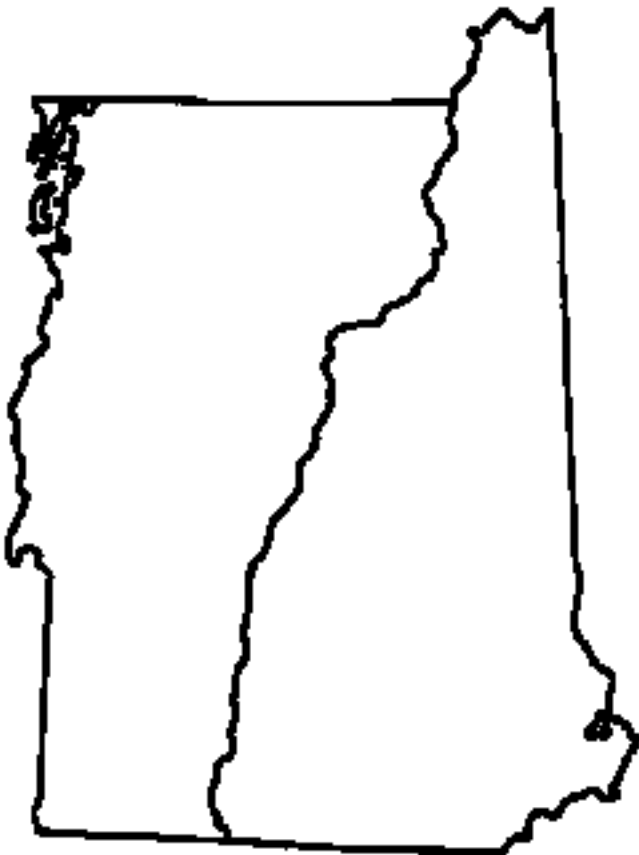


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U.S. Geological Survey

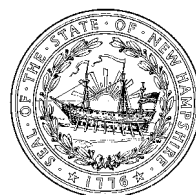
# Water Resources Data New Hampshire and Vermont Water Year 2000

By M.F. Coakley, Chandlee Keirstead, R.O. Brown, and R.G. Kiah

Water-Data Report NH-VT-00-1



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



**U.S. DEPARTMENT OF THE INTERIOR**

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13. ABSTRACT (Maximum 200 words) Water-resources data for the 2000 water year for New Hampshire and Vermont consists of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 76 gaging stations, stage records for 5 lakes, monthend contents for 2 lakes and reservoirs, water levels for 28 observation wells. Also included are data for 43 crest-stage partial-record stations. Additional water data were collected at various sites, which are not part of the systematic data-collection program and are published as miscellaneous measurements or under Supplemental National Water-Quality Assessment Data for Gaging Stations in New Hampshire and Vermont. A few pertinent stations in bordering states are also included in this report. These data represent that portion of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in New Hampshire and Vermont.			
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## 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 U.S. Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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

NOTE: Data for miscellaneous sites for both surface-water discharge and quality are published in separate sections of the data report. See references at the end of this list for page numbers for these sections.

[Letters after station name designate type of data collected: (d) discharge; (c) chemical; (b) biological; (s) sediment, (e) elevation, gage heights, or contents]

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## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record streamflow stations in New Hampshire and Vermont have been discontinued or converted to partial-record stations. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Those stations with an asterisk (\*) after the station number are currently operated as crest-stage partial-record stations. Discontinued project stations with less than 3 years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

## Discontinued surface-water discharge stations

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>SACO RIVER BASIN</b>			
Lucy Brook near North Conway, NH	01064400	4.68	1964-92
Cold Brook at South Tamworth, NH	01064800	5.41	1963-73
Ossipee River at Effingham Falls, NH	01065000	330	1942-90
<b>PISCATAQUA RIVER BASIN</b>			
Mohawk Brook near Center Strafford, NH	01072850	8.87	1964-77
Cocheco River at Dover, NH	01072880	173	1992-96
Dudley Brook near Exeter, NH	01073600	4.97	1962-85
<b>MERRIMACK RIVER BASIN</b>			
Pemigewasset River at North Woodstock, NH	01074000	28.6	1911-12
East Branch Pemigewasset River near Lincoln, NH	01074500	104	1928-53
Pemigewasset River at Woodstock, NH	01075000*	193	1940-77
Baker River at Wentworth, NH	01075500	58.8	1940-52
Stevens Brook near Wentworth, NH	01075800	2.94	1963-98
Baker River near Rummey, NH	01076000*	143	1929-77
Squam River at Ashland, NH	01077000	57.6	1939-95
Poorfarm Brook near Gilford, NH	01079600	5.0	1978-80
Merrimack River at Franklin Junction, NH	01081500*	1,507	1903-78
Contoocook River at Peterborough, NH	01082000*	68.1	1945-77
Nubanusit Brook near Peterborough, NH	01083000*	46.9	1921-31 1945-89
Contoocook River near Elmwood, NH	01083500	168	1917-24
North Branch Contoocook River near Antrim, NH	01084000	54.8	1924-70
Beards Brook near Hillsboro, NH	01084500	55.4	1945-70
Contoocook River near Henniker, NH	01085000*	368	1940-77
Contoocook River below Hopkinton Dam at West Hopkinton, NH	01085500*	427	1903-07, 1963-89
Warner River at Davisville, NH	01086000	146	1940-78
Blackwater River near Webster, NH	01087000*	129	1918-20, 1927-89
Contoocook River at Penacook, NH	01088000	766	1929-77
Merrimack River at Garvins Falls, NH	01088500	2,427	1904-15
Soucook River near Concord, NH	01089000	76.8	1952-87
Suncook River at North Chichester, NH	01089500	157	1918-27, 1928-70
Suncook River at East Pembroke, NH	01090000	270	1904-05
Merrimack River at Manchester, NH	01090500	2,854	1924-50
Piscataquog River below Everett Dam near East Weare, NH	01090800*	63.1	1963-89
South Branch Piscataquog River near Goffstown, NH	01091000	104	1940-78
Piscataquog River near Goffstown, NH	01091500*	202	1940-78
Sucker Brook at Auburn, NH	01093000	27.8	1938-70
Souhegan River at Merrimack, NH	01094000*	171	1909-76

## WATER RESOURCES DATA FOR NEW HAMPSHIRE AND VERMONT

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

## Discontinued surface-water discharge stations--Continued

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>CONNECTICUT RIVER BASIN</b>			
Big Brook near Pittsburg, NH	01127880	6.36	1963-85
Connecticut River at First Connecticut Lake near Pittsburg, NH	01128500	83	1917-90
Halls Stream near East Hereford, Quebec, Canada	01129300	85	1963-92
Passumpsic River at Pierces's Mill near St. Johnsbury, VT	01133500	237	1909-19
Kirby Brook at Concord, VT	01134800	8.05	1963-74
Moose River at St. Johnsbury, VT	01135000	128	1928-83
Stevens River at West Barnet, VT	01136000	22.2	1939-45
Ammonoosuc River at Bretton Woods, NH	01136500	a34	1903-07
Ammonoosuc River near Bath, NH	01138000	395	1935-80
Connecticut River at South Newbury, VT	01139500	2,825	1918-50
South Branch Waits River near Bradford, VT	01140000	42.7	1940-51
Connecticut River at Orford, NH	01140500	3,100	1900-21
Ompompanoosuc River at Union Village, VT	01141500*	130	1940-89
Mink Brook near Etna, NH	01141800	4.60	1962-98
White River near Bethel, VT	01142000	241	1931-55
Mascoma River at West Canaan, NH	01145000*	80.5	1939-78
Kent Brook near Shelburne, VT	01150800	3.31	1964-74
Ottawaquechee River at Woodstock, VT	01151000	126	1928-30
Black River at Covered Bridge at Weathersfield, VT	01152800	114	1976-82
Black River at North Springfield, VT	01153000*	158	1929-89
Williams River at Brockways Mills, VT	01153500	103	1940-84
Saxtons River at Saxtons River, VT	01154000	72.2	1940-82
Cold River at Drewsville, NH	01155000	82.7	1940-78
Sacketts Brook near Putney, VT	01155200	10.0	1963-74
Flood Brook near Londonderry, VT	01155300	9.25	1963-74
West River at Newfane, VT	01156000	308	1919-23, 1928-89
Connecticut River at Vernon, VT	01156500	6,266	1936, 1938 1944-73
Ashuelot River near Gilsum, NH	01157000	71.1	1922-80
Otter Brook near Keene, NH	01158500	42.3	1924-58
Pratt Brook at Chesham, NH	01159000	11.2	1919-21
Minnewawa Brook at Marlborough, NH	01159500	31.7	1919-22
South Branch Ashuelot River at Webb near Marlborough, NH	01160000	36.0	1920-78
Beaver Brook at Wilmington, VT	01167800	6.38	1963-77
<b>HUDSON RIVER BASIN</b>			
Batten Kill at Arlington, VT	01329000	152	1929-84
<b>ST. LAWRENCE RIVER BASIN</b>			
Mettawee River Tributary near Pawlet, VT	04280300	2.95	1963-74
East Creek near Rutland, VT	04281000	a47	1911-13
East Creek at Rutland, VT	04281500	51.1	1940-77
Lewis Creek Tributary at Starksboro, VT	04282700	5.31	1963-74

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

## Discontinued surface-water discharge stations--Continued

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>ST. LAWRENCE RIVER BASIN--continued</b>			
Mollys Brook near Marshfield, VT	04283000	a24	1920-23
Jail Branch at East Barre, VT	04284000	38.9	1920-23, 1933-92
Dog River at Northfield, VT	04286500	a52	1909-20, 1928-34
Sunny Brook near Montpelier, VT	04287300	2.31	1963-74
Winooski River at Richmond, VT	04289500	985	1903-07, 1910
Green River at Garfield, VT	04291000	a18	1915-21, 1922-32
Lamoille River at Cadys Falls, VT	04291500	268	1913-23
Stony Brook near Eden, VT	04292100	4.21	1963-74
Brownington Branch near Evansville, VT	04296200	2.15	1963-74

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**WATER RESOURCES DATA FOR NEW HAMPSHIRE AND VERMONT**  
**DISCONTINUED SURFACE-WATER-QUALITY NETWORK STATIONS**

The following continuous-record surface-water-quality stations have been discontinued. Daily records of water temperature (wt), specific conductance (sc), and dissolved oxygen (do), were collected and published for the period of record shown for each station.

**Discontinued continuous-record surface-water-quality stations**

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Type of record	Period of record (water years)
Merrimack River at Concord, NH	01088400	2300	sc,wt	1980-1982
Connecticut River at Wells River, VT	01138500	2644	sc,wt	1980-1982
Connecticut River at N. Walpole, NH	01154500	5493	sc,wt	1981
Connecticut River at Walpole, NH	01155050	5612	sc,wt	1975-1980
West River at Newfane, VT	01156000	308	wt	1960-1965
South Branch Ashuelot River at Webb, near Marlborough, NH	01160000	36.0	wt, sc	1954-1978
Beaver Brook at Wilmington, VT	01167800	6.38	wt,sc	1972-1977
Winooski River above Chase Mill at Burlington, VT	04290550	--	wt,sc,do	1979-1981
Winooski River below Chase Mill at Burlington, VT	04290560	--	wt,sc,do	1979-1982
Black River at Coventry, VT	04296000	122	wt,sc	1978-1981
Clyde River at Newport, VT	04296500	142	wt,sc	1975-1978

# Water Resources Data for New Hampshire and Vermont, 2000

By M.F. Coakley, Chandlee Keirstead, R.O. Brown, and R.G. Kiah

## INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and water levels of ground-water wells. This volume contains records for water discharge at 76 gaging stations; stage records for 5 lakes; month end contents for 2 lakes and reservoirs; and water levels at 28 observation wells. Also included are data for 43 crest-stage partial record stations. Locations of these sites are shown in figures 1 and 2. Additional water data were collected at various sites not involved in the systematic data-collection program and are published under miscellaneous discharge measurements and under Supplemental National Water-quality Assessment Data for Gaging Stations in New Hampshire and Vermont. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in New Hampshire and Vermont.

This series of annual reports for New Hampshire and Vermont began with the 1961 water year with a

report that contained only data relating to the quantities of surface water and published as "Water Resources data for Massachusetts, New Hampshire, Rhode Island, and Vermont." For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for New Hampshire and Vermont were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 1A and 1B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1939 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Branch of Information Services, Federal Center, Box 25286, Denver, Colorado 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official reports have an identification number





Figure 1. Location of surface-water data-collection sites.

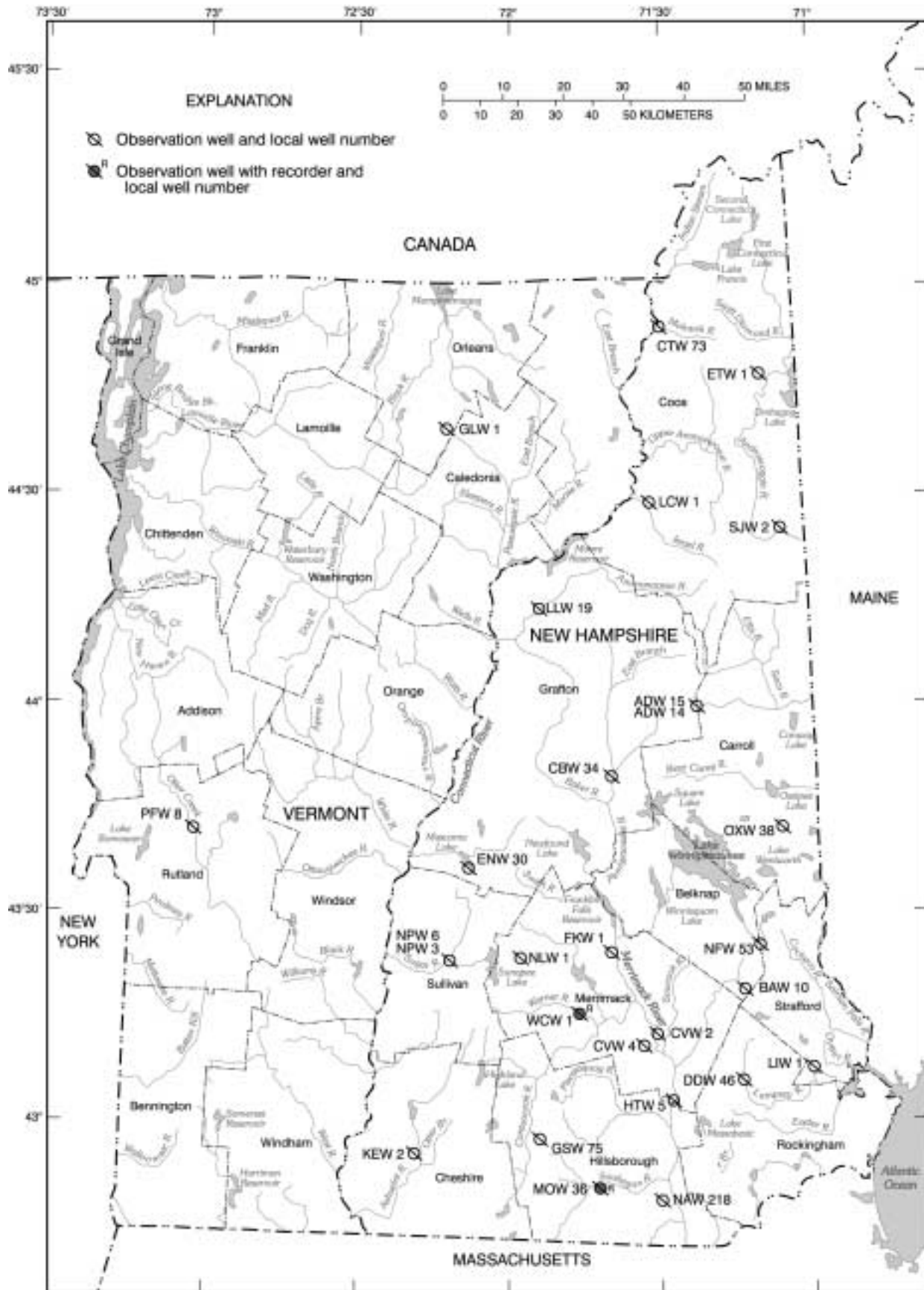


Figure 2. Location of ground-water data-collection sites.

consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NH-VT-00-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Real-time and historical data from the surface-water network, as well as information about individual sites, are available through the world wide web at:

[http://nh.water.usgs.gov/rt-cgi/gen\\_tbl\\_pg](http://nh.water.usgs.gov/rt-cgi/gen_tbl_pg)

<http://waterdata.usgs.gov/nwis-w/US/>

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (603) 226-7800.

## COOPERATION

The U.S. Geological Survey and organizations of the States of New Hampshire and Vermont have had cooperative agreements for the systematic collection of surface-water records since the early 1900's, and for groundwater records since the mid 60's. Organizations that assisted in collecting the data in this report through cooperative agreements with the U.S. Geological Survey are:

New Hampshire Department of Environmental Services,  
Robert W. Varney, Commissioner

Vermont Department of Environmental Conservation,  
Canute Dalmasse, Commissioner

City of Keene,  
Patrick MacQueen, City Manager

City of Rochester,  
Gary Stenhouse, City Manager

Assistance in the form of funds or services was provided by the Corps of Engineers, U.S. Army, in the collection of records for 20 gaging stations published in this report. Organizations supplying data are acknowledged in the station descriptions.

The following organizations contributed funds and services through the requirements of the Federal Energy Regulatory Commission:

Green Mountain Power Company

Citizens Utilities Company

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

## SUMMARY OF HYDROLOGIC CONDITIONS

### Streamflow

Runoff for the 2000 water year was above-normal throughout much of New Hampshire and Vermont except southern and central New Hampshire. The Piscataqua and Merrimack River Basins were in the normal range (below normal refers to the lower quartile of record, above normal refers to the upper quartile of record, and normal refers to the two middle quartiles). The basis of the above-normal, normal, and below-normal ranges is a 30-year reference period (October 1961 through September 1990).

The 2000 monthly and annual mean discharges and the monthly and annual median discharges for the reference period of 1961-90 are shown in figure 3 for stations on the Pemigewasset River at Plymouth, New Hampshire, and Dog River at Northfield Falls, Vermont. These stations recorded 2000 water-year runoff of 128 and 112 percent of median (compared to 102 percent a year ago for each site) and were used with other stations as indicators of monthly runoff across both states.

The 2000 water year began with most of New Hampshire and Vermont experiencing above-normal runoff. Runoff declined to normal or just above-normal for the winter period before rising to above-normal levels with the spring snowmelt and greater than normal precipitation. As the snowpack melted in the southern and eastern basins (Hudson, Merrimack, Saco, and Piscataquog) in April and May, runoff dropped to normal ranges. Continued snowmelt in the high reaches of the St. Lawrence, Connecticut, and Androscoggin River Basins kept runoff levels above-normal through May. Summer runoff for most of New Hampshire and Vermont was normal except for the Hudson River Basin, which experienced above-normal runoff throughout the

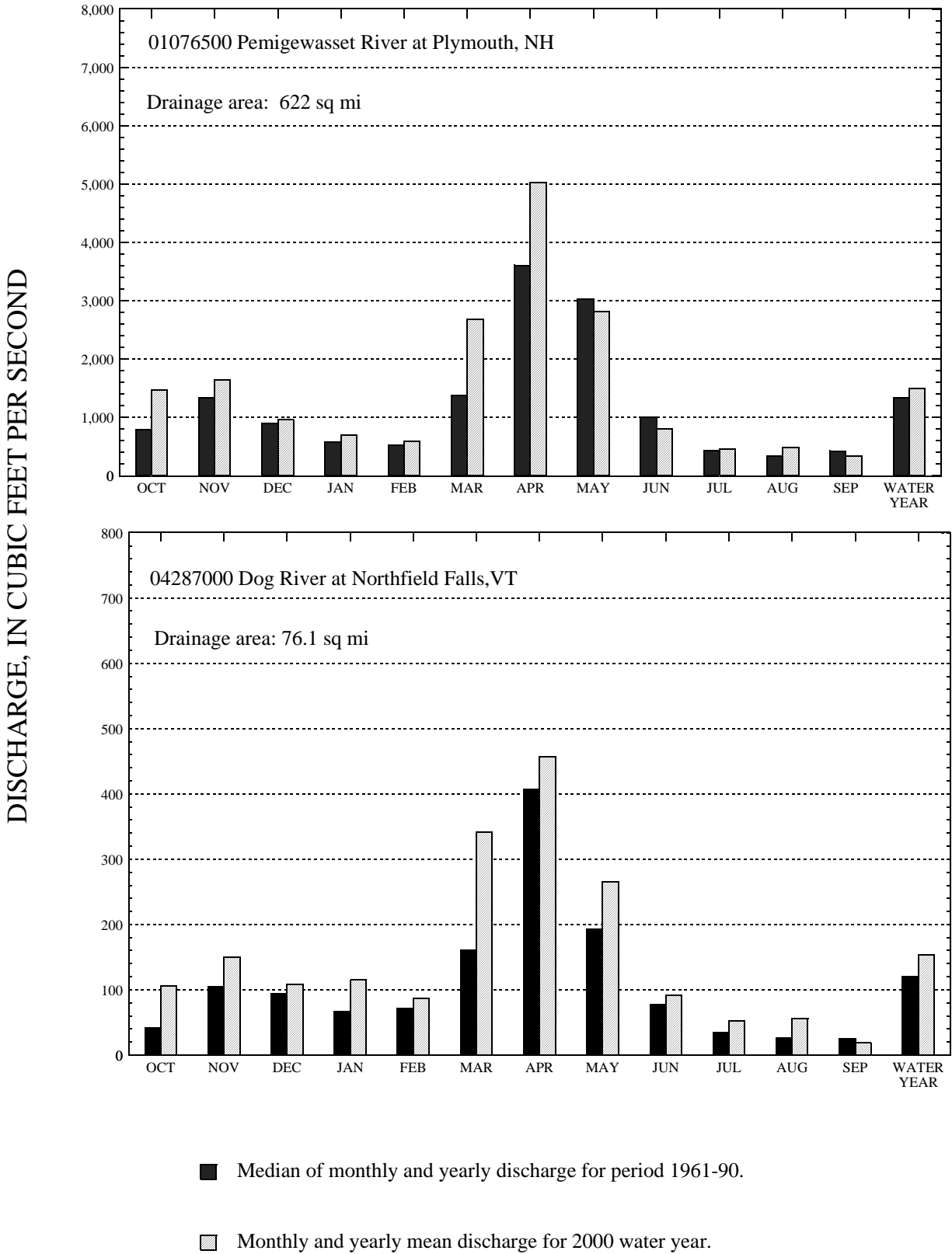


Figure 3. Comparison of discharge at two long-term index gaging stations during the 2000 water year with median discharge for period 1961-90.

summer. Southwestern New Hampshire and central Vermont and New Hampshire also had above-normal runoff for parts of the summer. The following table is a summary of mean runoff for a number of sites.

Station No.	Record length (years)	Mean runoff in 2000 water year		
		Mean ft <sup>3</sup> /s	Percent of median	Range
01054000	87	3,177	131	above-normal
01064500	97	1,022	110	normal
01073500	67	291	104	normal
01076500	97	1,493	112	normal
01078000	83	149	106	normal
01092000	64	5,933	120	normal
01138500	51	6,086	125	above-normal
01152500	73	472	117	normal
01154500	59	11,250	120	above-normal
01161000	92	799	111	normal
01334000	70	276	126	above-normal
04282500	98	1,281	124	above-normal
04287000	66	154	128	above-normal
04292500	72	1,576	130	above-normal
04293500	81	1,250	137	above-normal
04296000	49	251	130	above-normal

Additional statistics for each gaging station in this report are provided in the tables of daily mean discharges. Monthly flow hydrographs from the network are also available through the world wide web at:

<http://nh.water.usgs.gov/WaterData/curr.htm>

<http://vt.water.usgs.gov/WaterData/curr.htm>

### Floods and Droughts

Annual peak discharges at streamflow-gaging stations were recorded during the months of March, April, May, and July across the two States. The recurrence intervals of annual peak discharges at

most gaging stations were less than 5-years (peaks having a 1 in 5 chance of being equaled or exceeded in any given year) and ranged from less than 2-year to greater than a 5-year recurrence interval throughout the water year.

Minimum streamflows occurred during the late summer month of September for most of New Hampshire and Vermont. Minimum streamflows in the Hudson River Basin were observed in July. Runoff generally declined to about 50 to 96-percent flow duration (percentage of time daily flows will be equaled or exceeded) across both States.

### Reservoir Storage

The total combined usable storage of 5 major reservoirs in both States is 22,436 million cubic feet. At the beginning of the water year, the actual usable storage from these reservoirs was 18,319 million cubic feet or 82 percent of capacity. Average reservoir storage remained at 80 percent of capacity through November, then followed a steady seasonal decline to a minimum capacity for the water year of 54 percent by the end of January. Average reservoir storage then increased to a maximum average capacity of 91 percent for the water year by the end of July and finally declined seasonally to a capacity of 67 percent at the end of September, which is a combined usable storage of 15,388 million cubic feet.

### Ground-Water Levels

The ground-water observation-well network in New Hampshire consisted of 26 wells, and, in Vermont, 2 wells during the 2000 water year. Funding for the remaining network of Vermont wells was terminated at the end of the 1995 water year. Most wells are of small diameter and located in sandy material.

The monthly conditions summarized below are based on levels from selected representative wells across New Hampshire. The terms used below are defined as follows; **below-normal** refers to the lower quartile of ranked, monthly ground-water level readings, **above-normal** refers to the upper quartile, and **normal** refers to the two middle quartiles.

Ground-water conditions in New Hampshire were generally in the normal range from October

through December. January and February were predominantly below-normal with significant winter conditions keeping any ground-water recharge to a minimum. Ground-water conditions for the spring months of March through May were generally normal. Flows during June through September were generally normal but punctuated by isolated pockets of above- and/or below-normal conditions probably corresponding to effects of isolated, summer-time rain events.

Listed below are the monthly ground-water conditions for New Hampshire, summarized by general trends and exceptions.

**October** Ground-water levels were **normal**, except for the extreme southwestern part of the state, the lower Merrimack River valley, the sea-coast region, and the northern third of the state, which were **above-normal**.

**November** Ground-water levels were **normal**, except for the northeastern quarter of the state and a small pocket around the lower Contoocook River valley, which were **above-normal**.

**December** Ground-water levels were **normal**.

**January** Ground-water levels were **below-normal**, except for a swath through central New Hampshire from the middle Connecticut River valley to the seacoast and for the Upper Ammonoosuc and Israel River valleys, which were **normal**.

**February** Ground-water levels were **normal**, except for southeastern parts of the state (the seacoast region extending west to parts of the lower Merrimack River valley and north to parts of the Lake's region) and the region north of the White Mountains, which were **below-normal**.

**March** Ground-water levels were **normal**, except for the Israel River valley and parts of the Upper Ammonoosuc River valley in northern New Hampshire, which were **below-normal**.

**April** Ground-water levels were **normal**, except for parts of the Lamprey, Cocheco, and Salmon Falls River valleys in southeastern New Hampshire and the Ashuelot River valley in southwestern New Hampshire, which were **above-normal**.

**May** Ground-water levels were **normal**, except for lower and middle parts of the Connecticut River valley in western New Hampshire, which were **above-normal**.

**June** Ground-water levels were **normal**, except for the extreme southern part of the state along the Massachusetts border and parts of the Warner, Blackwater, Smith, and Mascoma River valleys, which were **above-normal**, and except for parts of the Piscataqua and

Merrymeeting River valleys in southeastern New Hampshire and for parts of the Israel, Upper Ammonoosuc, and Androscoggin River valleys in northern New Hampshire, which were **below-normal**.

#### **July**

Ground-water levels were **normal**, except for the Warner, Blackwater, Cold, and Ashuelot River valleys in the southwestern part of the State, which were **above-normal**, and except for the Androscoggin and extreme upper Connecticut River valleys in northern New Hampshire, which were **below-normal**.

#### **August**

Ground-water levels were **normal**, except for the southwestern part of the State (including the Sugar, Ashuelot, and Contoocook River valleys), which was **above-normal**, and except for a swath through the northern White Mountains region (including the Ammonoosuc and Androscoggin River valleys), which was **below-normal**.

**September** Ground-water levels were **normal**, except for northern New Hampshire (the White Mountain and North Country regions combined) and the Salmon Falls River valley, which were **below-normal**, and for southwestern New Hampshire (including the Contoocook, Piscataquog, Souhegan, and lower Ashuelot River valleys), which were **above-normal**.

**New monthly lows** (the lowest water level recorded for a given month) were recorded at the following wells during the 2000 water year:

Deerfield (DDW 46) in Feb.

Errol (ETW 1) in Oct. and Feb.

Lancaster (LCW 1) in June.

Lisbon (LLW 19) in Jan., Feb., Aug., and Sep. (this also set a new low water level for period of record).

Newport (NPW 3) in Mar.

Newport (NPW 6) in Mar.

Shelburne (SJW 2) in Aug.

**New monthly highs** (the highest water level recorded for a given month) were recorded at the following wells during the 2000 water year:

Barnstead (BAW 10) in May.

Colebrook (CTW 73) in Oct. (this also set a new high water level for period of record) and Nov.

Enfield (ENW-30) in May.

Lisbon (LLW 19) in May.

Nashua (NAW 218) in Apr.

Newport (NPW 3) in Aug.

Shelburne (SJW 2) in Apr.

Hydrographs for each of the ground-water-station records contained in this report provide additional information on water-level trends. Monthly conditions data from the network are also available through the world wide web at:

<http://nh.water.usgs.gov/WaterData/curr.htm>

## **SPECIAL NETWORKS AND PROGRAMS**

**The National Water-Quality Assessment (NAWQA) Program** of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet annually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies.

The New England Coastal Basins (NECB) NAWQA study unit encompasses 23,000 square

miles in western and central Maine, eastern New Hampshire, eastern Massachusetts, most of Rhode Island, and a small part of eastern Connecticut. In WY 2000, the NECB NAWQA study collected water samples from 11 stream sites and 17 ground water wells (fig. 4). Data from these sites are presented in the Miscellaneous Surface-Water Quality and Miscellaneous Ground-Water Quality sections of this report.

Additional information about the NAWQA Program is available through the world wide web at:

[http://www.rvares.er.usgs.gov/nawqa/nawqa\\_home.html](http://www.rvares.er.usgs.gov/nawqa/nawqa_home.html)

## **EXPLANATION OF THE RECORDS**

The surface-water and ground-water records published in this report are for the 2000 water year that began October 1, 1999, and ended September 30, 2000. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface water, and ground-water-level data.

The locations of the stations and wells where the data were collected are shown in figures 1 and 2. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### **Station Identification Numbers**

Each data station, whether streamgage or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream-order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

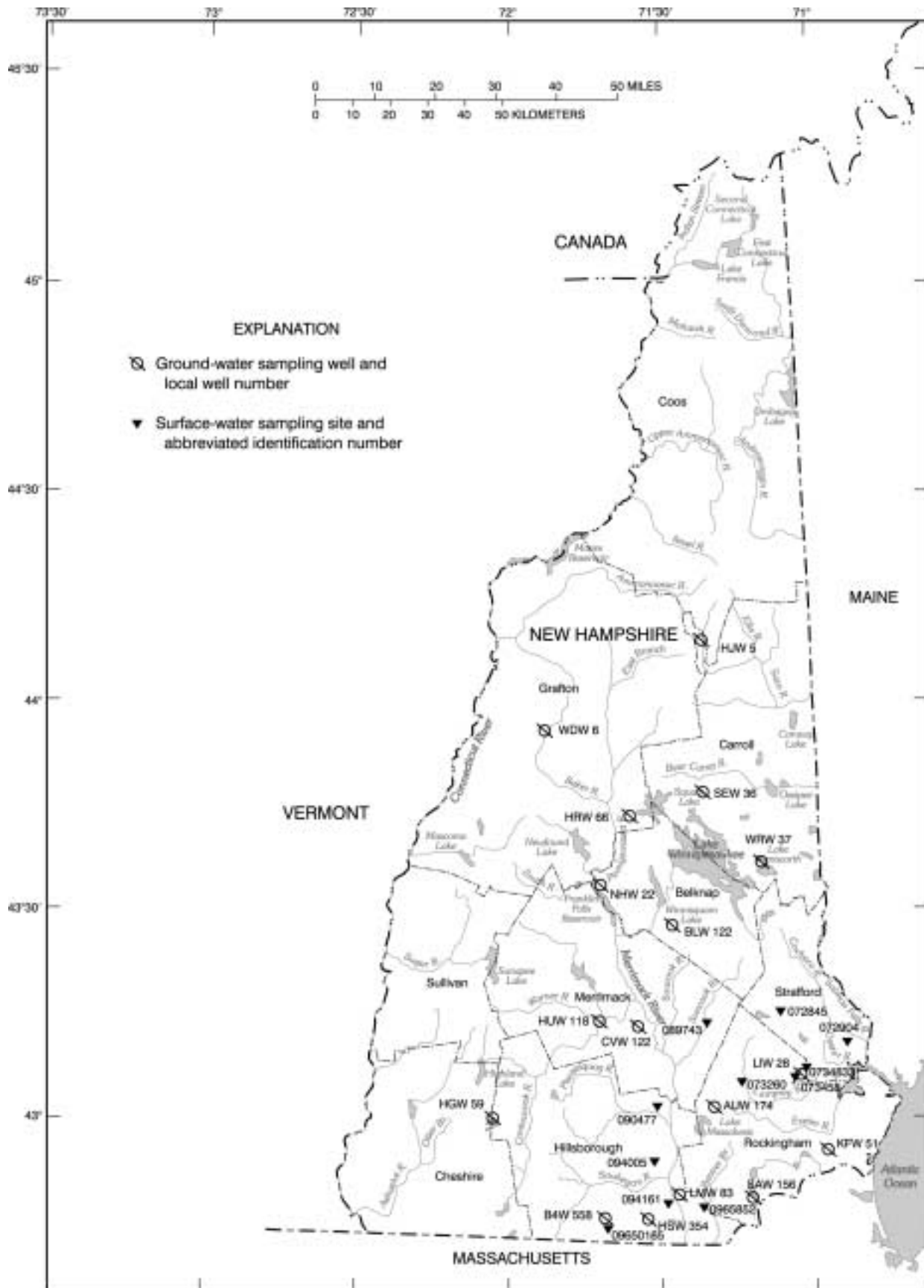


Figure 4. Location of surface- and ground-water quality data-collection sites for the National Water Quality Assessment (NAWQA) program.



## Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between continuous-record stations and other types of stations; therefore, the station number for a continuous-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete station number (usually eight digits, but sometimes nine or more if needed) appears just to the left of the station name. The first two digits indicate the Part number (formerly used in Water-Supply Papers to designate major river systems) and the last six or more digits indicate the downstream order within the Part. For example, in the station number 01076500, "01" is the Part number for "North Atlantic Slope Basins" and "076500" is the downstream order number.

## Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure

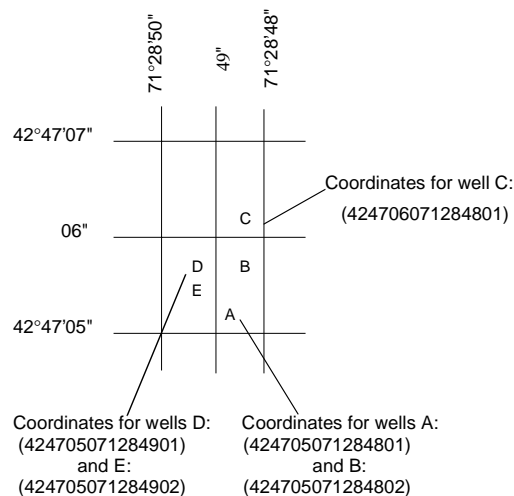


Figure 5. System for numbering wells and miscellaneous sites (latitude and longitude).

number and has no locational significance. In the rare instance where the initial determination of latitude and longitude is found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 5.)

A local well number 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 2.

## Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time.

They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents

commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements with/without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. Location of all complete-record stations for which data are given in this report are shown in figure 1. Some streamflow data from the network, as well as information for individual sites, are available through the world wide web at:

<http://nh.water.usgs.gov/WaterData/WaterDataPage.htm>

### **Data Collection and Computation**

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

Continuous records of stage are obtained with digital recorders that punch stage values on paper tapes at selected time intervals or with electronic data loggers which collect, store, and transmit data via satellite. Measurements of discharge are made with current meters using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's), Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the

American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for standards (ISO).

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

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

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

stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross section area. Discharge is computed by multiplying path velocity by the appropriate stage related coefficient and area.

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

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

## Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts, the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

## Station Manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

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

**DRAINAGE AREA.**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage

basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

**PERIOD OF RECORD.**--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

**REVISED RECORDS.**--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

**GAGE.**--The type of gage in current use, the datum of the current gage referred to sea level (see glossary), and a condensed history of the types, locations and datums of previous gages are given under this heading.

**REMARKS.**--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

**COOPERATION.**--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

**REVISIONS.**--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

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

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

#### **Data Table of Daily Mean Values**

The daily table of discharge records for stream-gaging stations gives mean discharge for

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

#### Statistics of Monthly Mean Data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR WATER YEARS \_ - \_, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

#### Summary Statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for

the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_ - \_," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table.

