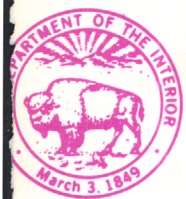
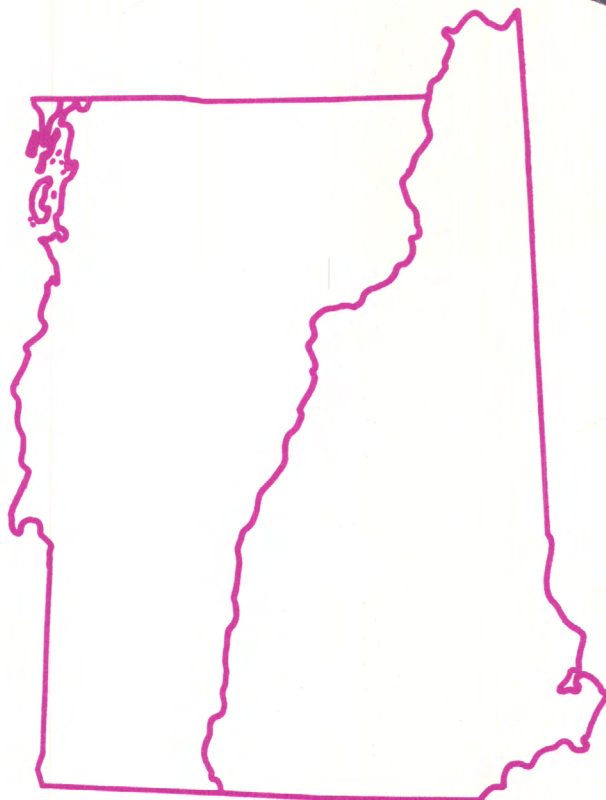
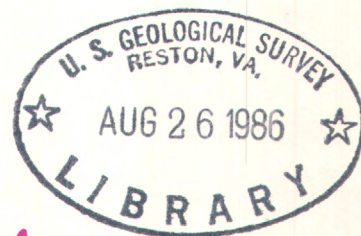


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Water Resources Data New Hampshire and Vermont Water Year 1984



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-84-1

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

CALENDAR FOR WATER YEAR 1984

1983

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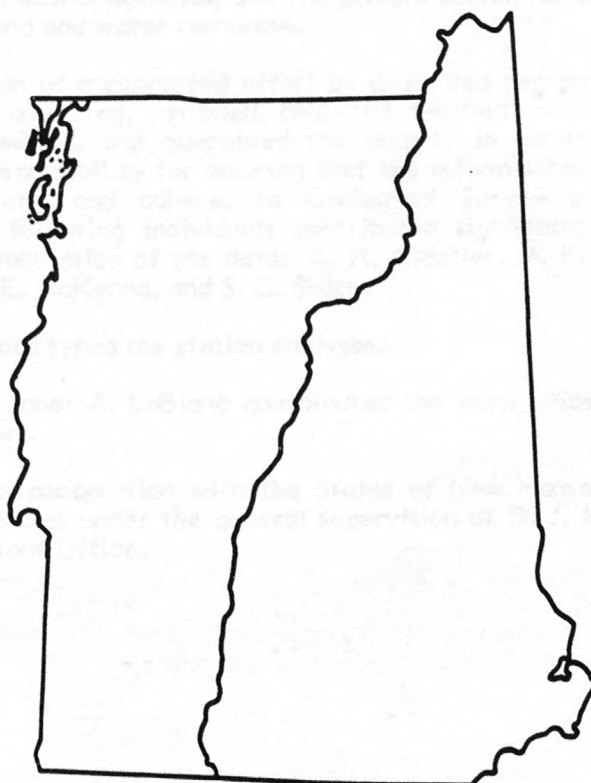
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Water Resources Data New Hampshire and Vermont Water Year 1984

by F.E. Blackey, J.E. Cotton, and K.W. Toppin



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NH-VT-84-1
Prepared in cooperation with the States of New Hampshire and
Vermont and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
150 Causeway Street
Boston, MA 02114-1384

PREFACE

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

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data: A. R. Cloutier, M. F. Coakley, J. C. Denner, J. E. King, K. E. McKenna, and S. C. Shore.

Nanci Jones and Karen Rickard typed the station analyses.

Maggie Jordan/Penrose and Janet A. LeBlanc coordinated the word processing and publishing phases of the report.

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

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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)

NORTH ATLANTIC SLOPE BASINS

ANDROSCOGGIN RIVER BASIN

Androscoggin River:

Umbagog Lake:

Magalloway River:

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Salmon Falls River (head of Piscataqua River) at Milton, N. H. (d)	22
--	----

Piscataqua River:

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Squamscott River:

Little River:

Dudley Brook near Exeter, N. H. (d)	25
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Pemigewasset River (head of Merrimack River):

Baker River:

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WATER RESOURCES DATA FOR NEW HAMPSHIRE AND VERMONT, 1984

INTRODUCTION

Water-resources data for the 1984 water year for New Hampshire and Vermont consist of records of stage, discharge, and water quality of streams; stage and contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 71 gaging stations, stage records for 4 lakes, monthend contents for 24 lakes and reservoirs, water-quality data for 3 gaging stations, and water levels for 30 observation wells. Also included are data for 4 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Locations of gaging stations, partial-record stations, and observation wells are shown in figure 1. A few pertinent stations (not included above) in bordering States and Province of Quebec are also included in this report. These data represent that portion of the National Water Data System 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-84-1." 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 1983 are:

New Hampshire: State Water Resources Board, D. F. Downing, chairman.

Vermont: State Department of Water Resources, J. P. Ponsetto, commissioner.

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

Organizations supplying data are acknowledged in the station descriptions.

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

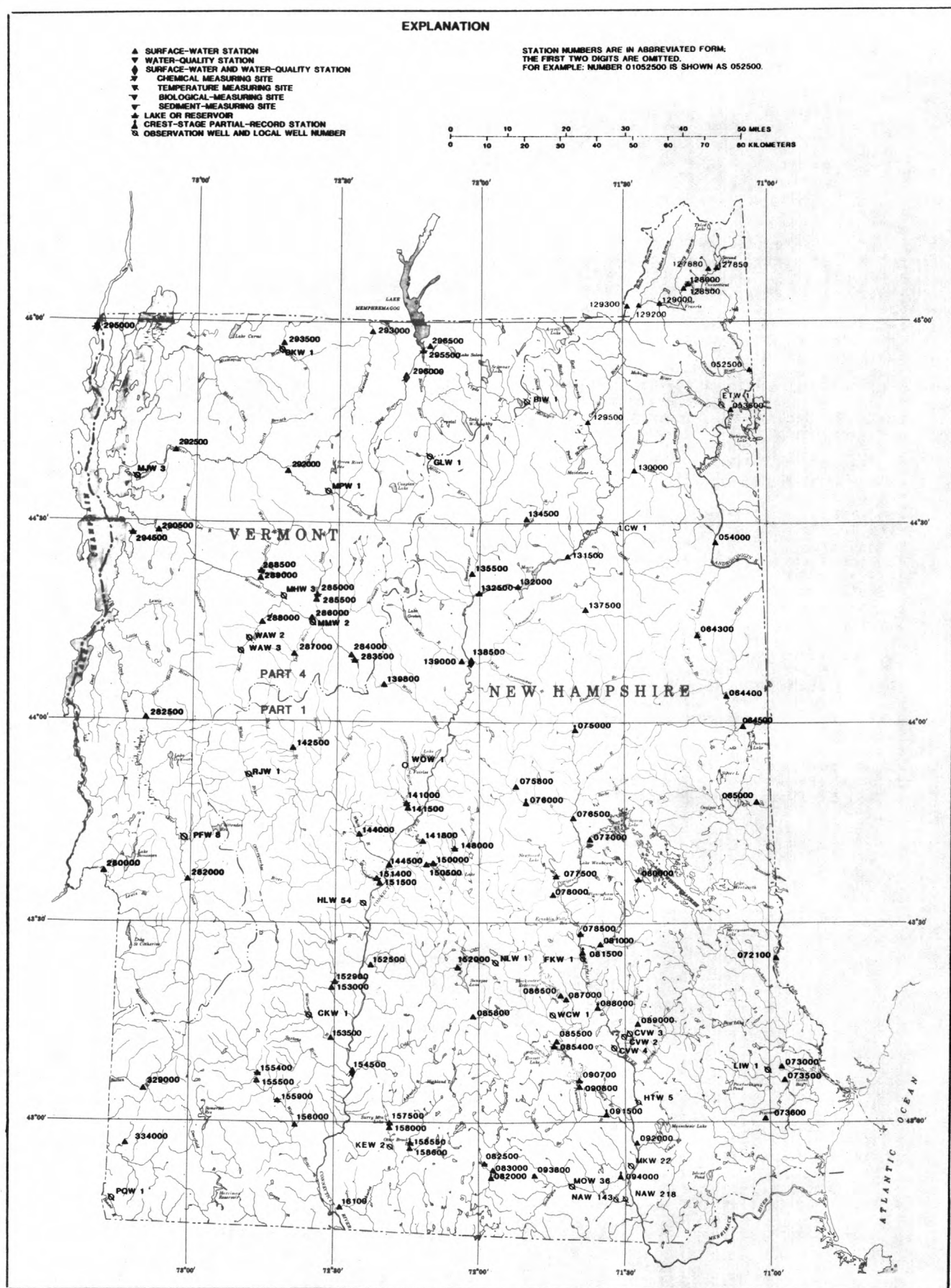


Figure 1.—Location of data-collection sites

SUMMARY OF HYDROLOGIC CONDITIONS

Runoff for the 1984 water year was excessive (in the upper quartile of record) throughout Vermont and New Hampshire. Runoff at the two index stations--Dog River at Northfield Falls, Vermont, and Pemigewasset River at Plymouth, New Hampshire--was 139 percent and 141 percent of median, respectively. The two most significant high-flow events of the year occurred May 27 to June 2 in the southern and central sections of the two States and on June 6 and June 7 in an area between northwestern Vermont and west-central New Hampshire. Both storms produced extensive flooding of small, ungaged streams. The second storm was particularly intense in an area north of Montpelier, Vermont.

Streamflow was in the normal range at the beginning of the water year. Runoff at most gaging stations was in the normal range in October. Streamflow was excessive in the months of November and December. Below-freezing temperatures in January resulted in deficient runoff for the month. Above-normal precipitation and temperatures above freezing combined to produce excessive runoff at most stations in February. The runoff in the next two months--March and April--was normal. Above-average precipitation in May and June produced excessive runoff for both months. Streamflow declined in July, August, and September and generally ranged from excessive to normal in July to deficient (in the lower quartile of record) in August and September.

Figure 2 compares monthly mean discharges for the 1984 water year with median discharges for the reference period 1951-80 for index stations in New Hampshire and Vermont.

At the beginning of the 1984 water year, ground-water levels were declining seasonally and generally were below normal, except in southeastern New Hampshire and western Vermont, where they were normal. Seasonal decline continued through October, except in parts of western Vermont. Major recharge during November returned ground-water levels to the normal range in northern New Hampshire and in the Lower Connecticut and Contoocook River valleys, and to above normal throughout the rest of the region. Four new highs of record for the month of November were observed in northern Vermont. Recharge continued during December, resulting in 11 monthly highs in central and northern Vermont. Ground-water levels generally declined during January, returning conditions to near normal in the Connecticut River basin and southeastern New Hampshire. Elsewhere, levels remained above normal.

Seasonal recharge began during February and water levels were above normal near the end of the month throughout both States. Three new monthly highs were observed in New Hampshire. Water levels continued to rise in March, except in the Connecticut River basin, where they declined and were in the normal range. Recharge continued or resumed during April. At the end of the month, ground-water levels remained near normal in the upper Connecticut River basin and above normal elsewhere.

Seasonal ground-water level declines began in May, but the decline was reversed by heavy rains near the end of the month, when observed levels were far above normal throughout the region. Eight new highs for the periods of record and 10 new monthly highs were observed. Although seasonal declines resumed in June and continued through the remainder of the water year, water levels remained above normal until early August. By the end of August, water levels were in the normal or below-normal ranges in the north and were in the normal range in the south by the end of September.

Usable major reservoir contents in the two-State area, reported at the end of the month, were in the normal range at the end of the year. The heavy rains during the period May 27 to June 2 brought Lake Winnepesaukee at Weirs Beach, New Hampshire (01080000) to its highest elevation for its period of record (1933-84), with a usable capacity of 146 percent of average for the month.

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.

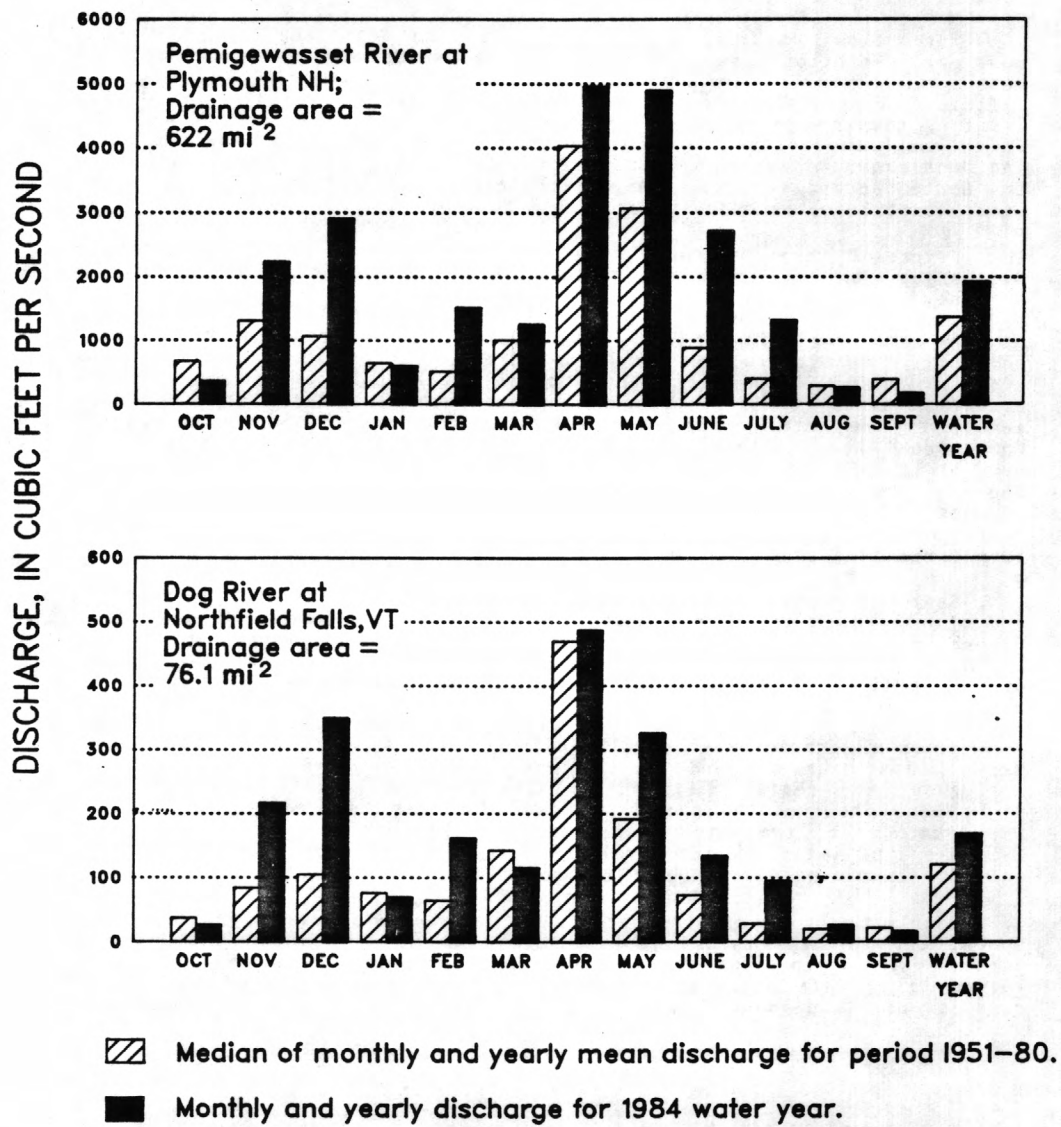


Figure 2.—Comparison of discharge at two long-term index gaging stations during 1984 water year with median discharge for period 1951-80.

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/m³ (grams per cubic meter), and ash-mass values of periphyton and benthic organisms are expressed in g/m² (grams per square meter).

Biomass pigment ratio is the ratio of organic mass in mg/m² (milligrams per square meter) to the mass of chlorophyll *a*, mg/m².

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 (FT³/S, ft³/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:

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

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 (CaCO₃).

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

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 (m²). 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 emerged 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.....Hexagenia
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 indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation 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.

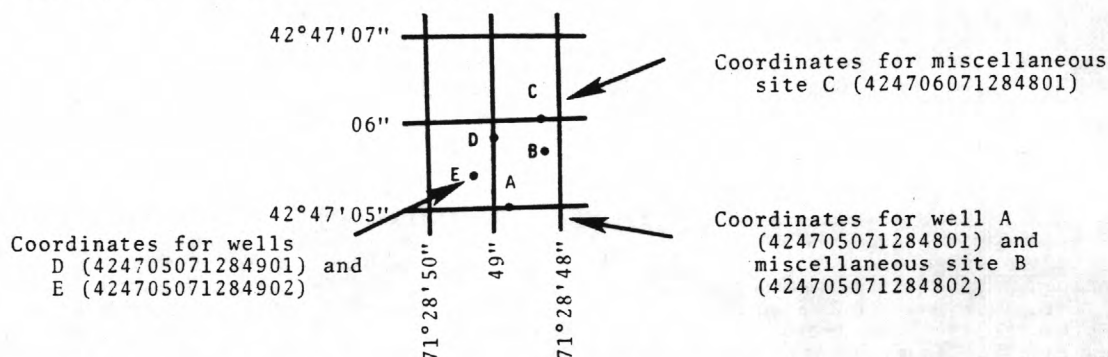


Figure 3.--System for numbering wells and miscellaneous sites (latitude and longitude)

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 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/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

Forty-five manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. Material is grouped under major subject headings called books and further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. Reports listed below are sold by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices, effective March 1986, are subject to change. When ordering, please give the series (U.S. Geological Survey Techniques of Water-Resources Investigations), title, book number, and chapter number.

- 1-D1 Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: Book 1, Chap. D1. 1975. 65 p. \$2.50.
- 1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: Book 1, Chap. D2. 1976. 24 p. \$2.50.
- 2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: Book 2, Chap. D1. 1974. 116 p. \$5.00.
- 2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: Book 2, Chap. E1. 1971. 126 p. \$4.75.
- 3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: Book 3, Chap. A1. 1967. 30 p. \$2.00.
- 3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: Book 3, Chap. A2. 1967. 12 p. \$1.75.
- 3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: Book 3, Chap. A3. 1968. 60 p. \$5.00.
- 3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: Book 3, Chap. A4. 1967. 44 p. \$2.25.
- 3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chap. A5. 1967. 29 p. \$2.25.
- 3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: Book 3, Chap. A6. 1968. 13 p. \$1.75.
- 3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A7. 1968. 28 p. \$4.50.
- 3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A8. 1969. 65 p. \$3.25.
- 3-A9 Measurement of time-of-travel and dispersion in streams by dye tracing, by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: Book 3, Chap. A9. 1982. 44 p. \$5.00.
- 3-A10 Discharge ratings at gaging stations, by E. J. Kennedy: Book 3, Chap. A10. 1985. 59 p. \$3.00.
- 3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: Book 3, Chap. A11. 1969. 22 p. \$2.00.
- 3-A13 Computation of continuous records of streamflow, by E. J. Kennedy: Book 3, Chap. A13. 1983. \$4.50.
- 3-A14 The use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: Book 3, Chap. A14. 1983. 46 p. \$4.50.
- 3-A15 Computation of water-surface profiles in open channels, by Jacob Davidian: Book 3, Chap. A15. \$2.50.
- 3-A16 Measurements of discharge using tracers, by F. A. Kilpatrick and E. D. Cobb: Book 3, Chap. A16. 1986. 52 p. \$2.50.
- 3-A17 Acoustic velocity meter systems, by Antonius Laenen: Book 3, Chap. A17. 1985. 38 p. \$1.75.
- 3-B1 Aquifer-test design, observation, and data analysis, by R. W. Stallman: Book 3, Chap. B1. 1971. 26 p. \$3.50.
- 3-B2 Introduction to ground-water hydraulics, a programmed text for self-instruction, by G. D. Bennett: Book 3, Chap. B2. 1976. 172 p. \$7.00.
- 3-B3 Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: Book 3, Chap. B3. 1980. 106 p. \$6.00.
- 3-C1 Fluvial sediment concepts, by H. P. Guy: Book 3, Chap. C1. 1970. 55 p. \$3.75.
- 3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: Book 3, Chap. C2. 1970. 59 p. \$5.50.
- 3-C3 Computation of fluvial-sediment discharge, by George Porterfield: Book 3, Chap. C3. 1972. 66 p. \$3.25.
- 4-A1 Some statistical tools in hydrology, by H. C. Riggs: Book 4, Chap. A1. 1968. 39 p. \$2.50.
- 4-A2 Frequency curves, by H. C. Riggs: Book 4, Chap. A2. 1968. 15 p. \$2.00.
- 4-B1 Low-flow investigations, by H. C. Riggs: Book 4, Chap. B1. 1972. 18 p. \$3.50.
- 4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: Book 4, Chap. B2. 1973. 20 p. \$3.25.
- 4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: Book 4, Chap. B3. 1973. 15 p. \$3.50.
- 4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: Book 4, Chap. D1. 1970. 17 p. \$1.75.
- 5-A1 Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad, M. J. Fishman, L. C. Friedman, D. E. Erdmann, and S. S. Duncan, editors: Book 5, Chap. A1. 1979. 626 p. \$11.00.
- 5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: Book 5, Chap. A2. 1971. 31 p. \$2.75.
- 5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: Book 5, Chap. A3. 1972. 40 p. \$2.50.
- 5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: Book 5, Chap. A4. 1977. 332 p. \$10.00.
- 5-A5 Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: Book 5, Chap. A5. 1977. 95 p. \$6.50.
- 5-A6 Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L. C. Friedman and D. E. Erdmann: Book 5, Chap. A6. 1982. 181 p. \$6.50.
- 5-C1 Laboratory theory and methods for sediment analysis, by H. P. Guy: Book 5, Chap. C1. 1969. 58 p. \$3.25.
- 7-C1 Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: Book 7, Chap. C1. 1976. 116 p. \$4.75.
- 7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J. D. Bredehoeft: Book 7, Chap. C2. 1978. 90 p. \$3.25.
- 7-C3 A model for simulation of flow in singular and interconnected channels by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: Book 7, Chap. C3. 1981. 110 p. \$7.50.
- 8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: Book 8, Chap. A1. 1968. 23 p. \$2.00.
- 8-A2 Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: Book 8, Chap. A2. 1983. 57 p. \$6.00.
- 8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: Book 8, Chap. B2. 1968. 15 p. \$1.75.

ANDROSCOGGIN RIVER BASIN

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01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, N. H.

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

DRAINAGE AREA.--152 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,275 ft, 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.--43 years, 350 ft³/s, 31.27 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 31	1500	*4,610	*8.15				

Minimum discharge, 15 ft³/s Sept. 10, 11, gage height, 1.00 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	108	426	225	94	155	167	2410	2590	156	50	20
2	45	109	355	215	98	150	184	1410	1130	126	49	19
3	55	118	310	200	95	140	197	877	729	106	46	18
4	54	386	193	190	117	135	236	1270	595	95	42	19
5	108	1240	276	180	170	130	330	1410	508	292	39	19
6	400	1120	276	175	128	125	1260	981	407	325	36	18
7	276	716	406	165	108	120	2040	925	378	814	37	17
8	168	470	385	155	101	115	1480	909	413	816	51	17
9	135	473	278	150	96	110	802	1100	311	390	44	16
10	120	483	289	145	99	110	576	867	241	271	36	16
11	98	716	214	140	88	105	477	658	202	225	34	20
12	87	1290	195	135	84	98	570	978	171	669	33	64
13	132	734	564	130	92	94	989	1340	147	436	32	47
14	202	438	1810	125	97	95	1350	1100	169	268	31	40
15	222	357	1660	120	108	96	1550	947	232	216	37	38
16	149	335	1230	120	225	96	1160	697	168	193	42	32
17	116	830	763	115	500	108	1840	561	135	200	34	29
18	102	588	481	110	325	118	2290	468	117	165	30	26
19	93	401	421	105	230	130	2230	414	387	179	27	23
20	84	311	245	100	180	417	1830	377	252	142	26	22
21	79	623	230	100	160	686	1780	359	154	115	24	41
22	75	1070	220	98	150	734	1160	330	154	100	23	40
23	74	624	215	97	144	620	1160	343	123	90	23	31
24	110	455	210	94	153	364	1780	824	101	82	42	26
25	157	1180	210	103	162	255	2100	588	399	71	84	23
26	119	1250	205	116	186	218	1850	468	665	65	46	25
27	101	661	200	114	178	203	1880	789	692	66	33	40
28	91	498	260	109	170	187	2040	485	347	79	27	38
29	107	502	290	101	161	182	2140	1180	220	70	24	30
30	157	569	265	96	---	169	2300	3470	176	60	22	26
31	117	---	240	98	---	162	---	4310	---	56	22	---
TOTAL	3878	18655	13322	4126	4499	6427	39748	32845	12313	6938	1126	840
MEAN	125	622	430	133	155	207	1325	1060	410	224	36.3	28.0
MAX	400	1290	1810	225	500	734	2300	4310	2590	816	84	64
MIN	45	108	193	94	84	94	167	330	101	56	22	16
CFSM	.82	4.09	2.83	.88	1.02	1.36	8.72	6.97	2.70	1.47	.24	.18
IN.	.95	4.57	3.26	1.01	1.10	1.57	9.73	8.04	3.01	1.70	.28	.21
CAL YR 1983	TOTAL	131812	MEAN	361	MAX	3950	MIN	28	CFSM	2.38	IN.	32.26
WTR YR 1984	TOTAL	144717	MEAN	395	MAX	4310	MIN	16	CFSM	2.60	IN.	35.42

ANDROSCOGGIN RIVER BASIN

01053500 ANDROSCOGGIN RIVER AT ERROL, N. H.

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

DRAINAGE AREA.--1,046 mi².

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

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

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

REMARKS.--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, with final regulation at Errol Dam. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--79 years, 1,910 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 12,700 ft³/s June 1; minimum daily, 670 ft³/s Nov. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	1740	1510	2070	2420	2020	1700	3060	12700	1710	2040	2070
2	1810	1750	1470	2070	2540	2090	1900	3090	10900	1710	1980	2100
3	1810	1740	1370	2150	2530	2140	1610	3550	9050	1700	1970	2130
4	1820	1690	1610	2270	2540	2130	2030	4160	7410	1700	1960	2160
5	1830	760	1710	2260	2530	2110	1520	4100	5640	1710	1970	2180
6	1850	670	1650	2240	2540	2180	871	4060	3360	1720	2060	2180
7	1850	1620	1380	2250	2530	2230	1700	3700	3160	1870	2010	2180
8	1830	1060	1400	2240	2530	2160	4260	3010	3170	2730	1960	2170
9	1830	1710	1450	2250	2540	2120	4510	2710	3150	2750	1950	2170
10	1830	1370	1520	2270	2530	2090	4380	1800	3050	2760	1940	2170
11	1830	1420	1670	2260	2520	2110	4260	1810	3050	2740	1930	2110
12	1810	2000	1820	2270	2510	2200	4150	1780	2950	2750	1930	2090
13	1760	2010	1500	2300	2550	2230	4000	2160	2700	2990	1960	2170
14	1690	1770	1300	2310	2510	2290	3740	3410	2820	3110	2000	2170
15	1650	1610	1370	2320	2510	2270	3380	4530	2660	3110	1990	2170
16	1680	1450	1900	2320	2510	2190	3580	4410	2370	3100	1970	2160
17	1720	1100	3060	2310	2520	2140	3860	3920	2000	3080	1990	2140
18	1750	964	3020	2310	2530	2130	3930	3490	2620	2790	2000	2130
19	1740	1220	3000	2330	2530	2120	4050	1700	1730	2220	1970	2130
20	1730	1440	2380	2320	2520	1940	4060	1700	2670	2210	1970	2150
21	1990	1410	2000	2330	2480	1280	4050	1750	2220	2190	2000	2160
22	1970	1300	2000	2330	2440	1040	4000	1800	2210	2190	1950	2170
23	1800	1660	1990	2300	2310	1230	3890	1880	2210	2210	1990	2160
24	1760	2010	2010	2340	2140	1260	3840	1910	2250	2190	2000	2180
25	1760	2010	2010	2310	2170	1500	3940	1920	2190	2200	1990	2160
26	1730	2050	1940	2300	2150	1890	4110	2010	2010	2240	1970	2140
27	1730	2580	2010	2320	2120	1880	3630	2170	2110	2280	1980	2140
28	1730	2960	2030	2330	2070	1900	2480	2910	2170	2200	1990	2120
29	1710	2530	2030	2320	2020	1870	1990	2940	2430	2190	2030	2110
30	1720	1900	2020	2320	---	1890	2420	3810	2250	2210	2050	1990
31	1740	---	2040	2330	---	1920	---	7730	---	2230	2060	---
TOTAL	55270	49504	58170	70650	70340	60550	97841	92980	109210	72790	61560	64260
MEAN	1783	1650	1876	2279	2426	1953	3261	2999	3640	2348	1986	2142
MAX	1990	2960	3060	2340	2550	2290	4510	7730	12700	3110	2060	2180
MIN	1650	670	1300	2070	2020	1040	871	1700	1730	1700	1930	1990

CAL YR 1983 TOTAL 698545 MEAN 1914 MAX 6810 MIN 670
WTR YR 1984 TOTAL 863125 MEAN 2358 MAX 12700 MIN 670

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, N. H.

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

DRAINAGE AREA.--1,361 mi².

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

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

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

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

AVERAGE DISCHARGE.--71 years, 2,474 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,100 ft³/s May 31, gage height, 9.41 ft; minimum daily, 1,770 ft³/s Nov. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1890	1900	2730	2380	2470	2500	2420	5300	16900	2370	2300	2110
2	1910	1900	2390	2350	2620	2430	2210	4810	16000	2000	2060	2130
3	1910	1930	2120	2360	2710	2490	2480	4480	15200	1840	2080	2150
4	1910	2060	1780	2490	2790	2490	2380	5770	13800	1890	2060	2190
5	2010	3260	2330	2670	2840	2450	3330	6280	11700	2020	2030	2220
6	2280	2670	2310	2610	2800	2440	6790	5610	9560	2490	2080	2220
7	2250	2490	2600	2590	2780	2540	6680	5170	8100	2700	2130	2220
8	2090	2380	2370	2530	2740	2480	7640	4280	5420	4150	2090	2210
9	2020	1950	2090	2470	2720	2400	7260	4350	4010	3700	2010	2220
10	2000	2260	2220	2520	2710	2360	5920	3280	3860	3420	2030	2210
11	1960	2150	1980	2500	2710	2330	4090	2850	3720	3180	2040	2260
12	1960	3070	2110	2420	2750	2320	3970	3130	3500	3540	1990	2140
13	2090	3170	2780	2470	2760	2420	4460	4210	3510	3560	2030	2210
14	2130	2700	4500	2560	2800	2440	5090	5210	3400	3550	2060	2230
15	2020	2210	4400	2540	2840	2570	5590	6190	3290	3520	2100	2230
16	1890	2180	3720	2480	3180	2560	5630	5770	3060	3450	2090	2250
17	1910	2610	4160	2490	3320	2480	6990	5010	2670	3440	2070	2240
18	1930	2110	4110	2550	3250	2440	7720	4330	2180	3380	2070	2190
19	1910	1770	3840	2550	3150	2550	7680	2670	3000	2910	2070	2170
20	1870	1900	3330	2500	3150	2910	7300	2500	2310	2600	2020	2190
21	1900	2320	2500	2470	3150	3040	6950	2490	2670	2440	2060	2230
22	2220	2810	2440	2470	3060	2420	6200	2460	2430	2390	2030	2210
23	1980	2520	2480	2490	2940	2490	5750	2530	2410	2360	2020	2210
24	2000	2740	2460	2480	2720	2350	6050	2960	2380	2340	2080	2230
25	2060	4370	2620	2610	2750	2190	6700	2830	2970	2300	2070	2230
26	1980	5080	3290	2550	2930	2430	6390	2690	3260	2300	2030	2230
27	1950	3820	2770	2530	2770	2580	6210	2960	3020	2380	2030	2190
28	1910	4060	2360	2570	2560	2450	5130	3480	2720	2410	2020	2190
29	1920	3970	2520	2480	2530	2430	4250	4500	2680	2340	2030	2170
30	1900	3750	2370	2530	---	2360	4320	10400	2750	2330	2090	2180
31	1890	---	2310	2540	---	2370	---	16100	---	2310	2110	---
TOTAL	61650	82110	85990	77750	82500	76710	163580	144600	162480	85610	63980	66060
MEAN	1989	2737	2774	2508	2845	2475	5453	4665	5416	2762	2064	2202
MAX	2280	5080	4500	2670	3320	3040	7720	16100	16900	4150	2300	2260
MIN	1870	1770	1780	2350	2470	2190	2210	2460	2180	1840	1990	2110
CAL YR 1983	TOTAL	948110	MEAN	2598	MAX	10200	MIN	1640				
WTR YR 1984	TOTAL	1153020	MEAN	3150	MAX	16900	MIN	1770				

SACO RIVER BASIN

01064300 ELLIS RIVER NEAR JACKSON, N. H.

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

DRAINAGE AREA.--10.9 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,500 ft, from topographic map. Prior to Oct. 14, 1969, at site 0.3 mi 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.--20 years (water years 1965-83), 34.4 ft³/s, 42.86 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0900	563	3.54	May 23	2015	657	3.68
Apr. 5	2330	*a1,110	*4.69	May 30	1030	761	3.90
May 1	0215	515	3.32	June 2	1630	819	4.02
May 12	2130	526	3.35				

a From rating curve extended above 390 ft³/s.

Minimum discharge, 5.5 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	17	35	20	10	15	15	270	169	32	16	9.4
2	9.0	17	32	19	10	14	16	91	379	27	16	9.4
3	8.9	18	29	18	10	13	17	69	169	25	15	8.6
4	8.6	50	43	17	35	13	18	134	91	23	15	8.6
5	15	68	39	16	16	13	254	90	79	26	15	8.2
6	21	51	27	16	13	12	437	73	67	29	15	7.9
7	14	38	60	15	12	12	132	90	69	130	13	7.5
8	12	31	41	15	12	12	76	146	66	67	13	7.2
9	11	29	36	14	11	11	52	207	60	43	12	6.8
10	11	30	31	14	11	11	42	96	54	37	12	6.5
11	9.9	63	29	13	11	11	34	81	49	41	12	6.8
12	12	75	27	13	10	11	38	275	43	90	12	7.5
13	110	40	175	13	10	10	51	193	39	45	12	6.8
14	70	33	378	13	12	11	59	130	46	37	12	6.8
15	38	31	131	13	79	12	60	90	42	31	34	6.5
16	30	50	75	13	68	13	116	70	36	32	18	6.8
17	27	65	53	12	33	14	165	62	34	29	15	6.8
18	25	40	46	12	30	11	112	58	34	44	13	6.5
19	22	36	43	12	25	15	85	73	35	46	13	6.1
20	20	31	40	12	23	25	77	111	31	34	13	8.6
21	19	86	37	11	20	40	78	115	31	29	12	13
22	18	59	33	11	18	46	60	120	28	26	11	7.9
23	18	44	31	11	17	26	63	321	28	24	12	7.2
24	26	41	29	11	19	19	96	236	29	22	14	6.8
25	24	162	28	12	27	17	102	97	134	21	14	6.1
26	21	66	27	12	35	18	75	122	73	20	12	7.0
27	19	48	26	11	28	18	81	94	50	21	11	6.7
28	18	41	27	11	24	16	95	72	40	22	9.8	6.3
29	21	49	28	11	17	15	118	325	34	20	9.4	6.1
30	18	43	22	10	---	16	210	544	36	18	9.4	6.1
31	17	---	21	10	---	15	---	483	---	17	9.4	---
TOTAL	702.9	1452	1679	411	646	505	2834	4938	2075	1108	420.0	222.5
MEAN	22.7	48.4	54.2	13.3	22.3	16.3	94.5	159	69.2	35.7	13.5	7.42
MAX	110	162	378	20	79	46	437	544	379	130	34	13
MIN	8.6	17	21	10	10	10	15	58	28	17	9.4	6.1
CFSM	2.08	4.44	4.97	1.22	2.05	1.50	8.67	14.6	6.35	3.28	1.24	.68
IN.	2.40	4.95	5.73	1.40	2.20	1.72	9.67	16.85	7.08	3.78	1.43	.76
CAL YR 1983	TOTAL	14652.7	MEAN 40.1	MAX 461	MIN 7.3	CFSM 3.68	IN 50.00					
WTR YR 1984	TOTAL	16993.4	MEAN 46.4	MAX 544	MIN 6.1	CFSM 4.26	IN 57.99					

SACO RIVER BASIN

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01064400 LUCY BROOK NEAR NORTH CONWAY, N. H.

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

DRAINAGE AREA---4.68 mi².

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

GAGE---Water-stage recorder. Elevation of gage is 710 ft, from topographic map.

REMARKS---Records good except those for winter period which are fair. No gage-height record, Dec. 12 to Jan. 16. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE---20 years, 15.1 ft³/s, 32.50 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	--	250	--	Apr. 5	2130	*a911	*8.04
Feb. 15	1900	191	6.56	May 29	1430	a308	6.92

a From rating curve extended above 140 ft³/s.

Minimum discharge, 0.16 ft³/s Sept 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.82	1.5	18	6.5	1.8	13	7.8	32	70	4.2	2.6	1.2
2	.82	1.5	14	6.0	1.7	11	9.1	22	45	3.7	2.6	1.1
3	.82	1.5	12	5.4	1.7	9.8	11	17	38	3.4	2.4	1.0
4	.82	12	10	5.6	4.3	8.8	13	40	28	3.4	2.3	1.0
5	.86	43	9.4	5.8	2.7	8.0	221	30	22	3.4	2.3	1.0
6	1.5	28	9.4	5.6	2.3	7.0	265	22	19	5.0	2.1	.93
7	1.2	18	55	5.4	2.1	6.4	97	19	17	21	2.1	.85
8	1.0	10	24	5.2	1.9	6.0	65	30	16	17	2.1	.85
9	1.0	7.6	17	5.0	1.8	5.6	43	40	13	9.3	2.0	.85
10	1.0	6.6	14	4.7	1.7	5.2	33	25	12	6.9	1.8	.85
11	1.0	17	12	4.5	1.7	5.0	29	20	9.7	6.9	1.8	.85
12	1.3	36	11	4.3	1.7	4.6	30	30	8.8	15	1.8	.85
13	55	15	90	4.0	1.6	4.5	33	38	7.6	8.4	1.8	.85
14	19	9.9	230	3.8	1.6	4.3	36	28	8.0	6.2	1.8	.85
15	11	8.0	90	3.7	8.0	4.2	35	25	8.0	5.6	3.2	.85
16	7.2	12	35	3.4	60	4.0	61	20	6.5	5.9	2.1	.85
17	5.7	33	18	3.1	24	3.8	70	17	5.9	7.6	1.7	.85
18	4.5	18	14	2.8	17	3.5	56	16	5.3	8.0	1.7	.77
19	3.5	12	13	2.6	13	5.6	49	14	5.6	10	1.7	.77
20	2.8	12	11	2.5	12	10	42	14	5.0	6.9	1.7	.77
21	2.3	37	10	2.4	11	17	38	13	4.4	5.6	1.7	.77
22	1.9	37	10	2.3	9.2	24	30	11	3.9	5.0	1.7	.77
23	1.9	22	9.5	2.2	8.2	20	26	9.7	3.9	4.7	1.6	.62
24	3.0	18	8.8	2.5	11	16	46	11	3.7	4.2	1.7	.62
25	2.5	88	8.4	3.2	20	12	52	9.3	18	3.7	1.7	.55
26	2.2	46	7.8	2.8	37	11	33	8.4	11	3.2	1.6	.49
27	2.0	26	7.5	2.3	20	10	28	7.6	7.6	3.2	1.2	.55
28	1.9	19	9.0	2.2	16	9.9	28	6.9	5.9	3.2	1.2	.55
29	2.2	24	10	2.2	14	9.4	30	101	5.0	3.2	1.2	.55
30	1.8	25	8.2	2.0	---	8.8	34	157	4.7	3.0	1.2	.55
31	1.8	---	7.0	1.9	---	7.8	---	152	---	2.6	1.2	---
TOTAL	144.34	644.6	803.0	115.9	309.0	276.2	1550.9	985.9	418.5	199.4	57.6	23.91
MEAN	4.66	21.5	25.9	3.74	10.7	8.91	51.7	31.8	14.0	6.43	1.86	.80
MAX	55	88	230	6.5	60	24	265	157	70	21	3.2	1.2
MIN	.82	1.5	7.0	1.9	1.6	3.5	7.8	6.9	3.7	2.6	1.2	.49
CFSM	1.00	4.59	5.53	.80	2.29	1.90	11.0	6.80	2.99	1.37	.40	.17
IN.	1.15	5.12	6.38	.92	2.46	2.19	12.33	7.83	3.33	1.58	.46	.19
CAL YR 1983	TOTAL	5317.90	MEAN	14.6	MAX	230	MIN	.70	CFSM	3.12	IN	42.26
WTR YR 1984	TOTAL	5529.25	MEAN	15.1	MAX	265	MIN	.49	CFSM	3.23	IN	43.94

SACO RIVER BASIN

01064500 SACO RIVER NEAR CONWAY, N. H.

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

DRAINAGE AREA.--385 mi².

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

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

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

REMARKS.--Records good except those for winter period and period of no gage-height record June 30 to Aug. 9, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--61 years (water years 1904-09, 1930-84), 939 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 25	2000	8,840	8.03	Apr. 6	0100	*24,300	*12.41
Dec. 14	1400	12,400	9.16	May 31	0430	14,700	9.85

Minimum discharge, 125 ft³/s Sept. 9, 10, gage height, 2.05 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	270	1670	600	310	945	939	5020	7700	560	275	180
2	157	262	1390	560	305	860	1020	3130	5000	520	265	178
3	157	242	1220	530	300	775	1130	2320	4480	480	260	178
4	152	796	1050	500	325	720	1260	3750	3060	450	250	183
5	164	3350	1050	475	400	675	8520	3750	2420	650	235	172
6	240	2560	1030	450	340	625	15100	2570	1990	900	230	158
7	281	1690	3070	435	320	590	7500	2370	1790	2080	220	160
8	221	1170	2080	415	310	555	5130	2620	1610	2000	230	150
9	190	962	1540	400	300	535	3630	4570	1370	1400	255	142
10	177	955	1360	375	300	510	2850	3040	1190	920	247	143
11	172	1370	1150	370	295	485	2480	2320	1050	600	244	136
12	167	2820	1070	355	290	460	2580	3570	939	1350	244	154
13	1280	1660	3720	345	290	430	2940	5360	853	1000	244	159
14	1190	1160	10300	335	290	425	3130	3750	872	750	254	158
15	844	970	5810	325	370	430	3130	3050	1000	670	521	176
16	539	1020	3360	315	2400	460	4230	2360	795	515	444	171
17	414	2380	2330	310	1950	510	5870	2000	715	490	308	162
18	370	1530	1650	300	1600	570	5260	1760	670	495	259	163
19	330	1170	1300	295	1200	653	4670	1670	706	670	237	156
20	303	1000	1050	290	910	1600	4030	1960	625	550	244	152
21	281	2000	890	285	800	1870	3770	1930	560	480	234	157
22	268	2760	790	280	740	1840	2940	1750	519	440	219	176
23	260	1920	710	275	700	1540	2710	1880	485	410	227	162
24	287	1500	660	275	800	1280	4360	2830	463	375	249	149
25	338	4890	600	330	1150	1150	5890	1790	1750	345	238	147
26	302	4460	560	580	1900	1070	3840	1450	1790	325	229	148
27	279	2550	620	450	1400	1010	3550	1400	1120	320	207	149
28	263	1920	700	400	1200	980	3530	1160	822	450	191	156
29	252	2030	800	360	1050	966	3620	4170	678	380	182	155
30	250	2220	700	335	---	908	4150	10700	605	330	178	159
31	241	---	650	320	---	883	---	13400	---	300	177	---
TOTAL	10526	53587	54880	11870	22545	26310	123759	103400	47627	21205	7797	4789
MEAN	340	1786	1770	383	777	849	4125	3335	1588	684	252	160
MAX	1280	4890	10300	600	2400	1870	15100	13400	7700	2080	521	183
MIN	152	242	560	275	290	425	939	1160	463	300	177	136
CFSM	.88	4.64	4.60	.99	2.02	2.21	10.7	8.66	4.12	1.78	.65	.42
IN.	1.02	5.18	5.30	1.15	2.18	2.54	11.96	9.99	4.60	2.05	.75	.46

CAL YR 1983	TOTAL	456972	MEAN	1252	MAX	10800	MIN	129	CFSM	3.25	IN.	44.15
WTR YR 1984	TOTAL	488295	MEAN	1334	MAX	15100	MIN	136	CFSM	3.46	IN.	47.18

01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, N. H.

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

DRAINAGE AREA.--330 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 390 ft, from topographic map.

REMARKS.--Records good. Flow regulated by Ossipee and Silver Lakes and Pine River Pond, combined capacity, 1,430,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 698 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,110 ft³/s June 1, gage height, 9.71 ft; minimum, 160 ft³/s Oct. 9-12; minimum daily, 160 ft³/s Oct 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	166	187	1770	1570	450	1830	801	1400	5950	704	253	220
2	166	188	1600	1550	438	1810	798	1200	5870	563	244	219
3	164	189	1540	1050	431	1810	811	1060	5350	486	232	218
4	164	198	1400	795	439	1800	847	1260	4750	476	238	218
5	164	845	1310	766	459	1290	1090	1450	4150	472	236	217
6	163	1460	1230	572	504	749	2100	1460	3570	686	234	216
7	162	1560	1360	465	532	647	3740	1230	3100	872	230	215
8	162	1460	1610	489	548	610	4350	1090	2720	1210	229	215
9	160	1360	1680	504	542	572	4200	1310	2430	1230	229	213
10	160	1280	1650	519	528	537	3820	1440	2100	1220	227	212
11	160	1220	1540	537	516	511	3380	1410	1590	1090	355	213
12	160	1200	1420	526	511	478	3020	1410	1270	1020	609	213
13	167	1180	1420	516	507	450	2770	1890	869	1030	372	212
14	172	1070	1980	518	510	416	2610	2310	663	1020	225	212
15	175	988	3050	518	546	437	2470	2420	663	1000	229	212
16	176	1020	3450	515	736	432	2390	2370	665	727	232	211
17	178	1110	3310	506	1130	441	2490	2190	665	526	224	210
18	178	1050	2990	496	1410	443	2640	1810	664	652	223	210
19	178	1010	2660	490	1480	467	2650	1590	661	788	226	209
20	179	995	2310	474	1470	522	2570	1500	573	712	231	208
21	180	989	1950	460	1450	620	2460	1310	465	656	231	207
22	180	1030	1720	447	1400	764	2280	1180	326	656	233	206
23	183	1170	1610	437	1320	1060	2080	807	236	655	223	207
24	185	1220	1590	439	1270	1200	1940	519	239	648	223	209
25	187	1480	1580	453	1350	1180	2010	523	317	549	223	208
26	189	2180	1580	461	1750	1130	2050	537	916	408	223	207
27	191	2290	1580	469	2100	1060	1920	555	1020	328	222	204
28	191	2140	1580	471	2100	1010	1780	569	1130	279	221	202
29	192	1960	1580	466	1960	962	1690	1340	866	291	221	202
30	188	1870	1580	463	---	901	1500	3140	711	272	221	200
31	187	---	1570	462	---	820	---	4660	---	252	221	---
TOTAL	5407	35899	57200	18404	28387	26959	69257	46940	54499	21478	7740	6325
MEAN	174	1197	1845	594	979	870	2309	1514	1817	693	250	211
MAX	192	2290	3450	1570	2100	1830	4350	4660	5950	1230	609	220
MIN	160	187	1230	437	431	416	798	519	236	252	221	200
CAL YR 1983	TOTAL	328991	MEAN	901	MAX	3720	MIN	160				
WTR YR 1984	TOTAL	378495	MEAN	1034	MAX	5950	MIN	160				

PISCATAQUA RIVER BASIN

01072100 SALMON FALLS RIVER AT MILTON, N. H.

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.

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 405 ft, from topographic map.

REMARKS.--Records good except those for periods of shifting control Nov. 25 to Jan. 2, which are fair. Flow regulated by Great East and Lovell Lakes and Horn, Wilson, and Milton (also controls Northeast and Town House) Ponds, combined usable capacity, 1,280,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 206 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s Apr. 6, gage height, 6.70 ft; minimum daily, 35 ft³/s Aug. 26 to Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	84	83	575	375	126	420	331	141	2290	158	57	35
2	84	85	492	309	118	286	354	164	1960	99	57	35
3	84	93	427	269	110	231	393	175	1750	55	56	35
4	84	98	396	249	110	233	434	240	1140	55	55	35
5	84	245	382	235	127	226	744	353	739	56	55	35
6	84	419	368	232	149	226	3210	396	659	126	55	35
7	84	404	546	232	161	214	2840	368	594	277	55	35
8	84	147	838	228	157	196	1780	330	515	452	51	35
9	84	57	730	213	147	181	1070	364	472	367	46	35
10	84	79	604	208	136	162	778	385	447	288	46	35
11	84	157	501	210	124	151	509	301	366	241	46	35
12	84	215	434	193	121	95	463	280	231	208	46	35
13	96	250	442	186	121	71	568	333	138	154	43	35
14	109	382	1380	175	125	136	550	470	112	122	41	35
15	109	427	1850	173	170	137	506	472	193	114	41	35
16	109	375	1380	171	364	136	520	427	215	94	41	35
17	130	411	1050	169	558	151	613	402	192	83	41	35
18	139	427	861	161	606	170	638	304	172	69	40	35
19	134	382	635	156	587	208	595	235	126	60	40	35
20	126	347	475	155	557	280	494	254	84	60	40	36
21	126	191	396	149	547	371	501	267	91	60	38	57
22	124	84	404	139	501	467	482	208	92	60	36	84
23	124	144	427	134	428	575	446	178	86	60	36	84
24	133	240	411	136	399	544	469	251	80	58	36	84
25	142	635	375	149	474	473	543	266	84	56	36	84
26	142	1230	340	171	680	365	518	241	133	61	35	84
27	142	1090	334	182	807	328	444	232	152	61	35	84
28	142	762	328	172	666	345	400	321	140	61	35	84
29	139	625	419	157	511	364	371	791	163	61	35	84
30	122	635	475	142	---	360	226	2060	174	60	35	84
31	82	---	450	136	---	336	---	2140	---	58	35	---
TOTAL	3378	10719	18725	5966	9687	8438	21790	13349	13590	3794	1344	1514
MEAN	109	357	604	192	334	272	726	431	453	122	43.4	50.5
MAX	142	1230	1850	375	807	575	3210	2140	2290	452	57	84
MIN	82	57	328	134	110	71	226	141	80	55	35	35

CAL YR 1983 TOTAL 102394 MEAN 281 MAX 2240 MIN 39
WTR YR 1984 TOTAL 112294 MEAN 307 MAX 3210 MIN 35

PISCATAQUA RIVER BASIN

23

01073000 OYSTER RIVER NEAR DURHAM, N. H.

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

DRAINAGE AREA.--12.1 mi².

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

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

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.--50 years, 19.7 ft³/s, 22.11 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 5	0545	186	3.29	Apr. 6	0115	*410	*4.70
Nov. 25	1745	202	3.39	May. 31	1930	304	4.11
Dec. 14	0615	221	3.50				

Minimum discharge, 0.99 ft³/s Oct. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.1	54	25	11	70	62	21	232	6.9	5.2	2.0
2	2.4	2.4	43	21	8.6	42	68	17	184	5.7	5.4	1.7
3	2.0	2.4	37	20	9.2	33	70	30	158	5.4	5.9	1.8
4	1.5	20	31	19	18	27	68	55	96	5.7	7.2	2.1
5	1.4	138	31	19	28	23	167	52	66	6.4	6.7	2.1
6	1.3	47	36	20	36	24	328	43	50	16	6.4	1.8
7	1.4	30	132	20	33	23	145	35	67	40	9.2	1.6
8	1.4	22	80	19	27	18	93	43	64	50	13	1.7
9	1.3	18	68	17	21	15	71	41	45	33	5.4	1.7
10	1.4	14	45	15	18	13	60	38	33	24	4.7	1.6
11	1.6	60	38	16	16	12	53	33	24	18	4.3	1.8
12	1.7	40	32	15	18	10	47	31	19	18	3.9	1.7
13	8.9	27	85	16	22	8.6	42	31	15	12	4.5	1.7
14	5.0	24	200	14	25	8.6	38	35	13	12	6.1	2.4
15	2.5	21	126	13	45	11	34	32	10	11	5.7	3.2
16	1.6	69	74	14	137	14	68	30	8.3	9.2	4.5	2.8
17	1.5	71	59	13	110	20	70	28	7.2	8.0	4.1	2.1
18	1.3	49	47	12	80	23	63	26	12	8.0	3.2	2.0
19	1.3	38	40	11	74	34	67	24	14	10	3.0	1.9
20	1.3	30	30	9.5	80	66	59	23	11	7.5	6.7	1.7
21	1.5	32	24	8.9	73	70	52	21	8.9	5.9	4.5	1.9
22	1.5	34	23	9.2	61	122	42	18	6.4	6.1	3.5	2.0
23	1.4	28	32	8.9	50	102	36	16	5.2	5.0	3.2	1.7
24	3.5	27	32	11	76	85	73	21	4.5	4.3	3.2	1.5
25	4.0	140	26	18	90	70	74	17	9.2	3.9	2.8	1.5
26	2.5	131	27	19	93	66	59	14	14	4.7	2.5	1.5
27	2.1	73	29	16	70	56	45	19	9.2	5.2	2.4	1.5
28	2.0	54	27	16	50	49	36	15	6.4	8.6	2.2	1.6
29	2.2	75	56	14	56	45	32	104	14	6.1	2.2	1.7
30	2.2	70	41	13	---	40	27	209	8.3	5.2	2.1	2.1
31	2.0	---	32	13	---	46	---	232	---	5.0	2.1	---
TOTAL	67.3	1388.9	1637	475.5	1435.8	1246.2	2149	1354	1214.6	366.8	145.8	56.4
MEAN	2.17	46.3	52.8	15.3	49.5	40.2	71.6	43.7	40.5	11.8	4.70	1.88
MAX	8.9	140	200	25	137	122	328	232	232	50	13	3.2
MIN	1.3	2.1	23	8.9	8.6	8.6	27	14	4.5	3.9	2.1	1.5
CFSM	.18	3.83	4.36	1.26	4.09	3.32	5.92	3.61	3.35	.98	.39	.16
IN.	.21	4.27	5.03	1.46	4.41	3.83	6.61	4.16	3.73	1.13	.45	.17

CAL YR 1983	TOTAL	11700.91	MEAN	32.1	MAX	412	MIN	.91	CFSM	2.65	IN	35.97
WTR YR 1984	TOTAL	11537.30	MEAN	31.5	MAX	328	MIN	1.5	CFSM	2.60	IN	35.47

PISCATAQUA RIVER BASIN

01073500 LAMPREY RIVER NEAR NEWMARKET, N. H.

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

DRAINAGE AREA--183 mi².

