140	425	267
21	238	157	255	130	6230	347	601	452	218	209	366	214
22	221	172	250	140	4120	322	559	400	228	356	298	1310
23	197	155	240	145	2460	366	533	360	322	233	278	2170
24	172	233	230	140	2270	435	807	331	307	184	262	2100
25	172	914	220	140	3310	414	1170	328	231	142	272	1500
26	740	783	225	135	2360	383	914	316	383	138	226	1030
27	540	508	215	130	1520	533	731	298	307	228	218	832
28	366	526	220	130	1140	494	642	292	216	189	206	1500
29	310	1050	220	125	---	586	601	262	195	522	189	1080
30	256	773	225	120	---	1340	601	248	184	466	162	807
31	214	---	210	120	---	1670	---	446	---	294	182	---
TOTAL	8217	9228	11767	4355	43791	18428	26592	16500	8978	6631	10704	17485
MEAN	265	308	380	140	1564	594	886	532	299	214	345	583
MAX	740	1050	877	195	6230	1670	1700	2140	537	522	1350	2170
MIN	168	155	210	120	125	322	533	248	184	127	157	138
CFSM	.86	1.00	1.24	.46	5.09	1.94	2.89	1.73	.97	.70	1.12	1.90
IN.	1.00	1.12	1.43	.53	5.31	2.23	3.22	2.00	1.09	.80	1.30	2.12

CAL YR 1980 TOTAL 132749 MEAN 363 MAX 3820 MIN 80 CFSM 1.18 IN 16.09
WTR YR 1981 TOTAL 182676 MEAN 500 MAX 6230 MIN 120 CFSM 1.63 IN 22.14

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 mi² (1,627 km²).

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) National Geodetic Vertical Datum of 1929. Apr. 1, 1903, to Apr. 30, 1907, and Oct. 5, 1910, to Jan. 31, 1920, nonrecording gage at site 1,800 ft (550 m) upstream at datum 10 ft (3 m) lower, and Oct. 1, 1928, to Oct. 17, 1933, at present datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation by Chittenden Reservoir, usable capacity, 819,800,000 ft³ (23,220,000 m³) on East Creek. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years (water years 1904-06, 1911-19, 1929-81), 983 ft³/s (27.84 m³/s), 21.26 in/yr (540 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s (312 m³/s) Mar. 20, 21, 1936, gage height, 10.3 ft (3.14 m); minimum daily, 92 ft³/s (2.61 m³/s) Aug. 9, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft³/s (385 m³/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 ft³/s (250 m³/s).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,070 ft³/s (144 m³/s) Feb. 27, gage height, 6.50 ft (1.981 m); minimum daily, 250 ft³/s (7.08 m³/s) Jan. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	444	506	1590	400	270	4790	2060	1100	714	412	602	343
2	417	473	1440	390	1150	4470	2380	1020	830	406	412	322
3	417	415	1450	350	2120	4070	2410	932	706	412	347	351
4	548	435	1520	320	1950	3690	2440	845	638	386	355	339
5	693	422	1350	300	1910	3350	2500	796	675	370	401	314
6	740	439	1070	300	1920	3020	2550	754	650	438	897	290
7	609	408	1100	290	1860	2730	2520	727	688	634	1040	278
8	530	456	937	300	1700	2450	2490	668	687	609	817	270
9	433	490	1180	300	1520	2170	2430	643	662	494	554	634
10	417	531	1310	310	1240	1860	2320	581	773	417	489	875
11	406	614	1320	290	1330	1550	2170	520	840	417	455	824
12	347	601	1060	270	2070	1280	1980	779	772	365	666	726
13	326	535	820	260	1940	1170	1790	1700	643	290	699	609
14	428	517	770	260	1880	1130	1590	1940	518	322	542	578
15	433	555	670	250	1830	1050	1480	2020	430	602	483	530
16	386	490	660	250	1840	1010	1400	2050	517	590	1560	489
17	391	404	700	260	1890	1010	1260	2030	830	477	1880	449
18	417	489	700	260	1970	886	1290	1890	1180	386	1910	428
19	401	482	650	270	2040	820	1550	1670	913	330	1780	406
20	449	429	700	270	2210	786	1590	1350	633	306	1510	433
21	506	417	600	270	2790	745	1490	1060	693	370	1090	449
22	542	394	540	280	2880	635	1310	897	620	524	747	706
23	542	377	500	290	3280	579	1130	798	658	609	536	1960
24	536	393	480	290	4040	666	1210	692	680	512	455	2520
25	506	1050	450	290	4870	693	1590	637	656	401	554	2630
26	524	1510	470	280	5040	743	1730	600	678	306	524	2640
27	867	1510	440	270	5030	869	1720	581	742	386	460	2670
28	894	1300	430	280	5020	1030	1610	568	664	572	351	2790
29	717	1480	410	270	---	1070	1380	547	514	673	365	2680
30	606	1600	410	270	---	1500	1200	507	512	981	318	2570
31	541	---	420	270	---	1930	---	501	---	860	286	---
TOTAL	16013	19722	26147	8960	67590	53752	54570	31403	20716	14857	23085	31103
MEAN	517	657	843	289	2414	1734	1819	1013	691	479	745	1037
MAX	894	1600	1590	400	5040	4790	2550	2050	1180	981	1910	2790
MIN	326	377	410	250	270	579	1130	501	430	290	286	270
CFSM	.82	1.05	1.34	.46	3.84	2.76	2.90	1.61	1.10	.76	1.19	1.65
IN.	.95	1.17	1.55	.53	4.00	3.18	3.23	1.86	1.23	.88	1.37	1.84

CAL YR 1980 TOTAL 259715 MEAN 710 MAX 2900 MIN 162 CFSM 1.13 IN 15.38
WTR YR 1981 TOTAL 367918 MEAN 1008 MAX 5040 MIN 250 CFSM 1.61 IN 21.79

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) National Geodetic Vertical Datum of 1929. 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) National Geodetic Vertical Datum of 1929 Nov. 1, 1933, to Sept. 30, 1964, and 1,069.59 ft (326.011 m) NGVD Oct. 1, 1964, to Aug. 7, 1972 (levels by Corps of Engineers).
REMARKS.--Records good except those for winter period, which are poor. Discharge affected by East Barre Detention Reservoir since 1935 (Reservoirs in Winooski River basin). Prior to 1964, occasional diurnal fluctuation at low flow caused by mill upstream. Diversion from reservoir on Orange Brook, a tributary upstream, for city of Barre. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--51 years, 54.3 ft^3/s (1.538 m^3/s), 18.96 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 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, 475 ft^3/s (13.5 m^3/s) Feb. 25, gage height, 4.54 ft (1.384 m); maximum gage height, 5.82 ft (1.774 m); Feb. 11, ice jam; minimum, 1.6 ft^3/s (0.045 m^3/s) July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	14	46	7.6	4.4	78	252	60	71	15	14	12
2	4.8	13	41	7.2	122	61	331	58	41	14	13	11
3	22	11	70	6.6	125	62	196	55	31	12	11	11
4	61	9.4	52	6.0	66	76	159	49	36	12	8.9	11
5	34	9.4	47	5.4	50	86	159	46	45	39	21	9.5
6	17	9.4	35	5.2	45	84	179	44	44	70	50	9.5
7	12	9.4	32	5.0	48	47	114	44	95	32	24	9.5
8	8.5	29	37	4.9	45	41	86	39	65	19	17	8.9
9	7.3	25	79	4.9	42	39	83	37	68	16	17	102
10	7.1	28	50	4.8	37	39	118	33	76	27	28	34
11	7.1	28	37	4.8	100	36	95	37	67	14	42	73
12	7.1	19	43	4.7	260	47	104	100	54	10	106	30
13	7.7	15	32	4.7	130	39	83	414	67	13	32	21
14	7.8	15	23	4.6	80	33	108	362	50	29	25	15
15	7.8	15	14	4.7	64	53	145	126	38	31	58	15
16	7.5	14	16	4.7	56	30	78	337	30	18	401	14
17	7.5	36	14	4.7	54	41	55	198	31	12	198	14
18	8.5	38	13	4.7	90	55	100	116	28	11	78	12
19	18	44	12	4.7	115	46	106	86	21	11	46	18
20	15	28	12	4.8	304	27	61	70	24	11	32	31
21	12	25	12	5.0	414	24	57	64	61	23	28	20
22	11	20	13	4.9	362	22	49	58	58	20	22	159
23	9.5	21	11	4.7	172	38	50	54	163	14	20	429
24	8.8	22	10	4.6	261	26	165	50	58	10	18	455
25	12	124	9.8	4.8	439	30	163	44	37	8.9	17	316
26	102	56	9.5	5.2	362	41	137	39	47	8.9	16	97
27	39	79	9.2	4.9	143	49	83	38	39	30	15	73
28	24	41	9.0	4.9	122	47	67	38	27	16	15	172
29	20	121	8.8	4.4	---	122	67	34	20	41	14	93
30	16	63	8.8	4.5	---	359	70	34	17	41	14	67
31	15	---	8.2	4.4	---	385	---	65	---	20	14	---
TOTAL	542.1	981.6	814.3	157.0	4112.4	2163	3520	2829	1509	648.8	1414.9	2342.4
MEAN	17.5	32.7	26.3	5.06	147	69.8	117	91.3	50.3	20.9	45.6	78.1
MAX	102	124	79	7.6	439	385	331	414	163	70	401	455
MIN	4.8	9.4	8.2	4.4	4.4	22	49	33	17	8.9	8.9	8.9
MEAN†	17.5	34.0	25.5	5.03	149	69.9	117	93.2	46.6	20.8	45.7	81.2
CFSM†	.45	.87	.66	.13	3.83	1.80	3.01	2.40	1.20	.53	1.17	2.09
IN.†	.52	.97	.76	.15	4.00	2.07	3.35	2.76	1.34	.62	1.35	2.33

CAL YR 1980 TOTAL 11695.5 MEAN 32.0 MAX 414 MIN 1.7 MEAN† 32.0 CFSM† .82 IN† 11.19
WTR YR 1981 TOTAL 21034.5 MEAN 57.6 MAX 455 MIN 4.4 MEAN† 57.9 CFSM† 1.49 IN† 20.22

† Adjusted for change in contents in East Barre Detention Reservoir.

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT

LOCATION.--Lat 44°17'58", long 72°34'45", Washington County, Hydrologic Unit 02010003, on right bank at Wrightsville, 0.8 mi (1.3 km) downstream from Wrightsville Detention Reservoir, and 3.5 mi (5.6 km) upstream from mouth.
DRAINAGE AREA.--69.2 mi² (179.2 km²).
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) National Geodetic Vertical Datum of 1929 (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, and period of no gage-height record, Dec 6 to Jan. 19, which are poor. 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 temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--48 years, 134 ft³/s (3.795 m³/s), 26.30 in/yr (668 mm/yr), adjusted for storage.
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s (61.5 m³/s) Apr. 12, 1934, gage height, 6.53 ft (1.990 m), from rating curve extended above 920 ft³/s (26 m³/s); minimum daily, 0.2 ft³/s (0.006 m³/s) Aug. 13, 1941. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,040 ft³/s (29.5 m³/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 ft³/s (487 m³/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, 798 ft³/s (22.6 m³/s) Feb. 25, gage height, 3.67 ft (1.119 m); minimum daily, 9.2 ft³/s (0.26 m³/s) Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	85	241	37	20	681	510	149	150	29	27	14
2	57	82	166	36	140	643	545	132	89	28	21	14
3	160	74	250	35	325	595	539	116	67	26	18	13
4	244	70	227	33	210	539	514	102	65	27	15	12
5	299	78	135	31	175	475	494	93	104	35	24	11
6	196	84	130	30	170	398	478	87	78	66	77	10
7	118	74	130	29	150	314	437	85	195	52	53	9.8
8	97	231	140	28	72	128	379	79	145	42	37	9.2
9	79	256	290	27	68	92	318	68	139	40	49	117
10	68	209	240	26	66	86	271	61	125	42	191	86
11	63	163	150	25	68	82	209	61	95	27	75	168
12	65	133	120	24	340	71	211	204	80	18	56	86
13	81	115	135	23	466	77	154	650	76	16	40	60
14	77	103	110	22	335	72	142	665	60	26	33	44
15	68	103	90	22	206	57	151	635	53	36	35	75
16	63	88	92	22	126	76	120	615	53	29	288	60
17	60	74	88	21	138	50	116	585	60	22	274	42
18	63	80	82	21	232	58	218	545	49	18	155	36
19	85	75	76	21	311	54	248	490	48	16	82	35
20	76	71	70	22	451	53	166	429	61	14	55	40
21	71	66	64	23	619	51	146	351	76	24	43	37
22	66	65	58	22	672	48	129	182	70	36	36	129
23	63	65	58	21	672	45	128	89	66	27	32	325
24	58	74	50	21	710	56	272	75	54	21	28	444
25	59	271	47	21	778	63	300	65	46	16	27	433
26	223	300	44	21	767	72	258	69	50	12	24	380
27	262	177	43	22	729	101	170	67	58	15	22	309
28	157	157	42	22	718	112	142	65	53	16	20	302
29	128	314	42	21	---	177	183	58	45	57	17	213
30	103	317	42	20	---	386	198	57	41	88	16	137
31	91	---	39	20	---	493	---	195	---	46	15	---
TOTAL	3363	4054	3491	769	9734	6205	8146	7124	2351	967	1885	3651.0
MEAN	108	135	113	24.8	348	200	272	230	78.4	31.2	60.8	122
MAX	299	317	290	37	778	681	545	665	195	88	288	444
MIN	57	65	39	20	20	45	116	57	41	12	15	9.2
MEAN†	109	138	109	24.5	450	137	242	230	76.6	31.2	60.5	123
CFSM†	1.58	1.99	1.58	.35	6.50	1.98	3.50	3.32	1.11	.45	.87	1.78
IN†	1.81	2.22	1.82	.41	6.78	2.29	3.90	3.83	1.24	.52	1.01	1.98

CAL YR 1980 TOTAL 35593.0 MEAN 97.2 MAX 567 MIN 11 MEAN† 97.2 CFSM† 1.40 IN† 19.13
WTR YR 1981 TOTAL 51740.0 MEAN 142 MAX 778 MIN 9.2 MEAN† 142 CFSM† 2.05 IN† 27.82

† 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 mi² (100.5 km²). 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 National Geodetic Vertical Datum of 1929 (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) National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by Corps of Engineers in 1935 for flood control. Usable capacity, 525,000,000 ft³ (14,900,000 m³) 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), out- flow 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, 1,142.26 ft (348.161 m) Feb. 25; minimum, 1,127.70 ft (343.723 m) Oct. 16-18, 23-25.

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 mi² (172.2 km²). 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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 28, 1960, non-recording gage, and July 28 to Sept. 30, 1960, water-stage recorder, at present site at datum 612.75 ft (186.766 km) National Geodetic Vertical Datum of 1929.

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 ft³ (620,000 m³) 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 ft³ (24,110,000 m³) between elevations 620.00 ft (188.976 m) and 685.00 ft (208.788 m, crest of spillway); total usable capacity, 873,500,000 ft³ (24,740,000 m³). 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, 657.68 ft (200.461 m) Feb. 26; minimum not determined.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

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	1127.73	2.9	-	-
Oct. 31	1127.75	2.9	0	0
Nov. 30	1130.42	6.1	+3.2	+1.23
Dec. 31	-	*4.0	-2.1	-.78
CAL YR 1980	-	-	+.4	+.01
Jan. 31	1128.60	3.9	-.1	-.04
Feb. 28	1133.04	9.8	+5.9	+2.44
Mar. 31	1133.30	10.2	+.4	+.15
Apr. 30	1132.28	8.7	-1.5	-.58
May 31	1135.35	14.0	+5.3	+1.98
June 30	1129.09	4.5	-9.5	-3.66
July 31	1128.78	4.1	-.4	-.15
Aug. 31	1128.89	4.2	+.1	+.04
Sept. 30	1134.45	12.2	+8.0	+3.09
WTR YR 1981	-	-	+9.3	+.29
		04285000 Wrightsville Detention Reservoir		
Sept. 30	620.62	24.4	-	-
Oct. 31	620.85	25.4	+1.0	+.37
Nov. 30	622.50	32.3	+6.9	+2.66
Dec. 31	620.42	23.7	-8.6	-3.21
CAL YR 1980	-	-	-.7	-.02
Jan. 31	620.20	22.8	-.9	-.34
Feb. 28	651.00	270.8	+248.0	+103
Mar. 31	634.17	102.9	-167.9	-62.7
Apr. 30	621.16	26.6	-76.3	-29.4
May 31	621.34	27.4	+.8	+.30
June 30	620.23	22.9	-4.5	-1.74
July 31	620.25	23.0	+.1	+.04
Aug. 31	*620.08	22.3	-.7	-.26
Sept. 30	620.73	24.9	+2.6	+1.00
WTR YR 1981	-	-	+.5	+.02

* 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 mi² (1,028 km²).
PERIOD OF RECORD.--May 1909 to June 1914 (fragmentary), July 1914 to September 1923, August 1928 to current year.
REVISED RECORDS.--WSP 424: 1915. WSP 894: Drainage area. WSP 1437: 1912-14(M), 1915-18, 1919(M), 1920, 1921(M), 1922-23, 1929, 1933, 1934(M), 1936, 1937(M), 1938, 1946(M). WDR MA-NH-RI-VT-72-1: 1969(M), 1970(P), 1971(M).
GAGE.--Water-stage recorder. Datum of gage is 499.99 ft (152.397 m) National Geodetic Vertical Datum of 1929. 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 and period of no gage-height record, Aug. 20 to Sept. 30, which are fair. Flow regulated by several small powerplants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³ (13,900,000 m³), which regulate runoff from 24 mi² (62 km²), and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River basin). See table below for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--62 years (water years 1915-23, 1929-81), 587 ft³/s (16.62 m³/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) Apr. 7, 1912, gage height, 17.31 ft (5.276 m), from floodmarks, present datum, from rating curve extended above 6,900 ft³/s (200 m³/s); maximum gage height, 17.55 ft (5.349 m) June 30, 1973; minimum daily discharge, 17 ft³/s (0.48 m³/s) Sept. 3, 1933.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft³/s (1,610 m³/s) Nov. 3, 1927, gage height, 27.1 ft (8.26 m), from rating curve extended above 6,900 ft³/s (200 m³/s).
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 3,900 ft³/s (110 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 12	0145	4500	127	a*14.16	4.316	Feb. 24	--	5200	147	ice jam	
Feb. 20	--	4700	133	ice jam		May 13	0345	*6080	172	10.80	3.292

a Ice jam.

Minimum daily discharge, 88 ft³/s (2.49 m³/s) Jan. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	318	727	210	92	1440	1700	652	743	166	187	180
2	261	287	654	190	1100	1330	2310	621	514	150	133	165
3	579	281	1040	180	1550	1230	1640	571	418	142	115	130
4	778	323	740	165	720	1080	1450	508	392	152	109	115
5	777	337	430	150	460	1040	1420	483	682	193	172	135
6	507	332	460	140	380	968	1450	510	531	411	397	115
7	412	320	380	130	375	859	1220	518	884	315	290	110
8	363	652	430	125	330	595	1080	473	645	216	208	105
9	325	680	760	120	280	531	1010	419	687	180	237	560
10	299	593	610	115	270	538	1110	354	729	283	643	430
11	269	543	540	110	1000	489	918	360	549	216	367	670
12	225	428	410	105	3100	452	961	1410	500	157	471	440
13	247	395	570	120	1600	473	758	4490	463	147	279	290
14	253	399	430	130	1000	425	736	2320	373	265	237	215
15	306	384	390	120	740	370	804	1720	338	276	507	370
16	292	312	440	105	560	450	617	2050	323	199	1870	320
17	256	284	450	100	660	362	579	1810	340	202	1160	260
18	217	345	400	95	1200	377	912	1490	353	147	687	210
19	308	350	360	88	1500	364	1020	1260	264	126	438	200
20	293	337	330	96	3000	350	743	1090	253	124	371	290
21	314	334	290	110	3500	323	704	954	513	175	320	270
22	300	316	280	115	2500	294	645	758	397	234	290	720
23	289	246	310	120	2300	310	644	583	697	184	230	2300
24	271	300	300	125	3200	399	1260	487	428	150	210	2500
25	266	1090	280	90	3700	453	1340	439	317	109	240	1600
26	842	897	260	95	2600	527	1040	441	371	101	230	1200
27	773	576	270	110	1960	614	785	452	325	140	220	980
28	553	527	230	130	1610	568	663	420	255	167	205	1120
29	462	1160	240	120	---	1070	708	404	215	306	195	930
30	405	856	250	125	---	2010	798	360	188	415	160	740
31	373	---	230	98	---	2160	---	776	---	268	160	---
TOTAL	12081	14202	13491	3832	41287	22451	31025	29183	13687	6316	11338	17670
MEAN	390	473	435	124	1475	724	1034	941	456	204	366	589
MAX	842	1160	1040	210	3700	2160	2310	4490	884	415	1870	2500
MIN	217	246	230	88	92	294	579	354	188	101	109	105
(†)	364.8	330.0	286.5	235.2	347.7	355.5	434.1	439.7	429.6	426.3	421.6	424.4

CAL YR 1980 TOTAL 144251 MEAN 394 MAX 2280 MIN 63
WTR YR 1981 TOTAL 216563 MEAN 593 MAX 4490 MIN 88

† Monthend contents, in millions of cubic feet, in Peacham Pond and Molly 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 mi² (197.1 km²).