**ANNUAL TOTAL.**--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

**ANNUAL MEAN.**--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

**HIGHEST ANNUAL MEAN.**--The maximum annual mean discharge occurring for the designated period.

**LOWEST ANNUAL MEAN.**--The minimum annual mean discharge occurring for the designated period.

**HIGHEST DAILY MEAN.**--The maximum daily mean discharge for the year or for the designated period.

**LOWEST DAILY MEAN.**--The minimum daily mean discharge for the year or for the designated period.

**ANNUAL 7-DAY MINIMUM.**--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

**INSTANTANEOUS PEAK FLOW.**--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

**INSTANTANEOUS PEAK STAGE.**--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

**INSTANTANEOUS LOW FLOW.**--The minimum instantaneous discharge occurring for the water year or for the designated period.

**ANNUAL RUNOFF.**--Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

Acre-foot (AC-FT) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

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

Inches (INCHES) indicates the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

**10 PERCENT EXCEEDS.**--The discharge that has been exceeded 10 percent of the time for the designated period.

**50 PERCENT EXCEEDS.**--The discharge that has been exceeded 50 percent of the time for the designated period.

**90 PERCENT EXCEEDS.**--The discharge that has been exceeded 90 percent of the time for the designated period.

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

### Identifying Estimated Daily Discharge

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

### Accuracy of the Records

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

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within

10 percent; and “fair,” within 15 percent. Records that do not meet the criteria mentioned are rated “poor.” Different accuracies may be attributed to different parts of a given record.

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

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

### Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the District Office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the New Hampshire-Vermont District Office at the address given on the back of the title page or by telephone (603) 226-7800.

### Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality

nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A **continuing-record station** is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A **partial-record station** is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A **miscellaneous sampling site** is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between “continuing **records**”, as used in this report, and “continuous **recordings**,” which refers to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. In this report, continuing-record stations where data are collected on a continuous basis are referred to as **continuous-recording stations**. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

### Arrangement of Records

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

## **Onsite Measurements and Sample Collection**

In obtaining water-quality data, a major concern is to assure that the data obtained represent the in-situ quality of the water. To do this, certain measurements, such as water temperature, pH, alkalinity, dissolved oxygen, and specific conductance need to be made on-site when the samples are taken. To assure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory.

Procedures for on-site measurements and for collecting, treating, and shipping samples are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

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

Water-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.

## **Water Temperature**

Water temperatures are measured at all water-quality stations. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges. At stations where recording instruments are used, both mean, maximum, and minimum temperatures for each day are published.

## **Laboratory Measurements**

Samples are analyzed locally for specific conductance, dissolved oxygen, pH, and temperature. All other samples were analyzed in the Geological Survey laboratory in Lakewood, Colorado. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

## **Data Presentation**

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, and extremes for parameters currently measured daily. Tables of water-quality data, including chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, and dissolved oxygen data from water-quality monitor recorders follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuing-record station. Comments that follow clarify information presented under the various headings of the station description.



**LOCATION.**--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

**DRAINAGE AREA.**--See Data Presentation under "Records of Stage and Water Discharge;" same comments apply.

**PERIOD OF RECORD.**--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of daily record are given for the parameters individually.

**INSTRUMENTATION.**--Information on instrumentation is given only if a water-quality monitor, or temperature recording device is in operation at a station.

**REMARKS.**--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

**EXTREMES.**--Maximums and minimums are given only for parameters measured daily or more frequently. Extremes are provided for both the period of daily record and for the current water year. If a value from a miscellaneous measurement from outside the period of daily record has higher maximum or lower minimum, that value is reported in a descriptive heading for extremes outside the period of daily record.

**REVISIONS.**--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates.

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

### Remark Codes

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

PRINTED

OUTPUT

REMARK

<i>E</i>	<i>Estimated value.</i>
<i>&gt;</i>	<i>Actual value is known to be greater than the value shown.</i>
<i>&lt;</i>	<i>Actual value is known to be less than the value shown.</i>

### Records of Ground-Water Levels

The national network of observation wells is intended to provide a sampling and historical record of ground-water level changes in the most important aquifers. Locations of observation wells from this network in New Hampshire and Vermont are shown in figure 2. Water levels measured from these 28 network wells are included in this report. Information about the availability of data in the water-level database may be obtained from the Chief, New Hampshire-Vermont District (see address on back of title page).

### Data Collection and Computation

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the municipality in which each well is located.

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

Water levels are reported to as many significant figures as can be justified by the local conditions. Accordingly, most measurements are reported to a hundredth of a foot, but one is given to five-hundredths of a foot.

### Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the water year, and the hydrograph showing water level fluctuations during the most recent ten-year period. Hydrographs are based on end-of-month measurements or continuous data record (where available). The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

**LOCATION.**--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

**AQUIFER.**--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

**WELL CHARACTERISTICS.**--This entry describes the well in terms of method of construction, use, diameter, depth and additional information such as casing breaks, collapsed screen, and other changes since construction.

**DATUM.**--This entry describes both the land-surface elevation at the well and the measuring point. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base, and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

**PERIOD OF RECORD.**--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the U.S. Geological Survey, may be noted.

**EXTREMES FOR PERIOD OF RECORD.**--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

### Records of Ground-Water Quality

Water samples were collected from 17 domestic bedrock wells between October 1999 and September 2000 in the New Hampshire part of the New England Coastal Basins NAWQA study. Only one sample was collected from each well. These samples were collected as part of the NAWQA program to determine the occurrence and distribution of selected constituents in the ground waters of certain bedrock aquifer systems and analyzed for major ions, nutrients, trace elements, radon gas, radionuclides, 48 pesticide compounds, and 86 volatile organic compounds (VOCs).

Sampling protocols were followed to obtain and evaluate accurate water-quality data (Koterba and others, 1995). The sample line was connected to the faucet that is at the base of the pressure tank from inside the home. Water-quality samples were processed in the field and then shipped to the USGS National Water-Quality Laboratory in Lakewood, Colorado for analysis. Samples were analyzed locally (in the field) for alkalinity, specific conductance, dissolved oxygen, pH, temperature, ferrous iron, and sulfide.

Koterba, M.T., Wilde, F.D., and Lapham, W.W., 1995, Ground-water data-collection protocols and procedures for the National Water Quality Assessment program- Collection and documentation of water-quality samples and related data: U.S. Geological Survey Open-File Report 95-399, 113 p.

### **Analyses of pesticides in surface-water and ground-water samples (schedule 2001)**

Selected surface-water and ground-water samples from the New England Coastal Basins NAWQA study were analyzed for pesticides on schedule 2001 during the 2000 water year. Sampling sites are shown in figure 4. This table lists the pesticides on the schedule, the unit of measure (micrograms per liter,  $\mu\text{g/L}$ ), the U.S. Geological Survey National Water Information System parameter code, and the laboratory reporting level. **Only pesticides measured at or above the minimum reporting level for one or more samples are listed in the water-quality tables.**

**SCHEDULE DESCRIPTION.**--Pesticides in filtered water extracted on C-18 Solid Phase Extraction (SPE) cartridge and analyzed by Gas Chromatography/Mass Spectrometry (GC/MS).

**SAMPLE REQUIREMENTS.**--1 liter of water filtered through 0.7-micron glass-fiber depth filter, chilled at 4° C (packed in ice).

**CONTAINER REQUIREMENTS.**--1 liter baked amber glass bottle (GCC) from NWQL.

**PCODE.**--The USGS/EPA parameter code.

**COMPOUND NAME.**--IUPAC nomenclature.

**COMMON NAME.**--Common or trade name(s) for constituent.

**LRL.**--Laboratory reporting level.

PCode	Compound name (Common name)	LRL (µg/L)
49260	Acetochlor (Harness Plus, Surpass)	0.002
46342	Alachlor (Lasso, Bullet)	0.002
39632	Atrazine (Atrex, Atred)	0.001
04040	Atrazine, Deethyl- (Metabolite of Atrazine)	0.002
82686	Azinphos, Methyl- (Guthion, Gusathion)	0.001
82673	Benfluralin (Benefin, Balan)	0.002
04028	Butylate (Genate Plus, Suntan+)	0.002
82680	Carbaryl (Sevin, Denapan)	0.003
82674	Carbofuran (Furandan, Curaterr)	0.003
38933	Chlorpyrifos (Brodan, Dursban)	0.004
04041	Cyanazine (Bledex, Fortrol)	0.004
82682	DCPA (Dacthal, Chlorthal-dimethyl)	0.002
34653	DDE,p,p-	0.006
39572	Diazinon (Basudin, Diazatol)	0.002
39381	Dieldrin (Panoram D-31, Octalox)	0.001
82660	Diethylaniline (Metabolite of Alachlor)	0.003
82677	Disulfoton (Disyston, Frumin AL)	0.017
82668	EPTC (Eptam, Farmarox)	0.002
82663	Ethalfuralin (Sonalan, Curbit)	0.004
82672	Ethoprop (Mocap, Ethoprophos)	0.003
04095	Fonofos (Dyfonate, Capfos)	0.003
34253	HCH,alpha- (alpha-BHC, alpha-lindane)	0.002
39341	HCH,gamma- (Lindane, gamma-BHC)	0.004
82666	Linuron (Lorex, Linex)	0.002
39532	Malathion	0.005
39415	Metolachlor (Dual, Pennant)	0.002
82630	Metribuzin (Lexon, Sencor)	0.004
82671	Molinate (Ordram)	0.004
82684	Napropamide (Devrinol)	0.003
39542	Parathion, Ethyl- (Roethyl-P, Alkron)	0.004
82667	Parathion, Methyl- (Pennacp-M)	0.006
82669	Pebulate (Tillam, PEBL)	0.004
82683	Pendimethalin (Prowl, Stomp, Pre-M)	0.004
82687	Permethrin,cis- (Ambush, Astro)	0.005
82664	Phorate (Thimet, Granutox)	0.002
04037	Prometon (Pramitol, Princep)	0.018
82676	Pronamide (Kerb) (Propyzamid)	0.003
04024	Propachlor (Ramrod, Satecid)	0.007
82679	Propanil (Stampede, Stam)	0.004
82685	Propargite (Omite, Alkyl sulfite)	0.013

PCode	Compound name (Common name)	LRL (µg/L)
04035	Simazine (Princep, Caliber 91)	0.005
82670	Tebuthiuron (Spike, Tebusan)	0.010
82665	Terbacil (Sinbar)	0.007
82675	Terbufos (Counter, Contraven)	0.013
82681	Thiobencarb (Bolero, Saturn)	0.002
82678	Triallate (Avadex BW, Far-GO)	0.001
82661	Trifluralin (Treflan, Gowan)	0.002

**Analyses of volatile organic compounds in ground-water samples (schedule 2020/2021)**

Selected ground-water samples from the NECB NAWQA study were analyzed for volatile organic compounds (VOCs) in 2000. The National Water Quality Lab (NWQL) created a method for accurate determination of VOCs in water in the nanogram per liter range, schedules 2020/2021. The method is described in USGS Open-File Report 97-829 (Connor and others, 1998). Minor improvements to instrument operating conditions permits a data reporting strategy for measuring detected compounds extrapolated at less than the lowest calibration standard or measured at less than the reporting limit.

This table lists the volatile organic compounds on the schedule, the unit of measure (micrograms per liter (µg/L), the U.S. Geological Survey National Water Information System parameter code, the Union of Pure and Applied Chemistry (IUPAC) compound name, and the National Water Quality Laboratory compound name. Positive detections measured at less than the LRL are reported as estimated concentrations (E) to alert the data user to decreased confidence in accurate quantitation. Values for analytes in the 2020/2021 schedules are preceded by an "E" in the following situations:

1. When the calculated concentration is less than the lowest calibration standard. The analyte meets all identification criteria to be positively identified, but the amount detected is below where it can be reliably quantified.

2. If a sample is diluted for any reason. The method reporting level is multiplied by the dilution factor to obtain the adjusted method reporting level. Values below the lowest calibration standard, multiplied by the dilution factor are qualified with an "E". For example, a value of 0.19 in a 1:2 dilution is reported as E0.1.

3. If the set spike has recoveries out of the specified range (60-140 percent).

4. If the analyte is also detected in the set blank. If the value in the sample is less than five times the blank value and greater than the blank value plus the long term method detection limit, the value is preceded by an "E" to indicate that the analyte is positively identified but not positively quantified because the analyte was also detected in the blank.

Connor, B.F., Rose, D.L., Noriega, M.C., Murtagh, L.K., and Abney, S.R., 1998, Methods of analysis by the U.S. Geological Survey National Water Quality Laboratory— Determination of 86 volatile organic compounds in water by gas chromatography/mass spectrometry, including detections less than reporting limits: U.S. Geological Survey Open-File Report 97-829, 78 p.

**SCHEDULE DESCRIPTION.**--The sample water is actively purged with helium to extract the volatile organic compounds. The volatile compounds are trapped onto a sorbent trap, thermally desorbed, separated by a megabore gas chromatographic capillary column, and finally determined by a full scan quadropole mass spectrometer. Compound identification is confirmed by the gas chromatographic retention time and by the resultant mass spectrum, typically identified by three unique ions.

**SAMPLE REQUIREMENTS.**--Water collected in vials placed in stainless steel VOC sampler. Hydrochloric acid is used for preservation. Chilled at 4°C (packed in ice).

**CONTAINER REQUIREMENTS.**--40 milliliter baked amber septum glass vial, from OCALA Quality Water Service Unit.

**PCODE.**--The EPA/USGS parameter code.

**COMPOUND NAME.**--IUPAC nomenclature.

**COMMON NAME.**--NWQL nomenclature.

**LRL.**--Laboratory reporting level.

PCode	Compound name	Common name	LRL (µg/L)
77353	(1,1-Dimethylethyl) benzene	<i>tert</i> -butylbenzene	0.06
77223	(1-Methylethyl) benzene	Isopropylbenzene	0.032
77350	(1-Methylpropyl) benzene	<i>sec</i> -butylbenzene	0.032
34396	1,1,1,2,2,2-Hexachloroethane	Hexachloroethane	0.19
77562	1,1,1,2-Tetrachloroethane	1,1,2-tetrachloroethane	0.03
34506	1,1,1-Trichloroethane	1,1,1-trichloroethane	0.032

PCode	Compound name	Common name	LRL (µg/L)
34516	1,1,2,2-Tetrachloroethane	1,1,2,2-tetrachloroethane	0.09
77652	1,1,2-Trichloro-1,2,2-trifluoroethane	Freon-113	0.06
34511	1,1,2-Trichloroethane	1,1,2-trichloroethane	0.06
34496	1,1-Dichloroethane	1,1-dichloroethane	0.066
34501	1,1-Dichloroethene	1,1-dichloroethene	0.04
77168	1,1-Dichloropropene	1,1-dichloropropene	0.026
49999	1,2,3,4-Tetramethylbenzene	Preh-nitene	0.23
50000	1,2,3,5-Tetramethylbenzene	Isodurence	0.20
77613	1,2,3-Trichlorobenzene	1,2,3-trichlorobenzene	0.27
77443	1,2,3-Trichloropropane	1,2,3-trichloropropane	0.16
77221	1,2,3-Trimethylbenzene	1,2,3-trimethylbenzene	0.12
34551	1,2,4-Trichlorobenzene	1,2,4-trichlorobenzene	0.19
77222	1,2,4-Trimethylbenzene	1,2,4-trimethylbenzene	0.056
82625	1,2-Dibromo-3-chloropropane	1,2-dibromo-3-chloropropane (DBCP)	0.21
77651	1,2-Dibromoethane	1,2-dibromoethane	0.036
34536	1,2-Dichlorobenzene	1,2-dichlorobenzene	0.048
32103	1,2-Dichloroethane	1,2-dichloroethane	0.13
34541	1,2-Dichloropropane	1,2-dichloropropane	0.068
77135	1,2-Dimethylbenzene	<i>o</i> -xylene	0.038
85795	1,3 & 1,4-Dimethylbenzene	<i>m</i> & <i>p</i> -xylene	0.06
77226	1,3,5-Trimethylbenzene	1,3,5-trimethylbenzene	0.044
34566	1,3-Dichlorobenzene	1,3-dichlorobenzene	0.054
77173	1,3-Dichloropropane	1,3-dichloropropane	0.12
34571	1,4-Dichlorobenzene	1,4-dichlorobenzene	0.05
77275	1-Chloro-2-methylbenzene	2-chlorotoluene	0.042
77277	1-Chloro-4-methylbenzene	4-chlorotoluene	0.06
77356	1-Isopropyl-4-methylbenzene	<i>p</i> -Isopropyltoluene	0.07
77170	2,2-Dichloropropane	2,2-dichloropropane	0.05
81595	2-Butanone	Methyl-ethyl ketone	1.6
77220	2-Ethyltoluene	2-ethyl toluene	0.06
77103	2-Hexanone	2-hexanone	0.70
34215	2-Propenenitrile	Acrylonitrile	1.2
78109	3-Chloro-1-propene	3-chloro-1-propene	0.20
78133	4-Methyl-2-pentanone	Methyl isobutyl ketone	0.37
81552	Acetone	Acetone	7.0
34030	Benzene	Benzene	0.035
81555	Bromobenzene	Bromobenzene	0.036
77297	Bromochloromethane	Bromochloromethane	0.044
32101	Bromodichloromethane	Bromodichloromethane	0.048
50002	Bromoethene	Vinyl Bromide	0.10
34413	Bromomethane	Methyl bromide	0.26
77041	Carbon disulfide	Carbon Disulfide	0.07
34301	Chlorobenzene	Chlorobenzene	0.028
34311	Chloroethane	Chloroethane	0.12

PCode	Compound name	Common name	LRL (µg/L)
39175	Chloroethene	Vinyl Chloride	0.11
34418	Chloromethane	Methyl chloride	0.50
77093	<i>cis</i> -1,2-Dichloroethene	<i>cis</i> -1,2-dichloroethene	0.038
34704	<i>cis</i> -1,3-Dichloropropene	<i>cis</i> -1,3-dichloropropene	0.09
32105	Dibromochloromethane	Dibromochloromethane	0.18
30217	Dibromomethane	Dibromomethane	0.05
34668	Dichlorodifluoromethane	Dichlorodifluoromethane	0.27
34423	Dichloromethane	Methylene Chloride	0.38
81576	Diethyl ether	Diethyl ether	0.17
81577	Di isopropyl	Ether	0.10
77128	Ethenylbenzene	Styrene	0.042
73570	Ethyl methacrylate	Ethyl Methacrylate	0.18
50004	Ethyl <i>tert</i> -butyl ether	Ethyl- <i>t</i> -butyl ether (ETBE)	0.054
34371	Ethylbenzene	Ethylbenzene	0.03
39702	Hexachlorobutadiene	Hexachlorobutadiene	0.14
77424	Iodomethane	Methyl iodide	0.12
49991	Methyl acrylate	Methyl Acrylate	1.4
81593	Methyl acrylonitrile	Methyl Acrylonitrile	0.6
81597	Methyl methacrylate	Methyl Methacrylate	0.35
78032	Methyl <i>tert</i> -butyl ether	Methyl- <i>t</i> -butyl ether (MTBE)	0.17
34010	Methylbenzene	Toluene	0.05
77342	<i>n</i> -Butylbenzene	<i>n</i> -butylbenzene	0.19
77224	<i>n</i> -Propylbenzene	<i>n</i> -propylbenzene	0.042
34696	Naphthalene	Naphthalene	0.25
50005	<i>tert</i> -Amyl methyl ether	<i>tert</i> -amyl methyl ether (TAME)	0.11
34475	Tetrachloroethene	Tetrachloroethene	0.10
32102	Tetrachloromethane	Carbon tetrachloride	0.06
81607	Tetrahydrofuran	Tetrahydrofuran	2.2
34546	<i>trans</i> -1,2-Dichloroethene	<i>trans</i> -1,2-dichloroethene	0.032
34699	<i>trans</i> -1,3-Dichloropropene	<i>trans</i> -1,3-dichloropropene	0.09
73547	<i>trans</i> -1,4-Dichloro-2-butene	<i>trans</i> -1,4-dichloro-2-butene	0.70
32104	Tribromomethane	Bromoform	0.06
39180	Trichloroethene	Trichloroethene	0.038
34488	Trichlorofluoromethane	Trichlorofluoromethane	0.09
32106	Trichloromethane	Chloroform	0.052

## ACCESS TO USGS WATER DATA

The U.S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and

manage our water resources. As part of the U.S. Geological Survey's program of releasing water data to the public, a large-scale computerized system was developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. As of December 1996, WATSTORE was retired. It has been replaced by National Water Information System (NWIS) and incorporates many of the features of WATSTORE. The historic daily-mean and peak-flow discharge data (final) from NWIS can be accessed through the world wide web (www) via the address:

<http://water.usgs.gov>

Provisional current (monthly) conditions and real time (telemetry) information for New Hampshire and Vermont can be obtained at the following www addresses:

<http://nh.water.usgs.gov>

<http://vt.water.usgs.gov>

[http://nh.water.usgs.gov/rt-cgi/gen\\_tbl\\_pg](http://nh.water.usgs.gov/rt-cgi/gen_tbl_pg)

<http://nh.water.usgs.gov/WaterData/curr.htm>

Information about the availability of other provisional, specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)

## DEFINITION OF TERMS

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

**Acre-foot** (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters.

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

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data.

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

**Inch** (IN., in.) as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it.

**Base flow** is flow in a channel sustained by ground-water discharge in the absence of direct runoff.

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

**Biomass** is the amount of living matter present at any given time, expressed as 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 of zooplankton and phytoplankton is expressed in grams per cubic meter (g/m<sup>3</sup>), and periphyton and benthic organisms in grams per square meter (g/m<sup>2</sup>).

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

**Bottom material:** See “Bed material.”

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

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases the water level can rise above the ground surface, yielding a flowing well.

**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.

**Continuous-record station** is a site that meets either of the following conditions:

1. Stage or streamflow are recorded at some interval on a continuous basis. The recording interval is usually 15 minutes, but may be less or more frequent.
2. Water-quality, sediment, or other hydrologic measurements are recorded at least daily.

**Control** designates a feature in the channel downstream from a gaging station that physically influences the water-surface elevation and thereby determines the stage-discharge relation at the station. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

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

**Cubic foot per second** (CFS, ft<sup>3</sup>/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second, 448.8 gallons per minute, or 0.02832 cubic meters per second.

**Cubic foot per second-day** (CFS-DAY, Cfs-day, [(ft<sup>3</sup>/s)/d]) 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, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

**Daily record** is a summary of streamflow, sediment, or water-quality values computed from data collected with sufficient frequency to obtain reliable estimates of daily mean values.

**Daily record station** is a site for which daily records of streamflow, sediment, or water-quality values are computed.

**Datum**, as used in this report, is an elevation above mean sea level to which all gage height readings are referenced.

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or flow, is the volume of water (or more broadly, volume of fluid including solid- and dissolved-phase material), that passes a given point in a given period of time.

**Annual 7-day minimum** is the lowest mean discharge for 7 consecutive days in a year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the

summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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

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

**Dissolved** refers to that material in a representative water sample that 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.

**Dissolved oxygen** (DO) content of water in equilibrium with air is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved solids, with small temperature changes having the more significant offset. Photosynthesis and respiration may cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** of water is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During that analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to reflect the change. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Drainage area** of a site on a stream is that area, measured in a horizontal plane, that has a common outlet at the site for its surface runoff. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth’s surface that is occupied by a drainage system with a common outlet for its surface runoff (see “Drainage area”).

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65°C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue.

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not

exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is the elevation of the zero point of the reference gage from which gage height is determined as compared to sea level (see “Datum”). This elevation is established by a system of levels from known benchmarks, by approximation from topographic maps, or by geographical positioning system.

**Gage height** (G.H.) is the water-surface elevation referenced to the gage datum. Gage height is often used interchangeably with the more general term “stage,” although gage height is more appropriate when used with a reading on a gage.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

**Ground-water level** is the elevation of the water table or another potentiometric surface at a particular location.

**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 the equivalent concentration of calcium carbonate (CaCO<sub>3</sub>).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

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

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the U.S. Geological Survey. Each hydrologic unit is identified by an 8-digit number.

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

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day.

See NOAA web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

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

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

**Micrograms per kilogram** (UG/KG,  $\mu\text{g/kg}$ ) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter** (UG/L,  $\mu\text{g/L}$ ) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter.

**Microsiemens per centimeter** (US/CM,  $\mu\text{S/cm}$ ) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter** (MG/L,  $\text{mg/L}$ ) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in  $\text{mg/L}$  and is based on the mass of dry sediment per liter of water-sediment mixture.

**Miscellaneous site**, or miscellaneous station, is a site where streamflow, sediment, and/or water-quality data are collected once, or more often on a random or discontinuous basis.

**Nanograms per liter** (NG/L,  $\text{ng/L}$ ) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929** (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of 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.

See NOAA web site:

<http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>

**Nephelometric turbidity unit** (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of Formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon** (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediments. May be reported as dissolved organic carbon (DOC), suspended organic carbon (SOC), or total organic carbon (TOC).

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter Code** is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, Sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).



**Particle-size classification** used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	0.004 - 0.062	Sedimentation
Sand	0.062 - 2.0	Sedimentation/sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

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

**Periodic station** is a site where stage, discharge, sediment, chemical, or other hydrologic measurements are made one or more times during a year, but at a frequency insufficient to develop a daily record.

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

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

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7 are termed "acidic," and solutions with a pH greater than 7 are termed "basic." Solutions with a pH of 7 are neutral. The presence and concentration of many dissolved chemical constituents found in water are, in part, influenced by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms are also influenced, in part, by the hydrogen-ion activity of water.

**Picocurie (PC, pCi)** is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioac-

tive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL of sample).

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

**Radioisotopes** are isotopic forms of an element that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight, but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after

the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**River mile** is the distance of a point on a river measured in miles from the river's mouth along the low-water channel.

**River mileage** is the linear distance along the meandering path of a stream channel determined in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council.

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

**Sea level** refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

See NOAA web site:

[http://www.co-ops.nos.noaa.gov/glossary/gloss\\_n.html#NGVD](http://www.co-ops.nos.noaa.gov/glossary/gloss_n.html#NGVD)

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

**Bed load** is the sediment that is transported in a stream by rolling, sliding, or skipping along or very close to the bed. In this report, bed load is considered to consist of particles in transit from the bed to an elevation equal to the top of the bed-load sampler nozzle (usually within 0.25 ft of the streambed).

**Bed-load discharge** (tons per day) is the quantity of sediment moving as bed load, reported as dry weight, that passes a cross section in a given time.

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

**Seven-day 10-year low flow** ( $7Q_{10}$ ,  $7Q_{10}$ ) is the minimum flow averaged over 7 consecutive days that is expected to occur on average, once in any 10-year period. The  $7Q_{10}$  has a 10-percent chance of occurring in any given year.

**Solute** is any substance that is dissolved in water.

**Specific conductance** is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stage:** See "Gage height."

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

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

**Surface area** of a lake or impoundment is that area encompassed by the boundary of the lake or impoundment as shown on USGS topographic maps, or on other available maps or photographs. The computed surface areas reflect the water levels of the lakes or impoundments at the times when the information for the maps or photographs was obtained.

**Synoptic Studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Total** is the total amount of a given constituent in a representative suspended-sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when

the results should be reported as “total.” (Note that the word “total” does double duty here, indicating both that the sample consists of a suspended-sediment mixture and that the analytical method determined all of the constituent in the sample.)

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

**Turbidity** is a measurement of the collective optical properties of a water sample that cause light to be scattered and absorbed rather than transmitted in straight lines; the higher the intensity of scattered light, the higher the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU) or Formazin turbidity units (FTU) depending on the method and equipment used.

**Volatile organic compounds** (VOC's) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOC's are manmade chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

**Water level** is the water-surface elevation or stage of the free surface of a body of water above or below any datum (see “Gage height”), or the surface of water standing in a well, usually indicative of the position of the water table or other potentiometric surface.

**Water table** is the surface of a ground-water body at which the water is at atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which is found the water table.

**Water year** in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1999, is called the “1999 water year.”

**WDR** is used as an abbreviation for “Water-Data Report” in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an

abbreviation for “Water-Resources Data” in reports published prior to 1976.)

**Well** is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

**Wet weight** refers to the weight of animal tissue or other substance including its contained water.

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

## PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

The reports listed below are for sale by the U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the “U.S. Geological Survey.” Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the “U.S. Geological Survey Techniques of Water-Resources Investigations.”

### Book 1. Collection of Water Data by Direct Measurement

#### Section D. Water Quality

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

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

## Book 2. Collection of Environmental Data

### Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A.R. Zohdy, G.P. Eaton, and D.R. Mabey: USGS- TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS- TWRI Book 2, Chapter D2. 1988. 86 pages.

### Section E. Subsurface Geophysical Methods

- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W.S. Keys and L.M. MacCary: USGS- TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W.S. Keys: USGS- TWRI Book 2, Chapter E2. 1990. 150 pages.

### Section F. Drilling and Sampling Methods

- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W.E. Teasdale: USGS- TWRI Book 2, Chapter F1. 1989. 97 pages.

## Book 3. Applications of Hydraulics

### Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS- TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS- TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS- TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS- TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS- TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS- TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS- TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS- TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS- TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS- TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS- TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS- TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS- TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS- TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS- TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS- TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS- TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS- TWRI Book 3, Chapter A18. 1989. 52 pages.

- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS- TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS- TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C.R. Wagner: USGS- TWRI Book 3, Chapter A21. 1995. 56 pages.

*Section B. Ground-Water Techniques*

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS- TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS- TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS- TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS- TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS- TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS- TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS- TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS- TWRI Book 3, Chapter B7. 1992. 190 pages.

*Section C. Sedimentation and Erosion Techniques*

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS- TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by Thomas K. Edwards and

G. Douglas Glysson: USGS- TWRI Book 3, Chapter C2. 1988. 80 pages.

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

**Book 4. Hydrologic Analysis and Interpretation**

*Section A. Statistical Analysis*

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS- TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS- TWRI Book 4, Chapter A2. 1968. 15 pages.

*Section B. Surface Water*

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS- TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS- TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS- TWRI Book 4, Chapter B3. 1973. 15 pages.

*Section D. Interrelated Phases of the Hydrologic Cycle*

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

**Book 5. Laboratory Analysis**

*Section A. Water Analysis*

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS- TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS- TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS- TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greenson, editors: USGS- TWRI Book 5, Chapter A4. 1989. 363 pages.

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

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

*Section C. Sediment Analysis*

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

**Book 6. Modeling Techniques**

*Section A. Ground Water*

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS- TWRI Book 6, Chapter A1. 1988. 586 pages.

6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS- TWRI Book 6, Chapter A2. 1991. 68 pages.

6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS- TWRI Book 6, Chapter A3. 1993. 136 pages.

6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS- TWRI Book 6, Chapter A4. 1992. 108 pages.

6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS- TWRI Book 6, Chapter A5, 1993. 243 pages.

6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1996. 125 pages.

**Book 7. Automated Data Processing and Computations**

*Section C. Computer Programs*

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

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

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

**Book 8. Instrumentation**

*Section A. Instruments for Measurement of Water Level*

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

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

*Section B. Instruments for Measurement of Discharge*

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

**Book 9. Handbooks for Water-Resources Investigations**

*Section A. National Field Manual for the Collection of Water-Quality Data*

9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS- TWRI Book 9, Chapter A1. 1998. 47 p.

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS- TWRI Book 9, Chapter A2. 1998. 94 p.

9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde,

- D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo:  
USGS- TWRI Book 9, Chapter A3. 1998.  
75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS- TWRI Book 9, Chapter A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS- TWRI Book 9, Chapter A5. 1999, 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke:  
USGS- TWRI Book 9, Chapter A6. 1998.  
Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D.N. Myers and F.D. Wilde: USGS- TWRI Book 9, Chapter A7. 1997. 49 pages.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS- TWRI Book 9, Chapter A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS- TWRI Book 9, Chapter A9. 1998. 60 pages.

## SURFACE-WATER-DISCHARGE AND SURFACE-WATER-QUALITY RECORDS

### Remark Codes

The following remark codes may appear with the water-quality data in this section:

PRINT OUTPUT	REMARK
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.

### Dissolved Trace-Element Concentrations

**\*NOTE.**--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter ( $\text{ng/L}$ ). Data above the  $\mu\text{g/L}$  level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at some stations in water year 1994.

### Change in National Trends Network Procedures

**\*NOTE.**--Sample handling procedures at all National Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).



ANDROSCOGGIN RIVER BASIN

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, NH

**LOCATION.**--Lat 44°52'39", long 71°03'28" (Revised), 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 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: July 1941 to current year.

Water-quality records: Water year 1954.

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

**GAGE.**--Water-stage recorder. Elevation of gage is 1,259.48 ft above sea level.

**REMARKS.**--Records good except for periods of ice effect, Nov. 30 to Mar. 23, which are fair. Satellite gage-height telemeter at station.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum discharge, 12,800 ft<sup>3</sup>/s, March 31, 1998, gage height, 12.11 ft, from rating curve extended above 7,500 ft<sup>3</sup>/s; maximum gage height, 12.23 ft, February 21, 1981 (ice jam); minimum discharge, 6.8 ft<sup>3</sup>/s, August 27, 28, 1949, September 1, 1952, gage height, 0.81 ft.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	2330	3,750	7.65	Apr. 9	1645	5,600	8.86
Apr. 5	0300	3,980	7.82	May 10	0645	*8,030	*10.11

Minimum discharge, 48 ft<sup>3</sup>/s, September 11,12, gage height, 2.01 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	282	e299	e101	e61	e527	696	693	210	102	70	53
2	299	246	e257	e100	e60	e360	913	829	193	86	60	52
3	216	255	e240	e201	e59	e284	1590	770	192	76	56	182
4	200	236	e228	e380	e58	e240	2700	709	168	201	172	181
5	258	200	e218	e440	e58	e202	3420	1010	159	196	126	153
6	285	182	e209	e303	e57	e180	1660	950	150	130	75	95
7	242	167	e203	e202	e57	e179	890	2700	158	93	61	74
8	191	156	e194	e150	e56	e187	763	2050	142	81	134	65
9	177	143	e188	e122	e54	e222	3460	2230	148	75	125	58
10	170	153	e178	e112	e53	e783	4070	5400	132	78	90	53
11	223	157	e255	e105	e63	e558	1350	4290	599	91	78	49
12	242	125	e215	e198	e65	e347	835	2190	637	83	97	48
13	177	136	e198	e189	e62	e281	618	1050	307	71	74	55
14	523	169	e188	e151	e64	e217	557	968	212	61	60	66
15	690	434	e178	e123	e62	e248	938	684	173	58	174	181
16	421	275	e175	e102	e63	e377	2110	528	154	67	123	450
17	334	197	e171	e92	e64	e381	1500	444	140	121	122	213
18	345	197	e124	e85	e63	e256	939	553	144	89	141	139
19	319	187	e94	e78	e62	e238	852	1010	123	163	98	106
20	258	187	e120	e74	e60	e219	793	554	108	137	87	87
21	273	783	e193	e71	e59	e210	1030	418	97	87	155	83
22	235	730	e184	e70	e57	e242	855	352	128	73	113	117
23	1360	899	e152	e68	e58	e340	1250	312	151	80	82	87
24	2160	820	e134	e67	e90	584	2240	367	115	70	217	97
25	1190	570	e128	e73	e527	680	1320	529	92	69	188	167
26	663	507	e123	e71	e643	753	970	705	95	61	113	110
27	536	1830	e120	e68	e246	772	788	544	52	52	83	87
28	420	1730	e115	e66	e608	1760	658	422	366	51	78	84
29	343	762	e111	e64	e839	3320	602	332	151	120	69	89
30	291	e410	e108	e63	---	1620	823	277	109	170	61	78
31	264	---	e105	e62	---	879	---	240	---	96	56	---
TOTAL	13931	13125	5405	4051	4328	17446	41190	34110	5735	2988	3238	3359
MEAN	449	438	174	131	149	563	1373	1100	191	96.4	104	112
MAX	2160	1830	299	440	839	3320	4070	5400	637	201	217	450
MIN	170	125	94	62	53	179	557	240	92	51	56	48
CFSM	2.96	2.88	1.15	.86	.98	3.70	9.03	7.24	1.26	.63	.69	.74
IN.	3.41	3.21	1.32	.99	1.06	4.27	10.08	8.35	1.40	.73	.79	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
268	338	228	170	150	295
1071	928	316	172	138	151
1591	2115	804	703	492	836
1991	1964	1974	1995	1981	1998
1954	1972	1943	1996	1988	1954
40.9	83.2	53.4	53.9	43.4	54.6
402	297	105	35.1	15.0	16.8
1953	1979	1979	1998	1967	1972
1998	1963	1952	1952	1952	1952

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1941 - 2000

ANNUAL TOTAL	124340	148906	
ANNUAL MEAN	341	407	353
HIGHEST ANNUAL MEAN			524
LOWEST ANNUAL MEAN			225
HIGHEST DAILY MEAN	3790	Sep 17	9900
LOWEST DAILY MEAN	26	Sep 6	6.8
ANNUAL SEVEN-DAY MINIMUM	28	Sep 2	9.0
INSTANTANEOUS PEAK FLOW		8030	12800
INSTANTANEOUS PEAK STAGE		10.11	12.23
INSTANTANEOUS LOW FLOW		48	6.8
ANNUAL RUNOFF (CFSM)	2.24	2.68	2.32
ANNUAL RUNOFF (INCHES)	30.43	36.44	31.51
10 PERCENT EXCEEDS	829	903	850
50 PERCENT EXCEEDS	187	182	160
90 PERCENT EXCEEDS	67	63	52

e Estimated.