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

REVISED RECORDS--WSP 1231: 1936-37.

GAGE--Water-stage recorder. Elevation of gage is 40 ft, from topographic map.

REMARKS---Records good except those for winter period and period of no gage-height record Apr. 6-8 which are fair. Some regulation by Pawtuckaway and Mendums Ponds; combined capacity, about 600,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE--50 years, 285 ft³/s, 21.15 in/yr.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 5,490 ft³/s Mar. 20, 1936, gage height, 14.88 ft, from rating curve extended above 3,100 ft³/s on basis of computation of flow over dam at gage height 14.69 ft; minimum daily, 1 ft³/s Oct. 21, 1935.

EXTREMES FOR CURRENT YEAR--Maximum discharge, 3,200 ft³/s Apr. 7, gage height, 9.50 ft from high water mark; minimum daily, 10 ft³/s Oct. 1, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	132	875	360	201	802	757	357	2980	140	58	23
2	13	98	760	330	186	716	820	323	3080	165	56	21
3	16	76	643	310	179	586	875	281	2830	157	53	21
4	17	142	562	300	264	508	935	479	2220	181	53	21
5	14	627	523	285	355	445	1320	699	1620	161	49	21
6	13	586	520	290	451	432	2480	689	1110	186	44	20
7	15	437	946	280	462	429	3070	605	1000	316	45	19
8	18	333	1020	270	426	373	2600	526	1070	565	50	19
9	16	260	950	255	357	295	1840	602	961	586	47	18
10	17	213	792	235	302	281	1400	574	753	517	42	18
11	17	386	656	220	276	262	1140	514	553	386	40	17
12	19	391	556	215	290	231	931	448	413	316	39	17
13	60	320	723	215	325	213	781	432	325	269	39	15
14	86	271	1410	210	363	167	646	437	281	215	45	17
15	89	233	1720	210	550	233	556	454	211	165	49	18
16	78	405	1750	205	1100	281	634	435	199	129	46	19
17	75	611	1380	205	1400	320	831	399	167	113	41	18
18	65	590	1030	195	1590	368	831	352	149	101	37	17
19	62	532	809	190	1460	432	824	309	143	117	34	16
20	48	435	600	185	1400	696	743	311	131	143	44	15
21	45	405	640	175	1340	856	653	297	119	159	45	14
22	47	402	600	170	1150	1130	574	276	107	137	41	13
23	63	355	440	165	950	1230	508	251	92	114	35	13
24	75	333	480	175	958	1160	618	235	82	96	33	13
25	76	788	470	205	1110	1000	767	229	89	85	32	12
26	78	1220	440	264	1180	875	733	213	128	73	30	12
27	108	1200	475	269	1100	792	640	239	120	69	28	12
28	101	1040	540	262	950	733	532	235	110	75	27	11
29	155	965	475	239	904	689	443	547	139	75	25	11
30	218	946	430	224	---	676	397	1540	142	69	25	10
31	171	---	390	211	---	699	---	2220	---	65	24	---
TOTAL	1885	14732	23605	7324	21579	17910	29879	15508	21324	5945	1256	491
MEAN	60.8	491	761	236	744	578	996	500	711	192	40.5	16.4
MAX	218	1220	1750	360	1590	1230	3070	2220	3080	586	58	23
MIN	10	76	390	165	179	167	397	213	82	65	24	10
CFSM	.33	2.68	4.16	1.29	4.07	3.16	5.44	2.73	3.89	1.05	.22	.09
IN.	.38	2.99	4.80	1.49	4.39	3.64	6.07	3.15	4.33	1.21	.26	.10
CAL YR 1983	TOTAL	165161.8	MEAN	452	MAX	4310	MIN	7.1	CFSM	2.47	IN	33.57
WTR YR 1984	TOTAL	161438.0	MEAN	441	MAX	3080	MIN	10	CFSM	2.41	IN	32.82

01073600 DUDLEY BROOK NEAR EXETER, N. H.

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

DRAINAGE AREA.--4.97 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 90 ft, from topographic map.

REMARKS.--Records fair except those for winter period, and those below 3.0 ft³/s, which are poor.

AVERAGE DISCHARGE.--22 years, 7.32 ft³/s, 20.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358 ft³/s Apr. 2, 1973, gage height, 7.74 ft, from rating curve extended above 210 ft³/s; no flow at times some years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1815	150	6.20	Apr. 6	0015	*208	*6.69
Dec. 14	0800	136	6.07	May 31	2115	180	6.46
Feb. 16	0845	151	6.21				

Minimum discharge, 0.02 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.44	15	6.3	3.2	14	34	5.5	115	3.1	.17	.12
2	.10	.35	9.6	4.1	2.7	5.4	40	4.9	98	2.1	.14	.07
3	.07	.35	8.2	3.5	3.1	2.3	36	4.4	79	1.5	.14	.07
4	.05	1.7	6.4	3.0	10	1.2	27	41	30	2.2	.14	.10
5	.04	60	7.8	3.1	21	2.0	81	50	15	2.3	.13	.09
6	.05	47	9.1	3.6	27	5.1	126	20	9.9	1.7	.11	.05
7	.05	13	73	5.1	24	3.9	48	12	28	3.9	.15	.05
8	.05	5.7	58	5.6	17	3.0	28	9.9	24	22	.22	.05
9	.04	3.7	17	4.4	12	2.5	21	23	11	13	.20	.10
10	.04	2.6	12	3.3	7.6	2.1	16	15	6.1	5.4	.20	.09
11	.04	28	11	3.0	6.1	1.8	14	9.1	4.0	3.1	.20	.04
12	.06	24	8.2	3.6	9.6	1.5	12	7.4	2.7	2.8	.17	.05
13	1.5	11	50	4.3	14	1.3	11	7.6	2.1	2.4	.20	.05
14	1.7	5.7	112	4.6	16	1.1	10	8.0	1.8	1.7	.32	.08
15	1.1	4.0	47	4.2	38	1.4	9.1	9.4	1.7	.92	.35	.17
16	.60	33	22	3.8	115	1.6	25	7.2	1.4	.72	.28	.09
17	.40	50	14	3.5	54	2.0	50	5.9	1.0	.54	.20	.06
18	.40	17	9.0	3.2	34	3.1	23	5.1	1.0	.54	2.1	.06
19	.35	10	6.8	2.8	38	10	21	4.1	1.4	.78	3.2	.05
20	.32	5.7	5.0	2.6	37	39	23	4.4	1.3	.72	1.8	.05
21	.32	7.6	3.5	2.5	32	32	16	4.6	.92	.49	1.4	.05
22	.32	17	3.0	2.6	21	50	11	3.7	.60	.32	.78	.06
23	.28	9.4	5.1	2.5	16	28	8.9	3.0	.44	.22	.40	.05
24	1.1	6.8	6.1	3.0	48	15	26	3.6	.36	.17	.32	.04
25	1.5	90	5.4	4.5	64	11	41	2.7	.66	.15	.25	.04
26	1.5	74	5.6	5.0	36	12	21	2.2	1.2	.14	.22	.04
27	1.2	23	6.0	4.8	27	12	13	3.5	1.2	.15	.22	.04
28	.72	13	6.4	4.5	13	14	9.4	3.3	.92	.54	.17	.05
29	.60	28	35	4.4	23	12	7.4	22	1.4	.60	.14	.05
30	.49	28	19	4.0	---	12	6.2	118	4.7	.40	.14	.06
31	.44	---	11	3.6	---	17	---	112	---	.22	.14	---
TOTAL	15.47	620.04	607.2	119.0	769.3	319.3	815.0	532.5	446.80	74.82	14.60	1.97
MEAN	.50	20.7	19.6	3.84	26.5	10.3	27.2	17.2	14.9	2.41	.47	.066
MAX	1.7	90	112	6.3	115	50	126	118	115	22	3.2	.17
MIN	.04	.35	3.0	2.5	2.7	1.1	6.2	2.2	.36	.14	.11	.04
CFSM	.10	4.17	3.94	.77	5.33	2.07	5.47	3.46	3.00	.49	.10	.01
IN.	.12	4.64	4.54	.89	5.76	2.39	6.10	3.98	3.34	.56	.11	.01

CAL YR 1983	TOTAL	4600.26	MEAN	12.6	MAX	138	MIN	.00	CFSM	2.54	IN	34.43
WTR YR 1984	TOTAL	4336.00	MEAN	11.8	MAX	126	MIN	.04	CFSM	2.37	IN	32.45

MERRIMACK RIVER BASIN

01075800 STEVENS BROOK NEAR WENTWORTH, N. H.

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

DRAINAGE AREA.--2.94 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 595 ft, from topographic map.

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

AVERAGE DISCHARGE.--21 years, 4.92 ft³/s, 22.72 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0845	116	3.12	May 29	1345	a265	3.80
Feb. 15	2000	113	3.10	June 7	0415	*a510	*4.74
Apr. 5	2015	a466	4.59				

a From rating curve extended above 120 ft³/s.

Minimum discharge, 0.14 ft³/s Sept 9, 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.21	7.7	2.0	.88	6.0	5.4	3.9	19	1.8	.60	.16
2	.17	.19	5.4	1.8	.86	4.5	8.6	2.4	7.9	1.2	.51	.16
3	.17	.40	4.2	1.7	1.0	3.5	12	1.8	5.2	.80	.47	.15
4	.17	19	3.2	1.6	2.0	3.0	14	10	3.2	.75	.39	.15
5	.24	9.0	3.5	1.5	2.4	2.8	161	6.4	2.3	1.2	.36	.15
6	.56	3.6	4.0	1.4	1.9	2.6	113	3.7	1.7	3.0	.34	.15
7	.36	2.1	33	1.4	1.6	2.4	31	2.7	139	9.8	.34	.15
8	.32	1.5	11	1.3	1.5	2.3	15	4.1	23	6.4	.31	.15
9	.30	1.1	7.2	1.3	1.4	2.2	7.9	7.6	14	2.4	.15	.15
10	.20	.90	4.5	1.2	1.3	2.1	5.7	3.9	8.3	2.0	.26	.14
11	.17	2.4	3.5	1.2	1.3	2.0	4.3	2.7	5.9	3.9	.26	.14
12	.16	8.6	3.5	1.1	1.2	1.9	4.9	19	4.5	8.6	.26	.24
13	1.0	3.2	48	1.1	2.0	1.9	7.9	18	3.7	3.3	.26	.20
14	.65	2.0	86	.98	4.0	1.9	11	19	7.3	2.0	.24	.18
15	.43	1.6	43	.96	54	1.7	18	9.4	6.7	1.6	.24	.34
16	.39	18	28	.94	53	1.6	17	5.4	3.9	1.7	.22	.34
17	.33	25	12	.92	26	1.3	22	3.9	3.0	3.2	.20	.26
18	.29	7.0	7.3	.88	23	2.0	14	2.8	3.0	11	.18	.24
19	.26	3.8	5.4	.86	17	3.5	12	2.7	2.3	8.6	.18	.22
20	.23	2.9	4.0	.84	15	8.1	8.6	5.4	1.7	3.7	.22	.20
21	.21	25	3.0	.82	13	13	7.9	3.3	1.5	2.3	.20	.28
22	.19	15	2.5	.80	7.7	20	4.7	2.6	1.3	1.9	.18	.22
23	.18	7.0	2.1	.78	7.0	13	3.5	2.7	1.2	1.4	.28	.20
24	.83	4.9	1.9	1.0	18	8.6	6.7	4.9	1.2	1.2	.26	.20
25	.61	47	1.8	1.6	25	6.3	8.3	2.8	10	1.0	.22	.18
26	.51	20	1.6	1.5	36	5.8	4.7	2.2	11	.86	.20	.20
27	.43	8.1	1.4	1.3	21	5.2	4.3	1.9	4.0	.86	.18	.22
28	.37	5.4	2.0	1.2	11	4.9	3.9	2.0	2.4	1.1	.15	.22
29	.29	20	7.0	1.1	8.6	5.2	3.9	89	1.8	1.0	.16	.22
30	.26	16	3.0	1.0	---	4.4	3.7	92	2.0	.75	.16	.22
31	.23	---	2.4	.95	---	4.0	---	61	---	.65	.16	---
TOTAL	10.66	280.90	353.1	37.03	358.64	147.7	544.9	399.2	302.0	89.97	8.27	6.03
MEAN	.34	9.36	11.4	1.19	12.4	4.76	18.2	12.9	10.1	2.90	.27	.20
MAX	1.0	47	86	2.0	54	20	161	92	139	11	.60	.34
MIN	.15	.19	1.4	.78	.86	1.3	3.5	1.8	1.2	.65	.15	.14
CFSM	.12	3.18	3.88	.41	4.22	1.62	6.19	4.39	3.44	.99	.09	.07
IN.	.13	3.55	4.47	.47	4.54	1.87	6.89	5.05	3.82	1.14	.10	.08

CAL YR 1983	TOTAL	2590.02	MEAN 7.10	MAX 86	MIN .06	CFSM 2.41	IN 32.76
WTR YR 1984	TOTAL	2538.40	MEAN 6.94	MAX 161	MIN .14	CFSM 2.36	IN 32.11

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, N. H.

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

DRAINAGE AREA.--622 mi².

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

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

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

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

REMARKS.--Records good except those for 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.--81 years, 1,365 ft³/s, 29.80 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	--	21,000	--	May 13	0300	16,600	10.14
Apr. 6	0600	*29,500	16.05	May 31	0100	25,900	*16.07

Minimum discharge, 151 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	276	2320	1250	330	1150	1090	4690	13300	880	433	190
2	171	265	1700	1100	320	1050	1250	3050	7060	742	407	190
3	169	265	1250	1020	310	1150	1450	2220	5640	638	382	186
4	166	1100	948	950	340	1030	1850	3380	4030	607	358	190
5	185	4500	1040	880	870	950	6200	4100	3140	599	335	194
6	339	2500	948	820	920	1000	24400	2790	2550	1090	318	181
7	432	1490	5210	780	680	900	12900	2410	7280	3020	312	177
8	299	1090	3420	730	590	760	8110	2610	5160	3950	324	168
9	243	905	2030	700	620	760	5210	5140	3130	1830	307	164
10	216	854	1600	660	440	710	3930	3650	2350	1330	285	155
11	202	1070	1210	600	600	650	3190	2640	1790	1090	280	164
12	199	2520	1120	560	740	570	3040	6260	1410	3320	290	181
13	614	1740	4690	510	900	610	3640	10400	1200	1880	280	190
14	1080	1150	18800	560	1500	620	3910	6410	1210	1170	270	181
15	945	966	10300	520	2200	640	4990	5160	1660	920	275	194
16	584	1130	6250	480	3800	680	4360	3640	1200	890	275	217
17	458	3890	4150	500	3600	620	6820	2900	1020	1920	250	226
18	399	2290	2990	520	2900	570	6050	2390	940	1820	230	208
19	360	1420	2330	540	2300	1370	5340	2050	992	3500	221	190
20	330	1130	1950	470	1900	2730	4770	2670	900	1810	221	177
21	307	2550	1600	490	1600	3450	4700	2490	783	1200	217	181
22	289	4430	1590	400	1750	3280	3670	2130	725	1030	208	217
23	278	2500	1620	440	2000	2850	2990	2130	677	860	217	181
24	350	1740	1500	390	2150	2070	3380	3920	607	750	240	164
25	465	6250	1330	360	2500	1580	4860	2540	2950	653	230	164
26	393	7040	1180	440	3000	1370	3430	1920	4370	584	221	160
27	350	3420	1120	400	2000	1240	3090	1710	1960	562	203	168
28	330	2420	1150	390	1750	1180	3070	1430	1230	661	194	177
29	309	2680	1550	370	1400	1170	3150	7410	992	592	186	164
30	314	3440	1630	360	---	1100	3520	22600	1090	511	181	160
31	287	---	1390	345	---	1030	---	24700	---	475	186	---
TOTAL	11234	67021	89916	18535	44010	38840	148360	151540	81346	40884	8336	5459
MEAN	362	2234	2901	598	1518	1253	4945	4888	2712	1319	269	182
MAX	1080	7040	18800	1250	3800	3450	24400	24700	13300	3950	433	226
MIN	166	265	948	345	310	570	1090	1430	607	475	181	155
CFSM	.58	3.59	4.66	.96	2.44	2.01	7.95	7.86	4.36	2.12	.43	.29
IN.	.67	4.01	5.38	1.11	2.63	2.32	8.87	9.06	4.87	2.45	.50	.33

CAL YR 1984 TOTAL 585653 MEAN 1605 MAX 18800 MIN 135 CFSM 2.58 IN 35.03
WTR YR 1984 TOTAL 705481 MEAN 1928 MAX 24700 MIN 155 CFSM 3.10 IN 42.19

MERRIMACK RIVER BASIN

01077000 SQUAM RIVER AT ASHLAND, N. H.

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

DRAINAGE AREA.--57.6 mi².

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 545 ft, from topographic map.

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

AVERAGE DISCHARGE.--45 years, 89.9 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 890 ft³/s May 30, gage height, 13.30 ft; minimum daily, 7.5 ft³/s July 3-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	61	120	196	131	169	177	65	807	250	82	60
2	60	61	121	196	130	169	178	66	760	88	82	60
3	60	61	122	160	130	169	179	66	785	7.5	82	60
4	60	63	122	133	130	169	179	67	768	7.5	81	60
5	59	60	122	132	130	169	272	66	752	7.5	81	60
6	59	59	121	133	131	169	533	66	422	38	69	60
7	60	59	124	133	133	144	664	66	291	83	61	59
8	59	61	124	133	133	130	727	67	381	83	61	59
9	60	61	124	133	132	130	716	66	380	69	61	59
10	59	60	124	133	130	130	702	66	378	82	62	59
11	59	61	124	133	130	130	688	66	371	82	61	59
12	59	61	124	134	130	130	472	68	246	82	61	59
13	60	61	146	133	130	130	326	68	158	110	61	59
14	59	61	247	133	131	130	300	110	160	128	61	61
15	58	61	298	134	131	130	300	133	215	128	61	61
16	59	61	297	134	133	130	453	132	257	128	61	61
17	59	60	297	133	133	130	605	150	252	128	61	61
18	58	61	296	133	133	130	398	194	248	127	61	61
19	57	61	296	133	132	132	299	204	195	128	61	61
20	59	62	296	133	133	133	221	204	139	127	61	60
21	61	70	294	133	133	133	172	204	115	127	61	61
22	61	84	294	133	133	135	172	177	114	128	61	61
23	61	84	295	133	133	158	172	160	113	127	61	60
24	62	84	294	133	134	176	105	158	113	127	61	60
25	61	87	291	133	135	176	66	156	139	126	61	60
26	61	86	290	133	138	176	66	156	226	125	61	59
27	61	86	140	133	156	176	65	156	253	126	61	59
28	61	105	196	133	169	176	64	157	253	126	61	59
29	61	122	196	133	169	176	65	481	253	126	61	59
30	60	121	196	133	---	176	65	790	250	97	60	59
31	60	---	196	131	---	176	---	854	---	82	60	---
TOTAL	1853	2145	6327	4276	3926	4687	9401	5439	9794	3200.5	2001	1796
MEAN	59.8	71.5	204	138	135	151	313	175	326	103	64.5	59.9
MAX	62	122	298	196	169	176	727	854	807	250	82	61
MIN	57	59	120	131	130	130	64	65	113	7.5	60	59
CAL YR 1983	TOTAL	42205.5	MEAN 116	MAX 494	MIN 4.4							
WTR YR 1984	TOTAL	54845.5	MEAN 150	MAX 854	MIN 7.5							

MERRIMACK RIVER BASIN

29

01078000 SMITH RIVER NEAR BRISTOL, N. H.

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

DRAINAGE AREA.--85.8 mi².

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

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

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

REMARKS.--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.--66 years, 144 ft³/s, 22.79 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	1030	1,630	6.51	May 31	0400	*2,770	*8.41
Apr. 5	2130	2,670	8.24				

Minimum discharge, 9.3 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	22	392	121	67	251	206	175	1720	54	25	13
2	11	22	271	111	63	206	250	162	1020	50	25	12
3	10	22	214	108	60	182	310	151	729	46	23	14
4	9.9	322	178	105	72	141	369	274	552	46	22	14
5	10	700	168	105	99	141	1150	400	370	52	20	13
6	17	505	170	98	107	141	2470	289	234	147	19	13
7	15	255	529	94	95	129	2010	220	395	241	21	13
8	14	158	498	88	89	120	1180	196	324	292	21	12
9	13	115	290	85	85	113	793	229	222	173	19	11
10	12	92	273	82	74	104	547	206	169	116	18	10
11	11	126	198	80	68	99	412	172	136	91	17	11
12	12	219	153	74	68	88	406	275	111	97	27	20
13	52	181	414	72	79	78	471	530	94	79	28	18
14	58	129	1480	72	94	88	476	528	109	60	25	20
15	42	104	1400	70	193	116	443	491	140	50	23	24
16	31	158	971	68	720	111	505	332	106	43	20	29
17	24	402	659	66	769	119	721	251	87	39	18	27
18	22	324	417	66	732	122	713	208	79	49	16	22
19	19	213	294	64	606	137	590	184	84	89	16	19
20	18	159	168	62	478	224	511	216	73	67	19	17
21	17	244	140	60	401	348	485	204	62	50	17	17
22	16	443	130	58	318	534	385	171	53	41	16	15
23	16	315	125	58	269	522	301	153	47	36	23	13
24	40	230	115	62	396	361	311	190	43	33	22	13
25	54	610	110	85	657	290	424	172	82	30	22	12
26	43	824	100	111	946	260	359	136	156	26	19	12
27	34	598	100	101	706	232	276	125	108	29	16	11
28	29	337	110	85	487	224	231	132	75	40	15	9.8
29	26	412	150	76	329	225	201	721	61	37	14	10
30	23	537	172	71	---	204	185	1920	57	32	14	9.9
31	22	---	140	69	---	187	---	2600	---	27	14	---
TOTAL	730.3	8778	10529	2527	9127	6097	17691	12013	7498	2262	614	454.7
MEAN	23.6	293	340	81.5	315	197	590	388	250	73.0	19.8	15.2
MAX	58	824	1480	121	946	534	2470	2600	1720	292	28	29
MIN	9.4	22	100	58	60	78	185	125	43	26	14	9.8
CFSM	.28	3.42	3.96	.95	3.67	2.30	6.88	4.52	2.91	.85	.23	.18
IN.	.32	3.81	4.56	1.10	3.96	2.64	7.67	5.21	3.25	.98	.27	.20
CAL YR 1983	TOTAL	71874.6	MEAN 197	MAX 1480	MIN 8.8	CFSM 2.30	IN 31.16					
WTR YR 1984	TOTAL	78321.0	MEAN 214	MAX 2600	MIN 9.4	CFSM 2.49	IN 33.96					

MERRIMACK RIVER BASIN

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, N. H.

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

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

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

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

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

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7,220,000,000 ft³ between elevations 500.65 ft and 504.32 ft above National Geodetic Vertical Datum of 1929. Stage regulated at outlet and by Wentworth, Merrymeeting (Reservoirs in Merrimack River basin), and other lakes. Contents given herein are computed from gage height at 2400 on last day of month, eliminating the effect of seiche and wind action.

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 5.94 ft June 4; minimum daily, 2.74 ft Oct. 31 to Nov. 3.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.87	2.74	3.98	3.73	3.19	3.82	3.88	4.15	5.66	4.46	4.03	3.59
2	2.89	2.74	3.98	3.67	3.18	3.80	3.87	4.17	5.82	4.42	4.03	3.55
3	2.88	2.74	3.97	3.61	3.16	3.78	3.90	4.18	5.91	4.40	4.03	3.55
4	2.87	2.86	4.00	3.58	3.16	3.77	3.90	4.27	5.93	4.38	4.00	3.54
5	2.89	3.06	4.01	3.57	3.17	3.75	4.02	4.29	5.94	4.38	3.99	3.51
6	2.86	3.06	4.03	3.56	3.20	3.76	4.27	4.32	5.90	4.44	3.98	3.46
7	2.83	3.05	4.08	3.55	3.21	3.75	4.38	4.32	5.94	4.54	3.97	3.44
8	2.82	3.07	4.12	3.54	3.19	3.77	4.43	4.36	5.94	4.60	3.98	3.41
9	2.80	3.08	4.11	3.52	3.18	3.75	4.44	4.42	5.88	4.59	3.97	3.42
10	2.79	3.11	4.08	3.54	3.18	3.73	4.44	4.44	5.83	4.58	3.95	3.39
11	2.77	3.15	4.05	3.58	3.17	3.69	4.43	4.45	5.75	4.57	3.94	3.37
12	2.77	3.14	4.02	3.57	3.15	3.66	4.39	4.53	5.67	4.55	3.92	3.37
13	2.91	3.16	4.10	3.55	3.15	3.66	4.35	4.66	5.56	4.53	3.91	3.35
14	2.91	3.19	4.28	3.52	3.14	3.73	4.30	4.72	5.49	4.50	3.91	3.34
15	2.87	3.20	4.32	3.51	3.18	3.73	4.26	4.76	5.38	4.44	3.87	3.37
16	2.86	3.32	4.34	3.48	3.30	3.71	4.26	4.76	5.31	4.42	3.84	3.32
17	2.86	3.40	4.33	3.44	3.35	3.68	4.27	4.76	5.22	4.37	3.80	3.31
18	2.85	3.40	4.31	3.41	3.42	3.66	4.26	4.73	5.13	4.36	3.79	3.29
19	2.84	3.41	4.28	3.39	3.48	3.71	4.24	4.70	5.05	4.36	3.77	3.26
20	2.83	3.43	4.24	3.36	3.51	3.73	4.23	4.69	4.94	4.31	3.80	3.26
21	2.82	3.48	4.20	3.33	3.53	3.78	4.21	4.66	4.87	4.27	3.77	3.24
22	2.81	3.51	4.17	3.30	3.54	3.84	4.19	4.62	4.79	4.23	3.76	3.23
23	2.79	3.52	4.10	3.27	3.54	3.87	4.16	4.58	4.74	4.19	3.78	3.20
24	2.86	3.54	4.06	3.25	3.56	3.86	4.17	4.59	4.69	4.13	3.79	3.19
25	2.86	3.67	3.95	3.27	3.61	3.86	4.19	4.56	4.67	4.10	3.77	3.21
26	2.84	3.74	3.94	3.26	3.72	3.86	4.19	4.58	4.64	4.10	3.75	3.17
27	2.82	3.75	3.89	3.24	3.77	3.85	4.18	4.59	4.59	4.13	3.74	3.14
28	2.81	3.87	3.86	3.22	3.81	3.84	4.17	4.60	4.54	4.15	3.72	3.13
29	2.75	3.96	3.89	3.22	3.85	3.85	4.17	4.78	4.52	4.13	3.70	3.09
30	2.76	3.98	3.84	3.21	---	3.90	4.17	5.08	4.48	4.11	3.66	3.08
31	2.74	---	3.78	3.19	---	3.88	---	5.40	---	4.04	3.62	---
MEAN	2.83	3.31	4.07	3.43	3.37	3.78	4.21	4.57	5.29	4.35	3.86	3.33
MAX	2.91	3.98	4.34	3.73	3.85	3.90	4.44	5.40	5.94	4.60	4.03	3.59
MIN	2.74	2.74	3.78	3.19	3.14	3.66	3.87	4.15	4.48	4.04	3.62	3.08
(+)	15330	17800	1732	16180	17500	17640	18000	20950	18780	17900	17100	15960
(-)	-105	+953	-179	-426	+527	+52.3	+139	+1101	-837	-329	-299	-440

CAL YR 1983 MEAN 3.19 MAX 4.61 MIN 2.74

WTR YR 1984 MEAN 3.87 MAX 5.94 MIN 2.74

† Contents, in millions of cubic feet at 2400 on last day of month.

‡ Change in contents, equivalent in cubic feet per second.

01081000 WINNIPESAUKEE RIVER AT TILTON, N. H.

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

DRAINAGE AREA.--471 mi².

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

REVISED RECORDS.--WSP 1901: 1960.

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

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

AVERAGE DISCHARGE.--47 years, 716 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,580 ft³/s May 31, gage height, 8.68 ft, minimum daily, 223 ft³/s Oct. 20-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	262	292	1440	2270	747	2230	1440	645	4190	751	300	289
2	273	281	1380	2230	767	2170	1470	538	3700	721	300	289
3	258	288	1330	2200	817	1970	1480	504	3880	720	300	289
4	258	352	1300	2050	853	1730	1500	551	3490	647	300	289
5	296	458	1300	1780	895	1560	1850	622	3330	647	300	289
6	296	441	1420	1410	921	1470	3080	608	3340	863	300	285
7	296	416	1870	1010	895	1370	2930	586	4000	1410	304	285
8	277	332	2080	958	879	1270	2870	568	4290	1820	308	285
9	262	328	2070	890	833	1220	2850	582	3770	1740	308	285
10	247	332	2150	762	817	1090	2770	577	3470	1560	292	281
11	240	348	2190	782	817	1080	2750	573	3250	1440	292	281
12	251	340	2200	787	802	1080	2770	622	3170	1360	292	281
13	344	312	2470	828	802	1110	2770	772	3130	1240	292	281
14	320	285	3280	906	807	1160	2730	1010	3170	1200	289	281
15	270	292	3400	968	859	1150	2670	1530	3250	1170	289	281
16	247	352	3130	1010	1240	1160	2680	1510	3130	1050	289	281
17	230	437	2900	1020	1610	1170	2780	1480	2990	995	289	278
18	226	403	2700	1040	1650	1150	2750	1500	2890	1020	289	278
19	226	348	2570	1100	1720	1230	2700	1550	2830	1080	316	278
20	223	324	2430	1180	1720	1350	2660	1610	2710	1070	312	278
21	223	386	2340	1180	1680	1420	2490	1670	2500	1050	296	278
22	223	386	2320	1170	1660	1530	2290	1750	2340	1040	292	281
23	223	373	2320	1160	1640	1630	2130	1670	2140	1020	300	281
24	223	425	2280	1180	1820	1700	2100	1370	1960	776	316	281
25	237	727	2220	1200	2140	1670	2020	1130	1850	604	304	281
26	247	1050	2210	1070	2550	1660	1750	859	1720	553	296	281
27	240	1000	2180	926	2530	1600	1410	921	1340	523	292	281
28	277	1030	2130	702	2360	1480	1050	1170	1110	527	292	281
29	288	1460	2260	702	2320	1480	995	2360	863	427	292	281
30	273	1500	2310	712	---	1460	900	4100	815	386	292	278
31	266	---	2300	712	---	1420	---	4480	---	336	292	---
TOTAL	8022	15298	68480	35895	39151	44770	66635	39418	84618	29746	9225	8468
MEAN	259	510	2209	1158	1350	1444	2221	1272	2821	960	298	282
MAX	344	1500	3400	2270	2550	2230	3080	4480	4290	1820	316	289
MIN	223	281	1300	702	747	1080	900	504	815	336	289	278
CAL YR 1983	TOTAL	363868	MEAN	997	MAX	3400	MIN	223				
WTR YR 1984	TOTAL	449726	MEAN	1229	MAX	4480	MIN	223				

MERRIMACK RIVER BASIN

01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, N. H.

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

DRAINAGE AREA.--46.9 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 790 ft, from topographic map. Prior to Oct. 1, 1931, at site 550 ft 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.--50 years, 85.5 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,130 ft³/s Apr. 11, 1931, gage height, 5.59 ft, site and datum then in use, from rating curve extended above 380 ft³/s; minimum daily, 0.5 ft³/s Aug. 1, 1926. Maximum discharge since construction of Edward MacDowell Reservoir in 1950, 699 ft³/s Apr. 12, 1960, gage height, 4.54 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 608 ft³/s June 5, gage height, 4.17 ft; minimum daily, 5.1 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	11	274	100	60	280	139	119	37	17	14	5.1
2	12	18	208	90	60	200	141	126	93	7.7	14	7.3
3	9.1	29	124	89	60	160	144	123	269	8.5	14	9.7
4	8.8	31	58	80	60	130	149	144	493	18	14	9.7
5	26	35	46	75	65	90	165	150	597	18	14	9.7
6	48	41	66	76	75	90	170	155	597	19	14	9.7
7	37	55	92	75	110	100	218	168	601	37	14	10
8	31	65	171	75	135	150	301	143	604	42	14	11
9	31	47	238	50	130	140	424	200	596	92	14	11
10	31	35	192	60	95	140	524	238	586	149	14	11
11	31	38	155	65	75	125	549	248	579	162	14	12
12	38	37	100	65	77	90	512	210	568	155	14	12
13	74	45	90	65	79	98	435	191	517	127	14	12
14	95	51	82	65	94	90	235	196	449	65	14	13
15	95	51	170	65	115	79	101	211	480	47	14	13
16	77	68	340	63	140	116	117	222	462	47	14	13
17	59	88	400	57	200	113	295	207	390	40	14	13
18	40	186	452	55	350	94	438	179	203	31	14	13
19	31	217	492	55	400	85	496	144	115	68	14	19
20	26	143	496	55	420	102	537	132	117	97	15	37
21	22	124	440	50	485	107	529	131	110	93	14	48
22	15	82	264	50	544	133	379	114	95	51	14	52
23	11	61	139	50	468	208	288	108	49	30	18	47
24	21	62	140	50	380	238	285	131	20	35	29	23
25	31	106	135	50	371	233	401	157	21	39	45	7.6
26	31	99	78	60	370	225	369	127	27	20	49	9.3
27	30	205	72	70	355	214	305	113	27	14	36	17
28	19	223	90	70	345	204	213	98	27	14	20	23
29	11	207	100	70	330	176	158	150	27	14	13	23
30	11	261	140	70	---	147	121	142	27	14	13	14
31	11	---	150	60	---	138	---	83	---	14	12	---
TOTAL	1022.1	2721	5994	2030	6448	4495	9138	4860	8783	1585.2	544	515.1
MEAN	33.0	90.7	193	65.5	222	145	305	157	293	51.1	17.5	17.2
MAX	95	261	496	100	544	280	549	248	604	162	49	52
MIN	8.8	11	46	50	60	79	101	83	20	7.7	12	5.1
CAL YR 1983	TOTAL	41811.1	MEAN 115	MAX 594	MIN 2.6							
WTR YR 1984	TOTAL	48135.4	MEAN 132	MAX 604	MIN 5.1							

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

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

DRAINAGE AREA.--427 mi².

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

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

REMARKS.--Records good except those for winter period, period of backwater from grass, June 23 to July 5, July 17-18, July 21 to Sept. 4 and Sept. 18 to Sept. 30, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward Macdowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River during periods of high flow in March 1968, April 1969, March 1977, March 1979, and May and June 1984. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years (water years 1963-84), 718 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,620 ft³/s Mar. 17, 1977, gage height, 10.04 ft; minimum daily, 15 ft³/s July 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,490 ft³/s Apr. 10, gage height, 7.74 ft; minimum daily discharge, 59 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	108	2100	700	820	1960	1230	1010	805	220	145	250
2	101	106	1950	660	770	1640	1260	919	892	155	115	110
3	167	98	1400	630	720	1340	1360	751	944	120	105	90
4	203	142	1170	610	800	1330	1580	991	1430	170	115	100
5	286	316	1080	600	1070	1210	2120	1680	2510	110	82	392
6	261	549	816	570	1280	1110	2580	1770	3170	616	68	465
7	201	673	1170	520	1330	1070	2570	1660	3490	793	86	470
8	188	611	1560	490	1350	924	3220	1240	3520	1210	100	476
9	189	485	1550	480	1210	939	3880	1570	3580	1120	100	476
10	82	413	1510	470	1100	872	4400	1640	3580	841	98	476
11	98	417	1420	470	1000	873	4390	1340	3460	903	94	476
12	75	550	1260	475	893	856	4060	1160	3270	909	90	470
13	229	629	1200	480	797	824	3470	1430	3020	853	91	465
14	304	409	2010	490	774	827	2900	1640	2050	878	105	448
15	365	82	2310	485	1000	851	2600	1760	1160	605	115	448
16	316	71	2950	480	2090	826	2620	1440	973	532	115	448
17	287	250	3760	470	3320	704	3040	1310	859	410	110	438
18	272	1150	3660	460	3990	692	3330	1200	769	425	100	150
19	227	1770	2740	440	4090	753	3380	1150	678	799	92	105
20	264	1690	1700	430	3790	940	3210	1080	515	634	110	90
21	207	1570	1460	425	3580	1210	2800	1060	457	415	130	80
22	288	1430	1100	415	3300	1650	2370	1010	397	390	115	75
23	156	1300	1050	400	2840	1930	2150	709	350	360	105	72
24	81	831	840	385	2540	1980	1870	836	330	320	110	68
25	275	1140	770	400	2830	1980	2050	943	310	300	115	65
26	273	1810	720	440	3040	1930	2230	837	345	290	110	63
27	151	2210	790	490	3060	1840	2090	814	340	420	120	62
28	191	2290	860	570	2780	1640	1760	898	310	480	150	61
29	318	2150	940	550	2290	1340	1470	1520	275	400	250	60
30	239	2190	890	530	---	1420	1290	2330	265	210	380	59
31	167	---	780	680	---	1400	---	1300	---	150	340	---
TOTAL	6572	27440	47516	15695	58454	38861	77280	38998	44054	16038	3961	7508
MEAN	212	915	1533	506	2016	1254	2576	1258	1468	517	128	250
MAX	365	2290	3760	700	4090	1980	4400	2330	3580	1210	380	476
MIN	75	71	720	385	720	692	1230	709	265	110	68	59
(†)	0	0	0	0	0	0	0	2230	31980	0	0	0
CAL YR 1983	TOTAL	328425	MEAN	900	MAX	4600	MIN	28				
WTR YR 1984	TOTAL	382377	MEAN	1045	MAX	4400	MIN	59				

MERRIMACK RIVER BASIN

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

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

DRAINAGE AREA---5.75 mi².

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

Water-quality records: Water year 1976.

GAGE---Water-stage recorder. Elevation of gage is 950 ft from topographic map.

REMARKS---Records fair except those for periods of no gage-height record Oct. 2-25, Dec. 13-15, Apr. 5-7, 16, May 29-31, June 11 to July 26, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE---22 years, 11.7 ft³/s, 27.63 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1300	224	6.88	Apr. 6	--	a609	b*8.83
Dec. 14 or 15	--	300	--	Apr. 16	--	150	--
Feb. 15	--	300	--	May 4	0845	163	6.38
Feb. 25	2345	140	6.19	May 29 or 30	--	*800	--

a From rating curve extended above 210 ft³/s.

b From highwater mark.

Minimum discharge, 0.21 ft³/s Sept. 25.

REVISIONS---Revised daily discharges, in cubic feet per second, for June 1983, are given below. These figures supersede those published in the report of 1983.

September 22.....	1.0	September 25.....	.43	September 27.....	.35	September 29.....	.29
23.....	.80	26.....	.38	28.....	.32	30.....	.26
24.....	.54						

MONTH	TOTAL	MEAN	MAX	MIN	CFSM	IN
September 1983	12.29	.41	1.5	.21	.07	.08
Wtr Yr 1983	4597.41	12.60	207	.21	2.19	29.74

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	1.6	18	6.6	3.3	15	16	14	67	3.3	.78	.28
2	.50	1.5	13	5.8	3.3	13	22	13	48	2.8	.72	.26
3	.40	1.6	11	5.2	3.4	11	33	11	39	2.4	.66	.35
4	.36	12	8.6	4.9	11	9.4	31	81	24	2.5	.64	.43
5	.90	21	9.4	5.3	11	8.9	85	42	17	2.7	.58	.43
6	1.2	14	10	5.3	8.4	8.4	150	25	15	3.0	.54	.38
7	.90	6.6	62	5.0	6.2	7.8	119	19	17	24	.53	.30
8	.65	4.1	21	4.5	5.4	7.3	71	26	11	12	.56	.28
9	.45	2.9	14	4.3	5.0	6.6	44	31	8.6	7.0	.49	.28
10	.38	2.4	12	4.0	4.6	6.2	33	20	6.7	2.7	.43	.28
11	.35	11	9.4	3.8	5.0	5.8	32	17	6.2	4.0	.43	.26
12	2.0	17	8.6	3.7	5.8	5.5	49	33	5.8	6.0	.49	.28
13	15	8.9	110	3.6	8.0	4.9	55	33	5.4	4.3	.53	.30
14	8.0	5.8	170	3.6	10	7.3	47	47	6.0	2.0	.64	.31
15	5.0	4.5	86	3.5	49	5.1	47	29	5.4	1.2	.68	.38
16	4.0	16	52	3.5	145	6.2	102	21	5.0	1.4	.56	.43
17	3.0	27	29	3.5	60	8.6	83	17	4.4	1.7	.46	.35
18	2.0	14	20	3.4	43	6.9	54	15	5.1	5.6	.38	.33
19	1.6	8.8	14	3.3	30	12	47	14	4.7	3.5	.33	.27
20	1.3	6.8	9.6	3.3	25	19	47	23	4.2	2.0	.72	.28
21	1.1	38	8.2	3.2	21	22	37	16	3.5	1.7	.49	.30
22	.95	28	7.5	3.1	19	43	25	13	3.0	1.4	.43	.26
23	.85	18	7.0	3.1	18	31	21	15	2.5	1.2	.68	.26
24	14	17	6.5	5.3	65	21	51	24	4.0	1.0	.60	.26
25	5.0	116	6.2	8.6	70	18	51	14	7.6	.90	.49	.24
26	1.3	43	6.0	5.6	83	17	30	11	6.0	.85	.43	.26
27	1.2	22	6.0	4.8	39	16	23	11	4.0	1.5	.40	.28
28	1.0	15	6.4	4.3	22	15	19	14	3.4	2.0	.38	.28
29	.97	44	20	4.1	19	15	17	150	3.3	1.5	.35	.28
30	1.2	36	10	3.7	---	13	15	300	3.2	1.1	.35	.28
31	1.6	---	7.6	3.6	---	12	---	175	---	.90	.33	---
TOTAL	77.40	564.5	779.0	135.5	798.4	397.9	1456	1274	346.0	108.15	16.08	9.16
MEAN	2.50	18.8	25.1	4.37	27.5	12.8	48.5	41.1	11.5	3.49	.52	.31
MAX	15	116	170	8.6	145	43	150	300	67	24	.78	.43
MIN	.24	1.5	6.0	3.1	3.3	4.9	15	11	2.5	.85	.33	.24
CFSM	.44	3.27	4.37	.76	4.78	2.23	8.44	7.15	2.00	.61	.09	.05
IN.	.50	3.65	5.04	.88	5.16	2.57	9.42	8.24	2.24	.70	.10	.06

CAL YR 1983	TOTAL	5594.35	MEAN	15.3	MAX	207	MIN	.21	CFSM	2.66	IN	36.19
WTR YR 1984	TOTAL	5962.09	MEAN	16.3	MAX	300	MIN	.24	CFSM	2.84	IN	38.57

01087000 BLACKWATER RIVER NEAR WEBSTER, N. H.

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

DRAINAGE AREA.--129 mi².

PERIOD OF RECORD.--Discharge: May 1918 to September 1920, February 1927 to current year. Published as "near Contoocook" 1918-20, 1927-35. Records published for both sites October 1934 to September 1935. Water-quality records: Water year 1957.

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

GAGE.--Water-stage recorder. Elevation of gage is 430 ft, from topographic map. Prior to Oct. 1, 1935, chain gage at site 5 mi 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.--59 years, 215 ft³/s, 22.63 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,000 ft³/s Mar. 19, 1936, gage height, 11.78 ft, from floodmarks, from rating curve extended above 6,700 ft³/s on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 ft³/s Sept. 17, 1941; minimum daily, 7.6 ft³/s Sept. 29, 1964. Maximum discharge since construction of Blackwater Reservoir in 1941, 2,390 ft³/s Apr. 16, 1951, Apr. 10, 1952, gage height, 7.18 ft. Maximum stage since at least 1733, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s Dec. 16; gage height, 6.77 ft; minimum, 16.8 ft³/s Oct. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	37	767	270	112	520	351	329	50	112	54	21
2	19	34	659	210	111	396	309	306	70	102	52	20
3	19	33	495	200	110	357	354	284	129	94	49	21
4	18	54	412	195	115	307	496	337	349	90	46	34
5	18	296	365	190	125	281	650	510	590	90	44	72
6	19	578	343	175	140	288	750	581	698	157	41	94
7	19	596	500	165	150	278	683	473	889	264	39	97
8	19	366	744	155	135	246	687	379	950	358	38	97
9	19	237	765	150	130	242	1020	363	985	343	36	97
10	18	179	590	145	125	216	1500	364	984	242	34	91
11	18	165	442	140	122	212	1760	333	1050	179	33	84
12	18	202	378	135	121	198	1780	309	1160	156	32	78
13	40	253	419	132	123	189	1500	398	1190	138	30	73
14	62	242	845	132	128	163	1140	573	1420	119	31	68
15	68	195	931	132	400	195	990	640	1720	103	36	65
16	62	207	1460	128	540	222	1050	644	1680	90	32	63
17	53	326	1880	127	800	219	1270	499	1550	83	30	61
18	45	475	1620	122	930	219	1270	391	1250	87	28	58
19	39	442	1190	120	920	242	1050	335	266	101	26	54
20	34	319	640	119	820	294	754	336	179	100	29	51
21	30	271	540	118	720	384	701	373	152	93	27	46
22	33	354	350	118	600	509	661	356	134	87	26	44
23	27	467	300	118	500	630	530	308	119	84	27	41
24	34	425	340	119	450	683	494	313	109	73	29	37
25	54	449	345	120	600	586	564	310	110	64	30	33
26	66	697	330	122	800	484	656	272	126	58	30	30
27	66	980	285	130	940	437	594	248	135	56	29	25
28	58	970	280	128	980	408	479	238	124	60	26	25
29	50	650	275	122	950	362	408	437	119	60	25	22
30	45	661	280	120	---	383	363	524	123	62	23	19
31	41	---	400	115	---	366	---	79	---	59	22	---
TOTAL	1130	11160	19170	4472	12697	10516	24814	11842	18410	3764	1034	1621
MEAN	36.5	372	618	144	438	339	827	382	614	121	33.4	54.0
MAX	68	980	1880	270	980	683	1780	644	1720	358	54	97
MIN	18	33	275	115	110	163	309	79	50	56	22	19
MEAN†	36.5	379	612	144	443	341	820	556	433	121	33.3	54.1
CFSM†	.28	2.94	4.74	1.12	3.43	2.64	6.36	4.31	3.36	.94	.26	.42
IN†	.33	3.28	5.47	1.28	3.71	3.05	7.10	4.97	3.74	1.08	.30	.47

CAL YR 1983 TOTAL 109757 MEAN 301 MAX 1880 MIN 16 MEAN† 301 CFSM† 2.33 IN† 31.65
WTR YR 1984 TOTAL 120630 MEAN 330 MAX 1880 MIN 18 MEAN† 330 CFSM† 2.58 IN† 34.79

† Adjusted for change in contents for Blackwater Reservoir.

MERRIMACK RIVER BASIN

01089000 SOUCCOOK RIVER NEAR CONCORD, N. H.

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

DRAINAGE AREA.--76.8 mi².

PERIOD OF RECORD.--Discharge: October 1951 to current year.

Water-quality records: Water years 1967-74.

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

GAGE.--Water-stage recorder. Elevation of gage is 290 ft, from topographic map.

REMARKS.--Records good except those for winter period which are fair. No gage-height record Dec. 20 to Jan. 29. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--33 years, 115 ft³/s, 20.34 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	0630	801	9.54	Apr. 6	1430	1,610	11.11
Dec. 14	2000	1,350	10.68	June 1	0230	*2,880	*13.37
Feb. 17	0015	884	9.73	June 7	1930	788	9.62
Feb. 26	1800	1,120	10.25	July 8	0415	855	9.78

Minimum discharge, 6.1 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	18	302	150	71	379	259	121	2320	59	25	13
2	22	19	241	140	73	281	290	108	1180	51	25	12
3	24	18	205	135	70	256	306	101	1160	43	25	12
4	15	46	177	125	78	199	318	197	657	39	22	13
5	12	239	170	120	98	170	444	277	427	48	21	13
6	11	175	162	120	179	165	1380	199	314	401	23	12
7	11	122	450	115	179	160	919	162	600	401	22	12
8	10	94	484	110	126	154	594	145	585	715	22	11
9	11	76	358	105	110	126	453	188	353	368	21	11
10	11	64	259	110	98	100	361	164	246	235	22	11
11	9.5	76	212	95	98	94	311	141	187	171	21	10
12	9.7	101	203	92	100	88	277	153	146	151	21	11
13	38	94	382	90	102	83	246	338	112	120	20	10
14	43	77	1120	89	113	76	220	318	102	96	21	12
15	33	68	964	88	207	102	205	328	93	79	21	13
16	27	112	590	90	708	106	231	248	80	67	19	15
17	23	290	438	87	746	117	353	201	72	60	19	14
18	20	209	338	85	600	118	313	170	68	65	16	13
19	23	151	283	80	652	152	283	153	67	102	15	12
20	23	122	250	79	587	283	277	179	58	77	21	12
21	21	122	265	75	531	366	252	159	67	62	24	11
22	19	154	250	72	498	421	210	139	65	52	20	11
23	17	130	180	70	350	461	190	125	57	46	19	10
24	22	114	200	69	430	404	218	115	51	41	21	10
25	31	345	190	73	543	345	292	105	63	35	20	9.6
26	23	700	175	88	923	321	246	100	71	30	18	9.2
27	23	427	200	105	781	288	199	105	61	29	16	9.0
28	21	309	220	95	501	270	168	100	53	39	15	8.8
29	18	345	200	88	404	265	149	500	51	36	14	8.5
30	17	393	180	82	---	241	141	1990	58	31	14	8.2
31	16	---	165	79	---	227	---	2240	---	28	14	---
TOTAL	611.4	5210	9813	3001	9956	6818	10105	9569	9424	3777	617	337.3
MEAN	19.7	174	317	96.8	343	220	337	309	314	122	19.9	11.2
MAX	43	700	1120	150	923	461	1380	2240	2320	715	25	15
MIN	7.2	18	162	69	70	76	141	100	51	28	14	8.2
CFSM	.26	2.27	4.13	1.26	4.47	2.87	4.39	4.02	4.09	1.59	.26	.15
IN.	.30	2.52	4.75	1.45	4.82	3.30	4.89	4.63	4.56	1.83	.30	.16

CAL YR 1983	TOTAL	61606.9	MEAN 169	MAX 1180	MIN 4.4	CFSM 2.20	IN 29.84
WTR YR 1984	TOTAL	69238.7	MEAN 189	MAX 2320	MIN 7.2	CFSM 2.46	IN 33.54

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

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

DRAINAGE AREA.--63.1 mi².

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

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 320 ft, from topographic map.