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) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair and period of no gage-height record, May 4-20, which are poor. Infrequent diurnal fluctuation at low flow by powerplant upstream; regulation much greater prior to 1955. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 122 ft³/s (3.455 m³/s), 21.77 in/yr (553 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s (300 m³/s) June 30, 1973, gage height, 11.57 ft (3.527 m), from rating curve extended above 1,500 ft³/s (42.5 m³/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 ft³/s (0.12 m³/s) Aug. 31, Sept. 7, 1942.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,600 ft³/s (45 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 20	1345	1960	55.5	5.06	1.542	May 13	--	*5270	149	a8.07	2.46
Feb. 24	1945	2090	59.2	5.22	1.591						

a From high-water marks.

Minimum discharge, 13 ft³/s (0.37 m³/s) Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	31	95	38	18	243	334	139	85	45	35	22
2	15	31	94	36	385	206	610	132	74	43	27	21
3	31	28	164	32	388	172	341	118	65	40	23	20
4	62	26	122	27	200	156	275	110	61	38	22	21
5	51	28	121	25	160	151	260	105	61	42	30	18
6	35	25	82	24	100	142	243	100	64	66	36	18
7	28	25	77	23	120	129	198	96	92	52	28	17
8	23	58	87	23	125	118	173	88	69	40	24	16
9	21	58	190	22	110	109	163	88	78	32	27	96
10	18	67	124	22	100	105	172	85	73	38	55	55
11	18	66	88	22	300	102	157	90	69	34	39	81
12	19	55	98	21	800	96	149	200	64	29	57	54
13	20	49	90	21	380	96	131	2000	78	27	40	44
14	19	48	76	21	240	83	138	800	59	35	33	36
15	18	50	65	22	200	95	153	250	60	34	46	34
16	17	45	72	22	170	73	128	275	55	33	266	31
17	17	34	68	22	300	86	125	240	54	26	133	28
18	19	42	66	22	440	79	186	200	47	25	87	26
19	30	41	62	23	532	81	183	180	42	23	63	33
20	24	39	60	24	1360	74	151	160	48	26	52	39
21	22	38	61	25	1220	70	138	159	85	36	46	32
22	20	38	64	24	656	63	127	143	74	31	41	196
23	19	35	56	23	432	78	124	125	119	23	36	578
24	19	40	50	23	1320	83	258	109	73	20	33	618
25	21	112	48	24	1030	88	323	99	65	18	33	268
26	77	92	47	26	552	110	234	94	88	17	30	173
27	64	70	46	24	372	121	187	87	74	29	27	144
28	48	82	45	20	287	433	162	82	59	23	27	195
29	41	180	44	18	---	578	180	77	50	89	24	144
30	36	115	43	18	---	571	149	75	48	69	23	117
31	33	---	40	18	---	507	---	102	---	46	22	---
TOTAL	900	1648	2445	735	12297	5098	6152	6608	2033	1129	1465	3175
MEAN	29.0	54.9	78.9	23.7	439	164	205	213	67.8	36.4	47.3	106
MAX	77	180	190	38	1360	578	610	2000	119	89	266	618
MIN	15	25	40	18	18	63	124	75	42	17	22	16
CFSM	.38	.72	1.04	.31	5.77	2.16	2.69	2.80	.89	.48	.62	1.39
IN.	.44	.81	1.20	.36	6.01	2.49	3.01	3.23	.99	.55	.72	1.55

CAL YR 1980 TOTAL 27567.3 MEAN 75.3 MAX 1420 MIN 7.3 CFSM .99 IN 13.48
WTR YR 1981 TOTAL 43685.0 MEAN 120 MAX 2000 MIN 15 CFSM 1.58 IN 21.35

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) National Geodetic Vertical Datum of 1929 (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 is poor. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--53 years (water years 1928-81), 255 ft^3/s (7.222 m^3/s), 24.91 in/yr (633 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 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 (650 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 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)
Feb. 11	2330	ice jam		a*14.45	4.404	Feb. 24	--	4100	116	ice jam	
Feb. 20	--	*4500	127	ice jam							

a Ice jam.

Minimum discharge not determined; minimum daily, 31 ft^3/s (0.88 m^3/s) Jan. 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	100	257	56	33	427	801	299	151	67	70	52
2	55	97	262	54	840	356	1460	267	105	61	54	50
3	120	86	477	48	850	294	719	237	89	58	48	46
4	283	89	290	40	410	288	655	213	89	108	48	44
5	193	108	195	36	300	272	779	199	97	94	103	41
6	119	94	180	35	180	257	690	194	124	117	155	38
7	94	91	170	34	220	222	464	186	385	81	103	36
8	79	385	190	34	220	199	379	162	213	63	91	36
9	68	252	280	32	200	178	373	159	310	52	121	267
10	62	316	200	32	180	174	444	144	272	54	322	111
11	60	247	130	32	700	166	403	159	166	43	130	267
12	72	190	150	31	1750	159	391	316	162	38	210	124
13	85	159	130	31	900	159	327	913	199	52	114	91
14	75	155	110	31	560	155	283	464	137	124	91	72
15	69	159	98	32	450	170	391	339	130	203	199	86
16	66	130	110	32	380	166	267	477	114	84	1340	65
17	67	96	100	32	660	127	257	464	121	58	975	58
18	96	124	98	32	940	133	496	345	103	48	573	54
19	141	140	90	34	1200	127	634	278	81	50	278	56
20	103	144	88	35	3000	114	496	232	91	44	182	63
21	91	136	90	37	2700	111	373	199	237	79	140	52
22	84	81	94	35	1400	105	299	178	130	70	111	397
23	76	100	84	34	2000	108	288	155	208	52	94	1330
24	70	148	76	34	2900	127	642	137	124	43	84	1530
25	75	700	72	36	1700	144	764	124	103	38	86	613
26	373	283	70	38	960	166	560	114	199	34	74	368
27	227	288	68	37	641	247	445	103	194	63	65	299
28	159	256	66	36	496	227	409	94	124	50	65	521
29	133	553	66	35	---	676	373	89	94	278	56	316
30	114	322	64	34	---	1330	305	91	81	217	54	237
31	105	---	60	34	---	1520	---	232	---	105	52	---
TOTAL	3471	6029	4415	1113	26770	8904	15167	7563	4633	2528	6088	7320
MEAN	112	201	142	35.9	956	287	506	244	154	81.5	196	244
MAX	373	700	477	56	3000	1520	1460	913	385	278	1340	1530
MIN	55	81	60	31	33	105	257	89	81	34	48	36
CFSM	.81	1.45	1.02	.26	6.88	2.07	3.64	1.76	1.11	.59	1.41	1.76
IN.	.93	1.61	1.18	.30	7.16	2.38	4.06	2.02	1.24	.68	1.63	1.96

CAL YR 1980 TOTAL 56142 MEAN 153 MAX 2300 MIN 22 CFSM 1.10 IN 15.02
WTR YR 1981 TOTAL 94001 MEAN 258 MAX 3000 MIN 31 CFSM 1.86 IN 25.16

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 mi² (282 km²).

PERIOD OF RECORD.--Elevation: September 1937 to current year. September 1937 to September 1938 monthend contents only, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 10, 1938, nonrecording gage at same site and datum.

REMARKS.--Reservoir is formed by earthfill dam completed by Corps of Engineers during summer of 1937 for flood control and storage of water for power. Usable capacity for storage of water for power, 1,582,700,000 ft³ (44,822,000 m³) 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 ft³ (34,822,000 m³) 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 ft³ (79,644,000 m³).

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

500.0	0	560.0	658.8
510.0	34.8	570.0	891.9
520.0	92.8	580.0	1,168.5
530.0	180.8	590.0	1,505.0
540.0	302.7	600.0	1,913.4
550.0	461.7		

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 613.45 ft (186.980 m) May 4, 1940; minimum observed, 501.3 ft (152.80 m) Oct. 16, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 591.60 ft (180.320 m) Dec. 10; minimum observed, 501.30 ft (152.796 m) July 3, 12, 13.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589.46	590.70	590.25	568.03	520.96	569.44	549.53	541.40	523.23	501.50	525.88	529.38
2	589.28	590.65	590.12	566.40	526.90	569.12	554.22	539.60	522.76	501.40	526.38	528.71
3	589.38	590.19	590.30	564.68	530.52	569.71	554.66	537.50	522.46	501.50	526.82	528.17
4	590.39	589.75	589.90	562.97	527.99	569.72	555.80	535.20	523.04	501.60	527.18	527.58
5	591.19	589.49	589.51	561.11	524.75	569.71	557.39	532.50	524.56	502.00	528.11	527.98
6	590.95	589.11	589.41	559.22	523.02	569.71	557.53	529.70	525.61	502.00	529.99	528.37
7	590.76	588.81	589.31	557.31	525.03	569.71	556.75	526.70	530.61	501.50	529.90	528.73
8	590.45	590.71	589.45	554.96	526.75	569.66	555.72	524.80	530.11	501.40	530.80	529.21
9	590.08	591.21	591.38	552.83	525.05	568.79	555.47	524.30	529.26	501.70	530.84	532.18
10	589.69	591.30	591.40	550.71	520.69	567.42	555.21	522.80	527.41	501.70	532.19	532.41
11	589.64	591.29	591.09	548.54	522.05	566.04	555.26	520.50	525.21	501.40	530.45	532.39
12	590.17	591.05	590.69	546.25	530.67	564.63	554.90	520.40	524.00	501.30	528.04	533.88
13	590.18	590.72	590.40	543.89	529.60	563.17	553.89	531.00	526.20	501.50	527.48	534.48
14	589.82	590.45	590.20	541.06	527.55	561.57	552.82	530.74	527.77	504.50	527.47	533.10
15	589.45	590.31	589.58	537.75	524.86	560.00	551.79	529.22	526.30	505.90	529.50	533.21
16	589.17	590.68	588.98	533.60	521.81	558.41	550.35	528.62	522.40	503.60	536.82	532.80
17	588.92	590.22	587.97	529.90	520.69	556.65	549.00	530.35	518.90	501.70	543.24	532.08
18	589.00	589.89	586.97	526.80	523.82	554.81	549.76	529.21	518.00	501.50	543.05	531.56
19	589.41	589.52	585.87	523.10	528.59	552.93	549.42	527.12	517.72	501.50	541.27	532.25
20	589.18	588.97	584.66	522.50	543.61	550.98	548.45	524.24	516.31	503.60	539.68	532.90
21	588.75	588.45	583.48	521.60	553.41	549.00	547.31	520.51	515.90	506.90	536.87	531.93
22	588.52	588.30	582.26	520.50	557.31	546.97	546.03	517.84	514.71	509.50	533.87	532.18
23	588.32	588.45	581.05	521.00	558.69	544.81	544.82	517.66	514.71	511.30	531.35	538.95
24	588.28	588.14	579.83	522.00	565.93	542.59	546.38	517.14	511.70	512.58	530.21	543.67
25	588.69	589.65	578.49	522.60	570.13	540.33	547.13	515.69	509.70	513.64	529.99	543.76
26	590.60	590.35	577.17	522.70	570.97	538.07	546.67	516.28	509.50	514.55	529.61	542.49
27	590.98	590.38	575.55	522.00	570.81	536.27	545.86	515.18	510.20	515.71	529.40	541.03
28	591.07	590.10	575.00	521.30	570.22	534.17	544.58	514.00	508.90	516.68	529.09	540.11
29	590.98	590.30	572.60	520.50	---	535.28	543.94	512.94	506.40	520.46	529.58	538.40
30	590.90	590.56	571.20	519.17	---	541.77	542.98	512.32	503.10	524.08	530.20	536.25
31	590.70	---	569.69	520.09	---	548.05	---	521.82	---	525.18	529.99	---
MEAN	589.82	589.99	584.96	538.23	537.23	556.11	550.79	524.75	519.56	506.88	531.46	533.67
MAX	591.19	591.30	591.40	568.03	570.97	569.72	557.53	541.40	530.61	525.18	543.24	543.76
MIN	588.28	588.14	569.69	519.17	520.69	534.17	542.98	512.32	503.10	501.30	525.88	527.58
(†)	1532.1	1526.7	884.4	93.3	897.6	428.7	347.2	107.2	9.4	134.2	180.7	253.6
(‡)	+12.4	-2.08	-240	-295	+332	-175	-31.4	-89.6	-37.7	+46.6	+17.4	+28.1

CAL YR 1980 MEAN 583.81 MAX 591.87 MIN 556.91 (‡) -19.4
WTR YR 1981 MEAN 547.02 MAX 591.40 MIN 501.30 (‡) -39.5

† Contents, in millions of cubic feet, at end of month.
‡ Change in contents, equivalent in cubic feet per second.

04289000 LITTLE RIVER NEAR WATERBURY, VT

LOCATION.--Lat 44°22'12", long 72°46'11", Washington County, Hydrologic Unit 02010003, on right bank 1 mi (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) National Geodetic Vertical Datum of 1929 (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 good. Flow completely regulated by Waterbury Reservoir (station 04288500). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 240 ft^3/s (6.797 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, 583 ft^3/s (16.5 m^3/s) Nov. 4, gage height, 7.79 ft (2.374 m); minimum daily, 3.0 ft^3/s (0.08 m^3/s) Aug. 2-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	191	379	537	13	542	498	489	176	100	3.1	107
2	256	167	311	537	296	444	519	485	205	66	3.0	107
3	238	331	334	533	464	59	511	481	174	64	3.0	88
4	238	327	354	528	456	182	511	472	171	69	3.0	88
5	15	308	344	520	448	222	511	468	169	67	13	10
6	324	324	212	520	276	220	511	460	174	108	68	9.7
7	273	331	215	526	13	220	511	448	176	81	124	9.7
8	287	19	334	517	13	220	506	368	327	63	9.7	12
9	281	135	56	501	290	340	468	180	456	62	141	155
10	270	324	344	492	401	530	502	191	452	94	235	321
11	167	281	341	496	350	520	506	311	444	62	317	344
12	14	324	372	488	470	520	511	351	305	49	324	12
13	245	327	347	484	460	515	511	456	13	61	97	58
14	324	331	262	472	430	515	511	460	12	102	73	259
15	305	238	365	468	450	515	481	456	217	147	21	167
16	281	15	409	500	440	511	498	456	390	145	409	143
17	259	175	560	500	420	506	498	456	379	104	464	145
18	126	311	560	500	430	502	502	456	240	59	464	143
19	14	302	551	190	448	498	506	452	102	67	464	11
20	256	351	555	38	489	498	502	444	165	22	456	11
21	314	347	555	280	515	493	502	432	163	4.5	448	159
22	227	194	555	280	515	489	498	324	185	4.4	440	324
23	205	66	551	45	519	485	498	169	187	4.4	262	460
24	141	375	551	9.1	551	472	502	167	178	4.3	176	468
25	16	45	551	9.4	560	476	502	196	157	4.3	87	468
26	18	18	551	94	555	476	502	194	155	4.2	90	468
27	235	187	551	100	551	476	498	208	155	4.1	74	464
28	238	409	546	99	546	472	498	189	153	4.0	78	464
29	251	472	546	105	---	472	498	163	149	3.8	10	460
30	217	198	542	104	---	481	493	163	145	3.3	10	452
31	251	---	542	11	---	498	---	167	---	3.3	73	---
TOTAL	6576	7423	13246	10483.5	11369	13369	15065	10712	6374	1636.6	5439.8	6387.4
MEAN	212	247	427	338	406	431	502	346	212	52.8	175	213
MAX	324	472	560	537	560	542	519	489	456	147	464	468
MIN	14	15	56	9.1	13	59	468	163	12	3.3	3.0	9.7

CAL YR 1980 TOTAL 69140.0 MEAN 189 MAX 605 MIN 10
WTR YR 1981 TOTAL 108081.3 MEAN 296 MAX 560 MIN 3.0

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 mi² (2,704 km²).
PERIOD OF RECORD.--Discharge: October 1928 to current year.
Water-quality records: Water years 1953, 1976-79.
REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).
GAGE.--Water-stage recorder. 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, Jan. 25 to Feb. 19, Feb. 22-24, which are fair. Flow regulated by powerplants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³ (13,900,000 m³), by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River basin) since 1935. See table with station 04286000 for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--53 years, 1,697 ft³/s (48.06 m³/s).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,300 ft³/s (1,280 m³/s) Mar. 19, 1936, gage height, 24.54 ft (7.480 m), present datum, from rating curve extended above 27,000 ft³/s (760 m³/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 ft³/s (0.68 m³/s) Sept. 7, 1968.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft³/s (3,200 m³/s) Nov. 4, 1927, gage height, 51.4 ft (15.67 m), present datum, from floodmarks, from rating curve extended above 27,000 ft³/s (760 m³/s) by method explained above.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 12,500 ft³/s (354 m³/s) and maximum (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21	1115	ice jam		*22.17	6.757	May 13	1430	13100	371	9.64	2.938
Feb. 25	1015	*18400	521	12.44	3.792	Sept. 24	0400	12600	357	9.36	2.853

Minimum daily discharge, 85 ft³/s (2.41 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571	807	1980	1150	400	3970	5730	2220	1940	692	359	465
2	571	868	1930	1100	2000	3480	8370	2030	1300	780	309	439
3	822	939	2220	1100	5400	2760	5710	1930	1100	459	394	553
4	1090	868	2250	960	2500	2260	4430	1760	825	465	366	641
5	1280	915	1650	950	2000	2200	4270	1660	1110	575	795	340
6	981	956	1480	1000	1700	2130	4460	1590	1380	859	815	85
7	923	931	1400	1050	1300	2090	3520	1650	1950	888	911	118
8	956	1260	1420	1000	1200	1800	2980	1490	2110	659	668	334
9	837	1700	2760	1040	1100	1590	2720	1220	1830	512	513	1200
10	981	1590	2510	970	1100	1840	3110	1060	2160	383	2100	1280
11	748	1690	2160	960	2000	1780	2840	1090	1800	548	1580	1480
12	486	1480	1250	940	7400	1700	2980	1380	1400	639	1410	1360
13	784	1220	1340	920	4700	1670	2480	9860	1130	328	1100	659
14	989	1380	1850	890	2700	1660	2220	6300	1070	201	797	854
15	868	1220	1300	920	2200	1440	2340	4040	920	1090	822	1040
16	868	883	1400	860	2000	1640	2100	4360	1270	991	5990	699
17	883	883	1650	850	2300	1460	1920	4560	1030	524	6430	702
18	691	1020	1500	850	3000	1360	2610	3590	1200	449	4380	766
19	504	1030	1600	730	4500	1400	3560	2960	780	282	2250	578
20	1080	1080	1450	570	7000	1360	2670	2580	750	475	1690	262
21	807	1060	1400	420	9600	1330	2430	2270	1100	309	1010	552
22	1010	956	1200	510	7800	1260	2230	2020	1180	343	1300	981
23	748	677	1450	430	5400	1230	2150	1560	1270	486	932	5850
24	829	1180	1500	430	8000	1310	3500	1240	1250	704	885	11500
25	741	2450	1200	450	13000	1460	4360	1190	1040	183	481	6060
26	1190	2500	1250	340	8570	1700	3690	1150	1070	134	576	3520
27	1600	1800	1300	450	5990	2070	2840	1150	1080	712	465	2560
28	1580	1600	1300	480	4600	2150	2430	1080	825	145	786	3180
29	1230	2830	1250	540	---	2350	2290	997	815	595	244	2790
30	1200	2690	1300	500	---	6790	2510	928	386	812	257	2160
31	883	---	1180	460	---	8350	---	1590	---	750	471	---
TOTAL	28731	40463	49430	23820	119460	69590	99450	72505	37071	16972	41086	53008
MEAN	927	1349	1595	768	4266	2245	3315	2339	1236	547	1325	1767
MAX	1600	2830	2760	1150	13000	8350	8370	9860	2160	1090	6430	11500
MIN	486	677	1180	340	400	1230	1920	928	386	134	244	85

CAL YR 1980 TOTAL 433523 MEAN 1184 MAX 8570 MIN 116
WTR YR 1981 TOTAL 651586 MEAN 1785 MAX 13000 MIN 85

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 poor. Some regulation by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--55 years (water years 1912-13, 1929-81), 533 ft^3/s (15.09 m^3/s), 23.35 in/yr (593 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 (240 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.--Maximum discharge, 4,290 ft^3/s (121 m^3/s) Feb. 25, gage height, 9.36 ft (2.853 m), no peak discharge above base of 5,400 ft^3/s (153 m^3/s); maximum gage height, 9.98 ft (3.042 m), Feb. 12, ice jam; minimum discharge, 94 ft^3/s (2.66 m^3/s) June 25; minimum daily, 120 ft^3/s (3.40 m^3/s) July 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	407	747	280	140	847	1690	621	823	288	212	154
2	187	354	666	290	700	700	2030	591	610	186	196	148
3	869	326	1110	280	2500	575	1530	572	261	152	174	150
4	1100	305	869	270	1700	422	1040	459	194	141	150	147
5	1120	322	726	210	1000	420	1080	354	443	171	295	124
6	670	280	560	180	800	430	1260	350	456	333	389	123
7	574	269	539	185	500	410	937	354	759	277	436	121
8	370	1120	603	190	350	390	754	350	758	246	363	122
9	358	926	1380	200	300	380	667	350	588	163	229	562
10	271	740	928	210	250	380	835	348	583	299	453	459
11	213	661	610	210	600	370	874	343	577	382	415	651
12	389	517	450	180	3100	360	980	386	434	332	326	497
13	420	453	360	160	1500	350	678	2030	294	252	152	363
14	378	415	370	180	1000	350	608	1970	373	271	146	370
15	356	412	300	200	800	310	647	1130	329	252	249	448
16	336	386	260	190	700	340	559	1240	369	195	1620	321
17	215	378	330	170	1200	310	517	1260	294	189	1670	278
18	272	328	310	160	1700	270	724	907	167	190	899	289
19	325	222	340	150	2500	250	928	625	225	192	524	237
20	364	244	370	160	3400	290	725	424	328	180	318	205
21	352	318	350	170	3900	280	599	419	293	172	221	235
22	335	315	250	180	3100	280	415	411	268	173	216	551
23	266	311	210	190	2600	270	432	400	422	171	218	1080
24	163	452	210	180	2200	350	911	389	380	170	209	1900
25	214	1530	220	190	3850	410	1410	318	284	159	208	1020
26	1020	1090	260	180	2550	457	1040	274	263	123	200	692
27	1170	707	280	180	1510	626	838	403	274	126	169	447
28	713	472	280	170	1030	656	707	454	303	120	151	468
29	577	1520	230	170	---	781	607	317	292	192	155	562
30	366	1080	190	160	---	2090	645	189	406	189	144	570
31	416	---	270	130	---	2440	---	332	---	142	161	---
TOTAL	14647	16860	14578	5955	45480	16794	26667	18570	12050	6428	11268	13294
MEAN	472	562	470	192	1624	542	889	599	402	207	363	443
MAX	1170	1530	1380	290	3900	2440	2030	2030	823	382	1670	1900
MIN	163	222	190	130	140	250	415	189	167	120	144	121
CFSM	1.52	1.81	1.52	.62	5.24	1.75	2.87	1.93	1.30	.67	1.17	1.43
IN.	1.76	2.02	1.75	.71	5.46	2.02	3.20	2.23	1.45	.77	1.35	1.60

CAL YR 1980 TOTAL 154939 MEAN 423 MAX 2820 MIN 60 CFSM 1.37 IN 18.59
WTR YR 1981 TOTAL 202591 MEAN 555 MAX 3900 MIN 120 CFSM 1.79 IN 24.31

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 mi² (1,777 km²).