ANDROSCOGGIN RIVER BASIN

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH

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

DRAINAGE AREA.--1,361 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1913 to current year. October 1922 to September 1928, monthly discharge only, published in WSP 1301. Discharges for water year 1918 not used in long-term statistics because of unknown discharge on December 25, 1917. Prior to October 1928, published as "at Berlin."

REVISED RECORDS.--WDR ME-81-1: Drainage area. WDR ME-97-1: 1913-28(M)

GAGE.--Water-stage recorder. Datum of gage is 832.88 ft above sea level. Prior to September 30, 1922, nonrecording gage showing head and tailwater elevations at site 3 mi upstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Azischohos, and Umbagog Lakes. These reservoirs have a combined usable capacity of about 28.1 billion ft<sup>3</sup> with final regulation at Errol Dam 35 mi upstream. Diurnal fluctuations caused by powerplant 0.8 mi upstream. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft<sup>3</sup>/s, estimated, April 30, 1923; minimum daily discharge, leakage only, December 25, 1917, when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft<sup>3</sup>/s, May 11, gage height, 9.26 ft; minimum daily discharge, 1,320 ft<sup>3</sup>/s, July 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3380	3020	3180	2640	2970	3000	4510	5010	2040	1790	1560	1510
2	2700	2970	2750	2690	2920	2890	4650	4580	2090	1750	1540	1610
3	2420	4020	2770	2810	2910	2760	5670	3500	2140	1730	1490	1750
4	2330	3510	2790	2910	2920	2670	8650	3240	2110	1730	1640	1720
5	2460	3140	2850	3310	2920	2590	10700	3040	2000	1820	1460	1740
6	2450	2780	2840	3110	2920	2530	8630	3130	1980	1760	1490	1530
7	2390	2730	2810	2990	2920	2610	7480	3290	2010	1680	1500	1550
8	2250	2650	2770	2890	2890	2650	7060	4900	2110	1780	1960	1480
9	2240	2620	2720	2850	2950	2910	9960	6830	1880	1790	1600	1510
10	2310	2630	2680	2870	2960	3300	12100	11700	1820	1960	1490	1520
11	2330	2690	2790	3270	2930	3400	8840	15000	1870	1920	1580	1510
12	2330	2650	2780	3350	2680	3210	7610	16200	2810	1440	1660	1500
13	2250	2630	2710	3020	2610	3030	6240	15500	2750	1320	1580	1510
14	2360	2680	2720	2880	2680	2890	4780	15900	2120	1490	1560	1540
15	2910	2980	2840	2810	2650	2890	3990	14500	1670	1570	1920	1730
16	2430	2940	2860	3000	2640	3010	4590	12500	1620	1620	1750	2290
17	2180	2780	2900	3000	2630	3150	4340	11100	1830	1840	1500	1980
18	2110	2620	2820	3010	2600	2930	3810	9230	1740	1670	1540	1630
19	2070	2550	2550	2980	2650	2810	3610	10200	1730	1700	1510	1690
20	2310	2670	2660	2980	2650	2780	3510	7390	1690	1650	1460	1630
21	2330	3170	3070	3010	2640	2740	3640	6660	1660	1510	1490	1600
22	2260	3360	2960	2890	2640	2790	4440	6470	1680	1520	1480	1590
23	4210	2860	2790	2830	2390	3000	4960	6150	1650	1460	1530	1550
24	6180	2750	2630	3060	2420	3400	6890	4850	1640	1450	1560	1600
25	4410	2630	2550	3030	2480	3590	6770	4950	1720	1620	1550	1590
26	3770	2640	2680	2980	2500	3750	6000	4880	1620	1610	1520	1570
27	3350	3640	2700	2980	2550	3910	5590	4680	1700	1430	1510	1550
28	3010	4940	2550	2920	2800	5660	5470	4050	1790	1440	1500	1520
29	3150	4410	2620	2910	3220	8960	5280	3900	1660	1580	1510	1580
30	3090	4210	2640	2920	---	6190	5180	3800	1660	1680	1540	1520
31	3050	---	2600	2970	---	4920	---	2890	---	1600	1530	---
TOTAL	87020	91870	85580	91870	79640	106920	184950	230020	56790	50910	48510	48600
MEAN	2807	3062	2761	2964	2746	3449	6165	7420	1893	1642	1565	1620
MAX	6180	4940	3180	3350	3220	8960	12100	16200	2810	1960	1960	2290
MIN	2070	2550	2550	2640	2390	2530	3510	2890	1620	1320	1460	1480

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2000, BY WATER YEAR (WY)

	2057	2108	2147	2157	2173	2513	3942	4293	2794	2089	1934	1984
MEAN	2057	2108	2147	2157	2173	2513	3942	4293	2794	2089	1934	1984
MAX	4894	4292	5811	4044	4294	7684	6474	10050	10560	5840	2792	6387
(WY)	1955	1991	1974	1970	1996	1936	1976	1937	1917	1996	1990	1954
MIN	1374	1413	1257	1276	1299	1376	1755	1746	1545	1524	1462	1330
(WY)	1942	1922	1953	1953	1922	1922	1965	1941	1915	1980	1995	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1914 - 2000

ANNUAL TOTAL	894690	1162680	
ANNUAL MEAN	2451	3177	2521
HIGHEST ANNUAL MEAN			4147
LOWEST ANNUAL MEAN			1689
HIGHEST DAILY MEAN	9730	Sep 17	20000
LOWEST DAILY MEAN	1430	Jul 2	795
ANNUAL SEVEN-DAY MINIMUM	1540	Aug 31	866
INSTANTANEOUS PEAK FLOW			21900
INSTANTANEOUS PEAK STAGE		9.26	May 11
10 PERCENT EXCEEDS	3270		3740
50 PERCENT EXCEEDS	2310		2020
90 PERCENT EXCEEDS	1580		1600

01064300 ELLIS RIVER NEAR JACKSON, NH

LOCATION.--Lat 44°13'08", long 71°14'59" (revised), 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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: December 1963 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,500 ft above sea level, from topographic map. Prior to October 14, 1969, at site 0.3 mi downstream at different datum.

REMARKS.--Records good except for estimated daily discharges and for Aug. 23 to Sept. 15, which are fair and for Dec. 19, Jan. 3-4, Feb. 27-28, and Sept. 16-30, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s (revised) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Nov. 3	0430	1,420	5.22	May 5	2200	817	4.16
Apr. 9	1100	* 1,600	* 5.52	Sept. 15	1430	1,080	4.64

Minimum discharge, 6.8 ft<sup>3</sup>/s, September 12, 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	28	e35	e14	11	32	39	27	27	14	18	9.5
2	41	37	e34	e15	11	26	58	41	26	13	17	13
3	34	528	e34	e20	10	24	119	33	25	13	17	12
4	32	87	34	e31	10	23	329	48	24	14	15	12
5	29	59	33	e42	10	21	132	107	24	14	13	10
6	28	50	33	e27	9.9	20	58	88	24	13	13	9.5
7	25	43	35	e23	9.8	20	45	160	27	12	14	9.3
8	24	38	31	e20	9.6	23	58	127	25	12	13	8.9
9	25	36	28	19	9.5	45	620	353	24	12	15	8.5
10	24	37	28	17	9.5	84	80	195	22	13	14	8.0
11	24	33	29	22	9.6	46	43	119	25	11	17	8.0
12	22	30	29	e18	9.3	41	35	75	26	10	17	8.3
13	21	30	26	e18	9.1	e28	30	84	24	10	13	8.6
14	62	34	25	e16	9.6	e25	28	157	23	11	25	7.9
15	36	35	24	e15	9.3	22	43	57	22	11	29	203
16	30	29	25	e14	9.1	33	79	48	21	112	20	e43
17	28	e29	23	e14	9.0	30	41	43	19	52	17	e22
18	28	e27	e22	e15	8.8	e25	32	55	18	30	16	e18
19	25	26	e20	e15	8.9	e23	29	52	18	25	14	e16
20	25	32	e20	e15	8.8	e22	28	42	16	21	14	e14
21	24	51	e60	15	8.6	e21	29	35	16	18	13	e13
22	23	37	e35	13	8.6	23	27	31	15	16	13	e12
23	225	42	e30	13	8.8	31	93	30	15	15	14	e11
24	75	40	e23	13	12	40	73	46	14	14	20	e12
25	47	37	e20	13	16	37	41	55	17	13	14	e11
26	38	40	e19	13	12	72	44	55	18	13	13	e10
27	33	231	e18	12	e22	53	34	42	15	14	12	e9.8
28	30	72	e17	12	e109	331	27	36	14	15	11	e10
29	28	50	e16	11	49	132	30	33	14	26	11	e9.9
30	27	e40	e15	11	---	57	33	30	14	24	10	e9.7
31	29	---	e14	11	---	44	---	29	---	21	9.9	---
TOTAL	1209	1888	835	527	437.8	1454	2357	2333	612	612	471.9	557.9
MEAN	39.0	62.9	26.9	17.0	15.1	46.9	78.6	75.3	20.4	19.7	15.2	18.6
MAX	225	528	60	42	109	331	620	353	27	112	29	203
MIN	21	26	14	11	8.6	20	27	27	14	10	9.9	7.9
CFSM	3.58	5.77	2.47	1.56	1.39	4.30	7.21	6.90	1.87	1.81	1.40	1.71
IN.	4.13	6.44	2.85	1.80	1.49	4.96	8.04	7.96	2.09	2.09	1.61	1.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980
MEAN	30.8	36.8	24.9	18.2	15.6	27.8	69.3	85.0	42.5	23.5	19.6	19.5					
MAX	80.9	90.1	104	57.6	109	75.6	150	159	123	60.5	62.5	65.0					
(WY)	1966	1970	1974	1986	1981	1998	1987	1984	1998	1996	1990	1999					
MIN	9.15	9.29	6.54	4.34	3.07	6.05	23.1	45.7	16.1	10.5	7.46	6.98					
(WY)	1970	1979	1979	1977	1977	1969	1995	1993	1970	1980	1980	1978					

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1964 - 2000
ANNUAL TOTAL	14909.4	13294.6	
ANNUAL MEAN	40.8	36.3	
HIGHEST ANNUAL MEAN			53.0
LOWEST ANNUAL MEAN			21.6
HIGHEST DAILY MEAN	624	Sep 17	1160
LOWEST DAILY MEAN	7.2	Sep 4	a 2.2
ANNUAL SEVEN-DAY MINIMUM	7.6	Aug 31	2.3
INSTANTANEOUS PEAK FLOW		b 1600	Apr 9
INSTANTANEOUS PEAK STAGE		5.52	Apr 9
INSTANTANEOUS LOW FLOW		d 6.8	Sep 12
ANNUAL RUNOFF (CFSM)	3.75	3.33	f
ANNUAL RUNOFF (INCHES)	50.88	45.37	3.18
10 PERCENT EXCEEDS	65	58	43.24
50 PERCENT EXCEEDS	25	24	70
90 PERCENT EXCEEDS	12	10	18
			8.4

- a Also on March 3, 4, 1980.
- b From rating curve extended above 390 ft<sup>3</sup>/s on basis of slope-area measurements at gage height 10.34 ft.
- c Gage height 10.34 ft from recorder, affected by drawdown; 18.9 ft from floodmarks, site and datum then in use.
- d Also occurred on September 14.
- e Estimated.
- f Minimum not determined, occurred during ice effect in March 1980.

SACO RIVER BASIN

0106450 SACO RIVER NEAR CONWAY, NH

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

DRAINAGE AREA.--385 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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. WRD ME-87-1: 1936 (M), 1951 (M), 1953 (M), 1960 (M), 1977 (M).

GAGE.--Water-stage recorder. Datum of gage is 418.19 ft above sea level. August 26, 1903, to June 30, 1912, nonrecording gage at site 0.8 mi downstream at different datum.

REMARKS.--Records good except those for periods of estimated daily discharges, which are fair. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft<sup>3</sup>/s, March 27, 1953, gage height, 17.20 ft; maximum gage height, 19.03 ft, March 7, 1979, (ice jam); minimum discharge, 40 ft<sup>3</sup>/s, March 16, 1932, gage height, 1.61 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	2030	9,430	8.21	Apr. 4	1715	12,400	9.04
Nov. 3	1245	9,270	8.16	Apr. 9	2045	* 18,900	* 10.59
Mar. 28	unknown	15,500	a 9.82				

Minimum discharge, 140 ft<sup>3</sup>/s, September 11,12, gage height, 2.18 ft,

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2680	878	1070	e350	e372	e1050	2450	1520	854	341	452	177
2	1370	842	973	e350	e350	e890	2450	1500	800	305	424	171
3	1090	5050	958	e418	e331	817	3340	1530	762	282	399	180
4	990	2600	911	e515	e322	746	8360	1410	704	278	372	198
5	997	1640	872	e905	e313	708	7320	1830	720	317	334	189
6	882	1350	837	e750	e308	656	4030	2120	655	293	294	172
7	797	1190	854	e650	e301	629	2950	1960	1050	260	289	163
8	732	1070	849	e580	e295	707	2660	2390	897	241	313	158
9	708	986	764	e547	e291	822	9420	2620	742	233	288	151
10	695	951	726	e542	e307	1680	7440	4350	652	247	305	145
11	656	916	812	e670	e315	1420	3630	3210	615	242	288	141
12	616	824	737	e668	e309	1200	2890	2590	668	221	412	141
13	570	795	691	e455	e296	1100	2360	1950	642	206	366	146
14	756	793	661	e370	e360	925	2050	2630	600	198	315	146
15	1000	948	642	e335	e388	918	1910	1940	556	202	610	412
16	746	830	673	e315	e378	1030	2480	1490	529	1200	478	1410
17	698	733	729	e300	e332	1460	2380	1290	503	2350	389	523
18	715	684	630	e288	e296	1110	1820	1250	491	994	343	356
19	674	659	e539	e280	e277	1020	1590	2230	493	693	313	289
20	620	647	e471	e274	e275	949	1470	1530	453	525	285	266
21	697	932	e1130	e268	e275	911	1510	1300	410	432	264	241
22	638	892	1070	e262	e271	952	1880	1200	398	378	244	219
23	3850	806	e775	e258	e271	1080	3060	1130	384	344	232	204
24	4220	798	e609	e253	e284	1440	4810	1490	351	322	258	203
25	2160	762	e534	e250	e456	1630	2990	1950	337	297	272	203
26	1600	792	e475	e404	e607	1840	2480	1670	484	275	231	195
27	1350	3010	e440	e399	e434	2230	2110	1360	419	297	213	185
28	1180	2430	e415	e369	e1150	e6300	1880	1200	372	329	203	178
29	1080	1520	e395	e356	e1800	e8500	1660	1090	329	344	195	171
30	988	1240	e375	e361	---	3920	1660	999	342	697	187	167
31	925	---	e360	e369	---	2920	---	921	---	528	182	---
TOTAL	36680	37568	21977	13111	11964	51560	97040	55650	17212	13871	9750	7500
MEAN	1183	1252	709	423	413	1663	3235	1795	574	447	315	250
MAX	4220	5050	1130	905	1800	8500	9420	4350	1050	2350	610	1410
MIN	570	647	360	250	271	629	1470	921	329	198	182	141
CFSM	3.07	3.25	1.84	1.10	1.07	4.32	8.40	4.66	1.49	1.16	.82	.65
IN.	3.54	3.63	2.12	1.27	1.16	4.98	9.38	5.38	1.66	1.34	.94	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	650	960	760	577	513	978	2627	2237	844	442	358	393																																																																																					
MAX	2369	2493	2656	1887	3170	5986	4564	4609	3644	2043	1685	1794																																																																																					
(WY)	1978	1908	1974	1986	1981	1936	1987	1940	1998	1973	1990	1954																																																																																					
MIN	114	211	152	144	124	146	871	614	300	158	129	102																																																																																					
(WY)	1948	1909	1956	1940	1940	1940	1995	1941	1964	1991	1936	1948																																																																																					

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1904 - 2000
ANNUAL TOTAL	395808	373883	
ANNUAL MEAN	1084	1022	946
HIGHEST ANNUAL MEAN			1463
LOWEST ANNUAL MEAN			489
HIGHEST DAILY MEAN	17000	Sep 17	9420
LOWEST DAILY MEAN	119	Sep 6	141
ANNUAL SEVEN-DAY MINIMUM	127	Sep 1	147
INSTANTANEOUS PEAK FLOW			18900
INSTANTANEOUS PEAK STAGE			10.59
INSTANTANEOUS LOW FLOW			140
ANNUAL RUNOFF (CFSM)	2.82	2.65	2.46
ANNUAL RUNOFF (INCHES)	38.24	36.13	33.38
10 PERCENT EXCEEDS	2400	2350	2190
50 PERCENT EXCEEDS	764	664	461
90 PERCENT EXCEEDS	223	241	185

a From floodmark.  
b Ice jam.  
c Estimated.

01064801 BEARCAMP RIVER AT SOUTH TAMWORTH, NH

LOCATION.--Lat 43°49'48", long 71°17'18", Carroll County, Hydrologic Unit 01060002, on right bank, 0.7 mi upstream of Sanger Brook, 0.8 mi east of South Tamworth, 1.0 mi downstream of Cold Brook, 1.1 mi west of Whittier.

DRAINAGE AREA.--67.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: April 1993 to current year. Published as "near South Tamworth" prior to October 1995.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 490 ft above sea level, from topographic map. Formerly published as Bear Camp River.

REMARKS.--Records good except those for estimated daily discharges, which are fair, and those for October 14, February 25-26, 28-29, and July 18-19, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft<sup>3</sup>/s (revised) and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	2130	Ice Jam	* 7.87	Apr. 4	1530	2,010	6.96
Mar. 28	1900	* 3,000	7.55	Apr. 9	1630	1,680	6.78

Minimum discharge, 8.5 ft<sup>3</sup>/s, September 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	91	153	e52	e50	e300	376	168	80	60	58	13
2	163	85	132	e53	e48	e240	361	180	71	45	52	12
3	120	241	123	e55	e46	e200	542	171	66	36	52	12
4	111	191	119	e68	43	e180	1480	151	59	31	54	13
5	119	137	114	e148	41	169	1130	159	60	28	39	12
6	102	114	108	e100	40	153	584	162	59	25	30	11
7	88	102	131	e85	39	148	402	145	161	22	36	11
8	77	108	137	e79	38	185	338	160	123	20	45	10
9	78	95	117	e75	37	257	1030	e185	90	19	37	9.8
10	78	90	108	74	38	668	783	e235	72	25	36	9.2
11	75	89	132	e225	38	442	464	351	65	24	33	8.8
12	69	80	120	e170	39	320	371	288	68	20	33	9.0
13	e63	79	107	e97	37	267	313	210	65	17	28	9.7
14	e78	87	99	e63	39	206	260	266	58	17	26	9.8
15	e112	128	94	e60	56	188	230	208	47	16	30	137
16	89	110	102	e59	55	233	248	164	45	149	30	139
17	77	95	113	e58	47	363	231	138	51	203	28	47
18	77	84	98	e54	42	258	187	133	64	e170	23	28
19	74	79	e78	e53	44	209	169	216	61	e170	21	21
20	78	79	e77	e50	44	181	159	160	54	e85	19	20
21	127	143	e210	e50	42	172	174	133	46	59	18	18
22	107	132	197	e51	41	191	310	121	48	45	16	16
23	571	113	e135	e50	41	250	646	112	57	35	16	14
24	563	106	e120	e50	49	365	760	290	45	28	39	15
25	316	102	e88	e49	e100	407	453	358	44	25	31	15
26	214	110	e75	e48	e200	468	320	276	79	21	22	14
27	167	524	e73	e46	e140	484	272	199	67	31	18	13
28	140	369	e68	e44	e380	1680	239	153	52	37	16	12
29	122	241	e63	e44	e390	1540	207	121	44	64	15	12
30	108	188	e60	e45	---	701	187	105	77	106	14	11
31	99	---	e58	e49	---	464	---	92	---	67	14	---
TOTAL	4530	4192	3409	2204	2244	11889	13226	5810	1978	1700	929	682.3
MEAN	146	140	110	71.1	77.4	384	441	187	65.9	54.8	30.0	22.7
MAX	571	524	210	225	390	1680	1480	358	161	203	58	139
MIN	63	79	58	44	37	148	159	92	44	16	14	8.8
CFSM	2.16	2.07	1.63	1.05	1.14	5.67	6.52	2.77	.98	.81	.44	.34
IN.	2.49	2.31	1.88	1.21	1.23	6.54	7.28	3.20	1.09	.94	.51	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	1993	1994	1995	1996	1997	1998	1999
MEAN	128	177	154	145	130	265	440	199	153	79.6	38.9	58.9			
MAX	258	302	410	331	242	436	632	398	811	178	91.0	243			
(WY)	1996	1996	1997	1996	1997	1998	1993	1996	1998	1996	1997	1999			
MIN	36.5	66.2	60.3	55.0	51.0	87.6	129	77.4	34.7	17.0	18.9	9.52			
(WY)	1998	1995	1998	1994	1994	1994	1995	1993	1999	1995	1995	1995			

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1993 - 2000

ANNUAL TOTAL	54277	52793.3	
ANNUAL MEAN	149	144	165
HIGHEST ANNUAL MEAN			217
LOWEST ANNUAL MEAN			94.6
HIGHEST DAILY MEAN	2290	Sep 17	5370
LOWEST DAILY MEAN	10	Sep 5	8.8
ANNUAL SEVEN-DAY MINIMUM	11	Sep 1	9.5
INSTANTANEOUS PEAK FLOW			3000
INSTANTANEOUS PEAK STAGE			a 7.87
INSTANTANEOUS LOW FLOW			b 8.5
ANNUAL RUNOFF (CFSM)	2.20		2.13
ANNUAL RUNOFF (INCHES)	29.87		29.05
10 PERCENT EXCEEDS	343		317
50 PERCENT EXCEEDS	98		82
90 PERCENT EXCEEDS	20		19

- a Ice jam.
- b Also occurred September 12.
- c Also occurred September 8, 1995.
- e Estimated.

## PISCATAQUA RIVER BASIN

## 01072100 SALMON FALLS RIVER AT MILTON, NH

**LOCATION.**--Lat 43°24'48", long 70°59'15", Strafford County, Hydrologic Unit 01060003, on right bank, 200 ft downstream from Milton Pond Dam at Milton.

**DRAINAGE AREA.**--108 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: October 1968 to current year.

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

**REMARKS.**--Records good except for the periods of shifting control due to gate openings, October 12-25, and April 23 to May 4, which are fair. Flow regulated by Great East and Lovell Lakes and Horn, Wilson, and Milton (also controls Northeast and Town House) Ponds. These reservoirs have a combined usable capacity of about 1.28 billion ft<sup>3</sup>.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 953 ft<sup>3</sup>/s, April 24, gage height, 4.66 ft; maximum gage height, 4.69 ft, March 29; minimum daily discharge 29 ft<sup>3</sup>/s, September 14.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	268	329	128	86	265	513	350	140	53	311	40
2	126	273	291	128	87	318	424	316	131	58	291	38
3	127	292	282	128	86	334	377	332	125	54	261	38
4	133	324	280	128	86	333	420	274	113	52	205	37
5	140	326	282	129	86	322	497	228	107	46	163	36
6	146	310	283	129	85	307	470	220	108	39	147	35
7	145	291	285	130	85	291	410	209	132	38	145	34
8	136	295	287	130	85	287	355	169	156	37	145	34
9	132	282	289	129	85	299	374	165	167	37	140	33
10	131	269	293	129	85	347	449	188	157	38	116	32
11	130	289	285	182	85	378	433	227	140	38	81	31
12	212	286	280	228	85	388	384	262	133	37	79	31
13	271	290	280	228	84	376	333	271	124	37	76	31
14	290	287	236	227	85	355	255	273	118	37	79	29
15	282	292	267	223	88	335	195	254	101	36	81	30
16	281	281	267	221	88	339	199	233	93	61	83	30
17	288	291	265	220	89	467	200	168	92	150	86	30
18	289	278	257	168	88	484	200	144	94	198	85	30
19	283	258	254	85	89	439	201	166	94	186	85	30
20	283	245	222	86	89	383	200	172	90	166	81	30
21	291	256	185	86	89	348	204	170	72	150	77	31
22	294	252	166	86	89	332	358	166	63	135	57	32
23	293	266	160	86	89	331	757	157	69	118	46	32
24	312	262	161	85	89	339	922	271	67	102	48	36
25	338	250	161	86	116	341	849	326	61	91	47	38
26	300	248	161	87	151	338	679	324	63	149	46	46
27	308	260	172	87	152	330	615	314	63	240	44	52
28	288	286	181	86	154	442	618	281	61	154	43	50
29	271	288	179	86	179	845	584	251	57	110	41	48
30	251	332	158	86	---	833	537	173	55	162	41	46
31	236	---	130	86	---	653	---	139	---	255	40	---
TOTAL	7134	8427	7328	4103	2834	12179	13012	7193	3046	3064	3270	1070
MEAN	230	281	236	132	97.7	393	434	232	102	98.8	105	35.7
MAX	338	332	329	228	179	845	922	350	167	255	311	52
MIN	126	245	130	85	84	265	195	139	55	36	40	29

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2000, BY WATER YEAR (WY)**

MEAN	181	197	225	180	191	323	431	225	134	68.4	61.6	77.5
MAX	499	487	604	384	439	720	908	431	650	181	165	162
(WY)	1978	1996	1984	1978	1970	1979	1969	1984	1998	1996	1982	1999
MIN	81.4	77.9	40.5	59.7	60.8	108	103	55.4	35.5	26.1	24.2	22.3
(WY)	1969	1987	1979	1977	1977	1993	1985	1985	1999	1991	1999	1993

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1969 - 2000
ANNUAL TOTAL	67705	72660	
ANNUAL MEAN	185	199	191
HIGHEST ANNUAL MEAN			307
LOWEST ANNUAL MEAN			98.6
HIGHEST DAILY MEAN	1020	Mar 5	3220
LOWEST DAILY MEAN	16	Sep 11	16
ANNUAL SEVEN-DAY MINIMUM	17	Sep 8	17
INSTANTANEOUS PEAK FLOW		a 953	4000
INSTANTANEOUS PEAK STAGE		4.69	6.70
10 PERCENT EXCEEDS	339	Mar 29	404
50 PERCENT EXCEEDS	136		135
90 PERCENT EXCEEDS	26		38

a Shifting control due to gate openings.

PISCATAQUA RIVER BASIN

01072800 COCHECO RIVER NEAR ROCHESTER, NH

LOCATION.--Lat 43°16'06", long 70°58'27", Strafford County, Hydrologic Unit 01060003, on right bank, directly behind Rochester Country Club, 0.6 mi south by southeast of Gonic, 2.5 mi south of Rochester City Hall, approximately 3.3 mi upstream from mouth of Isinglass River, and approximately 12.6 mi above mouth.

DRAINAGE AREA.-- 85.7 mi<sup>2</sup>

REVISED RECORDS.-- WDR NH-VT-97-1: Drainage area.

PERIOD OF RECORD.--Discharge records: March 1995 to current year. Published as "at Rochester" prior to October 1996.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 125 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Some regulation by small hydro plants, Sunrise and Baxter Lakes, City Dam No. 1, and the Rochester Reservoirs. Low flows diverted from Berrys River (tributary to Isinglass River) to Rochester Reservoir (head of Howard Brook) then into the Rochester City water supply system. Unknown amount of diverted flow enters the Cocheco River Basin above the gage.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,250 ft<sup>3</sup>/s, April 23, gage height, 8.50 ft; maximum gage height, 8.57 ft, March 29; minimum daily discharge, 11 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	113	128	60	e62	450	318	251	81	27	225	16
2	89	107	116	62	e61	389	263	220	73	25	179	15
3	69	134	109	63	e59	354	236	199	68	24	136	16
4	76	196	95	79	e57	320	324	182	60	23	106	19
5	109	160	94	154	e57	290	429	172	56	22	83	17
6	101	137	93	e150	e55	266	330	160	56	21	66	14
7	83	122	142	126	e55	241	265	150	116	19	58	13
8	71	112	182	101	e55	245	224	151	152	18	73	13
9	66	107	145	85	e54	268	277	194	116	17	72	12
10	68	104	121	e87	e56	326	425	192	92	21	61	12
11	79	144	119	e195	e55	326	324	255	71	20	50	12
12	77	153	110	e195	e55	285	274	282	76	17	42	11
13	70	139	103	e160	e53	352	249	220	78	15	37	17
14	106	139	95	e130	e72	327	214	211	71	17	47	16
15	94	149	88	e105	e107	289	190	191	65	23	64	21
16	92	141	97	e91	e113	311	176	158	63	114	67	29
17	88	131	109	e78	e105	504	163	136	63	178	59	29
18	98	118	100	e72	e90	494	149	130	65	115	49	25
19	105	107	84	e73	e87	369	142	153	63	78	43	21
20	112	104	77	e71	e86	306	142	150	57	57	41	27
21	168	116	158	e70	e81	282	149	135	49	44	37	27
22	157	121	190	e67	e78	281	650	128	49	38	33	24
23	240	115	146	e66	e76	290	1180	120	53	36	29	19
24	407	109	116	e63	e82	293	917	185	50	32	34	29
25	307	111	e95	e66	e140	279	632	361	42	27	32	31
26	205	112	e80	e67	e215	255	416	339	45	27	31	26
27	170	173	80	e66	e240	236	438	233	40	56	28	24
28	148	218	e68	e63	372	372	436	175	36	66	27	22
29	133	180	e60	e61	482	1020	367	141	31	72	24	18
30	125	147	e61	e59	---	590	308	108	28	121	20	15
31	116	---	64	e60	---	404	---	93	---	143	17	---
TOTAL	3935	4019	3325	2845	3160	11014	10607	5775	1965	1513	1870	590
MEAN	127	134	107	91.8	109	355	354	186	65.5	48.8	60.3	19.7
MAX	407	218	190	195	482	1020	1180	361	152	178	225	31
MIN	66	104	60	59	53	236	142	93	28	15	17	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
MEAN	116	153	148	182	199	310	288	157	131	67.5	23.5	34.2
MAX	286	329	409	359	295	415	508	268	568	161	60.3	112
(WY)	1997	1996	1997	1996	1996	1998	1997	1996	1998	1996	2000	1999
MIN	20.3	50.0	50.7	91.8	109	227	127	71.9	18.8	11.6	6.61	4.85
(WY)	1998	1999	1999	2000	2000	1996	1999	1995	1999	1995	1999	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1995 - 2000

ANNUAL TOTAL	44590.3	50618		
ANNUAL MEAN	122	138		159
HIGHEST ANNUAL MEAN				197
LOWEST ANNUAL MEAN				104
HIGHEST DAILY MEAN	928	Mar 5	1180	Apr 23
LOWEST DAILY MEAN	2.5	Sep 5	11	Sep 12
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 1	12	Sep 6
INSTANTANEOUS PEAK FLOW			1250	Apr 23
INSTANTANEOUS PEAK STAGE			8.57	Mar 29
10 PERCENT EXCEEDS	263		307	
50 PERCENT EXCEEDS	95		99	
90 PERCENT EXCEEDS	7.5		24	

e Estimated.



PISCATAQUA RIVER BASIN

01073000 OYSTER RIVER NEAR DURHAM, NH

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

DRAINAGE AREA.--12.1 mi<sup>2</sup>.

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

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

REMARKS.--Records good except those below 1.0 ft<sup>3</sup>/s, which are fair, and those for the period of Nov. 4 to Dec. 22 and for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 22	1000	* 254	* 3.79	No other peak greater than base discharge.			
Minimum discharge, 0.71 ft <sup>3</sup> /s, September 11.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	15	16	7.1	8.8	97	35	36	9.9	3.6	6.9	.87
2	4.6	13	14	7.5	8.5	82	30	33	8.1	3.0	6.7	1.1
3	3.9	17	14	9.1	7.8	70	30	29	6.9	2.6	5.6	1.3
4	6.2	17	14	14	7.7	59	60	25	5.5	2.5	4.9	1.3
5	7.4	15	14	32	7.5	52	58	23	4.8	2.4	3.6	1.3
6	5.2	13	14	e19	7.5	46	43	21	4.7	1.9	2.8	1.1
7	4.0	12	27	16	7.6	39	35	19	23	1.8	4.4	1.0
8	3.6	12	27	13	7.1	38	30	18	20	1.8	6.2	1.0
9	4.8	11	22	12	6.9	37	58	16	15	1.7	4.5	.99
10	5.7	11	20	21	6.9	41	50	18	11	3.5	4.2	1.0
11	7.8	17	19	69	7.0	35	37	36	8.1	2.6	3.2	.83
12	8.7	16	18	42	6.8	59	34	27	21	1.9	2.7	.84
13	9.3	16	16	29	6.1	80	29	22	19	1.6	2.4	1.8
14	17	16	16	20	12	62	25	26	15	1.4	7.4	1.5
15	15	16	15	e16	24	57	23	21	14	1.4	12	4.7
16	15	15	17	e14	19	61	21	17	12	12	8.7	6.3
17	21	13	17	e12	17	92	19	13	11	8.7	6.4	3.2
18	33	12	16	e10	15	70	18	12	12	5.5	4.7	2.1
19	35	12	14	e10	13	53	18	19	12	4.3	3.9	1.6
20	33	11	13	e9.7	13	46	18	17	9.9	3.1	3.3	4.7
21	20	12	25	9.1	12	43	24	13	8.0	2.3	2.6	3.9
22	13	12	23	e8.7	11	42	226	13	8.2	2.0	2.3	2.6
23	54	12	18	e8.4	12	39	170	11	9.0	1.7	1.9	2.3
24	45	12	14	e8.4	17	35	119	35	7.5	1.5	2.2	4.5
25	30	12	11	e8.4	38	32	78	48	6.4	1.3	2.0	3.6
26	23	12	9.8	8.5	47	30	63	42	7.1	1.2	1.7	2.6
27	18	22	9.3	8.2	51	27	79	30	6.8	7.0	1.5	2.3
28	15	26	8.2	7.7	86	82	65	23	6.1	7.7	1.4	2.1
29	13	20	7.6	7.1	103	89	53	20	5.1	5.2	1.2	2.2
30	12	18	7.4	e7.2	---	61	43	16	4.2	3.7	1.0	2.0
31	14	---	7.4	8.3	---	44	---	13	---	5.7	.91	---
TOTAL	503.2	438	483.7	472.4	586.2	1700	1591	712	311.3	106.6	123.21	66.63
MEAN	16.2	14.6	15.6	15.2	20.2	54.8	53.0	23.0	10.4	3.44	3.97	2.22
MAX	54	26	27	69	103	97	226	48	23	12	12	6.3
MIN	3.6	11	7.4	7.1	6.1	27	18	11	4.2	1.2	.91	.83
CFSM	1.34	1.21	1.29	1.26	1.67	4.53	4.38	1.90	.86	.28	.33	.18
IN.	1.55	1.35	1.49	1.45	1.80	5.23	4.89	2.19	.96	.33	.38	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

MEAN	7.59	18.1	22.2	19.4	22.1	47.9	48.7	24.8	12.4	5.05	3.47	4.35
MAX	65.2	62.7	55.6	58.1	84.5	122	104	97.5	71.1	33.7	22.7	52.6
(WY)	1997	1952	1997	1958	1981	1936	1956	1954	1998	1938	1991	1954
MIN	.89	1.58	2.73	2.25	3.47	13.5	13.7	8.85	2.07	.65	.52	.58
(WY)	1942	1979	1966	1981	1980	1967	1999	1957	1936	1949	1999	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1935 - 2000

ANNUAL TOTAL	5691.59	7094.24	
ANNUAL MEAN	15.6	19.4	19.6
HIGHEST ANNUAL MEAN			32.3
LOWEST ANNUAL MEAN			9.09
HIGHEST DAILY MEAN	137	Mar 1	856
LOWEST DAILY MEAN	.01	Sep 6	.01
ANNUAL SEVEN-DAY MINIMUM	.04	Sep 2	.04
INSTANTANEOUS PEAK FLOW			1160
INSTANTANEOUS PEAK STAGE			8.45
INSTANTANEOUS LOW FLOW			a .01
ANNUAL RUNOFF (CFSM)	1.29	1.60	1.62
ANNUAL RUNOFF (INCHES)	17.50	21.81	22.04
10 PERCENT EXCEEDS	36	46	48
50 PERCENT EXCEEDS	11	12	10
90 PERCENT EXCEEDS	.56	2.0	1.2

a Also occurred September 7, 1999.

e Estimated.



PISCATAQUA RIVER BASIN

01073587 EXETER RIVER AT HAIGH ROAD NEAR BRENTWOOD, NH

LOCATION.--Lat 42°59'04", long 71°02'20", Rockingham County, Hydrologic Unit 01060003, on right bank, 10 ft downstream of Haigh Road bridge over the Exeter River, 0.8 mi upstream from mouth of the Little River, 1.3 mi southwest of Marshall Corner, 1.8 mi east of Brentwood, and 3.4 mi north of Kingston.

DRAINAGE AREA.--63.5 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: June 27, 1996 to current year.