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

AVERAGE DISCHARGE.--21 years, 103 ft³/s, 22.17 in/yr, adjusted for storage and diversion.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s June 12, gage height, 9.09 ft; minimum daily, 0.75 ft³/s June 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	6.7	51	283	130	63	408	224	156	.75	574	31	9.1		
2	20	44	323	142	59	313	238	137	38	502	28	8.2		
3	34	40	344	95	58	206	265	126	171	259	25	7.8		
4	35	51	313	100	69	171	218	184	544	88	24	7.8		
5	29	102	200	100	93	149	218	262	1100	66	21	7.8		
6	24	122	151	98	110	144	341	265	1260	98	20	7.4		
7	20	110	187	98	114	135	494	280	1510	139	18	6.7		
8	17	91	300	95	102	122	771	250	1610	189	17	6.7		
9	14	75	306	86	95	112	1040	241	1650	230	16	6.7		
10	11	63	280	86	85	100	1150	221	1670	235	15	6.4		
11	9.1	77	203	88	81	95	1210	187	1700	230	14	6.4		
12	8.6	97	166	78	80	88	988	168	1680	218	14	7.1		
13	33	95	171	73	81	81	498	176	1570	124	14	6.7		
14	52	83	133	77	86	86	244	184	1410	86	14	7.1		
15	45	73	320	77	102	93	151	158	1310	69	14	7.4		
16	35	75	685	70	114	97	171	124	1490	53	14	8.0		
17	41	80	870	70	200	104	457	106	1450	50	14	8.4		
18	47	218	797	69	381	102	750	91	1270	54	14	8.8		
19	53	283	705	72	381	118	710	85	1230	88	13	8.3		
20	61	128	283	68	445	173	583	102	1430	77	18	8.0		
21	126	139	250	62	610	198	412	102	1470	61	21	7.6		
22	151	179	210	81	638	244	293	88	1470	52	19	7.5		
23	104	149	180	70	436	348	209	78	1480	46	17	7.3		
24	86	124	163	73	348	337	198	98	865	41	16	7.2		
25	86	168	146	63	408	334	253	104	829	34	16	7.1		
26	73	203	130	80	432	330	313	95	1120	29	16	7.0		
27	66	212	124	80	449	323	337	106	1160	30	14	6.9		
28	69	221	120	73	432	313	320	100	840	44	13	6.8		
29	104	215	153	69	428	274	230	158	424	44	11	6.7		
30	83	287	161	68	---	235	179	75	624	38	11	6.6		
31	63	---	144	66	---	221	---	.82	---	34	10	---		
TOTAL	1606.4	3855	8801	2557	6980	6054	13465	4507.82	34375.75	3882	522	221.5		
MEAN	51.8	129	284	82.5	241	195	449	145	1146	125	16.8	7.38		
MAX	151	287	870	142	638	408	1210	280	1700	574	31	9.1		
MIN	6.7	40	120	62	58	81	151	.82	.75	29	10	6.4		
MEAN†	53.3	143	271	81	249	190	448	293	994	90.7	16.2	7.15		
CFSM†	.84	2.27	4.29	1.29	3.95	3.01	7.10	4.64	15.8	1.44	.26	.11		
IN†	.97	2.52	4.96	1.49	4.25	3.47	7.93	5.35	18.17	1.66	.30	.13		
CAL YR 1983	TOTAL	54304.60	MEAN	149	MAX	1430	MIN	3.1	MEAN†	149	CFSM†	2.36	IN†	32.04
WTR YR 1984	TOTAL	86827.47	MEAN	237	MAX	1700	MIN	.75	MEAN†	237	CFSM†	3.76	IN†	51.19

† Adjusted for change in contents in Everett Lake.

MERRIMACK RIVER BASIN

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

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

DRAINAGE AREA.--3,092 mi².

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

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

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

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

REMARKS.--Records good. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnepesaukee, 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.--48 years, 5,341 ft³/s.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	1630	32,100	11.12	Apr. 18	1015	22,500	9.10
Feb. 27	0645	23,000	9.20	June 1	0215	*42,900	*13.35
Apr. 7	0200	38,900	12.51	June 8	1215	26,600	9.97
Apr. 10	1000	30,900	10.86				

Minimum daily discharge, 720 ft³/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	839	1220	14000	7950	3660	14100	9500	9360	40600	4640	1670	1180
2	889	1340	12800	7330	3330	11900	9790	9670	32800	4840	1930	921
3	853	1560	11000	7030	3540	10400	10300	8140	29100	3970	1490	939
4	1100	1640	9140	6910	4000	8820	11100	7560	22800	2690	1590	1830
5	1350	4830	8350	6230	4520	8090	15000	11400	22700	2570	1790	1150
6	1100	8490	8030	6140	5400	7760	31800	12300	23300	4460	2170	1070
7	1520	7030	9470	5110	5220	6990	35700	10700	24000	6690	1430	1830
8	1080	5660	15600	5120	5130	6580	29900	9560	26000	12700	1600	1980
9	1120	3650	14500	4200	4840	6210	29300	9450	24800	13200	1090	1430
10	1360	3280	12200	4420	4700	5780	30300	11400	23300	9820	1410	1210
11	1690	3960	10800	3060	4600	5240	29300	10500	22300	7910	960	1340
12	1410	4200	9950	3640	4260	4420	26700	8910	21500	7020	959	1250
13	1740	5570	10700	4110	4430	5110	23300	11400	20200	7410	1860	1220
14	1310	6130	21100	3990	4410	3020	19600	16500	18700	7050	1140	1220
15	1580	4980	31300	3610	4970	4900	17300	16700	17000	6000	984	1150
16	3070	4190	30000	3920	9300	6270	17800	15800	15800	5210	1280	1310
17	2010	5480	27900	4010	16700	6080	20300	13100	13600	3510	1240	1140
18	2140	8290	25100	3640	19600	5460	22000	11000	11200	4650	1050	1250
19	1890	8650	21000	3900	19400	5780	22100	9450	9410	6000	1180	1130
20	1560	7360	16700	3680	18400	7200	20800	8750	8630	5750	1230	961
21	1830	6490	13100	3770	17800	9640	18600	9350	7880	5600	1120	720
22	1380	7580	11300	3430	16500	13500	16600	9270	7010	4670	1250	838
23	1300	9800	9970	4000	14900	15800	14900	8440	6470	3950	1340	844
24	1610	8220	9720	3530	13700	14400	13300	7540	6040	3700	1300	817
25	1360	9120	8760	3860	17200	13800	14600	8850	4740	3120	1200	1020
26	1860	16100	9360	4200	20000	12600	15500	8000	6650	2870	1180	811
27	1600	18300	8300	4160	22400	11700	13900	7210	8860	2400	1040	803
28	1470	15300	7520	3540	19400	10600	12000	6830	7890	2450	1240	1030
29	1730	14500	8690	3610	16600	10500	10700	9210	5760	2570	1330	857
30	1550	13900	9190	3730	---	9810	9760	27700	5230	2690	1610	740
31	1440	---	8890	2520	---	9420	---	39500	---	1870	1130	---
TOTAL	46741	216820	424440	138350	308910	271880	571750	363550	494270	161980	41793	33991
MEAN	1508	7227	13690	4463	10650	8770	19060	11730	16480	5225	1348	1133
MAX	3070	18300	31300	7950	22400	15800	35700	39500	40600	13200	2170	1980
MIN	839	1220	7520	2520	3330	3020	9500	6830	4740	1870	959	720

CAL YR 1983	TOTAL	2660240	MEAN	7288	MAX	32100	MIN	759
WTR YR 1984	TOTAL	3074475	MEAN	8400	MAX	40600	MIN	720

MERRIMACK RIVER BASIN

39

01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, N. H.

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

DRAINAGE AREA.--3.60 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 920 ft, from topographic map.

REMARKS.--Records fair except those for periods of ice and periods of no gage-height record, Jan. 13 to Feb. 13, Mar. 15-22, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 7.32 ft³/s, 27.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 336 ft³/s Mar. 13, 1977, gage height, 7.13 ft, from rating curve extended above 90 ft³/s; maximum gage height, 7.81 ft Feb. 3, 1970, Dec. 21, 1973, backwater from ice; no flow for part of Sept. 26, 1976.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	1230	114	5.63	May 30	--	*a334	*b7.11
Dec. 14	0500	172	6.05				
Apr. 6	--	a217	b6.41				

a From rating curve extended above 90 ft³/s.

b Floodmark.

Minimum discharge, 0.22 ft³/s Sept. 1-3, 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.62	1.1	12	4.5	2.3	11	11	7.9	90	2.5	.59	.23
2	3.2	1.1	9.0	4.1	2.2	10	15	6.8	60	2.1	.54	.22
3	.85	1.1	7.0	3.7	3.5	9.0	21	6.3	40	1.8	.50	.23
4	.62	7.6	7.0	3.1	7.2	8.0	20	46	25	1.9	.47	.33
5	.54	33	5.1	3.3	7.5	7.0	50	29	18	2.1	.44	.33
6	.54	20	4.6	3.5	4.3	6.4	105	21	14	2.6	.41	.25
7	.47	9.4	24	3.5	3.2	5.6	60	16	14	18	.41	.23
8	.44	6.7	9.0	3.2	3.0	5.5	40	24	11	6.6	.44	.23
9	.44	5.1	5.1	2.9	2.9	5.2	30	28	9.1	2.6	.41	.23
10	.44	4.3	4.1	2.7	2.8	5.0	23	18	7.9	2.0	.44	.22
11	.44	27	3.4	2.7	3.5	4.6	20	14	6.6	3.2	.44	.22
12	.62	22	3.0	2.5	4.1	4.4	32	14	5.9	4.6	.44	.25
13	1.3	11	65	2.5	4.3	4.0	29	13	4.8	2.0	.59	.23
14	3.6	9.0	101	2.5	7.0	4.8	27	17	5.2	1.3	.64	.28
15	1.5	8.0	45	2.5	20	4.0	28	14	4.6	.91	.54	.30
16	1.0	62	29	2.5	60	4.5	48	13	4.0	1.1	.41	.35
17	.85	38	20	2.4	34	5.6	45	11	3.5	1.3	.35	.28
18	.80	21	16	2.3	26	5.0	33	9.1	4.0	4.3	.33	.25
19	.75	11	12	2.2	18	9.0	28	8.8	3.8	2.9	.33	.23
20	.67	9.4	8.0	2.1	14	12	25	13	3.1	1.6	.85	.23
21	.67	17	6.0	2.1	11	18	21	9.4	2.6	1.2	.41	.22
22	.71	12	6.4	2.0	11	28	17	7.0	2.2	1.0	.35	.23
23	.75	8.3	6.6	2.0	10	20	14	12	1.9	.90	.33	.23
24	11	7.3	6.0	3.6	28	13	26	20	2.4	.80	.33	.23
25	4.6	59	5.5	6.0	27	12	24	12	5.7	.69	.35	.23
26	2.5	29	5.2	3.5	25	11	17	10	4.0	.64	.35	.23
27	1.9	17	4.8	3.2	14	10	14	10	3.1	1.2	.31	.23
28	1.6	11	7.1	2.8	14	10	11	15	2.5	1.6	.23	.25
29	1.5	35	31	2.6	12	9.8	9.7	150	2.5	.98	.23	.25
30	1.2	23	8.2	2.5	---	9.0	8.8	170	2.4	.80	.23	.25
31	1.1	---	4.8	2.4	---	8.0	---	140	---	.64	.23	---
TOTAL	47.22	526.4	480.9	91.4	381.8	279.4	852.5	885.3	363.8	75.86	12.92	7.47
MEAN	1.52	17.5	15.5	2.95	13.2	9.01	28.4	28.6	12.1	2.45	.42	.25
MAX	11	62	101	6.0	60	28	105	170	90	18	.85	.35
MIN	.44	1.1	3.0	2.0	2.2	4.0	8.8	6.3	1.9	.64	.23	.22
CFSM	.42	4.86	4.31	.82	3.67	2.50	7.89	7.94	3.36	.68	.12	.07
IN.	.49	5.44	4.97	.94	3.94	2.89	8.81	9.15	5.76	.78	.13	.08
CAL YR 1983	TOTAL	4374.91	MEAN	11.99	MAX	160	MIN	.19	CFSM	3.33	IN	45.21
WTR YR 1984	TOTAL	4004.97	MEAN	10.9	MAX	170	MIN	.22	CFSM	3.03	IN	41.37

MERRIMACK RIVER BASIN

RESERVOIRS IN MERRIMACK RIVER BASIN

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

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

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

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

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

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

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

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

	Newfound Lake	Franklin Falls Reservoir	Edward MacDowell Reservoir
Sept. 30, 1983.....	1117	108.9	4.3
Oct. 31.....	998	132.9	14.4
Nov. 30.....	1248	230.0	26.7
Dec. 31.....	1069	135.0	13.7
Jan. 31, 1984.....	1017	113.3	13.7
Feb. 28.....	1298	188.2	15.9
Mar. 31.....	1234	145.9	13.0
Apr. 30.....	1447	211.7	7.3
May 31.....	1838	3348.0	279.3
June 30.....	1397	135.0	5.5
July 31.....	1327	115.4	8.6
Aug. 31.....	1204	111.1	4.9
Sept. 30.....	1100	100.2	4.9

	Blackwater Reservoir	Everett Lake
Sept. 30, 1983.....	.2	45.8
Oct. 31.....	.3	49.8
Nov. 30.....	19.4	86.2
Dec. 31.....	2.6	56.2
Jan. 31, 1984.....	1.1	49.8
Feb. 28.....	15.3	69.6
Mar. 31.....	20.8	54.9
Apr. 30.....	3.5	53.8
May 31.....	470	448.7
June 30.....	1.0	141.1
July 31.....	.4	48.7
Aug. 31.....	.2	47.0
Sept. 30.....	.4	46.4

CONNECTICUT RIVER BASIN

41

01127880 BIG BROOK NEAR PITTSBURG, N. H.

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

DRAINAGE AREA.--6.36 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,680 ft, from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record Jan. 2 to Mar. 7, Mar. 15 to Apr. 18, and periods when flows are below 10 ft³/s, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years (water years 1965-84), 16.0 ft³/s, 34.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 441 ft³/s May 3, 1967, gage height, 3.61 ft, from rating curve extended above 110 ft³/s; maximum gage height, 5.02 ft Dec. 27, 1969, ice jam; minimum discharge, about 0.90 ft³/s about Aug. 20, 21, 1975, July 25-28, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 206 ft³/s June 7, gage height, 3.43 ft, no other peak above base of 180 cfs; minimum discharge, 1.5 ft³/s, Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	6.5	20	8.4	4.4	9.8	15	42	78	7.4	3.5	2.4
2	1.5	6.5	17	7.8	4.4	9.0	17	27	40	6.2	3.7	2.4
3	1.7	12	17	7.8	4.5	8.5	22	20	26	5.4	2.9	2.0
4	1.7	34	58	7.4	4.8	7.8	30	25	24	4.9	2.7	1.9
5	7.1	71	31	6.5	5.2	7.4	50	28	22	15	2.4	1.9
6	14	40	13	6.2	5.5	7.0	110	21	17	11	2.2	1.7
7	11	28	36	5.7	5.2	6.6	80	18	66	48	2.4	1.7
8	8.8	22	70	6.2	5.1	6.4	50	17	52	46	2.2	1.7
9	8.8	19	41	5.4	5.0	6.2	42	22	29	23	2.0	1.7
10	7.4	16	14	5.7	4.9	5.9	32	20	21	15	1.9	1.6
11	6.2	27	32	5.6	4.8	5.7	28	16	16	15	3.5	2.2
12	5.7	38	21	5.5	5.2	5.6	40	32	13	41	6.8	3.3
13	7.1	24	49	5.6	5.8	5.5	55	39	11	24	3.7	2.4
14	11	22	99	5.8	6.4	5.4	65	32	15	21	3.5	2.2
15	10	16	61	5.4	15	5.4	68	28	16	17	4.9	2.0
16	8.1	18	43	5.2	26	5.6	75	23	11	16	4.4	2.0
17	6.8	32	29	5.4	22	6.2	85	20	9.2	14	3.5	1.9
18	6.2	23	22	5.8	20	6.6	76	16	7.8	13	2.5	1.7
19	5.7	18	18	5.7	25	10	66	14	16	13	2.4	1.7
20	4.9	16	16	5.4	28	20	52	13	11	9.2	2.4	2.7
21	4.6	28	17	5.3	35	38	52	11	8.1	7.8	2.2	3.7
22	4.4	35	16	5.2	20	34	31	10	7.8	6.5	1.9	2.5
23	4.4	24	15	5.0	15	28	31	12	6.2	5.7	3.3	2.4
24	6.5	20	14	5.0	17	24	46	26	5.7	5.4	7.4	2.2
25	6.2	78	13	4.9	18	22	82	18	16	4.6	4.2	2.0
26	5.1	51	11	4.8	15	16	52	20	19	3.9	2.9	5.1
27	5.1	29	12	4.8	13	14	45	23	16	4.2	2.5	3.7
28	4.6	23	13	4.7	12	13	43	16	11	4.6	2.2	2.7
29	9.9	27	14	4.6	10	12	42	57	8.8	3.9	2.0	2.5
30	7.4	26	9.9	4.5	---	12	39	137	8.4	3.5	2.2	2.2
31	6.5	---	8.8	4.4	---	13	---	150	---	3.3	2.4	---
TOTAL	199.9	830.0	850.7	175.7	362.2	376.6	1521	953	608.0	418.5	96.7	70.1
MEAN	6.45	27.7	27.4	5.67	12.5	12.1	50.7	30.7	20.3	13.5	3.12	2.34
MAX	14	78	99	8.4	35	38	110	150	78	48	7.4	5.1
MIN	1.5	6.5	8.8	4.4	4.4	5.4	15	10	5.7	3.3	1.9	1.6
CFSM	1.01	4.36	4.31	.89	1.97	1.90	7.97	4.83	3.19	2.12	.49	.37
IN.	1.17	4.85	4.98	1.03	2.12	2.20	8.90	5.57	3.56	2.45	.57	.41
CAL YR 1983	TOTAL	5422.3	MEAN	14.9	MAX	141	MIN	0.92	CFSM	2.34	IN	31.81
WTR YR 1984	TOTAL	6462.4	MEAN	17.7	MAX	150	MIN	1.5	CFSM	2.78	IN	37.79

CONNECTICUT RIVER BASIN

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

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

DRAINAGE AREA.--83.0 mi².

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

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

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

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

AVERAGE DISCHARGE.--67 years, 197 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,450 ft³/s May 31, gage height, 4.11 ft; minimum daily, 4.5 ft³/s Mar. 23-25, Mar. 27 to Apr. 5, Apr. 8-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	103	110	552	207	215	4.5	7.4	1050	150	149	155
2	417	103	161	546	252	234	4.5	7.4	919	267	149	155
3	417	103	252	598	304	252	4.5	7.4	519	263	149	155
4	407	105	252	738	304	252	4.5	8.0	425	150	149	155
5	412	108	252	382	300	252	4.5	8.0	423	263	149	155
6	412	108	252	397	300	248	4.9	8.0	423	316	149	155
7	412	105	252	714	300	226	4.9	12	423	185	149	155
8	407	105	252	707	300	260	4.5	12	424	117	149	155
9	407	105	252	699	300	256	4.5	13	423	135	149	155
10	402	105	252	677	300	256	4.5	18	422	145	149	155
11	428	105	252	484	295	256	4.5	23	359	198	149	155
12	444	105	339	238	291	167	5.9	27	301	134	149	154
13	444	105	514	238	300	110	6.0	34	300	91	121	155
14	444	105	222	238	308	110	6.3	39	301	125	91	155
15	439	105	43	238	226	110	6.3	43	301	126	91	155
16	439	105	43	238	105	110	6.3	48	205	177	91	155
17	433	105	43	186	105	110	6.5	36	155	254	91	155
18	433	105	43	158	105	110	6.6	10	250	257	91	155
19	215	105	87	158	60	110	6.8	11	299	258	91	155
20	105	105	125	158	105	108	6.8	12	301	257	91	154
21	105	108	248	158	105	70	6.8	14	304	256	91	152
22	105	108	334	158	176	4.9	6.8	43	308	256	91	155
23	105	105	334	155	211	4.5	6.8	120	205	374	91	155
24	105	105	334	155	211	4.5	6.9	215	146	419	91	154
25	105	108	334	155	211	4.5	7.4	248	264	347	91	155
26	105	108	334	155	211	5.3	7.4	249	316	200	91	155
27	105	108	330	155	211	4.5	7.4	316	316	200	127	155
28	105	108	330	155	211	4.5	7.4	571	316	200	155	155
29	105	108	330	155	211	4.5	7.4	720	314	200	155	155
30	105	108	444	173	---	4.5	7.5	918	210	200	155	155
31	91	---	558	204	---	4.5	---	1150	---	165	155	---
TOTAL	8983	3174	7908	10122	6525	3868.2	179.6	4948.2	10922	6685	3839	4644
MEAN	290	106	255	327	225	125	5.99	160	364	216	124	155
MAX	444	108	558	738	308	260	7.5	1150	1050	419	155	155
MIN	91	103	43	155	60	4.5	4.5	7.4	146	91	91	152
CAL YR 1983	TOTAL	65682.3	MEAN 180	MAX 558	MIN 1.7							
WTR YR 1984	TOTAL	71798.0	MEAN 196	MAX 1150	MIN 4.5							

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

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

GAGE.--Water-stage recorder. Elevation of gage is 1,150 ft, from topographic map.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,110 ft³/s May 31, gage height, 5.13 ft; minimum daily, 118 ft³/s May 23.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	408	461	322	977	784	703	253	394	1440	453	413	661
2	408	461	298	970	715	740	271	301	1310	512	410	655
3	410	474	425	1080	802	779	258	233	1270	542	408	511
4	410	576	547	1170	802	769	202	239	1230	535	405	428
5	434	515	574	1170	795	754	294	320	1290	574	401	425
6	595	409	561	1160	795	753	828	261	1300	637	400	423
7	544	315	614	1150	795	741	1270	214	1450	967	401	355
8	490	420	630	1150	804	726	723	190	1490	1350	401	419
9	475	487	605	1140	806	716	421	215	1400	624	399	416
10	470	369	601	1150	798	564	316	212	1350	625	445	167
11	504	298	526	1150	790	407	269	173	1070	627	523	149
12	549	587	700	1140	788	499	328	193	758	983	562	150
13	555	413	823	963	630	498	498	348	743	712	550	151
14	582	430	1430	808	432	625	690	303	741	613	533	132
15	610	421	1340	802	338	618	833	343	768	579	553	227
16	580	255	750	799	232	616	798	283	564	696	506	227
17	562	684	465	867	306	617	872	235	448	959	422	131
18	555	554	368	912	287	620	947	196	527	858	413	145
19	548	254	502	903	265	637	838	166	606	856	406	144
20	582	205	538	897	279	473	666	152	606	805	403	145
21	635	299	574	889	314	371	643	134	581	770	400	151
22	629	598	744	880	440	424	419	121	574	750	396	376
23	628	394	822	900	529	463	343	118	498	702	404	466
24	641	300	805	900	527	323	411	506	436	639	418	499
25	659	746	783	894	523	267	627	359	538	580	426	495
26	642	882	774	915	540	238	563	271	633	434	411	346
27	517	432	770	911	513	207	426	318	612	430	401	136
28	446	331	763	903	611	183	396	223	585	429	396	244
29	470	374	759	894	722	157	380	408	567	428	392	240
30	499	425	869	913	---	186	354	1340	508	422	391	238
31	471	---	985	911	---	239	---	2030	---	417	540	---
TOTAL	16508	13369	21267	30268	16962	16045	16137	10799	25893	20508	13529	9252
MEAN	533	446	686	976	585	518	538	348	863	662	436	308
MAX	659	882	1430	1170	806	779	1270	2030	1490	1350	562	661
MIN	408	205	298	799	232	157	202	118	436	417	391	131
CAL YR 1983	TOTAL	204359	MEAN	560	MAX	1540	MIN	114				
WTR YR 1984	TOTAL	210537	MEAN	575	MAX	2030	MIN	118				

CONNECTICUT RIVER BASIN

01129300 HALLS STREAM NEAR EAST HEREFORD, QUEBEC
(International gaging station)

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

DRAINAGE AREA.--85 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,090 ft, 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.

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

AVERAGE DISCHARGE.--36 years, 170 ft³/s, 27.16 in/yr. Records were provided by Water Survey of Canada.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,300 ft³/s July 7, gage height, unknown; minimum daily, 9.0 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	80	303	67	32	78	140	246	893	100	27	18
2	19	76	238	64	29	74	173	179	441	64	26	19
3	18	89	204	61	27	70	208	144	274	41	25	20
4	19	249	177	58	29	64	276	186	215	34	23	19
5	49	307	169	55	30	61	406	246	186	137	22	16
6	277	211	154	53	31	58	1210	201	148	109	20	18
7	153	167	285	51	32	54	1910	149	246	1390	20	17
8	99	147	206	49	34	53	618	126	229	653	26	16
9	89	120	183	48	36	51	413	179	143	281	21	16
10	76	104	162	47	38	49	290	151	106	185	18	15
11	65	291	126	46	39	47	257	121	84	272	18	18
12	54	530	118	47	42	47	403	176	70	872	130	22
13	70	255	501	46	45	47	491	269	61	357	50	20
14	117	133	2060	43	49	48	505	262	58	216	33	13
15	114	139	1370	39	56	49	600	269	91	162	65	10
16	80	162	777	37	512	51	763	241	61	249	65	12
17	64	572	456	35	427	53	904	190	47	210	42	12
18	57	294	280	34	391	56	770	152	42	156	32	11
19	52	204	243	33	350	55	621	129	76	165	25	9.0
20	46	165	117	32	302	64	558	113	57	116	22	13
21	43	491	109	31	388	586	530	102	41	90	21	19
22	41	579	102	30	210	756	332	93	40	76	19	17
23	37	317	88	29	148	523	261	144	38	65	19	15
24	86	244	85	28	132	399	392	713	33	57	34	15
25	90	1080	79	27	124	248	685	304	180	50	33	11
26	68	678	78	27	113	192	403	244	168	47	26	12
27	58	371	76	26	102	117	302	268	120	40	22	19
28	54	267	75	26	92	146	257	171	73	49	22	16
29	141	456	75	25	85	134	222	809	52	43	22	14
30	125	466	74	24	---	105	196	1970	65	20	19	14
31	88	---	74	24	---	81	---	2250	---	18	18	---
TOTAL	2368	9244	9044	1242	3925	4416	15096	10797	4338	6324	965	466.0
MEAN	76.4	308	292	40.1	135	142	503	348	145	204	31.1	15.5
MAX	277	1080	2060	67	512	756	1910	2250	893	1390	130	22
MIN	18	76	74	24	27	47	140	93	33	18	18	9.0
CFSM	.90	3.62	3.44	.47	1.59	1.67	5.92	4.09	1.71	2.40	.37	.18
IN.	1.04	4.05	3.96	.54	1.72	1.93	6.61	4.73	1.90	2.77	.42	.20
CAL YR 1983	TOTAL	64582.4	MEAN	176	MAX	2060	MIN	6.7	CFSM	2.07	IN	28.26
WTR YR 1984	TOTAL	68225.0	MEAN	186	MAX	2250	MIN	9.0	CFSM	2.19	IN	29.86

CONNECTICUT RIVER BASIN

45

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, N. H.

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

DRAINAGE AREA.--799 mi².

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

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

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

REMARKS.--Records good except those for winter period or for period of no gage-height record May 27 to July 10, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (Reservoirs in Connecticut River basin) 36 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--54 years, 1,587 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,200 ft³/s May 31 or June 1, gage height, 10.94 ft; minimum daily discharge, 274 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	585	873	2220	1750	1150	1690	1110	2560	12000	1050	647	750
2	592	855	1740	1600	1100	1520	1290	2000	10700	1100	644	778
3	616	883	1570	1700	1100	1600	1390	1540	7400	950	629	762
4	600	1450	1330	1800	1150	1570	1570	1860	4400	900	610	586
5	864	2510	1610	1850	1250	1540	2250	2290	3400	1100	592	561
6	1570	2130	1580	1850	1350	1500	5610	1870	3200	1700	575	551
7	1420	1410	2690	1750	1300	1470	7530	1550	2900	2500	600	540
8	1110	1190	2280	1800	1250	1390	6000	1390	3300	4500	641	482
9	979	1240	1670	1750	1150	1340	3330	1870	3080	3500	596	529
10	940	1160	1790	1650	1150	1320	2380	1750	2500	1770	571	493
11	855	1280	1310	1600	1150	988	1960	1370	2000	1570	644	325
12	883	2550	1310	1600	1100	980	2220	1710	1500	4100	914	416
13	979	2000	3460	1400	1050	1050	3190	2730	1500	2870	928	347
14	1110	1340	9940	1350	1000	960	4270	2290	1500	1780	811	356
15	1220	1320	10500	1250	980	1000	5130	2320	1550	1510	851	325
16	1090	1210	6920	1250	1750	1050	5320	1950	1400	1400	905	391
17	988	2630	3960	1350	2400	1050	5790	1690	1250	1710	732	387
18	930	2380	2470	1350	2150	1100	6430	1420	1200	1550	637	313
19	902	1610	2020	1300	1900	1200	5560	1230	1150	1660	594	277
20	873	1250	1430	1350	1800	1250	4490	1140	1300	1430	583	274
21	911	2000	1490	1300	2000	2340	4210	1060	1200	1260	567	313
22	911	3710	1650	1300	1900	3500	2990	982	1150	1170	553	326
23	911	2490	1800	1200	1750	3200	2420	965	950	1110	581	525
24	1040	1810	2000	1350	1650	2180	2710	2210	900	1030	681	611
25	1190	4390	1950	1450	1710	1670	3340	2190	1100	940	660	599
26	1080	5450	1750	1350	1980	1430	3280	1900	2000	816	618	601
27	1010	3020	1550	1350	1610	1300	2670	1800	1900	746	573	436
28	846	2080	1580	1350	1320	1150	2520	1750	1600	754	550	310
29	864	2250	1650	1300	1690	1140	2420	1950	1400	735	534	366
30	1040	3040	1850	1250	---	1030	2370	6200	1050	696	528	361
31	930	---	1900	1200	---	1030	---	10500	---	673	546	---
TOTAL	29839	61511	80970	45700	42840	45538	105750	68037	80400	48580	20095	13891
MEAN	963	2050	2612	1474	1477	1469	3525	2195	2680	1567	648	463
MAX	1570	5450	10500	1850	2400	3500	7530	10500	12000	4500	928	778
MIN	585	855	1310	1200	980	960	1110	965	900	673	528	274
CAL YR 1983	TOTAL	629836	MEAN	1726	MAX	11100	MIN	394				
WTR YR 1984	TOTAL	643151	MEAN	1757	MAX	12000	MIN	274				

CONNECTICUT RIVER BASIN

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, N. H.

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

DRAINAGE AREA.--232 mi².

PERIOD OF RECORD.--Discharge: August 1940 to November 1980, October 1982 to September 1983.
Water-quality records: Water year 1955.

GAGE.--Water-stage recorder. Elevation of gage is 920 ft, from topographic map.

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

AVERAGE DISCHARGE.--42 years, 476 ft³/s, 27.86 in/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 7	1530	3,990	6.11	May 31	1430	*7,480	*7.70

Minimum discharge, 54 ft³/s Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	96	756	350	135	360	166	2430	5500	260	115	74
2	62	99	637	330	140	360	210	1910	2820	223	115	72
3	63	111	566	300	140	350	240	1210	1770	195	109	72
4	62	283	444	280	200	330	325	1640	1310	179	103	72
5	129	966	531	260	320	300	648	1910	997	591	94	70
6	424	1080	569	250	280	280	2200	1340	783	741	92	70
7	394	784	790	240	230	260	3640	1130	783	1270	100	67
8	227	596	754	230	200	245	3280	1120	855	1360	112	65
9	160	517	783	220	190	230	1900	1470	622	741	100	63
10	117	554	584	210	170	215	1200	1340	497	539	86	61
11	98	685	515	205	160	200	950	1030	420	464	84	63
12	94	1060	745	200	200	190	980	1510	373	960	84	109
13	175	829	993	190	310	190	1300	2430	341	692	81	112
14	342	587	2070	185	280	190	1660	1990	420	470	81	109
15	333	494	2320	180	886	190	1950	1680	546	426	168	103
16	208	474	1940	180	2060	190	1720	1280	420	373	187	100
17	160	686	1150	170	1740	210	1920	1050	341	335	121	94
18	129	665	790	165	1040	240	2410	873	298	315	100	89
19	107	521	698	160	532	300	2430	758	420	414	86	67
20	97	444	430	160	536	400	2290	716	373	357	84	56
21	93	636	400	155	589	700	2210	684	282	266	81	76
22	90	974	380	155	496	861	1720	622	255	226	74	92
23	87	765	360	150	414	772	1410	660	231	208	81	89
24	137	628	340	155	406	540	1670	1200	200	179	139	79
25	247	1490	320	160	427	382	2030	960	583	157	191	65
26	174	1950	300	165	493	286	2000	732	930	142	125	76
27	143	1170	330	160	533	235	1770	783	684	142	97	100
28	110	791	360	150	390	202	1810	599	470	164	84	94
29	115	805	400	145	360	179	1910	1230	351	161	76	81
30	124	916	440	140	---	148	2070	4370	293	139	74	74
31	111	---	380	135	---	143	---	7020	---	125	76	---
TOTAL	4874	21656	22075	6135	13857	9678	50019	47677	24168	12814	3200	2414
MEAN	157	722	712	198	478	312	1667	1538	806	413	103	80.5
MAX	424	1950	2320	350	2060	861	3640	7020	5500	1360	191	112
MIN	62	96	300	135	135	143	166	599	200	125	74	56
CFSM	.68	3.11	3.07	.85	2.06	1.35	7.19	6.63	3.47	1.78	.44	.35
IN.	.78	3.47	3.54	.98	2.22	1.55	8.02	7.64	3.88	2.05	.51	.39
(†)	2.27	2.18	2.24	3.28	3.04	2.76	3.30	2.32	2.14	1.81	1.44	1.28

CAL YR 1983 TOTAL 185124 MEAN 507 MAX 4630 MIN 47 CFSM 2.19 IN 29.68
WTR YR 1984 TOTAL 218567 MEAN 597 MAX 7020 MIN 56 CFSM 2.57 IN 35.05

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

CONNECTICUT RIVER BASIN

47

01131500 CONNECTICUT RIVER NEAR DALTON, N. H.

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

DRAINAGE AREA.--1,514 mi².

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

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

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

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis (Reservoirs in Connecticut River basin), and other reservoirs. These reservoirs have a combined usable capacity of about 8,300,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 2,916 ft³/s, adjusted to drainage area at present site.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 28,400 ft³/s June 1, gage height, 20.30 ft; minimum daily, 314 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	831	1350	5610	3000	1760	2490	2200	6540	27000	1900	1040	655
2	780	1140	4190	2400	1730	2560	2400	6360	23300	1850	1000	972
3	780	1190	3720	2500	1420	2200	2740	4730	15700	1440	1040	1010
4	780	1500	2830	2600	1620	2140	3330	4240	8570	1410	878	976
5	1020	3840	2190	2700	1790	2340	3870	5920	6170	1730	1050	799
6	1990	5200	3340	2790	1990	2080	8860	5340	5670	3240	860	745
7	2530	3850	4910	2670	1900	2120	13100	4330	4540	4410	922	745
8	2260	2700	5200	2680	1760	2110	15400	3820	5600	8720	996	742
9	1630	2420	3670	2530	1590	1950	12400	4280	5380	7790	989	628
10	1090	2370	3130	2390	1620	1820	7510	5130	4280	4650	982	732
11	1430	2380	3060	2340	1680	1750	5420	4110	3630	3340	688	708
12	1180	3630	2520	2310	1660	1580	4870	4330	2980	4450	930	698
13	1240	4730	3630	2120	1780	1570	6020	7970	2600	6030	1200	698
14	1660	3110	10500	2130	1970	1380	7630	7750	2490	3860	1180	698
15	1900	2530	15700	1880	1920	1610	8770	7080	2570	2770	1160	698
16	1740	2460	17800	1930	4100	1650	9610	6010	2750	2710	1280	698
17	1410	3880	13500	1920	5270	1710	10000	4960	2450	2480	1320	314
18	1380	4790	7410	1900	4650	1810	11000	4280	2000	2480	1070	580
19	1240	3610	5210	1830	3850	1920	11500	3570	1770	2910	981	613
20	1230	2740	3630	2030	3670	2380	10700	3350	2310	2950	947	395
21	1120	2780	2710	1920	4310	3850	9450	3170	2040	2540	758	546
22	1210	6160	2710	1870	3980	5530	8130	2900	1730	2060	718	592
23	1170	5840	3210	1620	3240	6410	6260	2720	1610	1960	718	521
24	1220	4270	3670	1890	3150	5660	6040	4010	1540	1700	1120	676
25	1650	6190	3500	1750	3160	4210	6930	5210	1750	1550	1280	678
26	1660	10500	3200	1950	3360	3280	7480	4140	3870	1310	1160	923
27	1320	8920	2600	1990	3170	2940	6650	3690	3670	1310	860	791
28	1400	5760	2700	1850	2850	2570	6180	3850	2980	1140	741	718
29	1180	4950	2800	1870	2250	2540	6080	3870	2500	1190	876	466
30	1260	6520	3000	1710	---	2230	6100	11700	1910	1120	793	537
31	1440	---	3170	1710	---	2150	---	21200	---	1140	745	---
TOTAL	42731	121310	155020	66780	77200	80540	226630	170560	155360	88140	30282	20552
MEAN	1378	4044	5001	2154	2662	2598	7554	5502	5179	2843	977	685
MAX	2530	10500	17800	3000	5270	6410	15400	21200	27000	8720	1320	1010
MIN	780	1140	2190	1620	1420	1380	2200	2720	1540	1120	688	314
CAL YR 1983	TOTAL	1166310	MEAN	3195	MAX	17800	MIN	440	CFSM	2.11	IN	28.65
WTR YR 1984	TOTAL	1235105	MEAN	3375	MAX	27000	MIN	314	CFSM	2.23	IN	30.35

CONNECTICUT RIVER BASIN

01134500 MOOSE RIVER AT VICTORY, VT.

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

DRAINAGE AREA.--75.2 mi².

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

REVISED RECORDS.--WSP 1381: Drainage area.

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

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

AVERAGE DISCHARGE.--37 years, 144 ft³/s, 26.00 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2000	2,520	9.90	May 31	0430	*2,950	*10.37
Apr. 8	0330	1,230	7.95	July 8	0800	1,120	7.73
Apr. 18	1500	1,140	7.76				

Minimum discharge, 8.2 ft³/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	47	298	135	50	140	132	315	1520	42	23	14
2	16	44	195	125	52	130	160	229	699	33	23	15
3	18	52	145	110	52	130	172	177	380	28	20	14
4	18	177	125	100	86	125	216	197	260	25	19	13
5	76	235	125	92	120	115	292	280	200	151	17	14
6	223	161	140	90	110	100	561	200	161	290	16	13
7	145	115	155	86	84	96	1000	157	152	370	16	12
8	81	90	160	84	76	92	1110	152	149	969	34	11
9	60	77	155	80	70	90	607	296	117	395	24	9.6
10	52	69	150	78	64	80	349	267	88	165	19	9.0
11	42	99	160	76	62	74	258	176	75	112	17	9.0
12	38	261	165	74	74	70	298	286	63	356	75	27
13	83	198	290	72	115	68	443	596	55	258	37	25
14	100	116	1970	70	110	68	571	441	54	123	24	23
15	78	97	1690	68	130	68	607	356	79	102	22	28
16	60	113	923	66	405	68	637	266	58	85	19	22
17	49	468	594	64	630	72	740	231	49	75	17	22
18	43	358	320	62	450	76	1030	186	44	85	14	19
19	39	195	230	62	330	86	879	161	57	246	12	16
20	35	139	170	60	285	100	683	189	50	142	12	14
21	32	280	155	58	290	250	585	160	38	83	12	15
22	31	672	145	58	280	701	449	138	34	64	11	15
23	30	437	135	58	250	682	329	129	30	53	15	13
24	56	251	125	60	245	431	366	368	26	45	83	12
25	88	509	120	60	240	251	406	273	171	35	44	12
26	64	866	115	62	260	187	329	177	191	31	27	13
27	54	470	125	58	200	160	300	238	91	31	20	22
28	49	261	140	56	180	146	294	165	60	37	16	18
29	55	310	155	54	160	138	284	290	44	33	14	15
30	65	434	170	52	---	123	277	1360	45	28	14	14
31	52	---	135	50	---	116	---	2710	---	25	15	---
TOTAL	1848	7601	9680	2280	5460	5033	14364	11166	5040	4517	731	478.6
MEAN	59.6	253	312	73.5	188	162	479	360	168	146	23.6	16.0
MAX	223	866	1970	135	630	701	1110	2710	1520	969	83	28
MIN	16	44	115	50	50	68	132	129	26	25	11	9.0
CFSM	.79	3.36	4.15	.98	2.50	2.15	6.37	4.79	2.23	1.94	.31	.21
IN.	.91	3.76	4.79	1.13	2.70	2.49	7.11	5.52	2.49	2.23	.36	.24

CAL YR 1983 TOTAL 65529.0 MEAN 180 MAX 1970 MIN 12 CFSM 2.39 IN 32.42
WTR YR 1984 TOTAL 68198.6 MEAN 186 MAX 2710 MIN 9.0 CFSM 2.47 IN 33.74

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT.

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

DRAINAGE AREA.--436 mi².

PERIOD OF RECORD.--Discharge: October 1928 to current year. Monthly discharge only October 1928, published in WSP 1301.

Water-quality records: Water years 1953, 1967-74 (partial-record station).

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

GAGE.--Water-stage recorder. Elevation of gage is 490 ft, 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.--56 years, 743 ft³/s, 23.14 in/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1645	9,700	14.49	May 31	1400	*10,400	*15.19
Mar. 22	0945	5,340	9.61	July 7	1215	6,110	10.49
Apr. 7	1815	5,060	9.30				

Minimum daily discharge, 117 ft³/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	295	1410	850	275	660	812	1290	5800	407	234	175
2	150	254	1120	760	275	595	967	1120	2840	346	237	160
3	155	271	987	700	320	550	1020	945	1950	292	231	156
4	160	836	658	650	400	505	1210	1130	1570	271	223	153
5	375	1170	893	580	470	475	1720	1370	1310	1060	200	153
6	1020	838	936	540	425	445	4260	1090	1150	1290	192	126
7	684	597	3370	500	370	420	4610	914	1250	3950	203	142
8	429	471	1930	480	340	390	4120	838	1210	3060	250	142
9	318	443	1160	450	320	375	2480	1520	985	1560	208	117
10	313	399	895	420	300	365	1730	1320	805	985	198	119
11	267	536	805	400	280	360	1460	964	720	774	190	134
12	251	1360	870	395	290	355	1650	1280	627	1620	481	267
13	423	916	2880	385	400	350	2160	2140	565	1250	418	228
14	574	590	8850	375	580	350	2530	1800	559	792	234	208
15	500	529	6810	365	933	350	2640	1590	824	633	211	296
16	365	710	3960	355	2200	355	2780	1310	608	589	211	223
17	313	2170	2620	345	1790	385	3340	1170	530	595	192	203
18	263	1380	1870	340	1490	435	3420	978	481	614	182	200
19	244	914	1350	335	1440	630	3130	882	583	1310	172	180
20	230	687	1250	330	1570	1230	2660	1020	571	875	153	140
21	218	1670	970	320	1600	2400	2520	873	429	583	172	167
22	205	2270	900	315	1180	4780	1920	768	366	497	151	160
23	198	1480	860	310	983	3160	1560	743	366	413	156	149
24	369	1060	810	305	973	1720	1700	1570	346	361	418	140
25	485	2820	795	300	964	1240	1920	1240	978	313	336	138
26	363	2680	800	295	1090	932	1590	911	1240	271	203	138
27	290	1670	850	290	922	857	1400	1140	720	292	182	195
28	282	1190	900	280	793	832	1320	885	553	351	172	200
29	322	1650	1050	285	750	846	1250	2140	413	322	156	124
30	357	2000	1200	280	---	753	1190	5980	476	271	134	153
31	302	---	1100	280	---	707	---	9820	---	228	145	---
TOTAL	10580	33856	54859	12815	23723	27807	65069	50741	30825	26175	6845	5086
MEAN	341	1129	1770	413	818	897	2169	1637	1028	844	221	170
MAX	1020	2820	8850	850	2200	4780	4610	9820	5800	3950	481	296
MIN	150	254	658	280	275	350	812	743	346	228	134	117
CFSM	.78	2.59	4.06	.95	1.88	2.06	4.98	3.76	2.36	1.94	.51	.39
IN.	.90	2.89	4.68	1.09	2.02	2.37	5.55	4.33	2.63	2.23	.58	.43

CAL YR 1983	TOTAL	355603	MEAN 974	MAX 8850	MIN 102	CFSM 2.23	IN 30.34
WTR YR 1984	TOTAL	348381	MEAN 952	MAX 9820	MIN 117	CFSM 2.18	IN 29.72

CONNECTICUT RIVER BASIN

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, N. H.

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

DRAINAGE AREA.--87.6 mi².

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

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

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

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

AVERAGE DISCHARGE.--45 years, 210 ft³/s, 32.55 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 6	0600	*3,940	*7.60	May 30	1500	3,900	7.57

Minimum discharge, 34 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	61	292	290	68	143	121	1080	1330	127	59	47
2	47	60	243	250	66	129	129	581	1140	109	61	48
3	48	61	217	210	68	124	139	419	960	98	57	44
4	45	353	173	180	75	119	158	1070	636	94	54	45
5	59	1010	199	150	100	114	743	776	489	124	51	42
6	106	513	186	135	105	105	2680	513	396	175	50	40
7	87	272	640	125	90	105	1290	476	354	350	54	39
8	67	195	345	120	75	100	817	607	303	338	57	38
9	59	175	224	115	65	100	490	962	258	199	48	36
10	55	179	215	110	62	100	371	598	219	158	46	35
11	52	292	155	105	60	105	318	444	190	135	46	40
12	51	467	156	100	62	100	329	1030	166	168	46	71
13	109	277	1230	96	110	110	440	1010	147	136	45	49
14	159	200	1910	92	125	115	559	879	220	113	46	44
15	123	171	1040	88	120	130	640	678	287	101	88	44
16	89	274	735	86	170	115	670	572	175	116	70	54
17	77	611	486	84	350	137	1140	483	145	126	54	52
18	72	305	363	82	300	110	1000	393	131	140	48	46
19	68	223	294	80	290	160	844	387	133	264	44	41
20	64	186	196	78	1090	320	747	530	117	148	45	39
21	61	854	170	70	850	350	717	500	104	112	43	85
22	59	665	160	72	200	425	511	476	101	99	41	57
23	59	370	150	72	180	303	477	847	93	90	44	47
24	76	287	140	76	190	213	809	1260	86	82	111	43
25	82	1270	135	234	240	175	850	628	419	76	133	40
26	70	712	130	133	300	157	578	553	438	73	67	50
27	66	408	150	95	220	145	597	473	320	77	53	54
28	64	314	190	89	175	139	658	360	195	86	47	45
29	72	400	445	75	173	136	730	1020	147	75	44	42
30	73	408	487	76	---	130	935	2480	139	67	42	41
31	64	---	320	72	---	121	---	3050	---	62	45	---
TOTAL	2230	11573	11776	3640	5979	4835	20487	25135	9838	4118	1739	1398
MEAN	71.9	386	380	117	206	156	683	811	328	133	56.1	46.6
MAX	159	1270	1910	290	1090	425	2680	3050	1330	350	133	85
MIN	45	60	130	70	60	100	121	360	86	62	41	35
CFSM	.82	4.41	4.34	1.34	2.35	1.78	7.80	9.26	3.74	1.52	.64	.53
IN.	.95	4.91	5.00	1.55	2.54	2.05	8.70	10.67	4.18	1.75	.74	.59

CAL YR 1983	TOTAL	92482	MEAN 253	MAX 2510	MIN 33	CFSM 2.89	IN 39.27
WTR YR 1984	TOTAL	102748	MEAN 281	MAX 3050	MIN 35	CFSM 3.21	IN 43.63

CONNECTICUT RIVER BASIN

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01138500 CONNECTICUT RIVER AT WELLS RIVER, VT.

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

DRAINAGE AREA.--2,644 mi².

WATER-DISCHARGE RECORDS

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

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

REMARKS.--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.

AVERAGE DISCHARGE.--35 years, 4,788 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 48,200 ft³/s May 31, gage height, 15.03 ft; minimum daily, 642 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	654	3560	10700	2900	3500	7060	4050	11200	43400	3770	3740	1390
2	642	1740	8380	3000	4280	6680	5130	10400	34700	5550	4780	845
3	1790	2760	7760	6190	3560	5830	6600	10000	24300	5890	4320	1930
4	1870	3740	7480	6340	3290	3670	7580	10800	16500	2950	2160	1790
5	2790	6240	7500	6050	3470	4600	9180	11300	11700	4790	1540	1560
6	2840	4530	5750	5960	5550	4270	20100	9010	10200	8120	3600	2760
7	3130	3680	12500	3700	5290	4580	23500	6550	10000	9990	5330	1370
8	2510	3350	10800	3200	5580	5220	22100	6840	11000	16800	4690	1280
9	1060	3340	7720	5270	4660	4440	18000	8730	13800	15500	3410	1450
10	841	3050	5660	5910	4120	2830	14100	8470	9990	11100	3410	1670
11	2260	3400	6510	5200	3170	1160	12200	7800	8320	9310	1630	2880
12	2300	4850	7410	5400	2310	2920	12500	9010	8520	8670	1290	2310
13	3800	4320	12400	5600	4110	4250	12800	12600	7740	10000	3840	2460
14	4040	5180	30300	4400	5790	3930	13200	14800	7940	9490	3620	2290
15	2210	6530	32100	3900	7350	3650	12800	13900	7500	6260	2400	1570
16	2810	6090	28300	5000	10900	4950	15800	12800	5580	6170	3600	1150
17	1950	8360	21100	4700	7960	4020	20200	10200	3590	7450	4570	1760
18	2920	8010	15700	4000	8620	2480	18600	7740	4150	5930	1230	1720
19	2690	6850	10800	3300	8220	3870	18500	6140	6270	8320	646	1730
20	2880	6090	7820	3400	8160	5950	13700	6380	7330	7470	1760	1910
21	2970	8660	7430	3000	8060	8000	9250	6620	6430	5940	2260	2060
22	1090	11400	7540	2700	7040	9840	7080	6130	4240	4380	2320	1580
23	1100	12500	7650	3200	6950	10000	7070	5350	2510	6150	1740	1210
24	2990	8820	6290	4000	7120	10200	8460	9450	2580	6780	2420	3420
25	3400	13600	4570	3400	7270	7890	10400	9520	5320	5220	1370	3490
26	2740	18600	5200	3000	7810	7170	10600	7870	7100	4430	1430	3210
27	1920	15200	5800	2600	7170	7380	11000	6860	7630	2550	2580	2260
28	1490	12600	7200	1800	7290	7270	9160	6710	8560	2720	2130	1230
29	853	12100	6800	2500	7280	7270	8040	10900	7620	1900	1990	1340
30	845	10300	4900	3400	---	7060	9400	26100	4950	3630	2100	2350
31	1980	---	3700	2900	---	6440	---	44900	---	2750	2260	---
TOTAL	67365	219450	323770	125920	175880	174880	371100	335080	309470	209980	84166	57975
MEAN	2173	7315	10440	4062	6065	5641	12370	10810	10320	6774	2715	1933
MAX	4040	18600	32100	6340	10900	10200	23500	44900	43400	16800	5330	3490
MIN	642	1740	3700	1800	2310	1160	4050	5350	2510	1900	646	845

CAL YR 1983 TOTAL 2164640 MEAN 5930 MAX 44900 MIN 349
WTR YR 1984 TOTAL 2455036 MEAN 6708 MAX 44900 MIN 642

CONNECTICUT RIVER BASIN

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 September 1982.

WATER TEMPERATURES: October 1979 to September 1982.

REVISIONS.--WDR NH-VT-81-1: 1982.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	BARO- METRIC PRES- SURE (MM OF HG)	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)
NOV 08...	0900	2860	63	--	--	5.0	--	--	--	--
16...	1400	6860	78	737	7.3	7.5	1.7	11.3	97	170
DEC 20...	0935	7580	55	--	--	0.0	--	--	--	--
JAN 30...	0845	2830	--	--	--	0.0	--	--	--	--
MAR 06...	0825	2790	80	--	--	0.0	--	--	--	--
APR 04...	1130	6810	79	757	7.1	2.5	1.7	12.7	93	30
25...	0950	9420	70	--	--	5.5	--	--	--	--
JUN 06...	1400	10000	55	--	--	13.0	--	--	--	--
07...	1400	10700	85	757	7.4	13.5	3.5	10.4	101	600
AUG 08...	1315	3840	77	748	7.1	20.5	0.4	8.8	100	44
09...	0830	1090	58	--	--	23.0	--	--	--	--

DATE	STREP- TOCOCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS NONCAR- BONATE (MG/L AS CAC03)	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 CAC03)
NOV 16...	38	26	3	8.5	1.2	3.7	23	0.3	0.9	23
APR 04...	18	24	5	8.1	1	3.8	25	0.4	0.8	19
JUN 07...	270	24	6	8.1	0.9	2.6	19	0.2	0.7	18
AUG 08...	31	27	6	9.1	1.0	3.5	21	0.3	0.8	21

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
NOV 16...	10	4.3	<0.1	5.6	50	49	<0.1	0.08	0.1	1.30
APR 04...	8.3	5.2	0.2	6.0	27	45	0.33	0.14	0.18	0.8
JUN 07...	7.1	3.5	<0.1	5.2	50	39	<0.1	<0.01	0.01	0.6
AUG 08...	7.0	4.2	<0.1	4.9	47	43	0.18	<0.01	0.01	<0.1

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 16...	0.02	0.06	0.01	<0.01	0.03	45	833	32	<1	18.00
APR 04...	0.20	0.61	0.01	0.02	0.06	11	202	63	1	14.00
JUN 07...	0.01	--	<0.01	0.01	0.03	37	1070	57	1	14.00
AUG 08...	0.01	--	<0.01	0.01	0.03	30	311	62	1	14.00

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 16...	1	<1	<3.00	6	100	39	32	<0.1	1	<1	20
APR 04...	1	1	<3.00	5	70	8	29	<0.1	2	<1	9.00
JUN 07...	<1	<1	<3.00	6	80	6	22	<0.1	1	2	20
AUG 08...	<1	<1	<3.00	1	70	7	12	<0.1	<1	1	6.00

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

01139000 WELLS RIVER AT WELLS RIVER, VT.

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

DRAINAGE AREA.--98.4 mi².