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 and period of no gage-height record, Oct. 8 to Nov. 21, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 1,234 ft³/s (34.95 m³/s), 24.43 in/yr (621 mm/yr), adjusted to present drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,200 ft³/s (657 m³/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, 21.64 ft (6.596 m) Mar. 6, 1979, ice jam; minimum daily discharge, 74 ft³/s (2.10 m³/s) Sept. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 10,400 ft³/s (295 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21	--	ice jam		a*19.40	5.913	Feb. 25	1630	*13600	385	9.95	3.033

a From peak-stage indicator.

Minimum daily discharge, 199 ft³/s (5.64 m³/s) July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	733	1070	1700	640	320	2450	4930	1460	1720	625	360	372
2	604	940	1500	660	1600	2030	5950	1340	1280	455	366	378
3	1080	860	2000	650	5400	1740	4320	1250	901	360	333	364
4	2260	800	1900	620	3700	1310	2910	1170	1230	323	350	343
5	3140	840	1700	500	2200	1210	2760	895	1720	358	1540	314
6	1870	730	1300	420	1500	1240	2980	839	1200	775	2220	290
7	1340	700	1250	430	820	1160	2210	901	2960	609	1330	315
8	1100	2900	1400	440	640	1100	1750	850	2690	479	944	304
9	900	2400	3000	460	600	1070	1540	792	2000	416	1020	1500
10	710	2000	2000	480	570	1060	2050	765	1930	450	1770	1580
11	560	1800	1400	480	1400	1040	2030	760	1690	548	1260	2130
12	1050	1400	1050	420	7000	990	2480	885	1330	534	2180	1790
13	1100	1200	840	370	3500	988	1830	4790	1090	460	941	1320
14	1000	1030	860	420	2300	979	1430	5170	959	502	662	980
15	950	1000	700	460	1800	858	1540	2520	851	761	1030	919
16	900	960	600	430	1600	989	1340	2290	839	560	5900	906
17	580	940	760	390	2700	788	1290	3690	855	410	8500	647
18	720	820	720	370	3900	701	1670	2520	714	363	5830	693
19	860	640	780	350	5800	680	2290	1780	519	391	2450	674
20	960	750	840	370	7800	811	1740	1290	535	370	1420	576
21	930	780	800	400	10000	789	1620	1060	692	345	1000	532
22	880	846	580	420	9600	781	1330	922	628	363	800	814
23	600	807	480	440	6620	765	1250	897	954	341	699	2790
24	440	978	480	420	5650	888	1980	845	853	312	645	5780
25	560	3690	500	440	12000	923	3880	774	694	295	617	4200
26	2700	3180	600	420	8590	1020	2870	736	623	275	591	2320
27	3100	1780	640	410	4300	1590	2110	804	776	199	470	1510
28	2000	1620	640	400	2930	1730	1710	964	757	254	469	1440
29	1500	3050	520	390	---	1840	1590	793	702	475	406	1270
30	950	3030	440	370	---	4970	1690	669	513	830	421	1240
31	1100	---	620	300	---	6460	---	1170	---	517	429	---
TOTAL	37177	43541	32600	13770	114840	44950	69070	45591	34205	13955	46953	38291
MEAN	1199	1451	1052	444	4101	1450	2302	1471	1140	450	1515	1276
MAX	3140	3690	3000	660	12000	6460	5950	5170	2960	830	8500	5780
MIN	440	640	440	300	320	680	1250	669	513	199	333	290
CFSM	1.75	2.12	1.53	.65	5.98	2.11	3.36	2.14	1.66	.66	2.21	1.86
IN.	2.02	2.36	1.77	.75	6.23	2.44	3.75	2.47	1.85	.76	2.55	2.08

CAL YR 1980 TOTAL 365599 MEAN 999 MAX 6440 MIN 140 CFSM 1.46 IN 19.83
WTR YR 1981 TOTAL 534943 MEAN 1466 MAX 12000 MIN 199 CFSM 2.14 IN 29.01

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 and period of no gage-height record, Feb. 22 to Mar. 26, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--50 years, 271 ft^3/s (7.675 m^3/s), 28.09 in/yr (713 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 (160 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.--Maximum discharge, 2,400 ft^3/s (70.0 m^3/s) Sept. 24, gage height, 7.07 ft (2.15 m); no peak discharge above base of 3,300 ft^3/s (93 m^3/s); maximum gage height, 7.97 ft (2.43 m) Feb. 20, (ice jam); minimum discharge, 29 ft^3/s (0.82 m^3/s) July 26; minimum daily, 30 ft^3/s (0.85 m^3/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	185	324	100	52	650	876	257	255	62	77	56
2	110	179	294	95	220	480	1300	253	150	62	62	57
3	190	164	629	86	700	390	659	215	123	51	57	50
4	420	153	308	75	350	320	682	177	211	47	55	46
5	520	322	210	72	180	315	833	159	264	77	515	44
6	380	269	200	70	150	290	816	163	195	181	482	43
7	250	256	190	68	140	270	435	221	1010	89	214	42
8	200	1110	370	69	130	250	320	170	476	65	129	41
9	165	588	1350	69	120	235	354	147	536	70	133	778
10	140	522	550	70	115	225	550	115	571	83	127	392
11	131	380	260	67	230	215	407	134	404	70	115	1040
12	336	284	210	70	1400	205	390	203	260	48	201	313
13	340	240	200	65	850	200	274	1830	231	49	136	202
14	238	265	175	60	530	200	248	658	173	78	81	132
15	189	256	150	58	430	190	394	359	146	87	160	114
16	167	201	160	56	320	195	261	446	156	66	1690	83
17	161	148	155	57	450	190	236	456	196	56	1770	85
18	169	170	150	57	770	185	426	306	142	51	678	77
19	211	158	145	58	1000	150	398	237	115	42	270	82
20	227	155	145	59	1400	140	274	192	84	52	166	77
21	198	145	150	59	2200	135	255	165	216	59	122	90
22	195	147	170	60	1700	130	221	156	155	60	91	255
23	177	135	140	61	1400	135	219	134	376	57	90	504
24	145	183	130	62	1300	150	452	120	175	40	81	1550
25	119	756	130	61	2300	160	825	119	117	42	79	733
26	530	401	125	62	1700	186	492	272	105	30	70	342
27	655	228	120	62	1250	263	322	230	177	77	64	253
28	349	239	120	60	900	250	251	167	122	70	72	268
29	274	808	115	57	---	593	287	134	87	292	59	220
30	215	467	115	56	---	1490	370	174	79	342	66	164
31	187	---	110	55	---	1870	---	369	---	130	58	---
TOTAL	7703	9514	7600	2036	22287	10657	13827	8738	7307	2585	7970	8133
MEAN	248	317	245	65.7	796	344	461	282	244	83.4	257	271
MAX	655	1110	1350	100	2300	1870	1300	1830	1010	342	1770	1550
MIN	110	135	110	55	52	130	219	115	79	30	55	41
CFSM	1.89	2.42	1.87	.50	6.08	2.63	3.52	2.15	1.86	.64	1.96	2.07
IN.	2.19	2.70	2.16	.58	6.33	3.03	3.93	2.48	2.07	.73	2.26	2.31

CAL YR 1980 TOTAL 73343 MEAN 200 MAX 1600 MIN 27 CFSM 1.53 IN 20.83
WTR YR 1981 TOTAL 108357 MEAN 297 MAX 2300 MIN 30 CFSM 2.27 IN 30.77

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT

LOCATION.--Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank 1.7 mi (2.7 km) north of intersection of State Highways 105 and 118 in East Berkshire, 1.7 mi (2.7 km) upstream from Trout River, 3 mi (5 km) south of Richford, and 3.8 mi (6.1 km) downstream from North Branch.
DRAINAGE AREA.--479 mi² (1,241 km²).
PERIOD OF RECORD.--Discharge: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307. Prior to October 1977, published as "near Richford."
Water-quality records: Water years 1954, 1967-74.
REVISED RECORDS.--WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.
GAGE.--Water-stage recorder. 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 and period of no gage-height record, Feb. 14 to Mar. 25, which are poor. Diurnal fluctuation at low flow prior to 1934. Several observations of water temperature and specific conductance were made during the year.
AVERAGE DISCHARGE.--65 years, 923 ft³/s (26.14 m³/s), 26.17 in/yr (665 mm/yr).
EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s (487 m³/s) May 4, 1940, gage height, 15.15 ft (4.618 m), from rating curve extended above 9,300 ft³/s (260 m³/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 ft³/s (0.23 m³/s) July 14, 1911.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 45,000 ft³/s (1,270 m³/s) during flood of November 1927, gage height, 23.1 ft (7.04 m), from floodmarks, from rating curve extended above 9,300 ft³/s (260 m³/s) as explained above.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 7,600 ft³/s (215 m³/s) and maximums (*):

Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft³/s)	Discharge (m³/s)	Gage height (ft)	Gage height (m)
Feb. 21 or 25	--	ice jam		a*16.30	4.968	Aug. 17	1130	*10620	301	12.01	3.661

a High water mark.

Minimum discharge, 90 ft³/s (2.55 m³/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	574	1370	290	145	2000	3530	1040	928	221	261	188
2	340	556	1270	270	660	1500	3720	890	574	188	184	172
3	600	544	1760	250	2300	1200	2770	801	395	168	168	164
4	1300	504	1630	210	1100	1000	2000	660	752	152	188	150
5	1600	773	1000	200	540	980	2230	556	1400	142	496	138
6	1180	904	990	195	450	900	2560	508	1380	291	1640	132
7	770	936	980	190	410	840	1680	598	2440	329	1180	128
8	620	2520	970	190	380	770	1280	574	2270	224	852	123
9	500	2440	3740	190	360	720	1160	455	1760	227	647	1150
10	450	1940	2760	190	350	680	1590	390	2200	215	794	1390
11	390	1540	1550	190	700	660	1400	359	1890	172	647	2160
12	538	1280	1000	200	4300	630	1290	562	1330	148	679	1630
13	867	1070	820	180	2600	620	1030	2920	952	142	531	928
14	653	1020	700	170	1600	610	898	3190	739	150	348	635
15	525	1030	740	165	1200	580	1050	1610	574	198	801	470
16	435	851	640	160	1000	600	928	1410	604	205	3850	382
17	390	721	540	160	1400	590	801	1580	673	191	8840	301
18	420	684	480	160	2400	580	1150	1250	598	164	4560	280
19	525	616	420	165	3100	460	1400	960	430	152	2250	264
20	525	599	400	165	4200	440	1120	759	344	128	1330	271
21	513	560	420	170	6800	410	960	616	322	136	852	248
22	538	522	410	170	5200	400	809	538	395	158	616	405
23	496	497	390	170	4200	410	718	465	508	148	445	1050
24	420	624	360	175	4000	460	936	390	550	132	382	2830
25	386	1890	360	170	7000	520	1670	359	344	103	348	3490
26	944	1680	350	175	5300	616	1630	673	322	102	308	1870
27	1750	1140	340	180	3800	898	1290	746	519	168	261	1400
28	1290	1130	340	170	2800	936	1010	562	435	162	264	1360
29	994	2190	330	160	---	1180	967	435	315	340	239	1160
30	787	1950	320	155	---	2710	1230	532	251	905	213	898
31	647	---	300	150	---	4110	---	1060	---	502	208	---
TOTAL	21753	33285	27680	5735	68295	29010	44807	27448	26194	6663	34382	25767
MEAN	702	1110	893	185	2439	936	1494	885	873	215	1109	859
MAX	1750	2520	3740	290	7000	4110	3720	3190	2440	905	8840	3490
MIN	340	497	300	150	145	400	718	359	251	102	168	123
CFSM	1.47	2.32	1.86	.39	5.09	1.95	3.12	1.85	1.82	.45	2.32	1.79
IN.	1.69	2.58	2.15	.45	5.30	2.25	3.48	2.13	2.03	.52	2.67	2.00

CAL YR 1980 TOTAL 237625 MEAN 649 MAX 4110 MIN 90 CFSM 1.36 IN 18.45
WTR YR 1981 TOTAL 351019 MEAN 962 MAX 8840 MIN 102 CFSM 2.01 IN 27.26

ST. LAWRENCE RIVER BASIN

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) National Geodetic Vertical Datum of 1929. 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.

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, 6.17 ft (1.881 m) Mar. 1, affected by seiche; minimum, 1.65 ft (0.503 m) Nov. 4, affected by seiche.

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.93	1.90	2.48	2.56	1.95	6.15	4.50	4.40	3.65	3.04	2.36	3.18
2	1.91	1.90	2.53	2.56	2.03	6.14	4.69	4.36	3.61	3.00	2.34	3.15
3	1.97	1.84	2.59	2.53	2.20	6.13	4.83	4.31	3.54	2.96	2.33	3.05
4	2.03	1.72	2.63	2.52	2.33	6.08	4.87	4.25	3.52	2.92	2.35	3.00
5	2.07	1.80	2.66	2.50	2.40	6.02	4.91	4.18	3.54	2.90	2.40	2.92
6	2.10	1.79	2.67	2.49	2.43	5.95	4.95	4.13	3.53	2.89	2.43	2.86
7	2.11	1.78	2.66	2.48	2.46	5.92	4.97	4.08	3.55	2.89	2.47	2.85
8	2.06	1.86	2.65	2.46	2.48	5.84	4.92	4.01	3.57	2.84	2.48	2.90
9	2.06	1.86	2.73	2.44	2.50	5.76	4.89	3.91	3.58	2.83	2.48	2.98
10	2.05	1.95	2.84	2.42	2.50	5.69	4.90	3.85	3.60	2.81	2.52	2.99
11	2.03	2.01	2.90	2.41	2.52	5.62	4.88	3.81	3.61	2.78	2.54	3.00
12	2.03	2.03	2.90	2.39	2.75	5.54	4.90	3.82	3.60	2.75	2.59	3.01
13	2.01	2.03	2.90	2.38	3.00	5.45	4.86	3.92	3.59	2.71	2.60	3.00
14	1.98	2.05	2.89	2.36	3.13	5.39	4.67	4.05	3.54	2.69	2.60	3.00
15	1.98	2.06	2.87	2.35	3.21	5.31	4.69	4.11	3.48	2.70	2.63	3.01
16	1.97	2.06	2.88	2.33	3.23	5.24	4.67	4.15	3.44	2.68	2.70	3.00
17	1.94	2.05	2.86	2.32	3.28	5.15	4.63	4.20	3.43	2.63	2.80	2.99
18	1.89	2.08	2.80	2.29	3.37	5.05	4.63	4.21	3.41	2.60	3.10	2.97
19	1.90	2.06	2.83	2.27	3.49	4.96	4.64	4.20	3.37	2.59	3.30	2.93
20	1.89	2.04	2.81	2.25	3.70	4.88	4.64	4.18	3.36	2.56	3.35	2.88
21	1.88	2.00	2.80	2.23	4.04	4.82	4.61	4.13	3.31	2.52	3.35	2.85
22	1.86	2.01	2.77	2.20	4.43	4.73	4.56	4.10	3.30	2.50	3.36	2.88
23	1.84	1.96	2.75	2.19	4.72	4.65	4.51	4.06	3.25	2.51	3.38	3.05
24	1.83	1.98	2.73	2.17	4.98	4.57	4.49	3.99	3.20	2.47	3.30	3.35
25	1.81	2.09	2.73	2.14	5.43	4.51	4.52	3.92	3.14	2.40	3.22	3.62
26	1.87	2.16	2.66	2.10	5.86	4.42	4.51	3.89	3.15	2.33	3.24	3.74
27	1.87	2.23	2.67	2.09	6.06	4.39	4.51	3.85	3.16	2.35	3.25	3.77
28	1.91	2.27	2.62	2.08	6.11	4.35	4.49	3.81	3.14	2.38	3.20	3.88
29	1.94	2.34	2.62	2.06	---	4.28	4.44	3.76	3.10	2.43	3.23	3.94
30	1.94	2.43	2.61	2.03	---	4.31	4.43	3.71	3.04	2.41	3.23	3.95
31	1.88	---	2.58	2.00	---	4.42	---	3.69	---	2.38	3.19	---
MEAN	1.95	2.01	2.73	2.31	3.45	5.22	4.69	4.03	3.41	2.66	2.85	3.16
MAX	2.11	2.43	2.90	2.56	6.11	6.15	4.97	4.40	3.65	3.04	3.38	3.95
MIN	1.81	1.72	2.48	2.00	1.95	4.28	4.43	3.69	3.04	2.33	2.33	2.85

CAL YR 1980 MEAN 2.44 MAX 4.48 MIN 1.28
WTR YR 1981 MEAN 3.20 MAX 6.15 MIN 1.72

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

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-STAGE 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 National Geodetic Vertical Datum of 1929. March 1871 to May 1923, nonrecording gage located in Fort Montgomery and May 1923 to October 1938, nonrecording gage at present site. Prior to October 1970, at datum 93.00 ft (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, 99.06 ft (30.193 m) Feb. 28, minimum, 94.35 ft (28.758 m) Nov. 8.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.88	94.71	95.39	95.41	94.87	98.96	97.59	97.21	96.51	95.89	95.28	96.07
2	94.91	94.68	95.43	95.39	94.90	98.98	97.47	97.15	96.53	95.88	95.26	96.03
3	94.79	94.92	95.27	95.36	95.06	98.92	97.77	97.13	96.56	95.92	95.22	95.94
4	94.85	95.03	95.28	95.35	95.19	98.89	97.85	97.08	96.43	95.89	95.22	95.89
5	94.91	94.61	95.44	95.35	95.26	98.82	97.79	97.08	96.42	95.79	95.23	95.81
6	94.94	94.77	95.49	95.36	95.30	98.75	97.74	96.91	96.42	95.77	95.18	95.74
7	94.97	94.69	95.52	95.33	95.32	98.68	97.80	96.88	96.35	95.75	95.24	95.76
8	95.12	94.60	95.58	95.31	95.32	98.65	97.88	96.89	96.46	95.71	95.29	95.87
9	94.86	95.01	95.53	95.29	95.37	98.59	97.80	96.89	96.48	95.68	95.35	95.74
10	94.94	94.73	95.70	95.25	95.37	98.51	97.74	96.75	96.45	95.66	95.40	95.92
11	94.93	94.69	95.72	95.24	95.40	98.45	97.75	96.75	96.45	95.60	95.44	95.78
12	94.88	94.77	95.81	95.22	95.59	98.40	97.65	96.69	96.47	95.60	95.47	95.88
13	94.82	94.90	95.72	95.21	95.84	98.31	97.73	96.80	96.45	95.58	95.46	95.90
14	94.77	94.85	95.74	95.20	95.98	98.16	98.13	96.89	96.55	95.49	95.44	95.90
15	94.81	94.88	95.70	95.17	96.07	98.13	97.39	96.98	96.46	95.48	95.50	95.85
16	94.80	94.83	95.66	95.16	96.14	97.97	97.58	96.99	96.41	95.50	95.58	95.77
17	94.85	94.89	95.70	95.14	96.15	97.96	97.52	96.96	96.31	95.52	95.73	95.76
18	94.92	94.78	95.78	95.15	96.22	97.86	97.41	97.01	96.33	95.47	95.99	95.80
19	94.77	94.89	95.64	95.12	96.35	97.78	97.44	97.02	96.31	95.46	96.19	95.80
20	94.74	94.95	95.65	95.09	96.52	97.69	97.39	97.03	96.19	95.53	96.24	95.73
21	94.77	95.02	95.64	95.08	96.86	97.58	97.33	97.01	96.18	95.37	96.24	95.68
22	94.68	94.85	95.66	95.05	97.26	97.56	97.37	96.91	96.20	95.33	96.26	95.65
23	94.64	94.97	95.64	95.03	97.59	97.49	97.36	96.85	96.08	95.28	96.28	95.55
24	94.68	94.91	95.57	95.01	97.81	97.40	97.34	96.84	96.11	95.30	96.18	96.00
25	94.75	94.87	95.55	95.00	98.24	97.32	97.33	96.80	96.16	95.39	96.12	96.42
26	94.81	94.94	95.61	95.00	98.65	97.29	97.35	96.75	96.03	95.41	96.14	96.62
27	94.78	95.04	95.52	94.94	98.86	97.20	97.34	96.69	96.03	95.18	96.17	96.82
28	94.77	95.15	95.53	94.91	98.99	97.20	97.32	96.67	96.01	95.17	96.09	96.72
29	94.77	95.27	95.46	94.90	---	97.19	97.30	96.63	96.03	95.14	96.15	96.71
30	94.81	95.30	95.40	94.87	---	97.17	97.26	96.61	96.02	95.22	96.14	96.73
31	94.91	---	95.42	94.86	---	97.24	---	96.52	---	95.28	96.08	---
MEAN	94.83	94.88	95.57	95.15	96.30	98.04	97.56	96.88	96.31	95.52	95.73	95.99
MAX	95.12	95.30	95.81	95.41	98.99	98.98	98.13	97.21	96.56	95.92	96.28	96.82
MIN	94.64	94.60	95.27	94.86	94.87	97.17	97.26	96.52	96.01	95.14	95.18	95.55

CAL YR 1980 MEAN 95.31 MAX 97.34 MIN 94.13
WTR YR 1981 MEAN 96.06 MAX 98.99 MIN 94.60

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1969-72, 1974 to current year.
CHEMICAL DATA: 1966-67 (a), 1969 (b), 1970 (c), 1971-72 (b), 1974-81 (c).
MINOR ELEMENTS DATA: 1974-81 (b).
PESTICIDE DATA: 1976-79 (b), 1980 (a).
ORGANIC DATA: OC--1974 (a), 1975-77 (b), 1978 (a), 1979-81 (c).
PCB--1978-79 (b), 1980 (a).
NUTRIENT DATA: 1970 (c), 1971-72 (b), 1974 (b), 1975-81 (c).
BIOLOGICAL DATA:
Bacteria--1974 (a), 1975-81 (c).
Phytoplankton--1974 (a), 1975-78 (c), 1979 (b), 1980-81 (c).
Periphyton--1975 (c), 1976-80 (b).
SEDIMENT DATA: 1975-81 (c).