GAGE.--Water-stage recorder. Datum of gage is 60.16 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulation by power plant upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 29	----	e 570	Ice Jam	Apr. 23	0845	* 828	* 7.96

Minimum daily discharge, 5.9 ft<sup>3</sup>/s, September 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	65	104	59	e59	e520	266	268	81	26	59	8.9
2	34	59	94	57	e58	e450	224	199	75	24	60	6.2
3	29	67	86	64	e55	e390	202	203	69	22	54	7.5
4	34	81	82	77	e54	e335	205	176	49	23	51	11
5	41	92	80	119	e54	312	236	157	47	21	46	11
6	44	88	79	e140	e53	226	221	142	48	18	44	9.7
7	42	83	108	138	e52	217	201	133	103	18	44	8.4
8	39	76	153	118	e52	197	188	121	146	19	24	7.6
9	39	70	153	106	e51	180	196	114	134	16	32	6.8
10	41	67	143	105	e50	174	215	115	122	22	33	6.2
11	42	69	137	170	e54	176	206	149	107	22	28	5.9
12	41	71	126	199	e52	210	190	166	93	19	24	5.9
13	43	75	113	e160	e51	277	176	154	78	16	21	9.6
14	39	80	106	e110	e66	e285	143	160	71	14	29	10
15	34	80	103	e98	e110	279	142	147	70	12	41	19
16	33	77	102	e88	e120	266	124	126	65	36	41	24
17	34	73	102	e75	e105	302	119	116	58	50	36	20
18	45	69	99	e70	e97	346	114	106	58	45	31	17
19	51	66	90	e71	e92	312	109	106	63	46	28	15
20	58	66	e82	e68	e86	274	106	108	60	39	25	19
21	75	69	106	e66	e81	254	113	105	51	35	23	20
22	84	67	114	e64	e77	235	474	101	47	33	20	17
23	97	66	107	e62	e75	220	792	98	47	30	18	15
24	122	65	e100	e60	e82	189	735	105	42	25	19	24
25	122	69	e90	e62	e130	179	639	150	38	21	19	18
26	110	70	e81	e64	e190	174	513	158	35	20	17	13
27	104	84	e82	e62	e230	172	454	142	35	41	15	12
28	84	109	e74	e60	e390	204	409	119	34	56	13	11
29	80	122	e65	e58	e550	339	351	106	30	55	12	9.3
30	73	112	63	e56	---	342	306	92	28	50	11	8.4
31	72	---	62	e58	---	299	---	80	---	50	9.8	---
TOTAL	1818	2307	3086	2764	3176	8335	8369	4222	1984	924	927.8	376.4
MEAN	58.6	76.9	99.5	89.2	110	269	279	136	66.1	29.8	29.9	12.5
MAX	122	122	153	199	550	520	792	268	146	56	60	24
MIN	29	59	62	56	50	172	106	80	28	12	9.8	5.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2000, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	1996	1997	1998	1999	2000		
MEAN	105	68.0	121	116	172	239	196	122	117	32.4	9.47	17.6
MAX	335	132	304	133	252	304	321	169	361	80.4	29.9	55.4
(WY)	1997	1997	1997	1998	1998	1998	1997	1998	1998	1998	2000	1999
MIN	1.94	29.4	36.9	89.2	110	172	80.2	54.6	12.8	5.60	1.47	1.58
(WY)	1998	1999	1999	2000	2000	1997	1999	1999	1999	1999	1997	1997

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1996 - 2000

ANNUAL TOTAL	28901.4	38289.2	
ANNUAL MEAN	79.2	105	109
HIGHEST ANNUAL MEAN			142
LOWEST ANNUAL MEAN			67.2
HIGHEST DAILY MEAN	410	Feb 5	2630
LOWEST DAILY MEAN	1.2	Sep 2	.73
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 31	.77
INSTANTANEOUS PEAK FLOW			3060
INSTANTANEOUS PEAK STAGE			7.96
10 PERCENT EXCEEDS	185	220	11.44
50 PERCENT EXCEEDS	64	72	255
90 PERCENT EXCEEDS	2.9	18	59
			2.7

a Also occurred September 12.

e Estimated.

01074520 EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH

LOCATION.--Lat 44°02'51", long 71°39'37", Grafton County, Hydrologic Unit 01070001, on right bank at old crib dam, locally known as "the old hole", 800 ft upstream of bridge, 1900 ft downstream of Pollard Brook, 1.8 mi above mouth, east of the center of Lincoln.

DRAINAGE AREA.--115 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1993 to current year. Records for November 1928 to March 1953 at site 2.7 mi upstream published as "near Lincoln" (station 01045000) are not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 830 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, those below 200 ft<sup>3</sup>/s, and those for May 23 and Sept. 15, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 19, 1936, reached a stage of 9.80 ft, former site and datum, discharge, 17,000 ft<sup>3</sup>/s. Flood in October 1959 reached a discharge of 24,200 ft<sup>3</sup>/s, by computation of peak flow over dam.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1745	4,750	5.01	Apr. 9	1300	*a 11,800	* 7.88
Apr. 4	1030	5,060	5.16				

Minimum discharge, 49 ft<sup>3</sup>/s, September 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589	251	e365	e128	e101	234	506	399	283	104	98	59
2	363	239	e340	e132	96	184	535	571	267	93	93	59
3	306	1590	316	e160	95	157	1170	517	247	91	103	70
4	293	614	299	e190	97	141	3360	533	225	101	105	65
5	281	418	283	e370	97	130	2350	1150	215	125	81	59
6	254	356	273	177	94	121	1150	1150	217	95	69	56
7	231	315	275	197	90	116	778	1270	327	86	79	55
8	213	286	253	145	90	124	710	1360	237	84	77	53
9	225	271	226	e139	91	150	5270	1750	214	82	75	51
10	211	268	223	154	91	361	2040	1410	195	93	80	50
11	208	257	266	190	91	261	1170	1470	196	82	70	49
12	190	224	220	e160	90	225	851	996	204	74	89	51
13	176	223	205	e141	88	e193	658	747	187	70	74	61
14	327	245	194	e106	94	174	594	1530	177	68	73	55
15	285	310	184	e114	100	174	678	e790	165	70	133	509
16	245	235	190	e119	89	188	1120	e590	158	256	100	283
17	250	206	180	e111	84	e197	832	504	154	277	100	123
18	228	196	150	e127	83	e159	594	846	159	152	88	90
19	212	190	103	e110	89	e156	526	1190	162	117	78	77
20	215	193	142	e109	85	e153	490	681	139	99	74	72
21	234	418	e395	e107	83	155	528	571	129	90	72	68
22	205	302	239	e105	82	169	480	517	139	86	68	64
23	1130	302	182	e103	81	201	731	441	121	84	68	61
24	912	294	141	e101	e86	261	921	622	112	81	115	66
25	554	287	e84	e101	142	281	568	630	121	78	83	68
26	427	310	e130	e101	126	400	524	555	224	76	71	61
27	373	1930	e135	e99	115	406	488	474	144	78	68	58
28	327	956	e108	e97	e340	2370	440	418	124	82	67	57
29	301	582	e124	e95	e500	2050	407	366	104	130	63	56
30	277	456	e133	e95	---	901	479	333	114	159	62	55
31	263	---	e126	e100	---	604	---	307	---	109	61	---
TOTAL	10305	12724	6484	4183	3390	11396	30948	24688	5460	3272	2537	2561
MEAN	332	424	209	135	117	368	1032	796	182	106	81.8	85.4
MAX	1130	1930	395	370	500	2370	5270	1750	327	277	133	509
MIN	176	190	84	95	81	116	407	307	104	68	61	49
CFSM	2.89	3.69	1.82	1.17	1.02	3.20	8.97	6.93	1.58	.92	.71	.74
IN.	3.33	4.12	2.10	1.35	1.10	3.69	10.01	7.99	1.77	1.06	.82	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2000, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
MEAN	319	394	240	284	168	286	784	741	315	209	123	180
MAX	740	760	509	564	389	535	1093	1323	646	525	167	655
(WY)	1996	1996	1997	1996	1996	1998	1993	1996	1996	1996	1994	1999
MIN	96.4	139	83.5	116	90.5	95.2	264	412	179	105	81.8	67.7
(WY)	1998	1995	1998	1994	1994	1994	1995	1993	1999	1993	2000	1996

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	129511		117948			
ANNUAL MEAN	355		322		339	
HIGHEST ANNUAL MEAN					507	
LOWEST ANNUAL MEAN					202	
HIGHEST DAILY MEAN	7150		5270		7150	
LOWEST DAILY MEAN	52		49		46	
ANNUAL SEVEN-DAY MINIMUM	54		52		52	
INSTANTANEOUS PEAK FLOW			a 11800		a 16500	
INSTANTANEOUS PEAK STAGE			7.88		11.07	
INSTANTANEOUS LOW FLOW			b 49		45	
ANNUAL RUNOFF (CFSM)	3.09		2.80		2.95	
ANNUAL RUNOFF (INCHES)	41.89		38.15		40.10	
10 PERCENT EXCEEDS	676		679		744	
50 PERCENT EXCEEDS	231		177		186	
90 PERCENT EXCEEDS	93		71		78	

a From rating curve extended above 5,800 ft<sup>3</sup>/s.  
 b Also occurred on September 11, 12.  
 e Estimated.



MERRIMACK RIVER BASIN

01078000 SMITH RIVER NEAR BRISTOL, NH

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

DRAINAGE AREA.--85.8 mi<sup>2</sup>.

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 sea level (levels by U.S. Army Corps of Engineers).  
Prior to November 25, 1933, nonrecording gage at site 1.5 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to 1954, some diurnal fluctuation caused by small mill upstream; greater fluctuation prior to 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1885, that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,150 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1345	1,550	6.52	Apr. 10	0900	* 1,900	* 7.16

Minimum discharge, 10 ft<sup>3</sup>/s, September 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	67	120	45	49	e420	450	220	81	83	312	16
2	170	64	94	45	49	345	393	206	74	61	182	16
3	119	202	100	52	47	281	429	190	69	48	122	15
4	120	304	97	83	46	224	845	164	61	44	89	17
5	149	204	111	e185	45	192	920	152	57	42	65	16
6	128	145	110	143	45	167	707	147	61	36	50	14
7	100	117	141	117	44	158	473	142	237	32	54	13
8	86	101	142	98	43	188	361	141	205	30	59	12
9	82	91	118	84	43	e275	1130	234	126	29	51	12
10	80	86	104	92	43	e560	1700	209	95	43	49	12
11	83	87	111	263	43	e500	975	349	77	50	44	11
12	79	83	100	254	44	369	642	346	80	38	37	11
13	71	80	94	e145	44	e300	455	242	86	31	34	12
14	80	89	87	e92	46	e230	354	247	88	28	36	11
15	98	108	86	e78	68	215	304	215	88	26	50	26
16	87	102	94	e65	73	231	272	167	80	108	53	45
17	77	87	104	e53	65	359	240	144	73	158	52	33
18	74	76	e92	e48	55	e270	207	133	99	110	45	24
19	70	72	e70	49	53	e220	188	162	95	77	37	19
20	70	71	69	49	53	e185	177	152	78	56	33	34
21	83	94	134	49	51	e180	190	138	63	45	29	38
22	80	98	158	48	49	218	395	132	59	41	27	28
23	112	88	e110	46	48	308	649	123	70	36	27	23
24	185	84	e88	45	52	441	653	213	65	32	30	26
25	149	83	58	45	89	488	478	300	54	29	27	24
26	116	91	56	47	146	516	345	227	86	27	25	23
27	97	206	57	e46	177	555	387	162	93	37	22	21
28	85	296	45	e45	279	1060	399	131	88	38	20	18
29	78	205	44	e45	e450	1270	338	114	66	35	19	16
30	73	150	46	e44	---	898	273	101	85	43	18	15
31	69	---	46	e47	---	603	---	91	---	174	18	---
TOTAL	3205	3631	2886	2547	2339	12226	15329	5694	2639	1667	1716	601
MEAN	103	121	93.1	82.2	80.7	394	511	184	88.0	53.8	55.4	20.0
MAX	255	304	158	263	450	1270	1700	349	237	174	312	45
MIN	69	64	44	44	43	158	177	91	54	26	18	11
CFSM	1.20	1.41	1.09	.96	.94	4.60	5.96	2.14	1.03	.63	.65	.23
IN.	1.39	1.57	1.25	1.10	1.01	5.30	6.65	2.47	1.14	.72	.74	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2000, BY WATER YEAR (WY)

MEAN	73.8	131	133	102	98.8	254	483	226	104	53.7	37.3	41.5
MAX	279	379	393	300	578	1242	1077	504	391	387	340	457
(WY)	1997	1928	1974	1996	1981	1936	1969	1954	1998	1973	1990	1938
MIN	8.45	24.9	22.3	19.2	20.6	29.7	134	71.5	20.5	9.00	4.54	7.62
(WY)	1948	1972	1923	1940	1980	1940	1995	1941	1964	1965	1965	1948

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1918 - 2000

ANNUAL TOTAL	50562.0		54480		145		1996	
ANNUAL MEAN	139		149		64.7		1965	
HIGHEST ANNUAL MEAN					240		1996	
LOWEST ANNUAL MEAN					64.7		1965	
HIGHEST DAILY MEAN	1770	Sep 17	1700	Apr 10	6890	Mar 19	1936	
LOWEST DAILY MEAN	6.9	Sep 6	a 11	Sep 11	2.7	Aug 2	1933	
ANNUAL SEVEN-DAY MINIMUM	7.9	Sep 1	12	Sep 8	3.2	Sep 20	1939	
INSTANTANEOUS PEAK FLOW			1900	Apr 10	b 8100	Mar 19	1936	
INSTANTANEOUS PEAK STAGE			7.16	Apr 10	c 16.09	Mar 19	1936	
INSTANTANEOUS LOW FLOW			d 10	Sep 10	2.7	Aug 2	1933	
ANNUAL RUNOFF (CFSM)	1.61		1.73		1.69			
ANNUAL RUNOFF (INCHES)	21.92		23.62		22.92			
10 PERCENT EXCEEDS	289		345		349			
50 PERCENT EXCEEDS	87		86		67			
90 PERCENT EXCEEDS	13		28		17			

- a Also occurred September 12, 14.
- b From rating curve extended above 2,700 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow.
- c From floodmarks.
- d Also occurred September 11.
- e Estimated.

## MERRIMACK RIVER BASIN

## 01079602 POORFARM BROOK AT ELLACOYA STATE PARK NEAR GILFORD, NH

**LOCATION.**--Lat 43°34'22", long 71°21'20", Belknap County, Hydrologic Unit 01070002, on right bank at old highway 11 bridge, 250 ft downstream from State highway 11 bridge, 950 ft upstream from mouth, 3.1 mi northeast of Gilford, and 5.9 mi southeast of Weirs Beach.

**DRAINAGE AREA.**--6.38 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: June 1998 to current year.

**GAGE.**--Water-stage recorder and crest stage gage. Elevation of gage is 515 ft above sea level, from topographic map.

**REMARKS.**--Records good except those for estimated daily discharges and for Mar. 21-23 and 29, which are fair, and Mar. 28, which is poor.

**EXTREMES FOR CURRENT YEAR.**--Peak discharge greater than base discharge of 110 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	0615	Ice Jam	* 5.70	Mar. 28	1715	* 165	4.67

Minimum discharge, 0.85 ft<sup>3</sup>/s, September 12.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	6.4	8.5	e3.7	3.0	25	33	23	6.8	4.2	25	1.3
2	13	5.3	7.2	3.6	2.4	22	32	21	6.7	3.3	21	1.3
3	10	9.1	8.1	5.1	2.3	19	37	14	5.9	2.7	16	1.3
4	16	7.2	7.9	8.1	2.2	16	60	12	5.6	2.7	10	2.6
5	18	6.4	8.0	e15	2.2	15	46	13	6.3	3.2	7.8	2.7
6	12	6.1	8.0	e7.5	2.3	13	39	11	6.2	2.1	6.5	1.9
7	10	5.6	13	e7.0	2.2	13	35	11	19	1.8	7.9	1.7
8	8.9	5.6	12	5.8	2.2	16	32	11	10	1.7	8.5	1.4
9	9.4	5.5	8.8	5.5	2.2	27	52	11	8.1	1.7	6.4	1.3
10	8.5	5.9	8.6	19	2.2	46	39	11	6.1	2.4	5.9	1.2
11	8.2	7.0	8.0	23	2.6	32	33	25	5.4	1.9	5.5	1.0
12	7.1	4.6	6.6	14	2.9	27	33	21	6.6	1.5	4.1	.91
13	6.7	5.8	6.8	e8.0	3.0	21	29	14	6.1	1.4	3.6	1.2
14	7.8	6.2	6.6	e5.0	4.5	e18	26	15	6.1	1.3	5.2	1.0
15	7.3	6.3	6.4	e4.2	5.9	e23	24	12	5.5	1.3	8.5	3.5
16	6.4	4.8	8.2	e4.1	4.4	38	19	10	5.1	12	7.2	3.6
17	6.3	3.9	7.5	e3.7	3.9	39	15	9.3	6.8	6.7	5.7	2.1
18	8.9	3.7	e5.5	e3.3	3.5	e28	13	10	7.1	9.2	4.6	1.5
19	8.8	3.8	e4.8	e3.1	4.0	e26	13	12	6.4	7.6	4.1	1.3
20	9.0	5.3	e5.5	e3.0	3.7	e24	12	9.9	4.6	4.5	3.5	2.5
21	9.5	7.1	e14	e2.8	3.4	27	15	9.4	3.7	3.2	3.1	2.2
22	9.3	6.0	9.9	e2.8	3.3	30	32	8.6	3.8	2.8	2.9	1.5
23	40	6.0	8.0	e2.7	3.7	31	47	7.9	4.0	2.2	2.8	1.4
24	40	7.7	e7.0	e2.7	6.0	32	43	20	3.1	1.8	3.0	2.3
25	29	8.3	e5.8	2.6	e20	32	33	23	7.6	1.7	2.7	2.0
26	16	10	e5.3	2.5	e14	36	31	20	15	1.5	2.5	1.6
27	12	29	e5.0	2.5	e11	35	33	15	12	5.1	2.1	1.4
28	8.0	27	e4.1	2.4	e27	73	29	11	6.9	5.1	1.9	1.2
29	8.1	17	e3.9	2.3	e40	56	27	9.9	4.9	18	1.8	1.1
30	7.6	11	e4.0	2.3	---	38	25	8.6	5.4	21	1.7	1.0
31	7.3	---	e3.9	2.6	---	35	---	7.7	---	28	1.6	---
TOTAL	391.1	243.6	226.9	179.9	190.0	913	937	417.3	206.8	163.6	193.1	51.01
MEAN	12.6	8.12	7.32	5.80	6.55	29.5	31.2	13.5	6.89	5.28	6.23	1.70
MAX	40	29	14	23	40	73	60	25	19	28	25	3.6
MIN	6.3	3.7	3.9	2.3	2.2	1.3	1.2	7.7	3.1	1.3	1.6	.91
CFSM	1.98	1.27	1.15	.91	1.03	4.62	4.90	2.11	1.08	.83	.98	.27
IN.	2.28	1.42	1.32	1.05	1.11	5.32	5.46	2.43	1.21	.95	1.13	.30

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)**

	1998	1999	2000	1999	2000	2000	1999	2000	1998	1999	2000	
MEAN	10.8	6.86	6.34	9.17	9.51	30.0	26.7	10.3	20.3	6.71	3.12	10.8
MAX	12.6	8.12	7.32	12.5	12.6	30.6	31.2	13.5	52.0	13.9	6.23	29.1
(WY)	2000	2000	2000	1999	1999	1999	2000	2000	1998	1998	2000	1999
MIN	8.95	5.60	5.35	5.80	6.55	29.5	22.1	7.15	1.88	.99	.60	1.50
(WY)	1999	1999	1999	2000	2000	2000	1999	1999	1999	1999	1999	1998

**SUMMARY STATISTICS**

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1998 - 2000
ANNUAL TOTAL	4415.49	4113.31	
ANNUAL MEAN	12.1	11.2	11.3
HIGHEST ANNUAL MEAN			11.4
LOWEST ANNUAL MEAN			11.2
HIGHEST DAILY MEAN	264	73	e 398
LOWEST DAILY MEAN	.23	.91	a .23
ANNUAL SEVEN-DAY MINIMUM	.24	1.1	.24
INSTANTANEOUS PEAK FLOW		165	e 730
INSTANTANEOUS PEAK STAGE		b 5.70	c 7.33
INSTANTANEOUS LOW FLOW		.85	.20
ANNUAL RUNOFF (CFSM)	1.90	1.76	1.78
ANNUAL RUNOFF (INCHES)	25.75	23.98	24.12
10 PERCENT EXCEEDS	29	29	30
50 PERCENT EXCEEDS	7.2	6.9	5.8
90 PERCENT EXCEEDS	.55	2.0	1.2

- a Also occurred on September 5, 6, and 9.  
 b Ice jam.  
 c Maximum observed gage height.  
 e Estimated.

MERRIMACK RIVER BASIN

01079900 SHANNON BROOK NEAR MOULTONBOROUGH, NH

**LOCATION.**--Lat 43°43'49", long 71°21'28", Carroll County, Hydrologic Unit 01070002, on left bank 20 ft downstream from State Highway 109 bridge, 1.4 mi upstream from mouth, 2.5 mi southeast of Moultonborough, and 4.0 mi northwest of Melvin Village.

**DRAINAGE AREA.**--6.99 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: August 1998 to current year.

**GAGE.**--Water-stage recorder and crest stage gage. Elevation of gage is 545 ft above sea level, from topographic map.

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

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 120 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1715	* 214	* 6.52	Apr. 4	1245	124	5.84

Minimum discharge, 0.63 ft<sup>3</sup>/s, September 10-12, 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	8.7	12	e5.5	e5.2	33	26	15	7.5	3.1	9.7	1.1
2	11	8.2	11	5.8	e4.6	28	25	16	6.8	2.4	7.9	1.0
3	9.3	13	10	6.8	e4.6	24	34	14	6.1	2.8	6.7	1.2
4	10	11	10	8.3	e4.5	22	97	13	5.4	2.4	5.7	1.3
5	11	9.0	10	e14	e4.4	21	74	13	5.4	2.2	4.4	1.2
6	8.8	8.7	9.9	e8.5	e4.5	19	41	11	5.3	1.6	3.6	.89
7	7.4	7.5	15	8.3	e4.4	21	31	11	21	1.8	5.1	.82
8	6.5	6.9	13	7.4	e4.3	27	26	9.8	11	1.4	4.8	.77
9	7.5	6.5	11	6.8	e4.2	35	53	13	8.4	1.4	4.1	.73
10	7.4	6.8	10	12	e4.2	71	41	14	6.6	3.3	4.6	.66
11	6.9	10	12	30	e4.3	37	28	34	6.0	2.0	3.4	.63
12	5.7	8.0	10	15	4.2	33	28	25	7.0	1.4	2.9	e.67
13	5.3	8.5	9.6	10	4.2	30	24	19	6.1	1.2	2.8	1.1
14	7.5	11	9.2	6.4	e6.9	25	20	26	5.3	1.5	3.1	.87
15	6.9	15	8.8	6.5	e8.3	24	18	18	5.2	2.6	3.8	2.7
16	6.1	11	9.8	e6.3	6.5	31	17	15	5.0	12	3.5	3.3
17	5.8	9.1	9.4	e6.0	5.4	43	15	13	5.5	8.6	3.0	1.6
18	7.0	8.3	8.0	e5.6	5.9	30	13	13	6.4	18	2.5	1.3
19	6.1	7.9	e6.9	e5.4	6.0	27	13	14	6.0	23	2.7	1.1
20	7.6	7.9	e7.1	e5.2	5.3	22	12	13	4.5	10	2.4	1.3
21	11	13	28	e5.1	4.9	21	15	11	3.9	6.6	2.0	1.2
22	8.3	10	17	e5.1	4.6	24	30	11	5.7	5.0	1.8	.90
23	47	9.4	e12	e5.0	5.1	28	46	9.7	9.2	3.8	1.8	.83
24	39	9.7	e10	e5.0	7.5	33	60	27	5.0	3.1	2.6	1.8
25	22	9.4	e8.5	e4.9	21	33	35	26	4.2	2.8	1.9	e1.4
26	17	10	e7.9	e4.7	20	37	27	20	5.1	2.5	1.5	1.0
27	14	29	e7.4	e4.8	15	35	29	15	4.1	5.6	1.4	.88
28	13	26	e6.7	e4.6	54	109	24	13	3.3	5.0	1.3	.83
29	11	18	6.3	e4.6	48	82	20	11	2.8	5.8	1.3	.72
30	10	14	6.6	e4.6	---	43	17	9.9	4.4	15	1.2	.77
31	9.5	---	6.1	e4.9	---	31	---	8.5	---	12	1.2	---
TOTAL	363.6	331.5	319.2	233.1	282.0	1079	939	481.9	188.2	169.9	104.7	34.57
MEAN	11.7	11.1	10.3	7.52	9.72	34.8	31.3	15.5	6.27	5.48	3.38	1.15
MAX	47	29	28	30	54	109	97	34	21	23	9.7	3.3
MIN	5.3	6.5	6.1	4.6	4.2	19	12	8.5	2.8	1.2	1.2	.63
CFSM	1.68	1.58	1.47	1.08	1.39	4.98	4.48	2.22	.90	.78	.48	.16
IN.	1.94	1.76	1.70	1.24	1.50	5.74	5.00	2.56	1.00	.90	.56	.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2000, BY WATER YEAR (WY)

	1998	1999	2000	1998	1999	2000	1998	1999	2000	1998	1999	2000
MEAN	11.1	10.4	8.60	10.7	11.3	33.7	22.9	10.8	3.88	3.33	2.82	7.35
MAX	11.7	11.1	10.3	13.8	13.0	34.8	31.3	15.5	6.27	5.48	3.99	18.1
(WY)	2000	2000	2000	1999	1999	2000	2000	2000	2000	2000	1998	1999
MIN	10.5	9.82	6.91	7.52	9.72	32.5	14.6	6.02	1.49	1.18	1.08	1.15
(WY)	1999	1999	1999	2000	2000	1999	1999	1999	1999	1999	1999	2000

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1998 - 2000

ANNUAL TOTAL		4096.95		4526.67		
ANNUAL MEAN		11.2		12.4		11.5
HIGHEST ANNUAL MEAN						12.4
LOWEST ANNUAL MEAN						10.7
HIGHEST DAILY MEAN		190	Sep 17	109	Mar 28	190
LOWEST DAILY MEAN		.20	Sep 6	.63	Sep 11	.20
ANNUAL SEVEN-DAY MINIMUM		.29	Sep 1	.74	Sep 6	.29
INSTANTANEOUS PEAK FLOW				214	Mar 28	333
INSTANTANEOUS PEAK STAGE				6.52	Mar 28	7.22
INSTANTANEOUS LOW FLOW				a .63	Sep 10	.15
ANNUAL RUNOFF (CFSM)		1.61		1.77		1.65
ANNUAL RUNOFF (INCHES)		21.80		24.09		22.45
10 PERCENT EXCEEDS		25		28		26
50 PERCENT EXCEEDS		7.6		7.9		6.4
90 PERCENT EXCEEDS		.68		1.5		1.1

a Also occurred September 11, 12, 29.  
e Estimated.



## MERRIMACK RIVER BASIN

## 01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH

**LOCATION.**--Lat 43°36'27", long 71°27'32, Belknap County, Hydrologic Unit 01070002, 600 ft east of Weirs Beach Post Office, 1,600 ft north of US Highway 3 bridge at Weirs Beach, 5.3 mi north of Laconia Post Office.

**DRAINAGE AREA.**--363 mi<sup>2</sup>, 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). WDR NH-VT-99-1: 1998 (†).

**GAGE.**--Water-stage recorder. Datum of gage is 499.92 ft above sea level. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.63 ft, (corrected) higher. November 24, 1937 to November 7, 1965, water-stage recorder at site 500 ft southeast at present datum.

**REMARKS.**--Lake used for recreation and conservation for development of water power. Usable capacity, 7.22 billion ft<sup>3</sup> between elevations 500.57 ft and 504.24 ft above sea level. Stage regulated at outlet and by Wentworth, Merrymeeting, and other lakes. Contents given herein are computed from gage height at 2400 on last day of month.

Capacity table (gage height, in feet, and contents,  
in millions of cubic feet), furnished by State of New Hampshire,  
Department of Environmental Services

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 gage height, 0.63 ft, December 11, 1941.

**EXTREMES FOR CURRENT YEAR.**--Maximum daily gage height, 4.32 ft, April 11; minimum daily gage height, 2.27 ft, February 13.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.35	3.23	2.81	2.69	2.46	2.62	4.12	3.97	4.16	4.05	4.07	3.30
2	3.34	3.22	2.79	2.67	2.43	2.65	4.14	3.95	4.15	4.04	4.05	3.31
3	3.32	3.22	2.79	2.66	2.42	2.66	4.16	3.94	4.11	4.03	4.03	3.28
4	3.34	3.17	2.78	2.69	2.40	2.69	4.25	3.92	4.12	4.02	4.00	3.27
5	3.32	3.15	2.79	2.67	2.38	2.72	4.27	3.90	4.10	4.00	3.97	3.24
6	3.26	3.12	2.79	2.69	2.36	2.74	4.28	3.91	4.10	3.97	3.94	3.21
7	3.21	3.07	2.78	2.68	2.34	2.76	4.27	3.90	4.13	3.95	3.94	3.18
8	3.19	3.03	2.78	2.66	2.31	2.80	4.26	3.91	4.12	3.91	3.91	3.15
9	3.16	3.01	2.79	2.65	2.30	2.83	4.30	3.94	4.10	3.91	3.89	3.14
10	3.16	2.99	2.78	2.67	2.29	2.91	4.30	3.96	4.11	3.92	3.86	3.13
11	3.12	3.00	2.69	2.72	2.29	2.98	4.32	4.01	4.09	3.88	3.86	3.10
12	3.10	2.98	2.72	2.69	2.28	3.11	4.30	4.04	4.07	3.86	3.83	3.08
13	3.11	2.96	2.73	2.69	2.27	3.15	4.28	4.05	4.05	3.85	3.80	3.06
14	3.08	2.94	2.73	2.62	2.34	3.20	4.26	4.06	4.04	3.86	3.79	3.05
15	3.10	2.89	2.73	2.65	2.37	3.23	4.22	4.05	4.02	3.87	3.78	3.07
16	3.11	2.85	2.72	2.66	2.38	3.27	4.17	4.05	4.00	3.96	3.75	3.04
17	3.11	2.83	2.70	2.63	2.37	3.38	4.13	4.05	4.01	3.96	3.71	3.00
18	3.13	2.83	2.69	2.62	2.38	3.44	4.08	4.05	4.03	3.96	3.69	2.98
19	3.14	2.82	2.69	2.61	2.43	3.48	4.03	4.07	4.04	3.96	3.66	2.97
20	3.15	2.81	2.69	2.59	2.44	3.51	3.97	4.07	4.02	3.97	3.60	2.99
21	3.16	2.82	2.75	2.56	2.44	3.53	3.95	4.07	4.02	3.96	3.55	2.95
22	3.19	2.81	2.76	2.53	2.44	3.55	4.01	4.06	4.03	3.96	3.54	2.92
23	3.26	2.80	2.77	2.53	2.43	3.57	4.04	4.05	4.03	3.94	3.51	2.92
24	3.33	2.79	2.75	2.51	2.43	3.59	4.07	4.12	4.03	3.94	3.49	2.91
25	3.33	2.79	2.75	2.51	2.47	3.63	4.08	4.15	4.02	3.93	3.46	2.89
26	3.34	2.82	2.75	2.53	2.50	3.66	4.07	4.17	4.08	3.93	3.44	2.88
27	3.32	2.84	2.72	2.51	2.52	3.69	4.08	4.18	4.08	3.96	3.41	2.85
28	3.31	2.85	2.73	2.49	2.55	3.84	4.07	4.20	4.07	3.96	3.39	2.81
29	3.29	2.86	2.72	2.48	2.58	4.00	4.04	4.20	4.06	3.96	3.36	2.80
30	3.28	2.85	2.71	2.46	---	4.06	4.00	4.19	4.06	4.02	3.33	2.77
31	3.24	---	2.70	2.47	---	4.10	---	4.17	---	4.05	3.32	---
MEAN	3.22	2.94	2.74	2.61	2.40	3.27	4.15	4.04	4.07	3.95	3.71	3.04
MAX	3.35	3.23	2.81	2.72	2.58	4.10	4.32	4.20	4.16	4.05	4.07	3.31
MIN	3.08	2.79	2.69	2.46	2.27	2.62	3.95	3.90	4.00	3.85	3.32	2.77
(†)	16,200	15,550	15,270	14,820	15,040	18,060	17,780	18,180	17,920	17,960	16,420	15,350
(‡)	-119	-251	-105	-168	+88	+1,130	-108	+149	-100	+15	-575	-413

CAL YR 1999 MEAN 3.04 MAX 3.62 MIN 2.38 (†) -8.2

WTR YR 2000 MEAN 3.35 MAX 4.32 MIN 2.27 (†) -37

(†) Millions of cubic feet at 2400 on last day of month.

(‡) Change in contents equivalent in cubic feet per second.



MERRIMACK RIVER BASIN

01081000 WINNIPESAUKEE RIVER AT TILTON, NH

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

DRAINAGE AREA.--471 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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 sea level.

REMARKS.--Records good except for estimated daily discharges, which are fair. Flow regulated by powerplants prior to 1967 and by Winnepesaukee (station 01080000), Winnisquam 4.5 mi upstream, Wentworth, Merrymeeting, and other lakes upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,620 ft<sup>3</sup>/s, April 10, gage height 6.52 ft; minimum daily discharge, 110 ft<sup>3</sup>/s, October 17, 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614	789	602	548	776	504	1590	1930	635	356	737	300
2	604	797	597	548	775	467	1560	1630	612	337	867	300
3	584	816	597	551	773	542	1590	1460	592	333	850	296
4	602	922	601	574	771	654	1900	1340	590	331	834	301
5	768	1040	601	600	767	649	2180	1140	590	328	824	293
6	892	1030	599	578	767	639	2200	888	678	323	818	287
7	846	1030	608	575	765	661	2170	851	930	320	832	283
8	829	1020	686	568	722	675	2120	806	940	316	834	283
9	819	925	825	563	543	710	2310	667	889	318	835	284
10	839	815	829	587	517	680	2600	644	860	324	830	283
11	839	820	821	784	519	515	2460	789	845	321	819	282
12	534	828	820	892	519	464	2370	967	762	317	807	284
13	153	831	809	e840	e516	478	2300	919	624	313	798	293
14	130	832	714	e790	546	551	2200	901	612	310	812	290
15	124	838	579	e800	548	682	2150	885	608	309	756	311
16	114	740	571	795	544	715	2110	782	530	344	601	328
17	e110	599	573	e790	e539	836	2070	654	372	354	584	327
18	e111	581	569	e780	e534	780	2020	643	373	353	569	320
19	e110	579	560	779	532	720	2010	659	370	340	563	316
20	122	580	469	780	521	782	1990	664	362	329	559	330
21	135	595	393	e780	516	893	2000	660	355	326	558	328
22	132	663	387	e770	512	914	2200	726	356	324	555	324
23	165	825	359	738	511	941	2330	857	366	317	556	320
24	225	774	339	829	473	965	2350	913	363	313	557	326
25	374	609	326	792	361	968	2250	870	359	312	555	322
26	793	596	321	780	357	965	2150	942	448	372	555	318
27	672	630	321	776	369	1010	2200	939	607	540	553	311
28	615	661	316	775	448	1520	2210	909	607	554	552	306
29	707	634	314	777	532	2020	2170	892	591	551	549	302
30	810	612	404	774	---	1840	2120	878	506	568	474	299
31	813	---	536	779	---	1720	---	778	---	642	317	---
TOTAL	15185	23011	17046	22292	16573	26460	63880	28583	17332	11395	20910	9147
MEAN	490	767	550	719	571	854	2129	922	578	368	675	305
MAX	892	1040	829	892	776	2020	2600	1930	940	642	867	330
MIN	110	579	314	548	357	464	1560	643	355	309	317	282

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2000, BY WATER YEAR (WY)

	424	526	719	848	933	969	1164	971	709	469	409	405
MEAN	424	526	719	848	933	969	1164	971	709	469	409	405
MAX	1257	1304	2209	1855	1889	2043	2745	2605	2821	1922	897	954
(WY)	1978	1976	1984	1952	1958	1983	1953	1954	1984	1998	1986	1938
MIN	219	235	136	145	158	418	420	217	201	179	181	182
(WY)	1958	1972	1942	1942	1942	1989	1948	1957	1957	1957	1957	1957

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1937 - 2000

ANNUAL TOTAL	234078	271814										
ANNUAL MEAN	641	743								708		
HIGHEST ANNUAL MEAN										1229		1984
LOWEST ANNUAL MEAN										304		1965
HIGHEST DAILY MEAN	1820	Mar 5	2600	Apr 10	4480	May 31	1984					
LOWEST DAILY MEAN	110	Oct 17	ae 110	Oct 17	48	Aug 31	1941					
ANNUAL SEVEN-DAY MINIMUM	117	Oct 14	117	Oct 14	73	Oct 11	1995					
INSTANTANEOUS PEAK FLOW			2620	Apr 10	4580	May 31	1984					
INSTANTANEOUS PEAK STAGE			6.52	Apr 10	8.68	May 31	1984					
10 PERCENT EXCEEDS	1480		1480							1440		
50 PERCENT EXCEEDS	535		612							537		
90 PERCENT EXCEEDS	242		314							267		

a Also occurred October 19.  
e Estimated.



MERRIMACK RIVER BASIN

01089100 SOUCCOOK RIVER AT PEMBROKE ROAD NEAR CONCORD, NH

LOCATION.--Lat 43°12'47", long 71°28'49", Merrimack County, Hydrologic Unit 01070002, on left bank, 100 ft upstream of Pembroke Road bridge, 500 ft east of State Highway 106, 1.4 mi downstream from U.S. Highways 4 and 202, and State Highway 9.