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

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

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

REMARKS.--Records good except those for winter period, which are poor. Some diurnal fluctuation at low flow prior to 195⁷ and since June 1984 caused by small powerplant upstream. Flow partly regulated by Groton and Ricker

AVERAGE DISCHARGE.--44 years, 144 ft³/s, 19.87 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0300	2,000	5.92	May 30	1930	2,120	6.07
Apr. 6	0830	1,190	4.77	June 7	1100	*4,630	*8.68
Apr. 17	0300	1,050	4.56				

Minimum discharge, 19 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	52	327	125	59	150	192	299	1160	140	61	33
2	32	50	268	120	59	140	220	261	657	119	62	31
3	35	53	233	115	62	141	247	233	469	104	58	29
4	33	254	179	110	86	139	284	358	387	111	53	30
5	38	438	208	105	100	127	400	408	326	190	49	29
6	107	300	211	100	90	125	1090	323	280	230	46	25
7	78	197	885	97	80	115	1010	267	2550	601	47	32
8	62	142	518	94	74	105	744	242	1280	475	56	19
9	53	117	364	92	70	96	496	334	602	290	48	28
10	47	102	322	90	65	110	401	277	427	213	46	25
11	43	161	245	88	60	100	362	232	342	173	41	28
12	41	335	238	86	64	100	419	294	287	361	47	59
13	84	217	746	82	68	98	504	343	248	222	45	44
14	103	146	1800	80	90	96	567	397	289	158	45	41
15	88	124	1200	78	270	100	603	359	304	126	50	45
16	72	183	820	76	613	110	637	297	239	149	40	43
17	60	429	557	74	363	120	931	254	206	130	42	54
18	53	274	443	73	334	140	765	221	187	166	34	48
19	50	198	367	72	306	155	649	212	196	274	31	40
20	45	181	235	70	342	253	598	370	161	168	29	35
21	42	335	205	69	330	404	547	322	140	127	35	52
22	40	376	195	68	233	604	438	261	127	109	28	41
23	39	283	185	67	211	512	394	231	116	97	49	39
24	72	230	175	66	218	370	420	319	108	88	64	33
25	77	577	170	66	222	258	470	253	248	77	51	31
26	63	490	190	65	253	224	394	208	207	69	44	27
27	61	341	210	64	198	201	346	189	147	63	40	36
28	58	270	250	62	181	192	317	170	123	94	36	32
29	63	407	190	61	170	190	295	629	108	82	35	30
30	64	429	170	60	---	175	281	1620	132	66	36	29
31	56	---	145	60	---	169	---	1900	---	65	35	---
TOTAL	1789	7691	12251	2535	5271	5819	15021	12083	12053	5337	1383	1068
MEAN	57.7	256	395	81.8	182	188	501	390	402	172	44.6	35.6
MAX	107	577	1800	125	613	604	1090	1900	2550	601	64	59
MIN	30	50	145	60	59	96	192	170	108	63	28	19
CFSM	.59	2.60	4.01	.83	1.85	1.91	5.09	3.96	4.09	1.75	.45	.36
IN.	.68	2.91	4.63	.96	1.99	2.20	5.68	4.57	4.56	2.02	.52	.40

CAL YR 1983 TOTAL 74832 MEAN 205 MAX 1800 MIN 27 CFSM 2.08 IN 28.29
WTR YR 1984 TOTAL 82301 MEAN 225 MAX 2550 MIN 19 CFSM 2.29 IN 31.11

01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT.

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

DRAINAGE AREA.--8.95 mi².

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

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

GAGE.--Water-stage recorder. Elevation of gage is 1,180 ft, from topographic map.

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

AVERAGE DISCHARGE.--26 years, 16.0 ft³/s, 24.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 672 ft³/s June 30, 1973, gage height, 5.55 ft, from rating curve extended above 151 ft³/s on basis of slope-area measurement of peak flow; maximum gage height, 6.35 ft Jan. 22, 1959, ice jam; minimum discharge, 0.1 ft³/s Sept. 9, 19, 1963.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 4	1245	165	3.73	May 29	1030	156	3.68
Dec. 14	--	160	ice jam	June 7	0315	204	3.96
Dec. 22	2330	ice jam	*5.47	June 14	1730	144	3.61
Apr. 5	1930	*228	4.09	July 7	0830	155	3.67
May 4	0800	141	3.59				

Minimum discharge, 1.7 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.8	37	14	5.4	21	18	56	78	9.2	4.5	2.5
2	2.7	2.8	32	13	5.2	19	19	45	72	7.5	4.8	2.3
3	2.3	3.5	28	12	5.2	19	25	39	66	8.0	4.3	2.6
4	2.1	60	23	11	10	18	25	75	60	8.0	3.9	2.7
5	3.4	40	25	11	8.6	17	99	53	54	22	3.6	2.5
6	16	17	27	10	8.0	15	94	40	51	14	3.4	2.2
7	3.8	9.2	70	9.8	7.4	14	68	35	91	58	4.6	2.1
8	2.7	7.2	52	9.6	6.8	14	60	42	56	17	4.1	2.0
9	2.5	6.5	42	9.2	6.4	13	54	46	44	12	3.5	1.8
10	2.4	6.0	33	8.8	6.2	12	50	32	36	13	3.5	1.8
11	2.4	23	27	8.6	5.4	11	54	29	32	17	4.1	5.5
12	2.5	20	25	8.4	5.6	10	66	49	29	21	4.1	6.7
13	13	10	110	8.2	6.0	9.8	70	33	26	10	3.6	3.4
14	6.0	12	130	8.2	6.8	9.7	74	52	64	8.3	3.2	4.2
15	3.4	8.6	100	8.0	20	9.6	75	31	38	7.5	2.9	4.6
16	2.8	22	90	7.8	37	9.8	90	31	28	10	2.6	4.8
17	2.6	28	76	7.6	20	17	94	27	24	7.7	2.5	4.1
18	2.4	17	50	7.4	23	14	86	27	26	17	2.3	3.2
19	2.3	19	40	7.2	21	13	90	48	24	17	2.3	2.8
20	2.1	14	32	7.0	26	24	91	48	19	8.6	2.5	2.8
21	2.1	55	28	7.0	19	32	85	30	17	7.2	2.1	3.0
22	2.0	30	26	7.0	16	40	75	26	15	6.7	2.0	2.6
23	2.4	22	24	7.2	17	23	75	31	14	6.0	6.7	2.6
24	8.6	26	22	7.2	18	20	90	29	13	5.6	6.2	2.5
25	3.5	77	20	7.2	23	19	75	23	36	5.3	3.6	2.4
26	3.0	38	19	7.0	24	18	67	22	17	5.1	2.9	3.3
27	3.2	33	18	6.8	30	17	62	22	14	7.7	2.6	3.0
28	3.0	33	17	6.6	25	16	58	23	11	7.7	2.4	2.7
29	3.9	69	18	6.4	23	15	54	99	9.9	5.8	2.2	2.6
30	3.4	48	16	6.2	---	13	54	114	9.6	5.1	2.5	2.6
31	3.0	---	15	5.8	---	15	---	106	---	4.6	3.4	---
TOTAL	117.3	759.6	1272	261.2	435.0	517.9	1997	1363	1074.5	359.6	106.9	91.9
MEAN	3.78	25.3	41.0	8.43	15.0	16.7	66.6	44.0	35.8	11.6	3.45	3.06
MAX	16	77	130	14	37	40	99	114	91	58	6.7	6.7
MIN	1.8	2.8	15	5.8	5.2	9.6	18	22	9.6	4.6	2.0	1.8
CFSM	.42	2.83	4.58	.94	1.68	1.87	7.44	4.92	4.00	1.30	.39	.34
IN.	.49	3.16	5.29	1.09	1.81	2.15	8.30	5.66	4.47	1.49	.44	.38
CAL YR 1983	TOTAL	7570.9	MEAN	20.7	MAX	130	MIN	1.4	CFSM	2.31	IN	31.47
WTR YR 1984	TOTAL	8355.9	MEAN	22.8	MAX	130	MIN	1.8	CFSM	2.55	IN	34.73

CONNECTICUT RIVER BASIN

01141500 OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT.

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

DRAINAGE AREA.--130 mi².

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

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

REMARKS.--Records good except those for winter period and period of shifting control June 8 to Sept. 30, which are fair. Flow regulated by Union Village Reservoir (Reservoirs in Connecticut River basin) since October 1949. Some regulation by Lake Fairlee. Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 196 ft³/s, 20.47 in/yr, adjusted for storage.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,840 ft³/s June 8, gage height, 7.30 ft; minimum, 19 ft³/s Sept. 26, 29, 30; minimum daily, 19 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	40	532	230	88	225	275	343	165	82	55	27
2	25	39	395	180	80	202	326	308	140	72	55	25
3	25	42	343	195	74	199	425	287	162	69	51	25
4	25	212	275	170	88	199	459	524	463	74	47	29
5	29	499	261	165	115	186	563	491	994	91	42	26
6	84	440	302	160	180	183	907	392	1410	142	42	25
7	55	266	939	155	140	177	1310	349	1690	415	40	23
8	40	162	1050	140	105	205	1300	351	1800	264	40	22
9	35	195	528	135	92	156	584	429	1730	177	33	21
10	32	180	455	130	90	121	108	346	1620	167	31	21
11	30	165	373	130	96	121	150	313	1430	177	47	21
12	31	373	305	125	98	165	563	436	1020	351	55	32
13	76	422	631	125	99	132	1020	520	269	186	45	29
14	93	269	422	120	100	119	1120	627	293	142	40	25
15	72	202	581	115	160	124	1130	541	287	127	37	31
16	55	252	1570	110	444	167	1220	440	222	152	33	36
17	48	487	1510	110	578	165	1600	389	189	157	31	31
18	48	415	1160	105	575	172	1590	351	177	212	29	26
19	43	264	1480	105	392	192	1110	332	189	232	27	25
20	39	229	780	100	324	275	751	444	152	155	32	24
21	42	373	180	100	572	444	644	354	132	124	27	25
22	37	511	1000	98	622	653	554	313	116	105	25	23
23	40	385	950	120	429	581	503	308	100	93	39	20
24	74	305	475	125	379	444	560	385	93	82	51	20
25	71	820	236	110	373	305	614	302	218	71	40	20
26	56	810	135	105	408	308	491	266	157	62	31	20
27	53	467	220	100	373	346	432	243	124	69	27	20
28	48	373	350	96	326	346	392	240	103	116	25	20
29	45	532	380	94	318	324	360	727	89	80	25	20
30	43	676	320	92	---	284	337	335	84	67	25	19
31	42	---	240	92	---	264	---	255	---	60	27	---
TOTAL	1460	10405	18378	3937	7718	7784	21398	11941	15618	4373	1154	731
MEAN	47.1	347	593	127	266	251	713	385	521	141	37.2	24.4
MAX	93	820	1570	230	622	653	1600	727	1800	415	55	36
MIN	24	39	135	92	74	119	108	240	84	60	25	19
MEAN†	47.1	355	593	126	265	253	708	549	351	141	36.8	24.4
CFSM†	.36	2.73	4.56	.97	2.04	1.95	5.45	4.22	2.70	1.08	.28	.19
IN†	.42	3.04	5.26	1.11	2.20	2.24	608	4.87	3.01	1.25	.33	.21

CAL YR 1983 TOTAL 96061 MEAN 263 MAX 1570 MIN 19 MEAN† 263 CFSM† 2.02 IN† 27.50
WTR YR 1984 TOTAL 104897 MEAN 287 MAX 1800 MIN 19 MEAN† 287 CFSM† 2.21 IN† 30.01

† Adjusted for change in Union Village Reservoir.

01141800 MINK BROOK NEAR ETNA, N. H.

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

DRAINAGE AREA.--4.60 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 1,000 ft, from topographic map.

REMARKS.--Records good except those for winter period, which are fair and those below 0.5 ft³/s, and those for period of no gage-height record, May 3 to June 1, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--22 years, 7.60 ft³/s, 22.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 560 ft³/s Aug. 15, 1976, gage height, 3.80 ft, from rating curve extended above 130 ft³/s on basis of slope-area measurement at gage heights 3.50 ft and 3.75 ft; maximum gage height, 4.28 ft Jan. 9, 1978, backwater from ice; minimum discharge, 0.01 ft³/s Aug. 11, 1964.

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

Date	Time	Discharge (ft ³ /s)	Gageheight (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 4	1315	102	2.53	Mar. 22	0015	289	3.17
Nov. 25	1100	118	2.60	Apr. 5	2330	164	2.78
Dec. 7	0100	115	2.59	Apr. 16	1315	92	2.48
Dec. 14	0700	210	2.93	May 12	--	85	--
Feb. 15	2000	a420	*3.50	May 29	--	*a550	--

a From rating curve extended above 190 ft³/s.

Minimum discharge, 0.18 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.42	1.1	18	5.2	2.3	13	13	15	45	1.2	.90	.37
2	.47	1.1	14	4.5	2.1	10	15	12	34	1.1	.80	.26
3	.47	1.4	12	4.3	2.3	9.0	19	11	24	1.5	.70	.42
4	.47	32	11	4.0	4.2	7.5	19	20	19	2.1	.60	.54
5	.74	13	12	3.8	4.2	6.8	61	17	15	4.5	.50	.47
6	1.7	8.8	18	3.7	3.6	6.5	101	14	12	8.4	.40	.35
7	1.0	6.1	50	3.5	3.2	6.2	55	12	14	23	.57	.29
8	.78	4.9	21	3.3	3.0	5.8	34	17	10	7.1	.52	.27
9	.68	4.3	16	3.2	2.9	5.6	25	25	7.6	4.1	.37	.23
10	.58	4.0	11	3.1	2.8	5.4	21	17	6.0	3.5	.34	.21
11	.53	11	24	3.0	2.7	5.0	20	14	4.9	4.5	5.0	.38
12	.68	12	43	2.9	2.7	4.8	26	50	4.0	11	1.9	.86
13	4.0	7.3	77	2.8	4.8	4.6	28	35	3.4	3.0	1.2	.40
14	2.6	5.7	135	2.6	7.0	5.0	35	25	6.1	2.0	.96	.64
15	1.5	5.4	60	2.5	172	4.5	38	22	5.4	1.3	.77	1.6
16	1.1	21	36	2.5	101	4.2	57	17	3.7	3.5	.63	1.5
17	.93	21	24	2.4	35	4.5	42	14	3.0	7.0	.51	.83
18	.90	12	18	2.3	48	7.0	30	12	3.3	5.0	.41	.61
19	.92	8.9	15	2.3	32	10	24	11	3.7	3.5	.42	.51
20	.84	7.9	10	2.2	29	31	22	13	2.5	3.0	.79	.44
21	.80	20	8.0	2.2	22	46	19	11	2.1	2.8	.46	.44
22	.74	15	6.5	2.1	17	70	19	10	1.8	2.3	.36	.38
23	.84	11	5.8	2.1	16	19	14	13	1.5	1.8	1.3	.34
24	5.5	12	5.2	2.9	27	15	18	17	1.3	1.5	.95	.32
25	2.5	58	4.7	4.7	28	15	18	9.5	4.8	1.6	.71	.27
26	1.8	26	4.3	3.3	30	14	14	8.0	2.7	1.8	.50	.32
27	1.7	17	3.9	3.1	17	13	12	7.0	1.9	2.0	.40	.37
28	1.5	14	5.8	2.9	15	11	11	9.7	1.5	2.2	.33	.33
29	1.4	47	12	2.6	14	11	9.8	200	1.2	1.5	.30	.30
30	1.2	29	6.9	2.5	---	11	9.8	120	1.2	1.2	.30	.30
31	1.2	---	6.0	2.4	---	10	---	70	---	1.0	.41	---
TOTAL	40.49	437.9	694.1	94.9	650.8	391.4	829.6	848.2	246.6	120.0	24.31	14.55
MEAN	1.31	14.6	22.4	3.06	22.4	12.6	27.7	27.4	8.22	3.87	.78	.49
MAX	5.5	58	135	5.2	172	70	101	200	45	23	5.0	1.6
MIN	.42	1.1	3.9	2.1	2.1	4.2	9.8	7.0	1.2	1.0	.30	.21
CFSM	.29	3.17	4.87	.67	4.87	2.74	6.02	5.96	1.79	.84	.17	.11
IN.	.33	3.54	5.61	.77	5.26	3.16	6.71	6.86	1.99	.97	.20	.12

CAL YR 1983 TOTAL 3660.58 MEAN 10.0 MAX 135 MIN .10 CFSM 2.17 IN 29.60
WTR YR 1984 TOTAL 4392.85 MEAN 12.0 MAX 200 MIN .21 CFSM 2.61 IN 35.52

CONNECTICUT RIVER BASIN

01142500 AYERS BROOK AT RANDOLPH, VT.

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

DRAINAGE AREA.--30.5 mi².

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

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

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

REMARKS.--Records good except those for doubtful gage-height record, Sept. 1-30, and winter period which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years (water years 1940-75, 1977-84), 47.2 ft³/s, 21.02 in/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0230	478	5.45	May 4	1115	390	5.00
Dec. 13	2400	*685	*6.40	May 30	1315	635	6.18
Apr. 6	1845	464	5.38	July 7	1015	462	5.37
Apr. 16	2200	444	5.28				

Minimum discharge, 5.0 ft³/s Oct. 1-5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	9.7	98	56	21	72	85	153	311	20	18	9.6
2	5.0	9.7	87	54	20	65	87	120	224	18	18	8.7
3	5.0	9.7	81	52	22	59	102	110	178	16	17	8.6
4	5.0	82	74	50	35	56	106	244	147	17	15	8.9
5	5.3	93	76	49	33	51	174	210	123	39	13	8.8
6	19	63	89	47	29	50	401	169	109	40	13	8.2
7	12	42	315	45	26	48	363	151	110	180	13	8.0
8	9.7	33	151	42	21	44	273	163	93	68	14	7.4
9	8.3	30	133	40	20	43	203	172	80	47	12	7.0
10	7.5	28	110	38	20	40	174	139	68	39	11	6.6
11	6.8	51	94	37	22	39	165	123	60	37	11	8.6
12	6.8	74	99	35	24	37	186	161	51	59	11	13
13	30	46	338	34	26	35	197	153	47	39	11	8.6
14	20	38	586	33	27	32	220	163	53	32	11	9.0
15	14	36	384	32	45	42	238	142	53	31	10	8.6
16	12	40	287	31	107	41	307	128	44	51	10	9.6
17	10	66	216	30	77	46	336	113	39	40	11	9.5
18	9.6	52	178	30	85	44	285	103	39	68	8.7	8.6
19	8.4	42	140	29	85	45	247	116	41	67	8.4	7.6
20	8.3	41	135	28	119	58	222	165	36	45	8.8	7.6
21	7.9	98	125	27	103	90	195	123	31	38	8.4	7.0
22	7.7	90	115	26	85	119	158	101	28	34	7.8	6.6
23	7.7	75	110	27	82	109	142	99	26	31	17	6.5
24	17	67	105	28	88	82	202	103	24	28	23	6.4
25	15	171	96	30	92	82	224	87	58	24	15	6.0
26	12	120	88	29	101	73	186	77	37	22	12	9.6
27	12	94	82	27	89	70	158	75	28	28	9.8	7.4
28	11	82	76	25	81	72	142	77	24	37	8.7	6.0
29	11	144	84	24	77	74	142	334	22	26	8.4	6.6
30	10	128	66	23	---	70	138	486	22	23	9.0	6.5
31	10	---	58	22	---	68	---	470	---	20	12	---
TOTAL	329.1	1955.1	4676	1080	1662	1856	6058	5030	2206	1264	376.0	241.1
MEAN	10.6	65.2	151	34.8	57.3	59.9	202	162	73.5	40.8	12.1	8.04
MAX	30	171	586	56	119	119	401	486	311	180	23	13
MIN	5.0	9.7	58	22	20	32	85	75	22	16	7.8	6.0
CFSM	.35	2.14	4.95	1.14	1.88	1.96	6.62	5.31	2.41	1.34	.40	.26
IN.	.40	2.38	5.70	1.32	2.03	2.26	7.39	6.13	2.69	1.54	.46	.29

CAL YR 1983 TOTAL 25271.1 MEAN 69.2 MAX 586 MIN 3.8 CFSM 2.27 IN 30.82
WTR YR 1984 TOTAL 26733.3 MEAN 73.0 MAX 586 MIN 5.0 CFSM 2.39 IN 32.60

CONNECTICUT RIVER BASIN

59

01144000 WHITE RIVER AT WEST HARTFORD, VT.

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

DRAINAGE AREA.--690 mi².

PERIOD OF RECORD.--Discharge: June 1915 to current year. October 1927 to September 1928 monthly discharge only, published in WSP 1301.

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

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

GAGE.--Water-stage recorder. Datum of gage is 374.53 ft above National Geodetic Vertical Datum of 1929.

Prior to Oct. 30, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for 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.--69 years, 1,190 ft³/s, 23.42 in/yr.

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

Stage and discharge of the flood of Nov. 4, 1927, are the greatest since at least 1761.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0400	19,100	13.31	May 30	1530	*21,100	*13.91
Apr. 6	0500	12,700	11.16				

Minimum discharge, 139 ft³/s Oct. 4, 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	238	2290	940	450	1490	1400	2810	7510	443	319	251
2	144	228	1920	890	440	1330	1670	2240	4810	414	321	217
3	146	227	1730	840	460	1340	1920	1930	3620	378	318	199
4	142	663	1460	820	540	1260	2230	3640	2980	429	291	228
5	144	2280	1510	800	620	1070	3780	4310	2510	463	273	230
6	293	2000	1560	780	580	1000	11300	2960	2170	1060	254	204
7	343	1260	7650	740	540	980	9050	2410	2270	3310	261	184
8	233	937	3830	700	520	920	6230	2250	1920	2220	318	179
9	197	773	2690	680	500	900	4280	3300	1620	1250	284	166
10	178	676	2420	660	490	850	3570	2560	1400	959	245	158
11	166	973	1980	640	500	840	3130	2160	1250	807	289	154
12	163	2150	1790	620	520	760	3530	2760	1110	1410	319	279
13	274	1430	6410	600	580	700	4270	3540	1000	971	280	311
14	427	1060	17400	590	660	450	5170	3490	1040	725	252	233
15	350	918	9810	580	1300	826	6120	2990	1270	626	235	272
16	278	1050	6690	570	3500	955	6310	2480	958	606	223	303
17	237	1770	4530	550	2750	1040	8330	2180	850	794	221	288
18	218	1470	3520	540	3000	967	6880	1920	799	720	226	250
19	204	1180	2960	530	3100	942	5640	1780	860	1490	202	218
20	193	1070	1900	520	3700	1130	5350	2610	743	970	205	200
21	185	2170	1600	510	3400	1760	5030	2140	639	727	205	200
22	180	3170	1550	500	2300	2330	3710	1840	586	616	187	182
23	181	2270	1500	520	2070	2140	3190	1690	537	540	215	168
24	270	1820	1450	540	2230	1710	3700	2230	495	483	377	162
25	424	4560	1400	560	2270	1520	4720	1780	836	423	384	158
26	319	3630	1350	540	2560	1460	3540	1530	889	379	289	153
27	282	2480	1300	500	2000	1380	3120	1510	624	377	237	190
28	271	2020	1200	480	1900	1410	2850	1400	526	585	207	203
29	258	2860	1300	470	1790	1450	2690	8270	471	469	190	178
30	254	3100	1100	460	---	1320	2550	16900	457	390	195	167
31	249	---	1050	450	---	1240	---	13500	---	349	233	---
TOTAL	7345	50433	98850	19120	45270	37470	135260	107110	46750	25383	8055	6285
MEAN	237	1681	3189	617	1561	1209	4509	3455	1558	819	260	210
MAX	427	4560	17400	940	3700	2330	11300	16900	7510	3310	384	311
MIN	142	227	1050	450	440	450	1400	1400	457	349	187	153
CFSM	.34	2.44	4.62	.89	2.26	1.75	6.54	5.01	2.26	1.19	.38	.30
IN.	.40	2.72	5.33	1.03	2.44	2.02	7.29	5.77	2.52	1.37	.43	.34
CAL YR 1983	TOTAL	568079	MEAN 1556	MAX 17400	MIN 140	CFSM 2.26	IN 30.63					
WTR YR 1984	TOTAL	587331	MEAN 1605	MAX 17400	MIN 142	CFSM 2.33	IN 31.66					

CONNECTICUT RIVER BASIN

01144500 CONNECTICUT RIVER AT WEST LEBANON, N. H.

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

DRAINAGE AREA.--4,092 mi².

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

Water-quality records: Water year 1954.

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

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

June 16, 1918, to Nov. 2, 1930, nonrecording gage at various locations on upstream and downstream sides of railroad bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair and period of no gage-height record Jan. 2 to Feb. 6, which are poor. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Union Village Reservoir (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 17,200,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1415	52,500	19.61	Apr. 18	0045	35,000	15.48
Apr. 7	1700	40,300	16.76	May 31	1830	*66,100	*22.59

Minimum daily discharge, 940 ft³/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	2480	15400	5100	4700	9970	6790	14400	62700	2620	3920	1050
2	998	4860	13400	4400	3800	8610	9720	13800	54700	5720	3940	980
3	2330	2990	10500	7000	3900	9060	10600	13500	43400	4580	4110	1000
4	2390	5710	10800	7000	3200	7610	11900	16900	31900	1340	1140	1800
5	3090	10900	10400	7100	3700	6250	16800	18100	20700	5690	1100	1000
6	3440	8990	10400	7200	6000	6710	35300	15200	15400	7380	4140	990
7	3650	7730	22200	5300	5200	6830	39200	12600	23600	13100	3630	980
8	3720	5620	20700	5200	4400	6930	36900	10900	21400	18300	3670	940
9	1860	4220	13600	6800	3800	5980	29700	12900	16800	17200	4110	960
10	1950	5240	11000	6700	5000	3820	22800	13600	14100	12700	2030	1250
11	3000	7460	9550	6600	4600	2610	16900	12600	10000	10900	1110	1750
12	2500	8380	10300	6400	4400	5430	17800	13200	11200	9680	1140	2200
13	4120	7120	20400	5800	5200	4880	20300	16500	9450	11700	2660	1900
14	5400	9050	50600	2700	6200	5430	22400	21400	8460	9080	1950	1850
15	3590	8760	49000	4800	8400	7840	24100	21400	8710	4070	1710	1650
16	1980	7390	46400	5600	13500	6480	26500	17300	6080	5730	3380	1200
17	3310	9980	38500	4800	14500	5760	33700	15500	3880	6710	1340	1180
18	3120	10900	28500	2900	14000	6610	32100	13700	4850	7850	1500	1150
19	3270	10900	17900	3900	14500	6310	29300	9860	7400	8770	980	1350
20	3330	9000	12700	3200	13800	7040	26400	10600	7120	7810	1450	1100
21	3620	10100	10600	3100	12500	12700	17200	11200	4140	5510	1300	990
22	2440	16100	9280	2700	12000	16200	14000	10500	4600	4150	1850	1160
23	1390	16500	11100	3700	11500	15400	14100	8240	2370	6650	1800	1350
24	2650	14500	11100	3600	10800	14600	13900	11300	4210	5100	2100	3000
25	3870	18500	11000	4100	13000	11600	16200	14600	5950	4650	1050	2900
26	5460	27900	7400	5000	11900	11800	16600	12300	7530	2830	1450	1200
27	2080	22100	7000	2800	12400	11200	16000	10400	7580	3220	3400	1180
28	2330	17500	7300	3100	12500	10100	15300	10600	8090	2070	2100	1110
29	2090	17600	9800	3000	11200	9730	13300	22200	8200	1360	1600	1070
30	1140	16500	9400	4500	---	10200	13500	46000	3040	2750	1700	1070
31	3050	---	7400	4800	---	8950	---	60200	---	2400	1450	---
TOTAL	88178	324980	523630	148900	250600	262640	619310	511500	437560	211620	68810	41310
MEAN	2844	10830	16890	4803	8641	8472	20640	16500	14590	6826	2220	1377
MAX	5460	27900	50600	7200	14500	16200	39200	60200	62700	18300	4140	3000
MIN	998	2480	7000	2700	3200	2610	6790	8240	2370	1340	980	940
CAL YR 1983	TOTAL	3270615	MEAN	8961	MAX	50600	MIN	954				
WTR YR 1984	TOTAL	3489038	MEAN	9533	MAX	62700	MIN	940				

CONNECTICUT RIVER BASIN

61

01150500 MASCOMA RIVER AT MASCOMA, N. H.

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

DRAINAGE AREA.--153 mi².

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

REVISED RECORDS.--WSP 726: Drainage area. WSP 801: 1925(M), 1973(M).

GAGE.--Water-stage recorder. Elevation of gage is 740 ft, from topographic map.

REMARKS.--Records good. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (Reservoirs in Connecticut River basin).

AVERAGE DISCHARGE.--61 years, 217 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,200 ft³/s June 1, gage height, 5.72 ft; minimum daily, 31 ft³/s Oct. 1, 2.

REVISIONS.--The maximum discharge for the water year 1973 has been revised to 4,260 ft³/s, July 1, 1973 gage height, 5.75 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	115	670	273	96	434	232	194	3640	94	44	36
2	31	132	628	252	96	322	202	166	2340	82	44	36
3	64	151	571	190	95	304	199	195	1500	61	40	35
4	113	160	523	139	94	274	260	307	1180	46	37	35
5	112	226	475	143	94	243	460	393	877	53	37	34
6	112	355	449	131	96	230	1250	380	584	154	37	34
7	112	380	526	120	97	227	2320	329	277	240	37	34
8	112	385	652	120	97	222	1740	360	416	281	37	34
9	112	390	647	109	97	214	1220	235	566	282	37	34
10	112	395	596	98	97	206	681	194	462	191	36	33
11	112	395	538	99	96	198	374	244	270	145	37	33
12	112	400	472	99	96	155	403	268	168	160	39	33
13	112	405	483	99	96	125	470	396	186	190	38	33
14	112	410	814	99	97	146	859	713	195	164	39	33
15	112	407	1360	99	100	151	792	780	202	134	38	34
16	112	408	1580	99	120	154	775	653	205	97	37	33
17	112	428	1270	99	317	164	851	478	191	40	36	34
18	113	461	1080	99	570	174	926	382	178	45	36	34
19	113	455	887	99	691	183	882	369	142	118	36	34
20	113	429	686	99	753	199	743	364	120	146	35	35
21	113	294	539	99	761	249	638	220	120	129	35	35
22	113	415	462	98	705	337	589	165	117	96	35	35
23	113	425	385	97	613	464	535	227	118	80	36	36
24	113	416	348	97	545	512	370	337	119	64	36	36
25	114	434	339	97	550	476	297	434	85	58	36	37
26	114	600	328	96	620	393	382	375	58	62	37	47
27	114	778	317	97	730	326	379	322	110	73	37	73
28	114	737	302	97	733	318	346	341	114	69	37	94
29	115	680	296	97	623	253	316	618	126	61	36	106
30	115	667	293	96	---	218	285	1850	110	52	36	111
31	115	---	286	96	---	227	---	3470	---	47	36	---
TOTAL	3287	12333	18802	3632	9775	8098	19776	15759	14776	3514	1154	1291
MEAN	106	411	607	117	337	261	659	508	493	113	37.2	43.0
MAX	115	778	1580	273	761	512	2320	3470	3640	282	44	111
MIN	31	115	286	96	94	125	199	165	58	40	35	33
CAL YR 1983	TOTAL	101266	MEAN 277	MAX 1580	MIN 31							
WTR YR 1984	TOTAL	112197	MEAN 307	MAX 3640	MIN 31							

CONNECTICUT RIVER BASIN

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT.

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

DRAINAGE AREA.--221 mi².

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

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

REMARKS.--Records good except those for winter period which are fair and period of shifting control July 3-23, which are poor. Flow regulated by powerplants upstream and by North Hartland Reservoir (Reservoir in Connecticut River basin) since March 1961; greater regulation by powerplants 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.--54 years, 400 ft³/s, 24.58 in/yr, adjusted for storage.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,600 ft³/s June 9, gage height, 8.32 ft; minimum, 0.2 ft³/s July 6; minimum daily, 6.8 ft³/s July 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	381	32	561	260	167	370	476	219	33	180	23	62
2	330	33	21	250	156	320	589	22	32	164	23	55
3	53	33	800	340	126	420	692	22	208	47	23	58
4	34	121	1160	370	214	450	963	23	856	13	112	78
5	34	597	115	330	280	410	999	824	1870	6.8	257	65
6	35	943	22	290	271	360	2090	1860	2570	216	46	48
7	35	259	677	280	242	410	3330	2510	2700	623	23	56
8	35	26	645	250	185	320	3450	936	2440	863	23	46
9	35	26	856	220	178	210	3370	1050	4160	102	23	41
10	35	26	513	210	200	167	2070	1030	3190	9.3	23	41
11	35	26	1050	200	208	218	1050	623	2210	11	110	39
12	35	856	963	180	208	330	1210	634	2010	11	270	60
13	35	1050	1330	160	208	342	1640	990	1770	11	95	59
14	35	123	4270	190	250	238	1710	1430	876	195	23	73
15	35	27	5330	210	409	189	2590	1450	313	863	23	117
16	35	27	4180	210	705	240	2760	831	271	259	23	143
17	35	27	1700	130	1100	339	2500	1300	259	7.1	23	108
18	35	38	1050	200	1260	376	1270	458	233	17	23	87
19	35	745	1040	130	1260	374	2330	333	268	24	23	84
20	35	1260	517	260	1640	514	3440	1640	253	24	23	79
21	33	110	400	190	1600	642	2420	666	290	211	23	79
22	290	26	560	180	902	807	1420	576	303	876	23	79
23	362	293	640	155	763	762	1000	541	290	47	24	71
24	126	1150	620	145	800	746	1340	618	233	25	24	62
25	35	1840	440	145	820	546	1670	494	277	26	127	46
26	34	2010	330	208	860	490	1140	446	250	26	265	22
27	34	303	310	239	860	493	1210	472	208	27	234	22
28	35	21	380	239	780	494	1260	450	185	361	77	22
29	34	1480	480	233	600	538	923	1410	185	192	60	22
30	32	1170	520	185	---	507	902	876	178	46	51	22
31	32	---	390	206	---	445	---	35	---	23	60	---
TOTAL	2404	14678	31870	6795	17252	13067	51814	24769	28921	5506.2	2180	1846
MEAN	77.5	489	1028	219	595	422	1727	799	964	178	70.3	61.5
MAX	381	2010	5330	370	1640	807	3450	2510	4160	876	270	143
MIN	32	21	21	130	126	167	476	22	32	6.8	23	22
MEAN†	73.8	468	1056	221	589	423	1699	1211	532	185	63.2	77.8
CFSM†	.33	2.12	4.78	1.00	2.67	1.91	7.69	5.48	2.41	.84	.29	.35
IN†	.39	2.37	5.51	1.15	2.88	2.21	8.58	6.32	2.69	.97	.33	.39

CAL YR 1983 TOTAL 192128.0 MEAN 526 MAX 5330 MIN 16 MEAN† 526 CFSM† 2.38 IN† 32.33
WTR YR 1984 TOTAL 201102.2 MEAN 549 MAX 5330 MIN 6.8 MEAN† 548 CFSM† 2.48 IN† 33.78

† Adjusted for change in contents in North Hartland Reservoir.

01152500 SUGAR RIVER AT WEST CLAREMONT, N. H.

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

DRAINAGE AREA.--269 mi².

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

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

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

REMARKS.--Records good except those for winter period, which are fair. No gage-height record Dec. 21 to Jan. 25. Regulation by Sunapee Lake 25 mi upstream (Reservoirs in Connecticut River basin) and occasional diurnal fluctuation at low flow by mills upstream; greater regulation by mills prior to 1971.

AVERAGE DISCHARGE.--56 years, 408 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 4	1400	3,410	5.51	Apr. 6	1330	4,110	5.97
Feb. 16	1630	ice jam	*11.43	May 30	2000	*6,950	7.70

Minimum daily discharge, 24 ft³/s Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	37	968	500	350	967	677	522	4110	95	88	61
2	37	41	819	400	330	861	786	472	2720	90	90	58
3	31	37	713	400	391	780	875	439	2380	86	88	63
4	26	88	618	400	563	702	1030	721	1840	90	84	65
5	25	388	588	430	724	631	1300	974	1520	102	86	59
6	39	319	591	450	686	625	3600	806	1320	274	78	58
7	35	244	1290	480	601	546	3560	683	1170	483	74	54
8	30	189	1080	450	460	477	2730	638	967	625	70	54
9	34	148	832	420	420	472	2030	820	780	434	66	52
10	26	121	768	370	430	391	1650	696	606	402	66	52
11	24	143	651	410	460	346	1420	594	511	274	82	56
12	24	219	587	350	490	300	1380	709	314	253	84	78
13	37	204	1390	330	520	265	1500	1370	269	199	84	88
14	47	161	3290	310	550	996	1500	1480	261	202	78	88
15	62	137	2870	280	1100	1380	1670	1430	261	188	76	90
16	54	261	2190	260	3000	1040	1870	1160	210	171	72	72
17	41	704	1640	240	2500	644	2240	974	188	162	70	63
18	36	485	1300	230	2600	488	1890	847	181	191	65	66
19	30	351	1070	230	2000	528	1630	767	202	269	63	61
20	26	277	798	240	1550	715	1670	1000	156	225	70	54
21	26	315	700	270	1400	896	1670	903	139	206	65	49
22	25	509	640	300	1130	1260	1360	800	123	206	61	47
23	26	394	600	350	974	1320	1170	734	104	175	70	47
24	52	332	560	600	1280	1090	1160	1030	93	153	74	47
25	69	975	520	1000	1760	960	1320	793	120	139	68	47
26	65	1320	500	700	2220	889	1150	651	150	112	65	49
27	56	887	470	600	1620	793	917	600	147	102	61	47
28	51	663	650	520	1370	734	741	570	131	126	59	46
29	47	874	880	450	1160	734	638	2610	112	115	58	46
30	44	1120	720	400	---	670	576	5800	102	102	68	49
31	39	---	600	380	---	625	---	6230	---	93	65	---
TOTAL	1215	11943	30893	12750	32639	23125	45710	37823	21187	6344	2248	1766
MEAN	39.2	398	997	411	1125	746	1524	1220	706	205	72.5	58.9
MAX	69	1320	3290	1000	3000	1380	3600	6230	4110	625	90	90
MIN	24	37	470	230	330	265	576	439	93	86	58	46

CAL YR 1983 TOTAL 177354 MEAN 486 MAX 3290 MIN 22
WTR YR 1984 TOTAL 227643 MEAN 622 MAX 6230 MIN 24

CONNECTICUT RIVER BASIN

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 downstream from North Springfield Dam, 1,300 ft upstream from Great Brook, and 8.1 mi upstream from mouth.

DRAINAGE AREA.--158 mi².

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

Water-quality records: Water years 1954-55.

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

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

REMARKS.--Records good except those for 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.--55 years, 294 ft³/s, 25.27 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft³/s Sept. 22, 1938, gage height, 17.68 ft, from rating curve extended above 3,200 ft³/s on basis of computations of flow over dams at gage heights 16.41 ft and 17.68 ft; minimum daily, 7.0 ft³/s Nov. 13, 1973. Maximum discharge since construction of North Springfield Dam in 1960, 3,550 ft³/s Apr. 11, 1962, gage height, 6.43 ft; maximum gage height, 7.43 ft Dec. 16, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,530 ft³/s Dec. 16, gage height, 7.43 ft; minimum daily, 26 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	40	280	230	120	389	351	716	207	114	55	58
2	29	50	437	220	110	345	465	1030	156	104	63	49
3	29	47	368	200	100	317	559	648	313	110	59	50
4	34	90	304	190	142	278	653	799	923	133	54	54
5	36	168	299	200	224	251	1040	1300	1760	110	53	54
6	50	289	270	208	201	267	2210	956	2370	319	53	53
7	55	231	899	190	173	251	2750	690	2820	790	55	47
8	43	196	1060	170	150	214	2750	664	3160	848	62	44
9	37	161	1090	150	130	207	2660	1300	3170	767	62	42
10	52	147	623	160	120	190	2280	821	2640	293	60	40
11	66	185	433	165	130	180	1220	675	2160	216	119	39
12	52	387	354	181	143	160	982	759	1120	232	273	50
13	84	281	801	160	174	140	1040	995	441	185	147	53
14	102	217	1070	145	192	130	1290	1120	184	151	117	52
15	79	184	1590	140	314	150	1490	1060	149	129	97	58
16	67	223	2910	140	1160	196	1720	781	150	109	95	69
17	62	396	3100	130	1390	229	2310	662	150	102	87	73
18	56	306	2320	130	1190	230	2540	562	251	147	82	60
19	51	242	1430	130	911	232	2180	499	302	207	63	54
20	54	209	410	125	826	290	1680	596	168	137	53	49
21	48	346	364	130	1330	411	1680	533	142	113	56	45
22	42	580	330	130	1020	687	1580	424	120	106	44	42
23	49	438	300	134	612	663	970	395	109	96	53	40
24	95	361	280	139	707	532	627	412	100	89	65	39
25	108	682	260	147	847	452	957	335	136	77	61	38
26	73	860	250	202	872	441	1360	292	155	73	53	36
27	60	1080	240	166	711	407	1220	315	122	70	46	37
28	51	661	230	154	549	384	882	325	99	82	44	36
29	46	721	330	136	522	366	785	1670	93	81	43	35
30	45	887	334	130	---	355	640	875	119	84	50	51
31	41	---	258	120	---	333	---	555	---	60	58	---
TOTAL	1722	10665	23224	4952	15070	9677	42871	22764	23789	6134	2282	1447
MEAN	55.5	356	749	160	520	312	1429	734	793	198	73.6	48.2
MAX	108	1080	3100	230	1390	687	2750	1670	3170	848	273	73
MIN	26	40	230	120	100	130	351	292	93	60	43	35
MEAN†	55.4	360	747	159	521	313	1461	1109	371	197	74.2	48.5
CFSM†	.35	2.28	4.73	1.01	3.30	1.98	9.25	7.02	2.35	1.25	.47	.31
IN†	.40	2.54	5.45	1.16	3.56	2.28	10.3	8.10	2.62	1.44	.54	.34
CAL YR 1983	TOTAL	140177	MEAN 384	MAX 3100	MIN 22	MEAN† 384	CFSM† 2.43	IN† 33.01				
WTR YR 1984	TOTAL	164597	MEAN 450	MAX 3170	MIN 26	MEAN† 450	CRSM† 2.85	IN† 38.74				

† 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 upstream from highway bridge at Brockways Mills, 4 mi downstream from Hall Brook, 4.6 mi upstream from mouth, and 6 mi northwest of Bellows Falls.

DRAINAGE AREA.--103 mi².

PERIOD OF RECORD.--Discharge: June 1940 to September 1984 (discontinued).
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 above National Geodetic Vertical Datum of 1929 (levels by private engineer).

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

AVERAGE DISCHARGE.--44 years, 175 ft³/s, 23.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,800 ft³/s Aug. 10, 1976, gage height, 15.85 ft, from rating curve extended above 3,300 ft³/s on basis of slope-area measurement at gage height 13.31 ft; minimum not determined, occurred Dec. 11, 1941, during period of ice effect; minimum daily, 3.6 ft³/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, from floodmarks. Flood in November 1927 reached a stage possibly 2 ft higher than that of September 1938 flood because of backwater from milldam, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0500	4,530	9.23	Apr. 16	2000	2,830	7.28
Apr. 6	0200	a7,270	11.93	May 29	1500	a*7,540	*12.18

a From rating curve extended above 3,300 ft³/s.

Minimum discharge, 12 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	254	120	60	220	265	237	1130	39	26	36
2	14	22	196	110	59	194	335	208	711	37	26	25
3	15	22	170	105	65	184	442	192	513	41	26	27
4	14	27	137	110	156	167	445	845	383	45	24	35
5	16	45	157	115	202	144	2040	524	284	51	23	29
6	36	79	157	120	151	165	3910	346	235	150	22	25
7	27	52	1120	120	111	147	1950	273	250	494	23	23
8	20	40	397	125	84	126	1070	426	200	175	33	21
9	18	34	256	120	76	115	688	665	166	94	25	20
10	16	31	238	115	70	110	554	373	141	65	23	19
11	15	68	188	110	80	105	498	292	121	54	159	19
12	17	155	188	105	94	100	688	576	103	94	84	40
13	65	77	1710	120	115	96	748	571	93	57	46	27
14	47	55	3020	110	170	100	835	817	95	43	37	30
15	37	48	1180	100	460	110	917	497	86	36	41	45
16	27	109	733	95	1260	116	1530	374	73	34	31	46
17	24	197	470	90	759	125	1340	304	67	35	28	32
18	23	113	349	80	811	140	913	259	67	85	25	26
19	21	83	269	78	672	150	741	235	79	98	23	25
20	20	70	162	74	657	197	1030	362	63	53	27	23
21	19	232	147	68	533	286	755	264	55	62	24	22
22	19	233	145	66	380	563	502	218	51	80	22	20
23	19	161	135	85	330	463	422	202	45	46	30	19
24	57	127	130	98	503	345	750	231	43	38	34	19
25	49	755	125	254	590	302	701	179	69	32	27	18
26	35	367	120	224	693	292	461	160	58	30	24	18
27	31	225	120	152	388	269	377	160	45	30	22	17
28	29	177	115	127	318	258	324	183	42	51	21	16
29	26	460	250	95	280	244	285	3550	39	37	20	16
30	24	427	190	80	---	218	257	4150	39	30	29	16
31	23	---	160	70	---	210	---	3010	---	28	42	---
TOTAL	815	4514	12988	3441	10127	6261	25773	20683	5346	2244	1047	754
MEAN	26.3	150	419	111	349	202	859	667	178	72.4	33.8	25.1
MAX	65	755	3020	254	1260	563	3910	4150	1130	494	159	46
MIN	12	22	115	66	59	96	257	160	39	28	20	16
CFSM	.26	1.46	4.07	1.08	3.39	1.96	8.34	6.48	1.73	.70	.33	.24
IN.	.29	1.63	4.69	1.24	3.66	2.26	9.31	7.47	1.93	.81	.38	.27
CAL YR 1983	TOTAL	88388.8	MEAN 242	MAX 3020	MIN 8.7	CFSM 2.35	IN 31.92					
WTR YR 1984	TOTAL	93993.0	MEAN 257	MAX 4150	MIN 12	CFSM 2.50	IN 33.95					

CONNECTICUT RIVER BASIN

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, N. H.

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

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

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: March 1942 to current year.

Water-quality records: Water years 1954-55, 1971.

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

REMARKS.--Records good except those for winter period and period of no gage-height record April 3 to May 29, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 24,800,000,000 ft³.

AVERAGE DISCHARGE.--42 years, 9,469 ft³/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84,500 ft³/s May 31, gage height, 27.82 ft; minimum daily, 1,340 ft³/s Oct. 2, Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1520	3090	20300	9440	6400	13500	11700	19000	79200	3240	3650	1370
2	1340	5120	17300	8240	6200	12500	11300	18000	68100	5470	3800	1380
3	2690	4100	14100	8310	6210	12000	12000	17000	55800	5160	4170	2260
4	2690	6010	15300	10600	5180	11700	16000	20000	43800	2640	2600	1680
5	4060	8480	13000	10300	6540	10800	19000	25000	34400	6670	1920	1380
6	3850	11800	13200	9840	7730	8740	25000	24000	24500	7750	4100	1420
7	3140	10900	25600	9850	9150	8760	50000	20000	24900	16300	4000	1360
8	3340	6680	29700	8520	7810	9860	64000	17000	31900	21700	4460	1390
9	2210	6130	20400	8610	6260	8660	58000	19000	26600	20300	4240	1380
10	2600	6920	15600	7930	6740	5610	48000	20000	24000	15700	3230	2880
11	2700	7110	14000	9480	6570	2990	38000	17000	16700	12600	1410	2140
12	2920	10100	14100	8480	6450	6410	27000	19000	16600	11600	2330	2520
13	6030	9890	25100	9610	6860	5660	26000	22000	13400	11800	3580	2450
14	5600	10000	62200	6350	7530	5720	35000	28000	12600	12200	2920	2930
15	2580	10200	66500	6720	10200	6840	40000	32000	11100	6400	2390	2250
16	2480	11000	62400	7140	21000	9150	40000	25000	8240	7290	3560	1340
17	2910	10300	53100	7290	27000	10300	49000	22000	5660	7120	1730	1340
18	3700	12500	39800	6440	25000	7940	48000	18000	6330	9430	1690	1600
19	3500	12000	27800	6490	25000	8550	43000	16000	8190	9760	1380	1750
20	3800	12900	17100	5820	25000	11000	43000	15000	8860	9170	1880	1750
21	4020	12000	13400	5000	13000	13300	35000	16000	6300	7840	1590	1400
22	2040	17600	11800	4500	20300	22500	27000	15000	5660	5310	3670	1650
23	2390	19000	13600	4800	18300	22700	22000	13000	3570	7520	1370	1650
24	5260	18600	14600	4600	18000	21100	21000	15000	5870	6300	2120	3100
25	5340	22600	13000	6600	21200	17700	25000	18000	6420	6140	1570	3100
26	3540	34100	11000	7000	21800	16400	25000	12000	7470	3220	1820	1750
27	2750	29300	8400	4600	19900	15500	24000	14500	8860	4240	4180	1650
28	2460	22100	10000	7000	18700	14600	23000	14000	7950	2880	2550	1360
29	1730	22400	12000	4550	16700	14300	20000	30000	8070	2600	1990	1360
30	1640	23500	12600	6400	---	13200	18000	65200	6740	3440	1960	1360
31	3250	---	12000	6800	---	14600	---	83400	---	3520	2230	---
TOTAL	98080	396430	699000	227310	396730	362590	944000	709100	587790	255310	84090	54950
MEAN	3164	13210	22550	7333	13680	11700	31470	22870	19590	8236	2713	1832
MAX	6030	34100	66500	10600	27000	22700	64000	83400	79200	21700	4460	3100
MIN	1340	3090	8400	4500	5180	2990	11300	12000	3570	2600	1370	1340
CAL YR 1983	TOTAL	4365090	MEAN	11960	MAX	66500	MIN	1330				
WTR YR 1984	TOTAL	4815380	MEAN	13160	MAX	83400	MIN	1340				

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD---

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURES: October 1980 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	BARO- METRIC PRES- SURE (MM OF HG)	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)
OCT 27...	1400	3700	162	--	--	6.0	--	--	--	--
NOV 17...	1300	11400	105	744	7.2	5.5	1.2	11.7	95	900
APR 06...	1000	49100	87	742	7.1	3.5	9.4	13.1	101	1500
JUN 08...	1215	30300	91	758	7.2	15.0	4.2	11.2	112	240
AUG 07...	0930	1390	126	749	7.7	25.5	0.2	7.9	98	60

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)
NOV 17...	110	41	8	14	1.5	4.4	18	0.3	1.2	33
APR 06...	1100	28	6	9.5	1.1	3.8	22	0.3	0.9	22
JUN 08...	87	30	7	10	1.1	3.0	18	0.3	0.8	23
AUG 07...	88	44	14	15	1.6	5.4	21	0.4	1.1	30

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
NOV 17...	9.8	6.3	<0.1	5.5	74	63	<0.1	0.07	0.09	0.2
APR 06...	9.1	6.0	<0.1	4.7	43	49	0.21	0.14	0.18	1.20
JUN 08...	7.9	4.2	<0.1	4.9	50	46	0.29	0.04	0.05	0.9
AUG 07...	8.7	7.7	<0.1	4.6	77	62	0.17	<0.01	0.01	<0.1

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 17...	0.01	0.03	0.01	<0.01	0.03	10	308	47	<1	21.00
APR 06...	0.45	1.4	<0.01	0.03	0.09	273	36200	69	1	12.00
JUN 08...	0.01	--	<0.01	<0.01	0.03	57	4660	27	1	14.00
AUG 07...	0.02	--	<0.01	0.01	0.03	24	90	52	1	16.00

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	<1	<1	<3.00	1	90	3	30	<0.1	2	<1	5.00
APR 06...	<1	<1	<3.00	3	60	3	39	<0.1	1	<1	10
JUN 08...	<1	<1	<3.00	4	70	1	9	0.1	1	<1	9.00
AUG 07...	<1	<1	<3.00	7	40	5	3	<0.1	<1	<1	10

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

69

01155500 WEST RIVER AT JAMAICA, VT.

LOCATION.--Lat 43°06'32", long 72°46'33", Windham County, Hydrologic Unit 01080107, on left bank 0.2 mi upstream from highway bridge at Jamaica, 0.4 mi upstream from Ball Mountain Brook, and 2.8 mi downstream from Ball Mountain Dam, and at mile 26.2.

DRAINAGE AREA.--179 mi².

PERIOD OF RECORD.--Discharge: October 1946 to current year.
Water-quality records: Water year 1954.