WATER QUALITY DATA, WATER YEAR, OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (NTU)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	COLIFORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS (MG/L AS CACO3)
OCT											
07...	1300	144	7.5	14.0	.40	--	--	--	K3	K3	56
NOV											
05...	1200	150	7.7	6.0	.50	750	11.8	96	K3	<1	55
MAR											
30...	1200	142	7.3	3.5	1.0	750	11.6	91	K4	<1	46
APR											
28...	1200	180	7.5	7.5	.70	760	8.6	74	K7	K3	57
MAY											
26...	1200	147	7.8	15.5	.45	760	12.8	132	K4	<1	51
JUN											
23...	1100	136	6.7	19.5	.70	760	8.4	94	K6	<1	--
JUL											
22...	1100	142	7.6	23.0	.50	760	7.9	94	K9	K2	57
AUG											
19...	1030	135	7.1	20.0	5.0	770	8.4	91	K4	K1	56
SEP											
01...	1000	137	7.3	21.0	.40	760	8.3	93	K14	K1	55

DATE	HARDNESS NONCARBONATE (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)
OCT											
07...	15	16	4.0	5.6	1.2	41	13	7.7	.1	.3	85
NOV											
05...	12	15	4.2	5.9	1.9	43	14	8.2	.0	.2	87
MAR											
30...	8.0	13	3.3	5.3	1.2	38	14	8.1	<.1	1.2	118
APR											
28...	22	16	4.2	6.6	1.3	35	13	7.9	<.1	.9	86
MAY											
26...	15	15	3.4	5.3	1.2	36	13	8.2	<.1	.5	95
JUN											
23...	--	--	--	--	1.3	43	12	7.7	<.1	--	88
JUL											
22...	19	16	4.2	6.0	1.2	38	13	7.7	<.1	1.2	86
AUG											
19...	15	16	3.8	5.8	1.1	41	13	8.3	<.1	.7	82
SEP											
01...	12	17	3.1	5.6	.9	43	12	8.2	<.1	6.1	90

K Results based on colony count outside the acceptable range (non-ideal colony count).

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR, OCTOBER 1980 TO SEPTEMBER 1981

DATE	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN, DISSOLV (MG/L AS N)
OCT											
07...	73	.20	.03	.030	.030	.20	.19	.23	.22	.43	.25
NOV											
05...	76	.08	.11	.020	.040	.27	.05	.29	.09	.37	.20
MAR											
30...	70	.29	.26	.040	.040	.43	.24	.47	.28	.76	.54
APR											
28...	72	.29	.27	.020	.060	.46	.25	.48	.31	.77	.58
MAY											
26...	69	.26	.26	.060	.060	.42	.29	.48	.35	.74	.61
JUN											
23...	--	.11	.12	.010	.040	.35	.31	.36	.35	.47	.47
JUL											
22...	73	.15	.12	.040	.050	.61	.45	.65	.50	.80	.62
AUG											
19...	74	.04	.05	.040	.020	.35	.33	.39	.35	.43	.40
SEP											
01...	79	.02	.02	.020	.010	.35	--	.37	.31	.39	.33

DATE	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHORUS, DIS-SOLVED (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV-ERABLE (UG/L AS BA)	BARIUM, DIS-SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO)
OCT											
07...	.020	.010	1	2	100	10	0	1	10	<10	0
NOV											
05...	.020	.010	--	--	--	--	--	--	--	--	--
MAR											
30...	.020	<.010	0	0	100	100	0	0	<10	<10	0
APR											
28...	.020	<.010	--	--	--	--	--	--	--	--	--
MAY											
26...	.020	<.010	0	0	100	10	1	4	10	<10	1
JUN											
23...	.010	.010	--	0	--	--	--	--	--	--	--
JUL											
22...	<.010	<.010	1	1	100	10	<1	--	20	10	2
AUG											
19...	.020	<.010	--	--	--	--	--	--	--	--	--
SEP											
01...	<.010	<.010	--	--	--	--	--	--	--	--	--

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR, OCTOBER 1980 TO SEPTEMBER 1981

DATE	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY DIS-SOLVED (UG/L AS HG)
OCT 07...	0	3	6	70	0	2	0	10	4	.2	.2
NOV 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 30...	0	2	1	60	10	10	0	10	10	.1	<.1
APR 28...	--	--	--	--	--	--	--	--	--	--	--
MAY 26...	1	3	2	70	<10	2	0	10	<1	.3	.3
JUN 23...	--	--	--	--	--	--	--	--	--	--	.2
JUL 22...	1	6	2	20	<10	7	1	10	2	<.1	<.1
AUG 19...	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	--	--	--	--	--	--	--	--	--	--	--

DATE	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV-ERABLE (UG/L AS AG)	SILVER, DIS-SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, DIS-SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 07...	2	1	0	0	--	--	10	4	--	3.6	.4
NOV 05...	--	--	--	--	--	--	--	--	4.5	--	--
MAR 30...	3	0	0	0	0	0	50	10	--	3.4	.0
APR 28...	--	--	--	--	--	--	--	--	6.4	--	--
MAY 26...	4	1	0	0	0	0	30	9	--	3.1	--
JUN 23...	--	--	--	--	--	0	--	--	--	--	--
JUL 22...	7	1	0	0	<1	0	10	<4	--	15	--
AUG 19...	--	--	--	--	--	--	--	--	3.8	--	--
SEP 01...	--	--	--	--	--	--	--	--	2.9	--	--

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SAMPLE LOCATION, CROSS SECTION (FT FM L BANK)	SAMPLING DEPTH (FT)	DEPTH AT SAMPLE LOCATION, TOTAL (FEET)	SPECIFIC CONDUCTANCE (UMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)
MAR								
30...	1130	280	1.0	13.0	142	7.5	4.5	11.7
30...	1131	280	5.0	--	141	7.4	4.5	11.6
30...	1132	280	10	--	140	7.4	4.0	11.6
30...	1201	550	1.0	19.0	143	7.4	4.0	11.6
30...	1202	550	5.0	--	142	7.3	4.0	11.6
30...	1203	550	10	--	141	7.3	4.0	11.6
30...	1204	550	15	--	141	7.3	4.0	11.6
30...	1205	550	19	--	141	7.4	4.0	11.5
30...	1210	820	1.0	26.0	143	7.5	3.5	11.6
30...	1211	820	5.0	--	142	7.3	3.5	11.6
30...	1212	820	10	--	141	7.3	3.5	11.6
30...	1213	820	15	--	141	7.3	3.5	11.7
30...	1214	820	20	--	140	7.4	3.5	11.6
30...	1215	820	25	--	140	7.4	3.5	11.7
30...	1225	1100	1.0	17.0	138	7.8	3.0	11.8
30...	1226	1100	5.0	--	137	7.7	3.0	11.8
30...	1227	1100	10	--	137	7.7	3.0	11.8
30...	1228	1100	15	--	137	7.6	3.0	11.8
30...	1235	1380	1.0	14.0	137	7.8	2.0	11.9
30...	1236	1380	5.0	--	136	7.7	2.0	11.8
30...	1237	1380	10	--	136	7.8	2.0	11.8
30...	1238	1380	14	--	136	7.7	2.0	11.8
JUL								
22...	1030	280	1.0	10.2	142	7.1	22.5	8.3
22...	1032	280	5.0	10.2	142	7.3	22.5	7.9
22...	1034	280	10	10.2	142	7.3	22.0	7.6
22...	1040	550	1.0	20.2	142	7.7	22.5	8.0
22...	1042	550	5.0	20.2	143	7.6	22.5	7.9
22...	1044	550	10	20.2	143	7.5	22.5	7.5
22...	1046	550	15	20.2	143	7.4	22.5	7.7
22...	1048	550	20	20.2	143	7.3	22.5	7.2
22...	1102	820	1.0	22.3	142	7.6	23.0	8.2
22...	1104	820	5.0	22.3	142	7.6	23.0	7.9
22...	1106	820	10	22.3	143	7.6	22.5	7.8
22...	1108	820	15	22.3	143	7.5	22.5	7.6
22...	1110	820	20	22.3	143	7.4	22.5	7.9
22...	1112	820	22	22.3	143	7.6	22.5	7.7
22...	1120	1100	1.0	14.0	144	7.6	22.5	8.2
22...	1122	1100	5.0	14.0	144	7.6	22.5	8.0
22...	1124	1100	10	14.0	144	7.6	22.5	7.9
22...	1126	1100	14	14.0	144	7.6	22.5	8.1
22...	1130	1380	1.0	12.1	143	7.8	23.0	8.3
22...	1132	1380	5.0	12.1	144	7.6	23.0	8.0
22...	1134	1380	10	12.1	144	7.6	23.0	8.1
22...	1136	1380	12	12.1	144	7.6	22.5	8.2

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	SEDIMENT, SUSPENDED (MG/L)	DATE	TIME	SEDIMENT, SUSPENDED (MG/L)
OCT			JUN		
07...	1300	1	23...	1100	1
NOV			JUL		
05...	1200	7	22...	1100	1
MAR			AUG		
30...	1200	2	19...	1030	1
APR			SEP		
28...	1200	3	01...	1000	1
MAY					
26...	1200	6			

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE TIME	NOV 5,80 1200		MAR 30,81 1200		MAY 26,81 1200		JUN 23,81 1100	
TOTAL CELLS/ML	230		560		550		77	
DIVERSITY: DIVISION	1.6		0.4		1.6		0.7	
.CLASS	1.6		0.4		1.6		0.7	
..ORDER	2.3		1.3		2.1		0.7	
...FAMILY	2.4		1.4		2.1		0.7	
....GENUS	2.7		2.1		2.4		0.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...MICRACTINIACEAE								
....MICRACTINIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	26	11	--	-	140#	25	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	13	6	13	2	--	-	--	-
CHRYSOPHYTA								
.BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	64#	28	--	-	69	13	--	-
....MELOSIRA	26	11	180#	33	28	5	13#	17
....STEPHANODISCUS	--	-	160#	28	14	2	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	14	2	--	-
....COCCONEIS	--	-	--	-	--	-	--	-
...FRAGILARIACEAE								
....ASTERIONELLA	--	-	160#	28	--	-	--	-
....SYNEDRA	--	-	13	2	--	-	--	-
...NAVICULACEAE								
....NAVICULA	13	6	--	-	--	-	--	-
...NITZSCHIACEAE								
....NITZSCHIA	26	11	13	2	--	-	--	-
.CHRYSOPHYCEAE								
..CHRYSOMONADALES								
...MALLOMONADACEAE								
....MALLOMONAS	--	-	--	-	--	-	--	-
...OCHROMONADACEAE								
....OCHROMONAS	--	-	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	51#	22	--	-	69	13	64#	83
..HORMOGONALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	210#	38	--	-
PYRRHOPHYTA (FIRE ALGAE)								
.DINOPHYCEAE								
..PERIDINIALES								
...GLENODINIACEAE								
....GLENODINIUM	13	6	26	5	14	2	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE	JUL 22,81		AUG 19,81		SEP 1,81	
TIME	1100		1030		1000	
TOTAL CELLS/ML	120		2000		590	
DIVERSITY: DIVISION	1.7		1.1		0.6	
.CLASS	1.7		1.2		0.6	
..ORDER	1.7		1.4		0.6	
...FAMILY	1.7		1.5		0.7	
....GENUS	1.7		1.6		0.7	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...MICRACTINIACEAE						
....MICRACTINIUM	13	11	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	62	3	--	-
....KIRCHNERIELLA	--	-	78	4	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	--	-	93	5	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	47	2	--	-
CHRYSOPHYTA						
.BACILLARIOPHYCEAE						
..CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	26#	22	93	5	--	-
....MELOSIRA	--	-	--	-	--	-
....STEPHANODISCUS	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	43	7
...FRAGILARIACEAE						
....ASTERIONELLA	--	-	--	-	--	-
....SYNEDRA	--	-	16	1	--	-
...NAVICULACEAE						
....NAVICULA	--	-	--	-	43	7
...NITZSCHIACEAE						
....NITZSCHIA	--	-	--	-	--	-
.CHRYSOPHYCEAE						
..CHRYSOMONADALES						
...MALLOMONADACEAE						
....MALLOMONAS	--	-	31	2	--	-
...OCHROMONADACEAE						
....OCHROMONAS	--	-	78	4	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOCHRYSIDACEAE						
....CHROOMONAS	--	-	16	1	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	64#	56	1500#	74	--	-
..HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	500#	85
PYRRHOPHYTA (FIRE ALGAE)						
.DINOPHYCEAE						
..PERIDINIALES						
...GLENODINIACEAE						
....GLENODINIUM	13	11	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.

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) National Geodetic Vertical Datum of 1929. 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, 10.06 ft (3.066 m) May 18 (affected by sciche); minimum gage height, 7.54 ft (2.298 m) Feb. 1 (affected by seiche).

MEAN GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.31	8.50	9.77	8.71	7.64	9.48	8.95	9.74	9.49	9.01	8.48	8.65
2	8.31	8.59	9.80	8.66	7.68	9.37	9.01	9.72	9.47	8.94	8.45	8.60
3	8.38	8.59	9.87	8.62	7.76	9.26	9.03	9.69	9.50	8.85	8.44	8.58
4	8.46	8.57	9.95	8.58	7.78	9.24	9.09	9.69	9.52	8.79	8.45	8.56
5	8.52	8.64	9.89	8.53	7.78	9.24	9.21	9.62	9.61	8.78	8.50	8.54
6	8.56	8.66	9.88	8.50	7.78	9.25	9.35	9.60	9.67	8.78	8.66	8.52
7	8.55	8.67	9.85	8.46	7.78	9.27	9.40	9.55	9.71	8.79	8.65	8.48
8	8.46	8.81	9.84	8.39	7.77	9.27	9.37	9.54	9.77	8.74	8.63	8.41
9	8.45	8.88	9.91	8.37	7.79	9.27	9.33	9.53	9.83	8.71	8.64	8.60
10	8.38	9.01	9.88	8.34	7.74	9.27	9.41	9.50	9.87	8.64	8.67	8.58
11	8.34	9.12	9.80	8.28	7.75	9.25	9.46	9.45	9.86	8.52	8.68	8.70
12	8.35	9.16	9.69	8.27	7.92	9.21	9.54	9.50	9.80	8.48	8.70	8.71
13	8.33	9.18	9.59	8.23	8.04	9.18	9.56	9.70	9.69	8.53	8.70	8.71
14	8.30	9.23	9.41	8.21	8.14	9.14	9.51	9.80	9.65	8.56	8.70	8.71
15	8.25	9.28	9.29	8.17	8.19	9.13	9.62	9.85	9.62	8.58	8.71	8.70
16	8.20	9.32	9.28	8.15	8.24	9.11	9.57	9.95	9.58	8.53	8.93	8.68
17	8.14	9.32	9.25	8.12	8.23	9.07	9.57	10.04	9.51	8.52	9.16	8.65
18	8.14	9.35	9.20	8.06	8.23	8.98	9.66	10.01	9.42	8.56	9.24	8.63
19	8.18	9.34	9.16	8.03	8.25	8.96	9.71	9.94	9.32	8.56	9.26	8.61
20	8.18	9.34	9.11	8.00	8.35	8.92	9.75	9.86	9.31	8.50	9.26	8.58
21	8.16	9.33	9.08	7.97	8.59	8.89	9.75	9.79	9.28	8.52	9.23	8.54
22	8.20	9.32	9.03	7.94	8.87	8.84	9.71	9.70	9.24	8.56	9.20	8.56
23	8.20	9.27	8.99	7.93	9.07	8.79	9.66	9.62	9.28	8.51	9.17	8.67
24	8.17	9.31	8.95	7.90	9.20	8.75	9.68	9.52	9.21	8.46	9.15	8.93
25	8.18	9.41	8.91	7.86	9.39	8.71	9.80	9.45	9.20	8.42	9.13	9.02
26	8.19	9.48	8.88	7.82	9.54	8.67	9.87	9.36	9.23	8.37	9.03	9.06
27	8.36	9.50	8.87	7.79	9.58	8.63	9.89	9.45	9.20	8.46	8.69	9.07
28	8.42	9.50	8.83	7.79	9.54	8.62	9.86	9.40	9.16	8.40	8.91	9.15
29	8.48	9.59	8.81	7.76	---	8.62	9.80	9.39	9.12	8.47	8.82	9.17
30	8.48	9.69	8.78	7.73	---	8.72	9.80	9.39	9.05	8.51	8.77	9.14
31	8.48	---	8.72	7.68	---	8.87	---	9.42	---	8.48	8.70	---
MEAN	8.33	9.13	9.36	8.16	8.31	9.03	9.53	9.64	9.47	8.60	8.83	8.72
MAX	8.56	9.69	9.95	8.71	9.58	9.48	9.89	10.04	9.87	9.01	9.26	9.17
MIN	8.14	8.50	8.72	7.68	7.64	8.62	8.95	9.36	9.05	8.37	8.44	8.41

CAL YR 1980 MEAN 8.64 MAX 9.95 MIN 7.11
WTR YR 1981 MEAN 8.93 MAX 10.04 MIN 7.64

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).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--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. Observation of water temperature and specific conductance made during the year.

AVERAGE DISCHARGE.--30 years, 201 ft^3/s (5.692 m^3/s), 22.37 in/yr (568 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 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)
Feb. 22	1200	ice jam		*6.13	1.868	Feb. 25	--	*1450	41.1	ice jam	

No peak above base.

Minimum discharge, 30 ft^3/s (0.85 m^3/s) July 26; minimum daily, 31 ft^3/s (0.88 m^3/s) July 26, Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	119	305	74	40	430	621	222	280	60	62	41
2	65	113	235	68	160	318	687	207	182	55	47	39
3	104	105	382	62	500	257	547	192	123	52	39	38
4	230	99	285	54	250	209	449	162	130	50	37	36
5	285	113	210	52	200	204	444	143	139	51	50	35
6	209	139	200	49	175	191	523	136	147	63	60	33
7	136	120	180	48	160	177	403	161	459	65	47	32
8	109	323	170	50	150	164	293	151	352	51	40	31
9	93	382	482	49	140	154	256	126	257	48	50	83
10	85	293	410	50	130	148	333	110	286	57	47	146
11	79	237	280	49	250	141	313	105	217	75	60	247
12	104	186	200	50	950	136	314	162	161	50	100	181
13	122	157	160	47	560	132	259	851	174	45	68	119
14	116	150	150	43	350	131	221	708	172	49	52	93
15	102	149	135	42	260	124	258	632	131	58	59	70
16	88	136	140	40	220	128	208	746	122	56	394	62
17	81	134	130	41	380	121	182	481	126	48	405	56
18	82	108	125	41	500	121	233	390	110	42	351	52
19	108	109	120	42	600	97	277	294	92	40	186	48
20	108	108	110	42	900	93	220	226	101	41	102	49
21	96	122	110	43	1350	88	186	189	123	40	76	52
22	90	106	115	43	1250	85	170	169	122	42	63	94
23	87	130	100	44	970	87	158	150	191	40	56	238
24	78	111	94	44	880	98	257	132	161	36	53	500
25	74	362	92	44	1200	113	486	121	98	33	56	359
26	195	363	90	45	1020	144	387	140	86	31	61	213
27	378	247	88	45	815	181	272	145	111	33	55	143
28	287	197	86	43	594	180	209	124	122	33	51	135
29	194	463	84	41	---	267	209	109	84	60	47	133
30	156	418	82	41	---	585	267	103	68	111	45	108
31	133	---	78	40	---	715	---	217	---	99	43	---
TOTAL	4141	5799	5428	1466	14954	6019	9642	7804	4927	1614	2862	3466
MEAN	134	193	175	47.3	534	194	321	252	164	52.1	92.3	116
MAX	378	463	482	74	1350	715	687	851	459	111	405	500
MIN	65	99	78	40	40	85	158	103	68	31	37	31
CFSM	1.10	1.58	1.43	.39	4.38	1.59	2.63	2.07	1.34	.43	.76	.95
IN.	1.26	1.77	1.66	.45	4.56	1.84	2.94	2.38	1.50	.49	.87	1.06

CAL YR 1980 TOTAL 50999 MEAN 139 MAX 902 MIN 24 CFSM 1.14 IN 15.55
WTR YR 1981 TOTAL 68122 MEAN 187 MAX 1350 MIN 31 CFSM 1.53 IN 20.77

04296000 BLACK RIVER AT COVENTRY, VT.--Continued
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1977 to September 1981 (discontinued).
WATER TEMPERATURES: November 1977 to September 1981 (discontinued).