DRAINAGE AREA.--81.9 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1988 to current year. Records for October 1951 to September 1987, at site 0.9 mi upstream, published "near Concord" (station 01089000) are not equivalent because of difference in drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 270 ft above sea level, from topographic map.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1951, 14.50 ft, former site and datum, March 17, 1977, discharge 3,700 ft<sup>3</sup>/s. Minimum discharge since 1951, 1.5 ft<sup>3</sup>/s, former site and datum, August 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 29	0700	* 1,000	* 8.60	No other peak greater than base discharge.			
Minimum discharge, 14 ft <sup>3</sup> /s, September 12, 13.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	91	126	69	e57	426	288	233	100	65	214	22
2	127	88	109	68	e56	387	246	207	90	56	154	22
3	101	136	104	73	e54	352	239	184	84	49	115	21
4	108	161	103	92	e52	317	363	174	76	46	96	22
5	161	133	106	e140	e51	292	421	155	72	43	80	20
6	135	113	105	e150	e50	270	325	140	72	38	66	19
7	108	100	157	114	e50	248	268	130	176	35	65	17
8	92	93	195	95	50	257	233	124	190	33	89	16
9	101	85	159	85	49	289	383	175	136	32	78	16
10	92	87	138	87	51	366	569	179	109	43	65	16
11	103	102	132	193	50	335	384	279	93	41	56	15
12	99	107	119	195	50	309	321	316	110	34	49	15
13	103	102	106	158	48	350	290	234	122	30	44	19
14	119	105	104	e125	e59	297	245	209	103	29	47	20
15	105	122	101	e100	e95	277	216	184	94	30	80	24
16	90	117	107	e86	e102	300	194	156	83	85	79	40
17	83	106	112	e73	e90	525	175	134	86	115	71	33
18	93	91	104	e67	e78	436	161	126	111	79	59	27
19	92	86	e94	e68	75	351	157	174	105	60	50	23
20	92	85	e92	e66	73	301	149	169	89	49	43	50
21	129	94	163	e64	69	282	154	149	73	41	38	54
22	125	95	181	e62	66	285	416	138	72	41	35	38
23	162	89	146	e60	64	293	543	127	97	38	33	31
24	295	89	e130	e58	70	299	570	180	78	34	38	45
25	223	88	e115	e60	127	290	412	331	64	31	35	51
26	174	89	e110	e62	203	277	321	308	91	29	31	41
27	145	138	e92	e60	228	264	391	226	98	49	29	34
28	125	222	81	e58	352	435	384	175	83	80	27	30
29	110	182	e76	e56	473	877	323	147	69	58	25	27
30	101	147	75	e54	---	529	271	125	70	64	23	24
31	95	---	73	e55	---	366	---	109	---	152	22	---
TOTAL	3840	3343	3615	2753	2892	10882	9412	5697	2896	1609	1936	832
MEAN	124	111	117	88.8	99.7	351	314	184	96.5	51.9	62.5	27.7
MAX	295	222	195	195	473	877	570	331	190	152	214	54
MIN	83	85	73	54	48	248	149	109	64	29	22	15
CFSM	1.51	1.36	1.42	1.08	1.22	4.29	3.83	2.24	1.18	.63	.76	.34
IN.	1.74	1.52	1.64	1.25	1.31	4.94	4.28	2.59	1.32	.73	.88	.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2000, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	84.4	130	137	133	130	234	265	164	94.7	44.3	37.1	38.6	
MAX	168	289	368	420	350	417	429	333	441	127	95.4	140	
(WY)	1992	1996	1997	1996	1996	1998	1993	1996	1998	1998	1990	1999	
MIN	12.7	30.6	35.2	35.8	34.6	134	120	55.5	16.1	11.6	13.0	8.33	
(WY)	1998	1995	1999	1989	1993	1992	1999	1999	1999	1993	1999	1995	

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1988 - 2000	
ANNUAL TOTAL	38552.2	49707		
ANNUAL MEAN	106	136	125	
HIGHEST ANNUAL MEAN			198	1996
LOWEST ANNUAL MEAN			84.3	1999
HIGHEST DAILY MEAN	750	Sep 17	877	Mar 29
LOWEST DAILY MEAN	7.4	Aug 7	a 15	Sep 11
ANNUAL SEVEN-DAY MINIMUM	8.1	Aug 2	16	Sep 6
INSTANTANEOUS PEAK FLOW			1000	Mar 29
INSTANTANEOUS PEAK STAGE			8.60	Mar 29
INSTANTANEOUS LOW FLOW			b 14	Sep 12
ANNUAL RUNOFF (CFSM)	1.29		1.66	
ANNUAL RUNOFF (INCHES)	17.51		22.58	
10 PERCENT EXCEEDS	230		300	284
50 PERCENT EXCEEDS	89		100	75
90 PERCENT EXCEEDS	11		34	15

a Also occurred September 12.  
b Also occurred September 13.  
c Also occurred September 16, 1995 and October 4, 1995.  
e Estimated.





MERRIMACK RIVER BASIN

010965852 BEAVER BROOK AT NORTH PELHAM, NH

**LOCATION.**--Lat 42°46'59", long 71°21'14", Rockingham County, Hydrologic Unit 01070002, on right bank, 10 ft downstream from highway bridge at the Windham-Pelham town line, 0.7 mi north of North Pelham, 1.3 mi south of West Windham (junction of State Routes 128 and 111), and 4.7 mi north of Pelham.

**DRAINAGE AREA.**--47.8 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: October 1986 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 170 ft above sea level, from topographic map.

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

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 29	0145	410	8.81	Apr. 22	2030	* 710	* 10.14

Minimum discharge, 4.00 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	38	42	31	e32	323	165	176	44	19	52	5.5
2	20	39	42	31	e32	270	138	152	43	12	43	6.9
3	17	67	42	33	e31	227	122	136	47	14	39	16
4	20	79	42	e38	e31	193	141	123	37	15	43	12
5	36	60	41	e80	e30	167	156	109	34	15	35	9.6
6	26	53	42	e90	e30	145	145	97	43	13	29	8.1
7	19	48	79	83	e30	127	133	87	149	12	27	7.3
8	16	45	109	70	e30	114	115	77	166	10	25	6.8
9	20	43	96	61	e29	105	153	77	129	11	24	6.4
10	29	42	83	e55	e30	113	189	73	126	23	16	5.5
11	24	50	77	e130	34	110	162	114	88	19	10	4.7
12	18	51	66	e125	e32	176	144	118	81	15	12	4.6
13	9.4	48	60	e105	e29	249	128	106	77	14	12	7.9
14	10	46	54	e80	e46	229	111	119	64	12	22	10
15	20	46	55	e65	e110	208	99	106	57	9.7	30	21
16	17	43	60	e58	127	187	87	88	53	29	30	30
17	13	40	59	e50	e100	237	78	73	48	37	27	22
18	25	39	54	e45	e82	260	73	68	48	32	21	19
19	27	37	50	e42	e80	231	76	85	53	30	18	17
20	28	35	47	e41	77	202	77	84	47	23	16	12
21	51	33	65	e40	e62	182	101	77	39	20	14	13
22	45	31	70	e38	e55	164	549	69	37	31	12	14
23	50	29	64	36	e52	146	664	64	45	20	11	13
24	67	27	56	e35	e75	133	590	80	38	16	12	18
25	56	19	e49	e36	e150	120	421	107	34	15	12	16
26	54	21	e43	e37	273	108	326	107	31	13	10	5.5
27	44	53	e40	e36	273	99	328	95	31	33	9.5	5.2
28	37	78	e35	e34	340	167	292	79	35	51	8.1	6.9
29	37	59	e33	e32	386	287	250	64	30	35	7.1	7.8
30	33	48	33	e31	---	254	209	57	27	31	6.4	7.3
31	37	---	33	e33	---	207	---	50	---	48	6.1	---
TOTAL	931.4	1347	1721	1701	2688	5740	6222	2917	1781	677.7	639.2	339.0
MEAN	30.0	44.9	55.5	54.9	92.7	185	207	94.1	59.4	21.9	20.6	11.3
MAX	67	79	109	130	386	323	664	176	166	51	52	30
MIN	9.4	19	33	31	29	99	73	50	27	9.7	6.1	4.6
CFSM	.63	.94	1.16	1.15	1.94	3.87	4.34	1.97	1.24	.46	.43	.24
IN.	.72	1.05	1.34	1.32	2.09	4.47	4.84	2.27	1.39	.53	.50	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	46.3	73.9	94.0	87.0	95.3	150	163	92.8	51.0	20.8	21.1	21.1		
MAX	186	148	228	223	181	281	406	145	241	50.2	80.1	86.5		
(WY)	1997	1996	1987	1996	1996	1994	1987	1989	1998	1998	1991	1991		
MIN	5.15	15.4	15.8	27.5	41.4	56.5	56.9	34.4	7.27	3.53	1.52	2.71		
(WY)	1998	1999	1999	1989	1987	1989	1999	1999	1999	1993	1999	1997		

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1987 - 2000

ANNUAL TOTAL	17970.35	26704.3		
ANNUAL MEAN	49.2	73.0	76.2	
HIGHEST ANNUAL MEAN			99.9	1996
LOWEST ANNUAL MEAN			41.9	1999
HIGHEST DAILY MEAN	242	Mar 2	664	Apr 23
LOWEST DAILY MEAN	.83	Sep 4	4.6	Sep 12
ANNUAL SEVEN-DAY MINIMUM	.92	Sep 2	6.2	Sep 7
INSTANTANEOUS PEAK FLOW			710	Apr 22
INSTANTANEOUS PEAK STAGE			10.14	Apr 22
INSTANTANEOUS LOW FLOW			4.0	Sep 12
ANNUAL RUNOFF (CFSM)	1.03	1.53	1.59	
ANNUAL RUNOFF (INCHES)	13.99	20.78	21.67	
10 PERCENT EXCEEDS	127	164	170	
50 PERCENT EXCEEDS	35	44	49	
90 PERCENT EXCEEDS	1.7	12	6.1	

a Also occurred September 5, 8, 1999.  
e Estimated.



## CONNECTICUT RIVER BASIN

## 01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH

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

DRAINAGE AREA.--254 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by First Connecticut and Second Connecticut Lakes and Lake Francis 3.7 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,820 ft<sup>3</sup>/s, May 11, 2000, gage height, 8.37 ft, from rating curve extended above 2,600 ft<sup>3</sup>/s; minimum daily 30 ft<sup>3</sup>/s, August 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,820 ft<sup>3</sup>/s, May 11, gage height, 8.37 ft; minimum daily discharge, 188 ft<sup>3</sup>/s, August 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	711	673	625	914	802	597	439	1340	495	467	188	280
2	774	653	792	912	802	447	519	1350	485	448	188	288
3	731	640	794	946	797	324	787	1320	481	443	190	366
4	734	752	803	1100	791	267	1490	1280	471	481	203	338
5	792	804	872	1220	787	230	1770	858	457	524	193	320
6	777	784	924	1110	784	215	770	634	367	471	189	337
7	755	686	930	1070	778	195	515	1200	271	450	190	347
8	724	643	890	1020	772	219	486	1440	262	448	210	341
9	710	632	857	986	640	268	1210	2100	263	439	200	339
10	703	629	978	976	526	612	1170	5240	259	436	196	335
11	762	621	1170	965	526	494	817	5610	403	441	194	336
12	861	610	1140	969	526	357	1120	4360	444	433	212	340
13	615	611	1100	938	526	e305	1120	3350	334	426	195	345
14	636	630	1070	915	526	e255	1110	2950	298	421	231	346
15	766	853	1050	906	526	255	1130	1660	281	416	275	371
16	689	750	1050	904	526	298	1030	1090	271	416	308	505
17	649	689	1050	898	526	331	632	1050	267	379	326	428
18	647	676	1010	889	526	e270	472	1090	264	284	331	398
19	632	668	966	880	526	e245	441	973	255	342	299	380
20	457	685	977	868	522	232	417	647	250	317	292	363
21	394	1090	1010	863	520	232	594	584	246	295	300	356
22	521	829	1010	856	520	275	1030	554	295	288	295	353
23	1020	785	984	848	520	373	1320	533	371	288	287	348
24	1750	591	967	838	487	499	1780	528	359	286	394	400
25	1420	492	947	834	429	551	1640	598	438	282	347	478
26	919	465	947	833	443	648	1580	673	437	278	305	399
27	827	1160	946	826	477	642	1490	692	468	276	293	374
28	771	1070	934	822	720	1000	1420	616	500	276	287	378
29	726	501	930	818	757	1780	1370	565	456	277	281	383
30	697	375	926	811	---	876	1390	532	451	283	280	368
31	677	---	919	806	---	535	---	512	---	237	280	---
TOTAL	23847	21047	29568	28541	17608	13827	31059	45929	10899	11548	7959	10940
MEAN	769	702	954	921	607	446	1035	1482	363	373	257	365
MAX	1750	1160	1170	1220	802	1780	1780	5610	500	524	394	505
MIN	394	375	625	806	429	195	417	512	246	237	188	280

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2000, BY WATER YEAR (WY)

MEAN	553	553	743	794	775	549	627	523	379	415	429	442
MAX	1342	1056	1485	1175	1325	1088	1035	1691	863	1187	1043	1095
(WY)	1978	1978	1960	1960	1974	1979	2000	1974	1984	1996	1976	1963
MIN	111	181	384	462	376	209	247	162	80.9	55.7	64.7	111
(WY)	1969	1967	1979	1979	1980	1962	1995	1988	1962	1965	1975	1968

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	FOR WATER YEARS 1957 - 2000
ANNUAL TOTAL	204044	252772	
ANNUAL MEAN	559	691	564
HIGHEST ANNUAL MEAN			789
LOWEST ANNUAL MEAN			379
HIGHEST DAILY MEAN	2320	Sep 18	5610
LOWEST DAILY MEAN	120	Mar 21	a 188
ANNUAL SEVEN-DAY MINIMUM	129	May 31	192
INSTANTANEOUS PEAK FLOW			b 5820
INSTANTANEOUS PEAK STAGE			8.37
10 PERCENT EXCEEDS	932	1110	1020
50 PERCENT EXCEEDS	555	560	515
90 PERCENT EXCEEDS	198	271	155

a Also occurred August 2.

b From rating curve extended above 2,600 ft<sup>3</sup>/s.

e Estimated.

CONNECTICUT RIVER BASIN

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1999.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1999 to current year.

INSTRUMENTATION.--Water-temperature recorder since June 16, 1999, provides continuous recordings.

REMARKS.--Records poor.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	16.0	13.0	14.5	18.0	15.5	17.0	21.5	15.5	17.5
2	---	---	---	16.0	13.0	14.0	19.0	15.5	16.5	21.5	15.5	18.0
3	---	---	---	16.5	12.0	14.0	16.5	14.5	15.5	21.5	16.0	18.0
4	---	---	---	16.0	12.5	14.0	17.0	14.5	15.5	21.5	16.0	18.0
5	---	---	---	---	---	---	17.5	15.0	16.5	21.0	16.5	18.0
6	---	---	---	---	---	---	18.0	15.0	16.0	21.0	16.5	18.0
7	---	---	---	19.5	16.0	17.5	17.5	15.0	16.0	20.5	17.0	18.5
8	---	---	---	17.0	14.5	16.0	17.5	15.0	16.0	19.5	17.5	18.5
9	---	---	---	16.5	13.5	15.0	18.0	15.0	16.0	20.5	17.5	18.5
10	---	---	---	15.5	14.0	15.0	17.0	15.0	16.0	19.5	17.5	18.5
11	---	---	---	16.0	13.5	14.5	18.5	15.5	16.5	20.0	17.5	18.5
12	---	---	---	15.5	12.5	14.0	18.5	15.5	17.0	20.0	17.0	18.5
13	---	---	---	14.5	13.0	14.0	19.5	16.0	17.5	21.0	17.0	18.5
14	---	---	---	16.0	13.5	14.5	18.5	16.0	17.0	20.5	17.5	18.5
15	---	---	---	15.0	13.5	14.0	19.5	17.0	18.5	20.5	17.5	19.0
16	---	---	---	17.0	13.5	15.0	19.5	16.0	17.5	18.0	16.0	17.5
17	13.5	10.5	11.5	17.0	14.5	15.5	20.0	17.0	18.0	16.0	12.0	13.5
18	13.5	10.0	11.5	16.0	14.0	15.0	18.5	17.0	17.5	14.5	11.5	13.0
19	14.5	10.0	12.0	15.0	13.0	14.0	20.0	16.5	18.0	15.0	11.0	13.0
20	14.5	10.5	12.0	16.0	13.0	14.0	19.5	16.0	17.5	16.0	11.5	14.0
21	15.0	10.5	12.5	15.5	13.0	14.0	18.0	16.0	17.0	15.0	12.5	14.0
22	16.0	10.5	12.5	17.0	13.5	15.0	17.5	16.0	17.0	13.0	11.5	12.5
23	15.5	10.5	12.5	15.5	13.5	14.5	20.0	16.0	17.5	14.0	11.0	12.5
24	15.0	10.5	12.0	15.0	13.5	14.0	21.0	16.0	18.0	16.0	11.5	14.0
25	13.5	10.5	12.0	---	---	---	21.0	16.0	17.5	15.5	13.0	14.0
26	15.5	11.0	13.0	---	---	---	21.0	16.5	18.0	15.5	11.0	13.5
27	16.0	11.0	13.0	---	---	---	20.0	16.5	18.0	17.0	11.5	14.0
28	13.5	11.5	12.5	17.0	15.0	16.5	20.5	16.5	18.0	17.5	14.0	16.0
29	17.0	12.5	15.0	17.5	14.5	16.5	20.5	16.0	17.5	17.0	15.5	16.0
30	18.5	14.0	16.0	17.0	16.0	16.5	19.5	15.5	17.0	17.0	14.0	16.0
31	---	---	---	17.5	15.5	16.5	20.5	15.0	17.0	---	---	---
MONTH	18.5	10.0	12.7	19.5	12.0	14.9	21.0	14.5	17.0	21.5	11.0	16.3

## CONNECTICUT RIVER BASIN

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH -- Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1999 to current year.

INSTRUMENTATION.--Water-temperature recorder since June 16, 1999, provides continuous recordings.

REMARKS.--Records fair.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	16.0	12.0	14.0	10.0	8.5	9.5	4.0	.5	2.5	4.0	2.0	3.0			
2	16.0	14.0	15.0	10.5	8.0	9.0	4.0	2.5	3.5	4.0	2.0	3.0			
3	16.5	14.5	15.5	12.0	9.5	11.0	4.0	3.0	3.5	4.0	2.0	3.0			
4	15.0	13.0	14.5	10.0	8.5	9.0	4.5	3.0	3.5	3.0	1.5	2.5			
5	14.0	12.0	13.5	9.5	8.0	9.0	5.5	3.5	4.5	2.5	1.0	2.0			
6	13.5	12.0	13.0	9.5	8.0	9.0	6.0	4.5	5.0	3.0	1.5	2.0			
7	13.5	11.5	12.5	9.0	7.5	8.0	6.0	4.5	5.0	3.0	1.5	2.5			
8	14.0	12.0	13.0	8.5	7.0	7.5	5.0	3.5	4.5	3.5	1.5	2.5			
9	14.5	13.0	13.5	8.0	7.0	7.5	5.0	3.5	4.0	3.5	2.0	2.5			
10	14.5	12.5	13.5	9.0	7.5	8.0	5.0	3.0	4.0	3.5	1.5	2.5			
11	14.0	12.5	13.5	8.0	6.0	7.5	4.5	2.5	3.5	3.5	2.0	3.0			
12	13.5	11.0	12.5	7.5	6.0	7.0	4.0	2.5	3.0	3.0	1.5	2.5			
13	13.5	10.5	12.5	8.0	6.0	7.0	4.5	3.0	3.5	3.0	1.5	2.5			
14	13.0	7.5	10.5	8.0	6.0	7.0	4.5	3.0	4.0	3.0	1.0	2.0			
15	10.5	7.0	8.5	6.5	3.5	4.5	4.5	3.0	3.5	3.0	1.0	2.0			
16	11.5	8.5	10.0	4.5	3.5	4.0	4.5	3.0	3.5	3.5	1.5	2.5			
17	12.0	10.5	11.5	5.0	3.5	4.0	4.0	2.5	3.5	3.0	1.0	2.0			
18	11.5	9.5	10.5	5.0	3.5	4.5	4.0	2.0	3.0	3.0	1.0	2.0			
19	10.5	8.5	9.5	5.5	4.0	5.0	4.0	2.0	3.0	3.5	1.0	2.0			
20	9.5	8.0	8.5	6.5	4.5	5.5	4.0	2.0	3.0	3.5	1.0	2.5			
21	10.0	7.5	8.5	5.5	3.5	4.5	3.5	2.0	3.0	3.0	1.0	2.0			
22	11.0	7.5	9.0	6.0	3.5	4.5	3.5	2.0	2.5	3.0	1.0	2.0			
23	11.0	7.5	9.5	7.0	5.0	6.0	3.5	2.0	2.5	3.5	1.0	2.0			
24	8.5	7.0	7.5	8.0	5.0	6.5	3.5	2.0	2.5	3.5	1.5	2.5			
25	8.0	6.5	7.0	7.5	5.0	6.5	3.5	1.5	2.5	3.5	1.5	2.5			
26	9.0	6.0	7.5	6.0	4.5	5.5	3.5	2.0	3.0	3.5	1.5	2.5			
27	8.5	7.0	8.0	8.0	5.5	6.5	3.5	1.5	2.5	3.0	1.0	2.5			
28	8.5	6.5	7.5	6.5	4.5	5.5	3.5	2.0	2.5	3.0	1.0	2.0			
29	10.0	7.5	8.5	5.0	3.0	4.0	3.5	2.0	2.5	3.5	1.0	2.0			
30	10.0	7.5	8.5	3.5	1.0	2.5	3.5	2.0	3.0	3.5	1.0	2.0			
31	10.0	8.5	9.5	---	---	---	3.5	1.5	2.5	3.5	1.5	2.5			
MONTH	16.5	6.0	10.9	12.0	1.0	6.5	6.0	.5	3.3	4.0	1.0	2.4			

CONNECTICUT RIVER BASIN

01129200 CONNECTICUT RIVER BELOW INDIAN STREAM, NEAR PITTSBURG, NH -- Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	1.5	2.5	2.0	.0	1.0	7.5	2.0	4.5	6.5	4.0	5.5
2	3.0	1.0	2.0	2.0	.0	1.0	5.5	3.0	4.0	7.5	5.0	6.0
3	3.0	1.5	2.0	2.0	.0	1.0	4.5	3.0	4.0	7.5	4.5	6.0
4	3.5	1.0	2.0	2.5	.0	1.0	4.5	2.5	3.5	8.5	5.0	6.5
5	3.5	1.0	2.0	2.5	.0	1.0	3.5	1.5	2.5	12.0	6.5	9.5
6	3.0	1.0	2.0	3.0	.0	1.5	3.5	1.0	2.5	10.0	8.0	9.0
7	3.0	1.0	2.0	3.5	.0	1.5	4.0	2.0	3.0	12.5	8.5	10.5
8	3.0	1.0	2.0	3.0	.0	1.5	8.5	2.5	5.0	13.5	10.5	12.0
9	3.5	1.5	2.5	3.0	.5	1.5	6.5	1.0	3.5	12.0	9.0	10.5
10	3.5	1.5	2.5	2.0	.0	1.0	4.0	.5	2.0	10.5	8.0	9.0
11	3.5	1.5	2.5	2.0	.0	1.0	4.5	1.0	2.5	8.5	7.0	8.0
12	3.5	.5	2.0	2.0	.0	1.0	3.5	2.0	3.0	9.5	7.0	8.0
13	4.0	.5	2.0	2.5	.0	1.0	5.0	1.5	3.0	10.0	8.0	9.0
14	3.5	1.0	2.0	2.5	.0	1.0	5.0	2.0	3.5	10.0	8.0	9.0
15	3.5	1.0	2.5	2.5	.0	1.5	8.0	3.0	5.5	9.5	7.5	8.5
16	3.5	1.0	2.5	2.5	.0	1.0	6.5	3.5	5.0	10.0	7.0	8.5
17	3.0	.5	2.0	2.0	.0	1.0	6.0	2.0	4.0	11.0	8.0	9.0
18	3.5	.5	2.0	2.5	.0	1.0	7.5	2.5	5.0	10.0	8.5	9.0
19	4.0	1.0	2.5	3.0	.0	1.5	6.0	4.0	5.0	11.0	7.5	9.5
20	4.0	1.0	2.5	3.0	.0	1.5	9.0	4.5	6.5	12.0	7.5	10.0
21	4.0	.5	2.5	5.5	.0	2.5	7.5	4.5	6.0	12.0	9.5	10.5
22	4.5	1.0	2.5	7.0	1.0	3.5	5.0	3.0	4.0	11.5	9.5	10.5
23	4.0	1.5	2.5	6.0	1.0	3.5	5.5	3.0	4.5	11.0	9.0	10.0
24	4.0	1.5	2.5	6.0	.5	3.0	4.5	2.5	3.5	11.0	8.5	10.0
25	4.0	1.5	2.5	5.0	.5	2.5	6.5	2.5	4.5	11.5	9.0	10.0
26	3.5	1.5	2.5	4.0	1.5	3.0	6.5	3.5	5.0	10.5	9.0	10.0
27	4.5	1.5	2.5	6.0	1.5	3.5	5.0	4.0	4.5	10.0	8.5	9.5
28	2.5	.0	1.5	4.5	1.0	3.0	5.5	3.5	4.5	10.5	8.5	9.5
29	2.0	.0	1.0	3.0	.5	1.5	7.0	3.5	5.0	12.5	8.5	10.5
30	---	---	---	4.0	1.0	2.5	7.0	5.0	6.0	14.0	9.5	11.5
31	---	---	---	4.0	1.5	3.0	---	---	---	13.5	10.0	11.5
MONTH	4.5	.0	2.2	7.0	.0	1.8	9.0	.5	4.2	14.0	4.0	9.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.0	10.5	12.0	15.0	12.5	13.5	15.0	12.5	14.0	19.0	15.0	16.5
2	13.0	10.0	11.5	15.0	12.0	13.5	18.0	13.0	14.5	18.5	15.5	17.0
3	13.0	10.0	11.5	13.5	11.5	12.5	17.5	13.5	15.0	19.0	15.5	17.0
4	12.0	10.0	11.0	15.0	12.0	13.5	18.0	13.5	15.0	17.5	14.5	16.5
5	12.5	10.0	11.0	14.5	12.5	13.5	17.5	13.5	15.0	17.0	13.5	15.0
6	11.5	10.0	10.5	14.5	12.0	13.0	18.0	13.0	15.0	18.5	14.0	16.0
7	12.5	9.5	10.5	14.0	12.0	13.0	16.5	13.5	14.5	18.5	15.0	16.0
8	12.5	9.0	11.0	15.0	12.0	13.0	18.5	14.0	16.0	18.5	15.0	16.5
9	15.0	10.5	12.0	14.5	12.0	13.0	17.5	14.0	15.5	19.0	15.5	17.0
10	12.5	10.5	11.5	14.0	11.5	12.5	18.5	14.0	15.5	19.5	16.0	17.0
11	11.5	9.5	10.5	14.5	12.0	13.0	18.5	14.0	15.5	18.5	15.5	17.0
12	13.5	9.0	11.5	15.5	12.5	13.5	19.5	14.0	16.5	18.5	16.5	17.0
13	14.0	10.5	12.5	15.5	12.5	13.5	18.0	14.0	15.5	19.5	16.0	17.5
14	13.0	11.0	12.0	15.5	12.5	13.5	17.0	13.5	15.0	19.0	16.0	17.5
15	16.0	11.0	13.0	15.5	12.0	13.5	18.0	14.0	15.5	17.5	15.0	16.5
16	16.5	11.5	14.0	15.0	12.5	13.5	17.5	14.5	16.0	15.5	13.5	14.5
17	15.5	12.0	13.5	15.5	12.0	13.5	16.0	14.0	15.0	16.5	14.0	15.0
18	15.0	11.0	13.0	17.0	13.0	14.5	17.0	14.0	15.0	17.0	15.0	16.0
19	15.5	11.0	13.0	15.5	12.5	14.0	17.0	14.0	15.5	18.0	15.0	16.5
20	16.0	11.0	13.0	16.5	12.5	14.5	16.0	13.5	15.0	19.0	16.0	17.0
21	13.5	11.5	12.5	15.0	12.0	13.5	17.5	13.5	15.5	17.5	15.0	16.5
22	15.5	11.5	13.0	16.0	12.0	13.5	18.0	14.0	15.5	17.5	15.0	16.0
23	15.5	12.0	13.0	15.5	12.5	13.5	16.0	14.0	15.0	17.0	15.0	16.0
24	18.5	11.5	13.5	16.5	12.5	14.0	18.5	14.5	16.0	17.0	13.5	15.5
25	14.5	11.5	12.5	17.5	12.5	14.5	18.5	15.0	16.5	16.0	12.5	14.0
26	16.0	11.5	13.0	17.5	12.5	14.5	19.5	14.5	16.5	16.5	13.5	15.0
27	15.0	12.0	13.0	15.0	12.5	13.5	16.5	14.5	15.5	17.0	13.5	15.0
28	15.5	12.5	14.0	16.5	12.0	14.0	18.5	14.5	16.0	15.5	13.0	14.5
29	15.0	12.0	13.0	16.0	12.5	14.0	18.5	14.0	16.0	15.5	12.5	13.5
30	14.0	11.5	12.5	17.0	13.0	14.5	19.0	15.0	16.5	16.0	12.5	14.0
31	---	---	---	16.0	13.0	14.5	19.0	15.5	17.0	---	---	---
MONTH	18.5	9.0	12.3	17.5	11.5	13.6	19.5	12.5	15.5	19.5	12.5	16.0

CONNECTICUT RIVER BASIN

01129440 MOHAWK RIVER NEAR COLEBROOK, NH

LOCATION.--Lat 44°52'28", Long 71°24'38", Coos County, Hydrologic Unit 01080101, on right bank, upstream of Bungy Road Bridge, south of the intersection of State Highway 26 and Bungy Road, 0.8 mi upstream of Read Brook, 1.7 mi downstream of Roaring Brook, 5 mi east of Colebrook, and 5.5 mi west of Dixville Notch.

DRAINAGE AREA.--36.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,190 ft above sea level, from topographic map. REMARKS.--Records good except those for estimated daily discharges, which are fair, and estimated daily discharges during periods December 26 to January 4 and February 27-28, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	1015	912	7.17	Apr. 4	1030	755	6.86
Nov. 27	1045	939	7.22	Apr. 9	1200	1,290	7.80
Feb. 28	1345	539	6.37	Apr. 23	2215	506	6.29
Mar. 28	1500	1,260	7.76	May 10	0330	* 2,830	* 9.52

Minimum discharge, 9.5 ft<sup>3</sup>/s, August 13, 14, 31 and September 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	65	e80	e26	e25	e91	140	102	45	20	12	9.8
2	55	56	e73	e28	e25	70	180	120	47	17	11	14
3	47	59	73	e50	e25	59	246	93	45	23	11	25
4	62	50	99	e100	e24	51	532	86	41	43	32	42
5	67	45	105	148	e24	47	367	115	42	26	14	19
6	56	43	91	66	e23	e43	184	106	47	20	12	14
7	46	41	76	59	e23	e43	142	155	49	18	12	12
8	40	39	66	e43	e22	48	179	158	36	17	14	13
9	43	38	59	e40	e22	115	720	348	38	18	13	16
10	40	42	61	38	e22	190	296	956	33	29	12	14
11	77	42	86	49	e23	e89	173	620	157	21	11	14
12	46	34	66	e44	e22	74	144	265	79	17	12	13
13	41	37	60	e34	e22	e58	e124	175	52	14	10	27
14	157	64	57	e33	e23	e51	e131	164	42	13	19	18
15	94	80	54	e32	e22	60	246	119	37	13	39	91
16	72	55	59	e34	e22	85	233	102	34	26	24	62
17	64	48	56	e33	e22	66	151	95	40	22	22	27
18	81	45	e44	e32	e21	e54	125	188	33	20	18	22
19	64	47	e41	e32	e21	e56	114	152	29	23	14	21
20	59	85	e43	e31	e21	e51	117	99	26	16	22	21
21	59	203	e73	e30	e20	e57	121	86	27	14	19	26
22	51	119	e51	e30	e21	86	136	79	44	19	14	24
23	449	116	e44	29	e22	119	305	75	47	22	14	19
24	261	91	e38	e30	e29	141	282	92	30	15	37	34
25	152	75	e31	e29	e33	138	200	122	25	14	18	28
26	112	98	e30	e29	25	161	156	116	23	11	13	21
27	93	462	e29	e28	e31	158	141	102	38	11	13	18
28	78	189	e27	e27	e260	624	126	80	28	12	15	23
29	70	125	e26	e26	e160	381	116	69	20	18	12	19
30	62	97	e27	e25	---	190	117	60	22	19	11	17
31	60	---	e26	e25	---	138	---	52	---	13	10	---
TOTAL	2748	2590	1751	1260	1055	3594	6244	5151	1256	584	510	723.8
MEAN	88.6	86.3	56.5	40.6	36.4	116	208	166	41.9	18.8	16.5	24.1
MAX	449	462	105	148	260	624	720	956	157	43	39	91
MIN	40	34	26	25	20	43	114	52	20	11	10	9.8
CFSM	2.42	2.35	1.54	1.11	.99	3.16	5.67	4.53	1.14	.51	.45	.66
IN.	2.79	2.63	1.77	1.28	1.07	3.64	6.33	5.22	1.27	.59	.52	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	58.0	71.3	57.4	52.2	36.5	92.7	206	103	53.6	40.0	33.1	33.2		
MAX	122	110	127	134	109	231	344	177	96.3	108	93.3	79.9		
(WY)	1991	1989	1991	1996	1996	1998	1996	1989	1998	1996	1988	1999		
MIN	23.5	33.0	25.9	25.8	13.4	23.0	74.2	51.3	26.7	13.0	12.9	11.1		
(WY)	1998	1995	1990	1994	1993	1994	1995	1998	1992	1991	1999	1995		

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1987 - 2000
ANNUAL TOTAL	25660.0	27466.8	
ANNUAL MEAN	70.3	75.0	69.7
HIGHEST ANNUAL MEAN			104
LOWEST ANNUAL MEAN			44.1
HIGHEST DAILY MEAN	948	956	2450
LOWEST DAILY MEAN	6.3	9.8	5.3
ANNUAL SEVEN-DAY MINIMUM	6.5	12	5.8
INSTANTANEOUS PEAK FLOW		2830	a 4880
INSTANTANEOUS PEAK STAGE		9.52	10.99
INSTANTANEOUS LOW FLOW		b 9.5	c 5.2
ANNUAL RUNOFF (CFSM)	1.92	2.04	1.90
ANNUAL RUNOFF (INCHES)	26.01	27.84	25.82
10 PERCENT EXCEEDS	156	157	138
50 PERCENT EXCEEDS	45	43	41
90 PERCENT EXCEEDS	13	14	17

a From rating curve extended above 2,200 ft<sup>3</sup>/s.  
 b Also occurred on August 14, 31 and September 1, 2.  
 c Also occurred on September 5-7, 1996.  
 e Estimated.

## 01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH

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

DRAINAGE AREA.--799 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1930 to current year.

Water-quality records: Water years 1957, 1995, 1996.