GAGE.--Water-stage recorder. Elevation of gage is 640 ft, from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Ball Mountain Reservoir since 1961 (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years, 370 ft³/s, 28.07 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft³/s Dec. 31, 1948, gage height, 14.87 ft, from rating curve extended above 9,800 ft³/s, verified by slope-area measurement of peak flow; minimum, 0.94 ft³/s Sept. 23-25, 1968; minimum daily, 0.94 ft³/s Sept. 23, 24, 1968. Maximum discharge since construction of Ball Mountain Dam in 1961, 5,080 ft³/s Mar. 17, 1977, gage height, 9.27 ft; maximum gage height, 11.72 ft Feb. 7, 1982, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,840 ft³/s June 8, gage height, 9.15 ft; minimum discharge, 19 ft³/s Aug. 29; minimum daily, 28 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	465	59	733	320	160	465	301	870	162	67	68	301
2	436	59	460	280	150	385	333	635	149	67	56	232
3	29	59	380	240	140	337	440	455	398	67	51	151
4	29	61	253	220	170	286	629	1320	1190	68	50	131
5	30	86	261	220	170	270	936	1910	2050	114	50	131
6	72	236	354	200	200	220	1710	1500	2740	183	50	131
7	151	403	1680	190	300	210	2610	856	3640	394	50	86
8	143	279	1810	170	230	195	2860	642	4490	491	50	65
9	95	162	787	150	190	190	2720	1270	4570	780	50	65
10	43	133	569	130	160	190	2170	1390	2260	800	48	65
11	28	215	426	120	150	190	1210	914	1020	279	78	65
12	30	279	317	130	160	190	997	878	642	146	64	67
13	114	282	753	130	230	200	1490	1210	271	143	208	65
14	186	261	974	130	300	240	1760	1890	118	143	371	68
15	136	215	1710	130	350	346	1830	1710	107	141	363	68
16	73	297	3280	125	500	363	2040	929	107	141	268	70
17	52	541	3690	110	1500	294	2740	699	105	138	160	70
18	52	535	3220	110	2570	275	3350	507	86	112	70	85
19	52	329	1740	110	1890	236	2870	445	76	162	61	92
20	52	243	440	110	1670	215	1860	450	76	202	67	90
21	51	486	350	110	1910	321	1850	450	75	198	65	90
22	51	990	280	100	1050	535	1540	445	70	162	65	90
23	51	936	290	94	773	680	821	329	67	95	67	88
24	99	599	290	110	780	635	1310	376	67	72	65	88
25	211	974	270	160	936	450	1970	417	68	70	85	75
26	141	1360	230	330	1250	389	1410	321	68	70	94	67
27	94	1340	200	350	1260	376	1130	279	67	72	94	67
28	101	1070	170	220	974	358	1130	376	67	72	94	67
29	99	849	230	190	667	309	1080	1460	67	70	78	654
30	78	929	280	180	---	297	800	1070	67	70	99	513
31	61	---	310	170	---	297	---	317	---	68	261	---
TOTAL	3305	14267	26737	5339	20790	9944	47897	26320	24940	5657	3300	3897
MEAN	107	476	862	172	717	321	1597	849	831	182	106	130
MAX	465	1360	3690	350	2570	680	3350	1910	4570	800	371	654
MIN	28	59	170	94	140	190	301	279	67	67	48	65
MEAN†	75	478	866	168	718	320	1645	1301	342	180	112	100
CFSM†	.42	2.67	4.84	.94	4.01	1.79	9.19	7.27	1.91	1.01	.63	.56
IN†	.49	2.98	5.58	1.08	4.32	2.06	10.26	8.38	2.13	1.16	.72	.62

CAL YR 1983 TOTAL 166118 MEAN 455 MAX 3800 MIN 28 MEAN† 455 MIN† 2.54 IN† 34.52
WTR YR 1984 TOTAL 192393 MEAN 526 MAX 4570 MIN 28 MEAN† 523 MIN† 2.92 IN† 39.79

† Adjusted for change in contents in Ball Mountain Reservoir.

CONNECTICUT RIVER BASIN

01156000 WEST RIVER AT NEWFANE, VT.

LOCATION.--Lat 42°59'43", long 72°38'13", Windham County, Hydrologic Unit 01080107, on left bank 400 ft downstream from highway bridge, 1 mi northeast of Newfane, and at mile 12.7.

DRAINAGE AREA.--308 mi².

PERIOD OF RECORD.--Discharge: September 1919 to September 1923, October 1928 to current year.

Water-quality records: Water year 1954.

Water temperatures: October 1954 to September 1965.

REVISED RECORDS.--WSP 756: Drainage area. WSP 1231: 1922-23, 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 384.21 ft above National Geodetic Vertical Datum of 1929. Prior to June 27, 1931, nonrecording gage at site 600 ft upstream and June 27, 1931, to Aug. 21, 1972, water-stage recorder on right bank 600 ft downstream from highway bridge at same datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, June 7-12, which are fair. Flow regulated since 1961 by Ball Mountain Reservoir and Townshend Reservoir 6.8 mi upstream (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--60 years, 631 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,300 ft³/s Sept. 21, 1938, gage height, 22.81 ft, from floodmarks, from rating curve extended above 20,000 ft³/s on basis of contracted-opening measurement at gage height 19.3 ft and slope-area measurements at gage heights 19.46 ft and 22.81 ft; minimum, 7.6 ft³/s Aug. 24, 25, 26, 1962; minimum daily, 8.2 ft³/s Aug. 25, 1962. Maximum discharge since construction of Ball Mountain and Townshend Reservoirs in 1961, 10,300 ft³/s May 25, 1979, gage height, 10.07 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1869, that of Sept. 21, 1938. Flood of Nov. 3, 1927, reached a discharge of 45,000 ft³/s, gage height, 23.0 ft, from floodmarks, at nonrecording-gage site, from rating curve extended above 20,000 ft³/s on basis of computation of peak flow over dam at West Dummerston, about 5 mi downstream, adjusted for flow from intervening area.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,020 ft³/s June 8, gage height, 9.64 ft, from floodmarks; minimum, 46 ft³/s Oct. 1; minimum daily, 54 ft³/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	349	90	1130	470	240	781	444	1220	484	111	94	353
2	266	86	788	430	230	625	585	973	386	229	90	296
3	208	86	621	380	210	525	780	640	510	105	83	206
4	143	91	529	330	240	473	1030	2050	1490	95	77	178
5	59	113	328	320	260	378	2530	3000	2680	104	74	169
6	64	268	566	300	350	377	4250	2130	3510	197	72	157
7	166	403	1150	280	440	375	4570	1350	5000	863	72	143
8	169	367	3210	240	340	317	4720	1080	7500	783	70	98
9	151	233	1560	220	280	292	4550	1970	7500	762	70	90
10	99	179	920	190	240	256	4380	1980	4800	927	70	88
11	61	295	745	180	220	260	2800	1410	3600	416	83	88
12	54	465	544	190	250	267	1740	1360	2800	342	139	87
13	130	409	1600	190	350	268	2540	2330	493	263	135	84
14	250	344	2800	190	600	300	2600	2910	247	206	304	86
15	221	301	3480	190	900	367	2630	2770	207	184	392	92
16	151	551	5840	180	1400	360	3200	1480	183	177	282	94
17	98	920	6490	170	2700	361	4510	1100	173	171	231	93
18	88	771	4830	160	3730	357	5560	744	163	194	125	90
19	86	515	2540	160	3490	394	5320	599	153	247	79	100
20	84	373	773	160	2510	385	3510	665	140	254	94	102
21	82	677	482	160	3060	588	3180	648	126	230	97	99
22	82	1430	410	150	2320	988	2490	602	120	212	89	97
23	80	1430	420	140	1180	1090	1500	600	110	160	87	97
24	160	920	430	180	1470	998	1870	680	105	109	93	97
25	320	1570	380	250	1850	821	3030	760	126	97	92	96
26	230	2380	350	460	2740	697	2650	620	130	92	103	85
27	145	1900	300	500	2180	697	1850	520	107	97	105	81
28	160	1440	260	300	1570	641	1670	700	105	134	102	80
29	150	1510	350	280	1080	586	1540	2600	106	125	102	502
30	110	1610	400	270	---	549	1160	2000	117	109	167	543
31	95	---	440	250	---	453	---	700	---	100	262	---
TOTAL	4511	21727	44666	7870	36430	15826	83189	42191	43171	8095	3935	4471
MEAN	146	724	1441	254	1256	511	2773	1361	1439	261	127	149
MAX	349	2380	6490	500	3730	1090	5560	3000	7500	927	392	543
MIN	54	86	260	140	210	256	444	520	105	92	70	80
CAL YR 1983	TOTAL	286658	MEAN 785	MAX 6490	MIN 40							
WTR YR 1984	TOTAL	316082	MEAN 864	MAX 7500	MIN 54							

CONNECTICUT RIVER BASIN

71

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, N. H.

LOCATION.--Lat 42°59'40", long 72°18'40", Cheshire County, Hydrologic Unit 01080201, on right bank 600 ft downstream from Surry Mountain Dam, 2.5 mi upstream from Sturtevant Brook, 4.5 mi north of Keene, and at mile 34.0.

DRAINAGE AREA.--101 mi².

PERIOD OF RECORD.--Discharge: September 1945 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above U. S. Army Corps of Engineers datum.

REMARKS.--Records good. 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.--39 years, 176 ft³/s, 23.66 in/yr, adjusted for storage.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,050 ft³/s June 7, gage height, 8.54 ft; minimum daily, 7.3 ft³/s Sept. 12-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	17	395	231	76	959	262	233	92	33	33	9.7
2	42	16	254	228	70	876	270	207	207	31	30	9.7
3	35	16	246	188	70	654	295	184	368	29	27	9.7
4	30	20	262	168	71	368	312	207	712	27	24	9.7
5	24	26	259	168	115	251	312	275	1030	30	22	9.4
6	21	44	214	143	179	221	420	298	1020	70	20	9.0
7	17	59	246	132	238	170	560	315	1030	157	18	8.7
8	14	62	401	132	191	126	813	281	1040	278	17	8.7
9	13	58	383	130	132	126	950	312	1020	300	16	8.3
10	11	55	292	130	132	126	959	312	1000	273	15	8.3
11	11	60	270	105	132	126	986	270	1020	262	14	8.3
12	15	76	236	91	130	107	984	259	1020	284	14	8.0
13	30	89	228	79	130	78	864	359	1020	254	13	7.3
14	37	85	303	71	130	70	684	522	1000	195	13	7.6
15	36	81	532	71	164	70	455	631	989	147	13	7.6
16	33	94	753	71	147	107	401	541	970	115	12	8.0
17	29	184	879	71	318	135	715	442	922	112	11	8.3
18	26	226	882	72	553	166	1000	365	791	115	11	8.3
19	23	200	970	72	553	184	1010	303	753	172	10	8.3
20	20	170	1020	72	532	278	846	275	794	168	12	8.3
21	17	170	678	72	753	362	759	262	765	137	14	8.0
22	16	205	356	72	804	452	734	241	675	108	13	7.6
23	15	209	251	72	888	550	605	224	341	88	14	8.0
24	20	198	233	72	891	498	595	306	124	74	14	9.7
25	21	264	228	72	900	429	675	371	83	59	13	13
26	22	429	151	99	903	383	557	333	67	48	12	18
27	23	432	110	151	810	344	417	315	54	44	11	20
28	22	368	147	159	654	306	339	289	45	51	11	20
29	22	389	172	130	864	284	300	281	39	51	11	20
30	19	449	216	112	---	281	264	83	35	45	10	18
31	18	---	233	91	---	270	---	92	---	39	10	---
TOTAL	726	4751	11800	3527	11530	9357	18343	9388	19026	3796	478	313.5
MEAN	23.4	158	381	114	398	302	611	303	634	122	15.4	10.5
MAX	44	449	1020	231	903	959	1010	631	1040	300	33	20
MIN	11	16	110	71	70	70	262	83	35	27	10	7.3
MEAN†	22.1	170	383	107	460	243	613	639	279	122	13.7	12.2
CFSM†	.22	1.68	3.79	1.06	4.55	2.41	6.07	6.33	2.76	1.21	.14	.12
IN†	.25	1.88	4.37	1.22	4.92	2.77	6.77	7.30	3.08	1.40	.16	.13

CAL YR 1983 TOTAL 76280.8 MEAN 209 MAX 1020 MIN 3.3 MEAN† 209 CFSM† 2.07 IN† 28.12
WTR YR 1984 TOTAL 93035.5 MEAN 254 MAX 1040 MIN 7.3 MEAN† 254 CFSM† 2.51 IN† 34.25

† Adjusted for change in contents in Surry Mountain Lake.

CONNECTICUT RIVER BASIN

01158600 OTTER BROOK BELOW OTTER BROOK DAM, NEAR KEENE, N. H.

LOCATION.--Lat 42°56'45", long 72°14'14", Cheshire County, Hydrologic Unit 01080201, on right bank 450 ft downstream from Otter Brook Dam, 2 mi northeast of Keene, 2.4 mi upstream from Minnewawa Brook, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--47.2 mi².

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft above U. S. Army Corps of Engineers datum.

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

AVERAGE DISCHARGE.--26 years, 80.5 ft³/s, 23.16 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft³/s Apr. 20, 1959, gage height, 8.59 ft; maximum gage height, 8.61 ft Apr. 26, 1972, Oct 20, 1977; minimum discharge, 0.1 ft³/s Nov. 28, 1959; minimum daily, 0.3 ft³/s Sept. 27 to Oct. 2, Oct. 9, 10, 12-20, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 635 ft³/s June 11, gage height, 8.54 ft; minimum, 2.0 ft³/s Oct. 12, 13; minimum daily, 2.4 ft³/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.3	2.9	219	68	30	456	97	88	16	15	22	4.0		
2	3.6	2.9	113	68	30	392	99	78	16	15	20	3.5		
3	8.8	2.9	95	68	30	191	123	72	56	13	18	6.0		
4	6.2	2.9	80	55	64	144	178	118	184	12	16	8.9		
5	5.0	2.9	78	41	125	97	200	155	358	14	14	7.4		
6	4.5	3.3	69	42	148	79	275	127	467	97	12	5.4		
7	5.6	2.9	157	42	146	74	360	107	540	35	11	4.4		
8	3.8	2.8	196	42	99	72	506	101	560	126	13	3.8		
9	3.4	2.8	115	42	79	71	557	147	549	221	14	3.7		
10	3.1	2.8	98	42	79	70	534	128	589	231	12	3.5		
11	2.8	2.8	77	42	79	47	507	107	616	108	11	8.4		
12	2.4	3.3	68	42	79	35	477	123	610	151	11	20		
13	3.3	3.4	71	42	79	35	444	203	612	211	9.5	18		
14	5.0	3.4	155	34	123	36	230	316	598	121	10	18		
15	5.6	3.6	355	28	142	60	141	283	585	71	11	17		
16	6.2	31	460	28	132	70	180	188	570	56	9.6	19		
17	6.2	98	483	28	242	69	300	154	538	65	8.0	22		
18	6.2	98	490	27	398	70	299	131	460	90	6.7	20		
19	6.2	98	466	27	348	70	240	113	448	151	6.1	20		
20	6.2	95	258	30	332	113	327	143	476	105	14	19		
21	6.2	93	145	32	461	131	275	119	296	78	17	19		
22	6.2	93	83	32	480	177	231	98	45	61	12	18		
23	6.2	95	68	29	512	242	259	101	23	50	10	18		
24	6.2	85	68	27	456	249	324	278	18	41	10	18		
25	4.3	95	69	43	451	179	328	210	22	33	9.1	18		
26	3.3	110	56	69	237	97	220	143	27	28	7.6	18		
27	3.4	113	49	68	329	100	160	180	22	25	6.9	17		
28	3.4	227	49	47	305	102	125	160	18	37	5.7	16		
29	3.4	312	61	38	440	143	110	162	16	34	4.7	14		
30	2.9	362	67	38	---	157	98	13	14	29	4.8	12		
31	2.9	---	68	32	---	117	---	15	---	25	4.6	---		
TOTAL	146.8	2050.6	4886	1293	6455	3945	8204	4361	9349	2349	341.3	400.0		
MEAN	4.74	68.4	158	41.7	223	127	273	141	312	75.8	11.0	13.3		
MAX	8.8	362	490	69	512	456	557	316	616	231	22	22		
MIN	2.4	2.8	49	27	30	35	97	13	14	12	4.6	3.5		
MEAN†	6.86	84.0	156	39.6	245	106	275	306	140	76.1	10.6	13.4		
CFSM†	.15	1.78	3.30	.84	5.19	2.25	5.83	6.48	2.97	1.61	.22	.28		
IN†	.17	1.99	3.80	.97	5.59	2.60	6.50	7.47	3.32	1.86	.26	.32		
CAL YR 1983	TOTAL	34835.3	MEAN	95.4	MAX	522	MIN	1.6	MEAN†	95.4	CFSM†	2.02	IN†	27.46
WTR YR 1984	TOTAL	43780.7	MEAN	120	MAX	616	MIN	2.4	MEAN†	121	CFSM†	2.56	IN†	34.83

CONNECTICUT RIVER BASIN

73

01161000 ASHUELOT RIVER AT HINSDALE, N. H.

LOCATION.--Lat 42°47'07", long 72°29'12", Cheshire County, Hydrologic Unit 01080201, on left bank 40 ft upstream from highway bridge at Hinsdale, 0.2 mi downstream from dam, and 1.2 mi upstream from mouth.

DRAINAGE AREA.--420 mi².

PERIOD OF RECORD.--Discharge: March 1907 to December 1911, July 1914 to current year.
Water-quality records: Water years 1953, 1958, 1968.

REVISED RECORDS.--WSP 661: Drainage area. WSP 781: 1907-10, 1914-34. WSP 1301: 1915(M), 1917-19(M), 1921-33(M). WSP 1701: 1920.

GAGE.--Water-stage recorder. Datum of gage is 201.32 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Sept. 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Surry Mountain Lake 33 mi upstream since 1942 and by Otter Brook Lake 29 mi upstream on Otter Brook since 1958 (Reservoirs in Connecticut River basin). 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.--74 years, 676 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,600 ft³/s Mar. 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft Mar. 19, 1936, from floodmarks, backwater from Connecticut River; minimum discharge, 10 ft³/s Sept. 9, 1953; minimum daily, 12 ft³/s Sept. 15, 1929.

Maximum discharge since at least 1859, that of Mar. 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft³/s May 31, gage height, 9.25 ft; minimum 56 ft³/s Oct. 13; minimum daily, 65 ft³/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	101	1700	730	660	2260	1130	907	9010	216	177	97
2	120	95	1030	680	630	2170	1230	823	6070	206	160	96
3	128	94	1030	625	580	1920	1370	750	4190	196	146	95
4	124	101	1100	600	775	1450	1560	980	3260	187	139	94
5	114	122	1000	576	1080	1090	2130	1330	2500	181	134	92
6	99	163	860	568	1240	958	4340	1190	2560	383	130	88
7	87	196	1060	546	1190	885	4400	1040	2480	691	126	86
8	79	187	1430	500	1100	757	4080	1010	2440	1070	120	77
9	73	172	1280	435	920	680	3700	1180	2350	1080	116	73
10	69	160	1070	390	800	575	3310	1180	2210	988	112	72
11	67	213	921	390	750	540	2980	1030	2140	899	112	73
12	65	312	836	405	706	480	2650	988	2100	914	106	84
13	102	321	1440	435	731	440	2470	1360	2030	958	99	89
14	160	273	3660	440	750	410	2350	1630	2000	823	95	99
15	184	238	3500	450	1080	500	2230	1980	1990	568	95	108
16	169	355	2950	460	4000	591	2270	1840	1920	437	94	108
17	148	830	2560	470	5100	737	2690	1530	1860	383	92	104
18	137	960	2320	480	4100	763	2680	1270	1780	476	87	102
19	150	860	2160	520	3600	803	2560	1090	1600	857	85	99
20	148	720	2000	540	3130	965	2440	1030	1560	796	130	94
21	141	720	1630	590	2950	1270	2480	1010	1540	599	174	89
22	130	860	1230	640	2790	1740	2140	914	1250	469	143	84
23	122	880	940	700	2530	2140	1910	864	973	372	124	79
24	137	840	745	760	2640	2060	1780	1310	591	312	140	76
25	155	1200	590	1090	3050	1800	1900	1410	412	269	135	76
26	158	1700	575	1450	3620	1570	1820	1160	361	227	125	74
27	146	1800	575	1400	3180	1410	1510	1090	312	210	115	74
28	134	1500	580	1120	2580	1320	1230	1070	273	242	100	79
29	126	1700	785	1020	2210	1250	1060	2760	246	246	110	81
30	120	1900	890	905	---	1230	965	7620	231	216	100	81
31	108	---	785	750	---	1180	---	9600	---	196	98	---
TOTAL	3804	19573	43232	20665	58472	35944	69365	52946	62239	15667	3719	2623
MEAN	123	652	1395	667	2016	1159	2312	1708	2075	505	120	87.4
MAX	184	1900	3660	1450	5100	2260	4400	9600	9010	1080	177	108
MIN	65	94	575	390	580	410	965	750	231	181	85	72
CAL YR 1983	TOTAL	307387	MEAN	842	MAX	3660	MIN	48				
WTR YR 1984	TOTAL	388249	MEAN	1061	MAX	9600	MIN	65				

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 northeast of Pittsburg, N. H., 506,000,000 ft³; First Lake, 5.6 mi northeast of Pittsburg, N. H., 3,330,000,000 ft³. Records provided by New England Power Co.
01129000. LAKE FRANCIS on Connecticut River at Pittsburg, N. H., completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft³. Records provided by New Hampshire Water Resources Board.
- 01132000; 01132500. MOORE AND COMERFORD RESERVOIRS on Connecticut River are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Moore Reservoir, 4.5 mi northwest of Littleton, N. H., filled in April 1956, 4,970,000,000 ft³; Comerford Reservoir, 5 mi northeast of Monroe, N. H., completed in 1930, 1,279,000,000 ft³. Records provided by New England Power Co.
01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi north of Union Village, Vt., completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
- 01148000; 01150000. LAKES AND PONDS IN MASCOMA RIVER BASIN are operated as a unit for storage of water for power and are used for recreation. The reservoirs and usable capacity of each are as follows: 01148000 Goose Pond, 5.2 mi northeast of Mascoma, N. H., 509,000,000 ft³; Grafton Pond, 8.5 mi southeast of Mascoma, 144,000,000 ft³; Crystal Lake, 5.8 mi southeast of Mascoma, 75,000,000 ft³; 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³; total usable capacity of the four reservoirs, 1,060,000,000 ft³. Records provided by New Hampshire Water Resources Board.
01151400. NORTH HARTLAND RESERVOIR on Ottauquechee River at North Hartland, Vt., completed in 1961, used for flood control and recreation, has usable capacity of 3,110,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
01152000. SUNAPEE LAKE on Sugar River at Sunapee, N. H., used for recreation and storage of water for power, has usable capacity of 862,000,000 ft³. Records provided by New Hampshire Water Resources Board.
01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, Vt., completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi north of Jamaica, Vt., completed in 1961, used for food control and recreation, has usable capacity of 2,380,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi northwest of Townshend, Vt., completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi north of Keene, N. H., completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³. Records provided by U. S. Army Corps of Engineers.
01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi northeast of Keene, N. H. completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³. Records provided by U. S. Army Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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, 1983.....	2416.5	2580.2	4889.7	1.4	971.5	104.6
Oct. 31.....	1883.3	2339.4	4810.3	1.5	812.9	94.7
Nov. 30.....	2199.8	3167.5	5995.6	21.4	754.9	40.7
Dec. 31.....	2395.3	3461.2	5340.7	20.5	565.7	116.0
Jan. 31, 1984.....	1578.1	1952.2	4706.7	16.8	514.1	120.0
Feb. 28.....	1208.4	1521.5	3183.1	13.7	841.1	106.4
Mar. 31.....	1156.3	1134.0	1683.3	17.9	811.5	111.0
Apr. 30.....	3524.9	2710.3	5752.9	4.9	1102.6	39.0
May 31.....	3738.4	4190.6	6074.8	443.5	1296.5	1142.9
June 30.....	3334.4	3877.7	5819.8	3.2	1061.0	23.6
July 31.....	3189.4	3621.4	5780.0	2.7	1074.0	43.4
Aug. 31.....	2937.6	2879.5	5337.4	1.5	1042.2	24.2
Sept. 30.....	2568.9	2484.8	5948.5	1.5	935.2	66.4
	Sunapee Lake	Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1983.....	275	21.8	94.9	35.2	62.2	1.2
Oct. 31.....	236	21.3	11.3	35.8	58.6	6.9
Nov. 30.....	578	32.7	17.6	43.6	88.8	47.4
Dec. 31.....	447	26.9	28.1	39.4	95.5	41.8
Jan. 31, 1984.....	391	24.0	15.9	37.6	76.9	36.2
Feb. 28.....	549	26.9	17.7	42.5	234	91.2
Mar. 31.....	484	29.1	15.0	29.9	75.6	35.4
Apr. 30.....	675	112.6	141.7	40.8	79.5	39.3
May 31.....	840	1117.2	1352.5	860	980.5	481
June 30.....	612	24.7	83.4	35.5	59.8	36.8
July 31.....	588	21.8	76.3	35.2	59.8	37.6
Aug. 31.....	486	23.3	91.7	36.6	55.3	36.5
Sept. 30.....	381	24.0	13.0	35.8	59.8	36.8

HUDSON RIVER BASIN

75

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 upstream from bridge on Highway 313 at Arlington and 0.9 mi downstream from Warm Brook.

DRAINAGE AREA.--152 mi².

PERIOD OF RECORD.--October 1928 to July 1984 (discontinued).

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 above 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.--55 years, 339 ft³/s, 30.29 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft³/s Mar. 18, 1936, gage height, 11.3 ft, from floodmarks, present site, from rating curve extended above 6,100 ft³/s on basis of slope-area measurement at gage height 10.8 ft and computation of peak flow over dam; minimum, 37 ft³/s Sept. 25, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	1600	2,680	8.17	May 30	1200	3,910	8.96

Minimum discharge, 62 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	94	363	203	150	401	303	734	2270			
2	93	92	307	175	140	367	363	535	1400			
3	86	92	275	175	164	348	420	443	966			
4	75	119	244	177	301	328	447	1020	701			
5	82	160	239	183	296	306	582	1080	555			
6	240	255	242	195	239	314	1520	722	469			
7	150	208	1220	207	205	288	1720	551	442			
8	115	173	912	197	176	251	1320	614	376			
9	93	150	507	180	160	242	840	979	319			
10	83	139	410	160	150	221	645	690	271			
11	77	210	352	180	200	190	555	533	241			
12	76	378	303	150	348	210	604	1070	215			
13	166	255	1170	140	309	185	753	1330	189			
14	161	190	2510	136	420	180	927	1330	201			
15	128	165	2030	128	1090	190	1090	1080	190			
16	104	279	1340	110	1800	223	1130	817	158			
17	94	415	899	105	1470	266	1370	710	143			
18	90	292	610	99	1510	240	1500	587	147			
19	85	220	491	97	1390	227	1330	514	165			
20	82	192	357	115	1270	236	1320	488	159			
21	80	612	315	120	1040	354	1470	467	135			
22	79	674	290	130	748	449	1040	403	121			
23	82	431	270	145	608	407	791	428	111			
24	215	333	250	170	672	332	959	625	104			
25	183	1200	240	425	792	315	1040	457	178			
26	135	1040	230	322	1000	320	848	401	154			
27	124	593	220	238	673	303	831	478	118			
28	119	414	209	213	543	310	811	445	102			
29	110	482	371	188	485	317	811	2080	93			
30	101	465	306	170	---	290	783	3690	94			
31	96	---	254	160	---	271	---	3230	---			
TOTAL	3469	10322	17736	5393	18349	8881	28123	28531	10787			
MEAN	112	344	572	174	633	286	937	920	360			
MAX	240	1200	2510	425	1800	449	1720	3690	2270			
MIN	65	92	209	97	140	180	303	401	93			
CFSM	.74	2.26	3.76	1.15	4.16	1.88	6.16	6.05	2.37			
IN.	.85	2.53	4.34	1.32	4.49	2.17	6.88	6.98	2.64			

CAL YR 1983 TOTAL 130878 MEAN 359 MAX 2530 MIN 55 CFSM 2.36 IN 32.03

HUDSON RIVER BASIN

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT.

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

DRAINAGE AREA.--111 mi².

PERIOD OF RECORD.--Discharge: June 1931 to current year.
Water-quality records: Water years 1953-54.

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

GAGE.--Water-stage recorder. Elevation of gage is 525 ft, 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.--52 years, 223 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0330	2,340	6.05	July 7	0415	2,060	5.66
May 30	1230	*3,390	*7.36				

Minimum daily discharge, 42 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	55	271	140	88	310	259	394	1210	119	98	189
2	53	55	223	120	84	275	302	330	810	109	92	117
3	50	57	199	120	98	254	341	290	626	146	90	111
4	46	81	176	120	218	236	346	738	519	142	85	113
5	55	83	172	125	192	218	581	709	436	130	81	103
6	112	97	191	134	148	244	1290	486	382	439	78	89
7	72	89	1030	127	122	214	944	384	382	1440	79	81
8	58	81	496	117	110	177	632	369	317	597	89	75
9	51	72	327	109	105	166	491	519	268	334	78	71
10	48	67	271	109	96	149	442	399	235	235	74	67
11	45	93	232	110	144	143	407	335	214	296	125	73
12	45	190	205	120	259	179	495	750	185	940	112	104
13	69	122	1350	100	220	121	573	800	168	425	87	81
14	81	95	1780	90	390	130	659	976	237	278	79	101
15	73	85	965	84	1010	153	713	672	196	212	83	109
16	59	194	674	75	1320	158	863	544	162	202	81	94
17	54	261	488	70	833	270	993	473	147	207	97	81
18	50	160	390	68	1080	236	1050	409	149	659	79	73
19	47	121	323	65	848	207	1010	366	165	522	76	69
20	46	109	222	68	862	218	945	334	140	319	142	66
21	45	568	195	80	649	409	838	330	123	236	94	62
22	45	395	190	90	503	516	614	285	113	204	77	59
23	47	249	180	95	432	412	543	313	105	174	147	58
24	150	236	170	140	598	300	654	399	102	156	134	57
25	108	1030	155	282	640	273	671	288	170	134	111	56
26	80	582	150	194	736	257	570	255	135	122	85	63
27	70	384	145	123	502	218	523	318	111	141	74	65
28	66	298	140	111	432	214	478	312	105	172	70	58
29	63	391	240	100	389	252	443	1820	96	133	65	57
30	59	362	200	97	---	228	409	2890	148	116	115	56
31	57	---	170	93	---	222	---	2430	---	111	392	---
TOTAL	1946	6662	11920	3476	13108	7359	19079	19917	8156	9450	3169	2458
MEAN	62.8	222	385	112	452	237	636	642	272	305	102	81.9
MAX	150	1030	1780	282	1320	516	1290	2890	1210	1440	392	189
MIN	42	55	140	65	84	121	259	255	96	109	65	56

CAL YR 1983 TOTAL 90926 MEAN 249 MAX 1780 MIN 32
WTR YR 1984 TOTAL 106700 MEAN 292 MAX 2890 MIN 42

ST. LAWRENCE RIVER BASIN

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04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT.

LOCATION.--Lat 43°37'40", long 73°18'50", Rutland County, Hydrologic Unit 02010001, on right bank 0.3 mi downstream from Carver Falls, 1.9 mi upstream from Hubbardton River, and 3.2 mi northwest of Fair Haven.

DRAINAGE AREA.--187 mi².

PERIOD OF RECORD.--Discharge: October 1928 to current year.
Water-quality records: Water year 1954.

REVISED RECORDS.--WSP 1114: 1929(M), 1932-35.

GAGE.--Water-stage recorder. Elevation of gage is 105 ft, from topographic map.

REMARKS.--Records good except those for winter period and shifting control period May 31 to Sept. 30, which are fair, and those for no gage-height record Dec. 20-27, June 12 to July 5, July 21 to Aug. 6, 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.--56 years, 428 ft³/s, 18.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft³/s July 20, 1945, gage height, 24.36 ft, from high-water mark in well, from rating curve extended above 2,600 ft³/s on basis of computations of flow over dam at gage heights 16.10 ft, 21.40 ft, and 24.36 ft; minimum daily, 2.1 ft³/s Aug. 8, 1965, Sept. 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	1700	3,730	13.49	Feb. 16	0345	4,110	14.11
Dec. 14	0645	*6,250	*16.95	May 30	2045	5,540	16.09

Minimum daily discharge, 5.9 ft³/s Oct. 17-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	18	883	360	240	324	537	499	2480	66	38	66
2	13	26	745	320	230	310	619	461	1630	59	40	58
3	23	23	667	300	240	294	690	439	1270	62	43	48
4	29	35	599	290	420	269	771	621	959	55	47	63
5	6.4	48	549	310	500	243	813	770	687	110	35	54
6	38	109	548	290	430	215	1270	652	588	253	40	43
7	70	79	2500	260	410	205	1410	585	545	1020	38	48
8	19	93	1700	240	390	200	1290	561	425	1180	41	43
9	33	71	1090	230	370	195	1050	715	306	763	60	43
10	18	57	949	230	360	190	917	625	263	383	55	30
11	33	181	827	240	420	185	716	516	228	293	50	36
12	16	314	715	250	450	180	663	466	130	398	46	34
13	31	314	1300	230	560	180	617	587	120	398	43	51
14	47	231	5210	210	876	256	627	714	82	354	43	43
15	22	201	2880	200	2040	246	851	722	80	306	44	67
16	23	223	1920	210	3220	299	851	744	57	193	49	70
17	42	293	1430	200	1820	336	1020	697	56	209	77	51
18	14	279	1150	195	1540	326	1240	618	46	223	75	56
19	38	206	990	190	1390	317	985	567	56	346	43	48
20	5.9	160	700	185	1330	303	1080	574	53	189	46	46
21	42	216	540	200	1160	420	1230	498	43	64	55	46
22	5.9	369	400	230	939	877	1030	376	41	130	26	41
23	8.9	263	380	210	715	845	912	397	39	84	45	28
24	51	346	360	290	659	654	843	560	38	74	75	49
25	40	782	340	370	613	624	789	528	37	70	48	37
26	32	1030	330	450	568	622	715	476	90	69	34	34
27	28	780	320	410	478	565	639	481	76	58	49	35
28	24	663	300	330	434	557	586	463	84	60	30	37
29	37	1020	370	280	389	580	535	1230	74	130	40	31
30	26	1150	470	260	---	492	498	3490	80	44	48	44
31	30	---	390	250	---	463	---	4010	---	35	86	---
TOTAL	852.4	9580	31552	8220	23191	11772	25794	24642	10663	7678	1489	1380
MEAN	27.5	319	1018	265	800	380	860	795	355	248	48.0	46.0
MAX	70	1150	5210	450	3220	877	1410	4010	2480	1180	86	70
MIN	5.9	18	300	185	230	180	498	376	37	35	26	28
CFSM	.15	1.71	5.44	1.42	4.28	2.03	4.60	4.25	1.90	1.33	.26	.25
IN.	.17	1.91	6.28	1.64	4.61	2.34	5.13	4.90	2.12	1.53	.30	.27

CAL YR 1983	TOTAL	140381.9	MEAN 385	MAX 5210	MIN 3.1	CFSM 2.06	IN 27.93
WTR YR 1984	TOTAL	156813.4	MEAN 428	MAX 5210	MIN 5.9	CFSM 2.29	IN 31.19

ST. LAWRENCE RIVER BASIN

04282000 OTTER CREEK AT CENTER RUTLAND, VT.

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

DRAINAGE AREA---307 mi².

PERIOD OF RECORD---Discharge: May 1928 to current year.
Water-quality records: Water years 1955, 1971.

REVISED RECORDS---WSP 1084: 1929.

GAGE---Water-stage recorder. Datum of gage is 474.80 ft above National Geodetic Vertical Datum of 1929; prior to Oct. 1, 1964, datum was 1.00 ft higher. Prior to July 22, 1929, nonrecording gage at same site.

REMARKS---Records good except those for winter period, which are fair. Flow regulated by powerplants and Chittenden Reservoir 14 mi upstream on East Creek, usable capacity, 819,800,000 ft³. Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE---56 years, 553 ft³/s, 24.46 in/yr.

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

EXTREMES FOR CURRENT YEAR---Peak discharges greater than base discharge of 3,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1315	6,720	10.90	May 30	1515	*8,340	*12.00
Apr. 7	1215	3,760	8.02				

Minimum daily discharge, 109 ft³/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	182	888	481	332	601	502	1010	5000	217	161	235
2	163	162	743	453	267	541	658	807	3110	216	182	172
3	147	156	626	455	330	505	783	667	2000	286	164	167
4	140	232	502	438	533	484	889	1230	1380	285	132	207
5	162	505	567	363	583	461	1070	1690	1060	364	127	216
6	340	699	636	400	478	518	2680	1230	890	597	181	217
7	231	521	2680	360	429	480	3560	927	887	1040	256	165
8	171	388	2160	330	374	410	2610	854	700	818	195	149
9	127	354	1240	310	365	385	1690	1390	600	506	151	117
10	170	316	898	290	355	293	1220	1160	500	334	138	141
11	161	386	722	280	368	282	1020	885	450	276	144	171
12	146	621	637	259	340	306	1130	1130	470	479	401	197
13	184	490	2330	250	488	293	1340	1700	350	296	303	208
14	258	352	6080	240	774	245	1710	1770	370	227	240	237
15	210	327	4910	230	1640	393	2350	1660	340	197	217	265
16	171	464	3320	220	2180	378	2250	1230	290	178	195	308
17	194	870	2120	215	2420	383	2290	1050	270	172	190	308
18	172	646	1380	210	2000	332	2270	882	280	241	135	254
19	148	460	1060	205	1860	363	1990	732	320	369	109	196
20	140	397	677	200	1720	397	2090	933	300	283	180	173
21	130	910	593	220	1530	624	2450	783	260	194	165	171
22	113	1200	560	260	1180	1000	1860	701	230	156	154	147
23	122	788	520	300	997	950	1280	661	210	205	165	127
24	286	619	500	340	991	642	1360	940	190	184	219	120
25	297	1320	450	497	1040	548	1740	739	430	167	180	135
26	232	1540	430	582	1070	604	1520	547	314	169	156	170
27	251	1020	446	475	874	565	1240	626	265	177	164	200
28	218	797	455	406	782	567	1110	638	236	160	168	180
29	192	1160	660	296	739	585	1040	2170	231	151	143	160
30	172	1190	694	329	---	521	1000	7050	224	179	175	140
31	201	---	528	362	---	441	---	6870	---	170	271	---
TOTAL	5787	19072	40012	10256	27039	15097	48702	44662	22157	9293	5761	5653
MEAN	187	636	1291	331	932	487	1623	1441	739	300	186	188
MAX	340	1540	6080	582	2420	1000	3560	7050	5000	1040	401	308
MIN	113	156	430	200	267	245	502	547	190	151	109	117
CFSM	.61	2.07	4.21	1.08	3.04	1.59	5.29	4.69	2.41	.98	.61	.61
IN.	.70	2.31	4.85	1.24	3.28	1.83	5.90	5.41	2.68	1.13	.70	.68

CAL YR 1983 TOTAL 246812 MEAN 676 MAX 6080 MIN 65 CFSM 2.20 IN 29.91
WTR YR 1984 TOTAL 253491 MEAN 693 MAX 7050 MIN 109 CFSM 2.26 IN 30.72

04282500 OTTER CREEK AT MIDDLEBURY, VT.

LOCATION.--Lat 44°00'47", long 73°10'06", Addison County, Hydrologic Unit 02010002, on right bank 150 ft upstream from highway bridge in Middlebury and 3.5 mi downstream from Middlebury River.

DRAINAGE AREA.--628 mi².

PERIOD OF RECORD.--Discharge: April 1903 to April 1907, October 1910 to January 1920, October 1928 to current year.

Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 434: 1903-4. WSP 684: 1913(M), drainage area. WSP 1114: 1913. WSP 1207: 1929, 1931.

GAGE.--Water-stage recorder. Datum of gage is 335.75 ft above National Geodetic Vertical Datum of 1929. Apr. 1, 1903, to Apr. 30, 1907, and Oct. 5, 1910, to Jan. 31, 1920, nonrecording gage at site 1,800 ft upstream at datum 10 ft lower, and Oct. 1, 1928, to Oct. 17, 1933, at present datum.

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

AVERAGE DISCHARGE.--68 years (water years 1904-06, 1911-19, 1929-84), 992 ft³/s, 21.45 in/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft³/s Nov. 4, 1927, gage height, 13.3 ft, present datum, at site 1,800 ft upstream, from rating curve extended above 9,000 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,430 ft³/s June 4, gage height, 6.78 ft; minimum daily, 185 ft³/s Oct. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	200	295	2060	1700	570	2180	1150	2740	3100	459	290	422
2	185	301	2010	1350	550	1890	1250	2590	3810	459	341	386
3	213	302	1870	1000	520	1560	1400	2430	4850	450	409	314
4	231	344	1660	840	800	1230	1540	2330	5380	492	372	300
5	233	590	1390	760	937	1060	1700	2300	5290	656	291	318
6	301	830	1220	740	969	919	1990	2280	4940	884	261	362
7	441	956	2210	760	892	934	2210	2280	4520	1810	291	334
8	404	858	2200	880	773	910	2330	2270	4090	1950	411	314
9	281	694	2260	820	695	810	2410	2280	3700	1920	427	277
10	224	591	2330	680	659	700	2520	2200	3340	1760	363	237
11	256	666	2340	660	645	660	2650	2150	2990	1290	311	232
12	233	863	2290	650	784	620	2730	2180	2610	1090	279	349
13	242	887	2450	640	936	540	2750	2220	2230	999	433	330
14	270	777	3050	630	1300	520	2720	2250	1830	785	422	348
15	323	699	3090	620	1970	580	2670	2290	1370	606	403	430
16	323	690	3240	610	2330	620	2680	2330	910	548	435	416
17	275	910	3680	600	2320	738	2810	2370	689	591	352	399
18	281	1150	4100	590	2630	744	2920	2380	582	735	323	440
19	261	1020	4340	580	3020	683	2950	2350	670	1290	278	480
20	286	812	4390	560	3290	702	3040	2370	687	1050	230	408
21	291	1080	4140	550	3370	989	3110	2250	628	767	241	347
22	251	1510	3560	540	3340	1800	3170	2100	589	549	296	311
23	203	1570	3280	530	3310	1990	3200	1980	577	459	330	231
24	223	1440	2900	620	3230	2000	3250	2060	443	489	474	230
25	316	1610	2700	700	3080	1910	3320	1950	780	454	408	254
26	388	1820	2400	840	2920	1730	3280	1830	887	392	323	275
27	409	1890	2200	920	2750	1550	3210	1650	753	418	287	373
28	379	1900	2000	860	2580	1390	3100	1470	605	448	269	411
29	322	2020	1850	760	2410	1290	2990	1940	570	414	262	369
30	322	2090	1800	630	---	1210	2850	2670	484	317	277	327
31	283	---	1900	590	---	1130	---	2910	---	290	323	---
TOTAL	8850	31165	80910	23210	53580	35589	77900	69400	63904	24821	10412	10224
MEAN	285	1039	2610	749	1848	1148	2597	2239	2130	801	336	341
MAX	441	2090	4390	1700	3370	2180	3320	2910	5380	1950	474	480
MIN	185	295	1220	530	520	520	1150	1470	443	290	230	230
CFSM	.45	1.65	4.16	1.19	2.94	1.83	4.14	3.57	3.39	1.28	.54	.54
IN.	.52	1.85	4.79	1.37	3.17	2.11	4.61	4.11	3.79	1.47	.62	.61

CAL YR 1983 TOTAL 469217 MEAN 1286 MAX 6430 MIN 178 CFSM 2.05 IN 27.79
WTR YR 1984 TOTAL 489965 MEAN 1339 MAX 5380 MIN 185 CFSM 2.13 IN 29.02

ST. LAWRENCE RIVER BASIN

04284000 JAIL BRANCH AT EAST BARRE, VT.

LOCATION.--Lat 44°09'30", long 72°26'44", Washington County, Hydrologic Unit 02010003, on right bank 1,400 ft upstream from highway bridge, at East Barre, 1,400 ft downstream from East Barre Detention Reservoir, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--38.9 mi².

PERIOD OF RECORD.--August 1920 to September 1923, October 1933 to current year. October 1933 monthly discharge only, published in WSP 1307. Prior to October 1922, published as Jail Brook at East Barre.

REVISED RECORDS.--WSP 564: 1922. WSP 1034: Drainage area. WSP 1307: 1921-23(M).

GAGE.--Water-stage recorder. Datum of gage is 1,107.25 ft above National Geodetic Vertical Datum of 1929. Aug. 14, 1920, to Sept. 30, 1923, nonrecording gage at site 0.1 mi downstream at different datum. Nov. 1, 1933, to Jan. 25, 1935, nonrecording gage and Jan. 26, 1935, to Aug. 7, 1972, water-stage recorder at site 1,500 ft downstream. Datum of gage was 1,071.59 ft above National Geodetic Vertical Datum of 1929, Nov. 1, 1933, to Sept. 30, 1964, and 1,069.59 ft above NGVD Oct. 1, 1964, to Aug. 7, 1972 (levels by U. S. Army Corps of Engineers).

REMARKS.--Records good except for winter period, which are poor. Discharge affected by East Barre Detention Reservoir since 1935 (Reservoirs in Winoski 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.--54 years, 55.3 ft³/s, 19.31 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,820 ft³/s Oct. 1, 1920, gage height, 9.50 ft, from graph based on gage readings, site and datum then in use, from rating curve extended above 900 ft³/s; minimum, 0.1 ft³/s Aug. 18, 1950, Aug. 3, 4, 31, Sept. 1, 3, 1953. Maximum discharge since construction of East Barre Detention Reservoir in 1935, 634 ft³/s Apr. 19, 1969, gage height, 3.31 ft, site and datum then in use; maximum gage height, 9.48 ft Jan. 7, 1973, ice jam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 553 ft³/s Apr. 7, gage height, 4.84 ft; maximum gage height, 7.01 ft; Dec. 29, ice jam; minimum, 3.7 ft³/s Sept. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	10	11	101	28	11	54	44	177	525	21	14	7.4		
2	10	11	62	25	11	48	50	126	512	21	14	6.8		
3	10	11	53	23	10	50	64	64	451	23	14	6.8		
4	10	172	101	21	16	47	98	181	163	33	11	6.8		
5	13	318	103	20	15	45	230	161	94	54	8.2	6.8		
6	27	69	59	19	14	43	510	94	77	64	6.9	6.6		
7	18	43	390	19	13	40	535	68	403	268	9.2	5.8		
8	15	37	327	18	12	39	532	62	467	172	11	5.1		
9	14	33	158	17	12	38	492	135	232	54	8.1	4.1		
10	13	31	96	17	12	36	295	101	90	42	6.9	3.7		
11	12	58	89	16	11	35	144	71	66	29	6.9	4.9		
12	13	145	107	16	12	34	192	87	56	89	12	22		
13	31	54	238	15	13	33	268	116	49	49	10	8.5		
14	30	36	488	15	16	33	307	143	101	32	8.5	6.5		
15	24	34	495	14	40	32	320	112	196	26	7.6	7.2		
16	16	68	481	14	140	32	319	80	72	37	6.8	9.6		
17	14	170	448	13	90	38	440	77	50	43	6.1	11		
18	13	66	292	13	105	36	441	62	43	82	5.1	9.5		
19	13	42	140	13	110	39	370	69	46	184	4.6	7.0		
20	13	36	130	13	135	41	309	257	41	44	4.6	6.4		
21	12	191	110	13	110	88	274	122	35	33	4.6	6.2		
22	12	191	94	14	82	195	193	82	32	29	4.4	5.7		
23	12	82	82	14	72	132	166	76	28	27	8.2	5.2		
24	22	54	70	13	80	70	219	145	28	24	14	5.0		
25	22	235	62	13	86	63	290	77	69	21	12	4.8		
26	18	196	56	13	96	56	172	62	52	20	10	4.8		
27	16	96	50	12	84	54	137	54	33	20	8.9	4.8		
28	17	68	43	12	74	51	126	49	25	28	7.2	4.8		
29	14	141	48	11	62	44	118	265	21	21	6.5	4.8		
30	13	167	39	11	---	42	124	491	21	18	6.5	4.8		
31	12	---	33	11	---	40	---	519	---	15	6.7	---		
TOTAL	489	2866	5045	486	1544	1628	7779	4185	4078	1623	264.5	203.4		
MEAN	15.8	95.5	163	15.7	53.2	52.5	259	135	136	52.4	8.53	6.78		
MAX	31	318	495	28	140	195	535	519	525	268	14	22		
MIN	10	11	33	11	10	32	44	49	21	15	4.4	3.7		
MEAN†	15.1	99.4	160	15.0	54.1	53.2	262	170	96.2	52.2	7.56	6.82		
CFSM†	.39	2.56	4.11	.39	1.39	1.37	6.74	4.37	2.47	1.34	.19	.18		
IN†	.45	2.85	4.75	.45	1.50	1.58	7.52	5.03	2.76	1.55	.22	.20		
CAL YR 1983	TOTAL	28933.5	MEAN	79.3	MAX	495	MIN	4.3	MEAN†	79.3	CFSM†	2.04	IN†	27.69
WTR YR 1984	TOTAL	30190.9	MEAN	82.5	MAX	535	MIN	3.7	MEAN†	82.4	CFSM†	2.12	IN†	28.85

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

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT.

LOCATION.--Lat 44°17'58", long 72°34'45", Washington County, Hydrologic Unit 02010003, on right bank at Wrightsville, 0.8 mi downstream from Wrightsville Detention Reservoir, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--69.2 mi².

PERIOD OF RECORD.--Discharge: October 1933 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1937: 1934-39.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 550.53 ft above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Nov. 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period and period of shifting control Oct. 1 to Oct. 6, May 31 to Sept. 30, which are fair. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River basin). Occasional diurnal fluctuation at low flow caused by small mill upstream; more frequent diurnal fluctuation prior to 1968. Construction of powerplant at Wrightsville Detention Reservoir caused minor flow fluctuations during the summer of 1984. Greater diurnal fluctuations are expected next year. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 135 ft³/s, 26.49 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,170 ft³/s Apr. 12, 1934, gage height, 6.53 ft, from rating curve extended above 920 ft³/s; minimum daily, 0.2 ft³/s Aug. 13, 1941. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,040 ft³/s Mar. 21, 1936, gage height, 4.32 ft; maximum gage height, 5.43 ft Mar. 12, 1936, ice jam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft³/s Nov. 3, 1927, by computation of peak flow over dam 0.8 mi above gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 853 ft³/s June 7, gage height, 3.77 ft; minimum daily, 6.3 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	55	319	78	36	110	128	256	719	43	19	10
2	9.2	49	205	72	34	100	168	156	699	97	19	9.2
3	9.2	49	130	64	34	98	201	124	665	68	18	8.0
4	9.2	215	105	62	36	96	263	212	615	40	16	8.0
5	22	398	100	62	50	90	304	318	559	49	14	7.7
6	130	383	115	60	48	78	485	273	487	70	13	7.3
7	91	332	340	60	46	76	599	171	771	241	13	7.3
8	54	189	416	58	44	74	606	161	847	307	14	6.6
9	45	108	371	56	42	70	580	296	825	211	14	6.6
10	39	93	300	54	40	66	543	262	787	126	14	6.3
11	31	157	170	52	40	62	496	160	745	91	15	7.0
12	26	339	130	52	48	58	458	250	699	264	31	11
13	82	322	333	50	60	56	456	340	646	275	35	13
14	120	189	630	50	82	54	475	335	584	154	28	17
15	95	122	681	48	110	54	482	318	526	117	22	23
16	58	132	679	46	220	56	496	243	451	91	19	24
17	46	258	656	46	311	64	560	172	356	68	15	27
18	42	203	622	44	300	64	591	139	132	84	12	26
19	37	150	577	42	304	70	606	140	91	211	10	22
20	30	126	518	42	315	120	602	303	63	166	9.6	19
21	26	245	448	40	320	210	590	254	44	120	8.8	14
22	24	382	366	40	260	290	562	159	37	97	8.0	11
23	24	372	210	40	190	299	520	148	32	59	10	10
24	49	331	110	40	170	218	488	229	28	47	16	9.6
25	70	382	100	40	190	155	479	164	157	47	19	9.2
26	53	436	90	42	205	134	454	144	108	33	17	9.6
27	50	405	86	42	150	125	415	219	59	32	14	10
28	59	353	82	40	125	123	372	148	45	33	11	11
29	89	332	92	38	120	127	330	324	44	30	10	10
30	89	348	90	38	---	112	271	617	45	26	8.8	10
31	65	---	82	36	---	104	---	714	---	23	9.2	---
TOTAL	1582.4	7455	9153	1534	3930	3413	13580	7749	11866	3320	482.4	370.4
MEAN	51.0	249	295	49.5	136	110	453	250	396	107	15.6	12.3
MAX	130	436	681	78	320	299	606	714	847	307	35	27
MIN	8.8	49	82	36	34	54	128	124	28	23	8.0	6.3
MEAN†	51.5	254	290	49.2	136	110	453	338	302	102	15.0	12.3
CFSM†	.74	3.67	4.19	.71	1.97	1.59	6.55	4.88	4.36	1.47	.22	.18
IN†	.86	4.10	4.83	.82	2.13	1.83	7.31	5.63	4.87	1.69	.25	.20

CAL YR 1983 TOTAL 61873.2 MEAN 170 MAX 848 MIN 3.8 CFSM 2.46 IN 33.26 MEAN† 169 CFSM† 2.44 IN† 33.26
WTR YR 1984 TOTAL 64435.2 MEAN 176 MAX 847 MIN 6.3 CFSM 2.54 IN 34.64 MEAN† 175 CFSM† 2.53 IN† 34.52

† Adjusted for change in contents in Wrightsville Detention Reservoir.

ST. LAWRENCE RIVER BASIN

RESERVOIRS IN WINOOSKI RIVER BASIN ABOVE MONTPELIER, VT.

04283500 EAST BARRE DETENTION RESERVOIR.--Lat 44°09'18", long 72°26'42", Washington County, Hydrologic Unit 0201003, at dam on Jail Branch at East Barre, 4.5 mi upstream from mouth. DRAINAGE AREA, 38.8 mi². PERIOD OF RECORD, February 1936 (in WSP 1307), March and April 1936 (in WSP 798), May 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year. GAGE, water-stage recorder. Datum of gage is above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to Aug. 30, 1960, nonrecording gage, and Aug. 30 to Sept. 30, 1960, water-stage recorder, at present site at datum 1,127.9 ft above National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by U. S. Army Corps of Engineers in 1935 for flood control. Usable capacity, 525,000,000 ft³ between elevation 1,124.9 ft (bottom of outlet opening) and 1,165.0 ft (crest of spillway). Dam has no gates; below elevation 1,165.0 ft, outflow from reservoir is dependent on capacity of outlet opening near base of dam. Outlet-opening enlargement and reservoir-construction modifications completed in November 1959. Size of opening since enlargement, height, 7 ft and average width, 3.7 ft. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 1,163.9 ft, present datum, Mar. 22, 1936; minimum not determined.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 1,146.83 ft May 31; minimum not determined.