INSTRUMENTATION.--Water-quality monitor November 1977 to September 1981 (discontinued).

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 255 micromhos July 26, 1981; minimum recorded, 57 micromhos Apr. 1, 1981.
WATER TEMPERATURES: Maximum recorded, 28.0°C July 8, Aug. 9, 1978; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 255 micromhos July 26; minimum recorded, 57 micromhos Apr. 1.
WATER TEMPERATURES: Maximum recorded, 27.5°C July 8, 10; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS (MG/L AS CACO3)	HARD-NESS, NONCAR-BONATE (MG/L CACO3)
OCT												
15...	1415	95	--	--	10.0	--	--	--	--	--	--	--
22...	1020	90	183	7.7	5.8	1.2	12.2	101	K37	K18	81	20
NOV												
24...	1500	105	--	--	2.0	--	--	--	--	--	--	--
25...	1030	387	150	7.5	.7	1.4	14.2	101	320	4300	64	21
DEC												
10...	1315	399	118	7.2	.1	.80	14.9	104	470	94	49	17
JAN												
12...	1500	42	--	--	.0	--	--	--	--	--	--	--
14...	1300	--	--	--	--	--	--	--	28	43	--	--
MAR												
04...	1110	185	158	7.3	.1	.90	13.0	91	32	K14	72	--
26...	1030	113	--	--	3.0	--	--	--	--	--	--	--
31...	1000	735	85	7.0	3.7	5.5	12.3	97	111	800	23	--
APR												
23...	1000	--	--	--	--	--	--	--	K8	K11	--	--
MAY												
27...	0830	--	--	--	--	--	--	--	--	--	--	--
27...	0900	148	187	7.9	17.0	1.3	7.8	83	230	K17	82	--
JUN												
30...	1030	68	208	7.6	18.3	2.6	9.8	--	320	108	94	--
JUL												
01...	1445	284	--	--	16.5	--	--	--	--	--	--	--
29...	1115	50	220	7.2	17.0	2.1	8.5	90	1770	1080	110	--
AUG												
14...	1500	47	--	--	21.0	--	--	--	--	--	--	--
26...	1100	63	208	7.7	15.3	1.3	9.8	101	--	--	110	--
SEP												
29...	1115	136	148	7.4	9.9	2.2	10.9	99	1370	780	84	--

K, NON-IDEAL COLONY COUNT.

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)
OCT											
15...	--	--	--	--	--	--	--	--	--	--	--
22...	26	3.9	3.8	9	.2	.9	61	8.4	5.3	.1	4.7
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
25...	20	3.3	3.4	10	.2	1.5	43	10	6.2	.0	5.6
DEC											
10...	16	2.2	2.3	9	.1	.9	32	9.9	4.2	.0	4.7
JAN											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	23	3.6	2.9	8	.1	.8	52	9.4	5.1	<.1	6.1
26...	--	--	--	--	--	--	--	--	--	--	--
31...	7.7	.8	2.4	18	.2	.8	20	6.0	3.7	<.1	6.1
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	27	3.5	3.5	8	.2	.8	71	8.7	5.1	<.1	2.4
JUN											
30...	31	4.1	3.4	7	.2	.9	91	8.2	5.2	<.1	3.5
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
29...	34	5.5	4.0	7	.2	1.1	98	11	6.0	<.1	5.0
AUG											
14...	--	--	--	--	--	--	--	--	--	--	--
26...	35	5.0	3.7	7	.2	1.1	92	9.7	5.7	<.1	4.8
SEP											
29...	25	3.4	3.1	9	.2	1.0	63	9.0	4.3	<.1	6.1

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)
OCT											
15...	--	--	--	--	--	--	--	--	--	--	--
22...	110	90	.11	.12	.010	.000	.00	.14	.12	.15	.15
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
25...	95	78	.38	.42	.060	.050	.18	.44	.65	.50	.27
DEC											
10...	69	61	.45	.45	.040	.050	.12	.13	.62	.17	.00
JAN											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	92	84	.50	.50	.080	.040	.11	.49	.65	.57	.42
26...	--	--	--	--	--	--	--	--	--	--	--
31...	45	42	.48	.47	.010	.060	.64	2.4	1.2	2.40	1.7
APR											
23...	--	--	--	--	--	--	--	--	--	--	--
MAY											
27...	--	--	--	--	--	--	--	--	--	--	--
27...	99	94	.08	.07	.030	.030	.13	.22	.23	.25	.09
JUN											
30...	113	112	.12	.12	.030	.010	.16	.20	.29	.23	.06
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
29...	135	126	.08	.08	.010	.010	--	.21	.38	.22	.00
AUG											
14...	--	--	--	--	--	--	--	--	--	--	--
26...	123	121	.11	.12	.030	.020	.21	.26	.35	.29	.06
SEP											
29...	112	94	.18	.16	.060	.040	.25	.48	.45	.54	.25

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS TOTAL (MG/L AS PO4)	PHOSPHORUS, DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT											
15...	--	--	--	--	--	--	--	--	--	--	--
22...	.00	.26	.010	.03	.010	--	.2	4.0	11	2.7	51
NOV											
24...	--	--	--	--	--	--	--	--	--	--	--
25...	.23	.88	.060	.18	.020	4.7	--	--	55	57	70
DEC											
10...	.17	.62	.050	.15	.020	4.4	--	--	16	17	89
JAN											
12...	--	--	--	--	--	--	--	--	--	--	--
14...	--	--	--	--	--	--	--	--	10	--	74
MAR											
04...	.15	1.1	.030	.09	<.010	3.0	--	--	37	18	74
26...	--	--	--	--	--	--	--	--	--	--	--
31...	.70	2.9	.040	.12	<.010	4.4	--	--	95	189	92
APR											
23...	--	--	--	--	--	--	--	--	8	--	76
MAY											
27...	--	--	--	--	--	--	--	--	7	--	92
27...	.16	.33	.010	.03	<.010	3.4	--	--	--	--	--
JUN											
30...	.17	.35	.030	.09	<.010	5.7	--	--	8	1.5	82
JUL											
01...	--	--	--	--	--	--	--	--	--	--	--
29...	.30	.30	.030	.09	<.010	--	.6	2.7	9	1.2	90
AUG											
14...	--	--	--	--	--	--	--	--	--	--	--
26...	.23	.40	.020	.06	<.010	3.5	--	--	6	1.0	61
SEP											
29...	.29	.72	.020	.06	.010	5.1	--	--	12	4.4	53

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUSPENDED TOTAL (UG/L AS AS)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, TOTAL RECOVERABLE (UG/L AS BA)	BARIUM, SUSPENDED RECOVERABLE (UG/L AS BA)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM SUSPENDED RECOVERABLE (UG/L AS CD)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)
OCT											
22...	1	0	2	100	80	20	0	0	0	20	10
JUL											
29...	2	0	4	<50	--	10	1	0	1	<10	--

DATE	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DISSOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)	IRON, DISSOLVED (UG/L AS FE)
OCT										
22...	10	0	0	0	3	1	2	360	230	130
JUL										
29...	10	1	0	2	2	1	1	420	340	80

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUSPENDED RECOVERABLE (UG/L AS PB)	LEAD, DISSOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUSPENDED RECOV. (UG/L AS MN)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY DISSOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, SUSPENDED RECOVERABLE (UG/L AS NI)
OCT										
22...	4	4	0	30	10	20	<.1	<.1	8	8
JUL										
29...	3	0	3	80	10	70	<.1	<.1	1	0

DATE	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, SUSPENDED TOTAL (UG/L AS SE)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, SUSPENDED RECOVERABLE (UG/L AS AG)	SILVER, DISSOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, SUSPENDED RECOVERABLE (UG/L AS ZN)	ZINC, DISSOLVED (UG/L AS ZN)
OCT										
22...	0	0	0	0	0	0	0	8	8	0
JUL										
29...	1	<1	--	<1	<1	--	<1	10	6	4

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

PHYTOPLANKTON

DATE	NOV 25,80		MAR 31,81		MAY 27,81		JUN 30,81	
TIME	1030		1000		0900		1030	
TOTAL CELLS/ML	370		64		400		360	
DIVERSITY: DIVISION	0.4		0.7		0.4		1.2	
.CLASS	0.4		0.7		0.4		1.2	
..ORDER	2.0		0.7		2.0		2.1	
...FAMILY	2.1		0.7		2.3		2.5	
....GENUS	2.3		0.7		2.5		2.5	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)								
.BACILLARIOPHYCEAE								
..ACHNANTHALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	--	-	--	-	--	-
....COCCONEIS	--	-	--	-	--	-	--	-
....RHOICOSPHENIA	--	-	--	-	13	3	--	-
..BACILLARIALES								
...NITZSCHIACEAE								
....NITZSCHIA	64#	17	--	-	140#	35	100#	29
..EUPODISCALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	--	-	--	-	--	-
....MELOSIRA	26	7	--	-	--	-	--	-
..FRAGILARIALES								
...FRAGILARIACEAE								
....DIATOMA	150#	41	--	-	13	3	--	-
....MERIDION	--	-	51#	80	--	-	--	-
....SYNEDRA	13	3	--	-	77#	19	--	-
..NAVICULALES								
...CYMBELLACEAE								
....AMPHORA	--	-	--	-	--	-	--	-
....CYMBELLA	13	3	--	-	64#	16	26	7
...GOMPHONEMACEAE								
....GOMPHONEMA	--	-	--	-	--	-	26	7
...NAVICULACEAE								
....NAVICULA	77	21	--	-	64#	16	39	11
..SURIRELLALES								
...SURIRELLACEAE								
....CYMATOPLEURA	--	-	--	-	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)								
.CHLOROPHYCEAE								
..CHLOROCOCCALES								
...DICTYOSPHAERIACEAE								
....DICTYOSPHAERIUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE								
....ANKISTRODESMUS	26	7	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-	--	-
...PALMELLACEAE								
....SPHAEROCYSTIS	--	-	--	-	--	-	100#	29
...SCENEDESMACEAE								
....SCENEDESMUS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	--	-	13#	20	13	3	51	14
..ZYGNEMATALES								
...DESMIDIACEAE								
....COSMARIUM	--	-	--	-	--	-	--	-
CHRYSOPHYTA								
.CHRYSOPHYCEAE								
..OCHROMONADALES								
...DINOBRYACEAE								
....DINOBRYON	--	-	--	-	--	-	--	-
...SYNURACEAE								
....MALLOMONAS	--	-	--	-	13	3	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
.CRYPTOPHYCEAE								
..CRYPTOMONADALES								
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	--	-	--	-	13	4
CYANOPHYTA (BLUE-GREEN ALGAE)								
.CYANOPHYCEAE								
..CHROOCOCCALES								
...CHROOCOCCACEAE								
....ANACYSTIS	--	-	--	-	--	-	--	-
..OSCILLATORIALES								
...OSCILLATORIACEAE								
....OSCILLATORIA	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15 %.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 %.

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

PHYTOPLANKTON

DATE	JUL 29,81		AUG 26,81		SEP 29,81	
TIME	1115		1100		1115	
TOTAL CELLS/ML	3600		1400		780	
DIVERSITY: DIVISION	1.9		1.6		0.0	
.CLASS	1.9		1.6		0.0	
..ORDER	2.2		2.5		1.3	
...FAMILY	2.7		2.9		1.6	
....GENUS	2.7		3.0		2.1	
ORGANISM	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT	CELLS /ML	PER-CENT
BACILLARIOPHYTA (DIATOMS)						
.BACILLARIOPHYCEAE						
..ACHNANTHALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	41	3	--	-
....COCCONEIS	--	-	27	2	54	7
....RHOICOSPHENIA	--	-	--	-	--	-
..BACILLARIALES						
...NITZSCHIACEAE						
....NITZSCHIA	260	7	110	8	--	-
..EUPODISCALES						
...COSCINODISCACEAE						
....CYCLOTELLA	*	0	14	1	--	-
....MELOSIRA	--	-	--	-	--	-
..FRAGILARIALES						
...FRAGILARIACEAE						
....DIATOMA	--	-	--	-	200#	26
....MERIDION	--	-	--	-	--	-
....SYNEDRA	29	1	69	5	160#	21
..NAVICULALES						
...CYMBELLACEAE						
....AMPHORA	*	0	--	-	--	-
....CYMBELLA	430	12	260#	18	68	9
...GOMPHONEMACEAE						
....GOMPHONEMA	43	1	--	-	--	-
...NAVICULACEAE						
....NAVICULA	170	5	190	13	290#	37
..SURIRELLALES						
...SURIRELLACEAE						
....CYMATOPLEURA	*	0	--	-	--	-
CHLOROPHYTA (GREEN ALGAE)						
.CHLOROPHYCEAE						
..CHLOROCOCCALES						
...DICTYOSPHAERIACEAE						
....DICTYOSPHAERIUM	320	9	220#	15	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	29	1	41	3	--	-
....KIRCHNERIELLA	--	-	14	1	--	-
...PALMELLACEAE						
....SPHAEROCYSTIS	--	-	--	-	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	290	8	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	14	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....COSMARIUM	29	1	--	-	--	-
CHRYSOPHYTA						
.CHRYSOPHYCEAE						
..OCHROMONADALES						
...DINOBRYACEAE						
....DINOBRYON	490	13	--	-	--	-
...SYNURACEAE						
....MALLOMONAS	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
.CRYPTOPHYCEAE						
..CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	--	-	41	3	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
.CYANOPHYCEAE						
..CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	1500#	42	--	-	--	-
..OSCILLATORIALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	400#	28	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%.
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2 %.

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1							---	---	---	135	133	133
2							---	---	---	136	134	135
3							---	---	---	137	134	136
4							---	---	---	139	---	---
5							---	---	---	---	---	---
6							---	---	---	---	---	---
7							---	---	---	---	---	---
8							---	---	---	---	---	---
9							---	---	---	---	---	---
10							119	98	107	---	---	---
11							95	77	86	---	---	---
12							105	95	100	---	---	---
13							112	105	109	---	---	---
14							117	112	114	227	148	226
15							120	117	118	228	226	227
16							121	119	120	228	227	227
17							122	120	121	229	227	228
18							123	121	122	227	226	227
19							124	121	122	226	225	226
20							126	123	125	226	224	225
21							128	126	127	225	224	225
22							130	128	129	226	225	225
23							131	129	130	225	224	224
24							131	130	131	225	222	224
25							132	130	131	222	220	220
26							133	132	132	221	219	220
27							134	132	133	220	218	219
28							133	131	132	219	217	218
29							133	132	132	218	217	218
30							133	131	132	219	217	218
31							133	132	133	221	218	220
MONTH							134	77	122	229	133	211

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	221	219	220	151	141	145	62	57	59	140	134	137
2	220	183	209	156	150	153	66	61	63	143	139	141
3	186	161	168	158	153	155	67	59	63	149	141	144
4	164	146	154	164	156	159	71	65	68	155	148	151
5	156	142	148	163	156	160	75	71	73	162	155	158
6	163	156	159	162	158	160	75	69	72	164	159	162
7	169	162	166	161	155	158	74	69	72	159	157	158
8	175	169	172	158	152	155	79	72	76	160	154	157
9	177	175	176	155	151	153	80	77	78	163	159	161
10	182	178	180	153	148	151	---	---	---	169	162	165
11	183	144	177	152	148	150	---	---	---	170	166	168
12	143	116	128	150	147	148	---	---	---	168	142	163
13	130	126	128	147	143	145	---	---	---	138	114	127
14	136	130	133	145	141	143	---	---	---	118	109	113
15	137	134	135	145	140	142	---	---	---	125	112	118
16	142	137	139	143	136	140	---	---	---	120	115	118
17	145	140	142	142	137	139	---	---	---	124	120	122
18	142	137	140	143	136	138	---	---	---	129	123	126
19	137	135	136	139	134	136	---	---	---	136	128	132
20	136	129	132	138	132	134	---	---	---	144	135	139
21	131	122	127	140	130	134	---	---	---	152	144	147
22	128	108	117	139	133	136	---	---	---	158	151	153
23	123	116	119	133	127	130	---	---	---	156	151	154
24	129	120	125	126	122	124	---	---	---	161	148	153
25	127	113	119	126	121	123	---	---	---	160	148	155
26	124	115	120	122	108	117	---	---	---	171	151	159
27	131	124	127	108	99	104	134	124	129	194	155	182
28	141	132	137	100	93	96	142	134	137	202	192	195
29	---	---	---	97	84	91	143	141	142	209	197	202
30	---	---	---	85	68	75	143	130	136	211	200	205
31	---	---	---	68	63	65	---	---	---	207	192	198
MONTH	221	108	148	164	63	134	143	57	90	211	109	154

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	206	197	203						
2	---	---	---	216	205	213						
3	---	---	---	223	216	219						
4	---	---	---	222	217	221						
5	---	---	---	222	212	219						
6	---	---	---	221	213	217						
7	---	---	---	219	214	217						
8	---	---	---	214	191	205						
9	---	---	---	216	194	205						
10	---	---	---	230	216	224						
11	---	---	---	234	226	230						
12	---	---	---	239	226	234						
13	---	---	---	236	220	229						
14	---	---	---	224	220	223						
15	---	---	---	228	221	224						
16	---	---	---	236	224	231						
17	---	---	---	238	233	235						
18	---	---	---	236	233	235						
19	---	---	---	244	233	237						
20	---	---	---	237	226	232						
21	---	---	---	246	229	238						
22	---	---	---	248	235	242						
23	---	---	---	253	237	243						
24	---	---	---	252	235	241						
25	---	---	---	249	237	243						
26	---	---	---	255	184	217						
27	---	---	---	---	---	---						
28	---	---	---	---	---	---						
29	---	---	---	---	---	---						
30	196	193	194	---	---	---						
31	---	---	---	---	---	---						
MONTH	196	193	194	255	184	226						
YEAR	255	57	158									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1							---	---	---	.0	.0	.0
2							---	---	---	.0	.0	.0
3							---	---	---	.0	.0	.0
4							---	---	---	.0	.0	.0
5							---	---	---	---	---	---
6							---	---	---	---	---	---
7							---	---	---	---	---	---
8							---	---	---	---	---	---
9							---	---	---	---	---	---
10							.0	.0	.0	---	---	---
11							.0	.0	.0	---	---	---
12							.0	.0	.0	---	---	---
13							.0	.0	.0	---	---	---
14							.0	.0	.0	.0	.0	.0
15							.0	.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							.0	.0	.0	.0	.0	.0
23							.0	.0	.0	.0	.0	.0
24							.0	.0	.0	.0	.0	.0
25							.0	.0	.0	.0	.0	.0
26							.0	.0	.0	.0	.0	.0
27							.0	.0	.0	.0	.0	.0
28							.0	.0	.0	.0	.0	.0
29							.0	.0	.0	.0	.0	.0
30							.0	.0	.0	.0	.0	.0
31							.0	.0	.0	.0	.0	.0
MONTH							.0	.0	.0	.0	.0	.0

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.0	.0	.0	.5	.0	.5	5.5	3.0	4.0	11.5	8.0	9.5
2	.0	.0	.0	1.5	.0	.5	4.5	4.0	4.5	11.5	8.5	10.0
3	.0	.0	.0	1.0	.0	.0	6.0	3.0	4.5	13.5	7.5	10.0
4	.0	.0	.0	.5	.0	.0	7.5	5.0	6.0	15.5	8.5	12.0
5	.0	.0	.0	1.0	.0	.0	7.5	6.5	7.0	18.0	12.0	14.5
6	.0	.0	.0	.5	.0	.0	6.5	4.0	5.5	14.5	10.0	13.0
7	.0	.0	.0	2.0	.0	1.0	6.5	3.0	4.5	13.5	9.0	10.5
8	.0	.0	.0	1.5	.5	1.0	8.5	3.5	6.0	15.0	8.5	11.5
9	.0	.0	.0	2.5	.5	1.5	7.0	6.5	7.0	15.0	10.0	12.0
10	.0	.0	.0	2.5	1.0	1.5	---	---	---	17.5	11.0	14.0
11	.0	.0	.0	3.0	1.0	2.0	---	---	---	14.5	13.0	13.5
12	.0	.0	.0	3.0	1.0	1.5	---	---	---	17.0	12.5	14.5
13	.0	.0	.0	3.5	1.0	2.0	---	---	---	12.0	9.5	10.5
14	.0	.0	.0	2.0	.0	1.0	---	---	---	12.0	9.0	10.5
15	.0	.0	.0	1.5	.0	.5	---	---	---	14.0	11.0	13.0
16	.0	.0	.0	2.5	.0	1.0	---	---	---	14.0	12.5	13.5
17	.0	.0	.0	1.5	.0	.5	---	---	---	12.5	10.0	11.5
18	.0	.0	.0	.5	.0	.0	---	---	---	11.0	8.5	9.5
19	.0	.0	.0	.5	.0	.0	---	---	---	13.0	8.0	10.5
20	.0	---	---	.5	---	---	---	---	---	14.5	8.5	11.5
21	.0	---	---	2.0	---	---	---	---	---	15.0	10.5	12.5
22	.5	---	---	3.5	.5	2.0	---	---	---	16.5	12.0	14.0
23	.5	.0	.0	6.0	.0	2.5	---	---	---	17.5	12.0	14.0
24	.5	.0	.5	4.5	1.5	3.0	---	---	---	18.5	12.0	15.5
25	.5	.0	.5	7.0	1.5	3.5	---	---	---	17.0	14.5	15.5
26	1.0	.5	.5	7.5	2.0	4.0	9.0	5.0	7.0	19.0	14.5	17.0
27	1.0	.5	.5	4.5	2.0	3.0	11.0	6.5	8.5	19.0	16.0	17.5
28	.5	.0	.0	5.5	1.0	3.0	12.5	8.5	10.5	21.0	16.0	18.5
29	---	---	---	7.0	3.0	4.5	10.0	9.0	9.5	19.0	17.0	18.0
30	---	---	---	4.5	3.5	4.0	10.5	8.5	9.5	19.0	16.0	17.5
31	---	---	---	4.0	3.5	4.0	---	---	---	17.0	16.0	16.5
MONTH	1.0	.0	.0	7.5	.0	1.5	12.5	3.0	6.5	21.0	7.5	13.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	25.5	17.5	21.5						
2	---	---	---	26.5	18.5	22.0						
3	---	---	---	23.5	20.0	22.0						
4	---	---	---	24.5	20.0	22.0						
5	---	---	---	23.0	20.5	21.5						
6	---	---	---	25.0	19.5	22.0						
7	---	---	---	26.5	20.5	23.5						
8	---	---	---	27.5	20.0	24.0						
9	---	---	---	27.0	22.5	24.5						
10	---	---	---	27.5	21.0	24.5						
11	---	---	---	27.0	21.0	24.0						
12	---	---	---	24.5	19.0	22.0						
13	---	---	---	22.5	19.5	21.0						
14	---	---	---	20.5	18.0	19.0						
15	---	---	---	23.0	16.0	19.5						
16	---	---	---	23.5	16.5	20.0						
17	---	---	---	24.5	17.5	21.0						
18	---	---	---	21.5	18.5	19.5						
19	---	---	---	25.0	18.0	21.5						
20	---	---	---	22.0	19.0	20.5						
21	---	---	---	22.5	19.5	21.0						
22	---	---	---	23.0	18.5	21.0						
23	---	---	---	23.0	16.5	19.5						
24	---	---	---	23.5	15.5	19.5						
25	---	---	---	24.0	17.5	20.5						
26	---	---	---	21.0	---	---						
27	---	---	---	---	---	---						
28	---	---	---	---	---	---						
29	---	---	---	---	---	---						
30	23.0	19.0	21.5	---	---	---						
31	---	---	---	---	---	---						
MONTH	23.0	19.0	21.5	27.5	15.5	21.5						
YEAR	27.5	.0	6.5									

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).