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

GAGE.--Water-stage recorder. Datum of gage is 880.17 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis 36 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,200 ft<sup>3</sup>/s, May 11, gage height, 11.89 ft; maximum gage height, 12.50 ft, February 29 (ice jam); minimum daily discharge, 344 ft<sup>3</sup>/s, August 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	1550	1710	e1400	e1360	e3000	2720	2990	1190	967	403	421
2	1720	1430	1860	e1500	e1390	e2500	3120	3330	1110	849	356	490
3	1450	1420	1840	e1600	e1360	e2000	4440	3040	1090	753	344	819
4	1410	1360	1890	e2300	e1350	e1700	8220	2760	1020	1100	894	931
5	1760	1410	2200	e3100	e1310	e1500	10700	2910	974	1110	550	808
6	1700	1360	2240	e2350	e1310	e1350	6150	2360	991	934	407	607
7	1550	1280	2050	e2100	e1320	1200	3570	3090	998	782	372	569
8	1380	1160	1860	e1850	e1290	1230	3240	3560	857	735	414	531
9	1320	1130	1710	e1660	e1160	1740	7570	5250	822	723	436	512
10	1300	1130	1650	1610	e1090	e3500	7270	12700	766	818	392	482
11	1540	1130	2300	1680	e1120	e2900	4200	18300	1440	904	376	465
12	1610	1050	2220	1730	e1090	2420	3570	13300	1960	761	474	463
13	1440	1070	1980	e1610	e1010	2060	3090	8500	1310	666	407	580
14	1870	1170	1870	e1500	e1110	1570	2990	6690	1010	642	365	594
15	2530	1930	1790	e1400	e1010	1550	4000	5090	868	733	663	1000
16	1930	1720	1800	e1470	e1070	1730	5690	3010	798	646	945	2140
17	1660	1440	1890	e1530	e1070	1940	4020	2570	743	714	1130	1350
18	1620	1360	1650	e1490	e1060	1400	2870	2790	755	563	837	1030
19	1530	1310	1460	e1490	e1060	1370	2520	3940	673	573	659	886
20	1380	1430	e1550	e1480	e1020	1270	2370	2550	604	561	616	755
21	1270	3220	e1900	e1520	e1050	1210	2570	2060	561	448	685	713
22	1150	3200	1810	e1530	e1070	1440	3230	1820	648	467	574	717
23	3380	2470	1610	e1450	e1050	2000	4870	1650	799	486	525	630
24	6340	2070	e1430	e1390	e1010	2810	6580	1630	712	466	1270	753
25	5100	1650	e1370	e1420	e1060	3110	5780	1960	678	433	1010	1090
26	3170	1630	e1400	e1420	e1180	3530	4820	2590	710	414	689	875
27	2400	5480	e1500	e1410	e1230	3540	4040	2230	1120	398	558	723
28	2000	6290	e1480	e1420	e1950	5460	3540	1930	1290	396	537	692
29	1790	3360	e1380	e1360	e3600	8520	3190	1630	935	652	493	710
30	1600	2280	e1400	e1360	---	5970	3280	1460	855	756	459	655
31	1510	---	e1450	e1370	---	3530	---	1300	---	512	438	---
TOTAL	62500	58490	54250	50500	36760	79050	134220	128990	28287	20962	18278	22991
MEAN	2016	1950	1750	1629	1268	2550	4474	4161	943	676	590	766
MAX	6340	6290	2300	3100	3600	8520	10700	18300	1960	1110	1270	2140
MIN	1150	1050	1370	1360	1010	1200	2370	1300	561	396	344	421

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2000, BY WATER YEAR (WY)

MEAN	1293	1604	1538	1366	1225	1656	3894	2547	1251	894	840	922
MAX	3445	3119	3095	2537	3295	6254	7348	6018	3724	2818	2475	3203
(WY)	1978	1960	1974	1998	1981	1936	1934	1972	1943	1996	1976	1954
MIN	355	583	643	549	350	271	1206	843	472	292	220	357
(WY)	1949	1948	1948	1948	1940	1940	1995	1998	1962	1955	1940	1949

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1930 - 2000
ANNUAL TOTAL	547833	695278	
ANNUAL MEAN	1501	1900	1585
HIGHEST ANNUAL MEAN			2246
LOWEST ANNUAL MEAN			1033
HIGHEST DAILY MEAN	11600	Sep 18	28000
LOWEST DAILY MEAN	246	Sep 7	108
ANNUAL SEVEN-DAY MINIMUM	250	Sep 2	128
INSTANTANEOUS PEAK FLOW		19200	32300
INSTANTANEOUS PEAK STAGE		a 12.50	ab 20.60
10 PERCENT EXCEEDS	2610	3530	3030
50 PERCENT EXCEEDS	1320	1410	1120
90 PERCENT EXCEEDS	445	561	457

a Ice jam.

b From floodmarks in well.

e Estimated.

## CONNECTICUT RIVER BASIN

## 01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1995, 1996, 1999.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1999 to current year.

INSTRUMENTATION.--Water-temperature recorder since June 16, 1999, provides continuous recordings.

REMARKS.--Records fair.

## TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	21.5	18.0	19.5	22.5	19.0	20.5	22.5	15.5	19.0
2	---	---	---	21.5	19.0	20.0	19.5	17.0	18.5	23.0	16.5	19.5
3	---	---	---	23.0	18.0	20.5	20.5	16.0	18.0	24.0	17.5	20.5
4	---	---	---	24.0	19.5	21.5	17.5	16.0	17.0	25.0	18.5	21.5
5	---	---	---	25.0	20.5	22.0	20.0	16.5	18.0	24.0	19.5	21.5
6	---	---	---	22.5	20.0	21.5	19.5	17.0	18.0	23.5	19.5	21.5
7	---	---	---	20.0	18.5	19.0	20.0	17.5	18.5	24.0	21.0	22.5
8	---	---	---	19.5	17.0	18.0	17.5	16.0	16.5	23.0	21.0	22.0
9	---	---	---	18.5	16.0	17.0	16.5	15.0	16.0	24.0	20.5	22.0
10	---	---	---	17.5	15.5	16.5	17.5	13.5	15.5	21.5	19.0	20.0
11	---	---	---	16.0	14.5	15.0	19.0	15.0	17.0	20.5	17.5	19.0
12	---	---	---	19.0	14.5	16.5	21.5	17.5	19.0	20.5	16.5	18.5
13	---	---	---	17.0	14.5	16.0	21.0	17.5	19.0	20.5	16.5	18.5
14	---	---	---	18.5	14.5	16.0	20.5	18.0	19.5	20.5	17.0	18.5
15	---	---	---	20.0	15.5	17.5	20.0	17.5	19.0	21.0	18.0	19.5
16	---	---	---	20.5	16.5	18.0	21.5	17.0	19.0	19.0	14.5	17.5
17	18.5	15.0	17.0	23.5	16.5	19.5	21.5	18.0	19.5	14.5	12.0	13.0
18	19.0	15.0	16.5	22.5	19.5	21.0	20.5	18.0	19.5	13.0	11.5	12.0
19	20.5	14.0	17.0	21.0	17.5	19.0	22.0	17.5	19.5	13.5	12.0	13.0
20	21.0	15.0	18.0	20.5	16.0	18.0	21.0	17.5	19.0	15.0	12.0	13.5
21	22.0	16.5	19.0	21.5	15.5	18.5	19.5	17.5	18.5	14.0	13.0	13.5
22	24.0	17.0	20.0	22.5	17.0	19.5	19.5	17.0	18.0	13.5	11.5	12.5
23	23.5	18.5	21.0	23.0	18.5	20.5	21.5	16.5	18.5	13.0	11.0	12.0
24	23.5	19.0	21.0	20.0	18.5	19.5	23.0	17.0	19.5	14.5	11.5	13.0
25	21.5	19.0	20.5	20.0	17.0	18.5	24.0	18.0	21.0	14.5	13.0	13.5
26	23.5	18.0	20.5	19.5	16.0	18.0	23.5	18.5	21.0	14.5	12.0	13.0
27	24.5	18.5	21.5	21.5	17.5	19.5	22.5	20.0	21.0	14.5	11.5	13.0
28	22.0	20.0	21.0	22.5	17.5	20.0	24.5	20.0	22.0	15.5	12.5	14.0
29	22.5	19.5	21.0	21.5	18.0	19.5	23.0	19.0	20.5	16.0	14.0	15.0
30	21.0	17.5	19.0	22.0	17.5	19.5	21.0	17.5	19.0	16.0	13.5	15.0
31	---	---	---	22.0	17.5	19.5	22.0	15.5	18.5	---	---	---
MONTH	24.5	14.0	19.5	25.0	14.5	18.9	24.5	13.5	18.8	25.0	11.0	16.9

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH -- Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1995, 1996, 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1999 to current year.

INSTRUMENTATION.--Water-temperature recorder since June 16, 1999, provides continuous recordings.

REMARKS.--Records fair.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.0	12.5	13.0	9.5	7.5	8.0	2.0	.0	1.0	1.0	.0	.5
2	14.0	11.5	12.5	9.0	7.0	8.0	1.5	.0	.5	1.0	.0	.5
3	14.5	12.5	13.0	11.5	8.5	10.0	3.0	1.0	2.0	1.0	.0	.5
4	12.5	10.5	11.5	9.5	6.5	8.5	3.5	2.0	3.0	1.5	.0	.5
5	11.5	9.5	10.5	7.5	5.5	6.5	5.0	3.0	4.0	1.5	.0	1.0
6	11.0	9.0	10.0	8.0	6.0	7.0	6.0	4.5	5.0	1.0	.0	.5
7	10.0	8.5	9.0	7.0	5.0	6.0	6.0	4.0	5.0	1.5	.0	.5
8	10.5	7.5	9.0	5.5	3.5	5.0	5.0	3.0	4.0	1.5	.0	.5
9	11.5	9.0	10.5	5.0	3.5	4.5	4.0	2.5	3.0	1.5	.0	1.0
10	13.0	10.5	11.5	6.5	4.5	5.5	3.5	2.0	3.0	2.5	1.0	1.5
11	13.5	11.5	12.0	6.5	4.0	5.5	3.5	1.5	3.0	2.5	1.0	1.5
12	12.0	10.0	11.0	4.5	3.0	4.0	2.5	1.5	2.0	2.0	.0	1.5
13	11.5	9.5	10.5	5.0	3.0	4.0	3.0	1.5	2.5	1.0	.0	.5
14	11.5	8.0	10.0	5.5	4.5	5.0	3.5	2.0	3.0	1.0	.0	.5
15	8.5	7.0	7.5	5.5	3.5	4.5	3.5	2.5	3.0	1.0	.0	.5
16	10.0	7.0	8.5	4.0	2.0	3.0	3.5	2.5	3.0	1.0	.0	.5
17	11.0	9.0	10.0	2.5	1.5	2.0	3.0	1.5	2.5	1.0	.0	.5
18	11.0	8.5	10.0	3.0	1.5	2.0	2.5	.0	1.0	1.0	.0	.5
19	9.0	7.0	8.0	4.5	2.5	3.5	1.0	.0	.5	1.0	.0	.5
20	8.0	7.0	7.5	5.0	3.0	4.0	1.0	.0	.5	1.0	.0	.5
21	8.5	7.0	7.5	6.0	4.0	5.0	1.5	.0	1.0	1.0	.0	.5
22	8.0	6.0	7.5	5.0	4.0	4.5	1.5	.5	1.0	1.0	.0	.5
23	8.5	7.0	7.5	7.0	5.0	6.0	1.0	.0	.5	1.0	.0	.5
24	8.0	6.5	7.0	7.5	5.5	6.5	1.0	.0	.5	1.0	.0	.5
25	7.0	6.0	6.5	7.5	6.0	6.5	1.0	.0	.5	1.0	.0	.5
26	7.0	5.5	6.5	6.0	5.0	5.5	1.0	.0	.5	1.0	.0	.5
27	8.0	6.5	7.0	7.5	5.0	6.5	1.0	.0	.5	1.0	.0	.5
28	6.5	5.0	6.0	6.5	4.5	5.5	1.0	.0	.5	1.0	.0	.5
29	8.0	5.5	6.5	5.0	3.5	4.0	1.0	.0	.5	1.0	.0	.5
30	8.0	6.0	7.0	3.5	1.5	3.0	1.0	.0	.5	1.0	.0	.5
31	9.0	6.5	8.0	---	---	---	1.0	.0	.5	1.0	.0	.5
MONTH	14.5	5.0	9.1	11.5	1.5	5.3	6.0	.0	1.9	2.5	.0	.6



## CONNECTICUT RIVER BASIN

## 01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH -- Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.0	.0	.5	1.0	.0	.5	5.0	2.0	3.5	7.0	5.5	6.5
2	1.0	.0	.5	1.0	.0	.5	5.0	3.5	4.5	8.5	6.0	7.0
3	1.0	.0	.5	1.5	.0	.5	4.0	3.0	3.5	8.5	6.0	7.5
4	1.0	.0	.5	2.0	.0	1.0	4.0	3.0	3.5	10.0	7.0	8.5
5	1.0	.0	.5	2.0	.5	1.0	4.0	2.5	3.0	10.5	9.0	9.5
6	1.0	.0	.5	3.0	.0	1.5	3.0	2.0	2.5	11.0	9.0	10.0
7	1.0	.0	.5	3.0	.0	1.5	3.5	2.5	3.0	12.0	9.0	10.5
8	1.0	.0	.5	4.5	1.0	2.5	6.0	3.0	4.5	13.5	11.5	12.5
9	1.0	.0	.5	4.5	2.0	3.5	6.0	1.5	4.0	12.5	10.0	11.5
10	1.0	.0	.5	3.5	.5	2.0	3.0	.5	2.0	11.0	8.5	9.5
11	1.0	.0	.5	1.5	.0	1.0	3.5	2.0	3.0	9.0	7.5	8.0
12	1.0	.0	.5	1.5	.0	.5	3.5	2.0	2.5	10.5	7.5	9.0
13	1.0	.0	.5	2.5	.0	1.0	4.0	1.5	2.5	10.5	9.0	10.0
14	1.0	.0	.5	1.5	.0	.5	4.5	2.5	3.5	11.5	9.5	10.5
15	1.0	.0	.5	3.0	.0	1.5	7.0	3.5	5.5	11.0	9.0	9.5
16	1.0	.0	.5	2.5	.5	2.0	7.0	4.5	6.0	10.0	8.5	9.5
17	1.0	.0	.5	2.0	.0	1.0	5.0	3.5	4.0	12.0	9.0	10.5
18	1.0	.0	.5	2.5	.0	1.0	6.5	4.0	5.0	11.0	9.5	10.5
19	1.0	.0	.5	3.5	.0	1.5	6.5	4.5	5.5	10.0	8.5	9.5
20	1.0	.0	.5	4.0	.0	2.0	7.5	5.0	6.0	11.5	8.0	10.0
21	1.0	.0	.5	5.5	1.0	3.0	7.0	5.5	6.5	12.5	10.0	11.0
22	1.0	.0	.5	5.5	2.0	4.0	6.0	3.5	5.0	13.0	10.5	11.5
23	1.0	.0	.5	5.5	2.5	4.0	5.0	3.0	4.0	13.0	10.5	11.5
24	1.0	.0	.5	5.0	2.0	3.5	4.5	3.0	3.5	12.0	10.0	11.0
25	1.0	.0	.5	4.0	2.0	3.0	5.5	2.5	4.0	12.0	10.0	11.0
26	1.0	.0	.5	4.0	2.5	3.0	6.0	5.0	5.5	11.5	10.5	11.0
27	1.0	.0	.5	4.5	2.0	3.0	6.0	4.0	5.0	11.0	9.5	10.5
28	1.0	.0	.5	4.0	1.5	3.0	5.0	4.0	4.5	11.5	9.0	10.5
29	1.0	.0	.5	2.5	1.5	2.0	6.5	4.0	5.5	13.0	9.0	11.0
30	---	---	---	3.0	2.0	2.5	8.0	6.0	7.0	16.0	10.0	13.0
31	---	---	---	3.0	2.0	2.5	---	---	---	17.0	12.0	14.5
MONTH	1.0	.0	.5	5.5	.0	1.9	8.0	.5	4.3	17.0	5.5	10.2
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.0	14.0	16.0	---	---	---	---	---	---	24.0	19.0	21.0
2	17.0	14.0	15.5	---	---	---	---	---	---	21.5	18.0	20.0
3	17.0	13.0	15.0	---	---	---	---	---	---	20.5	17.5	18.5
4	15.0	12.5	14.0	---	---	---	---	---	---	18.0	15.0	17.5
5	15.0	11.0	13.0	---	---	---	---	---	---	17.5	14.0	15.5
6	---	---	---	---	---	---	---	---	---	17.5	13.0	15.0
7	---	---	---	---	---	---	---	---	---	18.0	13.0	15.5
8	---	---	---	---	---	---	---	---	---	18.0	14.0	16.0
9	---	---	---	---	---	---	---	---	---	19.5	15.5	17.5
10	---	---	---	---	---	---	---	---	---	20.5	15.5	17.5
11	---	---	---	---	---	---	---	---	---	20.0	16.5	18.0
12	---	---	---	---	---	---	---	---	---	18.5	17.5	18.0
13	---	---	---	---	---	---	---	---	---	20.5	17.0	18.5
14	---	---	---	---	---	---	---	---	---	19.0	16.5	18.0
15	---	---	---	---	---	---	---	---	---	17.5	14.5	16.0
16	---	---	---	---	---	---	---	---	---	15.0	13.5	14.0
17	---	---	---	---	---	---	18.5	16.0	17.5	14.0	12.5	13.0
18	---	---	---	---	---	---	19.0	15.0	16.5	16.0	12.5	14.0
19	---	---	---	---	---	---	18.5	15.5	17.0	17.0	13.5	15.0
20	---	---	---	---	---	---	17.0	15.0	16.5	19.5	15.5	17.0
21	---	---	---	---	---	---	18.5	15.0	16.0	18.0	16.0	17.0
22	---	---	---	---	---	---	19.5	14.5	17.0	17.5	14.5	16.0
23	---	---	---	---	---	---	17.5	16.0	16.5	15.0	13.5	14.0
24	---	---	---	---	---	---	18.5	15.5	17.0	15.0	12.5	14.0
25	---	---	---	---	---	---	20.0	15.5	17.5	15.0	12.0	13.5
26	---	---	---	---	---	---	21.0	16.5	19.0	14.5	11.5	12.5
27	---	---	---	---	---	---	19.0	17.0	18.0	15.0	11.0	13.0
28	---	---	---	---	---	---	21.0	16.0	18.0	13.5	10.5	12.5
29	---	---	---	---	---	---	20.5	15.5	17.5	13.0	9.5	11.0
30	---	---	---	---	---	---	21.5	17.0	19.0	13.0	9.0	11.0
31	---	---	---	---	---	---	23.5	18.0	20.5	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	24.0	9.0	15.7



## CONNECTICUT RIVER BASIN

## 01131500 CONNECTICUT RIVER NEAR DALTON, NH

**LOCATION.**--Lat 44°24'36", long 71°43'16", Coos County, Hydrologic Unit 01080101, on left bank, 250 ft 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 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: 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, 1994-95.

**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 sea level. Prior to September 30, 1935, nonrecording gage at bridge 10.5 mi downstream at mean sea level. January 1, 1935, to June 29, 1937, nonrecording gage at bridge 250 ft downstream at present datum. July 11, 1956, to June 1, 1961, auxiliary nonrecording gage read hourly at same site.

**REMARKS.**--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, and other reservoirs. These reservoirs have a combined usable capacity of about 8.3 billion ft<sup>3</sup>.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 24,100 ft<sup>3</sup>/s, May 12, gage height, 19.09 ft; minimum daily discharge, 754 ft<sup>3</sup>/s, July 28 and August 3.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3370	2850	4240	1810	1700	6410	6860	5530	2640	1440	1030	755
2	3580	2750	3220	1890	1760	5350	6290	5560	2350	1500	856	778
3	2970	2700	3320	2070	e1700	4360	8880	5840	2250	1380	754	1330
4	2410	2820	3550	2870	1700	3480	12900	5220	2070	1480	1210	1590
5	2780	2660	3670	4880	1600	2850	17000	5200	2060	2080	1520	1690
6	3080	2400	3920	5500	1620	2440	17500	5510	1920	1800	958	1340
7	3020	2500	3800	4220	1640	2120	13200	5380	1970	1560	835	1030
8	2550	2270	3480	3580	e1600	2040	8100	6550	2020	1240	1570	995
9	2390	1900	3160	3150	1580	2360	11500	8060	1760	1160	1580	869
10	2400	1950	2950	2860	1540	4190	17300	14100	1630	1310	1310	892
11	2340	1960	3060	3000	1520	5890	15600	18900	1760	1740	1050	780
12	2740	2020	3850	3530	1450	4980	10300	23300	3300	1450	994	779
13	2470	1760	3530	3250	1260	3920	7380	20900	3510	1220	1070	817
14	2600	1920	3220	e2400	1480	3270	6350	17100	2570	1040	869	1010
15	4260	2810	2920	e1680	1260	2820	6280	12900	2040	1130	1320	1130
16	4090	3390	2870	1820	1410	3030	8080	8780	1610	1180	1720	3230
17	3360	2910	3070	1970	1410	e3250	8780	6070	1630	1470	2090	3370
18	2970	2430	2990	e1900	1380	e3160	6660	5370	1510	1390	1890	2210
19	2810	2350	2000	e1900	1370	2810	5440	7470	1540	1240	1430	1820
20	2700	2250	1760	e1910	1290	2640	4910	6880	1300	1230	1210	1540
21	2550	3160	2590	1990	1370	2690	4920	5180	1220	1110	1230	1370
22	2420	5430	3530	e2050	1400	3080	6090	4420	1230	883	1160	1240
23	3040	4690	3110	e1850	1360	3900	7400	3940	1300	935	1010	1290
24	9160	3960	e2180	1740	1350	5080	10700	3730	1320	1130	1280	1150
25	9970	3330	e1730	1830	1570	6080	11600	4090	1260	968	1850	1500
26	7590	2960	1800	1810	1740	6780	9850	4650	1260	803	1420	1620
27	5300	5020	e2050	1810	1780	7480	7980	4880	1240	769	1120	1400
28	4300	10400	e2050	1820	2800	8870	7040	4320	1840	754	956	1160
29	3710	9110	1710	e1690	6550	13900	6170	3830	1760	847	912	1140
30	3310	5790	1760	e1700	---	13800	5740	3370	1420	1540	832	1120
31	3160	---	1910	1710	---	10600	---	3160	---	1430	813	---
TOTAL	113400	102450	89000	76190	50190	153630	276800	240190	55290	39209	37849	40945
MEAN	3658	3415	2871	2458	1731	4956	9227	7748	1843	1265	1221	1365
MAX	9970	10400	4240	5500	6550	13900	17500	23300	3510	2080	2090	3370
MIN	2340	1760	1710	1680	1260	2040	4910	3160	1220	754	754	755

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2000, BY WATER YEAR (WY)**

MEAN	2195	2877	2503	2135	1822	2946	7778	5537	2478	1580	1414	1530
MAX	6129	7331	5786	4321	6093	12140	15380	11890	5915	5059	3662	7140
(WY)	1978	1928	1974	1996	1981	1936	1934	1972	1947	1996	1976	1954
MIN	654	1066	860	751	533	482	2631	1951	1030	654	406	654
(WY)	1949	1948	1948	1948	1940	1940	1995	1941	1988	1955	1942	1995

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1927 - 2000
ANNUAL TOTAL	1026702	1275143	
ANNUAL MEAN	2813	3484	2904
HIGHEST ANNUAL MEAN			4203
LOWEST ANNUAL MEAN			1934
HIGHEST DAILY MEAN	15800	Sep 18	23300
LOWEST DAILY MEAN	389	Sep 3	a 754
ANNUAL SEVEN-DAY MINIMUM	408	Sep 3	877
INSTANTANEOUS PEAK FLOW			24100
INSTANTANEOUS PEAK STAGE		19.09	May 12
10 PERCENT EXCEEDS	5080	7390	6080
50 PERCENT EXCEEDS	2250	2340	1870
90 PERCENT EXCEEDS	864	1130	819

a Also occurred August 3.

e Estimated.





01135150 POPE BROOK (SITE W-3) NEAR NORTH DANVILLE, VT

LOCATION.--Lat 44°28'35", long 72°07'33", Caledonia County, Hydrologic Unit 01080102, on left bank, 0.3 mi north of Pope Cemetery, 1.1 mi upstream of North Brook, and 1.7 mi northwest of North Danville.

DRAINAGE AREA.--3.25 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: December 1990 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,141.20 ft above sea level.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 1960-1990, 380 ft<sup>3</sup>/s, June 30, 1973, gage height, 3.4 ft (data provided by USACOE-CRREL).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	1300	70	1.89	Apr. 4	0735	109	2.21
Nov. 11	0650	76	1.94	May 9	1545	107	2.20
Mar. 28	1820	88	2.05	May 10	2210	* 187	* 2.68

Minimum discharge, 1.0 ft<sup>3</sup>/s, September 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	4.4	5.9	2.8	2.5	4.9	21	14	6.8	2.1	1.6	1.2
2	3.1	4.3	5.8	e2.9	2.5	4.6	31	15	6.5	1.8	1.6	1.4
3	3.1	6.7	5.9	e3.2	2.5	4.3	34	11	5.9	2.0	5.4	1.5
4	5.5	4.7	8.1	e9.6	2.4	3.9	69	9.8	5.8	2.1	2.9	1.7
5	4.9	4.1	6.8	8.6	e2.3	3.8	40	14	5.5	1.8	1.6	1.3
6	4.0	3.9	6.4	5.3	2.3	3.6	25	10	8.6	1.7	1.4	1.2
7	3.4	3.7	5.8	4.7	2.2	3.6	25	9.1	7.7	1.8	3.1	1.2
8	3.0	3.5	5.3	4.0	e2.2	4.2	29	8.7	6.0	1.8	2.8	1.1
9	3.5	3.5	5.1	3.7	2.3	7.1	39	41	6.3	1.8	3.1	1.1
10	3.0	3.6	5.6	3.9	2.2	9.2	23	50	5.3	2.0	1.9	1.1
11	3.5	3.4	6.5	6.3	2.3	6.0	19	40	8.8	1.6	1.8	1.1
12	2.9	3.1	5.3	4.8	2.2	8.0	18	20	6.6	1.5	1.9	1.2
13	2.8	3.6	5.0	3.9	e2.2	5.6	16	19	5.6	1.4	1.5	1.8
14	7.4	4.7	4.9	e3.6	e2.2	6.0	19	21	5.1	1.5	2.6	1.2
15	4.6	4.8	4.9	e3.4	2.3	5.8	30	15	4.8	1.5	2.6	9.5
16	3.7	3.9	6.2	e3.2	2.3	7.1	25	13	4.3	1.8	10	3.3
17	3.8	3.4	5.4	e3.0	e2.2	5.9	18	12	3.9	1.7	3.0	2.1
18	3.7	3.4	4.0	e2.9	e2.2	6.0	16	26	3.7	1.7	2.2	1.7
19	3.1	3.8	4.0	e2.8	2.2	5.4	15	16	3.5	1.5	1.8	1.5
20	4.3	5.1	5.5	2.8	2.2	5.3	16	12	3.1	1.3	1.9	1.4
21	3.8	9.0	11	2.8	2.1	5.9	34	11	3.0	1.4	1.6	1.5
22	3.3	5.2	4.7	2.6	2.1	7.4	37	10	3.0	1.6	1.4	1.3
23	27	4.6	4.0	2.4	2.2	11	34	9.8	2.8	1.5	2.4	1.5
24	11	4.3	3.4	2.5	2.6	14	28	28	2.5	1.3	2.7	2.0
25	7.0	3.9	e3.4	2.6	4.2	13	21	17	3.3	1.2	1.7	1.6
26	6.1	9.2	e3.2	2.7	3.6	16	17	14	3.1	1.2	1.4	1.4
27	5.4	31	e3.1	2.6	4.6	17	17	11	2.6	1.2	1.4	1.4
28	5.0	9.6	e3.0	2.5	13	42	16	10	2.2	5.1	1.4	1.4
29	4.8	7.5	e2.9	2.4	7.0	27	15	9.0	2.1	3.0	1.3	1.3
30	4.5	6.6	e2.9	2.4	---	19	13	8.2	2.4	1.8	1.3	1.3
31	4.5	---	2.8	2.5	---	17	---	7.5	---	1.6	1.2	---
TOTAL	160.3	172.5	156.8	113.4	87.1	299.6	760	512.1	140.8	55.3	72.5	52.3
MEAN	5.17	5.75	5.06	3.66	3.00	9.66	25.3	16.5	4.69	1.78	2.34	1.74
MAX	27	31	11	9.6	13	42	69	50	8.8	5.1	10	9.5
MIN	2.8	3.1	2.8	2.4	2.1	3.6	13	7.5	2.1	1.2	1.2	1.1
CFSM	1.59	1.77	1.56	1.13	.92	2.97	7.79	5.08	1.44	.55	.72	.54
IN.	1.83	1.97	1.79	1.30	1.00	3.43	8.70	5.86	1.61	.63	.83	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2000, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		
MEAN	4.04	5.68	4.86	5.10	3.69	6.53	19.0	9.10	4.32	3.29	3.08	2.72
MAX	6.54	11.4	9.22	9.04	8.16	10.9	25.4	16.5	9.48	7.79	6.00	4.90
(WY)	1996	1996	1997	1996	1996	1998	1994	2000	1998	1998	1997	1999
MIN	2.20	2.79	3.24	2.50	1.98	2.66	6.87	4.51	1.84	1.40	1.22	1.61
(WY)	1995	1995	1998	1994	1993	1994	1995	1998	1995	1991	1999	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1991 - 2000

ANNUAL TOTAL	1881.48	2582.7	
ANNUAL MEAN	5.15	7.06	6.03
HIGHEST ANNUAL MEAN			8.44
LOWEST ANNUAL MEAN			3.93
HIGHEST DAILY MEAN	53	Sep 17	85
LOWEST DAILY MEAN	.73	Sep 5	.73
ANNUAL SEVEN-DAY MINIMUM	.77	Aug 30	.77
INSTANTANEOUS PEAK FLOW		b 187	b 249
INSTANTANEOUS PEAK STAGE		2.68	2.96
INSTANTANEOUS LOW FLOW		c 1.0	d .69
ANNUAL RUNOFF (CFSM)	1.59	2.17	1.86
ANNUAL RUNOFF (INCHES)	21.54	29.56	25.22
10 PERCENT EXCEEDS	9.7	17	12
50 PERCENT EXCEEDS	3.6	3.8	3.6
90 PERCENT EXCEEDS	1.2	1.5	1.5

a Also occurred on September 9-11.

b From rating curve extended above 84 ft<sup>3</sup>/s on basis of theoretical weir formula.

c Also occurred on September 10, 11.

d Also occurred on September 3-5.

e Estimated.

CONNECTICUT RIVER BASIN

01135300 SLEEPERS RIVER (SITE W-5) NEAR ST. JOHNSBURY, VT

LOCATION.--Lat 44°26'04", long 72°02'22", Caledonia County, Hydrologic Unit 01080102, on left bank, just upstream of Emerson Falls, 1.5 mi northwest of Post Office in St. Johnsbury, and 2.6 mi above mouth.

DRAINAGE AREA.--42.9 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge Records: October 1990 to current year.

Water-quality records: Water year 1992 to 1995.

GAGE.--Water-stage recorder. Datum of gage is 641.68 ft above sea level.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 603 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	1515	740	2.80	Apr. 22	1515	701	2.74
Nov. 27	0900	872	2.99	May 9	1630	1,320	3.53
Mar. 28	1915	843	2.95	May 10	2330	* 2,700	* 4.70
Apr. 2	2130	626	2.62	May 18	1800	663	2.68
Apr. 4	0830	1,450	3.66	May 24	1130	669	2.69
Apr. 9	1115	843	2.95				

Minimum discharge, 5.8 ft<sup>3</sup>/s, July 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	43	54	e22	e25	103	205	127	68	20	14	8.7
2	37	40	49	e24	24	76	302	177	65	16	14	9.5
3	31	73	67	e38	e24	69	375	122	59	14	56	18
4	55	52	88	e100	e23	59	807	108	59	20	56	18
5	67	42	79	e150	e23	55	393	154	59	17	19	14
6	45	39	73	e62	e22	51	239	118	81	13	14	10
7	37	36	64	58	e22	50	241	111	110	12	29	9.2
8	30	35	55	48	e20	64	278	105	66	13	63	8.5
9	35	33	51	43	e21	130	483	603	74	12	47	8.0
10	31	35	53	42	21	193	266	561	60	19	29	7.3
11	34	35	79	91	22	88	214	622	89	16	19	6.9
12	29	29	58	81	e22	116	200	224	80	11	29	7.5
13	25	34	54	51	e21	89	178	195	62	9.5	17	14
14	90	48	52	e38	e23	66	189	283	55	13	23	11
15	63	66	53	e35	e23	77	283	167	50	13	52	105
16	43	46	71	e34	e22	104	268	145	45	13	119	73
17	38	e38	67	e32	e22	85	187	132	40	14	51	32
18	42	37	44	e30	e21	65	164	304	36	14	29	22
19	33	37	22	e28	e21	67	161	216	34	12	21	17
20	42	48	e34	e26	e22	69	164	146	28	9.5	17	15
21	51	100	e90	e26	e22	79	373	130	26	8.5	15	14
22	37	61	61	e25	23	110	455	122	27	10	13	12
23	298	49	48	e25	23	158	351	114	24	11	15	11
24	163	44	41	e24	27	201	317	324	21	8.9	42	18
25	85	40	e36	24	e40	174	216	188	23	7.6	20	18
26	65	97	e30	25	e44	212	179	157	35	6.5	14	14
27	55	416	e28	e24	e66	213	181	124	24	6.2	12	12
28	48	136	e26	e24	e260	459	161	106	21	15	12	12
29	46	90	e23	e23	245	319	145	93	17	89	11	11
30	42	74	e23	e23	---	207	134	83	23	32	10	11
31	42	---	e22	e24	---	183	---	75	---	17	9.5	---
TOTAL	1811	1953	1595	1300	1194	3991	8109	6136	1461	492.7	891.5	547.6
MEAN	58.4	65.1	51.5	41.9	41.2	129	270	198	48.7	15.9	28.8	18.3
MAX	298	416	90	150	260	459	807	622	110	89	119	105
MIN	25	29	22	22	20	50	134	75	17	6.2	9.5	6.9
CFSM	1.36	1.52	1.20	.98	.96	3.00	6.30	4.61	1.13	.37	.67	.43
IN.	1.57	1.69	1.38	1.13	1.03	3.46	7.03	5.32	1.27	.43	.77	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2000, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		
MEAN	54.6	73.4	57.5	58.2	43.6	98.1	209	104	51.9	36.8	43.5	31.8
MAX	128	124	143	108	93.3	168	302	198	100	84.2	97.9	66.4
(WY)	1991	1991	1991	1996	1996	1990	1994	2000	1998	1998	1998	1989
MIN	11.2	31.6	24.9	19.2	19.8	39.1	75.2	48.8	14.9	8.47	6.37	12.4
(WY)	1989	1995	1989	1989	1993	1994	1995	1998	1995	1991	1999	1995

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1991 - 2000

ANNUAL TOTAL	21813.3	29481.8			
ANNUAL MEAN	59.8	80.6			71.9
HIGHEST ANNUAL MEAN					93.8
LOWEST ANNUAL MEAN					42.8
HIGHEST DAILY MEAN	823	Sep 17	807	Apr 4	1380
LOWEST DAILY MEAN	2.2	Sep 2	6.2	Jul 27	2.2
ANNUAL SEVEN-DAY MINIMUM	2.4	Sep 1	8.2	Sep 6	2.4
INSTANTANEOUS PEAK FLOW			a 2700	May 10	a 7570
INSTANTANEOUS PEAK STAGE			4.70	May 10	7.11
INSTANTANEOUS LOW FLOW			5.8	Jul 27	1.9
ANNUAL RUNOFF (CFSM)	1.39	1.88			1.68
ANNUAL RUNOFF (INCHES)	18.91	25.55			22.77
10 PERCENT EXCEEDS	128	200			160
50 PERCENT EXCEEDS	42	42			42
90 PERCENT EXCEEDS	6.0	13			13

a From rating curve extended above 560 ft<sup>3</sup>/s on basis of theoretical weir formula.  
e Estimated.

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT

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

DRAINAGE AREA.--436 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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), 1994.

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

GAGE.--Water-stage recorder. Elevation of gage is 490 ft above sea level, from topographic map.

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

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 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Apr. 4	2230	7,320	11.83	May 11	0945	* 9,600	* 14.35
Apr. 9	1500	5,400	9.67				

Minimum daily discharge, 152 ft<sup>3</sup>/s, July 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1150	482	666	e300	e360	2100	1590	1340	741	350	281	174
2	653	463	797	e320	e370	1590	2070	1660	676	307	255	179
3	459	527	690	e390	e350	1200	3100	1450	634	248	284	641
4	464	514	740	e750	e360	895	5710	1230	603	321	490	450
5	710	437	772	e1700	e360	754	6230	1400	642	306	326	394
6	571	415	760	1200	e350	683	3320	1360	630	230	230	284
7	504	383	698	893	e350	655	2350	1310	1050	219	219	226
8	396	368	607	665	e340	698	2250	1250	766	201	744	212
9	382	351	546	562	e360	1230	4250	e3000	692	218	574	182
10	408	339	509	546	e370	2450	4200	e4300	616	251	470	178
11	389	361	694	810	e380	1450	2730	8080	745	483	339	167
12	421	333	640	979	e380	1200	2160	4200	1060	267	e450	165
13	346	336	566	603	e380	1160	1710	2510	774	228	e300	212
14	567	380	521	e380	e400	894	1650	2820	640	218	246	280
15	944	697	503	e350	e440	840	2140	2070	586	209	538	623
16	637	591	542	e350	e460	941	3090	1610	529	195	767	1630
17	516	449	629	e360	e460	890	2330	1400	471	215	915	766
18	509	404	463	e370	e470	745	1720	1740	467	221	530	514
19	454	399	342	e370	e480	747	1590	2740	427	227	351	482
20	433	433	387	e365	e500	702	1540	1750	385	195	310	361
21	593	821	658	e360	e475	749	2290	1380	337	185	286	305
22	513	914	776	e360	e460	943	3750	1250	345	198	243	336
23	1300	674	776	e350	e470	1270	3430	1160	423	235	229	279
24	2400	582	e540	e355	e490	1690	3510	1690	359	214	543	318
25	1520	518	e450	e360	e590	1800	2890	1730	312	179	454	478
26	998	586	e330	e360	e700	1860	2220	1660	346	168	308	350
27	778	2690	e320	e370	e820	1980	1890	1400	313	157	245	274
28	656	2550	e290	e375	2620	2940	1700	1200	445	152	213	267
29	586	1410	e280	e360	3160	4480	1520	1030	330	358	208	277
30	529	972	e280	e350	---	2780	1470	902	314	703	193	261
31	495	---	e290	e360	---	1880	---	805	---	370	185	---
TOTAL	21281	20379	17062	16223	17705	44196	80400	61427	16658	8028	11726	11265
MEAN	686	679	550	523	611	1426	2680	1982	555	259	378	376
MAX	2400	2690	797	1700	3160	4480	6230	8080	1060	703	915	1630
MIN	346	333	280	300	340	655	1470	805	312	152	185	165
CFSM	1.57	1.56	1.26	1.20	1.40	3.27	6.15	4.54	1.27	.59	.87	.86
IN.	1.82	1.74	1.46	1.38	1.51	3.77	6.86	5.24	1.42	.68	1.00	.96

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	528	705	601	497	427	942	2262	1347	641	405	342	352
MAX	1522	1667	1919	1255	2280	4013	3931	3082	1846	1519	963	1126
(WY)	1946	1960	1974	1978	1981	1936	1934	1972	1973	1990	1954	1954
MIN	132	253	169	128	123	161	806	517	225	138	122	98.8
(WY)	1948	1948	1948	1948	1980	1940	1995	1941	1988	1955	1934	1948

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1929 - 2000

ANNUAL TOTAL	242272	326350	
ANNUAL MEAN	664	892	753
HIGHEST ANNUAL MEAN			1153
LOWEST ANNUAL MEAN			472
HIGHEST DAILY MEAN	4630	Sep 17	8080
LOWEST DAILY MEAN	63	Sep 7	152
ANNUAL SEVEN-DAY MINIMUM	66	Sep 3	186
INSTANTANEOUS PEAK FLOW			9600
INSTANTANEOUS PEAK STAGE			14.35
ANNUAL RUNOFF (CFSM)	1.52	2.05	23.49
ANNUAL RUNOFF (INCHES)	20.67	27.84	1.73
10 PERCENT EXCEEDS	1320	2080	23.48
50 PERCENT EXCEEDS	503	517	1690
90 PERCENT EXCEEDS	127	241	430
			168

e Estimated.