04285000 WRIGHTSVILLE DETENTION RESERVOIR.--Lat 44°18'38", long 72°34'31", Washington County, Hydrologic Unit 0201003, at dam on North Branch Winoski River at Wrightsville, 0.3 mi downstream from Long Meadow Brook, and 4.2 mi upstream from mouth. DRAINAGE AREA, 66.5 mi². PERIOD OF RECORD, November 1935 to 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 above National Geodetic Vertical Datum of 1929 (levels by U. S. Army Corps of Engineers). Prior to July 28, 1960, nonrecording gage, and July 28 to Sept. 30, 1960, water-stage recorder, at present site at datum 612.75 ft above National Geodetic Vertical Datum of 1929.

Reservoir is formed by earthfill dam completed by U. S. Army Corps of Engineers in 1935 for flood control; modification of intake-structure works to create a recreational pool completed in June 1965. Usable capacity for recreation, 22,000,000 ft³ between elevations 612.75 ft (bottom of outlet opening) and 620.00 ft; for flood control, 851,500,000 ft³ between elevations 620.00 ft and 685.00 ft (crest of spillway); total usable capacity, 873,500,000 ft³. Dam has no gates; below elevation 685.00 ft, outflow from reservoir is dependent on capacity of outlet opening, 5.25 ft square near base of dam. Figures given herein represent usable contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 676.4 ft, present datum, Mar. 22, 1936, from graph based on gage readings; minimum observed, 613.00 ft Aug. 17, 1949, and Aug. 17-19, 1950.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 662.37 ft June 8; minimum, 614.15 ft Sept. 10.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

		Elevation (feet)	Contents (millions of cubic feet)	Change in contents	
				Millions of cubic feet	Equivalent, cubic feet per second
04283500 East Barre Detention Reservoir					
Sept. 30.		--	6.1	--	--
Oct. 31.		1128.83	4.2	-1.9	-.71
Nov. 30.		1135.44	14.2	+10.0	+3.86
Dec. 31.		1131.62	7.7	-6.5	-2.43
CAL YR 1983		--	--	+1.9	+0.06
Jan. 31.		1130.37	6.0	-1.7	-.63
Feb. 29.		1131.88	8.1	+2.1	+.84
Mar. 31.		1133.13	10.0	+1.9	+.71
Apr. 30.		1136.68	17.5	+7.5	+2.89
May 31.		1146.74	110.2	+92.7	+34.6
June 30.		1131.29	7.3	-102.9	-39.7
July 31.		1131.00	6.8	-.5	-.19
Aug. 31.		1128.89	4.2	-2.6	-.97
Sept. 30.		1128.93	4.3	+.1	+.04
WTR YR 1984		--	--	-1.8	-.06
04285000 Wrightsville Detention Reservoir					
Sept. 30.		620.12	22.5	--	--
Oct. 31.		620.46	23.8	+1.3	+.49
Nov. 30.		623.81	38.1	+14.3	+5.52
Dec. 31.		620.49	23.9	-14.2	-5.30
CAL YR 1983		--	--	-.9	-.03
Jan. 31.		620.27	23.1	-.8	-.30
Feb. 29.		620.83	25.3	+2.2	+.88
Mar. 31.		620.76	25.0	-.3	-.11
Apr. 30.		621.18	26.7	+1.7	+.66
May 31.		650.30	262.2	+235.5	+87.9
June 30.		619.54	20.3	-241.9	-93.3
July 31.		615.02	5.5	-14.8	-5.53
Aug. 31.		614.48	4.1	-1.4	-.52
Sept. 30.		614.41	3.9	-.2	-.08
WTR YR 1984		--	--	-18.6	-.59

04286000 WINOOSKI RIVER AT MONTPELIER, VT.

LOCATION.--Lat 44°15'23", long 72°35'36", Washington County, Hydrologic Unit 02010003, on right bank 0.4 mi upstream from Dog River and 1 mi downstream from depot at Montpelier.

DRAINAGE AREA.--397 mi².

PERIOD OF RECORD.--May 1909 to June 1914 (fragmentary), July 1914 to September 1923, August 1928 to current year.

REVISED RECORDS.--WSP 424: 1915. WSP 894: Drainage area. WSP 1437: 1912-14(M), 1915-18, 1919(M), 1920, 1921(M), 1922-23, 1929, 1933, 1934(M), 1936, 1937(M), 1938, 1946(M). WDR MA-NH-RI-VT-72-1: 1969(M), 1970(P), 1971(M).

GAGE.--Water-stage recorder. Datum of gage is 499.99 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1914, nonrecording gage at site 0.9 mi upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by several small powerplants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³, which regulate runoff from 24 mi², and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River basin). See table below for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years (water years 1915-23, 1929-84), 593 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,200 ft³/s Apr. 7, 1912, gage height, 17.31 ft, from floodmarks, present datum, from rating curve extended above 6,900 ft³/s; maximum gage height, 17.55 ft June 30, 1973; minimum daily discharge, 17 ft³/s Sept. 3, 1933.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft³/s Nov. 3, 1927, gage height, 27.1 ft, from rating curve extended above 6,900 ft³/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0030	6,150	10.50	June 7	1530	*9,340	*13.70
Apr. 7	0830	4,570	8.86	July 7	1100	4,050	8.28
May 31	1230	6,370	10.75				

Minimum daily discharge, 93 ft³/s Oct. 2, 4, Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	202	1340	490	320	660	720	1140	3980	333	214	140
2	93	211	1090	450	300	620	901	886	2930	337	230	120
3	94	208	886	430	380	540	1030	706	2390	305	227	107
4	93	1240	608	550	400	450	1220	1260	1920	301	205	111
5	120	2050	740	560	380	430	1840	1520	1630	686	165	120
6	337	1230	940	570	360	520	4310	1130	1440	818	177	119
7	283	818	3320	540	370	490	3970	840	6950	2730	188	116
8	190	553	2020	380	350	390	2860	754	4250	2030	159	110
9	160	380	1470	390	360	420	2300	1180	2810	1150	163	94
10	148	337	1360	420	340	380	1930	1030	2130	818	155	98
11	133	571	916	410	350	350	1640	768	1820	673	134	117
12	128	1260	848	370	340	320	1710	955	1600	1580	194	173
13	265	1030	2900	350	390	355	1900	1270	1440	1030	184	151
14	329	589	5820	390	400	330	2020	1300	1530	673	195	123
15	298	518	4290	350	700	390	2090	1240	1740	530	184	157
16	199	706	3000	320	1600	400	2340	1010	1280	640	177	138
17	227	1400	2300	350	1400	510	3040	840	1050	679	138	158
18	151	955	1900	360	1250	440	2680	706	734	932	115	154
19	139	653	1600	370	1200	420	2500	679	693	1500	125	150
20	137	484	1000	350	1500	680	2330	1590	565	893	123	144
21	116	1290	980	350	1300	1200	2110	1170	451	589	107	147
22	146	1580	1000	340	1000	1750	1740	818	399	451	128	141
23	122	1200	940	330	850	1570	1600	740	362	380	185	109
24	214	986	820	340	860	1070	1750	1240	317	353	217	93
25	244	2030	720	360	950	833	1960	978	811	317	190	111
26	193	1820	600	370	1050	740	1590	659	754	283	137	109
27	185	1290	590	350	800	727	1400	761	467	294	128	132
28	205	1120	640	345	720	804	1210	614	380	329	131	129
29	313	1730	720	250	710	740	1090	2390	329	224	131	135
30	237	1810	680	265	---	646	1020	5060	404	199	140	96
31	194	---	600	325	---	589	---	5670	---	208	159	---
TOTAL	5787	30251	46638	12025	20930	19764	58801	40904	47556	22265	5105	3802
MEAN	187	1008	1504	388	722	638	1960	1319	1585	718	165	127
MAX	337	2050	5820	570	1600	1750	4310	5670	6950	2730	230	173
MIN	93	202	590	250	360	320	720	614	317	199	107	93
(†)	410.5	398.1	348.3	187.0	141.8	80.9	332.5	486.6	446.8	412.9	396.8	367.2

CAL YR 1983 TOTAL 291946 MEAN 800 MAX 5820 MIN 79
WTR YR 1984 TOTAL 313828 MEAN 857 MAX 6950 MIN 93

† Monthend contents, in millions of cubic feet, in Peacham Pond and Mollys Falls Reservoir; records provided by Green Mountain Power Corp.

ST. LAWRENCE RIVER BASIN

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 downstream from Northfield Falls and 1.2 mi downstream from Cox Branch.

DRAINAGE AREA.--76.1 mi².

PERIOD OF RECORD.--Discharge: October 1934 to current year. October 1934 monthly discharge only, published in WSP 1307.

Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1237: 1935-37.

GAGE.--Water-stage recorder. Datum of gage is 603.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. Infrequent diurnal fluctuation at low flow by powerplant upstream; regulation much greater prior to 1955. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--50 years, 123 ft³/s, 21.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,600 ft³/s June 30, 1973, gage height, 11.57 ft, from rating curve extended above 1,500 ft³/s on basis of computation of flow over dam at gage height 8.49 ft and slope-area measurements at gage heights 8.96 ft, 11.53 ft, and 11.57 ft; minimum, 4.3 ft³/s Aug. 31, Sept. 7, 1942.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 13	2100	*3,050	*6.23	May 30	1045	3,000	6.18
Apr. 7	0730	2,050	5.18				

Minimum discharge, 5.2 ft³/s Sept 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	27	253	106	50	148	132	221	666	36	43	19
2	15	26	208	100	49	135	161	182	414	33	40	17
3	15	26	183	95	48	137	194	161	309	31	39	17
4	14	250	150	94	72	130	240	361	244	32	36	18
5	19	364	159	92	70	125	375	414	200	82	34	18
6	42	256	176	88	65	105	1350	275	173	77	31	16
7	28	148	785	82	58	100	1400	221	221	434	30	16
8	23	108	364	80	58	98	671	206	158	176	30	14
9	21	90	294	76	57	96	430	286	132	107	28	14
10	19	80	230	72	56	86	353	218	111	88	27	13
11	18	176	185	72	56	80	328	185	100	82	26	16
12	19	300	179	70	58	71	406	221	90	203	25	23
13	49	160	1120	68	65	70	524	244	81	111	24	18
14	48	119	1920	68	75	70	585	254	94	88	23	18
15	38	104	989	66	153	70	556	227	104	79	22	18
16	29	127	661	64	383	70	814	194	81	88	22	19
17	26	212	434	62	257	81	960	173	72	82	21	19
18	24	168	339	60	294	77	730	148	67	125	20	17
19	23	135	265	60	305	84	604	161	70	170	19	15
20	21	119	212	58	387	100	524	383	60	113	19	15
21	21	393	205	58	313	150	454	240	55	92	19	14
22	20	393	190	60	231	203	339	191	43	79	18	13
23	21	276	185	62	206	197	298	179	41	70	29	13
24	38	223	161	60	224	161	383	206	39	64	34	13
25	37	604	153	58	244	145	450	161	113	57	27	12
26	31	375	150	57	275	140	339	140	77	49	23	18
27	30	264	145	55	206	132	290	132	53	49	20	14
28	30	215	130	53	182	132	257	123	44	67	19	12
29	31	384	148	52	176	137	224	856	39	57	18	13
30	30	349	123	51	---	127	203	1740	37	53	18	13
31	28	---	118	50	---	118	---	1360	---	48	20	---
TOTAL	822	6471	10814	2149	4673	3575	14574	10063	3988	2922	804	475
MEAN	26.5	216	349	69.3	161	115	486	325	133	94.3	25.9	15.8
MAX	49	604	1920	106	387	203	1400	1740	666	434	43	23
MIN	14	26	118	50	48	70	132	123	37	31	18	12
CFSM	.35	2.84	4.59	.91	2.12	1.51	6.39	4.27	1.75	1.24	.34	.21
IN.	.40	3.16	5.29	1.05	2.28	1.75	7.12	4.92	1.95	1.43	.39	.23

CAL YR 1983	TOTAL	62229	MEAN	170	MAX	1920	MIN	13	CFSM	2.23	IN	30.42
WTR YR 1984	TOTAL	61330	MEAN	168	MAX	1920	MIN	12	CFSM	2.21	IN	29.98

04288000 MAD RIVER NEAR MORETOWN, VT.

LOCATION.--Lat 44°16'42", long 72°44'37", Washington County, Hydrologic Unit 02010003, on left bank at downstream side of highway bridge, 2.4 mi downstream from Moretown, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--139 mi².

PERIOD OF RECORD.--Discharge: July to November 1910, October 1928 to current year. October 1928 monthly discharge only, published in WSP 1307.

Water-quality records: Water years 1954-55, 1957, 1967-74.

REVISED RECORDS.--WSP 744: Drainage area. WSP 854: 1934(M). WSP 1114: 1929, 1930(M), 1936-37.

GAGE.--Water-stage recorder. Concrete control since Oct. 13, 1933. Datum of gage is 543.93 ft above National Geodetic Vertical Datum of 1929 (levels by Vermont Department of Highways). July 6 to Nov. 4, 1910, nonrecording gage at same site at different datum. Nov. 20, 1928, to Sept. 27, 1930, nonrecording gage at same site at present datum.

REMARKS.--Records good except those for winter period, which are fair. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years (water years 1928-84), 258 ft³/s, 25.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,400 ft³/s Sept. 22, 1938, gage height, 16.34 ft, from floodmarks, from rating curve extended above 2,700 ft³/s on basis of computations of flow over dam at gage heights 9.98 ft, 11.51 ft, 16.34 ft, and 19.4 ft; minimum, 1.4 ft³/s Oct. 1, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft³/s Nov. 3, 1927, gage height, 19.4 ft, from floodmarks, by computation of peak flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0230	4,730	8.09	May 29	1345	*5,260	8.49
Feb. 16	unknown	ice jam	a*12.45				

a From high water marks.

Minimum discharge, 22 ft³/s Sept. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	99	476	215	110	295	273	854	1090	73	53	45
2	30	91	398	205	110	276	340	504	747	64	53	34
3	30	98	358	200	105	275	421	381	573	60	51	32
4	30	1150	385	195	165	256	457	968	440	60	43	40
5	67	1140	374	190	160	250	866	924	333	193	41	36
6	193	734	370	185	150	220	2280	637	284	163	40	32
7	89	467	1730	180	140	215	2210	513	304	861	45	29
8	62	342	706	175	135	205	1120	529	235	289	51	27
9	57	286	588	170	130	190	727	861	189	171	41	25
10	55	259	444	165	125	165	600	600	156	126	38	24
11	51	636	399	165	125	155	547	440	136	120	40	27
12	51	817	622	160	135	145	688	753	117	448	40	62
13	234	447	1850	155	150	140	820	733	106	171	38	41
14	202	331	3230	155	170	180	924	707	181	120	36	53
15	139	283	1990	150	350	236	889	573	178	136	34	53
16	98	417	1220	145	890	240	1350	488	120	136	34	55
17	81	696	783	140	580	312	1660	418	103	111	38	64
18	73	466	598	135	680	255	1390	346	98	208	36	49
19	65	372	490	135	700	233	1130	504	109	381	29	38
20	60	319	370	130	900	257	1030	1000	90	174	32	36
21	57	1130	300	130	720	467	1030	591	77	123	29	36
22	57	978	290	125	519	597	714	440	75	106	27	30
23	57	654	285	125	469	458	637	464	68	90	95	29
24	184	543	275	130	503	336	917	625	64	80	71	27
25	135	1470	265	140	530	320	1010	403	315	68	62	25
26	101	829	255	130	522	280	760	388	150	64	45	64
27	110	587	245	125	382	262	701	448	100	71	38	73
28	113	481	240	120	341	256	688	360	82	98	32	45
29	176	710	260	120	336	260	707	2680	73	73	29	38
30	143	622	240	115	---	225	682	2830	73	64	32	36
31	110	---	225	115	---	216	---	1970	---	55	58	---
TOTAL	2941	17454	20261	4725	10332	8177	27568	23932	6666	4957	1331	1205
MEAN	94.9	582	654	152	356	264	919	772	222	160	42.9	40.2
MAX	234	1470	3230	215	900	597	2280	2830	1090	861	95	73
MIN	30	91	225	115	105	140	273	346	64	55	27	24
CFSM	.68	4.19	4.71	1.09	2.56	1.90	6.61	5.55	1.60	1.15	.31	.29
IN.	.79	4.67	5.42	1.26	2.77	2.19	7.38	6.40	1.78	1.33	.36	.32

CAL YR 1983	TOTAL	134618	MEAN	369	MAX	3230	MIN	19	CFSM	2.66	IN	36.03
WTR YR 1984	TOTAL	129549	MEAN	354	MAX	3230	MIN	24	CFSM	2.55	IN	34.67

ST. LAWRENCE RIVER BASIN

04288500 WATERBURY RESERVOIR NEAR WATERBURY, VT

LOCATION.--Lat 44°22'54", long 72°46'13", Washington County, Hydrologic Unit 02010003, at dam on Little River 2.7 mi upstream from mouth and 3.5 mi north of Waterbury.

DRAINAGE AREA.--109 mi².

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

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

REMARKS.--Reservoir is formed by earthfill dam completed by U.S. Army Corps of Engineers during summer of 1937 for flood control and storage of water for power. Usable capacity for storage of water for power, 1,582,700,000 ft³ between elevations 500.0 ft and 592.0 ft, sill of taintor gate; for flood control, 1,229,000,000 ft³, between elevations 592.0 ft and 617.5 ft, crest of spillway; total usable capacity, 2,812,300,000 ft³.

Capacity table (elevation, in feet, and contents, in millions of cubic feet)			
500.0	0	560.0	658.8
510.0	34.8	570.0	891.9
520.0	92.6	580.0	1,168.5
530.0	180.8	590.0	1,505.0
540.0	302.7	600.0	1,913.4
550.0	461.7		

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 613.45 ft May 4, 1940; minimum observed, 501.30 ft Oct. 16, 1938, July 3, 12, 13, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 579.29 ft June 8; minimum observed, 501.50 ft Aug. 20.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537.92	538.08	540.30	534.38	530.97	528.80	533.64	564.59	570.88	547.08	520.34	523.24
2	538.20	538.02	538.83	532.13	530.89	526.76	533.02	563.95	570.57	546.09	521.31	523.70
3	537.86	537.83	537.16	531.05	528.29	528.67	531.58	562.96	569.89	544.67	520.21	524.17
4	538.14	542.56	535.05	529.93	529.68	529.81	531.69	563.22	569.05	543.65	520.98	524.61
5	539.56	544.99	532.88	528.77	530.92	526.99	535.50	563.53	567.98	543.02	521.64	525.12
6	542.59	544.93	531.90	527.59	530.83	527.43	546.29	562.96	566.85	542.46	520.43	525.57
7	542.87	545.14	539.20	529.20	530.58	529.00	550.02	562.28	578.77	545.20	520.49	525.96
8	540.46	545.50	538.81	530.36	530.68	530.22	550.96	561.72	579.26	544.30	519.87	526.27
9	538.05	544.18	537.77	528.98	530.73	530.58	550.62	562.31	578.84	543.17	515.30	526.58
10	538.98	542.50	536.50	527.43	529.88	531.60	549.87	561.76	578.04	541.92	510.80	526.87
11	537.84	543.40	536.08	525.68	530.41	532.61	549.02	560.86	577.05	541.02	510.50	526.97
12	537.67	544.93	534.93	523.93	531.82	531.87	548.70	562.03	575.96	541.70	510.20	527.58
13	539.40	544.15	541.85	523.30	533.04	530.72	549.05	562.61	574.83	540.80	508.50	528.11
14	539.50	542.71	553.40	524.99	533.05	529.64	549.71	562.54	573.88	539.78	504.42	529.91
15	537.52	541.03	556.85	526.38	537.13	529.05	550.32	562.06	572.72	538.52	502.25	530.80
16	535.21	540.01	558.32	525.77	540.07	527.26	552.43	561.32	571.44	537.40	501.75	531.78
17	536.10	540.27	558.39	526.85	539.55	529.25	555.75	560.42	570.03	536.25	501.60	532.51
18	535.89	539.21	557.95	525.91	539.44	530.05	557.90	559.39	568.92	536.44	501.57	533.04
19	535.57	537.58	556.91	525.92	539.41	528.85	559.74	558.71	567.70	538.50	501.53	532.96
20	535.17	535.63	555.44	525.72	541.90	530.18	560.78	559.40	566.22	537.35	501.78	533.32
21	534.72	539.13	554.20	526.86	542.08	533.60	561.89	558.82	564.52	535.65	501.90	532.05
22	535.20	540.50	552.83	527.80	541.10	536.12	561.60	557.85	562.88	533.79	503.60	532.39
23	535.78	540.04	551.59	527.72	539.91	535.50	561.19	557.38	561.14	532.34	509.30	532.70
24	534.87	539.23	549.26	527.83	538.93	533.68	561.90	557.70	559.39	530.45	515.45	532.08
25	534.99	543.20	548.59	527.89	538.20	531.79	562.99	556.93	558.20	527.44	517.60	531.47
26	534.83	543.65	546.91	527.89	537.36	528.89	563.01	556.56	556.54	524.83	518.90	531.83
27	534.67	543.00	545.18	527.65	535.69	525.85	562.98	556.44	554.70	523.06	519.84	532.06
28	534.41	541.95	543.38	528.70	533.62	526.95	563.14	555.60	552.72	524.13	520.59	531.64
29	536.26	541.89	541.53	529.58	531.61	528.67	563.49	561.38	550.67	524.86	521.21	532.05
30	537.75	541.38	539.47	529.67	---	529.89	563.75	567.65	548.53	523.65	521.87	532.43
31	538.04	---	537.05	530.22	---	531.64	---	570.35	---	522.06	522.66	---
MEAN	537.29	541.55	544.79	527.94	534.75	530.06	552.42	561.14	567.27	536.50	513.17	529.33
MAX	542.87	545.50	558.39	534.38	542.08	536.12	563.75	570.35	579.26	547.08	522.66	533.32
MIN	534.41	535.63	531.90	523.30	528.29	525.85	531.58	555.60	548.53	522.06	501.53	523.24
(+)	277.1	323.3	264.2	183.2	199.0	199.3	742.9	901.0	436.8	109.1	113.9	208.9
(+)	-1.79	+17.8	-22.1	-30.2	+6.31	+0.11	+210	+59.0	-179	-122	+1.79	+36.7
CAL YR 1983	MEAN 544.79	MAX 591.03	MIN 526.26	(+) +1.15								
WTR YR 1984	MEAN 539.62	MAX 579.26	MIN 501.53	(+) -2.00								

† Contents, in millions of cubic feet, at end of month.

‡ Change in contents, equivalent in cubic feet per second.

ST. LAWRENCE RIVER BASIN

87

04289000 LITTLE RIVER NEAR WATERBURY, VT.

LOCATION.--Lat 44°22'12", long 72°46'11", Washington County, Hydrologic Unit 02010003, on right bank 1 mi downstream from Waterbury Reservoir, 1.7 mi upstream from mouth, and 2.5 mi north of Waterbury.

DRAINAGE AREA.--111 mi².

PERIOD OF RECORD.--July to October 1910 (gage heights only), October 1935 to current year. October, November 1935 monthly discharge only, published in WSP 1307. Prior to October 1962, published as Waterbury River near Waterbury.

REVISED RECORDS.--WSP 824: 1936.

GAGE.--Water-stage recorder. Concrete control since Dec. 8, 1937. Datum of gage is 428.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). July 7 to Oct. 31, 1910, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records fair. No gage-height record, Nov. 24 to Dec. 6. Flow completely regulated by Waterbury Reservoir (station 04288500). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--49 years, 241 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft³/s, Mar. 18, 1936, gage height, 19.38 ft; minimum daily, 0.6 ft³/s several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft³/s Dec. 9, 1937, gage height, 14.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 700 ft³/s Nov. 26; minimum daily, 5.7 ft³/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	119	480	468	22	485	26	597	579	378	65	7.2
2	7.2	119	480	401	180	398	307	595	575	234	16	7.2
3	69	194	480	253	232	29	482	592	570	274	72	7.5
4	6.9	281	470	249	25	42	403	573	566	260	15	7.5
5	9.1	493	470	248	21	407	312	564	562	245	15	7.5
6	9.7	493	450	245	114	120	350	564	560	245	100	7.2
7	137	341	353	18	121	17	512	563	575	105	38	7.2
8	476	185	493	18	86	20	509	562	577	225	75	7.2
9	481	440	490	243	91	81	506	566	577	276	224	7.2
10	122	489	484	245	160	20	509	564	572	263	257	7.2
11	99	493	296	243	53	20	518	562	566	271	157	33
12	100	502	321	223	51	155	530	568	559	253	153	35
13	12	498	504	139	55	190	509	572	553	247	149	7.9
14	314	493	485	16	218	189	514	572	556	256	139	8.8
15	481	489	518	16	172	184	518	569	551	266	102	8.5
16	452	493	517	140	241	209	534	566	548	253	78	8.2
17	12	493	516	90	486	18	546	562	546	235	62	12
18	115	489	515	90	487	54	546	560	448	145	51	8.8
19	117	485	516	93	489	278	546	562	514	212	51	56
20	117	476	513	101	492	109	553	572	512	319	49	8.8
21	120	489	511	18	493	113	564	566	511	343	45	187
22	10	498	509	23	493	255	573	561	512	302	34	8.8
23	10	500	479	96	493	486	574	560	511	240	7.9	8.5
24	293	500	493	78	493	485	574	562	511	265	7.5	104
25	120	510	493	94	493	479	574	558	518	314	6.3	104
26	126	660	493	97	493	474	574	556	512	302	6.0	64
27	153	640	491	110	489	464	574	555	509	194	5.7	60
28	212	500	489	21	489	155	574	552	504	18	6.3	99
29	37	490	485	22	489	69	574	586	500	17	7.2	9.1
30	14	480	481	76	---	71	581	580	497	141	6.9	8.8
31	102	---	475	42	---	23	---	582	---	150	7.5	---
TOTAL	4340.8	13332	14750	4216	8221	6099	14966	17623	16151	7248	2008.3	913.1
MEAN	140	444	476	136	283	197	499	568	538	234	64.8	30.4
MAX	481	660	518	468	493	486	581	597	579	378	257	187
MIN	6.9	119	296	16	21	17	26	552	448	17	5.7	7.2
CAL YR 1983	TOTAL	110953.0	MEAN	304	MAX 572	MIN 4.7						
WTR YR 1984	TOTAL	109868.2	MEAN	300	MAX 660	MIN 5.7						

ST. LAWRENCE RIVER BASIN

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT.

LOCATION.--Lat 44°28'44", long 73°08'21", Chittenden County, Hydrologic Unit 02010003, on right bank 0.5 mi downstream from Muddy Brook and 2 mi southwest of Essex Junction.

DRAINAGE AREA.--1,044 mi².

PERIOD OF RECORD.--Discharge: October 1928 to current year.

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

REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).

GAGE.--Water-stage recorder. Elevation of gage is 185 ft, from topographic map; prior to Oct. 1, 1964, datum was 1.00 ft higher.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492,000,000 ft³, by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River basin) since 1935. See table with station 04286000 for monthend contents in Peacham Pond and Mollys Falls Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--56 years, 1,718 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,300 ft³/s Mar. 19, 1936, gage height, 24.54 ft, present datum, from rating curve extended above 27,000 ft³/s on basis of computations of flow over dam at gage heights 19.72, 24.54, and 51.4 ft and slope-area measurement at gage height 51.4 ft, all at present datum; minimum daily, 24 ft³/s Sept. 7, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft³/s Nov. 4, 1927, gage height, 51.4 ft, present datum, from floodmarks, from rating curve extended above 27,000 ft³/s by method explained above.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	1430	13,300	9.79	Apr. 7	1700	14,400	10.35
Dec. 14	1500	*21,300	*13.93	May 31	0115	17,800	12.16

Minimum daily discharge, 64 ft³/s Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	617	3960	1810	780	1960	1550	4000	10400	1160	549	225
2	241	683	3190	1720	680	1940	2030	3050	6590	790	772	198
3	338	830	2700	1550	1000	1370	2580	2480	5190	892	338	221
4	353	2680	2290	1650	1220	1270	3150	2950	4230	867	400	220
5	495	8300	2080	1620	1190	1310	3430	5540	3430	908	357	257
6	888	5350	2350	1510	1040	1430	10600	3760	3000	1830	440	273
7	882	3180	9910	1400	1100	1350	12900	2990	6770	4860	457	383
8	824	2110	6360	1120	920	1080	8780	2670	8940	4160	421	235
9	953	1650	4150	1100	980	1050	5850	3650	5000	2350	446	107
10	715	1570	3700	1300	900	1030	4800	3430	3670	1780	643	210
11	451	2270	2880	1300	1020	1010	3920	2730	3080	1400	482	250
12	456	5320	2090	1250	1200	872	3980	2850	2730	2340	302	329
13	838	3420	5820	1200	1500	938	4700	4020	2450	2220	455	338
14	871	2480	19100	1080	2100	902	5290	3510	2370	1620	522	534
15	1310	2070	14900	1100	5000	989	5410	3550	3110	1350	440	295
16	1110	2210	9900	960	5900	1280	5780	3040	2430	1260	488	269
17	813	4030	6770	1000	5100	1240	9130	2760	2090	1410	464	423
18	252	3440	4250	1100	4700	1250	8380	2450	1830	1280	239	405
19	702	2540	2650	1000	4750	1220	6710	2320	1510	2490	176	291
20	940	2130	2050	1120	6560	1270	6060	5120	1590	2290	396	394
21	334	4240	1980	860	6490	2050	5740	3750	1420	1700	319	285
22	393	6380	2200	900	3930	4010	4600	2870	1240	1140	288	304
23	64	4190	2950	900	3090	4560	3860	2550	1260	1080	352	238
24	699	3260	2050	890	3050	3290	4030	3590	1090	952	567	239
25	862	6810	1850	1050	3030	2660	5600	3000	1310	823	373	296
26	730	6920	1880	1100	3250	2450	4390	2490	1980	961	325	417
27	719	4210	1950	1090	2600	2090	3790	2880	1570	752	211	325
28	940	3330	2050	1100	2430	2000	3460	2340	1150	608	270	463
29	659	4130	2320	840	2150	1790	3300	5490	1190	565	406	361
30	776	5410	2180	800	---	1660	3180	15200	1070	339	166	111
31	630	---	1900	750	---	1420	---	15000	---	595	235	---
TOTAL	20328	105760	134410	36170	77660	52741	156980	126030	93690	46772	12299	8896
MEAN	656	3525	4336	1167	2678	1701	5233	4065	3123	1509	397	297
MAX	1310	8300	19100	1810	6560	4560	12900	15200	10400	4860	772	534
MIN	64	617	1850	750	680	872	1550	2320	1070	339	166	107

CAL YR 1983 TOTAL 839739 MEAN 2301 MAX 19100 MIN 107
WTR YR 1984 TOTAL 871736 MEAN 2382 MAX 19100 MIN 64

ST. LAWRENCE RIVER BASIN

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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 upstream from bridge in Johnson and 0.8 mi upstream from Gihon River.

DRAINAGE AREA.--310 mi².

PERIOD OF RECORD.--Discharge: July to December 1910, June 1911 to December 1913 (monthly discharge only, January to March 1912, February 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. Elevation of gage is 495 ft, from topographic map. Prior to Dec. 31, 1913, nonrecording gage at bridge 0.7 mi downstream at different datum.

REMARKS.--Records good except those for winter period and periods of shifting control, Nov. 5 to Apr. 7, July 8 to Sept. 30, which are fair. Some regulation by powerplant upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--58 years (water years 1912-13, 1929-84), 537 ft³/s, 23.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft³/s July 1, 1973, gage height, 17.33 ft; minimum, 11 ft³/s Sept. 2, 1935; minimum daily, 16 ft³/s Oct. 26, 1947.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 5,400 ft³/s; maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	2030	5,960	11.15	June 7	0900	*13,000	*16.50

Minimum discharge, 58 ft³/s June 24; minimum daily 64 ft³/s June 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	324	1170	410	400	450	529	810	2950	224	176	126
2	101	202	978	425	365	430	757	689	1680	220	169	123
3	101	208	851	420	410	415	816	523	1170	194	133	123
4	98	465	743	440	390	395	959	609	966	136	123	116
5	175	1370	605	445	400	370	1220	1020	785	155	116	104
6	617	1270	534	420	415	315	3270	764	605	425	113	95
7	578	791	2590	405	440	340	3690	615	7720	713	101	83
8	353	659	1770	400	425	360	2330	477	2270	1040	107	78
9	301	446	1190	415	430	320	1600	647	1140	639	186	78
10	197	436	990	410	385	290	1160	998	751	460	250	78
11	213	654	800	430	355	320	957	680	626	368	198	101
12	240	1390	665	440	325	340	1050	630	542	334	272	172
13	200	997	1630	400	450	320	1400	1160	400	690	394	259
14	383	714	5290	375	425	310	1750	967	420	377	377	246
15	386	659	4390	370	500	330	1830	819	470	276	364	322
16	360	664	3650	405	1600	345	1890	754	419	234	250	276
17	349	913	2710	415	1380	320	2490	743	361	338	198	172
18	179	1060	1300	410	1030	345	2410	623	337	343	172	116
19	114	772	1060	405	1070	365	2150	553	342	757	169	194
20	111	674	918	415	1380	405	1840	581	353	728	158	230
21	110	959	820	435	1420	600	1660	608	350	422	119	179
22	107	1840	780	450	920	1530	1240	592	291	334	98	162
23	123	1160	745	470	800	1770	983	432	231	226	119	104
24	236	924	675	445	760	1180	992	1010	64	133	151	101
25	355	1550	620	375	770	924	1280	926	124	209	172	98
26	261	2040	620	390	650	762	1110	615	484	259	186	123
27	191	1200	580	440	455	537	895	705	514	213	162	116
28	255	959	560	380	475	619	760	666	347	194	129	107
29	238	973	600	340	500	728	712	1370	229	186	126	206
30	288	1460	605	395	---	600	645	4010	223	183	126	198
31	323	---	500	405	---	470	---	4920	---	179	133	---
TOTAL	7644	27733	40939	12780	19325	16805	44375	30516	27164	11189	5547	4486
MEAN	247	924	1321	412	666	542	1479	984	905	361	179	150
MAX	617	2040	5290	470	1600	1770	3690	4920	7720	1040	394	322
MIN	98	202	500	340	325	290	529	432	64	133	98	78
CFSM	.80	2.98	4.26	1.33	2.15	1.75	4.77	3.17	2.92	1.17	.58	.48
IN.	.92	3.33	4.91	1.53	2.32	2.02	5.32	3.66	3.26	1.34	.67	.54

CAL YR 1983 TOTAL 258929 MEAN 709 MAX 5290 MIN 65 CFSM 2.29 IN 31.07
WTR YR 1984 TOTAL 248503 MEAN 679 MAX 7720 MIN 64 CFSM 2.19 IN 29.82

ST. LAWRENCE RIVER BASIN

04292500 LAMOILLE RIVER AT EAST GEORGIA, VT.

LOCATION.--Lat 44°40'45", long 73°04'23", Franklin County, Hydrologic Unit 02010005, on right bank at East Georgia, 0.5 mi upstream from railroad bridge, and 1 mi downstream from Beaver Meadow Brook.

DRAINAGE AREA.--686 mi².

PERIOD OF RECORD.--Discharge: August 1929 to current year. Prior to October 1937, published as "near Milton."
Water-quality records: Water years 1955, 1967-74.

REVISED RECORDS.--WSP 894: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 285 ft, from topographic map. Prior to Dec. 1, 1937, at site 3.5 mi downstream at different datum.

REMARKS.--Records good except those for winter period, period of shifting control, July 7 to Sept. 30 and period of no gage-height record, Aug. 12-23, which are fair. Low flow regulated by powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--55 years, 1,247 ft³/s, 24.69 in/yr, adjusted to present drainage area.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 23,700 ft³/s Apr. 18, 1982, gage height, 12.38 ft, from rating curve extended above 21,700 ft³/s on the basis of computation of flow over dam at gage height 11.76 ft; maximum gage height, 21.64 ft Mar. 6, 1979, backwater from ice; minimum daily discharge, 74 ft³/s Sept. 26, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0100	12,900	9.78	June 7	2300	*18,000	11.05
Feb. 15	2030	ice jam	*16.52				

Minimum daily, 177 ft³/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	270	714	2680	1000	890	890	1190	2180	6830	385	348	301
2	230	644	2080	910	820	1080	1510	1780	3560	417	364	280
3	254	617	1580	970	700	940	1750	1350	2410	339	333	277
4	236	2110	1280	1050	910	850	1980	1420	1930	353	294	251
5	487	4990	1190	1050	980	860	2680	2720	1610	431	257	284
6	2250	4130	1300	1050	950	820	6740	2140	1300	844	294	202
7	1690	2270	6790	1040	990	810	8660	1610	11500	8020	254	251
8	1010	1670	5330	980	920	740	5600	1410	11000	4360	368	221
9	871	1290	2910	900	910	830	3580	1790	3200	1710	607	204
10	782	1120	2380	940	920	780	2640	2180	1840	1110	636	204
11	636	2900	1940	960	940	700	2080	1690	1330	998	420	177
12	556	5670	1590	950	810	700	2030	1680	1140	1810	650	407
13	618	3340	3720	1000	950	700	2520	2990	961	1800	950	402
14	1270	1900	11400	1050	1200	710	3120	2420	854	1040	910	545
15	1470	1550	11600	930	2500	740	3480	2100	1080	761	730	595
16	939	1750	7410	800	4750	710	3920	1860	868	782	710	578
17	792	2950	4480	850	3500	770	5260	1830	755	687	500	523
18	700	2690	3070	1000	2620	880	5680	1510	685	789	345	385
19	552	1810	2420	1000	3300	880	4360	1350	718	1610	330	274
20	378	1480	2100	1000	4080	1000	3690	1760	739	1520	345	372
21	386	3450	1850	840	4260	2000	3360	1560	683	894	295	389
22	361	5240	1750	920	2720	4200	2740	1360	638	707	230	337
23	367	3100	1690	980	2050	4320	2100	1430	504	630	290	270
24	509	2180	1550	1030	1950	2840	1990	3250	438	472	416	257
25	767	4440	1400	1100	1720	2060	2760	2350	381	402	376	248
26	723	5250	1400	950	1800	1660	2490	1670	787	463	304	304
27	707	3140	1310	850	1300	1350	1970	1790	858	448	398	458
28	675	2260	1300	1000	1050	1240	1720	1530	693	420	297	330
29	717	2800	1350	750	1100	1360	1640	2790	539	420	290	290
30	754	3390	1370	690	---	1310	1560	7950	396	380	251	308
31	675	---	1110	840	---	1040	---	8770	---	330	242	---
TOTAL	22632	80845	93330	29380	51590	39770	94800	72220	60227	35332	13034	9924
MEAN	730	2695	3011	948	1779	1283	3160	2330	2008	1140	420	331
MAX	2250	5670	11600	1100	4750	4320	8660	8770	11500	8020	950	595
MIN	230	617	1110	690	700	700	1190	1350	381	330	230	177
CFSM	1.06	3.93	4.39	1.38	2.59	1.87	4.61	3.40	2.93	1.66	.61	.48
IN.	1.23	4.38	5.06	1.59	2.80	2.16	5.14	3.92	3.27	1.92	.71	.54

CAL YR 1983 TOTAL 619020 MEAN 1696 MAX 11600 MIN 170 CFSM 2.47 IN 33.57
WTR YR 1984 TOTAL 603084 MEAN 1648 MAX 11600 MIN 177 CFSM 2.40 IN 32.70

ST. LAWRENCE RIVER BASIN

91

04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT.

LOCATION.--Lat 44°58'22", long 72°23'15", Orleans County, Hydrologic Unit 02010007, on right bank 200 ft upstream from Big Falls, 1.5 mi downstream from Jay Branch, and 2.2 mi upstream from North Troy.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--August 1931 to current year.

REVISED RECORDS.--WSP 924: 1940. WSP 1114: 1933(M), 1936-39.

GAGE.--Water-stage recorder. Elevation of gage is 580 ft, from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 272 ft³/s, 28.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,290 ft³/s Apr. 18, 1982, gage height, 13.21 ft, from rating curve extended above 5,500 ft³/s on basis of computation of flow over dam at gage height 11.70 ft; minimum, 9.4 ft³/s Aug. 28, 1949; minimum daily, 11 ft³/s Aug. 28, 1949, Aug. 30, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	1400	4,250	9.35	July 7	0230	*4,560	*9.69

Minimum discharge, 13 ft³/s Sept. 20; minimum daily, 22 ft³/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	113	387	165	80	160	264	518	825	71	47	53
2	42	98	311	155	78	150	343	327	450	71	49	41
3	45	153	235	145	90	140	393	256	307	64	53	41
4	42	397	170	140	105	135	501	474	263	46	38	37
5	329	1250	210	145	120	130	846	679	213	191	36	35
6	845	646	250	140	110	135	2240	412	182	293	35	34
7	368	379	848	130	105	130	1720	302	444	2880	53	33
8	200	282	505	115	105	115	1020	282	604	497	75	34
9	184	248	358	110	100	105	557	567	261	231	56	32
10	143	222	260	105	100	100	406	394	174	152	52	30
11	119	1030	225	100	110	92	359	279	145	168	51	30
12	97	1720	232	98	120	86	516	420	124	1260	44	49
13	114	546	1230	94	150	84	797	641	109	368	55	54
14	413	311	3600	92	200	84	1000	451	105	190	54	41
15	304	249	2520	92	660	84	1080	407	169	178	55	51
16	182	257	1700	90	680	92	1140	399	120	276	51	51
17	140	704	850	90	540	130	1560	321	99	189	48	39
18	118	420	610	90	425	150	1400	255	97	149	33	46
19	99	281	440	88	440	200	978	217	169	178	32	38
20	86	221	305	86	760	350	763	211	118	133	40	22
21	82	1310	265	86	450	600	843	189	88	98	46	57
22	86	1170	275	85	370	1000	497	167	80	84	34	46
23	62	520	265	84	330	700	434	220	79	78	46	37
24	166	366	250	83	375	500	560	814	79	70	74	34
25	173	1200	230	86	400	360	816	398	134	61	65	44
26	133	783	205	84	295	300	609	257	136	64	43	71
27	113	447	190	84	180	290	492	285	97	57	34	75
28	121	335	175	83	175	238	461	205	86	75	35	56
29	167	501	190	83	165	232	450	1210	70	68	32	41
30	157	578	190	82	---	195	411	2620	78	55	34	35
31	126	---	175	81	---	191	---	1870	---	45	49	---
TOTAL	5301	16737	17656	3191	7818	7258	23456	16047	5905	8340	1449	1287
MEAN	171	558	570	103	270	234	782	518	197	269	46.7	42.9
MAX	845	1720	3600	165	760	1000	2240	2620	825	2880	75	75
MIN	42	98	170	81	78	84	264	167	70	45	32	22
CFSM	1.31	4.26	4.35	.79	2.06	1.79	5.97	3.95	1.50	2.05	.36	.33
IN.	1.51	4.75	5.01	.91	2.22	2.06	6.66	4.56	1.68	2.37	.41	.37

CAL YR 1983 TOTAL 119226 MEAN 327 MAX 3600 MIN 29 CFSM 2.50 IN 33.86
WTR YR 1984 TOTAL 114445 MEAN 313 MAX 3600 MIN 22 CFSM 2.39 IN 32.50

ST. LAWRENCE RIVER BASIN

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT.

LOCATION---Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank 1.7 mi north of intersection of State Highways 105 and 118 in East Berkshire, 1.7 mi upstream from Trout River, 3 mi south of Richford, and 3.8 mi downstream from North Branch.

DRAINAGE AREA---479 mi².

PERIOD OF RECORD---Discharge: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307. Prior to October 1977, published as "near Richford."
Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS---WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.

GAGE---Water-stage recorder. Elevation of gage is 410 ft, from topographic map. Prior to Aug. 1, 1915, nonrecording gage at site 0.2 mi downstream at datum 4.35 ft lower. Aug. 1, 1915, to Sept. 30, 1923, water-stage recorder at present site and datum. Oct. 1, 1928, to Sept. 30, 1929, nonrecording gage at former site at datum 4.6 ft lower.

REMARKS---Records good except those for winter period, which are fair. Diurnal fluctuation at low flow prior to 1934. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE---68 years, 927 ft³/s, 26.28 in/yr.

EXTREMES FOR PERIOD OF RECORD---Maximum discharge, 21,200 ft³/s Apr. 18, 1982, gage height, 17.45 ft, from rating curve extended above 9,300 ft³/s on basis of computation of peak flow over dam at gage height 14.70 ft, slope-area measurement at gage height 12.90 ft, and study of discharge per foot of width at measuring section; maximum gage height, 18.92 ft Mar. 15, 1946, ice jam; minimum discharge observed, 8 ft³/s July 14, 1911.

EXTREMES OUTSIDE PERIOD OF RECORD---Maximum discharge since at least 1830, 45,000 ft³/s during flood of November 1927, gage height, 23.1 ft, from floodmarks, from rating curve extended above 9,300 ft³/s as explained above.

EXTREMES FOR CURRENT YEAR---Peak discharges greater than base discharge of 7,600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	1630	*10,700	12.06	Feb. 15	1830	ice jam	*16.06

Minimum discharge, 96 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	370	1910	620	250	495	960	1540	4400	188	131	247
2	113	329	1480	580	250	475	1260	1270	2250	181	135	240
3	103	568	1260	545	245	445	1430	1020	1290	154	126	204
4	102	1790	1090	500	275	425	1700	1210	980	136	129	182
5	218	4680	1050	480	315	410	2440	2230	801	258	110	162
6	1790	3790	1120	495	355	415	4470	1800	647	598	103	142
7	1320	2430	3620	480	340	400	5320	1330	1350	3740	122	126
8	780	1620	2600	445	325	370	4910	1120	1670	3860	159	116
9	580	1260	2050	400	320	340	3110	1650	987	1390	154	107
10	480	1060	1650	360	310	315	1940	1630	616	703	174	100
11	359	2800	1380	340	310	290	1470	1200	460	645	182	120
12	308	5810	1210	330	345	280	1470	1430	370	2240	441	182
13	326	4050	4270	315	380	265	1900	1970	315	2040	207	162
14	1020	2130	8910	300	475	260	2390	1620	294	983	174	164
15	1210	1390	10400	290	1000	260	2750	1490	308	763	853	138
16	752	1390	8270	290	2100	265	3330	1420	315	1010	494	140
17	542	2770	5040	285	2120	310	3610	1250	251	1030	273	140
18	415	2280	2710	285	1700	400	3720	994	230	727	210	122
19	333	1530	1700	280	1350	520	3090	830	297	673	182	112
20	284	1180	1290	275	1400	700	2300	725	352	546	179	120
21	248	3190	1020	270	2550	1500	2080	660	251	404	154	129
22	230	4310	1060	270	1500	3500	1680	580	210	320	142	135
23	224	3170	1000	265	1100	3300	1280	952	195	267	185	129
24	378	1980	950	260	1000	2620	1290	2850	184	228	287	114
25	544	3270	880	255	1180	1780	1900	1830	245	196	244	103
26	430	3690	800	265	1250	1330	2040	1150	340	174	187	355
27	374	2410	740	260	750	1120	1510	987	267	174	149	313
28	367	1640	670	260	650	1020	1300	809	210	190	122	234
29	430	2100	720	255	530	1020	1180	1830	186	198	114	185
30	538	2550	720	255	---	838	1090	5040	174	174	131	157
31	425	---	670	250	---	759	---	5790	---	152	363	---
TOTAL	15334	71537	72240	10760	24675	26427	68920	50207	20445	24342	6616	4880
MEAN	495	2385	2330	347	851	852	2297	1620	682	785	213	163
MAX	1790	5810	10400	620	2550	3500	5320	5790	4400	3860	853	355
MIN	102	329	670	250	245	260	960	580	174	136	103	100
CFSM	1.03	4.98	4.86	.72	1.78	1.78	4.80	3.38	1.42	1.64	.45	.34
IN.	1.19	5.56	5.61	.84	1.92	2.05	5.35	3.90	1.59	1.89	.51	.38

CAL YR 1983 TOTAL 454865 MEAN 1246 MAX 10400 MIN 74 CFSM 2.60 IN 35.33
WTR YR 1984 TOTAL 396383 MEAN 1083 MAX 10400 MIN 100 CFSM 2.26 IN 30.78

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT.

LOCATION.--Lat 44°28'52", long 73°13'27", Chittenden County, Hydrologic Unit 02010003, 50 ft south of Gulf Oil Co. dock at Burlington, 0.1 mi north of Burlington Water Department pumping station, and 0.5 mi north of railroad station.

PERIOD OF RECORD.--Gage heights: May 1907 to current year.
Water-quality records: Water year 1971.

REVISED RECORDS.--WSP 684: 1912-29 (datum correction). WSP 1207: 1938 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 92.86 ft above National Geodetic Vertical Datum of 1929. Prior to July 20, 1937, nonrecording gage at site 0.7 mi south, and July 20, 1937, to Sept. 7, 1939, nonrecording gage at site 0.1 mi south, both at present datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 8.80 ft Apr. 4, 1976; minimum observed, -0.25 ft Dec. 4, 1908.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.26 ft Dec. 18, 19, affected by seiche; minimum, 1.55 ft Nov. 3, affected by seiche.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.97	1.64	4.46	6.40	4.10	5.21	4.52	6.13	6.51	4.64	3.68	2.76
2	1.95	1.59	4.49	6.29	4.04	5.17	4.51	6.12	6.65	4.54	3.64	2.73
3	1.90	1.60	4.50	6.20	3.96	5.11	4.52	6.07	6.65	4.46	3.59	2.71
4	1.90	1.74	4.51	6.10	3.94	5.05	4.52	6.08	6.60	4.36	3.55	2.67
5	1.95	1.92	4.51	6.04	3.92	4.97	4.57	6.11	6.58	4.35	3.50	2.62
6	1.98	2.01	4.50	5.95	3.90	4.92	4.72	6.11	6.53	4.33	3.43	2.59
7	1.98	2.09	4.70	5.88	3.86	4.86	5.00	6.09	6.53	4.46	3.40	2.55
8	1.95	2.10	4.95	5.81	3.82	4.79	5.25	6.03	6.71	4.59	3.38	2.47
9	1.95	2.15	5.03	5.72	3.79	4.71	5.37	6.03	6.75	4.63	3.32	2.40
10	1.96	2.17	5.08	5.64	3.74	4.62	5.40	6.02	6.70	4.60	3.22	2.35
11	1.87	2.33	5.11	5.56	3.70	4.54	5.41	5.98	6.61	4.56	3.22	2.40
12	1.87	2.55	5.05	5.47	3.67	4.48	5.41	5.93	6.52	4.55	3.25	2.41
13	1.89	2.73	5.29	5.38	3.65	4.41	5.39	5.97	6.41	4.56	3.21	2.35
14	1.92	2.82	5.95	5.30	3.68	4.40	5.40	5.99	6.33	4.55	3.18	2.34
15	1.91	2.84	6.56	5.23	3.89	4.34	5.45	5.97	6.22	4.49	3.18	2.35
16	1.93	2.94	6.97	5.16	4.23	4.26	5.55	5.95	6.11	4.47	3.17	2.34
17	1.87	2.99	7.16	5.07	4.48	4.24	5.74	5.91	5.99	4.42	3.12	2.32
18	1.88	3.05	7.23	5.00	4.64	4.18	6.02	5.85	5.83	4.41	3.10	2.26
19	1.88	3.11	7.23	4.93	4.76	4.17	6.19	5.78	5.73	4.40	3.05	2.22
20	1.87	3.12	7.16	4.84	4.91	4.12	6.25	5.79	5.65	4.35	2.98	2.20
21	1.85	3.17	7.08	4.78	5.09	4.07	6.33	5.77	5.54	4.31	2.96	2.21
22	1.82	3.36	6.94	4.69	5.18	4.16	6.32	5.68	5.44	4.26	2.89	2.19
23	1.78	3.49	6.96	4.64	5.19	4.37	6.28	5.65	5.35	4.19	2.91	2.14
24	1.81	3.48	6.92	4.57	5.22	4.50	6.29	5.75	5.20	4.13	2.92	2.13
25	1.79	3.73	6.86	4.52	5.24	4.57	6.36	5.76	5.14	4.08	2.91	2.11
26	1.78	3.96	6.78	4.46	5.23	4.59	6.36	5.70	5.06	4.02	2.84	2.11
27	1.77	4.11	6.68	4.40	5.22	4.59	6.34	5.70	4.97	3.95	2.79	2.09
28	1.69	4.16	6.56	4.35	5.25	4.58	6.29	5.66	4.87	3.90	2.74	2.07
29	1.70	4.24	6.58	4.27	5.25	4.59	6.26	5.73	4.80	3.85	2.73	2.05
30	1.68	4.38	6.53	4.22	---	4.60	6.19	6.00	4.73	3.79	2.73	2.03
31	1.65	---	6.44	4.17	---	4.55	---	6.30	---	3.72	2.77	---
MEAN	1.86	2.85	5.96	5.19	4.40	4.57	5.61	5.92	5.96	4.32	3.14	2.34
MAX	1.98	4.38	7.23	6.40	5.25	5.21	6.36	6.30	6.75	4.64	3.68	2.76
MIN	1.65	1.59	4.46	4.17	3.65	4.07	4.51	5.65	4.73	3.72	2.73	2.03
CAL YR 1983	MEAN	3.95	MAX	8.46	MIN	1.59						
WTR YR 1984	MEAN	4.35	MAX	7.23	MIN	1.59						

STREAMS TRIBUTARY TO ST. LAWRENCE RIVER

04295000 RICHELIEU RIVER (LAKE CHAMPLAIN) AT ROUSES POINT, NY
(National stream-quality accounting network station)

LOCATION.--Lat 44°59'46", long 73°21'37", Clinton County, Hydrologic Unit 02010006, on left bank at outlet of Lake Champlain in Rouses Point, and 1.0 mi south of Fort Montgomery ruins. Water-quality sampling site at stage station.

DRAINAGE AREA.--8,277 mi².