PERIOD OF RECORD.--Discharge: May 1909 to September 1919; May 1920 to August 1922, October 1922 to September 1924, November 1928 to May 1936, September 1938 to current year. Prior to November 1928, published as "at West Derby."

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) National Geodetic Vertical Datum of 1929. May 25, 1909, to Sept. 20, 1915, nonrecording gage, and Sept. 21, 1915, to Sept. 30, 1924, Nov. 16, 1928, to May 4, 1936, water-stage recorder, at site 0.65 mi (1.05 km) upstream at different datum.

REMARKS.--Records poor. Flow regulated by powerplant and reservoirs upstream and, since Mar. 6, 1957, by diversion around station through canal and penstock of Newport No. 11 powerplant. Diversion computed from relation of kilowatt-hour output and measured discharge, discharge computed by adding flow over control to flow diverted through powerplant. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--62 years (water years 1910-19, 1921, 1923-24, 1929-35, 1939-81), 258 ft^3/s (7.307 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 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) Feb. 24; minimum daily, 31 ft^3/s (0.88 m^3/s) Jan. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	198	319	69	35	663	412	284	236	180	143	200
2	146	211	349	143	55	594	447	275	251	182	60	159
3	128	234	423	278	126	542	483	271	303	177	114	142
4	40	229	371	299	90	503	487	266	307	97	156	140
5	147	210	342	254	156	494	489	256	306	93	194	160
6	412	231	295	188	259	481	489	258	320	147	242	38
7	287	204	266	170	97	477	495	258	308	152	222	69
8	222	187	328	197	95	477	494	256	406	180	111	182
9	208	254	334	116	310	470	493	266	416	42	104	174
10	250	295	365	42	234	408	489	255	416	61	196	218
11	107	305	376	101	506	277	485	204	467	42	102	281
12	77	284	376	175	450	312	484	257	467	58	254	218
13	240	279	333	219	413	345	423	260	413	77	272	169
14	209	281	321	126	406	323	408	330	413	110	238	151
15	131	118	312	179	412	285	399	314	414	116	209	152
16	147	118	364	74	344	250	371	440	414	114	212	152
17	123	295	363	54	400	266	282	474	397	68	363	262
18	46	311	275	50	499	254	313	326	274	86	421	252
19	55	263	302	106	487	226	314	413	292	63	419	164
20	147	173	352	166	488	264	286	413	317	120	423	148
21	172	169	177	101	497	242	318	413	257	112	424	122
22	180	129	245	97	866	154	319	410	288	91	419	195
23	160	80	132	130	1100	243	411	378	265	42	418	183
24	140	316	241	86	1140	233	412	176	259	45	420	298
25	76	285	139	80	1130	219	410	196	310	67	383	356
26	213	290	353	170	1060	232	390	183	283	57	315	335
27	265	207	58	229	936	234	375	185	320	123	175	323
28	230	265	94	197	776	236	292	196	292	115	209	322
29	264	308	162	126	---	233	378	185	218	164	223	277
30	267	246	149	43	---	299	374	169	199	167	61	308
31	258	---	164	31	---	414	---	261	---	142	257	---
TOTAL	5458	6975	8680	4296	13367	10650	12222	8828	9828	3290	7759	6150
MEAN	176	233	280	139	477	344	407	285	328	106	250	205
MAX	412	316	423	299	1140	663	495	474	467	182	424	356
MIN	40	80	58	31	35	154	282	169	199	42	60	38

CAL YR 1980 TOTAL 71636 MEAN 196 MAX 672 MIN 27
WTR YR 1981 TOTAL 97503 MEAN 267 MAX 1140 MIN 31

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.

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 1981

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
Merrimack River basin						
01075000 Pemigewasset River	Merrimack River	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock, NH, and 0.7 mi upstream from Eastman Brook.	193	1940-77‡, 1978-80	4- 8-81 7- 1-81	907 165
01076000 Baker River	Pemigewasset River	Lat 43°47'46", long 71°50'42", Grafton County, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney, NH.	143	1929-77‡, 1978-80	4- 9-81	479
01081500 Merrimack River	Atlantic Ocean	Lat 43°25'26", long 71°39'12", Merrimack County, at Franklin Junction, NH, 1 mi downstream from confluence of Pemigewasset and Winnipesaukee Rivers.	-	1906-78‡, 1979-80	4-29-81	3,060
01082000 Contoocook River	Merrimack River	Lat 42°51'45", long 71°57'35", Hillsborough County, 1,100 ft downstream from milldam, 1 mi south of Peterborough, NH, and 1.5 mi upstream from Nubanusit Brook.	68.1	1945-77‡, 1978, 80	4-27-81 7-16-81	199 35.4
01085000 Contoocook River	do	Lat 43°09'10", long 71°51'24", Merrimack County, 1.6 mi downstream from Sand Brook, and 2.5 mi southwest of Henniker, NH.	368	1940-77‡, 1978-80	7-16-81	207
01087950 Contoocook River diversion	do	Lat 43°16'30", long 71°36'16", Merrimack County, at bridge on River Road, 200 ft upstream from confluence with Contoocook River.	-	-	6-30-81 7-13-81 8-31-81 9-17-81	108 61.3 28.8 32.2
01088000 Contoocook River	do	Lat 43°17'12", long 71°35'56", Merrimack County, at Penacook, NH, 0.5 mi upstream from mouth.	766	1929-77‡, 1978-80	7-17-81	248
01088400 Merrimack River	Atlantic Ocean	Lat 43°12'32", long 71°31'51", Merrimack County, at bridge on State Highway 3 at Concord, NH.	-	1979	5-27-81 9-28-81	3,670 4,440
01091500 Piscataquog River	Merrimack River	Lat 43°00'58", long 71°33'03", Hillsborough County, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, NH.	202	1939-78‡, 1979-80	12- 9-80 2-20-81 6-15-81	108 318 68.2
01094000 Souhegan River	do	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls at Merrimack, NH, 1.5 mi upstream from mouth.	171	1909-76‡, 1979-80	2-20-81 4- 1-81 6-16-81	333 412 28.2
Connecticut River basin						
01145000 Mascoma River	Connecticut River	Lat 43°39'00", long 72°04'50", Grafton County, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan and at mile 19.3.	80.5	1939-78‡, 1979-80	5-18-81 7-10-81	336 135

‡ Operated as a continuous-record gaging station.

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
ANDROSCOGGIN RIVER BASIN									
01052500 - DIAMOND RIVER NEAR WENTWORTH LOCATION, NH (LAT 44 52 40 LONG 071 03 25)									
OCT , 1980					APR , 1981				
09...	1000	268	7.0	38	28...	1615	356	9.5	33
17...	1245	217	3.5	38	AUG				
NOV					19...	1000	517	13.0	30
25...	1400	771	.0	33					
01053500 - ANDROSCOGGIN RIVER AT ERROL, NH (LAT 44 46 57 LONG 071 07 46)									
OCT , 1980					APR , 1981				
09...	1315	1250	10.5	35	28...	1815	1210	7.0	32
NOV					AUG				
25...	1600	1180	.5	34	19...	1230	1490	16.0	32
01054000 - ANDROSCOGGIN RIVER NEAR GORHAM, NH (LAT 44 26 10 LONG 071 11 27)									
OCT , 1980					APR , 1981				
09...	1630	1460	12.0	105	29...	1145	1990	8.5	100
NOV					AUG				
26...	0800	2340	.5	85	19...	1415	1990	19.0	88
SACO RIVER BASIN									
01064300 - ELLIS RIVER NEAR JACKSON, NH (LAT 44 13 12 LONG 071 15 00)									
OCT , 1980					MAY , 1981				
06...	1220	21	7.0	42	07...	1155	55	3.0	39
NOV					JUN				
18...	1000	14	.0	58	23...	1230	35	12.0	24
JAN , 1981					AUG				
06...	1615	7.6	.0	36	12...	0940	29	11.0	52
FEB					SEP				
18...	0930	25	.0	43	22...	1130	31	12.0	31
APR									
07...	1235	52	3.5	32					
01064400 - LUCY BROOK NEAR NORTH CONWAY, NH (LAT 44 04 10 LONG 071 10 30)									
OCT , 1980					MAY , 1981				
06...	1500	1.8	9.5	27	07...	1500	8.6	8.0	29
NOV					JUN				
18...	1240	1.8	.0	25	23...	1335	12	12.5	21
JAN , 1981					AUG				
06...	1150	1.8	.0	21	12...	1330	14	13.0	50
FEB					SEP				
18...	1155	13	.0	20	22...	1445	21	10.0	20
APR									
07...	1500	11	4.5	23					
01064500 - SACO RIVER NEAR CONWAY, NH (LAT 43 59 27 LONG 071 05 29)									
OCT , 1980					MAY , 1981				
17...	1530	190	7.0	50	15...	1200	1710	10.0	26
30...	1400	578	5.0	40	JUN				
NOV					22...	1300	578	11.0	33
17...	1200	222	2.0	38	AUG				
JAN , 1981					17...	0950	2840	12.0	79
08...	1530	292	.0	90	SEP				
FEB					21...	1410	386	14.0	40
17...	1530	1040	1.5	35					
APR									
07...	1000	1970	3.0	26					
01065000 - OSSIPEE RIVER AT EFFINGHAM FALLS, NH (LAT 43 47 44 LONG 071 03 36)									
NOV , 1980					MAY , 1981				
12...	0900	397	5.0	40	15...	1005	978	15.0	36
JAN , 1981					JUN				
05...	1030	231	2.0	35	22...	1115	218	22.0	32
FEB					AUG				
17...	1310	735	2.5	36	11...	0930	234	22.5	57
APR					SEP				
06...	1350	1320	4.0	44	21...	1040	393	13.0	51

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
PISCATAQUA RIVER BASIN									
01072100 - SALMON FALLS RIVER AT MILTON, NH (LAT 43 24 50 LONG 070 59 15)									
OCT , 1980					MAY , 1981				
24...	1405	54	10.0	60	05...	1530	121	13.0	66
NOV					JUN				
28...	1115	170	2.5	55	17...	1210	59	22.0	62
JAN , 1981					AUG				
14...	0945	78	2.0	48	07...	0945	55	24.0	90
FEB					SEP				
18...	1530	170	2.5	62	16...	1215	197	18.0	91
APR									
02...	1410	265	7.0	50					
01073000 - OYSTER RIVER NEAR DURHAM, NH (LAT 43 08 55 LONG 070 57 56)									
OCT , 1980					APR , 1981				
24...	1020	1.1	4.0	180	02...	1100	75	6.0	73
NOV					MAY				
24...	1120	3.9	2.0	175	05...	1025	12	12.0	104
DEC					JUN				
10...	1400	12	.0	155	17...	0945	2.1	22.0	144
JAN , 1981					AUG				
09...	1305	2.3	.0	156	07...	1330	5.0	22.0	150
FEB					SEP				
19...	1515	17	.0	82	28...	1440	5.2	13.0	91
01073500 - LAMPREY RIVER NEAR NEWMARKET, NH (LAT 43 06 09 LONG 070 57 11)									
OCT , 1980					APR , 1981				
28...	1100	300	6.0	70	28...	1050	347	11.0	71
JAN , 1981					AUG				
29...	1215	43	.0	98	27...	1020	46	18.0	90
FEB					SEP				
25...	1200	2080	.0	60	28...	1000	139	13.0	85
01073600 - DUDLEY BROOK NEAR EXETER, NH (LAT 42 59 37 LONG 071 01 24)									
OCT , 1980					MAY , 1981				
23...	1350	.07	5.0	190	05...	1250	2.6	12.5	163
DEC					JUN				
10...	1140	1.8	.0	240	17...	1440	.20	26.0	230
JAN , 1981					AUG				
07...	1155	.20	.0	410	06...	1045	.66	22.0	200
FEB					SEP				
25...	1400	190	.0	78	15...	1325	.65	16.0	186
APR									
01...	1540	4.8	8.0	137					
MERRIMACK RIVER BASIN									
01075800 - STEVENS BROOK NEAR WENTWORTH, NH (LAT 43 50 12 LONG 071 53 07)									
OCT , 1980					FEB , 1981				
22...	1100	.97	7.5	33	26...	1030	28	.0	--
DEC					MAY				
03...	1145	22	2.5	25	12...	1300	4.7	12.0	24
01076000 - BAKER RIVER NEAR RUMNEY, NH (LAT 43 47 46 LONG 071 50 42)									
OCT , 1980					APR , 1981				
22...	1000	--	--	47	09...	1110	479	6.0	18
01077000 - SQUAM RIVER AT ASHLAND, NH (LAT 43 42 19 LONG 071 37 49)									
OCT , 1980					APR , 1981				
24...	1030	92	9.0	40	07...	1330	56	6.0	--
DEC									
04...	1145	89	.5	42					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
MERRIMACK RIVER BASIN--Continued									
01078000 - SMITH RIVER NEAR BRISTOL, NH (LAT 43 34 04 LONG 071 44 54)									
OCT , 1980					APR , 1981				
22...	1415	31	--	52	07...	1415	257	--	31
DEC					MAY				
04...	1030	196	.0	30	14...	1415	260	14.5	30
01081000 - WINNIPESAUKEE RIVER AT TILTON, NH (LAT 43 26 31 LONG 071 35 20)									
OCT , 1980					JUN , 1981				
24...	1410	269	10.0	64	05...	1015	506	19.5	67
JAN , 1981									
28...	1255	519	2.0	62					
01083000 - NUBANUSIT BROOK NEAR PETERBOROUGH, NH (LAT 42 53 10 LONG 071 58 24)									
DEC , 1980					MAR , 1981				
03...	1135	74	3.0	--	12...	1320	61	3.0	47
JAN , 1981									
22...	1330	14	.0	--					
01085500 - CONTOOCOOK RIVER BELOW HOPKINTON DAM AT WEST HOPKINTON, NH (LAT 43 11 31 LONG 071 44 51)									
OCT , 1980					MAY , 1981				
22...	1435	48	11.0	60	04...	1140	830	12.5	62
DEC					JUN				
08...	1230	388	1.0	51	15...	1135	193	21.0	72
FEB , 1981					AUG				
19...	0855	584	1.0	66	04...	1200	158	24.0	80
MAR					SEP				
31...	1245	1030	7.0	52	14...	1455	327	15.0	50
01085800 - WEST BRANCH WARNER RIVER NEAR BRADFORD, NH (LAT 43 15 33 LONG 072 01 35)									
OCT , 1980					JAN , 1981				
17...	1050	.53	8.5	38	23...	1315	1.9	.0	--
DEC									
04...	1240	21	.5	--					
01087000 - BLACKWATER RIVER NEAR WEBSTER, NH (LAT 43 17 45 LONG 071 41 46)									
OCT , 1980					APR , 1981				
22...	1135	31	13.0	46	04...	1000	271	10.0	57
DEC					JUN				
08...	1045	196	.0	44	15...	0945	86	19.0	60
JAN , 1981					AUG				
07...	1000	58	.0	50	03...	0845	72	21.0	85
FEB					SEP				
19...	1000	290	.0	45	16...	1200	72	15.0	55
MAR									
31...	0935	1040	5.0	51					
01089000 - SOUCOOK RIVER NEAR CONCORD, NH (LAT 43 14 22 LONG 071 27 44)									
OCT , 1980					JUN , 1981				
30...	1615	23	4.5	--	16...	1505	24	22.0	75
DEC					AUG				
09...	1200	54	.0	75	10...	1300	55	21.0	66
JAN , 1981					SEP				
14...	1310	7.3	.0	85	11...	1320	49	15.0	156
FEB					16...	1435	26	16.0	--
19...	1330	91	.0	56	17...	1325	47	16.0	--
MAR					23...	1100	264	14.0	--
31...	1430	175	6.0	48	30...	1450	77	9.0	60
MAY									
05...	0835	112	12.0	66					
01090800 - PISCATAQUOG RIVER BELOW EVERETT DAM, NEAR EAST WEARE, NH (LAT 43 05 29 LONG 071 39 36)									
OCT , 1980					SEP , 1981				
16...	1110	52	11.0	51	22...	0830	85	17.0	42

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
MERRIMACK RIVER BASIN--Continued									
01091500 - PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (LAT 43 00 58 LONG 071 33 03)									
DEC , 1980					JUN , 1981				
09...	1505	108	1.0	--	15...	1445	68	21.0	75
FEB , 1981					AUG				
20...	1125	318	.0	70	05...	0815	53	23.0	80
APR					SEP				
01...	0910	524	5.0	48	15...	0910	137	16.0	68
MAY									
04...	1345	324	12.0	60					
01092000 - MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH (LAT 42 56 54 LONG 071 27 52)									
OCT , 1980					APR , 1981				
23...	1200	3010	10.0	60	01...	1330	11200	8.0	56
DEC					MAY				
04...	1000	5130	4.0	50	04...	1430	7150	--	66
10...	0925	4080	2.0	62	JUN				
JAN , 1981					16...	1000	2160	21.0	73
07...	1215	3380	1.0	49	AUG				
FEB					05...	1015	2400	24.0	--
20...	1500	5990	2.0	61	SEP				
27...	1155	33000	.0	50	15...	1000	2420	15.0	70
01093800 - STONY BROOK TRIBUTARY NEAR TEMPLE, NH (LAT 42 51 36 LONG 071 50 00)									
OCT , 1980					JUL , 1981				
16...	1445	.34	9.0	30	15...	1235	1.6	18.0	30
DEC					SEP				
09...	1210	4.0	3.0	--	23...	1145	64	11.0	29
JAN , 1981									
22...	1130	2.0	.0	--					
01094000 - SOUHEGAN RIVER AT MERRIMACK, NH (LAT 42 51 27 LONG 071 30 24)									
FEB , 1981					JUN , 1981				
20...	1340	333	1.0	75	16...	1500	28	22.0	120
APR					AUG				
01...	1020	412	10.0	65	05...	1100	56	24.0	74
MAY					SEP				
04...	1525	308	13.0	87	15...	1105	167	17.0	116
CONNECTICUT RIVER BASIN									
01127880 - BIG BROOK NEAR PITTSBURG, NH (LAT 45 08 06 LONG 071 12 23)									
OCT , 1980					APR , 1981				
20...	1400	12	6.0	--	06...	1010	86	2.0	32
JAN , 1981					MAY				
12...	1400	3.6	.0	45	11...	1035	7.1	10.5	38
FEB									
23...	1145	76	1.0	--					
01128500 - CONNECTICUT RIVER AT FIRST CONNECTICUT LAKE NEAR PITTSBURG, NH (LAT 45 05 14 LONG 071 17 34)									
OCT , 1980					APR , 1981				
20...	1530	401	8.5	--	10...	1100	152	--	34
APR , 1981									
06...	1040	11	2.5	--					
01129200 - CONNECTICUT RIVER BELOW INDIAN STREAM NEAR PITTSBURG, NH (LAT 45 02 25 LONG 071 26 37)									
OCT , 1980					APR , 1981				
20...	1600	1070	9.0	37	06...	1545	741	2.5	30
JAN , 1981					MAY				
12...	1615	872	.0	30	11...	1200	120	12.0	--
FEB									
23...	1630	1250	.5	--					
01130000 - UPPER AMMONOOSUC RIVER NEAR GROVETON, NH (LAT 44 37 30 LONG 071 28 10)									
OCT , 1980					FEB , 1981				
21...	0710	379	6.0	33	24...	1200	--	1.0	25
21...	1015	996	--	50	24...	1500	17900	.5	--
JAN , 1981					MAY				
16...	1200	112	.0	--	15...	1130	431	13.0	33