01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT

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

DRAINAGE AREA.--8.95 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: June 1958 to current year.

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

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

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation at low flow caused by mill upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4	2100	Ice Jam	* 3.94	Apr. 4	0745	142	3.56
Mar. 28	1200	* 185	3.81	May 10	2200	183	3.80

Minimum discharge, 1.3 ft<sup>3</sup>/s, September 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	7.6	e16	e12	e8.6	13	31	41	28	8.4	4.6	2.3
2	5.0	7.5	e19	e13	e8.3	12	38	44	30	6.9	4.5	2.4
3	4.8	13	e16	e18	e8.2	12	43	37	27	6.5	4.4	2.5
4	7.1	8.7	18	e52	e7.5	11	81	35	26	7.0	4.2	2.4
5	6.3	8.2	18	e25	e7.2	11	48	47	26	6.8	3.9	2.1
6	6.4	8.1	17	e16	e7.0	11	44	43	43	5.8	3.8	2.0
7	6.3	7.9	17	e15	e7.0	12	45	39	38	5.4	4.0	1.9
8	6.2	7.8	17	e15	e7.0	13	59	39	27	5.2	4.1	1.8
9	6.7	7.7	18	e14	e7.0	18	61	64	26	6.2	3.9	1.8
10	6.9	8.3	18	e14	e7.0	20	46	57	23	9.9	3.8	1.8
11	9.0	8.5	20	e13	e7.0	15	41	66	24	5.6	5.6	1.7
12	7.2	7.5	20	e12	e6.8	18	40	47	24	5.0	5.0	1.8
13	6.8	8.1	20	e12	e6.8	16	37	50	20	4.8	4.0	2.4
14	9.0	8.9	20	e12	e6.8	20	40	56	21	4.7	11	1.8
15	9.3	9.3	20	e12	e7.8	16	54	47	19	4.9	7.9	6.9
16	8.5	8.2	20	e12	e6.4	18	49	45	17	14	18	3.0
17	8.1	8.1	22	e11	e6.0	17	42	42	18	7.2	5.2	1.9
18	8.2	9.8	e20	e11	e6.0	e22	40	58	16	5.8	4.1	1.8
19	8.0	8.1	e16	e11	e6.4	e19	40	50	14	5.0	3.7	1.7
20	8.6	8.8	e18	e11	e6.3	18	39	45	13	4.7	3.5	1.6
21	9.7	11	e20	e10	e6.4	18	50	46	12	4.8	3.3	1.6
22	9.4	8.5	e13	e9.8	e7.0	19	63	46	11	5.2	3.1	1.5
23	28	8.0	e16	e9.6	e7.2	22	55	44	10	4.9	4.4	1.4
24	10	7.8	e16	e9.5	e8.0	24	59	63	9.2	5.0	5.3	1.7
25	8.3	7.5	e15	e9.4	e14	23	52	48	16	4.8	3.3	1.6
26	7.9	12	e15	e9.3	e12	29	46	41	13	4.5	3.0	1.5
27	7.6	41	e15	e9.0	e10	27	52	37	11	4.5	2.7	1.4
28	7.5	19	e14	e8.9	32	57	47	35	8.6	4.5	2.6	1.4
29	7.5	17	e13	e8.8	15	30	43	33	9.7	4.4	2.5	1.4
30	7.4	16	e12	e8.7	---	28	41	31	12	4.8	2.5	1.4
31	7.6	---	e11	e8.6	---	28	---	30	---	4.6	2.4	---
TOTAL	255.1	317.9	530	412.6	252.7	617	1426	1406	592.5	181.8	144.3	60.5
MEAN	8.23	10.6	17.1	13.3	8.71	19.9	47.5	45.4	19.8	5.86	4.65	2.02
MAX	28	41	22	52	32	57	81	66	43	14	18	6.9
MIN	4.8	7.5	11	8.6	6.0	11	31	30	8.6	4.4	2.4	1.4
CFSM	.92	1.18	1.91	1.49	.97	2.22	5.31	5.07	2.21	.66	.52	.23
IN.	1.06	1.32	2.20	1.71	1.05	2.56	5.93	5.84	2.46	.76	.60	.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2000, BY WATER YEAR (WY)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000					
MEAN	10.0	13.9	13.2	10.3	9.50	17.8	50.5	34.3	13.8	7.35	5.69	5.26	35.5	33.1	41.0	26.6	46.0	47.0	91.2	75.7	41.1	41.0	25.5	14.9	1976	1990	1984	1978	1981	1976	1969	1971	1973	1973	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963		
MAX (WY)	1.14	3.41	2.91	2.53	1.90	5.02	16.3	11.4	4.87	1.63	1.15	.40	1976	1990	1984	1978	1981	1976	1969	1971	1973	1973	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963	1976	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963	
MIN (WY)	1976	1990	1984	1978	1981	1976	1969	1971	1973	1973	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963	1976	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963	1976	1990	1976	1964	1964	1971	1964	1971	1995	1995	1963	1970	1963

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1958 - 2000
ANNUAL TOTAL	4896.7	6196.4	
ANNUAL MEAN	13.4	16.9	16.0
HIGHEST ANNUAL MEAN			29.1
LOWEST ANNUAL MEAN			6.71
HIGHEST DAILY MEAN	76	Apr 8	260
LOWEST DAILY MEAN	1.1	Sep 4	.20
ANNUAL SEVEN-DAY MINIMUM	1.2	Aug 31	.21
INSTANTANEOUS PEAK FLOW		185	bc 800
INSTANTANEOUS PEAK STAGE		d 3.94	d 6.35
INSTANTANEOUS LOW FLOW		1.3	f .10
ANNUAL RUNOFF (CFSM)	1.50	1.89	1.79
ANNUAL RUNOFF (INCHES)	20.35	25.75	24.28
10 PERCENT EXCEEDS	29	44	40
50 PERCENT EXCEEDS	9.0	11	8.6
90 PERCENT EXCEEDS	2.2	3.2	2.3

- a Also occurred on September 27-30.
- b From rating curve extended above 160 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow.
- c From floodmarks.
- d Ice jam.
- e Estimated.
- f Also occurred on September 19, 1963.

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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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 and crest-stage gage. Datum of gage is 630.50 ft (Vermont State Department of Highways datum). Prior to October 1, 1964, at site 140 ft downstream at datum 2.25 ft higher and October 1, 1964, to September 30, 1975, at site 140 ft downstream at datum 1.25 ft higher.

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

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 ft<sup>3</sup>/s and maximum (\*):

Table with columns: Date, Time, Discharge (ft<sup>3</sup>/s), Gage height (ft), Date, Time, Discharge (ft<sup>3</sup>/s), Gage height (ft). Includes entries for Mar. 28, Apr. 4, Apr. 9, and July 16.

Minimum discharge, 6.2 ft<sup>3</sup>/s, September 29, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

Table with columns: DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. Contains daily mean discharge values for water years 1999-2000.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2000, BY WATER YEAR (WY)

Table with columns: MEAN, MAX, (WY), MIN, (WY). Shows monthly mean statistics for water years 1939-2000.

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1939 - 2000

Summary statistics table comparing 1999 calendar year, 2000 water year, and long-term averages (1939-2000) for metrics like annual total, mean, highest/lowest annual means, etc.

a Also occurred on September 30. e Estimated.

01144000 WHITE RIVER AT WEST HARTFORD, VT

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

DRAINAGE AREA.--690 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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, 1992-95.

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 sea level. Prior to October 30, 1927, nonrecording gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow during period 1934-50 caused by powerplant upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft<sup>3</sup>/s, November 4, 1927, gage height, 29.3 ft, from floodmarks, from rating curve extended above 29,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum observed, about 35 ft<sup>3</sup>/s, August 4, 1918; minimum daily discharge, 54 ft<sup>3</sup>/s, September 27, 28, 1963. Stage and discharge of the flood of November 4, 1927, are the greatest since at least 1761.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 11,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1900	14,400	11.81	Apr. 4	1400	* 18,200	* 13.05

Minimum discharge, 142 ft<sup>3</sup>/s, September 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1220	758	1410	e560	e545	2460	3310	2060	1130	543	1980	270
2	824	712	1210	e575	e540	1990	3430	2510	1040	462	1450	255
3	679	1260	1220	e710	e500	1750	6400	2240	1020	416	1160	252
4	687	1190	1170	2690	e470	1460	13500	1950	888	430	1130	261
5	986	941	1140	5880	e450	1370	8650	2000	823	436	854	254
6	818	850	1080	2160	e440	1240	5160	1960	921	395	693	239
7	716	768	1030	1840	e425	1200	4100	1880	3270	354	641	224
8	633	726	950	1500	e420	1420	4250	1710	1770	339	634	216
9	609	688	877	1330	e415	2410	5660	2290	1350	327	545	206
10	636	687	842	e1500	e415	6600	4610	2330	1180	585	511	190
11	635	806	1020	e2600	e410	3250	3920	5130	1020	600	448	188
12	614	730	957	e2000	e410	2700	3750	3260	1010	405	579	180
13	548	706	884	e1300	e400	2250	3170	2680	973	341	563	214
14	572	751	848	e1020	e375	1820	3030	4470	1100	317	489	239
15	631	908	849	e930	e365	1800	3560	2980	1030	345	784	235
16	560	843	896	e820	e365	2670	3980	2470	916	1060	974	395
17	529	782	1010	e820	e355	3000	3230	2350	913	6000	1030	301
18	507	703	852	e830	e330	2000	2710	2260	1160	2500	712	240
19	478	695	566	e810	e340	1880	2480	3220	1030	1810	589	218
20	460	713	555	e790	e370	1810	2290	2400	857	1200	509	283
21	506	1070	1220	e740	e390	1800	2550	2210	734	921	449	268
22	484	1080	1160	e680	e400	2110	4230	2030	753	838	409	213
23	1890	944	833	e645	e400	2670	4820	1870	794	722	387	197
24	3990	869	732	e620	e450	3410	4450	2880	655	623	534	196
25	2150	794	470	e610	e600	3510	3490	3430	586	545	483	197
26	1480	995	675	e610	e1150	4230	2940	2580	802	480	398	192
27	1200	5640	e920	e600	e1900	3980	3160	2090	662	447	352	185
28	1030	3470	e680	e590	e5200	8610	3030	1800	580	417	332	171
29	934	2210	e570	e580	4090	7920	2580	1610	504	470	310	169
30	847	1740	e550	e560	---	4930	2300	1420	557	947	294	167
31	800	---	e530	e560	---	3830	---	1260	---	2030	282	---
TOTAL	28653	35029	27706	37460	22920	92080	124740	75330	30028	27305	20505	6815
MEAN	924	1168	894	1208	790	2970	4158	2430	1001	881	661	227
MAX	3990	5640	1410	5880	5200	8610	13500	5130	3270	6000	1980	395
MIN	460	687	470	560	330	1200	2290	1260	504	317	282	167
CFSM	1.34	1.69	1.30	1.75	1.15	4.30	6.03	3.52	1.45	1.28	.96	.33
IN.	1.54	1.89	1.49	2.02	1.24	4.96	6.73	4.06	1.62	1.47	1.11	.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2000, BY WATER YEAR (WY)

MEAN	670	1020	1004	863	804	1912	3879	1984	898	498	375	404
MAX	2416	2391	3189	2178	3503	7170	7286	4734	3459	2010	1822	2774
(WY)	1946	1960	1984	1996	1981	1936	1969	1940	1947	1996	1976	1938
MIN	80.0	285	237	197	169	222	1131	634	224	108	90.5	77.5
(WY)	1964	1954	1923	1925	1940	1940	1995	1941	1921	1965	1965	1963

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1915 - 2000	
ANNUAL TOTAL	420992	528571		
ANNUAL MEAN	1153	1444	1191	
HIGHEST ANNUAL MEAN			1910	1976
LOWEST ANNUAL MEAN			494	1965
HIGHEST DAILY MEAN	9400	Apr 2	13500	Apr 4
LOWEST DAILY MEAN	80	Sep 6	167	Sep 30
ANNUAL SEVEN-DAY MINIMUM	92	Sep 1	182	Sep 24
INSTANTANEOUS PEAK FLOW			18200	Apr 4
INSTANTANEOUS PEAK STAGE			13.05	Apr 4
INSTANTANEOUS LOW FLOW			142	Sep 30
ANNUAL RUNOFF (CFSM)	1.67	2.09		1.73
ANNUAL RUNOFF (INCHES)	22.70	28.50		23.45
10 PERCENT EXCEEDS	2430	3340	2700	
50 PERCENT EXCEEDS	794	850	633	
90 PERCENT EXCEEDS	152	337	190	

- a Also occurred on September 28, 1963.
- b From rating curve extended above 29,000 ft<sup>3</sup>/s as explained under Extremes paragraphs.
- c From floodmarks.
- d About.
- e Estimated.

CONNECTICUT RIVER BASIN

01144500 CONNECTICUT RIVER AT WEST LEBANON, NH

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

DRAINAGE AREA.--4,092 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1911 to November 1976 (published as "at White River Junction, VT"), November 1978 to current year.  
Water-quality records: Water year 1954, 1994.

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 sea level. 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 November 2, 1930, nonrecording gage at various locations on upstream and downstream sides of railroad bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Union Village Reservoir, and other reservoirs. These reservoirs have a combined usable capacity of about 17.2 billion ft<sup>3</sup>.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge. 136,000 ft<sup>3</sup>/s, November 4, 1927, gage height, 35.0 ft, present site; minimum daily discharge 82 ft<sup>3</sup>/s, August 8, 1965. Stage and discharge of flood November 4, 1927, are the greatest since at least 1760.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 47,400 ft<sup>3</sup>/s, April 5, gage height, 18.46 ft; maximum gage height, 20.03 ft, February 28 (ice jam); minimum daily discharge, 969 ft<sup>3</sup>/s, September 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5670	6780	13800	3470	e3060	10800	19700	13500	7110	1330	4250	2410
2	5790	6170	7150	2150	e3360	8550	16900	12500	6170	1250	3650	1740
3	4590	6780	5380	3340	e4840	10900	22600	12300	5320	1360	4080	995
4	3970	6040	5760	5290	e3800	9080	39600	11700	5610	1380	2940	1000
5	5200	5440	6920	14200	e1150	8160	44000	11800	5720	2530	2470	1620
6	5460	6600	7400	9690	e1230	6200	38400	11400	6210	3410	2290	3110
7	5300	6740	7010	7800	e3250	4830	32800	12800	9550	3670	4550	1690
8	5630	5000	7540	6410	e3730	5960	27000	13800	6890	2800	2880	1700
9	3510	5890	6850	7550	e3140	9340	30100	15700	6540	1720	5800	1230
10	3120	4900	7000	7320	e2620	20500	42000	24700	5910	2670	4890	1040
11	4280	4950	7590	6840	e3760	18200	36800	34700	3850	3420	2610	2360
12	6180	3790	5690	9550	e2040	14500	30300	39500	6150	3880	1320	2810
13	4370	3490	6420	6570	e1540	11600	22100	37500	4190	4020	1520	1920
14	6710	3270	4830	7820	e2050	9770	18800	38300	6450	2090	2770	1880
15	4840	4820	6090	6320	e3420	9370	19700	34300	7990	1120	2710	1590
16	5080	6780	5950	3220	e2420	13200	19300	25900	e3940	1500	3550	3120
17	7760	6140	6750	e6660	e2150	12900	18200	17600	e4500	7160	3300	3460
18	6700	5460	6290	e7460	e3640	8840	18900	16200	e1830	4360	3150	4950
19	6680	6260	4540	e6380	e2360	7260	17500	19100	e4500	3960	3650	5210
20	7540	4970	6860	e6110	e1710	9250	17300	18800	5260	2930	1540	4000
21	4020	2950	4780	e7020	e2800	8900	17500	16300	e4260	2520	3080	3790
22	5270	6960	6170	e7990	e2200	10400	20900	13000	e4530	2550	2250	1310
23	5500	7770	5270	e4920	e2640	11700	24800	11200	e1700	1820	2740	1660
24	15100	7720	6090	e4510	e3540	13600	24800	8800	e1260	2200	2600	1940
25	16500	5870	e3880	e5350	e3450	15300	23400	12500	e2230	2100	2420	2630
26	14200	6780	5850	e5100	e5310	15800	21200	11400	e4040	2580	2750	2900
27	12000	14800	3850	e4590	4630	15800	19900	11800	8170	1750	2950	3440
28	7690	20800	3620	e7520	e13500	24700	19000	9780	e5990	2040	2190	2690
29	6280	17400	4610	e5010	e15700	33800	15800	9430	e1300	1300	2100	969
30	6310	14700	3390	e2570	---	30600	14200	8330	2490	2410	2420	1290
31	7090	---	3620	e2780	---	25100	---	9200	---	6050	3560	---
TOTAL	208340	216020	186950	191510	109040	414910	733500	543840	149660	83880	92980	70454
MEAN	6721	7201	6031	6178	3760	13380	24450	17540	4989	2706	2999	2348
MAX	16500	20800	13800	14200	15700	33800	44000	39500	9550	7160	5800	5210
MIN	3120	2950	3390	2150	1150	4830	14200	8330	1260	1120	1320	969

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1977, 1979 - 2000, BY WATER YEAR (WY)

MEAN	4786	6794	6266	5138	4816	9268	20240	13020	6219	3774	3055	3231
MAX	12990	24860	16890	11680	17650	35510	32900	25890	16870	14050	8904	12900
(WY)	1982	1928	1984	1996	1981	1936	1934	1972	1947	1973	1990	1954
MIN	1314	2313	1795	1627	1419	1626	5536	4556	1946	1393	1072	1007
(WY)	1948	1948	1948	1948	1940	1940	1995	1987	1921	1921	1942	1921

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1912 - 1977, 1979 - 2000

ANNUAL TOTAL	2328131	3001084										
ANNUAL MEAN	6378	8200										
HIGHEST ANNUAL MEAN										7163		
LOWEST ANNUAL MEAN										10700		1928
HIGHEST DAILY MEAN	27900	Apr 4	44000	Apr 5	129000	Nov 4	1927					
LOWEST DAILY MEAN	729	Sep 6	969	Sep 29	82	Aug 8	1965					
ANNUAL SEVEN-DAY MINIMUM	949	Aug 3	1620	Sep 3	731	Aug 27	1934					
INSTANTANEOUS PEAK FLOW			47400	Apr 5	136000	Nov 4	1927					
INSTANTANEOUS PEAK STAGE			a 20.03	Feb 28	35.00	Nov 4	1927					
10 PERCENT EXCEEDS	13600		18800		16000							
50 PERCENT EXCEEDS	5630		5620		4600							
90 PERCENT EXCEEDS	1320		1930		1690							

a Ice jam.  
e Estimated.

01150500 MASCOMA RIVER AT MASCOMA, NH

LOCATION.--Lat 43°38'55", long 72°10'55", Grafton County, Hydrologic Unit 01080104, on right bank, at Mascoma, 100 ft downstream from outlet of Mascoma Lake.

DRAINAGE AREA.--153 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: August 1923 to present; August 1923 to January 1993, at site 900 ft downstream and different datum.

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

GAGE.--Water-stage recorder. Datum of gage is 740.68 ft above sea level.

REMARKS.--Records fair. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,840 ft<sup>3</sup>/s, March 19, 1936, gage height, 7.50 ft (at different datum), from rating curve extended above 2,500 ft<sup>3</sup>/s on basis of computations of flow over dam at gage heights 6.85 ft. and 7.50 ft; minimum daily discharge, 2 ft<sup>3</sup>/s, February 3, 1939, September 1, 1940.

EXTREMES FOR CURENT YEAR.--Maximum discharge, 2,480 ft<sup>3</sup>/s, April 10, gage height, 7.55 ft; minimum daily discharge, 37 ft<sup>3</sup>/s, September 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	307	258	303	92	80	468	742	351	170	115	239	42
2	373	253	263	92	80	513	656	288	170	109	250	42
3	329	255	235	92	80	515	619	323	160	101	218	42
4	286	263	220	93	79	490	678	340	153	96	148	42
5	273	301	210	99	79	454	1190	337	114	89	98	42
6	271	299	204	134	79	411	1260	334	93	74	97	41
7	245	283	210	170	79	343	983	326	146	65	95	41
8	224	296	215	179	78	303	764	318	305	65	95	41
9	168	294	212	174	69	323	1170	316	301	52	94	40
10	164	269	186	172	61	462	2180	329	251	43	63	39
11	158	247	167	211	63	597	2150	546	205	43	41	39
12	203	235	166	272	63	620	1260	549	167	44	41	39
13	227	226	166	286	63	585	908	517	156	45	41	39
14	246	221	164	256	63	532	773	501	156	45	41	38
15	256	221	163	222	64	486	889	505	157	47	42	38
16	244	222	164	192	65	457	663	447	154	50	56	38
17	236	223	165	169	65	467	383	396	153	140	86	38
18	230	231	166	149	66	455	390	367	224	186	105	38
19	231	247	164	140	67	432	383	339	263	144	96	38
20	231	260	161	133	67	386	374	332	245	119	80	38
21	239	257	163	126	67	299	545	328	195	103	73	38
22	246	259	166	122	67	248	618	321	178	89	65	38
23	252	257	163	118	67	328	621	260	202	81	61	38
24	267	258	160	114	67	399	676	301	236	80	58	38
25	293	253	158	97	68	483	741	408	190	58	54	38
26	313	246	154	81	69	575	713	356	181	40	51	38
27	305	248	152	81	82	742	536	340	169	39	48	38
28	290	259	149	81	167	873	451	327	142	39	47	37
29	269	318	146	80	331	1560	481	307	120	39	45	37
30	256	342	119	79	---	1690	483	222	116	38	43	37
31	263	---	92	79	---	1110	---	171	---	125	42	---
TOTAL	7895	7801	5526	4385	2395	17606	24280	11102	5472	2403	2613	1172
MEAN	255	260	178	141	82.6	568	809	358	182	77.5	84.3	39.1
MAX	373	342	303	286	331	1690	2180	549	305	186	250	42
MIN	158	221	92	79	61	248	374	171	93	38	41	37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

MEAN	142	187	191	158	166	317	639	346	179	116	94.1	92.1
MAX	461	560	607	368	550	1222	1338	769	493	658	443	591
(WY)	1976	1928	1984	1978	1981	1936	1969	1996	1984	1973	1990	1938
MIN	34.6	35.8	46.5	39.3	38.7	65.4	180	78.2	34.8	27.5	19.0	29.6
(WY)	1964	1965	1979	1981	1980	1931	1995	1957	1999	1999	1985	1998

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1923 - 2000

ANNUAL TOTAL		71718				92650						
ANNUAL MEAN		196				253				219		
HIGHEST ANNUAL MEAN										359		1973
LOWEST ANNUAL MEAN										84.4		1965
HIGHEST DAILY MEAN				2030	Sep 18	2180	Apr 10	5090			Mar 19	1936
LOWEST DAILY MEAN				19	Sep 8	a 37	Sep 28	2.0			Feb 3	1929
ANNUAL SEVEN-DAY MINIMUM				20	Sep 8	38	Sep 24	16			Aug 24	1985
INSTANTANEOUS PEAK FLOW						2480	Apr 10	b 5840			Mar 19	1936
INSTANTANEOUS PEAK STAGE						7.55	Apr 10	9.08			Apr 20	1997
10 PERCENT EXCEEDS		368				516		472				
50 PERCENT EXCEEDS		160				178		125				
90 PERCENT EXCEEDS		23				42		47				

a Also occurred on September 29, 30.

b From rating curve extended above 2,500 ft<sup>3</sup>/s on basis of computations of flow over dam at gage heights 6.85 ft and 7.50 ft. from gage located 900 ft downstream of present site at different datum.



CONNECTICUT RIVER BASIN

01150900 OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT

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

DRAINAGE AREA.--23.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1984 to current year.

REVISED RECORDS.--WRD NH-VT-87-1: 1985-86.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 24	0830	528	4.86	Mar. 28	2100	1,010	5.87
Nov. 27	1600	504	4.80	Apr. 4	1845	* 1,670	* 6.96
Mar. 10	0530	648	5.15				

Minimum discharge, 7.8 ft<sup>3</sup>/s, September 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	36	64	e19	e24	173	173	102	30	17	219	13
2	35	35	54	e19	e23	140	206	e130	28	15	98	13
3	29	132	59	e53	e23	104	419	e105	24	14	67	14
4	33	82	59	e229	e22	82	1120	e96	20	15	59	13
5	38	60	56	e412	e21	72	861	e103	20	14	42	12
6	31	50	53	e276	e21	61	333	e96	43	11	35	11
7	26	41	50	e127	e20	60	242	e90	120	11	37	10
8	22	36	38	e88	e20	88	252	e86	54	10	32	9.7
9	24	34	33	e71	e20	229	327	e120	42	13	28	9.5
10	24	35	39	e74	e20	533	280	e132	36	38	27	9.0
11	25	38	73	e108	e19	254	216	e150	30	19	23	9.0
12	21	27	51	e80	e19	189	196	e125	55	13	36	9.2
13	20	29	43	e57	e19	137	163	e140	39	11	29	17
14	25	36	40	e44	e18	108	164	e200	54	11	e31	11
15	26	44	e39	e37	e27	118	228	e140	43	17	47	20
16	22	38	e59	e36	e19	214	254	e120	35	86	89	20
17	21	33	e53	e37	e18	e180	193	e130	70	210	62	14
18	20	29	e38	e36	e16	e130	154	e120	69	98	43	12
19	18	32	e40	e36	e17	e110	145	e140	55	58	35	11
20	19	39	e26	e35	e20	105	135	e100	39	43	28	16
21	20	58	e68	e33	e20	105	208	e76	33	35	25	14
22	18	49	e52	e32	e20	116	269	e72	51	32	22	12
23	185	45	e41	e31	e23	143	304	65	58	27	24	11
24	438	41	e35	e31	e36	180	286	154	38	23	32	12
25	195	38	e32	e30	e90	185	207	154	34	21	23	11
26	101	81	e26	e30	e115	230	172	104	35	19	19	10
27	73	388	e24	e29	e140	201	190	74	27	20	18	9.8
28	57	264	e21	e28	e400	574	181	60	22	20	17	9.9
29	46	132	e20	e27	320	565	153	52	19	27	15	10
30	42	92	e21	e26	---	285	134	43	21	70	15	9.0
31	40	---	e19	e25	---	206	---	35	---	274	14	---
TOTAL	1748	2074	1326	2196	1570	5877	8165	3314	1244	1292	1291	362.1
MEAN	56.4	69.1	42.8	70.8	54.1	190	272	107	41.5	41.7	41.6	12.1
MAX	438	388	73	412	400	574	1120	200	120	274	219	20
MIN	18	27	19	19	16	60	134	35	19	10	14	9.0
CFSM	2.41	2.95	1.83	3.03	2.31	8.10	11.6	4.57	1.77	1.78	1.78	.52
IN.	2.78	3.30	2.11	3.49	2.50	9.34	12.98	5.27	1.98	2.05	2.05	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	49.5	64.6	47.6	51.3	39.5	96.1	160	81.8	42.4	31.6	24.4	26.6				
MAX	121	121	87.2	108	76.6	200	272	169	160	125	51.5	97.2				
(WY)	1988	1989	1997	1998	1990	1998	2000	1996	1998	1996	1986	1987				
MIN	14.2	25.4	21.2	19.4	14.5	44.6	45.7	34.7	13.7	6.77	6.50	6.19				
(WY)	1998	1995	1998	1988	1987	1989	1995	1995	1988	1991	1999	1995				

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1985 - 2000

ANNUAL TOTAL	19697.3	30459.1		
ANNUAL MEAN	54.0	83.2	59.6	
HIGHEST ANNUAL MEAN			83.2	2000
LOWEST ANNUAL MEAN			35.6	1995
HIGHEST DAILY MEAN	752	Sep 17	1120	Apr 4
LOWEST DAILY MEAN	3.3	Sep 5	a 9.0	Sep 10
ANNUAL SEVEN-DAY MINIMUM	3.6	Aug 31	9.6	Sep 6
INSTANTANEOUS PEAK FLOW			b 1670	Apr 4
INSTANTANEOUS PEAK STAGE			6.96	Apr 4
INSTANTANEOUS LOW FLOW			7.8	Sep 10
ANNUAL RUNOFF (CFSM)	2.31	3.56		
ANNUAL RUNOFF (INCHES)	31.31	48.42		
10 PERCENT EXCEEDS	94	206	126	
50 PERCENT EXCEEDS	32	38	32	
90 PERCENT EXCEEDS	5.7	15	10	

- a Also occurred on September 11, 30.
- b From rating curve extended above 670 ft<sup>3</sup>/s.
- c Also occurred on September 2, 5, 6.
- e Estimated.



CONNECTICUT RIVER BASIN

01152500 SUGAR RIVER AT WEST CLAREMONT, NH

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

DRAINAGE AREA.--269 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: May 1928 to current year. Published as "at Claremont" prior to October 1928. Water-quality records: Water year 1954, 1995-96

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 sea level (levels by U.S. Army Corps of Engineers). Prior to October 1, 1928, nonrecording gage at site 0.8 mi upstream at different datum.

REMARKS.--Records good except those for the period of Aug. 4 to Sept. 30, which are fair, and those for estimated daily discharges, which are poor. Regulation by Sunapee Lake 25 mi upstream and occasional diurnal fluctuation at low flow by mills upstream; greater regulation by mills prior to 1971.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s, March 19, 1936, gage height, 10.92 ft, from rating curve extended above 6,700 ft<sup>3</sup>/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, March 12, 1936 (ice jam); minimum daily discharge, 14 ft<sup>3</sup>/s, August 26, 1965.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	Unknown	Ice Jam	* 8.31	Apr. 4	1845	3,510	5.23
Mar. 28	2115	* 4,350	5.83	Apr. 9	2145	4,250	5.76

Minimum daily discharge, 55 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	699	321	369	e163	e220	e1350	1150	761	253	348	e1540	75
2	538	315	311	e163	e215	1050	1030	729	233	287	e925	71
3	455	536	295	192	e201	904	1130	670	221	250	e705	71
4	488	586	302	410	e207	765	2640	575	201	234	599	73
5	603	492	345	976	e199	665	2580	518	194	191	503	72
6	525	449	334	552	e195	582	1740	502	212	166	423	71
7	458	410	365	477	e191	552	1260	485	770	148	397	66
8	408	379	365	383	e181	639	1030	450	623	136	445	64
9	376	320	322	334	e181	910	2670	364	462	139	411	62
10	361	288	294	349	e182	1680	3020	396	401	284	381	62
11	385	299	295	823	e184	1190	2050	1260	337	270	337	59
12	363	280	277	690	e181	929	1610	958	365	195	285	55
13	335	277	257	504	e179	879	1290	760	388	156	266	62
14	346	279	248	343	e313	729	1070	751	391	116	253	60
15	370	293	249	e280	e341	704	904	640	373	104	264	86
16	351	284	264	e230	e270	867	823	542	337	192	337	108
17	333	265	302	214	e238	1280	734	409	320	524	384	103
18	315	251	273	e220	e233	964	602	389	396	406	330	89
19	205	243	e190	e217	e229	806	578	507	363	279	295	79
20	192	245	e200	e216	e226	729	560	463	315	222	254	95
21	206	294	406	e215	e222	714	612	412	277	185	222	119
22	202	303	420	209	e216	782	1210	396	251	174	144	100
23	361	286	e310	e207	e232	934	1550	379	208	150	123	87
24	564	275	e250	e207	e342	1170	1410	547	192	131	119	86
25	427	281	e185	e212	e412	1260	1110	716	184	122	117	85
26	352	336	e189	e209	e453	1420	951	615	280	111	108	84
27	387	641	e189	e208	e505	1400	1130	478	497	157	101	84
28	385	787	160	e207	e874	2680	1210	401	400	190	95	83
29	363	556	e161	e205	e1450	3070	1040	352	283	176	88	68
30	344	434	e165	e213	---	1990	885	314	385	292	84	73
31	331	---	e165	e214	---	1460	---	282	---	1080	79	---
TOTAL	12028	11005	8457	10042	9072	35054	39579	17021	10112	7415	10614	2352
MEAN	388	367	273	324	313	1131	1319	549	337	239	342	78.4
MAX	699	787	420	976	1450	3070	3020	1260	770	1080	1540	119
MIN	192	243	160	163	179	552	560	282	184	104	79	55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2000, BY WATER YEAR (WY)

MEAN	218	349	361	324	331	685	1280	641	314	174	137	134
MAX	895	917	1146	1090	1343	2490	2746	1657	818	711	952	1269
(WY)	1976	1996	1997	1978	1981	1936	1969	1940	1940	1973	1990	1938
MIN	39.2	66.9	92.9	84.7	74.5	108	359	179	67.5	26.2	29.3	44.7
(WY)	1984	1972	1948	1948	1942	1940	1995	1965	1965	1965	1999	1995

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1928 - 2000

ANNUAL TOTAL	140286	172751	
ANNUAL MEAN	384	472	411
HIGHEST ANNUAL MEAN			660
LOWEST ANNUAL MEAN			139
HIGHEST DAILY MEAN	5290	Sep 17	3070
LOWEST DAILY MEAN	20	Sep 1	55
ANNUAL SEVEN-DAY MINIMUM	24	Aug 7	61
INSTANTANEOUS PEAK FLOW			4350
INSTANTANEOUS PEAK STAGE			bc 8.31
10 PERCENT EXCEEDS	796		1030
50 PERCENT EXCEEDS	265		332
90 PERCENT EXCEEDS	30		110
			69

a From rating curve extended above 6,700 ft<sup>3</sup>/s as explained above.  
 b Ice jam.  
 c From peak stage indicator.  
 e Estimated.

01153550 WILLIAMS RIVER NEAR ROCKINGHAM, VT

LOCATION.--Lat 43°11'30", long 72°29'08", Windham County, Hydrologic Unit 01080107, on left bank, 50 ft downstream from highway bridge on Parker Hill Road, 0.2 mi downstream from Divoll Brook, 0.35 mi northeast of Rockingham, 2.2 mi upstream from mouth, and 4.5 mi northwest of Bellows Falls.