WATER-STAGE RECORDS

PERIOD OF RECORD.--March 1871 to current year. Maximum and minimum monthly gage heights at St. Johns, Quebec, October 1863 to December 1870, published in WSP 97. Prior to October 1970, daily gage heights published in WSP 894. Discharge records for January 1875 to September 1916 at "Chambly, Quebec," published in WSP 65, 82, 97, 129, 170, 206, 424, and 1307 have been found to be unreliable and should not be used. Daily discharge record for "Richelieu River at Fryers Rapids, Quebec," published in Water Supply of Canada annual reports. Gage heights prior to October 1, 1925, published as "Richelieu River at Fort Montgomery, Rouses Point."

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929. March 1871 to May 1923, nonrecording gage located in Fort Montgomery and May 1923 to October 1938, nonrecording gage at present site. Prior to October 1970, at datum 93.00 ft higher.

REMARKS.--Area of lake surface about 490 mi². Total volume below 92.5 ft elevation, reported by Lake Champlain Studies Center, 902.2 bil ft³.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.80 ft Mar. 30, 1903; minimum observed, 92.17 ft Oct. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since at least 1827, 102.1 ft May 4, 1869, from marks at railroad bridge near present gage, according to data published on p. 428 of the Report of the Board of Engineers on Deep Waterways, 1900: U.S. 56th Cong., 2d sess. H. Doc. 149.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 100.30 ft Dec. 22; minimum, 94.20 ft Nov. 4.

ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.88	94.55	97.29	99.18	96.92	98.02	97.35	99.03	99.30	97.46	96.55	95.56
2	94.83	94.60	97.38	99.17	96.88	97.97	97.33	98.94	99.31	97.41	96.49	95.52
3	94.90	94.52	97.29	99.10	96.84	97.92	97.33	98.90	99.48	97.37	96.45	95.51
4	94.70	94.39	97.33	99.02	96.75	97.86	97.36	98.81	99.47	97.33	96.41	95.51
5	94.78	94.49	97.35	98.89	96.71	97.84	97.38	98.89	99.42	97.28	96.37	95.46
6	94.83	94.80	97.38	98.83	96.70	97.74	97.57	98.95	99.40	97.28	96.34	95.40
7	94.82	94.91	97.54	98.65	96.68	97.65	97.78	98.91	99.40	97.33	96.28	95.40
8	94.95	95.09	97.79	98.62	96.66	97.60	97.96	98.93	99.56	97.42	96.20	95.50
9	94.75	94.97	97.97	98.53	96.59	97.51	98.06	98.92	99.60	97.48	96.29	95.50
10	94.78	95.07	97.87	98.44	96.59	97.46	98.12	98.86	99.52	97.49	96.32	95.43
11	94.97	95.03	97.83	98.37	96.53	97.39	98.15	98.88	99.44	97.54	96.09	95.26
12	94.83	95.24	98.11	98.28	96.50	97.27	98.14	98.87	99.37	97.44	96.08	95.22
13	94.82	95.51	97.99	98.21	96.52	97.23	98.19	98.77	99.26	97.42	96.07	95.43
14	94.85	95.64	98.72	98.12	96.57	97.17	98.23	98.78	99.14	97.44	96.06	95.18
15	94.74	95.75	99.40	98.03	96.68	97.14	98.25	98.79	99.01	97.42	96.05	95.12
16	94.75	95.69	99.79	97.97	97.01	97.09	98.35	98.74	98.97	97.38	96.00	95.17
17	95.00	95.81	99.94	97.92	97.30	96.98	98.55	98.72	98.92	97.31	95.91	95.18
18	94.73	95.85	100.00	97.83	97.45	96.94	98.79	98.68	98.95	97.28	95.90	95.25
19	94.65	95.91	99.94	97.74	97.63	96.95	98.98	98.65	98.59	97.26	95.89	95.19
20	94.64	95.98	99.93	97.70	97.74	96.94	99.07	98.62	98.48	97.29	95.80	95.21
21	94.62	96.04	99.88	97.59	97.88	96.92	98.94	98.58	98.39	97.22	95.81	95.04
22	94.64	96.17	100.02	97.56	98.01	97.01	99.12	98.60	98.26	97.15	95.82	95.03
23	94.67	96.31	99.83	97.48	98.06	97.19	99.12	98.55	98.15	97.17	95.77	95.11
24	94.54	96.59	99.71	97.43	98.04	97.32	99.06	98.55	98.27	96.95	95.66	94.99
25	94.62	96.48	99.65	97.36	98.00	97.37	99.05	98.69	98.01	96.86	95.68	95.04
26	94.60	96.76	99.66	97.27	98.00	97.39	99.13	98.65	97.91	96.87	95.74	94.93
27	94.58	96.87	99.59	97.21	98.01	97.39	99.14	98.50	97.87	96.80	95.74	94.94
28	94.80	97.01	99.54	97.15	97.95	97.37	99.13	98.44	97.81	96.75	95.73	94.94
29	94.40	97.13	99.42	97.12	98.06	97.30	99.06	98.50	97.67	96.70	95.67	94.90
30	94.52	97.24	99.38	97.04	---	97.31	99.12	98.79	97.57	96.66	95.72	94.86
31	94.56	---	99.36	96.96	---	97.36	---	99.12	---	96.64	95.62	---
MEAN	94.73	95.68	98.80	98.02	97.22	97.37	98.39	98.76	98.82	97.21	96.02	95.23
MAX	95.00	97.24	100.02	99.18	98.06	98.02	99.14	99.12	99.60	97.54	96.55	95.56
MIN	94.40	94.39	97.29	96.96	96.50	96.92	97.33	98.44	97.57	96.64	95.62	94.86
CAL YR 1983	MEAN	96.79	MAX	101.31	MIN	94.39						
WTR YR 1984	MEAN	97.19	MAX	100.02	MIN	94.39						

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1966-67, 1969-72, 1974 to current year.

CHEMICAL DATA: 1966-67 (a), 1969 (b), 1970 (c), 1971-72 (b), 1974-82 (c), 1983-84 (b).

MINOR ELEMENTS DATA: 1974-84 (b).

PESTICIDE DATA: 1976-79 (b), 1980 (a), 1982 (b).

ORGANIC DATA: OC--1974 (a), 1975-77 (b), 1978 (a), 1979-81 (c).

PCB--1978-79 (b), 1980 (a), 1982 (b).

NUTRIENT DATA: 1970 (c), 1971-72 (b), 1974 (b), 1975-82 (c), 1983-84 (b).

BIOLOGICAL DATA:

Bacteria--1974 (a), 1975-82 (c), 1983-84 (b).

Phytoplankton--1974 (a), 1975-78 (c), 1979 (b), 1980-81 (c).

Periphyton--1975 (c), 1976-80 (b).

SEDIMENT DATA: 1975-82 (c), 1983-84 (b).

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	BARO- METRIC PRES- SURE (MM OF HG)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 19...	1015	148	7.3	12.0	<1.0	775	11.5	105	51	K5
APR 11...	1000	131	7.4	2.5	1.3	760	13.8	101	<1	<1
MAY 09...	0900	152	8.3	7.5	<1.0	750	12.7	108	<1	<1
AUG 16...	0945	151	8.2	25.5	.50	760	8.3	102	K3	K1
DATE	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 19...	62	11	18	4.1	6.1	1.3	51	15	9.2	<.10
APR 11...	56	9	16	3.8	5.8	1.2	47	12	8.8	<.10
MAY 09...	59	15	17	3.9	5.9	1.2	44	15	8.9	<.10
AUG 16...	58	11	17	3.7	6.1	1.0	47	14	8.4	<.10
DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)
OCT 19...	.7	86	85	<.10	.190	.40	.040	<.010	<.010	<10
APR 11...	1.6	72	78	<.10	.400	1.6	<.010	<.010	<.010	<10
MAY 09...	1.1	94	80	.15	.060	.70	.050	<.010	<.010	<10
AUG 16...	1.0	84	80	<.10	<.010	.30	.010	.010	.010	<10

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 1983 TO SEPTEMBER 1984

DATE	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
OCT 19...	<1	12	<.5	<1	<1	<3	2	5	1	<4
APR 11...	1	12	<.5	<1	1	<3	2	21	3	<4
MAY 09...	<1	9	<1	<1	<1	<3	2	16	<1	<4
AUG 16...	1	11	<.5	<1	<1	<3	1	18	2	<4

DATE	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 19...	2	.4	<10	1	<1	<1	84	<6	5
APR 11...	2	<.1	<10	1	<1	<1	79	<6	9
MAY 09...	2	.1	<10	2	<1	<1	82	<6	5
AUG 16...	8	.2	<10	<1	<1	<1	82	<6	15

DATE	TIME	SAMPLE LOC- ATION, CROSS SECTION (FT FM L BANK)	SAM- PLING DEPTH (FEET)	DEPTH AT SAMPLE LOC- ATION, TOTAL (FEET)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)
MAY									
09...	0915	275	1	17	152	8.2	25.5	8.3	102
09...	0916	275	5	17	151	8.1	25.5	8.3	102
09...	0917	275	10	17	151	8.1	25.5	8.4	103
09...	0918	275	15	17	152	7.9	25.5	8.6	105
09...	0930	550	1	26	151	8.3	25.5	8.2	101
09...	0931	550	5	26	152	8.3	25.5	8.2	101
09...	0932	550	10	26	151	8.3	25.5	8.2	101
09...	0933	550	15	26	151	8.3	25.5	8.2	101
09...	0934	550	20	26	151	8.3	25.5	8.3	102
09...	0935	550	25	26	150	8.2	25.5	8.5	104
09...	0945	825	1	27	152	8.3	25.5	8.2	101
09...	0946	825	5	27	152	8.3	25.5	8.2	101
09...	0947	825	10	27	151	8.3	25.5	8.2	101
09...	0948	825	15	27	151	8.3	25.5	8.2	101
09...	0949	825	20	27	150	8.3	25.5	8.4	103
09...	0950	825	25	27	150	8.3	25.5	8.6	105
09...	1000	1100	1	15	152	8.2	25.5	8.1	99
09...	1001	1100	5	15	151	8.2	25.5	8.0	98
09...	1002	1100	10	15	151	8.2	25.5	8.1	99
09...	1003	1100	15	15	151	8.2	25.5	8.0	98
09...	1015	1330	1	12	152	8.3	25.5	8.1	99
09...	1016	1330	5	12	151	8.3	25.5	8.2	101
09...	1017	1330	10	12	151	8.2	25.5	8.4	103

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	TIME	SEDI- MENT, SUS- PENDED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 19...	1015	4	--	MAY 09...	0900	0	--
APR 11...	1000	1	--	AUG 16...	0945	1	50

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.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 21, 1934, nonrecording gage on highway bridge 0.1 mi southeast at same datum. July 21, 1934, to Aug. 22, 1961, nonrecording gage on east side, and Aug. 23, 1961, to Oct. 18, 1966, on west side of bridge at present site and datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.92 ft Apr. 20, 1933; minimum recorded, 6.48 ft Nov. 2, 1968, affected by seiche; but may have been lower during period of use of nonrecording gage.

GAGE HEIGHT (FEET ABOVE DATUM), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.51	7.62	9.54	9.60	7.98	8.73	7.92	9.38	10.44	8.67	9.20	7.96
2	7.50	7.65	9.44	9.50	7.91	8.67	7.90	9.43	10.56	8.64	9.16	7.93
3	7.47	7.66	9.35	9.43	7.86	8.56	7.91	9.43	10.42	8.59	9.10	7.89
4	7.46	7.65	9.22	9.36	7.82	8.45	7.94	9.50	10.33	8.53	9.06	7.85
5	7.54	7.81	9.12	9.28	7.78	8.35	8.05	9.61	10.18	8.59	9.02	7.81
6	7.63	7.96	9.07	9.21	7.75	8.26	8.24	9.64	9.99	8.60	8.97	7.78
7	7.69	8.09	9.26	9.18	7.71	8.15	8.56	9.66	9.86	9.05	8.92	7.74
8	7.69	8.12	9.35	9.16	7.66	8.07	8.89	9.62	9.75	9.20	8.87	7.69
9	7.74	8.13	9.36	9.12	7.61	7.99	9.09	9.65	9.62	9.18	8.76	7.65
10	7.70	8.14	9.35	9.10	7.57	7.90	9.19	9.66	9.48	9.13	8.69	7.61
11	7.66	8.21	9.33	9.06	7.52	7.82	9.20	9.62	9.36	9.09	8.68	7.62
12	7.66	8.40	9.37	9.01	7.47	7.72	9.18	9.61	9.31	9.21	8.70	7.62
13	7.68	8.63	9.48	8.96	7.45	7.65	9.15	9.69	9.28	9.17	8.69	7.56
14	7.72	8.75	9.90	8.92	7.46	7.65	9.14	9.72	9.27	9.06	8.65	7.56
15	7.75	8.80	10.40	8.89	7.58	7.61	9.16	9.68	9.26	8.96	8.64	7.55
16	7.76	8.86	10.59	8.84	7.73	7.56	9.22	9.66	9.16	8.96	8.60	7.51
17	7.70	9.09	10.66	8.78	7.85	7.53	9.26	9.59	9.11	9.02	8.55	7.47
18	7.72	9.19	10.60	8.73	7.96	7.49	9.31	9.52	9.02	9.06	8.46	7.43
19	7.72	9.25	10.49	8.68	8.06	7.48	9.33	9.45	9.08	9.11	8.42	7.40
20	7.69	9.26	10.30	8.62	8.23	7.48	9.35	9.44	9.05	9.14	8.41	7.38
21	7.68	9.37	10.14	8.57	8.41	7.56	9.46	9.42	8.97	9.20	8.31	7.39
22	7.65	9.59	10.07	8.52	8.51	7.72	9.33	9.39	8.92	9.23	8.23	7.34
23	7.63	9.68	10.02	8.47	8.59	7.84	9.25	9.38	8.85	9.23	8.21	7.32
24	7.66	9.65	9.98	8.42	8.67	7.95	9.20	9.52	8.70	9.33	8.18	7.32
25	7.66	9.80	9.94	8.38	8.73	8.02	9.26	9.52	8.76	9.31	8.12	7.30
26	7.63	9.86	9.90	8.31	8.78	8.05	9.27	9.55	8.78	9.28	8.07	7.32
27	7.63	9.80	9.82	8.26	8.81	8.04	9.24	9.61	8.75	9.33	8.03	7.28
28	7.66	9.69	9.81	8.21	8.82	8.03	9.26	9.60	8.71	9.32	8.00	7.25
29	7.63	9.63	9.79	8.16	8.79	8.00	9.31	9.69	8.69	9.28	7.98	7.23
30	7.64	9.60	9.75	8.10	---	7.96	9.32	9.93	8.67	9.25	7.96	7.21
31	7.63	---	9.68	8.05	---	7.93	---	10.22	---	9.22	7.99	---
MEAN	7.65	8.80	9.78	8.80	8.04	7.94	8.96	9.59	9.34	9.06	8.54	7.53
MAX	7.76	9.86	10.66	9.60	8.82	8.73	9.46	10.22	10.56	9.33	9.20	7.96
MIN	7.46	7.62	9.07	8.05	7.45	7.48	7.90	9.38	8.67	8.53	7.96	7.21
CAL YR 1983	MEAN 8.80	MAX 10.74		MIN 7.46								
WTR YR 1984	MEAN 8.67	MAX 10.66		MIN 7.21								

ST. LAWRENCE RIVER BASIN

04296000 BLACK RIVER AT COVENTRY, VT.

LOCATION.--Lat 44°52'08", long 72°16'14", Orleans County, Hydrologic Unit 01110000, on right bank 15 ft downstream from highway bridge, 800 ft upstream from Stony Brook, and 0.4 mi northwest of Coventry.

DRAINAGE AREA.--122 mi².

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Elevation of gage is 725 ft, 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.

AVERAGE DISCHARGE.--33 years, 202 ft³/s, 22.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,740 ft³/s Apr. 2, 1976, gage height, 7.91 ft; minimum, 11 ft³/s Aug. 29 to Sept. 1, 1953; minimum daily, 11 ft³/s Aug. 29 to Sept. 1, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,570 ft³/s Dec. 14, gage height, 5.99 ft, no peak above base of 1,700 ft³/s; minimum 29 ft³/s Sept. 10, 11, gage height, 1.69 ft; minimum daily, 30 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	75	402	160	69	180	250	238	1220	69	47	41
2	40	69	337	140	68	155	310	232	902	66	45	41
3	39	70	275	135	65	140	346	189	665	61	44	38
4	37	104	210	135	75	130	418	216	440	57	43	37
5	66	403	200	120	90	125	623	305	295	71	40	37
6	236	405	236	120	97	115	1060	260	229	89	38	36
7	236	278	711	120	93	115	1170	199	305	295	39	35
8	135	167	541	110	86	115	1070	168	405	279	39	33
9	95	127	440	105	88	97	768	320	295	193	40	32
10	88	111	425	100	85	90	563	240	201	106	39	30
11	77	282	325	94	80	85	421	190	164	92	37	34
12	69	605	280	93	83	78	421	260	138	179	60	43
13	72	398	652	92	100	74	515	380	122	220	166	56
14	120	256	1430	85	130	70	594	390	122	141	120	52
15	145	163	1490	84	350	78	635	365	155	90	71	103
16	108	170	1360	84	485	90	665	300	131	92	64	73
17	88	400	943	84	365	110	763	260	111	111	57	62
18	78	354	660	84	350	137	768	250	99	95	49	60
19	70	258	530	84	355	154	700	230	111	109	45	53
20	65	180	375	82	525	193	623	175	128	162	46	49
21	61	476	325	80	510	388	555	150	101	104	44	46
22	58	610	335	80	345	740	456	130	92	78	42	44
23	57	462	320	80	280	661	366	200	87	69	47	41
24	73	358	310	77	295	508	324	320	80	63	61	38
25	109	615	285	78	320	430	366	290	101	58	63	37
26	96	622	260	75	325	316	360	218	162	55	53	40
27	81	488	225	75	255	255	297	243	128	55	46	49
28	80	394	190	75	205	240	248	218	94	55	41	54
29	85	414	195	74	190	241	218	610	80	55	39	46
30	95	473	210	72	---	203	197	1270	71	52	37	40
31	86	---	195	71	---	193	---	1460	---	49	39	---
TOTAL	2788	9787	14672	2948	6364	6506	16070	10276	7234	3270	1641	1380
MEAN	89.9	326	473	95.1	219	210	536	331	241	105	52.9	46.0
MAX	236	622	1490	160	525	740	1170	1460	1220	295	166	103
MIN	37	69	190	71	65	70	197	130	71	49	37	30
CFSM	.74	2.67	3.88	.78	1.80	1.72	4.39	2.71	1.98	.86	.43	.38
IN.	.85	2.98	4.47	.90	1.94	1.98	4.90	3.13	2.21	1.00	.50	.42
CAL YR 1983	TOTAL	91995	MEAN 252	MAX 1490	MIN 33	CFSM 2.07	IN 28.05					
WTR YR 1984	TOTAL	82936	MEAN 227	MAX 1490	MIN 30	CFSM 1.86	IN 25.29					

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

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1977 to September 1981.

WATER TEMPERATURES: November 1977 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	BARO- METRIC PRES- SURE (MM OF HG)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 18...	1115	76	174	--	--	9.0	--	--	--	--
NOV 17...	0800	411	144	727	7.4	1.5	8.0	12.8	96	2300
18...	1120	352	112	--	--	1.5	--	--	--	--
JAN 04...	0840	141	140	--	--	0.0	--	--	--	--
FEB 09...	1100	93	205	751	7.4	0.0	1.9	12.8	89	5900
MAR 28...	1115	229	135	--	--	0.0	--	--	--	--
APR 04...	1430	387	132	748	7.6	5.5	5.6	11.4	92	180
MAY 03...	1345	187	118	--	--	10.0	--	--	--	--
JUN 08...	0730	412	155	744	7.8	17.0	5.4	9.2	97	2700
21...	1315	99	175	--	--	19.5	--	--	--	--
AUG 08...	1030	37	265	741	8.1	20.0	0.3	8.4	96	200
15...	1345	73	162	--	--	24.0	--	--	--	--

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)
NOV 17...	1950	60	9	19	3.0	3.0	10	0.2	1.5	51
FEB 09...	1400	87	10	28	4.2	3.6	8	0.2	1.0	77
APR 04...	23	56	9	18	2.6	2.7	9	0.2	1.0	47
JUN 08...	600	67	8	22	2.8	2.5	7	0.1	0.7	59
AUG 08...	120	110	11	36	5.9	4.3	8	0.2	0.9	100

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
NOV 17...	12	5.1	<0.1	5.0	92	80	0.13	0.10	0.13	1.10
FEB 09...	13	6.0	<0.1	7.4	112	110	0.53	0.11	0.14	0.6
APR 04...	9.0	4.5	<0.1	4.7	58	71	0.41	0.15	0.19	1.20
JUN 08...	8.2	3.6	<0.1	4.2	106	81	2.5	0.76	0.98	0.8
AUG 08...	14	6.9	<0.1	4.0	152	134	0.1	0.02	0.03	<0.1

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

ST. LAWRENCE RIVER BASIN

04296000 BLACK RIVER AT COVENTRY, VT.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)
NOV 17...	0.06	0.18	0.03	0.02	0.06	44	49	65	<1	18.00
FEB 09...	0.03	0.09	0.01	<0.01	0.03	13	3.3	70	--	--
APR 04...	0.31	0.95	<0.01	0.02	0.06	19	20	95	1	10.00
JUN 08...	0.02	--	0.01	<0.01	0.03	40	44	51	1	12.00
AUG 08...	0.01	--	<0.01	0.01	0.03	35	3.5	55	--	--

DATE	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, DIS- SOLVED (UG/L AS NI)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 17...	1	<1	<3.00	1	140	4	33	<0.1	1	<1	<3.00
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
APR 04...	<1	<1	<3.00	1	80	1	25	<0.1	2	<1	7.00
JUN 08...	<1	<1	<3.00	3	120	1	20	0.1	1	<1	9.00
AUG 08...	--	--	--	--	--	--	--	--	--	--	--

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

ST. LAWRENCE RIVER BASIN

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04296500 CLYDE RIVER AT NEWPORT, VT.

LOCATION.--Lat 44°56'22", long 72°11'23", Orleans County, Hydrologic Unit 01110000, on right bank in Newport, just downstream from small right-bank tributary, and 1 mi upstream from mouth.

DRAINAGE AREA.--142 mi².

PERIOD OF RECORD.--Discharge: May 1909 to September 1919; May 1920 to August 1922, October 1922 to September 1924, November 1928 to May 1936, September 1938 to current year. Prior to November 1928, published as "at West Derby."

Water-quality records: Water years 1975-77.

REVISED RECORDS.--WSP 744: 1913(M), drainage area. WSP 924: 1940. WSP 1307: 1913-15(M).

GAGE.--Water-stage recorder and since Mar. 6, 1957, records of power generation. Datum of gage is 682.36 ft above National Geodetic Vertical Datum of 1929. May 25, 1909, to Sept. 20, 1915, nonrecording gage, and Sept. 21, 1915, to Sept. 30, 1924, Nov. 16, 1928, to May 4, 1936, water-stage recorder, at site 0.65 mi upstream at different datum.

REMARKS.--Records fair. Flow regulated by powerplant and reservoirs upstream and, since Mar. 6, 1957, by diversion around station through canal and penstock of Newport No. 11 powerplant. Diversion computed from relation of kilowatt-hour output and measured discharge, discharge computed by adding flow over control to flow diverted through powerplant. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years (water years 1910-19, 1921, 1923-24, 1929-35, 1939-84), 260 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft³/s Mar. 20, 1936, gage height, 5.76 ft, site and datum then in use, from rating curve extended above 2,800 ft³/s on basis of computation of peak flow over dam; maximum daily, 2,680 ft³/s May 4, 1940; minimum daily, 2.6 ft³/s June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,500 ft³/s June 2; minimum daily, 20 ft³/s Sept. 12, 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	117	567	300	151	222	303	509	1420	168	218	35
2	115	98	541	300	180	228	318	495	1500	184	212	38
3	71	145	510	315	157	106	247	481	1300	193	98	49
4	71	159	473	316	91	155	387	466	1060	158	34	62
5	112	78	438	290	115	214	351	460	849	199	32	59
6	160	80	409	268	160	183	420	451	723	168	63	59
7	185	207	505	261	157	168	452	448	658	281	51	58
8	156	282	513	282	190	172	552	446	634	183	51	38
9	96	190	486	293	175	176	771	447	586	200	101	40
10	124	260	465	231	163	118	733	446	547	260	91	32
11	113	306	443	203	136	70	668	444	518	272	36	48
12	138	302	413	236	206	168	611	433	491	387	41	20
13	164	301	483	240	226	185	572	423	414	303	114	20
14	185	300	738	196	133	173	552	281	380	247	79	69
15	156	301	1050	180	287	156	550	380	389	287	88	21
16	166	303	1340	190	370	118	583	385	388	319	89	35
17	157	303	1340	198	290	100	652	384	355	274	62	42
18	121	302	1120	192	408	101	712	425	268	261	35	32
19	136	299	895	188	304	225	769	448	288	256	48	34
20	128	301	739	196	330	151	811	446	260	235	66	35
21	126	317	687	194	414	234	798	402	271	159	56	34
22	111	398	579	124	416	317	756	349	239	136	70	68
23	71	451	480	204	358	400	708	296	176	253	62	48
24	164	446	465	188	425	429	661	311	137	253	60	36
25	69	525	474	199	320	436	629	383	265	202	38	42
26	107	535	496	233	304	429	605	384	261	218	50	35
27	123	540	463	184	236	433	585	381	243	173	68	53
28	101	548	426	110	227	431	566	381	254	58	68	42
29	44	566	398	76	214	428	524	422	268	53	62	37
30	93	579	341	159	---	425	525	505	140	224	51	36
31	107	---	306	135	---	374	---	1030	---	218	51	---
TOTAL	3756	9539	18583	6681	7143	7525	17371	13542	15282	6782	2245	1257
MEAN	121	318	599	216	246	243	579	437	509	219	72.4	41.9
MAX	185	579	1340	316	425	436	811	1030	1500	387	218	69
MIN	44	78	306	76	91	70	247	281	137	53	32	20
CAL YR 1983	TOTAL	124095	MEAN 340	MAX 1360	MIN 44							
WTR YR 1984	TOTAL	109706	MEAN 300	MAX 1500	MIN 20							

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1984

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Merrimack River basin							
#01081500	Merrimack River at Franklin Junction, N. H.	Lat 43°25'26", long 71°50'12", Merrimack County at Franklin Junction, N. H. 1 mi downstream from confluence of Pemigewasset and Winnepesaukee Rivers.	1,507	1903-78†, 1983	12-16-84	14.76	19,300
#01082000	Contoocook River at Peterborough, N. H.	Lat 42°51'45", long 71°57'55", Hillsborough County, 1 mi south of Peterborough, and 1.5 mi upstream from Nubanusit Brook.	68.1	1964-77†, 1978-83	5-31-84	5.85	2,200
#01091500	Piscataquog River near Goffstown, N. H.	Lat 43°00'58", long 71°33'03", Hillsborough County, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, N. H.	202	1939-78†, 1983	4-11-84	10.00	5,500
#01094000	Souhegan River at Merrimack, N. H.	Lat 42°51'27", long 71°30'24", Hillsborough County, at head of Wildcat Falls, 1.5 mi upstream from mouth.	171	1909-76†, 1979-83	4-6-84	8.50	4,420

† Operated as a continuous-record gaging station.

‡ Also a miscellaneous site.

Special study and miscellaneous sites

Discharge measurements in the following table were made at special study and miscellaneous sites throughout New Hampshire.

Discharge measurements made at special study and miscellaneous sites during water year 1984

Discharge measurements made at special study and miscellaneous sites during water year 1984						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Saco River basin						
01064254	Saco River	Lat 44°04'41", long 71°14'19", Carroll County, 0.3 mi upstream from State Highway 302 bridge, 2.3 mi east of Bartlett, 3.6 mi southwest of Glen.	--	--	8-28-84	*0.12
Stony Brook					9-26-84	*.09
01064254.1	do	Lat 44°04'47", long 71°14'20", Carroll County, 0.2 mi upstream from State Highway 302 bridge, 2.3 mi east of Bartlett, 3.5 mi southwest of Glen.	--	--	9-13-83	0
Stony Brook					8- 2-84	*.13
					8-28-84	*.07
01064254.2	do	Lat 44°04'54", long 71°14'20", Carroll County, 250 ft upstream from State Highway 302 bridge, 2.3 mi east of Bartlett, 3.5 mi southwest of Glen.	--	--	9-13-83	0
Stony Brook					8-24-84	0
					9-26-84	0
01064254.3	do	Lat 44°05'00", long 71°14'19", Carroll County, 250 ft downstream from State Highway 302 bridge, 2.3 mi east of Bartlett, 3.4 mi southwest of Glen.	--	--	9-13-83	0
Stony Brook					4-20-84	17.3
01064254.4	do	Lat 44°05'13", long 71°14'12", Carroll County, 0.2 mi upstream from mouth, 0.4 mi downstream from State Highway 302 bridge, 2.4 mi east of Bartlett, 3.2 mi southwest of Glen.	--	--	4-20-84	20.6
Stony Brook						
01064390	do	Lat 44°06'27", long 71°08'32", Carroll County, 0.5 mi northeast of Lower Bartlett, 0.6 mi northeast of State Highway 16A bridge over East Branch Saco River, 2.0 mi east of Glen.	37.8	--	7-28-83	*9.02
East Branch Saco River					9-18-83	*5.74
01064390.4	do	Lat 44°06'03", long 71°08'59", Carroll County, at State Highway 16A bridge, 0.1 mi south of Lower Bartlett, 1.8 mi southeast of Glen.	--	--	9-13-83	*5.32
East Branch Saco River					8- 1-84	*12.7
					8-24-84	*8.17
					9-11-84	*5.05
01064390.7	do	Lat 44°05'50", long 71°09'33", Carroll County, at railroad trestle, 0.4 mi upstream from mouth, 0.5 mi southwest of Lower Bartlett and State Highway 16A bridge over East Branch Saco River, 1.5 mi southeast of Glen.	--	--	9-13-83	*4.41
East Branch Saco River					8- 1-84	*10.7
					8-28-84	*7.55
					9-11-84	*3.88
01064390.8	do	Lat 44°05'47", long 71°09'41", Carroll County, 0.1 mi downstream from railroad trestle, 0.3 mi upstream from mouth, 0.6 mi southwest of Lower Bartlett and State Highway 16A bridge over East Branch Saco River, 1.4 mi southeast of Glen.	--	--	7-28-83	*4.78
East Branch Saco River					9-13-83	*3.25
					9-11-84	*1.61
01064390.9	do	Lat 44°05'44", long 71°09'54", Carroll County, at mouth, 0.8 mi southwest of Lower Bartlett and State Highway 16A bridge over East Branch Saco River, 1.3 mi southeast of Glen.	--	--	8- 1-84	*6.62
East Branch Saco River					8-28-84	*.69
					9-11-84	.0
01064391	Atlantic Ocean	Lat 44°05'39", long 71°09'53", Carroll County, 75 ft downstream from mouth of East Branch Saco River, 0.25 mi downstream from Saco River near Glen (01064350), 1.0 mi southwest of Lower Bartlett, 1.4 mi southeast of Glen.	--	--	8-29-84	*62.1
Saco River					9-18-84	*57.1
					9-27-84	*44.8
01064391.4	Saco River	Lat 44°05'54", long 71°08'57", Carroll County, at State Highway 16A bridge, 0.3 mi south of Lower Bartlett, 1.7 mi north of Intervale.	--	--	5- 3-84	1.12
Saco River tributary at Lower Bartlett						
01064391.6	do	Lat 44°05'47", long 71°08'55", Carroll County, 1000 ft downstream from State Highway 16A bridge, 0.5 mi south of Lower Bartlett, 1.5 mi north of Intervale.	--	--	5- 3-84	0
Saco River tributary at Lower Bartlett						

See footnotes at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Saco River basin--Continued						
01064392 Saco River	Atlantic Ocean	Lat 44°03'58", long 71°08'50", Carroll County, 0.1 mi upstream from mouth of Unnamed tributary at Intervale, 0.7 mi southwest of Intervale, 1.3 mi northwest of North Conway.	--	--	8-30-84 9-18-84 9-27-84	*71.1 *60.8 *49.7
01064392.5 North Branch Saco River tributary at Intervale	Saco River	Lat 44°05'00", long 71°08'21", Carroll County, at State Highway 16A culvert, 0.5 mi north of State Highway 16A junction with Hurricane Mountain Road, 0.6 mi north of Intervale, 1.5 mi south of Lower Bartlett.	--	--	5- 3-84 9-26-84	*1.47 *.03
01064392.6 South Branch Saco River tributary at Intervale	do	Lat 44°04'58", long 71°08'21", Carroll County, at State Highway 16A culvert, 0.4 mi north of State Highway 16A junction with Hurricane Mountain Road, 0.5 mi north of Intervale, 1.6 mi south of Lower Bartlett.	--	--	5- 3-84 9-26-84	*.55 *.01
01064392.7 Saco River tributary at Intervale	do	Lat 44°05'00", long 71°08'24", Carroll County, downstream from junction of North and South Branches of Unnamed tributary, 500 ft west of State Highway 16A culvert, 0.5 mi north of State Highway 16A junction with Hurricane Mountain Road, 0.6 mi north of Intervale, 1.5 mi south of Lower Bartlett.	--	--	9-26-84	0
01064392.8 Saco River tributary at Intervale	do	Lat 44°04'59", long 71°08'24", Carroll County, 500 ft downstream from confluence of North and South Branches, 500 ft west of South Branch State Highway 16A culvert, 0.5 mi north of State Highway 16A junction with Hurricane Mountain Road, 0.6 mi north of Intervale 1.5 mi south of Lower Bartlett.	--	--	5- 3-84	2.09
01064400.3 Lucy Brook	do	Lat 44°04'13", long 71°10'10", Carroll County, 0.6 mi northwest from Westside Road bridge, 1.5 mi west of Intervale, 2.4 mi northwest of North Conway.	--	--	7-28-83 8-29-84 9-10-84 9-19-84	*1.08 *1.39 *.92 *.88
01064400.6 Lucy Brook	do	Lat 44°04'03", long 71°09'34", Carroll County, 100 ft upstream from Westside Road bridge, 1.1 mi southwest of Intervale, 1.9 mi northwest of North Conway.	--	--	7-28-83 9-13-83 4-20-84 7- 6-84 8- 3-84 8-29-84 9-10-84 9-19-84	*.77 *.66 45.1 5.96 *2.42 *1.01 *.69 *.59
01064400.7 Lucy Brook	do	Lat 44°04'07", long 71°09'21", Carroll County, 0.2 mi east of Westside Road bridge, 0.9 mi southwest of Intervale, 1.8 mi northwest of North Conway.	--	--	7- 6-84 8- 3-84 8-29-84 9-10-84 9-19-84	4.36 *1.8 *2.21 .0 .0
01064400.8 Lucy Brook	do	Lat 44°04'06", long 71°09'14", Carroll County, 0.4 mi east of Westside Road bridge, 0.8 mi southwest of Intervale, 1.6 northwest of North Conway.	--	--	4-20-84 7- 6-84 8- 3-84 8-29-84 9-10-84 9-19-84	43.8 3.34 *.44 0 0 0
01064402 Kearsarge Brook	do	Lat 44°02'41", long 71°07'31", Carroll County, at State Highway 16 and 302 culvert, 0.5 mi south of North Conway, 2.3 mi northwest of Redstone.	--	--	8- 2-83 8- 2-84 8-29-84 9-11-84	*5.22 *6.4 *2.74 *1.98
01064402.1 Kearsarge Brook	do	Lat 44°02'38", long 71°07'48", Carroll County, 0.3 mi west of State Highway 16 and 302 culvert, 0.6 mi south of North Conway, 2.5 mi northwest of Redstone.	--	--	8- 2-84 8-29-84 9-11-84	*6.07 *2.12 *1.19
01064402.2 Kearsarge Brook	do	Lat 44°02'35", long 71°07'59", Carroll County, at mouth, 0.4 mi west of State Highway 16 and 302 culvert, 0.7 mi south of North Conway, 2.5 mi northwest of Redstone.	--	--	8- 2-83 8- 2-84 8-29-84 9-11-84	*4.88 *5.48 *1.25 *.56

See footnotes at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Saco River basin--Continued						
01064402.3 Saco River	Atlantic Ocean	Lat 44°02'17", long 71°08'22", Carroll County, downstream from Kearsarge Brook, 1.2 mi southwest of North Conway, 2.5 mi northwest of Redstone.	--	--	8-29-84 9-18-84 9-27-84	*84.2 *77.1 *60.9
01064410 Saco River	do	Lat 44°00'32", long 71°07'00", Carroll County, upstream from Moat Brook, 0.9 mi southwest of Redstone, 3.1 mi south of North Conway.	--	--	8-29-84 9-18-84 9-26-84	*96.3 *84.7 *65.0
01064415 Saco River	do	Lat 43°59'06", long 71°07'06", Carroll County, 50 feet upstream from mouth of Swift River, 0.4 mi north of Conway, 2.3 mi southwest of Redstone.	--	--	8-30-84 9-18-84	*119 *94
01064490 Swift River	Saco River	Lat 43°59'07", long 71°07'12", Carroll County, at covered bridge, 100 ft downstream from Westside Road bridge, 500 ft upstream from mouth, 0.4 mi north of Conway, 2.3 mi southwest of Redstone.	-	--	8-30-84 9-18-84	*66.6 *55.3
01064500.5 Mason Brook	do	Lat 44°01'22", long 71°04'06", Carroll County, just downstream from major left bank tributary and right bank minor tributary, 0.4 mi northwest of power line crossing, 0.9 mi northwest of East Conway Road culvert, 1.8 mi east of Redstone, 2.0 mi north of Center Conway.	--	--	9-26-84	*.50
01064500.6 Mason Brook	do	Lat 44°01'06", long 71°03'47", Carroll County, at power line crossing, 0.5 mi northwest of East Conway Road culvert, 1.6 mi north of Center Conway, 2.0 mi east of Redstone.	--	--	9-26-84	*.85
01064500.8 Mason Brook	do	Lat 44°00'39", long 71°03'19", Carroll County, 700 ft southeast of East Conway Road culvert, 1.1 mi north of Center Conway, 2.4 mi east of Redstone.	--	--	9-26-84	*.86
01064503.5 White Lot Brook	Weeks Brook	Lat 44°02'04", long 71°01'46", Carroll County, at power line crossing, 1.4 mi northwest of East Conway, 3.2 mi northeast of Center Conway.	--	--	5- 1-84 9-25-84	7.88 *2.7
01064503.6 White Lot Brook	do	Lat 44°01'55", long 71°01'40", Carroll County, 0.2 mi south of power line crossing, 1.3 mi northwest of East Conway, 3.0 mi northeast of Center Conway.	--	--	5- 1-84 9-25-84	7.56 *1.6
Merrimack River basin						
††01075000 Pemigewasset River	Merrimack River	Lat 43°58'34", long 71°40'48", Grafton County, 0.2 mi east of Woodstock, and 0.7 mi upstream from Eastman Brook.	193	1940-77+, 1978-83	4-17-84 7- 3-84	2,400 249
††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.	143	1929-77+, 1978-83	2-23-84 4-17-84 7-19-84	364 1,300 486
01077510 Newfound River	do	Lat 43°37'05", long 71°44'25", Grafton County, at outlet of Newfound Lake, near State Highway 3A, 2.3 mi north of Bristol.	96.4	1974-76, 1983	10-17-83 11-25-83 5-31-84 8-29-84	102 622 2,170 50.9
01080525 Winnepesaukee River	Merrimack River	Lat 43°31'50", long 71°28'04", Belknap County, at Church Street bridge in Laconia, 1.3 mi south of Lakeport.	--	--	6-11-84	2,920
01080930 Winnepesaukee River	do	Lat 43°28'18", long 71°32'01", Belknap County, at Lochmere Dam, at Lochmere, 0.8 mi southeast of East Tilton, 3.5 mi northeast of Tilton.	--	--	6-11-84	3,190
††01081500 Merrimack River	Atlantic Ocean	Lat 43°25'26", long 71°39'12", Merrimack County, at Franklin Junction, 1 mi downstream from confluence of Pemigewasset and Winnepesaukee Rivers.	--	1906-78+, 1979-83	12-15-83 9- 5-84	17,800 1,200

See footnotes at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Merrimack River basin--Continued						
††01082000 Contoocook River	Merrimack River	Lat 42°51'45", long 71°57'35", Hills-borough County, 1,100 ft downstream from milldam, 1 mi south of Peterborough, and 1.5 mi upstream from Nubanusit Brook.	68.1	1945-77+, 1978-83	8- 4-83 2-27-84	8.29 404
01088000 Contoocook River	do	Lat 43°14'58", long 71°37'13", Merrimack County, at bridge in Riverhill N. H., 3.7 mi southwest of Penacook, 4.0 mi upstream from mouth.	766	1929-77+, 1978-83	4- 7-84 5- 9-84	6,750 2,280
01088400 Merrimack River	Atlantic Ocean	Lat 43°12'32", long 71°31'51", Merrimack County, at bridge on State Highway 3 at Concord.	--	1979-82	4- 7-84	23,800
††01091500 Piscataquog River	Merrimack River	Lat 43°00'58", long 71°33'03", Hills-borough County, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown.	202	1939-78+, 1979-83	10-27-83 12-14-83 3- 2-84	123 3,310 850
01093720 Souhegan River	do	Lat 42°47'28", long 71°47'40", Hills-borough County, at State Highway 31 bridge, 0.1 mi north of Greenville-Wilton Town line, 1.9 mi northeast of Greenville, 2.8 mi south of West Wilton.	--	--	8-27-84	*5.38
01093740 Souhegan River	do	Lat 42°49'18", long 71°45'42", Hills-borough County, at Gade Road bridge, 0.2 mi southeast of junction of State Highway 31 and 101, 1.2 mi southeast of Wilton Center, 2.0 mi southwest of Wilton.	--	--	8-27-84	*11.4
01093850 Souhegan River	do	Lat 42°50'33", long 71°42'32", Hills-borough County, at bridge connecting North Purgatory Road and State Highway 101, 1.5 mi east of Wilton, 3.0 mi west of Wilton.	--	--	8-27-84	*20.9
01093930 Souhegan River	do	Lat 42°50'08", long 71°38'45", Hills-borough County, downstream from dam, 0.2 mi east of State Highway 13 and 101 junction in Milford, 1.3 mi northwest of East Milford.	--	--	8-27-84	*26.4
01093950 Beaver Brook	Souhegan River	Lat 42°52'41", long 71°38'10", Hills-borough County, at culvert of New Boston Road, 0.5 mi south of Mount Vernon Town line, 0.8 mi north of New Boston Road and Boston Post Road junction, 1.3 mi northwest of State Highway 101 and 122 junction in Amherst.	--	--	8-24-84	*.01
01093980 Souhegan River	Merrimack River	Lat 42°49'34", long 71°35'10", Hills-borough County, 0.1 mi upstream from Boston Post Road bridge, 1.1 mi northeast of Ponemah, 2.1 mi northwest of South Merrimack, 3.2 mi east of Milford.	--	--	8-28-84	*26.5
††01094000 Souhegan River	do	Lat 42°51'27", long 71°30'24", Hills-borough County, at head of Wildcat Falls at Merrimack, 1.5 mi upstream from mouth.	171	1909-76+, 1979-83	4-11-84 8-28-84 9-27-84	1,190 27.1 9.2
01094003 Baboosic Brook	Souhegan River	Lat 42°53'53", long 71°33'22", Hills-borough County, at Beals Road bridge, at Stowell, Woodward, and Beals Roads junction, at Merrimack-Bedford Town line, 1.3 mi east of Baboosic Lake outlet, 4.0 mi northwest of Merrimack.	--	--	8-30-84	*.38
01094005 Baboosic Brook	do	Lat 42°53'36", long 71°30'53", Hills-borough County, at Bedford Road bridge, 2.1 mi west of Reeds Ferry, and 2.3 mi northwest of Merrimack.	--	--	8-30-84	*.56
01094010 Naticook Brook	Merrimack River	Lat 42°49'42", long 71°30'57", Hills-borough County, at Greens Pond Road culvert, at Greens Pond outlet, 1.4 mi south of Lawrence Corner, 1.6 mi southwest of Thorntons Ferry.	1.36	1964-65, 1967-68, 1970-72	8-31-84	*.03

See footnotes at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis- charge (ft ³ /s)
Merrimack River basin--Continued						
01094020 Naticook Brook	Merrimack River	Lat 42°50'24", long 71°29'58", Hills- borough County, at Amherst Road culvert, 0.2 mi west of Everett Turnpike Tollgate, 1.3 mi west of Thorntons Ferry, 1.5 mi south of Merrimack.	2.23	1964-65, 1967-68, 1970-73	8-31-84	0
01094024 Naticook Brook	do	Lat 42°50'39", long 71°29'36", Hills- borough County, at State Highway 3 culvert, at Thorntons Ferry, 1.4 mi south of Merrimack.	--	--	8-31-84	*.21
01094046 Chase Brook tributary	Chase Brook	Lat 42°48'42", long 71°26'24", Hills- borough County, at Page Road, 0.6 mi south of Perch Pond, 3.0 mi north of Hudson, 4.5 mi west of West Windham.	--	--	8-31-84	0
01094050 Chase Brook	Merrimack River	Lat 42°48'59", long 71°28'13", Hills- borough County, at State Highway 3A bridge, 1.6 mi southwest of Darroh Pond, 2.0 mi southeast of Thorntons Ferry, 2.0 mi south of Litchfield.	8.24	1964-65, 1967-68, 1970-72	8-31-84	*2.52
01094070 Pennichuck Brook	do	Lat 42°46'20", long 71°34'50", Hills- borough County, at outlet of Dunklee Pond, 2.3 mi northeast of Hollis, 2.6 mi southwest of South Merrimack.	--	--	8-28-84	*.64
01094080 Pennichuck Brook	do	Lat 42°46'59", long 71°34'10", Hills- borough County, at Nevins Road culvert, 1.1 mi southwest of Pennichuck Pond out- let, 1.4 mi southwest of South Merrimack, 3.2 mi northeast of Hollis.	--	--	8-28-84	*.71
01094100 Muddy Brook	Pennichuck Brook	Lat 42°46'11", long 71°33'25", Hills- borough County, at Wheeler Road, 1.7 mi south of Pennichuck Pond outlet, 2.5 mi south of South Merrimack, 2.6 mi north- east of Hollis.	--	--	8-31-84	0
01094120 Muddy Brook	do	Lat 42°46'50", long 71°32'58", Hills- borough County, at Farley Road culvert, 1.0 mi southeast of Pennichuck Pond outlet, 1.7 mi south of South Merrimack, 3.4 mi northeast of Hollis.	--	--	8-31-84	*.39
01094130 Witches Brook	do	Lat 42°46'28", long 71°36'22", Hills- borough County, Haydens Millpond outlet, at Mill Road, 1.1 mi northwest of Silver Lake outlet, 2.5 mi north of Hollis, 3.3 mi southwest of South Merrimack.	--	--	8-31-84	*.45
01094140 Witches Brook	do	Lat 42°46'58", long 71°36'15", Hills- borough County, at State Highway 122 culvert, near junction of State Highway 122 with Haydens Road, near North Cemetery, 2.8 mi southwest of South Merrimack, 3.0 mi north of Hollis.	--	--	8-31-84	*.86
01094150 Witches Brook	do	Lat 42°47'32", long 71°35'58", Hills- borough County, at State Highway 122 culvert, at Witches Spring, 1.7 mi south of Ponemah, 2.3 mi southwest of South Merrimack, 3.6 mi north of Hollis.	4.28	1964-65, 1967-68, 1970-73	8-31-84	*1.70
01094155 Witches Brook	do	Lat 42°48'02", long 71°33'56", Hills- borough County, at South Merrimack Road culvert, 0.3 mi south of State Highway 101A, 0.6 mi southwest of South Merrimack.	--	--	8-31-84	*4.45
01094157 Pennichuck Brook	Merrimack River	Lat 42°48'15", long 71°32'37", Hills- borough County, at State Highway 101A culvert, 0.6 mi east of South Merrimack, 3.1 mi northeast of State Highway 101A and Everett Turnpike junction in Nashua.	--	--	8-28-84	*14.5
01096501.5 Scab Mill Brook	North Stream	Lat 42°45'47", long 71°40'54", Hills- borough County, at North Mason Road bridge, 0.4 mi northwest of North Mason Road and State Highway 13 junction, 2.4 mi north of Brookline.	--	--	8-29-84	*.20

See footnotes at end of table.

Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Merrimack River basin--Continued						
01096501.7 Nissitissit River	Nashua River	Lat 42°43'16", long 71°39'35", Hills-borough County, at Townsend-Milford Road bridge, 0.4 mi north of South Brookline, 0.8 mi south of Brookline.	--	--	8-29-84	*0.77
01096502 Nissitissit River	do	Lat 42°42'19", long 71°37'17", Hills-borough County, at Pepperell Road bridge, at West Hollis, 0.1 mi north of New Hampshire-Massachusetts State line, 2.7 mi southeast of Brookline, 2.8 mi southwest of Hollis.	47.6	1971-73	8-29-84	*5.86
01096502.1 Beaver Brook	Nissitissit River	Lat 42°44'25", long 71°36'19", Hills-borough County, at State Highway 130 (Proctor Hill Road) culvert, 0.8 mi west of Hollis, 2.8 mi east of Brookline.	--	--	8-31-84	*.06
01096502.2 Beaver Brook	do	Lat 42°42'48", long 71°36'54", Hills-borough County, at Worcester Road bridge, 0.6 mi north of New Hampshire-Massachusetts State line, 0.6 mi northeast of West Hollis, 2.2 mi southwest of Hollis.	--	--	8-29-84	*.12
01096502.8 Nissitissit River	Nashua River	Lat 42°41'33", long 71°35'29", Middlesex County, Mass., at Prescott Street in North Pepperell, Mass., 1.0 mi northeast of Hovey Corner, Mass., 1.8 mi north of State Highway 113 and 111 junction in Pepperell, Mass.	--	--	8-29-84	*7.51
01096506 Nashua River	Merrimack River	Lat 42°42'46", long 71°32'58", Hills-borough County, at Runnels Bridge on State Highway 111 in Hollis Depot, 0.7 mi north of New Hampshire-Massachusetts State line, 2.8 mi southeast of Hollis, 3.8 mi northeast of State Highway 113 and 111 junction in Pepperell, Mass.	--	--	8-30-84	*84.9
01096506.2 Flints Pond tributary	Flints Pond	Lat 42°45'15", long 71°33'10", Hills-borough County, at Pine Hill Road, 0.3 mi north of Flints Pond, 2.1 mi northeast of Hollis, 2.8 mi north of Hollis Depot.	--	--	8-31-84	0
01096506.3 Flints Brook	Nashua River	Lat 42°44'32", long 71°33'10", Hills-borough County, at State Highway 130 (Broad Street) culvert, 1.9 mi east of Hollis, 1.9 mi north of Hollis Depot.	--	--	8-31-84	*.04
01096506.4 Flints Brook	do	Lat 42°43'34", long 71°33'23", Hills-borough County, at Rideout Road culvert, 1.0 mi north of Hollis Depot, 2.0 mi southeast of Hollis.	--	--	8-31-84	*.88
01096507 Nashua River	Merrimack River	Lat 42°45'49", long 71°27'18", Hills-borough County, at State Highway 101A bridge, 0.5 mi west of State Highway 101A and 111 junction in Nashua, 0.6 mi northeast of Nashua City Hall.	--	--	8-30-84	*126
01096510 Glover Brook	First Brook	Lat 42°46'51", long 71°24'52", Hills-borough County, at Greeley Street culvert, 0.7 mi northwest of Hudson Center, 1.0 mi northeast of Ottarnic Pond outlet, 1.8 mi northeast of State Highway 102 and 111 junction in Hudson.	--	--	8-29-84	0
01096510.6 Second Brook	Merrimack River	Lat 42°45'06", long 71°25'11", Hills-borough County, at Pelham Road, 1.4 mi southeast of State Highway 102 and 111 junction in Hudson, 1.5 mi south of Hudson Center.	--	--	8-31-84	*.08
01096502 9.6 Limit Brook	do	Lat 42°43'59", long 71°24'56", Hills-borough County, at Wasson Road culvert, 0.5 mi west of Perhams Four Corners, 0.5 mi east of State Highway 3A and Wasson Road junction, 2.5 mi south of State Highway 102 and 111 junction in Hudson.	--	--	8-29-84	0

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at special study and miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis- charge (ft ³ /s)
Merrimack River basin--Continued						
01096529.8 Limit Brook	Merrimack River	Lat 42°42'28", long 71°25'25", Hills- borough County, at Chalifoux Road cul- vert, 0.2 mi west of Chalifoux Road and State Highway 3A junction, 0.6 mi north of New Hampshire-Massachusetts State line, 2.2 mi north of Tyngsboro, Mass.	--	--	8-29-84	*0.34
01096530.3 Limit Brook	do	Lat 42°41'41", long 71°25'13", Middlesex County, Mass., at pumping station road, 0.3 mi south of New Hampshire- Massachusetts State line, 1.3 mi north of Tyngsboro, Mass.	--	--	8-29-84	*1.70
01096585.4 Beaver Brook	do	Lat 42°46'12", long 71°21'03", Hills- borough County, at Tallant Road bridge, 0.1 mi east of State Highway 128 and Tallant Road junction, 0.3 mi south of North Pelham, 2.3 mi south of West Windham.	--	--	8-30-84	*5.72
01096585.8 Beaver Brook	do	Lat 42°44'25", long 71°19'22", Hills- borough County, upstream from Golden Brook, at Bridge Street (State Highway 111A) bridge, 0.5 mi north of Pelham, 2.6 mi southeast of North Pelham.	--	--	8-30-84	*7.85
01096593.5 Beaver Brook	do	Lat 42°43'08", long 71°19'28", Hills- borough County, at Willow Street bridge, 0.2 mi west of Willow Street and State Highway 38 (Bridge Street) junction, 1.1 mi south of Pelham, 1.5 mi north of New Hampshire-Massachusetts State line.	--	--	8-30-84	*11.5
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 down- stream from Indian River, 3.5 mi west of Canaan and at mile 19.3.	80.5	1939-78†, 1979-83	6-29-84	53.4
01152010 Sugar River	do	Lat 43°23'10", long 72°23'16", Sullivan County, 1 mi below dam at outlet of Sunapee Lake at Sunapee.	45.5	1976, 1979-83	10-31-83 12- 7-83 1-18-84 3-20-84	3.81 228 48.8 124

†† Also a crest-stage partial record station.