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

CONNECTICUT RIVER BASIN--Continued

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
01134500 - MOOSE RIVER AT VICTORY, VT (LAT 44 30 42 LONG 071 50 13)				
OCT , 1980				
16...	1000	96	7.0	--
JAN , 1981				
17...	1300	31	.0	--
APR				
06...	1100	414	4.0	--
JUL , 1981				
02...	1045	29	17.5	--
AUG				
17...	1445	526	19.0	--
01135000 - MOOSE RIVER AT ST. JOHNSBURY, VT (LAT 44 25 22 LONG 072 00 02)				
OCT , 1980				
16...	1415	138	7.5	--
NOV				
26...	1230	657	4.0	--
JAN , 1981				
14...	0900	37	.0	--
MAY , 1981				
18...	1115	524	11.0	--
JUL				
02...	1315	42	17.5	--
AUG				
17...	1230	790	17.0	--
01135500 - PASSUMPSIC RIVER AT PASSUMPSIC, VT (LAT 44 21 56 LONG 072 02 23)				
OCT , 1980				
17...	1030	406	9.0	--
JAN , 1981				
14...	1300	181	.0	--
APR				
07...	0900	1200	5.0	--
JUL , 1981				
07...	1045	648	15.5	--
AUG				
17...	1015	1710	18.0	--
01137500 - AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH (LAT 44 16 08 LONG 071 37 52)				
OCT , 1980				
21...	1245	142	7.0	30
DEC				
08...	1045	--	5.0	34
MAR , 1981				
03...	1000	--	.0	28
APR				
08...	1030	371	4.0	25
01138500 - CONNECTICUT RIVER AT WELLS RIVER, VT (LAT 44 09 13 LONG 072 02 34)				
OCT , 1980				
02...	1400	4380	12.0	--
24...	1200	3530	6.0	--
NOV				
25...	1230	8040	3.0	69
JAN , 1981				
21...	1030	--	.0	--
MAR				
02...	1300	7560	2.0	--
31...	1215	10800	3.2	54
MAY , 1981				
27...	1330	6130	13.0	77
JUL				
14...	1230	2380	23.0	--
28...	1130	1410	21.3	107
AUG				
18...	1200	12700	19.5	--
SEP				
09...	0915	1850	19.5	--
30...	1100	7430	13.1	58
01139000 - WELLS RIVER AT WELLS RIVER, VT (LAT 44 09 03 LONG 072 03 55)				
OCT , 1980				
24...	1245	43	5.5	--
JAN , 1981				
21...	1200	50	.0	--
MAR				
02...	1400	261	2.0	--
06...	1515	189	2.0	--
APR , 1981				
14...	1300	205	5.0	--
JUN				
01...	1130	176	15.0	--
JUL				
14...	1400	90	22.0	90
01139800 - EAST ORANGE BRANCH AT EAST ORANGE, VT (LAT 44 05 34 LONG 072 20 10)				
OCT , 1980				
27...	1130	6.8	5.0	--
DEC				
09...	1230	--	.0	90
JAN , 1981				
20...	1345	6.2	.0	100
MAR				
06...	1700	42	2.0	80
APR , 1981				
15...	1230	29	4.0	--
MAY				
20...	1200	41	10.0	110
JUL				
15...	0945	7.1	15.0	80
SEP				
29...	1315	24	8.0	--
01141500 - OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT (LAT 43 47 23 LONG 072 15 19)				
OCT , 1980				
27...	1300	59	5.0	88
DEC				
11...	1045	187	.0	85
JAN , 1981				
23...	0945	39	.0	90
MAR				
06...	1200	295	2.0	100
APR , 1981				
08...	1000	472	4.5	--
MAY				
21...	1445	318	10.0	--
JUN				
25...	1115	81	16.0	110
AUG				
02...	1215	90	20.0	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

CONNECTICUT RIVER BASIN--Continued

01141800 - MINK BROOK NEAR ETNA, NH (LAT 43 42 08 LONG 072 11 15)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
23...	0915	.43	4.0	85
DEC				
03...	1430	15	1.0	60
JAN , 1981				
19...	1200	.58	.0	72
FEB				
26...	1410	26	.0	48

01142500 - AYERS BROOK AT RANDOLPH, VT (LAT 43 56 04 LONG 072 39 30)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
27...	1630	17	5.0	--
DEC				
11...	0900	23	.0	80
JAN , 1981				
22...	1430	9.4	.0	90
APR				
15...	1000	79	3.5	--
MAY , 1981				
21...	1130	79	10.0	100
JUL				
10...	2115	18	26.0	85
21...	1230	33	19.0	85

01144000 - WHITE RIVER AT WEST HARTFORD, VT (LAT 43 42 51 LONG 072 25 07)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
15...	0845	240	--	95
DEC				
11...	1015	918	.0	90
JAN , 1981				
22...	1100	--	.0	95
MAR				
05...	0830	1610	2.0	100
MAR , 1981				
27...	1245	1170	--	90
MAY				
21...	1330	1500	10.0	95
JUL				
15...	1145	339	2.0	--

01144500 - CONNECTICUT RIVER AT WEST LEBANON, NH (LAT 43 38 47 LONG 072 18 46)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
24...	1000	9770	5.5	95
DEC				
09...	1445	12700	5.0	--
JAN , 1981				
22...	0945	250	.0	120
MAR				
02...	0900	19700	1.0	100
05...	0700	8130	2.0	110
APR , 1981				
08...	1645	13900	6.0	--
MAY				
21...	1600	13400	10.5	110
JUL				
16...	1415	5670	25.0	110

01150500 - MASCOMA RIVER AT MASCOMA, NH (LAT 43 39 01 LONG 072 11 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
DEC , 1980				
04...	1415	339	--	53
JAN , 1981				
19...	0945	41	--	57
APR , 1981				
09...	1300	452	5.5	41
MAY				
13...	1115	254	13.0	46

01151500 - OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT (LAT 43 36 09 LONG 072 21 17)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
23...	1230	103	6.0	85
DEC				
10...	1000	382	.5	100
JAN , 1981				
22...	1015	84	.0	--
MAR , 1981				
05...	0730	594	2.0	110
MAY				
21...	1645	402	10.0	95
JUL				
16...	1000	88	25.0	100

01152500 - SUGAR RIVER AT WEST CLAREMONT, NH (LAT 43 23 15 LONG 072 21 45)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
JAN , 1981				
29...	1030	102	1.0	127
JUL , 1981				
22...	1110	182	22.0	113

01152800 - BLACK RIVER AT COVERED BRIDGE, AT WEATHERSFIELD, VT (LAT 43 23 55 LONG 072 31 14)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
21...	1115	65	8.0	93
28...	1010	267	5.0	--
NOV				
20...	1115	121	.4	96
DEC				
10...	1445	287	1.0	113
JAN , 1981				
19...	1245	40	.0	--
APR				
15...	1120	349	5.0	66
JUL				
13...	1110	7.5	23.0	127

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

CONNECTICUT RIVER BASIN--Continued

01153000 - BLACK RIVER AT NORTH SPRINGFIELD, VT (LAT 43 20 00 LONG 072 30 55)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
21...	1400	78	10.0	105
28...	1100	358	5.0	--
NOV				
20...	1000	95	.8	105
DEC				
10...	1315	304	1.0	112
JAN , 1981				
19...	1600	58	.0	--
MAY , 1981				
26...	1300	122	19.5	98
JUL				
13...	1230	38	25.0	120
SEP				
09...	1240	58	20.5	138

01153500 - WILLIAMS RIVER AT BROCKWAYS MILLS, VT (LAT 43 12 31 LONG 072 31 05)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
DEC , 1980				
10...	1130	126	.5	127
JAN , 1981				
20...	1300	27	.0	--
MAR				
11...	1115	158	1.5	74
JUL , 1981				
13...	1420	26	25.0	133
SEP				
09...	1455	108	19.5	102

01154000 - SAXTONS RIVER AT SAXTONS RIVER, VT (LAT 43 08 14 LONG 072 29 17)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
22...	0940	13	7.0	108
DEC				
10...	1010	63	.5	77
MAR , 1981				
11...	1250	127	2.0	72
APR				
14...	1050	121	5.0	69
MAY , 1981				
26...	1530	70	20.5	83
JUL				
13...	1540	17	26.0	110
SEP				
10...	0805	26	13.0	87

01154500 - CONNECTICUT RIVER AT NORTH WALPOLE, NH (LAT 43 07 34 LONG 072 26 14)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
28...	1055	10600	7.7	99
NOV				
24...	1045	10500	2.4	88
DEC				
29...	1045	12000	.2	92
JAN , 1981				
15...	1000	5900	.1	113
MAR				
03...	1320	16100	1.2	70
24...	1000	6710	2.8	113
APR , 1981				
22...	0900	10700	6.1	91
JUN				
24...	1145	10300	20.6	109
JUL				
21...	1030	9270	24.3	133
AUG				
11...	1200	10600	24.0	98

01155500 - WEST RIVER AT JAMAICA, VT (LAT 43 06 32 LONG 072 46 33)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
DEC , 1980				
01...	1325	462	3.0	78
APR , 1981				
16...	0945	402	6.0	47
MAY				
27...	1145	173	17.0	48
JUL , 1981				
14...	1015	83	21.0	60
SEP				
10...	1110	187	18.0	63

01156000 - WEST RIVER AT NEWFANE, VT (LAT 42 59 43 LONG 072 38 13)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
22...	1505	107	10.0	66
JAN , 1981				
21...	1430	79	.0	--
APR				
16...	1215	685	6.0	47
MAY , 1981				
27...	0815	239	17.0	59
JUL				
14...	1230	114	23.0	61

01158000 - ASHUELOT RIVER BELOW SURRY MT DAM, NEAR KEENE, NH (LAT 42 59 40 LONG 072 18 40)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
JAN , 1981				
26...	1245	19	3.0	57
MAR				
12...	1140	195	3.0	46
JUL , 1981				
15...	1135	43	24.0	43
SEP				
11...	1015	39	15.0	47

01158600 - OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, NH (LAT 42 56 45 LONG 072 14 14)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
JAN , 1981				
26...	1030	8.4	2.0	52
MAR				
12...	1000	73	2.0	48
APR				
17...	1015	118	8.0	42
JUL , 1981				
15...	1010	19	22.0	46
SEP				
11...	0855	46	19.0	43

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01161000 - ASHUELOT RIVER AT HINSDALE, NH (LAT 42 47 07 LONG 072 29 12)									
DEC , 1980					JUL , 1981				
09...	1445	263	2.0	164	14...	1410	183	25.0	153
APR , 1981					SEP				
16...	1350	937	8.0	77	10...	1510	177	20.0	210
ST. LAWRENCE RIVER BASIN									
04280000 - POULTNEY RIVER BELOW FAIR HAVEN, VT (LAT 43 37 40 LONG 073 18 50)									
OCT , 1980					APR , 1981				
01...	1145	21	9.0	110	09...	1000	365	5.0	--
DEC					MAY				
11...	1445	139	.0	90	22...	1030	208	10.0	85
JAN , 1981					JUL				
26...	1315	60	.0	95	22...	1345	130	22.0	85
MAR					23...	1300	80	22.0	--
05...	1045	282	2.0	105					
04282000 - OTTER CREEK AT CENTER RUTLAND, VT (LAT 43 36 13 LONG 073 00 49)									
OCT , 1980					MAY , 1981				
23...	0830	159	6.0	105	22...	1000	403	10.0	90
DEC					JUL				
11...	1400	432	.0	95	23...	1500	246	21.0	85
JAN , 1981					31...	1030	365	17.0	85
26...	0930	135	.0	90					
MAR									
04...	1500	587	1.5	100					
04282500 - OTTER CREEK AT MIDDLEBURY, VT (LAT 44 00 47 LONG 073 10 06)									
OCT , 1980					MAR , 1981				
22...	1600	542	6.0	100	04...	1100	3600	1.5	95
NOV					MAY				
20...	1200	370	4.0	--	22...	1215	889	10.0	100
DEC					JUL				
11...	1615	1280	.0	95	23...	1615	634	20.0	90
JAN , 1981					AUG				
26...	1500	318	.0	90	06...	1000	875	21.0	85
04284000 - JAIL BRANCH AT EAST BARRE, VT (LAT 44 09 30 LONG 072 26 44)									
OCT , 1980					APR , 1981				
24...	1400	9.0	6.0	--	15...	1415	135	3.5	--
28...	0800	21	5.0	75	MAY				
DEC					20...	1530	71	10.0	--
09...	1130	76	.0	--	JUL				
JAN , 1981					08...	1000	17	21.0	--
20...	1615	4.9	.0	--	SEP				
MAR					29...	1545	85	8.0	--
03...	1115	68	.0	--					
04285500 - NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT (LAT 44 17 58 LONG 072 34 45)									
OCT , 1980					APR , 1981				
22...	0800	64	6.0	85	13...	0945	155	5.0	--
DEC					MAY				
08...	1300	115	.0	90	20...	0900	438	10.0	85
JAN , 1981					JUL				
19...	1500	21	.0	95	09...	1300	23	20.0	95
MAR					10...	0900	44	20.0	100
03...	1545	584	2.0	80	SEP				
04...	0630	578	1.5	80	30...	1145	131	9.0	--
04286000 - WINOOSKI RIVER AT MONTPELIER, VT (LAT 44 15 23 LONG 072 35 36)									
OCT , 1980					MAR , 1981				
22...	1145	249	6.0	--	03...	1300	1150	1.5	95
DEC					APR				
08...	1000	429	.0	85	13...	1330	726	4.5	--
JAN , 1981					MAY				
19...	1015	87	.0	80	19...	0800	1220	10.5	100
FEB					JUL				
03...	0845	1550	.0	80	10...	1400	323	25.0	90
13...	1445	1600	.0	--	13...	1615	175	25.0	--

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

ST. LAWRENCE RIVER BASIN--Continued

04287000 - DOG RIVER AT NORTHFIELD FALLS, VT (LAT 44 10 58 LONG 072 38 27)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
28...	1245	47	5.0	80
NOV				
20...	1600	40	2.0	--
DEC				
24...	1000	50	.0	--
JAN , 1981				
06...	1100	24	.0	--
28...	1130	21	1.0	--
30...	1600	20	.0	--
FEB				
03...	1100	388	.0	--
12...	1130	602	1.0	--
FEB , 1981				
25...	1615	850	3.0	--
APR				
28...	1045	171	6.5	--
MAY				
21...	0915	162	10.0	--
27...	1215	91	14.0	--
JUN				
29...	1200	49	17.0	--
JUL				
21...	1400	41	19.0	--
29...	0800	123	20.0	--

04288000 - MAD RIVER NEAR MORETOWN, VT (LAT 44 16 42 LONG 072 44 37)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
06...	0945	133	14.0	--
NOV				
17...	1015	71	2.0	--
JAN , 1981				
05...	1430	36	.0	--
FEB				
03...	0915	--	.0	--
13...	1530	--	.0	--
APR , 1981				
10...	0915	409	5.0	--
MAY				
13...	1515	842	13.0	--
JUN				
19...	1130	81	17.0	--
AUG				
12...	1500	181	19.5	--

04289000 - LITTLE RIVER NEAR WATERBURY, VT (LAT 44 22 12 LONG 072 46 11)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
06...	1345	577	14.0	--
NOV				
17...	1315	593	4.0	--
DEC				
22...	1245	556	.0	--
31...	0930	543	.0	--
JAN , 1981				
15...	1000	474	.0	--
20...	1100	193	.0	--
23...	1230	308	.5	--
FEB , 1981				
03...	1000	468	.5	--
JUL				
27...	0930	4.3	19.0	--
29...	1330	6.0	19.0	--
30...	1030	3.3	17.0	--
SEP				
28...	1530	468	11.0	--

04290500 - WINOOSKI RIVER NEAR ESSEX JUNCTION, VT (LAT 44 28 44 LONG 073 08 21)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
MAR , 1981				
23...	1000	1230	3.5	--
SEP , 1981				
12...	1315	1400	19.0	--

04292000 - LAMOILLE RIVER AT JOHNSON, VT (LAT 44 37 22 LONG 072 40 50)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
08...	0945	363	12.0	--
NOV				
24...	1000	303	4.0	--
JAN , 1981				
08...	1030	184	.0	--
MAR				
25...	0900	401	3.0	--
MAY , 1981				
12...	1445	360	14.0	--
JUN				
23...	1300	522	17.0	--
AUG				
12...	0900	421	19.0	--

04292500 - LAMOILLE RIVER AT EAST GEORGIA, VT (LAT 44 40 45 LONG 073 04 23)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
07...	0945	1360	12.0	--
MAR , 1981				
23...	1345	732	5.0	--
MAY				
12...	1100	707	15.0	--
JUN , 1981				
22...	1345	627	17.0	--
AUG				
11...	1030	999	18.0	--

04293000 - MISSISQUOI RIVER NEAR NORTH TROY, VT (LAT 44 58 22 LONG 072 23 15)

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
OCT , 1980				
14...	1030	236	9.0	--
NOV				
25...	1415	784	3.0	--
JAN , 1981				
09...	1130	70	.0	--
FEB				
10...	1200	115	.0	--
MAR , 1981				
26...	0800	159	3.0	--
JUN				
24...	1330	155	18.0	--
AUG				
13...	1330	124	20.0	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)	DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (UMHOS)
ST. LAWRENCE RIVER BASIN--Continued									
04293500 - MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT (LAT 44 57 30 LONG 072 41 55)									
OCT , 1980					MAY , 1981				
10...	1115	453	11.0	--	14...	1245	3430	14.0	--
NOV					JUN				
25...	1100	2010	4.0	--	24...	1100	551	16.5	--
JAN , 1981					AUG				
09...	1500	194	.0	--	13...	1100	514	19.0	--
MAR					SEP				
25...	1500	525	5.0	--	22...	1315	328	12.0	--
04296000 - BLACK RIVER AT COVENTRY, VT (LAT 44 52 08 LONG 072 16 14)									
OCT , 1980					MAY , 1981				
15...	1415	95	10.0	--	27...	0900	148	17.0	187
22...	1020	90	5.8	183	JUN				
NOV					30...	1030	68	18.3	208
24...	1500	105	2.0	--	JUL				
25...	1030	387	.7	150	01...	1445	284	16.5	--
DEC					29...	1115	50	17.0	220
10...	1315	399	.1	118	AUG				
JAN , 1981					14...	1500	47	21.0	--
12...	1500	42	.0	--	26...	1100	63	15.3	208
MAR					SEP				
04...	1110	185	.1	158	29...	1115	136	9.9	148
26...	1030	113	3.0	--					
31...	1000	735	3.7	85					
04296500 - CLYDE RIVER AT NEWPORT, VT (LAT 44 56 22 LONG 072 11 23)									
OCT , 1980					JUL , 1981				
15...	1130	16	6.0	--	01...	1045	24	16.5	--
NOV					AUG				
26...	1045	8.7	3.0	--	03...	1430	10	23.0	--
FEB , 1981					14...	1400	11	21.0	--
11...	1030	17	.5	--					
MAY									
15...	1030	26	15.0	--					

CHESHIRE COUNTY

425543072175801. Local number, KEW 2.
LOCATION.--Lat 42°55'43", long 72°17'58", Hydrologic Unit 01080201, east side of State Highway 12, about 0.5 mi (0.8 km) north of State Highway 9, and 1.1 mi (1.8 km) southwest of the center of Keene.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 18 ft (5.5 m).
DATUM.--Altitude of land-surface datum is 475 ft (145 m). Measuring point: Top of casing, 4.5 ft (1.37 m) above land-surface datum.
PERIOD OF RECORD.--August 1963 to current year. Prior to January 1973, published in New Hampshire Hydrologic-Data Report No. 3.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.5 ft (0.15 m) below land-surface datum, Nov. 28, 1963; lowest measured, 6.23 ft (1.90 m) below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	4.88	JAN 23, 1981	4.73	APR 24, 1981	3.06	JUL 23, 1981	3.75
NOV 20	4.51	FEB 24	1.08	MAY 22	3.43	AUG 21	4.22
DEC 20	4.01	MAR 23	3.35	JUN 22	3.90	SEP 22	4.62

COOS COUNTY

444733071094901. Local number, ETW 1.
LOCATION.--Lat 44°47'33", long 71°09'49", Hydrologic Unit 01040001, southwest side of State Highway 26, 1.8 mi (2.9 km) northwest of the center of Errol.
Owner: U.S. Geological Survey.
AQUIFER.--Very fine sand and silt of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 30 ft (9.14 m).
DATUM.--Altitude of land-surface datum is 1,245 ft (379 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.4 ft (2.87 m) below land-surface datum, May 22, 1969; lowest measured, 14.1 ft (4.30 m) below land-surface datum, Feb. 22, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1980	12.7	JAN 26, 1981	12.4	APR 23, 1981	12.1	JUL 22, 1981	12.5
NOV 21	12.8	FEB 24	11.5	MAY 22	12.0	AUG 21	12.4
DEC 20	12.5	MAR 23	12.4	JUN 20	12.1	SEP 21	12.6

442830071321001. Local number, LCW 1.
LOCATION.--Lat 44°28'30", long 71°32'10", Hydrologic Unit 01080101, in gravel pit about 1,100 ft (335 m) southwest of Middle Street, 2.2 mi (3.5 km) southeast of U.S. Highway 3, and 2.0 mi (3.2 km) southeast of the center of Lancaster.
Owner: Town of Lancaster.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2.5 in (0.06 m), depth 30 ft (9 m).
DATUM.--Altitude of land-surface datum is 940 ft (287 m). Measuring point: Top of casing, 1.0 ft (0.30 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to May 1980, April 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing at 1.0 ft (0.30 m) above land-surface datum, April 1970, Apr. 28, 1972; lowest measured, 6.93 ft (2.11 m) below land-surface datum, July 24, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 24, 1981	0.94	JUN 21, 1981	1.72	AUG 23, 1981	1.79	SEP 21, 1981	2.13
MAY 21	0.98	JUL 27	2.28				