‡ Operated as a continuous-record gaging station.

* Base flow.

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)
ANDROSCOGGIN RIVER BASIN									
01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH (LAT 44 26 10 LONG 071 11 27)									
OCT 1983					MAR 1984				
20...	1020	1810	9.0	81	02...	1415	2640	1.0	49
NOV					APR				
03...	1320	1920	12.0	78	20...	1005	7480	4.5	66
DEC					JUN				
06...	1600	1690	5.5	--	01...	0905	16300	11.0	39
12...	1320	1960	1.0	82	AUG				
JAN 1984					08...	1450	2110	25.0	66
24...	0735	2440	0.5	64					
SACO RIVER BASIN									
01064300 ELLIS RIVER NEAR JACKSON, NH (LAT 44 13 12 LONG 071 15 00)									
NOV 1983					MAY 1984				
01...	1100	17	4.0	32	21...	1615	126	8.0	30
DEC									
07...	1200	58	0.0	33					
01064400 LUCY BROOK NEAR NORTH CONWAY, NH (LAT 44 04 10 LONG 071 10 30)									
NOV 1983					APR 1984				
01...	0830	1.7	4.0	21	10...	1500	32	3.0	17
DEC					AUG				
07...	0800	73	--	14	29...	1430	1.2	16.5	24
01065000 OSSIPEE RIVER AT EFFINGHAM FALLS, NH (LAT 43 47 44 LONG 071 03 36)									
FEB 1984					APR 1984				
28...	1115	1950	1.0	28	10...	1045	3850	3.0	28
PISCATAQUA RIVER BASIN									
01072100 SALMON FALLS RIVER AT MILTON, NH (LAT 43 24 50 LONG 070 59 15)									
OCT 1983					FEB 1984				
26...	1000	138	10.0	53	28...	0815	692	--	48
NOV					APR				
07...	1105	411	7.5	26	11...	0855	663	--	40
DEC					MAY				
06...	1300	389	2.0	35	21...	1030	283	16.0	43
JAN 1984									
16...	1300	174	1.0	32					
01073000 OYSTER RIVER NEAR DURHAM, NH (LAT 43 08 55 LONG 070 57 56)									
OCT 1983					FEB 1984				
25...	1230	4.0	6.0	268	29...	1330	58	0.5	--
DEC					APR				
06...	1045	29	0.5	68	16...	1000	34	6.0	86
JAN 1984					MAY				
16...	1100	15	0.0	72	21...	0900	24	15.0	74
01073500 LAMPREY RIVER NEAR NEWMARKET, NH (LAT 43 06 09 LONG 070 57 11)									
OCT 1983					MAR 1984				
24...	1030	55	8.0	81	26...	1050	853	1.5	65
NOV					APR				
28...	1030	1070	3.5	50	25...	1000	775	--	74
FEB 1984									
27...	1300	1100	4.0	52					
01073600 DUDLEY BROOK NEAR EXETER, NH (LAT 42 59 37 LONG 071 01 24)									
OCT 1983					FEB 1984				
24...	1340	1.9	8.0	232	27...	0830	28	--	107
NOV					MAR				
28...	1210	12	2.5	54	12	1240	19	5.0	100
MERRIMACK RIVER BASIN									
01075800 STEVENS BROOK NEAR WENTWORTH, NH (LAT 43 50 12 LONG 071 53 07)									
DEC 1983					MAR 1984				
09...	1045	7.2	0.0	11	26...	1130	5.1	2.0	24
JAN 1984					APR				
16...	1245	1.6	0.0	10	06...	1300	79	4.5	21
FEB									
23...	1130	6.3	1.5	11					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)
MERRIMACK RIVER BASIN--Continued									
01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH (LAT 43 45 33 LONG 071 41 10)									
JAN 1984					APR 1984				
23...	1415	426	0.0	--	25...	1045	4970	3.0	47
MAR					AUG				
26...	1010	1430	2.0	50	29...	1030	190	18.0	66
01077000 SQUAM RIVER AT ASHLAND, NH (LAT 43 42 19 LONG 071 37 49)									
DEC 1983					MAY 1984				
09...	0900	130	2.0	38	31...	1420	917	14.0	42
APR 1984					AUG				
18...	1220	594	--	45	22...	0930	63	22.0	50
01078000 SMITH RIVER NEAR BRISTOL, NH (LAT 43 34 04 LONG 071 44 54)									
JAN 1984					JUL 1984				
16...	1130	71	0.0	44	03...	1030	49	19.0	38
APR					AUG				
17...	1400	788	12.0	22	22...	1300	16	20.0	40
01081000 WINNIPESAUKEE RIVER AT TILTON, NH (LAT 43 26 31 LONG 071 35 20)									
OCT 1983					MAR 1984				
28...	0945	280	--	60	01...	1430	2130	--	68
DEC					MAY				
13...	1030	2460	3.0	66	23...	1245	1740	15.0	65
JAN 1984									
20...	1100	1180	0.0	65					
01083000 NUBANUSIT BROOK NEAR PETERBOROUGH, NH (LAT 42 53 10 LONG 071 58 24)									
OCT 1983					MAY 1984				
24...	1000	31	6.0	70	22...	1245	109	12.0	48
DEC					JUL				
05...	1000	37	0.0	68	23...	1525	31	20.0	53
JAN 1984					AUG				
16...	1000	63	0.0	86	27...	1500	36	22.0	66
APR									
09...	1215	493	7.0	40					
01085500 CONTOOCOOK R BL HOPKINTON DAM AT W HOPKINTON, NH (LAT 43 11 31 LONG 071 44 51)									
NOV 1983					APR 1984				
02...	1300	105	0.0	73	12...	1335	4170	5.0	47
DEC					17...	1015	2980	--	45
08...	1330	1560	0.5	48	MAY				
MAR 1984					24...	1300	914	--	31
05...	1200	1210	--	43					
01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH (LAT 43 15 33 LONG 072 01 35)									
OCT 1983					APR 1984				
26...	0900	1.3	7.0	44	11...	1030	27	1.0	24
DEC					MAY				
07...	0930	68	0.0	49	24...	1110	22	12.0	25
JAN 1984					JUL				
18...	1000	3.6	0.0	34	26...	1535	0.8	24.0	41
FEB					SEP				
28...	1100	24	0.0	13	07...	1645	0.3	23.0	46
01087000 BLACKWATER RIVER NEAR WEBSTER, NH (LAT 43 17 45 LONG 071 41 46)									
NOV 1983					APR 1984				
02...	0810	32	3.0	65	12...	1135	1840	4.0	30
DEC					MAY				
09...	1330	685	--	30	24...	0940	318	17.0	10
JAN 1984									
18...	1030	123	0.0	55					
01089000 SOUCOOK RIVER NEAR CONCORD, NH (LAT 43 14 22 LONG 071 27 44)									
OCT 1983									
26...	1400	23	5.0	72					
01090800 PISCATAQUOG RIVER BL EVERETT DAM, NR E WEARE, NH (LAT 43 05 29 LONG 071 39 36)									
OCT 1983					JAN 1984				
27...	1415	68	--	41	19...	1100	66	--	52
DEC					APR				
08...	0940	354	2.0	35	18...	1400	880	7.0	40
01091500 PISCATAQUOG RIVER NEAR GOFFSTOWN, NH (LAT 43 00 58 LONG 071 33 03)									
OCT 1983									
27...	1200	123	--	61					

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MERRIMACK RIVER BASIN--Continued									
01092000 MERRIMACK R NR GOFFS FALLS, BELOW MANCHESTER, NH (LAT 42 56 54 LONG 071 27 52)									
OCT 1983 27...	0800	1070	9.5	84	DEC 1983 09...	1500	13000	1.0	55
01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH (LAT 42 51 36 LONG 071 50 00)									
OCT 1983 24...	0800	9.4	6.0	35	APR 1984 09...	1105	27	0.0	--
DEC 05...	0800	6.5	0.0	41	MAY 22...	1050	6.6	11.0	23
JAN 1984 16...	0800	2.5	0.0	40	JUL 23...	1225	0.9	21.0	20
FEB 27...	0800	19	0.0	39	AUG 27...	1000	0.3	22.0	32
01094000 SOUHEGAN RIVER AT MERRIMACK, NH (LAT 42 51 27 LONG 071 30 24)									
OCT 1983 05...	1235	46	13.0	121	NOV 1983 02...	1530	47	--	120
CONNECTICUT RIVER BASIN									
01127880 BIG BROOK NEAR PITTSBURG, NH (LAT 45 08 06 LONG 071 12 23)									
OCT 1983 26...	1435	4.9	7.5	28	JUL 1984 10...	1515	15	18.0	32
JAN 1984 18...	1355	5.8	0.0	20	AUG 15...	0915	4.7	21.0	30
MAR 01...	1000	9.9	0.5	42					
01128500 CONNECTICUT R AT FIRST CONN LK NR PITTSBURG, NH (LAT 45 05 14 LONG 071 17 34)									
DEC 1983 07...	1215	268	2.0	30	APR 1984 11...	1430	2.0	6.0	40
MAR 1984 07...	1410	6.1	1.5	34	JUL 11...	1245	273	15.0	44
01129200 CONNECTICUT R BL INDIAN STREAM NR PITTSBURG, NH (LAT 45 02 25 LONG 071 26 37)									
FEB 1984 29...	1430	682	1.5	46	MAY 1984 23...	1300	118	16.0	44
APR 11...	1130	253	7.0	34	JUL 11...	0950	546	17.0	44
20...	1315	553	13.5	43					
01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH (LAT 44 44 56 LONG 071 37 50)									
OCT 1983 04...	1400	563	10.0	52					
01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH (LAT 44 37 30 LONG 071 28 10)									
DEC 1983 06...	1200	478	1.0	28	APR 1984 12...	1115	995	9.0	30
FEB 1984 29...	1145	366	0.5	26	JUL 10...	1215	543	14.0	39
01131500 CONNECTICUT RIVER NEAR DALTON, NH (LAT 44 24 36 LONG 071 43 16)									
OCT 1983 27...	1215	1270	9.0	48					
01134500 MOOSE RIVER AT VICTORY, VT (LAT 44 30 42 LONG 071 50 13)									
OCT 1983 19...	0945	39	8.5	30	FEB 1984 13...	1000	150	0.0	6
NOV 22...	1030	731	2.5	20	MAR 21...	1030	538	0.0	22
JAN 1984 05...	1115	92	0.0	28	MAY 07...	1045	162	8.0	15
01135000 MOOSE RIVER AT ST. JOHNSBURY, VT (LAT 44 25 22 LONG 072 00 02)									
OCT 1983 19...	1215	56	9.0	72	FEB 1984 23...	1245	172	0.0	56
NOV 22...	1330	950	3.0	38	MAY 07...	1415	240	12.0	46
JAN 1984 05...	1400	162	0.0	58					

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT (LAT 44 21 56 LONG 072 02 23)									
OCT 1983					MAR 1984				
19...	1345	216	10.5	172	21...	0900	2130	0.0	125
NOV					MAY				
23...	0930	1500	3.0	72	08...	1100	853	--	120
JAN 1984									
06...	0830	763	0.0	138					
01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH (LAT 44 16 08 LONG 071 37 52)									
DEC 1983					FEB 1984				
08...	1100	286	0.5	35	28...	1050	169	0.5	37
JAN 1984					APR				
23...	1015	73	0.0	35	18...	1000	961	5.0	22
01139000 WELLS RIVER AT WELLS RIVER, VT (LAT 44 09 03 LONG 072 03 55)									
NOV 1983					APR 1984				
02...	1015	50	3.0	65	25...	0915	480	5.5	65
DEC					JUN				
20...	1000	238	0.0	55	06...	1300	281	14.5	185
MAR 1984					AUG				
06...	0945	132	0.0	70	09...	1430	47	23.0	163
01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT (LAT 44 05 34 LONG 072 20 10)									
NOV 1983					APR 1984				
02...	1300	2.6	5.0	200	06...	0945	84	1.0	55
DEC					JUN				
14...	1015	151	3.0	60	06...	0945	47	20.0	142
FEB 1984					AUG				
06...	1315	8.4	0.0	43	01...	0915	4.5	16.5	175
MAR									
06...	1110	15	0.0	45					
01141500 OMPOMPANOOSUC RIVER AT UNION VILLAGE, VT (LAT 43 47 23 LONG 072 15 19)									
NOV 1983					APR 1984				
07...	1520	205	7.5	125	24...	1115	528	7.0	74
DEC					JUN				
19...	1330	1770	1.5	85	14...	1335	351	26.0	148
FEB 1984					AUG				
07...	1145	177	0.0	45	08...	1115	40	20.5	185
MAR									
09...	1415	119	0.0	80					
01141800 MINK BROOK NEAR ETNA, NH (LAT 43 42 08 LONG 072 11 15)									
JAN 1984					JUN 1984				
17...	0930	2.4	0.0	51	01...	1345	40	18.0	62
FEB					AUG				
27...	0930	17	0.5	50	21...	1000	0.5	20.0	67
APR									
10...	0920	21	1.0	57					
01142500 AYERS BROOK AT RANDOLPH, VT (LAT 43 56 04 LONG 072 39 30)									
NOV 1983					APR 1984				
01...	1300	9.7	5.5	200	06...	1200	363	3.0	108
DEC					24...	0830	160	6.0	47
15...	0900	388	3.5	115	JUN				
FEB 1984					11...	1400	63	19.0	180
08...	1415	22	0.0	40					
MAR									
09...	1215	55	--	70					
01144000 WHITE RIVER AT WEST HARTFORD, VT (LAT 43 42 51 LONG 072 25 07)									
NOV 1983					APR 1984				
04...	1100	302	7.0	185	25...	1330	4560	5.5	--
DEC					JUN				
19...	1115	3010	0.5	60	14...	0700	917	19.0	93
FEB 1984					SEP				
02...	1030	463	0.0	32	27...	1345	184	15.0	95
01144500 CONNECTICUT RIVER AT WEST LEBANON, NH (LAT 43 38 47 LONG 072 18 46)									
NOV 1983					APR 1984				
07...	1030	11000	7.0	93	25...	1100	15800	7.0	85
DEC					MAY				
20...	0820	13500	0.0	80	31...	1015	58700	--	95
FEB 1984					JUN				
07...	1005	6000	0.0	60	14...	1225	9300	19.5	90
MAR									
07...	1600	6310	0.0	95					

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CONNECTICUT RIVER BASIN--Continued									
01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT (LAT 43 36 09 LONG 072 21 17)									
NOV 1983					APR 1984				
07...	1230	30	8.0	145	20...	1200	3780	6.0	68
DEC					JUL				
19...	1615	1090	0.5	55	10...	1345	6.4	23.5	160
FEB 1984					17...	0915	5.1	21.0	166
07...	1345	247	0.0	40	AUG				
MAR					02...	1200	24	23.0	175
09...	0915	222	0.0	80					
01152500 SUGAR RIVER AT WEST CLAREMONT, NH (LAT 43 23 15 LONG 072 21 45)									
DEC 1983					MAY 1984				
08...	1150	1110	0.0	74	25...	1355	819	13.0	71
MAR 1984					JUL				
01...	1300	880	0.0	--	26...	1130	111	23.0	102
APR					SEP				
06...	1140	4500	9.0	69	07...	1130	51	14.0	141
11...	1340	1400	9.0	78					
01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT (LAT 43 20 00 LONG 072 30 55)									
OCT 1983					APR 1984				
27...	1300	49	7.0	132	18...	1230	2700	5.0	50
DEC					JUL				
08...	1200	1060	0.0	63	27...	1120	58	24.0	140
JAN 1984					SEP				
20...	1100	124	0.0	96	07...	1415	38	14.0	161
MAR									
05...	1100	247	0.0	59					
01153500 WILLIAMS RIVER AT BROCKWAYS MILLS, VT (LAT 43 12 31 LONG 072 31 05)									
OCT 1983					APR 1984				
27...	1350	31	7.0	131	17...	1235	1140	4.0	51
DEC					JUL				
08...	1505	357	0.0	80	27...	1420	31	23.0	140
JAN 1984					SEP				
20...	1445	74	0.0	68	10...	1430	19	14.0	147
MAR									
05...	1300	157	0.0	260					
01155500 WEST RIVER AT JAMAICA, VT (LAT 43 06 32 LONG 072 46 33)									
NOV 1983					MAR 1984				
02...	1300	64	7.0	68	06...	1600	216	0.0	54
DEC					JUL				
14...	1500	64	7.0	68	02...	1135	64	20.0	63
JAN 1984					AUG				
24...	1500	100	0.0	50	21...	1645	67	19.0	60
01156000 WEST RIVER AT NEWFANE, VT (LAT 42 59 43 LONG 072 38 13)									
NOV 1983					MAR 1984				
02...	1400	86	--	75	06...	1500	391	0.0	61
DEC					APR				
14...	1500	2710	0.0	75	17...	0935	3940	4.0	143
JAN 1984					AUG				
24...	1400	181	0.0	61	22...	0915	90	17.0	60
01158000 ASHUELOT RIVER BL SURRY MT DAM, NR KEENE, NH (LAT 42 59 40 LONG 072 18 40)									
OCT 1983					APR 1984				
25...	1000	19	7.0	49	12...	1120	970	2.0	30
DEC					MAY				
06...	1000	253	0.0	39	23...	1140	209	15.0	34
JAN 1984					JUL				
17...	1300	68	0.0	37	25...	1215	57	22.0	44
FEB					AUG				
29...	1200	804	0.0	39	28...	1400	10	23.0	47
01158600 OTTER BROOK BELOW OTTER BROOK DAM, NR KEENE, NH (LAT 42 56 45 LONG 072 14 14)									
OCT 1983					APR 1984				
25...	0900	3.5	6.0	48	10...	1450	540	2.0	30
DEC					MAY				
06...	0900	71	0.0	39	23...	1435	81	15.0	36
JAN 1984					AUG				
16...	0900	33	0.0	39	28...	1505	5.0	19.0	40
MAR									
07...	0900	79	0.0	39					

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)
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CONNECTICUT RIVER BASIN--Continued

01161000 ASHUELOT RIVER AT HINSDALE, NH (LAT 42 47 07 LONG 072 29 12)

OCT 1983					JUN 1984				
25...	1400	171	7.0	173	01...	1345	9250	10.5	35
DEC					04...	1250	2690	16.0	64
06...	1400	841	0.0	150	JUL				
JAN 1984					25...	1440	276	23.0	110
19...	1400	482	0.0	164	SEP				
FEB					06...	1350	81	18.0	--
29...	1400	2280	0.0	144					
APR									
12...	1535	2970	2.0	151					

HUDSON RIVER BASIN

01329000 BATTEN KILL AT ARLINGTON, VT (LAT 43 04 38 LONG 073 09 26)

NOV 1983					MAR 1984				
01...	1300	93	7.0	230	06...	1400	317	0.0	200
DEC					JUL				
13...	1030	1790	0.0	250	02...	1605	149	17.0	254
JAN 1984					AUG				
23...	1400	144	0.0	250	21...	1545	114	18.0	250

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT (LAT 42 54 47 LONG 073 15 25)

NOV 1983					APR 1984				
01...	1100	56	6.0	250	16...	1230	757	3.0	250
DEC					JUL				
13...	1100	1530	0.0	244	02...	1330	114	17.0	220
JAN 1984					AUG				
23...	1100	95	0.0	250	21...	1130	96	22.0	215
MAR									
06...	1100	239	0.0	260					

ST. LAWRENCE RIVER BASIN

04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT (LAT 43 37 40 LONG 073 18 50)

NOV 1983					MAR 1984				
03...	1430	16	7.0	250	07...	1040	138	0.0	75
DEC					JUN				
28...	1145	243	0.0	130	25...	1015	90	20.5	--
FEB 1984					AUG				
01...	1530	181	0.0	40	07...	1345	20	23.0	200

04282000 OTTER CREEK AT CENTER RUTLAND, VT (LAT 43 36 13 LONG 073 00 49)

NOV 1983					APR 1984				
04...	0730	180	7.0	200	18...	1500	2270	7.0	75
DEC					JUL				
28...	1345	414	0.0	148	02...	1030	131	23.0	200
FEB 1984					AUG				
01...	1300	347	0.0	80	07...	1530	295	23.0	190
MAR									
07...	1215	522	0.0	85					

04282500 OTTER CREEK AT MIDDLEBURY, VT (LAT 44 00 47 LONG 073 10 06)

NOV 1983					APR 1984				
03...	1030	306	7.0	135	17...	1200	2520	6.5	80
DEC					JUN				
21...	1230	3640	0.0	52	12...	1100	2630	24.0	175
FEB 1984					JUL				
01...	0915	647	0.0	25	25...	1500	406	22.0	175
MAR									
07...	0850	927	0.0	100					

04284000 JAIL BRANCH AT EAST BARRE, VT (LAT 44 09 30 LONG 072 26 44)

NOV 1983					APR 1984				
01...	0930	11	1.5	125	25...	0750	338	4.0	60
DEC					JUN				
14...	1315	508	1.5	70	11...	1030	68	17.5	88
JAN 1984					AUG				
31...	1215	11	0.0	45	01...	1130	14	20.0	170
MAR									
06...	1330	44	0.0	55					

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ST. LAWRENCE RIVER BASIN--Continued									
04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT (LAT 44 17 58 LONG 072 34 45)									
OCT 1983					APR 1984				
13...	1145	88	13.0	45	30...	1100	288	11.0	20
NOV					JUN				
14...	1100	161	3.0	30	18...	1315	89	17.0	32
DEC					JUL				
29...	1100	94	0.0	32	26...	1030	38	21.0	45
FEB 1984					AUG				
14...	1315	84	0.0	52	24...	1045	17	21.0	63
MAR									
20...	1030	112	0.0	22					
04286000 WINOOSKI RIVER AT MONTPELIER, VT (LAT 44 15 23 LONG 072 35 36)									
OCT 1983					APR 1984				
31...	1215	193	6.0	183	27...	0815	1410	7.0	45
DEC					JUN				
15...	1200	4170	2.0	90	05...	1430	1610	19.0	120
JAN 1984					AUG				
27...	1130	392	0.0	--	06...	1315	165	23.5	200
MAR									
05...	1330	394	0.0	80					
04287000 DOG RIVER AT NORTHFIELD FALLS, VT (LAT 44 10 58 LONG 072 38 27)									
OCT 1983					APR 1984				
25...	1345	35	7.0	--	26...	0730	350	5.0	63
NOV					MAY				
28...	0930	215	2.5	70	29...	1045	580	10.5	78
DEC					JUN				
27...	0750	179	0.0	30	28...	0835	46	22.5	62
JAN 1984					JUL				
06...	1130	86	0.0	118	27...	0945	48	15.5	135
26...	1400	59	0.0	65	AUG				
FEB					29...	0945	18	20.0	90
27...	1000	185	0.0	22					
MAR									
26...	0845	127	0.0	78					
04288000 MAD RIVER NEAR MORETOWN, VT (LAT 44 16 42 LONG 072 44 37)									
OCT 1983					APR 1984				
31...	0930	110	3.0	35	18...	0945	1280	4.0	35
DEC					JUN				
22...	0900	290	0.0	70	12...	1430	124	22.5	84
JAN 1984					AUG				
26...	1100	137	0.0	--	06...	1000	40	23.0	92
MAR									
05...	1130	206	0.0	58					
04289000 LITTLE RIVER NEAR WATERBURY, VT (LAT 44 22 12 LONG 072 46 11)									
OCT 1983					MAR 1984				
13...	1500	9.6	17.0	73	20...	1430	20	2.0	64
NOV					APR				
14...	1400	489	5.0	42	30...	1345	560	7.0	34
DEC					AUG				
06...	0915	448	2.0	44	28...	1100	6.2	22.0	80
29...	1330	485	0.0	35					
FEB 1984									
14...	0930	484	0.0	70					
04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT (LAT 44 28 44 LONG 073 08 21)									
OCT 1983					MAR 1984				
14...	1200	1060	17.0	110	23...	1100	4770	0.0	98
NOV					MAY				
15...	1115	2060	4.0	96	01...	1015	4460	11.0	76
DEC					JUN				
30...	1100	3580	0.0	135	19...	1130	1740	18.0	135
FEB 1984					AUG				
08...	1230	3090	0.0	78	23...	0915	123	21.5	225
04292000 LAMOILLE RIVER AT JOHNSON, VT (LAT 44 37 22 LONG 072 40 50)									
OCT 1983					FEB 1984				
17...	0930	351	9.5	105	10...	1245	388	0.0	72
NOV					MAR				
17...	1000	812	2.5	106	27...	0900	535	0.0	54
DEC					MAY				
30...	1400	846	0.0	82	08...	1500	470	12.5	97
JAN 1984					JUN				
03...	1000	415	0.0	100	20...	1000	347	18.0	186

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPECIFIC CON- DUCT- ANCE (UMHOS)
ST. LAWRENCE RIVER BASIN--Continued									
04292500 LAMOILLE RIVER AT EAST GEORGIA, VT (LAT 44 40 45 LONG 073 04 23)									
OCT 1983					MAY 1984				
14...	1530	1780	15.5	138	01...	1330	2450	12.0	80
NOV					JUN				
15...	1300	1510	3.0	75	19...	1400	707	22.0	126
FEB 1984					AUG				
08...	1400	1400	0.0	10	23...	1445	265	21.5	134
MAR									
23...	1400	4310	0.0	68					
04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT (LAT 44 58 22 LONG 072 23 15)									
OCT 1983					MAY 1984				
17...	1500	127	9.5	72	02...	1315	321	7.5	48
NOV					JUN				
18...	1430	384	2.0	65	20...	1445	97	19.5	78
JAN 1984					AUG				
03...	1600	148	0.0	66	14...	1200	45	23.5	162
MAR									
27...	1415	206	0.0	68					
04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT (LAT 44 57 30 LONG 072 41 55)									
OCT 1983					MAY 1984				
17...	1300	538	9.5	82	02...	1030	1270	8.5	55
NOV					JUN				
17...	1400	2890	3.0	70	20...	1245	348	19.5	184
JAN 1984					AUG				
03...	1345	547	0.0	73	13...	1500	197	26.0	68
MAR									
27...	1200	1120	0.0	74					
04296500 CLYDE RIVER AT NEWPORT, VT (LAT 44 56 22 LONG 072 11 23)									
OCT 1983					MAY 1984				
18...	1430	8.0	12.5	154	03...	1100	79	8.5	84
NOV					JUN				
18...	0930	13	2.5	118	21...	1100	9.8	20.0	170
JAN 1984					AUG				
04...	1100	11	0.0	66	18...	1100	12	21.5	162
MAR									
28...	0900	30	0.0	56					

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GROUND WATER LEVELS IN NEW HAMPSHIRE

CHESHIRE COUNTY

425543072175801. Local number, KEW 2.

LOCATION.--Lat 42°55'43", long 72°17'58", Hydrologic Unit 01080201, east side of State Highway 12, about 0.5 mi north of State Highway 9, and 1.1 mi southwest of the center of Keene.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 18 ft.

DATUM.--Altitude of land-surface datum is 475 ft. Measuring point: Top of casing, 4.5 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to January 1973, published in New Hampshire Hydrologic-Data Report No. 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft below land-surface datum, May 31, 1984; lowest measured, 6.23 ft below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	4.85	JAN 23, 1984	3.68	APR 24, 1984	1.74	JUL 23, 1984	3.57
NOV 22	2.98	FEB 22	1.17	MAY 23	3.15	AUG 24	4.64
DEC 21	2.57	MAR 21	1.39	MAY 31	0.17	SEP 21	4.98
				JUN 22	3.79		

COOS COUNTY

444733071094901. Local number, ETW 1.

LOCATION.--Lat 44°47'33", long 71°09'49", Hydrologic Unit 01040001, southwest side of State Highway 26, 1.8 mi northwest of the center of Errol.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand and silt of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 30 ft.

DATUM.--Altitude of land-surface datum is 1,245 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.4 ft below land-surface datum, May 22, 1969; lowest measured, 14.1 ft below land-surface datum, Feb. 22, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	13.0	JAN 26, 1984	12.9	APR 23, 1984	11.0	JUL 23, 1984	11.8
NOV 29	12.7	FEB 21	10.8	MAY 26	11.5	AUG 25	12.2
DEC 24	12.6	MAR 22	13.0	JUN 22	11.3	SEP 22	12.8

442830071321001. Local number, LCW 1.

LOCATION.--Lat 44°28'30", long 71°32'10", Hydrologic Unit 01080101, in gravel pit about 1,100 ft southwest of Middle Street, 2.2 mi southeast of U.S. Highway 3, and 2.0 mi southeast of the center of Lancaster.

Owner: Town of Lancaster.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2.5 in, depth 30 ft.

DATUM.--Altitude of land-surface datum is 940 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to May 1980, April 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing at 1.0 ft above land-surface datum, April 1970, Apr. 28, 1972, Dec. 21, 1982; lowest measured, 6.93 ft below land-surface datum, July 24, 1970.

WATER LEVEL, IN FEET ABOVE OR BELOW (-) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	-2.29	FEB 24, 1984	-0.41	MAY 28, 1984	-1.22	AUG 21, 1984	-2.50
NOV 22	-0.84	MAR 26	-0.75	JUN 26	-1.44	SEP 21	-2.38
DEC 24	-0.98	APR 24	-0.74	JUL 24	-2.11		

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 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, depth 16.9 ft.

DATUM.--Altitude of land-surface datum is about 195 ft. Measuring point: Bottom rim of hand pump, 0.80 ft 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 below land-surface datum, Mar. 30, 1962; lowest measured, 12.57 ft below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	11.91	FEB 22, 1984	5.48	JUN 05, 1984	4.83	SEP 26, 1984	11.76
NOV 22	7.80	MAR 26	4.88	26	7.18		
DEC 21	5.90	APR 24	5.26	JUL 26	8.50		
JAN 23, 1984	7.75	MAY 24	6.52	AUG 27	10.63		

425024071413001. Local number, MOW 36.

LOCATION.--Lat 42°50'24", long 71°41'30", Hydrologic Unit 01070002, 85 ft from north side of Old Wilton Road, about 550 ft west of the intersection of State Highway 101, and 2.2 mi west of the center of Milford.

Owner: Leonard Cushing.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug, unused water-table well, diameter 36 in, depth 14.6 ft, lined with concrete.

DATUM.--Altitude of land-surface datum is about 265 ft. Measuring point: Top of concrete casing on south side of well, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.68 ft below land-surface datum, Mar. 29, 1963; lowest measured, 12.30 ft below land-surface datum, Nov. 18, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	9.21	FEB 25, 1984	6.46	JUN 06, 1984	6.36	SEP 24, 1984	9.48
NOV 23	7.56	MAR 23	6.49	23	7.67		
DEC 24	7.13	APR 25	6.96	JUL 24	7.73		
JAN 24, 1984	7.72	MAY 24	7.54	AUG 24	8.72		

424752071315202. Local number, NAW 143. (42475207131201) Formerly published as this number.

LOCATION.--Lat 42°47'52", long 71°31'52", Hydrologic Unit 01070002, north side of State Highway 101-A, about 3.0 mi west of U.S. Highway 3 opposite Round Pond, and 3.9 mi west-northwest of the center of Nashua.

Owner: Roland Cadorette.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 1.25 in, depth 13.0 ft.

DATUM.--Altitude of land-surface datum is 200 ft. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--December 1958 to August 1959; January 1962 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, 5.98 ft below land-surface datum, May 24, June 5, 1984; lowest measured, 11.65 ft below land-surface datum, June 25, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	8.88	FEB 22, 1984	7.27	JUN 05, 1984	5.89	SEP 26, 1984	9.08
NOV 22	8.29	MAR 26	6.75	26	6.42		
DEC '21	7.26	APR 24	6.33	JUL 26	6.94		
JAN 23, 1984	7.79	MAY 24	6.79	AUG 27	7.71		

GROUND-WATER LEVELS IN NEW HAMPSHIRE

HILLSBOROUGH COUNTY--Continued

424800071295301. Local number, NAM 218.

LOCATION.--Lat 42°48'00", long 71°29'53", Hydrologic Unit 01070002, 57 ft east of edge of pavement of northbound lane of Everett Turnpike, about 0.63 mi north of Tinker Road overpass, and 2.8 mi northwest of the center of Nashua.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 42.5 ft.

DATUM.--Altitude of land-surface datum is 205 ft. Measuring point: Top of casing, 3.1 ft above land-surface datum.

PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.10 ft below land-surface datum, June 5, 1984; lowest measured, 33.10 ft below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	29.93	FEB 22, 1984	28.03	JUN 05, 1984	26.10	SEP 26, 1984	29.74
NOV 22	29.15	MAR 26	27.40	26	26.30		
DEC 21	27.49	APR 24	26.31	JUL 26	27.04		
JAN 23, 1984	28.20	MAY 24	26.68	AUG 27	28.41		

MERRIMACK COUNTY

431224071303601. Local number, CVW 2.

LOCATION.--Lat 43°12'24", long 71°30'36", Hydrologic Unit 01070002, about 100 ft north of the Federal Aeronautics Administration Building at Concord Municipal Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 60 ft.

DATUM.--Altitude of land-surface datum is 340 ft. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.85 ft below land-surface datum, Aug. 27, 1973; lowest measured, 44.62 ft below land-surface datum, Aug. 1, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	39.64	FEB 22, 1984	39.67	JUN 06, 1984	38.84	SEP 26, 1984	37.67
NOV 22	39.89	MAR 26	39.14	26	38.01		
DEC 21	39.95	APR 25	39.00	JUL 26	37.48		
JAN 23, 1984	39.51	MAY 24	38.91	AUG 27	37.38		

431248071290201. Local number, CVW 3.

LOCATION.--Lat 43°12'48", long 71°29'02", Hydrologic Unit 01070002, at northwest corner of intersection of State Highway 106 and Pembroke Road, and 2.8 mi east of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Very fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 72.7 ft.

DATUM.--Altitude of land-surface datum is 350 ft. Measuring point: Top of casing, 2.30 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.10 ft below land-surface datum, Aug. 27, 1984; lowest measured, 59.96 ft below land-surface datum, Jan. 30, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	56.60	FEB 22, 1984	56.75	JUN 06, 1984	56.00	SEP 26, 1984	55.27
NOV 22	56.84	MAR 26	56.36	26	55.54		
DEC 21	56.96	APR 25	56.47	JUL 26	55.33		
JAN 23, 1984	56.67	MAY 24	56.12	AUG 27	55.10		

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 west of South Street, and 1.8 mi southwest of the State House in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Lacustrine silty fine sands and clays of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 1.25 in, depth 40.71 ft.

DATUM.--Altitude of land-surface datum is 285 ft. Measuring point: Top of casing, 3.8 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.94 ft below land-surface datum, June 5, 1984; lowest measured, 19.80 ft below land-surface datum, Dec. 26, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	18.95	JAN 23, 1984	16.99	MAY 24, 1984	14.85	JUN 26, 1984	14.88
NOV 22	18.50	FEB 22	16.28	31	14.30	JUL 26	15.63
29	18.02	MAR 26	15.69	JUN 05,	12.94	AUG 27	16.74
DEC 21	16.85	APR 24	14.27	06	13.03	SEP 26	17.88

432428071390701. Local number, FKW 1.

LOCATION.--Lat 43°24'28", long 71°39'07", Hydrologic Unit 01070002, about 1,500 ft northeast of U.S. Highway 3, north of Holy Cross Convent, and 2.6 mi south of Franklin.

Owner: Holy Cross Convent.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Unused water-table well, diameter 2.5 in, depth 52.3 ft.

DATUM.--Altitude of land-surface datum is 290 ft. Measuring point: Top of casing, 1.80 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.18 ft below land-surface datum, June 5, 1984; lowest measured, 15.75 ft below land-surface datum, Oct. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	13.66	FEB 24, 1984	11.35	JUN 05, 1984	6.18	SEP 26, 1984	10.57
NOV 22	13.99	MAR 26	10.00	26	6.84		
DEC 21	12.40	APR 25	8.40	JUL 26	7.98		
JAN 23, 1984	12.29	MAY 24	8.35	AUG 27	9.27		

430235071275501. Local number, HTW 5.

LOCATION.--Lat 43°02'35", long 71°27'55", Hydrologic Unit 01070002, within southeastern cloverleaf of intersection of U.S. Highway 3A and Interstate Highway 93, 3.7 mi south of the center of Hooksett.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Crystalline rock of Devonian age.

WELL CHARACTERISTICS.--Drilled, unused bedrock well, diameter 6 in, depth 102.73 ft.

DATUM.--Land-surface datum is 258.93 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.69 ft below land-surface datum, Apr. 28, 1967; lowest measured, 51.96 ft below land-surface datum, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	50.59	FEB 22, 1984	46.60	JUN 05, 1984	45.56	SEP 26, 1984	49.11
NOV 22	50.18	MAR 26	46.26	26	45.06		
DEC 21	46.28	APR 24	45.63	JUL 26	46.76		
JAN 23, 1984	46.76	MAY 24	46.11	AUG 27	48.00		

GROUND-WATER LEVELS IN NEW HAMPSHIRE

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 east of intersection of State Highway 114 and Golf Course Road, and 2.1 mi southeast of New London.

Owner: W. S. Mariner.

AQUIFER.--Sandy till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in, depth 21 ft, lined with stone to 21 ft, open end.

DATUM.--Altitude of land-surface datum is 1,020 ft. Measuring point: Top of 2-in casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1947 to current year. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft below land-surface datum, Apr. 2, 1963; lowest measured, 16.90 ft below land-surface datum, Dec. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	15.42	FEB 24, 1984	3.67	JUN 04, 1984	2.85	SEP 26, 1984	12.94
NOV 22	14.08	MAR 26	3.93	26	7.70		
DEC 21	3.71	APR 25	3.77	JUL 26	9.22		
JAN 23, 1984	7.57	MAY 24	5.25	AUG 27	11.36		

431540071452801. Local number, WCW 1.

LOCATION.--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 44 ft northeast of edge of pavement of north-bound lane of Interstate Highway 89, about 2 mi southeast of State Highway 103 overpass in Warner.

Owner: New Hampshire Department of Public Works and Highways.

AQUIFER.--Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused water-table well, diameter 2 in, depth 42.8 ft.

DATUM.--Altitude of land-surface datum is 424 ft. Measuring point: Top of casing, 3.2 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.94 ft below land-surface datum, May 5, 1969; lowest measured, 33.82 ft below land-surface datum, Dec. 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	32.36	FEB 24, 1984	29.79	JUN 04, 1984	26.54	SEP 26, 1984	30.66
NOV 22	32.22	MAR 26	28.83	26	26.28		
DEC 21	30.72	APR 25	27.03	JUL 26	27.80		
JAN 23, 1984	29.78	MAY 24	27.29	AUG 27	29.39		

STRAFFORD COUNTY

430721071005001. Local number, LIW 1.

LOCATION.--Lat 43°07'21", long 71°00'50", Hydrologic Unit 01060003, southwest side of Bennett Road about 200 ft from the west corner of the Lee Town Green.

Owner: Mildred Carlson.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 40 in, depth 32.8 ft, lined with stone to 32.8 ft.

DATUM.--Altitude of land-surface datum is 190 ft. Measuring point: Top edge of board across well opening, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1953 to current year. Prior to January 1958, published in New Hampshire Basic-Data Report No. 1, Ground-Water Series. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; Geological Survey Water-Supply Paper Series. January 1956 to December 1972, published in Ground-Water Levels in the United States, Northeastern States; Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.66 ft below land-surface datum, Mar. 22, 1983; lowest measured, 32.35 ft below land-surface datum, Nov. 1, 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	31.79	JAN 23, 1984	31.03	APR 24, 1984	29.64	JUL 26, 1984	30.77
NOV 22	30.62	FEB 22	30.00	MAY 24	30.36	AUG 27	31.02
DEC 21	30.26	MAR 26	29.40	JUN 26	30.51	SEP 26	31.40

BENNINGTON COUNTY

424810073160401. Local number, POW 1.

LOCATION.--Lat 42°48'10", long 73°16'04", Hydrologic Unit 02020003, in front of residence on west side of State Highway 346 and 0.15 mi south of post office at North Pownal.

Owner: Robert Rudd, Sr.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 18 ft, cased with stone to 18 ft, open end.

DATUM.--Altitude of land-surface datum is 515 ft. Measuring point: Top of 0.75-in diameter hole drilled in center of 0.38-in thick steel cover at land-surface datum.

PERIOD OF RECORD.--October 1964 to current year. Prior to October 1977, published as Pownal 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.98 ft below land-surface datum, June 1, 1984; lowest measured, 16.59 ft below land-surface datum, Oct. 19, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	15.44	FEB 20, 1984	12.48	JUN 01, 1984	9.98	SEP 23, 1984	13.91
NOV 25	13.45	MAR 20	12.85	22	13.07		
DEC 24	12.90	APR 21	12.59	JUL 23	13.21		
JAN 24, 1984	13.47	MAY 25	12.70	AUG 21	13.66		

CHITTENDEN COUNTY

443646073124901. Local number, MJW 3.

LOCATION.--Lat 44°36'46", long 73°12'49", Hydrologic Unit 02010005, about 600 ft south of manager's residence at Vermont Sandbar Waterfowl Development Area, about 400 ft west of former U.S. Highway 2, and 0.9 mi northwest of Lamaille River bridge at Milton.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 40 ft, screened 38 to 40 ft. DATUM.--Altitude of land-surface datum is 160 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1956 to current year. Prior to October 1977, published as Milton 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft below land-surface datum, May 29, 1974; lowest measured, 37.82 ft below land-surface datum, Feb. 26, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	29.35	FEB 23, 1984	26.47	JUN 08, 1984	23.37	SEP 24, 1984	28.30
NOV 22	30.83	MAR 26	26.92	21	23.49		
DEC 19	26.79	APR 20	25.64	JUL 26	25.05		
JAN 20, 1984	25.77	MAY 23	24.27	AUG 22	26.44		

ESSEX COUNTY

444731071514701. Local number, BIW 1.

LOCATION.--Lat 44°47'31", long 71°51'47", Hydrologic Unit 01110000, south of road and just west of parking lot for Brighton State Park Beach at Brighton.

Owner: U.S. Geological Survey.

AQUIFER.--Medium and coarse sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 35 ft, screened 33 to 35 ft. DATUM.--Altitude of land-surface datum is 1,180 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Brighton 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft below land-surface datum, Apr. 25, 1974; lowest measured, 4.95 ft below land-surface datum, Aug. 21, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	4.38	FEB 22, 1984	3.92	JUN 08, 1984	2.87	SEP 28, 1984	4.65
NOV 20	3.76	MAR 22	3.79	21	3.76		
DEC 20	2.75	APR 23	2.88	JUL 25	4.00		
JAN 21, 1984	4.10	MAY 22	3.65	AUG 21	4.95		

GROUND-WATER LEVELS IN VERMONT

FRANKLIN COUNTY

445603072422901. Local number, BKW 1.

LOCATION.--Lat 44°56'03", long 72°42'29", Hydrologic Unit 02010007, at southeast end of State Highway 118 bridge on Missisquoi River at East Berkshire.

Owner: U.S. Geological Survey.

AQUIFER.--Fine sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 51 ft, screened 49 to 51 ft.

DATUM.--Altitude of land-surface datum is 425 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Berkshire 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.78 ft below land-surface datum, Apr. 25, 1978; lowest measured, 16.43 ft below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	14.83	FEB 23, 1984	11.93	JUN 08, 1984	12.72	SEP 25, 1984	15.52
NOV 22	11.98	MAR 26	12.66	21	14.39		
DEC 19	11.19	APR 20	11.74	JUL 26	14.62		
JAN 20, 1984	13.62	MAY 23	13.78	AUG 22	15.07		

LAMOILLE COUNTY

443405072323501. Local number, MPW 1.

LOCATION.--Lat 44°34'05", long 72°32'35", Hydrologic Unit 02010005, Vermont Highway Department right-of-way off State Highway 15 and 3 mi east of Morrisville.

Owner: U.S. Geological Survey.

AQUIFER.--Silty, fine to medium sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 48 to 50 ft.

DATUM.--Altitude of land-surface datum is 660 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Morristown 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.87 ft below land-surface datum, Jan. 27, 1978; lowest measured, 20.40 ft below land-surface datum, Nov. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	19.89	FEB 23, 1984	17.70	JUN 01, 1984	16.52	AUG 22, 1984	19.60
NOV 22	18.47	MAR 26	17.58	08	16.63	SEP 11	19.90
DEC 19	17.53	APR 20	16.65	21	17.93	25	20.13
JAN 30, 1984	17.87	MAY 23	17.79	JUL 26	18.90		

ORANGE COUNTY

435343072151801. Local number, WOW 1.

LOCATION.--Lat 43°53'43", long 72°15'18", Hydrologic Unit 01080103, 60 ft west of salt shed and 1.3 mi south-southeast of West Fairlee Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 54 ft, screened 52 to 54 ft.

DATUM.--Altitude of land-surface datum is 700 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as West Fairlee 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft below land-surface datum, Jan. 26, 1978; lowest measured, 5.48 ft below land-surface datum, Sept. 8, 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	5.04	JAN 26, 1984	3.27	MAY 25, 1984	2.44	AUG 21, 1984	4.03
NOV 21	3.74	FEB 22	2.59	JUN 01	0.77	SEP 21	4.62
DEC 14	1.70	MAR 27	1.30	25	2.27		
23	1.77	APR 23	1.84	JUL 25	2.96		

ORLEANS COUNTY

443952072114001. Local number, GLW 1.

LOCATION.--Lat 44°39'52", long 72°11'40", Hydrologic Unit 01110000, at Vermont Highway Department salt shed west of State Highway 16 and 3 mi south of Glover Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 82 ft, screened 80 to 82 ft.

DATUM.--Altitude of land-surface datum is 1,200 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Glover 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.11 ft below land-surface datum, May 23, 1969; lowest measured, 18.95 ft below land-surface datum, Mar. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	16.18	FEB 23, 1984	15.87	JUN 07, 1984	13.18	SEP 24, 1984	16.47
NOV 22	15.67	MAR 26	15.82	21	14.58		
DEC 19	14.44	APR 20	13.24	JUL 26	15.23		
JAN 20, 1984	16.43	MAY 23	14.67	AUG 22	15.90		

RUTLAND COUNTY

434217073010601. Local number, PFW 8.

LOCATION.--Lat 43°42'17", long 73°01'06", Hydrologic Unit 02010002, 12 ft west of storage building at St. Alphonsus Cemetery at Pittsford.

Owner: U.S. Geological Survey.

AQUIFER.--Medium to fine sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 42 ft, screened 40 to 42 ft.

DATUM.--Altitude of land-surface datum is 490 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Well pulled Nov. 8, 1968, point replaced, depth changed from 43 ft to 42 ft, old 3-ft point was completely encrusted.

PERIOD OF RECORD.--October 1957 to current year. Prior to October 1977, published as Pittsford 8.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.17 ft below land-surface datum, May 26, 1976; lowest measured, 39.59 ft below land-surface datum, Oct. 18, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	35.47	JAN 26, 1984	34.83	MAY 25, 1984	35.02	SEP 21, 1984	35.12
NOV 21	35.48	FEB 22	34.68	JUN 25	34.49		
DEC 14	35.03	MAR 27	34.87	JUL 25	34.45		
23	34.90	APR 23	34.95	AUG 21	34.86		

WASHINGTON COUNTY

441829072413901. Local number, MHW 3.

LOCATION.--Lat 44°18'29", long 72°41'39", Hydrologic Unit 02010003, adjacent to salt shed at Vermont Highway Department garage off U.S. Highway 2 and 1.25 mi west of Middlesex Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 48 to 50 ft.

DATUM.--Land-surface datum is 453.72 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Middlesex 3.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.99 ft below land-surface datum, Feb. 24, 1976; lowest measured, 23.80 ft below land-surface datum, Sept. 11, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	23.27	FEB 23, 1984	20.47	JUN 01, 1984	16.73	AUG 22, 1984	23.72
NOV 22	19.92	MAR 26	21.29	08	17.73	SEP 11	23.80
DEC 19	19.30	APR 20	18.65	21	22.14	24	23.63
JAN 20, 1984	21.19	MAY 23	21.16	JUL 26	22.65		

GROUND-WATER LEVELS IN VERMONT

WASHINGTON COUNTY--Continued

441552072341901. Local number, MMW 2.

LOCATION.--Lat 44°15'52", long 72°34'19", Hydrologic Unit 02010003, at southeast corner of garage at Nine Winter Street in Montpelier.

Owner: U.S. Geological Survey.

AQUIFER.--Medium to coarse sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 26 ft, screened 24 to 26 ft.

DATUM.--Altitude of land-surface datum is 520 ft. Measuring point: Top of casing, 0.10 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to October 1977, published as Montpelier 2.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.09 ft below land-surface datum, Apr. 24, 1969; lowest measured, 17.00 ft below land-surface datum, Sept. 24, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	16.68	FEB 23, 1984	14.86	JUN 01, 1984	13.16	AUG 22, 1984	16.34
NOV 22	15.32	MAR 27	15.23	08	11.97	SEP 10	16.84
DEC 22	12.61	APR 20	13.29	21	13.20	11	16.85
JAN 20, 1984	15.08	MAY 23	14.17	JUL 26	14.81	24	17.00

441215072483101. Local number, WAW 2.

LOCATION.--Lat 44°12'15", long 72°48'31", Hydrologic Unit 02010003, at rest area on east side of State Highway 100 and 1.3 mi northeast of Waitsfield Village.

Owner: U.S. Geological Survey.

AQUIFER.--Silty gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in, depth 45.5 ft, screened 43.5 to 45.5 ft.

DATUM.--Altitude of land-surface datum is 685 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.25 ft below land-surface datum, Dec. 14, 1983; lowest measured, 7.62 ft below land-surface datum, July 26, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	6.95	JAN 26, 1984	6.20	MAY 25, 1984	5.73	AUG 21, 1984	7.21
NOV 21	5.44	FEB 22	5.76	JUN 01	4.41	SEP 21	7.24
DEC 14	4.25	MAR 27	6.27	25	6.38		
23	5.78	APR 23	5.45	JUL 25	6.67		

441033072500201. Local number, WAW 3.

LOCATION.--Lat 44°10'33", long 72°50'02", Hydrologic Unit 02010003, town of Waitsfield, northwest of Vermont Highway Department salt shed on State Highway 100 and 0.5 mi southeast of Irasville Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drive and wash observation water-level well, diameter 1.25 in, depth 53 ft, screened 51 to 53 ft.

DATUM.--Altitude of land-surface datum is 715 ft. Measuring point: Top of casing, 3.25 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Feb. 24, 1976; lowest measured, 8.00 ft below land-surface datum, Sept. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	6.89	JAN 26, 1984	6.23	MAY 25, 1984	6.54	AUG 21, 1984	7.61
NOV 21	5.47	FEB 22	5.51	JUN 01	4.10	SEP 21	7.65
DEC 14	4.18	MAR 27	6.02	25	6.54		
23	5.25	APR 23	5.21	JUL 25	6.93		

WINDSOR COUNTY

431551072350601. Local number, CKW 1.

LOCATION.--Lat 43°15'51", long 72°35'06", Hydrologic Unit 01080107, at Vermont Highway Department salt shed on Elm Street in Chester.

Owner: U.S. Geological Survey.

AQUIFER.--Boulders, coarse gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Altitude of land-surface datum is 580 ft. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Chester 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft below land-surface datum, June 1, 1984; lowest measured, 6.31 ft below land-surface datum, Sept. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	5.83	FEB 23, 1984	3.30	JUN 01, 1984	1.57	SEP 24, 1984	5.65
NOV 21	4.74	MAR 22	3.84	25	5.31		
DEC 20	3.40	APR 24	2.98	JUL 20	5.21		
JAN 20, 1984	5.15	MAY 22	3.97	AUG 21	5.45		

433240072242901. Local number, HLW 54.

LOCATION.--Lat 43°32'40", long 72°24'29", Hydrologic Unit 01080104, at northeast corner of fire station in Hartland.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-level well, diameter 1.25 in, depth 51 ft, screened 49 to 51 ft.

DATUM.--Altitude of land-surface datum is 575 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft below land-surface datum, June 1, 1984; lowest measured, 9.94 ft below land-surface datum, Oct. 22, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	9.63	JAN 26, 1984	8.59	MAY 25, 1984	7.63	JUL 25, 1984	8.35
NOV 21	9.29	FEB 22	8.17	JUN 01	5.96	AUG 21	8.98
DEC 14	7.45	MAR 27	7.96	12	7.03	SEP 21	9.36
23	7.47	APR 23	7.01	25	7.35		

435129072483301. Local number, RJW 1.

LOCATION.--Lat 43°51'29", long 72°48'33", Hydrologic Unit 01080105, adjacent to salt shed at Vermont Highway Department garage 1.3 mi south of Rochester Village.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 73 ft, screened 71 to 73 ft.

DATUM.--Altitude of land-surface datum is 800 ft. Measuring point: Top of casing, 4.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to current year. Prior to 1977, published as Rochester 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft below land-surface datum, Mar. 26, 1968; lowest measured, 13.05 ft below land-surface datum, Aug. 25, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	12.36	JAN 26, 1984	10.41	MAY 25, 1984	8.08	AUG 21, 1984	12.20
NOV 21	10.12	FEB 22	8.08	JUN 01	4.61	SEP 21	12.32
DEC 14	5.40	MAR 27	9.44	25	10.41		
23	6.50	APR 23	5.41	JUL 25	10.81		

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- NOTES -

- N O T E S -

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
<i>Length</i>		
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)
<i>Area</i>		
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)
<i>Volume</i>		
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)
<i>Flow</i>		
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)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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