HILLSBOROUGH COUNTY

425303071283701. Local number, MKW 22.
LOCATION.--Lat 42°53'03", long 71°28'37", Hydrologic Unit 01070002, north side of Damon Clinic on west side of U.S. Highway 3, about 400 ft (122 m) south of Bedford Road, in Reeds Ferry in Merrimack.
Owner: H. A. Damon.
AQUIFER.--Gravel of Pleistocene age.
WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in (0.91 m), depth 16.9 ft (5.15 m).
DATUM.--Altitude of land-surface datum is about 195 ft (59 m). Measuring point: Bottom rim of hand pump, 0.80 ft (0.24 m) above land-surface datum.
PERIOD OF RECORD.--November 1958 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.96 ft (1.21 m) below land-surface datum, Mar. 30, 1962; lowest measured, 12.57 ft (3.83 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	9.68	JAN 26, 1981	10.10	APR 22, 1981	6.56	JUL 24, 1981	8.14
NOV 21	9.15	FEB 23	7.55	MAY 26	7.10	AUG 25	10.00
DEC 22	7.64	MAR 25	6.12	JUN 23	8.57	SEP 24	10.14

425024071413001. Local number, MOW 36.
LOCATION.--Lat 42°50'24", long 71°41'30", Hydrologic Unit 01070002, 85 ft (26 m) from north side of Old Wilton Road, about 550 ft (108 m) west of the intersection of State Highway 101, and 2.2 mi (3.5 km) west of the center of Milford.
Owner: Leonard Cushing.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in (0.91 m), depth 14.6 ft (4.55 m), lined with concrete.
DATUM.--Altitude of land-surface datum is about 265 ft (81 m). Measuring point: Top of concrete casing on south side of well, 1.60 ft (0.49 m) above land-surface datum.
PERIOD OF RECORD.--January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.68 ft (1.73 m) below land-surface datum, Mar. 29, 1963; lowest measured, 12.30 ft (3.75 m) below land-surface datum, Nov. 18, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	10.82	JAN 24, 1981	9.70	APR 27, 1981	7.82	JUL 23, 1981	8.51
NOV 20	9.82	FEB 24	7.62	MAY 23	8.02	AUG 25	9.03
DEC 20	8.73	MAR 22	7.87	JUN 21	8.66	SEP 24	8.58

424752071315201. Local number, NAW 143.
LOCATION.--Lat 42°47'52", long 71°31'52", Hydrologic Unit 01070002, north side of State Highway 101-A, about 3.0 mi (4.8 km) west of U.S. Highway 3 opposite Round Pond, and 3.9 mi (6.3 km) west-northwest of the center of Nashua.
Owner: Roland Cadorette.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 1.25 in (0.03 m), depth 13.0 ft (3.96 m).
DATUM.--Altitude of land-surface datum is 200 ft (61 m). Measuring point: Top of casing, 1.5 ft (0.46 m) above land-surface datum.
PERIOD OF RECORD.--December 1958 to August 1959; January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.20 ft (1.89 m) below land-surface datum, May 29, 1973; lowest measured, 11.65 ft (3.55 m) below land-surface datum, June 25, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	9.09	JAN 26, 1981	9.48	APR 22, 1981	8.12	JUL 24, 1981	8.23
NOV 21	9.42	FEB 23	9.01	MAY 26	8.05	AUG 25	8.59
DEC 22	9.03	MAR 25	8.02	JUN 23	8.30	SEP 24	8.83

HILLSBOROUGH COUNTY--Continued

424800071295301. Local number, NAW 218.
LOCATION.--Lat 42°48'00", long 71°29'53", Hydrologic Unit 01070002, 57 ft (17.4 m) east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi (1.01 km) north of Tinker Road overpass, and 2.8 mi (4.5 km) northwest of the center of Nashua.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 42.5 ft (12.95 m).
DATUM.--Altitude of land-surface datum is 205 ft (62 m). Measuring point: Top of casing, 3.1 ft (0.94 m) above land-surface datum.
PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.39 ft (8.04 m) below land-surface datum, July 17, 1978; lowest measured, 33.10 ft (10.09 m) below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	29.92	JAN 26, 1981	29.64	APR 22, 1981	27.40	JUL 24, 1981	27.65
NOV 21	29.89	FEB 23	29.69	MAY 26	27.31	AUG 25	27.95
DEC 22	27.19	MAR 25	27.23	JUN 23	27.76	SEP 24	28.91

MERRIMACK COUNTY

431224071303601. Local number, CVW 2.
LOCATION.--Lat 43°12'24", long 71°30'36", Hydrologic Unit 01070002, about 100 ft (30 m) north of the Federal Aeronautics Administration Building at Concord Municipal Airport.
Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in (0.05 m), depth 60 ft (18.3 m).
DATUM.--Altitude of land-surface datum is 340 ft (104 m). Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.85 ft (11.23 m) below land-surface datum, Aug. 27, 1973; lowest measured, 44.62 ft (13.60 m) below land-surface datum, Aug. 1, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	41.58	FEB 23, 1981	42.34	MAY 26, 1981	42.62	SEP 24, 1981	42.59
NOV 21	41.78	MAR 04	42.41	JUN 23	42.59		
DEC 22	41.99	25	42.49	JUL 24	42.57		
JAN 26, 1981	42.17	APR 22	42.57	AUG 25	42.54		

431248071290201. Local number, CVW 3.
LOCATION.--Lat 43°12'48", long 71°29'02", Hydrologic Unit 01070002, at northwest corner of intersection of State Highway 106 and Pembroke Road, and 2.8 mi (4.5 km) east of the State House in Concord.
Owner: U.S. Geological Survey.
AQUIFER.--Very fine sand of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 72.7 ft (22.15 m).
DATUM.--Altitude of land-surface datum is 350 ft (107 m). Measuring point: Top of casing, 2.30 ft (0.70 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.56 ft (16.93 m) below land-surface datum, Sept. 27, 1973; lowest measured, 59.96 ft (18.28 m) below land-surface datum, Jan. 30, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	57.86	FEB 23, 1981	57.83	MAY 26, 1981	57.84	SEP 24, 1981	57.85
NOV 21	57.80	MAR 04	58.19	JUN 23	57.96		
DEC 22	57.95	25	58.18	JUL 24	57.84		
JAN 26, 1981	57.54	APR 22	57.85	AUG 25	57.91		

MERRIMACK COUNTY--Continued

431049071324301. Local number, CVW 4.
LOCATION.--Lat 43°10'49", long 71°32'43", Hydrologic Unit 01070002, north side of Iron Works Road, about 700 ft (213 m) west of South Street, and 1.8 mi (2.9 km) southwest of the State House in Concord.
Owner: U.S. Geological Survey.
AQUIFER.--Lacustrine silty fine sands and clays of Pleistocene age.
WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in (0.03 m), depth 40.71 ft (12.41 m).
DATUM.--Altitude of land-surface datum is 285 ft (87 m). Measuring point: Top of casing, 3.8 ft (1.16 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.93 ft (4.25 m) below land-surface datum, Apr. 23, 1969; lowest measured, 19.80 ft (6.04 m) below land-surface datum, Dec. 26, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	19.90	FEB 23, 1981	19.98	MAY 14, 1981	17.58	JUL 24, 1981	18.05
NOV 21	19.97	MAR 04	19.22	26	17.84	AUG 12	18.50
DEC 22	19.75	25	18.74	JUN 12	18.06	25	18.49
JAN 26, 1981	20.30	APR 10	18.36	23	18.20	SEP 14	19.00
FEB 12	20.17	22	18.24	JUL 14	18.32	24	18.79

432428071390701. Local number, FKW 1.
LOCATION.--Lat 43°24'28", long 71°39'07", Hydrologic Unit 01070002, about 1,500 ft (457 m) northeast of U.S. Highway 3, north of Holy Cross Convent, and 2.6 mi (4.2 km) south of Franklin.
Owner: Holy Cross Convent.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Unused water-table well, diameter 2.5 in (0.06 m), depth 52.3 ft (15.9 m).
DATUM.--Altitude of land-surface datum is 290 ft (88 m). Measuring point: Top of casing, 1.80 ft (0.55 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.98 ft (2.13 m) below land-surface datum, Apr. 24, 1973; lowest measured, 15.75 ft (4.80 m) below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	15.13	JAN 26, 1981	16.27	APR 23, 1981	13.98	JUL 24, 1981	12.92
NOV 24	15.75	FEB 23	15.47	MAY 26	13.40	AUG 25	12.50
DEC 22	15.89	MAR 25	14.42	JUN 23	13.38	SEP 24	12.63

430235071275501. Local number, HTW 5.
LOCATION.--Lat 43°02'35", long 71°27'55", Hydrologic Unit 01070002, within southeastern cloverleaf of intersection of U.S. Highway 3A and Interstate Highway 93, 3.7 mi (6.0 km) south of the center of Hooksett.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Crystalline rock of Devonian age.
WELL CHARACTERISTICS.--Drilled, unused bedrock well, diameter 6 in (0.15 m), depth 102.73 ft (31.31 m).
DATUM.--Land-surface datum is 258.93 ft (78.922 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--April 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.69 ft (12.40 m) below land-surface datum, Apr. 28, 1967; lowest measured, 51.96 ft (15.84 m) below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	50.45	JAN 26, 1981	49.28	APR 22, 1981	46.84	JUL 24, 1981	47.67
NOV 21	50.96	FEB 23	49.50	MAY 26	46.80	AUG 25	48.20
DEC 22	49.27	MAR 25	46.50	JUN 23	47.34	SEP 24	48.96

MERRIMACK COUNTY--Continued

432343071570901. Local number, NLW 1.
LOCATION.--Lat 43°23'43", long 71°57'09", Hydrologic Unit 01070003, at north side of Golf Course Road, about 500 ft (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. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft (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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	15.75	JAN 27, 1981	13.00	APR 22, 1981	5.24	JUL 24, 1981	10.75
NOV 24	15.95	FEB 23	6.40	MAY 27	5.61	AUG 31	10.65
DEC 24	13.44	MAR 25	6.11	JUN 23	8.65	SEP 24	11.83

431540071452801. Local number, WCW 1.
LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 44 ft (13.4 m) northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi (3.2 km) southeast of State Highway 103 overpass in Warner.
Owner: New Hampshire Department of Public Works and Highways.
AQUIFER.--Sand and fine gravel of Pleistocene age.
WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in (0.05 m), depth 42.8 ft (13.05 m).
DATUM.--Altitude of land-surface datum is 424 ft (129 m). Measuring point: Top of casing, 3.2 ft (0.98 m) above land-surface datum.
PERIOD OF RECORD.--December 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.94 ft (7.60 m) below land-surface datum, May 5, 1969; lowest measured, 33.82 ft (10.31 m) below land-surface datum, Dec. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	33.21	JAN 26, 1981	33.16	APR 22, 1981	30.55	JUL 24, 1981	31.02
NOV 21	33.30	FEB 23	32.74	MAY 26	30.27	AUG 25	31.47
DEC 22	32.96	MAR 25	31.12	JUN 23	30.46	SEP 24	31.86

STRAFFORD COUNTY

430721071005001. Local number, LIW I.
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 edge of board across well opening, 2.00 ft (0.61 m) above land surface datum.
PERIOD OF RECORD.--November 1953 to current year. Prior to January 1958, published in New Hampshire Basic-Data Report No. 1, Ground-Water Series. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to December 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1980	31.47	JAN 26, 1981	31.70	APR 22, 1981	30.94	JUL 24, 1981	31.42
NOV 21	31.78	FEB 23	31.23	MAY 26	31.05	AUG 25	31.55
DEC 22	31.38	MAR 25	30.94	JUN 23	31.30	SEP 24	31.76

BENNINGTON COUNTY

424810073160401. Local number, PQW 1.
LOCATION.--Lat 42°48'10", long 73°16'04", Hydrologic Unit 02020003, in front of residence on west side of State Highway 346 and 0.15 mi (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. Prior to October 1977, published as Pownal 1.
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 1980 TO SEPTEMBERR 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1980	14.65	JAN 22, 1981	14.50	MAY 03, 1981	13.39	JUL 25, 1981	13.71
NOV 20	14.98	FEB 21	12.08	09	13.54	AUG 20	14.09
25	13.35	28	10.60	17	13.49	26	14.33
DEC 03	13.38	MAR 08	11.18	20	13.56	SEP 25	13.56
20	13.86	22	12.72	JUN 21	13.78		
JAN 06, 1981	14.35	APR 24	13.29	22	13.78		

CHITTENDEN COUNTY

443646073124901. Local number, MJW 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 former 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. Prior to October 1977, published as Milton 3.
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 1980 TO SEPTEMBERR 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	36.26	JAN 22, 1981	37.15	APR 24, 1981	33.23	JUL 23, 1981	33.05
NOV 20	36.61	FEB 24	37.19	MAY 25	32.30	AUG 21	33.79
DEC 22	36.96	MAR 24	32.47	JUN 25	32.47	SEP 22	34.47

ESSEX COUNTY

444731071514701. Local number, BIW 1.
LOCATION.--Lat 44°47'31", long 71°51'47", Hydrologic Unit 01110000, south of road and just west of parking lot for Brighton State Park Beach at Brighton.
Owner: U.S. Geological Survey.
AQUIFER.--Medium and coarse sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (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. Prior to October 1977, published as Brighton 1.
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, September 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBERR 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1980	4.28	JAN 22, 1981	4.37	APR 23, 1981	3.95	JUL 24, 1981	4.33
NOV 25	4.00	FEB 21	2.95	MAY 25	4.00	AUG 21	3.72
DEC 22	3.97	MAR 23	4.05	JUN 23	3.72	SEP 21	3.96

FRANKLIN COUNTY

445603072422901. Local number, BKW 1.
LOCATION.--Lat 44°56'03", long 72°42'29", Hydrologic Unit 02010007, at southeast end of State Highway 118 bridge on Missisquoi River at East Berkshire.
Owner: U.S. Geological Survey.
AQUIFER.--Fine sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (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 (130 m). Measuring point: Top of casing, 4.00 ft (1.22 m) above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Berkshire 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.78 ft (2.98 m) below land-surface datum, Apr. 25, 1978; 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 1980 TO SEPTEMBERR 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	14.83	JAN 22, 1981	14.52	APR 24, 1981	13.68	JUL 23, 1981	15.37
NOV 20	14.32	FEB 24	9.71	MAY 25	14.30	AUG 21	12.79
DEC 22	13.15	MAR 24	14.40	JUN 25	14.45	SEP 22	14.74

LAMOILLE COUNTY

443405072323501. Local number, MPW 1.
LOCATION.--Lat 44°34'05", long 72°32'35", Hydrologic Unit 02010005, Vermont Highway Department right-of-way off State Highway 15 and 3 mi (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. Prior to October 1977, published as Morristown 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.87 ft (4.53 m) below land-surface datum, Jan. 27, 1978; lowest measured, 20.40 ft (6.22 m) below land-surface datum, Nov. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	19.82	FEB 24, 1981	15.83	MAY 25, 1981	18.25	SEP 22, 1981	19.58
NOV 20	19.45	MAR 24	18.21	JUN 25	18.76		
DEC 22	17.90	APR 24	17.60	JUL 23	19.46		
JAN 22, 1981	18.02	MAY 13	17.14	AUG 21	19.39		

ORANGE COUNTY

435343072151801. Local number, WOW 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. Prior to October 1977, published as West Fairlee 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft (0.22 m) below land-surface datum, Jan. 26, 1978; lowest measured, 5.48 ft (1.67 m) below land-surface datum, Sept. 23 and Sept. 8, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	5.17	JAN 23, 1981	4.74	APR 24, 1981	2.78	JUL 24, 1981	4.19
NOV 21	5.07	FEB 24	0.78	MAY 22	2.16	AUG 25	4.08
DEC 22	4.52	MAR 25	2.82	JUN 24	3.42	SEP 23	3.92

ORLEANS COUNTY

443952072114001. Local number, GLW 1.
LOCATION.--Lat 44°39'52", long 72°11'40", Hydrologic Unit 01110000, at Vermont Highway Department salt shed west of State Highway 16 and 3 mi (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. Prior to October 1977, published as Glover 1.
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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	18.03	JAN 22, 1981	17.45	APR 24, 1981	16.11	JUL 23, 1981	17.11
NOV 20	17.48	FEB 24	16.35	MAY 25	16.25	AUG 21	17.48
DEC 22	17.08	MAR 24	16.88	JUN 25	16.60	SEP 22	17.89

RUTLAND COUNTY

434217073010601. Local number, PFW 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. Prior to October 1977, published as Pittsford 8.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.17 ft (10.42 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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	37.08	JAN 23, 1981	37.12	APR 24, 1981	36.68	JUL 24, 1981	36.50
NOV 21	37.11	FEB 24	36.70	MAY 22	36.67	AUG 25	36.34
DEC 22	37.07	MAR 25	36.77	JUN 24	36.58	SEP 23	36.10

WASHINGTON COUNTY

441829072413901. Local number, MHW 3.
LOCATION.--Lat 44°18'29", long 72°41'39", Hydrologic Unit 02010003, adjacent to salt shed at Vermont Highway Department garage off U.S. Highway 2 and 1.25 mi (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 (138.294 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft (0.91 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Middlesex 3.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.99 ft (4.87 m) below land-surface datum, Feb. 24, 1976; lowest measured, 23.74 ft (7.24 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	22.72	FEB 24, 1981	18.92	MAY 25, 1981	22.00	SEP 22, 1981	22.93
NOV 20	22.48	MAR 24	22.45	JUN 25	22.42		
DEC 22	20.97	APR 24	21.04	JUL 23	23.10		
JAN 22, 1981	21.87	MAY 14	18.76	AUG 21	22.23		

WASHINGTON COUNTY--Continued

441552072341901. Local number, MMW 2.
LOCATION.--Lat 44°15'52", long 72°34'19", Hydrologic Unit 02010003, at southeast corner of garage at Nine Winter Street in Montpelier.
Owner: U.S. Geological Survey.
AQUIFER.--Medium to coarse sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (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 (158 m). Measuring point: Top of casing, 0.10 ft (0.03 m) above land-surface datum.
PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Montpelier 2.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.09 ft (3.38 m) below land-surface datum, Apr. 24, 1969; lowest measured, 16.84 ft (5.13 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	15.94	FEB 24, 1981	13.72	MAY 14, 1981	14.18	JUL 23, 1981	16.38
NOV 20	15.88	MAR 24	15.40	25	13.70	AUG 12	16.23
DEC 22	15.30	APR 13	14.44	JUN 10	14.87	21	15.91
JAN 22, 1981	16.35	24	14.70	25	15.62	SEP 14	16.24
FEB 13	14.39	MAY 13	14.55	JUL 15	16.23	22	16.36

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, 4.54 ft (1.38 m) below land-surface datum, Apr. 11, 1980; lowest measured, 7.62 ft (2.32 m) below land-surface datum, July 26, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	7.39	FEB 24, 1981	5.12	MAY 22, 1981	6.82	SEP 23, 1981	5.77
NOV 21	7.13	MAR 25	6.93	JUN 24	7.08		
DEC 22	6.56	APR 24	6.04	JUL 24	7.48		
JAN 23, 1981	6.96	MAY 14	6.20	AUG 25	7.14		

441033072500201. Local number, WAW 3.
LOCATION.--Lat 44°10'33", long 72°50'02", Hydrologic Unit 02010003, town of Waitsfield, northwest of Vermont Highway Department salt shed on State Highway 100 and 0.5 mi (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, 8.00 ft (2.44 m) below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	7.65	FEB 24, 1981	5.18	MAY 22, 1981	6.52	SEP 23, 1981	6.09
NOV 21	7.17	MAR 25	6.90	JUN 24	6.86		
DEC 22	6.69	APR 24	5.90	JUL 24	7.47		
JAN 23, 1981	7.34	MAY 14	6.08	AUG 25	7.12		

WINDSOR COUNTY

431551072350601. Local number, CKW 1.
LOCATION.--Lat 43°15'51", long 72°35'06", Hydrologic Unit 01080107, at Vermont Highway Department salt shed on Elm Street in Chester.
Owner: U.S. Geological Survey.
AQUIFER.--Boulders, coarse gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (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. Prior to October 1977, published as Chester 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft (0.55 m) below land-surface datum, Mar. 28, 1978; 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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	5.88	FEB 24, 1981	2.12	MAY 22, 1981	5.03	AUG 21, 1981	5.75
NOV 21	5.75	MAR 25	5.05	JUN 15	5.58	SEP 22	5.77
DEC 22	5.24	APR 24	4.71	24	5.65		
JAN 23, 1981	5.16	MAY 14	4.84	JUL 24	5.54		

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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	9.92	FEB 24, 1981	6.89	MAY 22, 1981	8.55	AUG 25, 1981	9.56
NOV 21	9.87	MAR 25	8.83	JUN 15	9.05	SEP 23	9.35
DEC 22	9.41	APR 24	8.43	24	9.11		
JAN 23, 1981	8.12	MAY 14	8.52	JUL 24	9.46		

435129072483301. Local number, RJW 1.
LOCATION.--Lat 43°51'29", long 72°48'33", Hydrologic Unit 01080105, adjacent to salt shed at Vermont Highway Department garage 1.3 mi (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. Prior to 1977, published as Rochester 1.
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 1980 TO SEPTEMBER 1981

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1980	12.33	FEB 24, 1981	6.86	MAY 22, 1981	8.84	SEP 23, 1981	10.43
NOV 21	12.05	MAR 25	10.61	JUN 24	10.93		
DEC 22	11.39	APR 24	8.80	JUL 24	12.09		
JAN 23, 1981	12.01	MAY 14	7.80	AUG 25	11.09		

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October 1, 1978

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

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

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

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