DRAINAGE AREA.--112 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1986 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 300 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges which are poor. Low flow regulated by powerplant upstream October 1986 to September 1992.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1215	* 7,100	* 9.07	Apr. 4	1030	2,900	6.81

Minimum discharge, 33 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	219	110	207	e82	e83	369	489	265	134	62	606	58
2	137	107	186	e80	e82	333	475	294	122	52	366	54
3	110	567	183	e110	e81	289	680	255	124	46	281	59
4	181	277	195	e390	e77	258	1930	224	104	51	210	58
5	212	207	196	e650	e75	241	1050	213	97	64	156	52
6	162	180	181	299	e72	233	642	252	270	48	131	46
7	131	160	175	264	e75	250	511	221	1080	42	207	44
8	114	148	157	217	e72	369	458	190	351	39	302	42
9	114	139	147	192	e72	559	1030	177	257	58	177	39
10	113	136	144	277	e75	891	699	247	218	398	165	38
11	120	127	169	586	e75	480	540	574	173	125	258	36
12	101	117	145	387	e75	445	519	313	224	75	839	35
13	92	122	135	242	e72	376	430	303	201	57	346	65
14	108	126	132	147	e210	313	391	397	311	48	299	48
15	112	137	142	e130	e235	328	388	269	244	50	322	98
16	96	124	187	e125	e135	559	356	223	199	481	308	81
17	91	112	196	e120	e110	773	305	206	172	683	236	52
18	86	104	148	e110	e99	432	279	243	160	292	187	45
19	79	102	116	e98	e94	363	268	364	156	173	161	40
20	85	106	e160	e94	e92	341	249	289	128	126	131	79
21	97	133	e320	e100	e88	365	480	245	110	102	114	65
22	88	117	232	e88	e88	430	918	238	108	96	102	47
23	513	110	166	e79	e96	561	670	223	93	79	110	42
24	312	105	e150	e79	e170	717	491	700	79	68	245	57
25	209	102	e135	e85	e290	683	390	500	72	60	133	54
26	175	176	e120	e87	e250	882	356	343	82	55	104	45
27	152	1040	e105	e83	e300	722	508	268	101	66	89	42
28	136	471	e100	e81	e800	2950	436	224	82	68	81	38
29	128	307	e95	e79	593	1220	351	198	64	61	70	36
30	120	248	e90	e79	---	757	299	174	70	134	65	35
31	115	---	e85	e85	---	578	---	153	---	1120	62	---
TOTAL	4508	6017	4899	5525	4636	18067	16588	8785	5586	4879	6863	1530
MEAN	145	201	158	178	160	583	553	283	186	157	221	51.0
MAX	513	1040	320	650	800	2950	1930	700	1080	1120	839	98
MIN	79	102	85	79	72	233	249	153	64	39	62	35
CFSM	1.30	1.79	1.41	1.59	1.43	5.20	4.94	2.53	1.66	1.41	1.98	.46
IN.	1.50	2.00	1.63	1.84	1.54	6.00	5.51	2.92	1.86	1.62	2.28	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2000, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	131	198	179	173	150	423	637	292	142	71.0	57.6	64.8		
MAX	461	382	443	441	306	850	1199	544	440	227	221	282		
(WY)	1988	1996	1997	1996	1997	1990	1994	1996	1998	1996	2000	1987		
MIN	29.4	59.2	78.2	58.7	51.0	184	156	90.4	34.9	16.6	15.7	13.4		
(WY)	1994	1999	1990	1989	1993	1994	1995	1995	1995	1999	1999	1995		

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1987 - 2000

ANNUAL TOTAL	66682.6	87883		
ANNUAL MEAN	183	240	210	
HIGHEST ANNUAL MEAN			283	1996
LOWEST ANNUAL MEAN			111	1995
HIGHEST DAILY MEAN	2980	Mar 22	6670	Mar 31 1987
LOWEST DAILY MEAN	7.3	Aug 6	6.9	Sep 7 1995
ANNUAL SEVEN-DAY MINIMUM	8.0	Aug 2	7.5	Sep 2 1995
INSTANTANEOUS PEAK FLOW			7100	Mar 28 1987
INSTANTANEOUS PEAK STAGE			9.07	Mar 28 1987
INSTANTANEOUS LOW FLOW			33	Sep 12 1999
ANNUAL RUNOFF (CFSM)	1.63	2.14	1.87	
ANNUAL RUNOFF (INCHES)	22.15	29.19	25.45	
10 PERCENT EXCEEDS	326	515	464	
50 PERCENT EXCEEDS	117	151	105	
90 PERCENT EXCEEDS	13	60	24	

- a Also occurred on September 30.
- b From rating curve extended above 3,800 ft<sup>3</sup>/s.
- c Also occurred on August 6-8, 1999.
- e Estimated.

## CONNECTICUT RIVER BASIN

## 01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH

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

DRAINAGE AREA.--5,493 mi<sup>2</sup>, includes that of Saxtons River.

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

Water-quality records: Water years 1975 to September 1980 (published as "at Walpole"), October 1980.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1980 to September 1981.

WATER TEMPERATURES: October 1980 to September 1981.

GAGE.--Water-stage recorder. Datum of gage is 218.63 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, and other reservoirs, combined usable capacity, about 24.8 billion ft<sup>3</sup>.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 61,600 ft<sup>3</sup>/s, April 5, gage height, 27.79 ft; minimum daily discharge, 1,360 ft<sup>3</sup>/s, September 4.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6300	7540	17200	5580	e5210	e20500	30300	18400	9160	2420	16100	3490
2	9220	8380	12100	3880	e2560	15600	25800	16300	8480	2530	11000	2700
3	7140	8650	7490	3900	e5590	15600	27400	16900	7280	2730	6880	1780
4	5420	10200	8280	8310	e4710	15300	47400	15600	6810	2130	5740	1360
5	7090	7980	8420	22500	e3790	12900	60300	14900	6990	2920	4570	2260
6	8640	10000	9830	15900	e2120	11600	51400	15200	8180	3480	4930	3390
7	6990	7620	9930	11800	e3170	9720	42600	15900	15100	4680	6260	3300
8	7670	8550	9710	10500	e4160	9910	36000	16600	12200	3260	6670	1620
9	5830	6920	9350	8870	e4990	12600	37800	17900	9550	2790	6210	1590
10	4790	7720	9310	11000	e4540	31100	52900	26100	8500	5380	8200	1670
11	6040	6210	9360	11800	e3890	29300	49400	38300	6600	5100	4730	2690
12	7460	6260	8840	14700	e3200	22600	41900	45400	7940	4960	6370	3050
13	5290	4320	7630	11400	e2430	18700	32200	43900	7580	4770	4630	3440
14	7450	6190	7710	9860	e3660	13700	25500	44200	7270	2930	4540	2680
15	7170	4480	7410	9540	e3800	13900	25300	41400	9250	1580	4980	3060
16	7380	8150	6560	e4980	e4790	18200	25600	33600	8020	2940	5860	2900
17	8180	7060	8310	e5890	e3440	22400	23500	33500	6990	12800	5900	4270
18	8760	7620	8780	e7240	e4630	14700	23900	20000	4190	10900	5770	4950
19	7970	7250	6750	e8120	e3640	13100	22200	22600	6320	7390	4830	5580
20	7920	7240	8330	e6020	e2660	13200	21100	23600	7680	4280	3220	6370
21	6910	5790	6750	e6710	e3170	13800	22600	19700	6000	3980	5190	4770
22	6020	6350	7840	e7780	e4210	15100	26700	17600	6200	3130	3240	3100
23	8560	9110	8020	e6320	e3070	18100	32000	14200	5530	2900	3760	1810
24	16800	10200	7820	e4090	e3720	20900	32900	14000	2280	4440	3210	2030
25	21700	8430	8180	e5240	e5080	23600	31200	18400	2790	3150	4970	3780
26	18300	8200	6410	e6400	7260	24400	28400	16200	5490	2030	3000	3240
27	14600	17300	6390	e5600	11700	24400	26900	14800	8720	3370	3890	3950
28	11200	28200	5220	e6600	16300	33900	25800	13300	8850	2910	3910	3480
29	8590	23800	4940	e7860	e27000	47900	23000	12400	5390	1400	2470	1690
30	8940	17900	4040	e3700	---	46000	18400	11900	2460	4580	3420	1990
31	8950	---	4310	e3870	---	39700	---	10800	---	10800	4830	---
TOTAL	273280	283620	251220	255960	158490	642430	970400	673600	217800	132660	169280	91990
MEAN	8815	9454	8104	8257	5465	20720	32350	21730	7260	4279	5461	3066
MAX	21700	28200	17200	22500	27000	47900	60300	45400	15100	12800	16100	6370
MIN	4790	4320	4040	3700	2120	9720	18400	10800	2280	1400	2470	1360

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2000, BY WATER YEAR (WY)

MEAN	6284	8664	8467	7162	7142	13700	27210	16490	8070	4641	3960	3835
MAX	18300	18420	22550	17930	21810	34150	45630	33380	20600	18930	12990	14820
(WY)	1978	1960	1984	1996	1981	1979	1969	1972	1947	1973	1990	1954
MIN	1424	2886	2124	1866	2736	4532	7803	6477	3082	1845	1461	1555
(WY)	1949	1948	1948	1948	1980	1956	1995	1965	1999	1965	1942	1995

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1942 - 2000	
ANNUAL TOTAL	3290220		4120730			
ANNUAL MEAN	9014		11260		9635	
HIGHEST ANNUAL MEAN					14630	
LOWEST ANNUAL MEAN					4991	
HIGHEST DAILY MEAN	44100	Apr 2	60300	Apr 5	88300	Mar 28 1953
LOWEST DAILY MEAN	1300	Sep 1	1360	Sep 4	a 115	Aug 31 1952
ANNUAL SEVEN-DAY MINIMUM	1400	Aug 5	2170	Sep 4	777	Aug 7 1970
INSTANTANEOUS PEAK FLOW			61600	Apr 5	97000	Mar 27 1953
INSTANTANEOUS PEAK STAGE			22.79	Apr 5	30.37	Mar 27 1953
10 PERCENT EXCEEDS	18600		25500		21400	
50 PERCENT EXCEEDS	7630		7600		6250	
90 PERCENT EXCEEDS	1740		3040		2020	

a Also occurred on September 2, 1957.

e Estimated.



## CONNECTICUT RIVER BASIN

## 01155910 WEST RIVER BELOW TOWNSHEND DAM NEAR TOWNSHEND, VT

**LOCATION.**--Lat 43°03'04", long 72°42'02", Windham County, Hydrologic Unit 01080107, on left bank, 150 ft below Townshend Dam, 1.9 mi northwest of Townshend, 2.2 mi upstream from Mills Brook, and 18.2 mi upstream from mouth.

**DRAINAGE AREA.**--282 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: October 1994 to current year. Records for September 1919 to September 1923, October 1928 to September 1989, at site 5.5 mi downstream (station 01156000) are not equivalent because of difference in drainage area.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 463 ft above sea level, from topographic map.

**REMARKS.**--Records good except those for estimated daily discharges and those for the period of July 6 to September 30, which are fair. Flow regulated since 1961 by Ball Mountain Reservoir and Townshend Reservoir. These reservoirs have a combined usable capacity of about 3.84 billion ft<sup>3</sup>.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 6,000 ft<sup>3</sup>/s, April 6, gage height, 8.16 ft; minimum daily discharge, 95 ft<sup>3</sup>/s, September 29.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	464	290	770	203	207	1870	2280	1110	325	181	1360	149
2	335	259	562	202	216	880	1230	856	273	162	1050	150
3	289	1660	425	252	213	1470	1200	742	299	154	923	156
4	365	1450	429	1600	215	1330	1900	560	242	154	646	154
5	438	864	432	3460	209	618	3970	528	243	149	378	148
6	369	639	452	3120	204	554	4910	651	373	144	269	142
7	325	567	512	1580	192	520	3110	555	2020	140	369	140
8	299	396	491	611	185	683	1030	467	1090	136	1300	134
9	300	354	429	532	183	1080	1140	417	924	143	1250	116
10	304	337	353	605	183	2480	2140	473	803	560	773	113
11	313	299	421	1330	180	2300	1620	1760	e600	738	408	109
12	292	288	396	1210	159	1540	1370	1080	e630	313	1120	96
13	272	289	377	e550	154	1440	1080	872	599	203	856	117
14	268	289	411	e430	189	1130	861	1140	772	209	842	105
15	269	301	443	235	310	892	799	873	773	983	1150	129
16	750	312	411	e260	349	1190	818	694	771	1380	1140	131
17	623	338	429	e240	410	2300	836	469	758	2720	835	108
18	237	325	358	228	369	1710	853	480	719	3890	647	100
19	216	308	300	251	230	1340	820	1520	595	1930	389	96
20	235	265	232	273	222	1200	805	1090	461	1040	287	148
21	253	287	553	267	218	969	961	751	363	541	266	124
22	224	279	740	187	216	940	1400	706	286	362	294	106
23	723	272	610	186	219	1280	1890	652	255	273	227	103
24	623	265	298	203	265	1740	2320	1330	241	216	505	116
25	856	245	218	192	525	1840	2270	e2100	226	169	524	116
26	1460	310	187	199	794	2120	1380	e1870	204	163	471	107
27	1100	1460	224	199	758	2280	1040	e900	206	190	313	102
28	594	1980	271	200	1790	1770	1470	e690	189	197	217	98
29	410	2050	225	202	2480	2730	1720	e540	172	190	122	95
30	334	1710	209	199	---	4910	1370	e365	192	224	124	682
31	320	---	206	204	---	4030	---	369	---	998	106	---
TOTAL	13860	18688	12374	19410	11844	51136	48593	26610	15604	18852	19161	4190
MEAN	447	623	399	626	408	1650	1620	858	520	608	618	140
MAX	1460	2050	770	3460	2480	4910	4910	2100	2020	3890	1360	682
MIN	216	245	187	186	154	520	799	365	172	136	106	95

**STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2000, BY WATER YEAR (WY)**

MEAN	355	613	551	836	476	1117	1754	838	353	250	163	165
MAX	892	1134	1143	1163	832	1650	2602	1517	967	608	618	510
(WY)	1996	1996	1997	1998	1996	2000	1996	1996	1998	2000	2000	1999
MIN	108	199	246	626	234	571	474	269	87.6	51.7	31.4	35.4
(WY)	1998	1999	1996	2000	1995	1996	1995	1995	1995	1995	1999	1995

**SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1995 - 2000**

ANNUAL TOTAL	209579	260322										
ANNUAL MEAN	574	711								622		
HIGHEST ANNUAL MEAN										816		1996
LOWEST ANNUAL MEAN										378		1995
HIGHEST DAILY MEAN	4700	Mar 23	a 4910	Mar 30	6570						Apr 7	1998
LOWEST DAILY MEAN	16	Aug 13	95	Sep 29	2.3						Sep 9	1995
ANNUAL SEVEN-DAY MINIMUM	18	Aug 7	105	Sep 23	6.4						Sep 8	1995
INSTANTANEOUS PEAK FLOW			6000	Apr 6	8050						Apr 24	1996
INSTANTANEOUS PEAK STAGE			8.16	Apr 6	8.89						Apr 24	1996
10 PERCENT EXCEEDS	1430		1710		1650							
50 PERCENT EXCEEDS	325		411		289							
90 PERCENT EXCEEDS	34		154		47							

a Also occurred April 6.

e Estimated.

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, NH

LOCATION.--Lat 42°59'40", long 72°18'40", Cheshire County, Hydrologic Unit 01080201, on right bank, 600 ft 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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: September 1945 to September 1989, October 1995 to current year. Annual maximums and measurements, water years 1990-95.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 480.00 ft above sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Surry Mountain Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft<sup>3</sup>/s, March 29, gage height, 8.60 ft; minimum daily discharge, 16 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	202	203	79	71	784	662	297	127	112	207	28
2	228	193	178	79	76	623	440	268	107	99	246	26
3	203	235	169	69	80	461	327	234	96	92	228	25
4	191	273	158	60	75	416	490	173	81	87	269	25
5	245	252	153	173	74	353	403	124	71	75	261	23
6	249	228	151	223	73	300	376	218	69	61	199	22
7	228	208	172	225	73	270	429	169	171	53	180	20
8	200	193	194	225	64	274	581	137	276	46	314	19
9	172	166	183	129	61	330	576	125	284	42	295	19
10	168	120	166	128	61	435	728	126	249	64	242	18
11	218	98	160	376	61	458	794	276	199	80	195	17
12	211	87	147	438	61	467	781	348	167	83	219	16
13	154	82	136	225	61	472	752	334	160	75	219	20
14	134	80	128	112	61	466	707	306	160	64	180	21
15	142	84	128	112	98	455	580	258	164	52	154	27
16	137	87	134	112	112	443	355	216	158	61	138	37
17	128	85	144	113	112	655	272	183	144	97	132	40
18	121	81	140	112	111	759	234	159	138	159	122	37
19	112	78	122	111	110	566	212	191	130	201	110	32
20	112	77	109	95	110	438	198	232	119	180	96	39
21	135	89	174	72	108	374	195	232	102	138	83	52
22	143	102	230	65	107	352	273	217	90	105	71	62
23	176	102	206	65	75	364	388	200	80	81	63	113
24	255	99	173	65	83	406	423	216	70	64	62	204
25	249	100	128	65	83	456	429	302	60	54	61	218
26	215	102	105	65	85	498	426	345	57	44	56	189
27	193	169	e94	65	88	538	420	313	152	45	50	161
28	196	297	e91	70	384	605	414	263	199	45	45	140
29	217	280	83	71	740	937	407	218	177	44	39	122
30	216	233	80	71	---	1060	366	181	139	43	35	108
31	209	---	79	71	---	906	---	152	---	77	31	---
TOTAL	5767	4482	4518	3941	3358	15921	13638	7013	4196	2523	4602	1880
MEAN	186	149	146	127	116	514	455	226	140	81.4	148	62.7
MAX	255	297	230	438	740	1060	794	348	284	201	314	218
MIN	112	77	79	60	61	270	195	124	57	42	31	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1989, 1996 - 2000, BY WATER YEAR (WY)

MEAN	102	162	177	151	156	284	549	283	134	55.2	40.9	53.0
MAX	453	577	512	383	423	661	1022	632	634	229	334	233
(WY)	1978	1996	1997	1978	1981	1979	1960	1956	1984	1973	1986	1960
MIN	4.39	4.04	22.7	21.2	28.1	88.5	167	90.6	13.5	5.77	4.88	9.63
(WY)	1965	1965	1965	1981	1980	1956	1946	1986	1964	1965	1965	1957

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1945 - 1989, 1996 - 2000

ANNUAL TOTAL	63360.8		71839			
ANNUAL MEAN	174		196		179	
HIGHEST ANNUAL MEAN					279	
LOWEST ANNUAL MEAN					57.3	
HIGHEST DAILY MEAN	918	Mar 24	1060	Mar 30	2150	Apr 7 1987
LOWEST DAILY MEAN	2.0	Aug 7	16	Sep 12	.40	Sep 17 1964
ANNUAL SEVEN-DAY MINIMUM	2.3	Aug 5	18	Sep 7	.67	Aug 1 1965
INSTANTANEOUS PEAK FLOW			1080		2260	
INSTANTANEOUS PEAK STAGE			8.60		a 11.78	
10 PERCENT EXCEEDS	431		427		521	
50 PERCENT EXCEEDS	120		146		90	
90 PERCENT EXCEEDS	9.6		55		14	

a From floodmarks.  
e Estimated.



CONNECTICUT RIVER BASIN

01158600 OTTER BROOK BELOW OTTER BROOK DAM NEAR KEENE, NH

LOCATION.--Lat 42°56'45", long 72°14'14", Cheshire County, Hydrologic Unit 01080201, on right bank, 450 ft downstream from Otter Brook Dam, 2.0 mi northeast of Keene, 2.4 mi upstream from Minnewawa Brook, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--47.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: May 1958 to September 1989, October 1995 to current year. Annual maximums and measurements, water years 1990-95.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to September 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Otter Brook Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 587 ft<sup>3</sup>/s, March 17, gage height, 8.36 ft; minimum daily discharge, 7.2 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	52	64	23	e38	403	201	150	51	27	85	11
2	54	50	53	23	e36	335	196	110	47	22	68	11
3	44	119	51	32	31	218	160	98	48	20	62	12
4	67	121	50	52	29	158	152	87	38	21	104	13
5	115	93	50	112	23	156	239	80	30	19	77	13
6	100	77	51	138	23	114	281	80	34	16	55	12
7	78	67	79	110	23	92	203	74	148	14	59	10
8	63	56	89	81	23	93	165	61	156	12	108	9.6
9	61	47	71	80	23	139	173	55	106	12	108	9.0
10	77	45	62	79	23	182	407	63	81	31	93	8.2
11	90	44	62	81	23	188	409	163	e65	31	71	7.6
12	80	41	55	99	23	191	269	142	e67	23	103	7.2
13	70	41	51	114	23	289	178	114	e70	17	91	9.9
14	78	42	48	101	23	245	126	105	68	14	72	13
15	89	47	50	83	61	193	202	85	65	13	66	15
16	77	44	54	81	82	191	241	71	60	29	61	24
17	71	40	61	79	55	427	223	63	58	52	55	23
18	70	35	54	42	39	388	201	65	76	52	47	17
19	67	34	44	22	39	294	116	113	70	43	41	13
20	67	35	e41	e22	39	227	67	112	58	30	34	19
21	83	46	90	e24	39	181	62	98	47	23	29	34
22	78	47	97	24	39	169	70	94	48	21	24	28
23	106	44	72	24	39	157	81	86	60	18	21	22
24	133	42	57	23	38	185	341	114	47	15	27	145
25	108	42	41	23	51	198	243	158	38	14	26	103
26	88	45	38	23	69	198	175	142	35	12	22	64
27	77	102	29	32	70	e255	175	110	47	16	18	47
28	70	138	23	39	220	e300	180	90	47	20	16	39
29	65	102	23	39	380	e465	183	76	38	19	14	34
30	61	78	23	38	---	480	180	66	32	17	13	31
31	56	---	23	38	---	276	---	58	---	46	12	---
TOTAL	2410	1816	1656	1781	1624	7387	5899	2983	1835	719	1682	804.5
MEAN	77.7	60.5	53.4	57.5	56.0	238	197	96.2	61.2	23.2	54.3	26.8
MAX	133	138	97	138	380	480	409	163	156	52	108	145
MIN	44	34	23	22	23	92	62	55	30	12	12	7.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1989, 1996 - 2000, BY WATER YEAR (WY)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1996	1997	1998	1999	2000	
MEAN	46.9	73.9	77.9	65.4	72.0	138	250	116	59.4	28.5	21.6	24.2																										
MAX	158	242	272	185	223	368	447	256	312	120	157	114																										
(WY)	1978	1996	1997	1978	1984	1979	1987	1969	1984	1973	1986	1999																										
MIN	.86	3.20	12.8	8.97	14.3	29.8	88.6	34.4	3.78	2.65	2.21	.77																										
(WY)	1965	1965	1965	1981	1965	1965	1985	1999	1964	1965	1963	1964																										

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1958 - 1989, 1996 - 2000

ANNUAL TOTAL	26051.4	30596.5		
ANNUAL MEAN	71.4	83.6	81.1	
HIGHEST ANNUAL MEAN			126	1960
LOWEST ANNUAL MEAN			23.2	1965
HIGHEST DAILY MEAN	493	Sep 19	480	Mar 30
LOWEST DAILY MEAN	2.0	Aug 6	7.2	Sep 12
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 4	8.8	Sep 7
INSTANTANEOUS PEAK FLOW			587	Mar 17
INSTANTANEOUS PEAK STAGE			8.36	Mar 17
INSTANTANEOUS LOW FLOW			7.2	Sep 12
10 PERCENT EXCEEDS	181	186	208	
50 PERCENT EXCEEDS	49	61	41	
90 PERCENT EXCEEDS	4.6	19	5.9	

a Includes bypass flow around gage through spillway of the dam structure.

e Estimated.

## 01160350 ASHUELOT RIVER AT WEST SWANZEY, NH

**LOCATION.**--Lat 42°52'16", long 72°19'42", Cheshire County, Hydrologic Unit 01080201, on left bank, 150 ft downstream of California/Main Street bridge in West Swanzey, 4.5 mi downstream from South Branch Ashuelot River, 5 mi southwest of Keene, and 14.2 mi upstream from mouth.

**DRAINAGE AREA.**--316 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: April 1994 to current year.

**GAGE.**--Water-stage recorder and crest-stage gage. Elevation of gage is 452 ft above sea level, from topographic map.

**REMARKS.**--Records fair except those for estimated daily discharges, daily discharges above 1,000 ft<sup>3</sup>/s, and daily discharges below 150 ft<sup>3</sup>/s, which are poor. Flow regulated by Surry Mountain Lake 20 mi upstream since 1942 and by Otter Brook Lake 16 mi upstream on Otter Brook since 1958. Some regulation by small hydro plants upstream.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 2,050 ft<sup>3</sup>/s, April 10, gage height, 3.03 ft; minimum daily discharge, 68 ft<sup>3</sup>/s, September 12.

## DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

## DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	486	443	538	208	210	1810	1270	860	384	250	718	e100
2	491	427	460	209	202	1630	1010	752	357	202	646	e108
3	412	702	423	228	192	1290	845	684	387	179	533	e115
4	454	861	405	305	195	1030	1020	612	345	193	629	e110
5	664	744	397	554	178	944	1140	542	304	e185	557	e100
6	634	639	392	648	177	837	1040	538	299	e170	e485	e94
7	541	563	470	616	174	768	959	563	835	e150	e435	e90
8	463	504	584	526	172	765	980	472	1030	e130	533	e82
9	424	463	535	470	163	853	1270	438	823	e120	610	e78
10	417	414	475	379	166	1110	1850	469	698	140	559	e73
11	478	371	462	784	176	1190	1870	880	568	181	e510	e70
12	491	339	439	909	180	1190	1610	933	467	164	904	e68
13	414	329	405	788	167	1310	1390	832	456	159	1040	e112
14	445	321	380	e444	235	1260	1200	792	462	e150	722	175
15	517	320	391	e394	358	1110	1080	674	461	e140	559	174
16	493	351	417	392	464	1090	971	595	448	e190	486	249
17	465	345	442	359	414	1500	832	505	410	264	437	216
18	462	324	427	295	319	1870	744	470	429	522	e400	166
19	455	305	368	251	302	1590	653	641	419	584	e350	137
20	424	302	316	233	300	1270	571	702	374	441	e300	189
21	477	341	509	217	271	1040	582	665	323	327	e230	292
22	480	335	619	187	261	970	964	629	316	263	e200	257
23	590	328	539	187	251	928	1260	588	374	202	e160	238
24	778	310	444	183	261	957	1290	650	354	e165	e180	447
25	731	327	e340	179	382	1000	1220	795	303	e150	e170	490
26	628	341	e315	181	533	1030	1030	822	268	e130	e160	388
27	549	531	295	188	564	1060	1060	741	326	e150	e140	329
28	516	804	246	201	952	1140	1080	646	424	249	e135	282
29	515	763	210	211	1680	1520	1060	579	414	208	e120	244
30	501	633	226	208	---	1700	986	466	314	165	e110	217
31	466	---	227	215	---	1580	---	418	---	357	e105	---
TOTAL	15861	13780	12696	11149	9899	37342	32837	19953	13372	6880	13123	5690
MEAN	512	459	410	360	341	1205	1095	644	446	222	423	190
MAX	778	861	619	909	1680	1870	1870	933	1030	584	1040	490
MIN	412	302	210	179	163	765	571	418	268	120	105	68

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2000, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	373	571	593	688	561	1008	1298	725	340	206	152	165
MAX	761	1539	1723	1076	1007	1264	2353	1511	1067	362	423	514
(WY)	1996	1996	1997	1996	1996	1998	1994	1996	1998	1996	2000	1999
MIN	108	160	214	360	341	708	518	316	89.1	91.9	53.0	47.8
(WY)	1998	1995	1999	2000	2000	1997	1995	1995	1999	1999	1999	1995

## SUMMARY STATISTICS

## FOR 1999 CALENDAR YEAR

## FOR 2000 WATER YEAR

## WATER YEARS 1994 - 2000

ANNUAL TOTAL	167031	192582										
ANNUAL MEAN	458	526								541		
HIGHEST ANNUAL MEAN										781		1996
LOWEST ANNUAL MEAN										380		1995
HIGHEST DAILY MEAN	2350	Mar 5			1870	Mar 18			3340		Dec 3	1996
LOWEST DAILY MEAN	20	Aug 13			e 68	Sep 12			20		Aug 13	1999
ANNUAL SEVEN-DAY MINIMUM	21	Aug 7			79	Sep 6			21		Aug 7	1999
INSTANTANEOUS PEAK FLOW					2050	Apr 10			3620		Apr 17	1996
INSTANTANEOUS PEAK STAGE					3.03	Apr 10			a 6.30		Mar 7	1999
10 PERCENT EXCEEDS	1040				1040				1460			
50 PERCENT EXCEEDS	351				442				322			
90 PERCENT EXCEEDS	44				166				66			

a Ice jam.  
e Estimated.

CONNECTICUT RIVER BASIN

01161000 ASHUELOT RIVER AT HINSDALE, NH

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

DRAINAGE AREA.--420 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1907 to December 1911, July 1914 to current year.

Water-quality records: Water years 1953, 1958, 1968, 1994.

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 sea level (levels by U.S. Army Corps of Engineers). Prior to Sep. 29, 1933, nonrecording gage on highway bridge at same datum.

REMARKS.--Records good except those below 350 ft<sup>3</sup>/s, which are fair, and those for estimated daily discharges, which are poor. Flow regulated by Surry Mountain Lake 33 mi upstream since 1942 and by Otter Brook Lake 29 mi upstream on Otter Brook since 1958. Regulation by small hydro plants upstream.

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 16,600 ft<sup>3</sup>/s, March 19, 1936, by computation of peak flow over dam; maximum gage height, 20.2 ft, March 19, 1936, from floodmarks (backwater from the Connecticut River); minimum daily discharge, 12 ft<sup>3</sup>/s, September 15, 1929. Maximum discharge since at least 1859, that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,050 ft<sup>3</sup>/s, March 18, gage height, 6.59 ft; maximum gage height, 7.34 ft, January 24 (ice jam); minimum daily discharge, 117 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	706	612	782	e340	e330	2790	1930	1330	532	341	780	174
2	766	581	681	340	e322	e2580	1550	1140	480	297	829	185
3	653	849	607	364	e311	2100	1290	1020	559	269	715	197
4	682	1160	582	509	e314	1650	1480	907	482	287	811	187
5	1030	1030	565	867	e291	1470	1840	814	411	285	831	177
6	1000	866	565	997	e290	1330	1640	738	428	256	673	165
7	847	767	668	924	e287	1200	1460	807	1700	217	562	153
8	726	692	824	818	e287	1180	1380	706	1780	191	639	141
9	664	629	789	742	e274	1300	1830	650	1330	172	823	132
10	647	572	717	657	e278	1750	2690	697	1070	201	854	128
11	695	511	691	1180	e290	1870	2740	1390	864	235	765	123
12	720	454	657	1410	e294	1930	2420	1520	775	227	1540	117
13	645	449	598	1240	e281	2130	2080	1310	749	215	1920	163
14	608	433	564	770	e375	2000	1790	1220	781	204	1350	218
15	730	416	593	825	e610	1770	1600	1040	777	192	1030	239
16	707	431	671	e860	e770	1760	1480	879	729	265	911	289
17	645	441	693	e660	e690	2540	1230	763	640	402	867	286
18	613	414	646	e550	e555	2930	1080	700	654	584	712	236
19	609	396	563	e490	e443	2630	960	879	678	762	593	212
20	586	387	480	e425	e438	2110	833	1030	600	578	494	292
21	654	435	732	e380	e405	1730	842	972	494	445	401	339
22	683	453	932	e315	e390	1550	1550	924	451	377	331	348
23	850	438	845	e310	e379	1460	1990	864	551	321	299	302
24	1130	410	706	e305	e393	1450	1960	964	510	262	307	394
25	1040	424	614	e302	e640	1480	1880	1250	416	217	299	626
26	898	455	e585	e302	e855	1500	1570	1280	358	194	279	527
27	787	716	e510	e310	e890	1510	1640	1130	357	266	249	440
28	707	1100	e445	e328	e550	1640	1700	953	467	376	236	389
29	678	1090	e410	e342	2550	2080	1670	834	487	329	212	338
30	667	918	e375	e336	---	2340	1510	702	411	274	194	307
31	634	---	e355	e339	---	2280	---	598	---	329	182	---
TOTAL	23007	18529	19445	18537	15782	58040	49615	30011	20521	9570	20688	7824
MEAN	742	618	627	598	544	1872	1654	968	684	309	667	261
MAX	1130	1160	932	1410	2550	2930	2740	1520	1780	762	1920	626
MIN	586	387	355	302	274	1180	833	598	357	172	182	117

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1911, 1914 - 2000, BY WATER YEAR (WY)

	1907	1908	1909	1910	1911	1914	1915	1916	1917	1918	1919	1920
MEAN	347	591	658	611	608	1249	1877	991	517	278	227	245
MAX	1474	2248	2209	1539	2016	4392	3723	2175	2075	1182	1098	2394
(WY)	1976	1928	1997	1978	1984	1936	1960	1945	1984	1915	1990	1938
MIN	49.2	55.4	113	84.0	113	273	597	335	96.9	60.8	50.5	53.0
(WY)	1965	1965	1915	1981	1980	1940	1985	1985	1964	1965	1966	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1907 - 1911, 1914 - 2000

ANNUAL TOTAL	250948	291569	
ANNUAL MEAN	688	797	683
HIGHEST ANNUAL MEAN			1093
LOWEST ANNUAL MEAN			216
HIGHEST DAILY MEAN	4990	Sep 17	2930
LOWEST DAILY MEAN	33	Aug 13	117
ANNUAL SEVEN-DAY MINIMUM	35	Aug 7	137
INSTANTANEOUS PEAK FLOW			3050
INSTANTANEOUS PEAK STAGE			bc 7.34
10 PERCENT EXCEEDS	1640		1640
50 PERCENT EXCEEDS	560		654
90 PERCENT EXCEEDS	69		266

- a By computation of peak flow over dam from floodmarks (backwater from Connecticut River).
- b From peak indicator clip.
- c Ice jam.
- d From floodmarks.
- e Estimated.

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT

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

DRAINAGE AREA.--111 mi<sup>2</sup>.

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

Water-quality records: Water years 1953-54.

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

GAGE.--Water-stage recorder. Elevation of gage is 525 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation at low flow caused by mills upstream; diurnal fluctuation greater prior to 1960.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	0845	2,210	5.86	July 17	0115	* 3,110	* 6.95

Minimum discharge, 76 ft<sup>3</sup>/s, July 14, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	426	195	259	e108	e125	493	316	264	183	209	160	116
2	279	191	230	e110	e120	432	320	260	301	169	140	168
3	234	465	225	e135	e120	353	452	238	371	155	223	291
4	267	300	271	e340	e115	303	820	220	238	165	418	183
5	266	246	287	532	e110	278	719	289	206	142	207	148
6	232	221	272	246	e105	251	459	318	360	121	160	127
7	202	205	299	216	e102	236	390	261	1080	113	221	115
8	184	192	254	191	e98	250	352	226	464	108	355	109
9	295	183	227	178	e94	362	529	212	365	106	248	103
10	272	199	230	207	e90	775	457	388	319	137	423	100
11	298	322	263	340	e94	500	401	664	292	107	614	91
12	245	238	221	254	e90	681	387	404	512	91	1120	101
13	216	215	205	e195	e87	477	345	397	377	83	506	258
14	224	206	198	e170	e180	373	348	478	440	79	494	152
15	215	213	200	e160	e225	357	448	347	341	95	535	207
16	197	190	198	e150	168	417	501	298	284	1080	591	182
17	182	173	193	e142	e125	845	389	265	285	1270	433	132
18	173	162	170	e136	e110	494	354	352	303	398	335	110
19	158	156	147	e130	e110	401	322	513	275	279	286	100
20	201	160	150	e125	109	363	297	410	230	221	246	143
21	214	196	272	e125	104	341	363	335	202	197	216	124
22	184	174	209	e122	103	337	526	312	245	216	195	106
23	747	163	166	e122	112	349	403	287	242	170	239	131
24	536	157	143	e120	161	376	350	451	189	151	358	436
25	366	164	e122	e125	345	384	312	440	180	135	233	254
26	304	210	e118	e132	370	510	296	370	300	123	190	175
27	270	1150	e115	e130	550	413	348	304	261	150	169	148
28	247	526	e110	e125	1560	696	364	272	223	143	154	132
29	230	361	e108	e122	754	626	336	247	188	129	140	120
30	216	303	e108	e120	---	433	295	221	313	148	130	115
31	206	---	e108	e128	---	353	---	201	---	179	123	---
TOTAL	8286	7836	6078	5436	6436	13459	12199	10244	9569	6869	9862	4677
MEAN	267	261	196	175	222	434	407	330	319	222	318	156
MAX	747	1150	299	532	1560	845	820	664	1080	1270	1120	436
MIN	158	156	108	108	87	236	295	201	180	79	123	91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	151	210	213	198	182	323	533	324	179	124	106	117																																																										
MAX	418	412	471	425	575	958	1008	742	436	311	481	585																																																										
(WY)	1976	1960	1974	1937	1981	1936	1969	1943	1998	1935	1976	1938																																																										
MIN	30.9	39.6	94.6	61.6	54.2	68.0	215	116	53.1	39.8	41.2	25.6																																																										
(WY)	1965	1965	1948	1965	1980	1965	1946	1987	1964	1964	1964	1964																																																										

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1931 - 2000

ANNUAL TOTAL	82745	100951	
ANNUAL MEAN	227	276	222
HIGHEST ANNUAL MEAN			362
LOWEST ANNUAL MEAN			98.9
HIGHEST DAILY MEAN	2010	Jan 24	6350
LOWEST DAILY MEAN	38	Aug 13	a 21
ANNUAL SEVEN-DAY MINIMUM	42	Aug 1	22
INSTANTANEOUS PEAK FLOW			b 8450
INSTANTANEOUS PEAK STAGE		6.95	12.04
INSTANTANEOUS LOW FLOW		c 76	4.0
10 PERCENT EXCEEDS	445	469	458
50 PERCENT EXCEEDS	190	226	143
90 PERCENT EXCEEDS	55	113	57

a Also occurred on September 23, 1964, and July 12, 1965.

b From rating curve extended above 2,800 ft<sup>3</sup>/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.

c Also occurred on July 15.

e Estimated.

ST. LAWRENCE RIVER BASIN

0428000 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 mi<sup>2</sup>.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplant upstream and Lake Bomoseen.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft<sup>3</sup>/s, July 20, 1945, gage height, 24.36 ft, from high-water mark in well, from rating curve extended above 2,600 ft<sup>3</sup>/s on basis of computations of flow over dam at gage heights 16.10 ft, 21.40 ft, and 24.36 ft; minimum daily discharge, 2.1 ft<sup>3</sup>/s, August 8, 1965, September 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	1915	* 5,250	* 15.71	Aug. 1	0515	2,640	11.46

Minimum daily discharge, 35 ft<sup>3</sup>/s, September 26-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	281	393	100	e165	1420	430	347	178	137	2080	81
2	139	230	290	92	e150	1150	409	373	163	117	1240	76
3	122	206	266	101	e150	943	518	422	152	103	992	73
4	122	206	255	398	e155	763	1000	357	137	110	778	71
5	153	174	249	911	e147	674	1560	320	133	99	617	69
6	134	163	251	571	e142	482	1110	305	153	89	507	67
7	118	149	240	503	e140	344	869	288	707	81	341	66
8	110	138	222	407	e140	364	651	257	689	78	265	66
9	108	135	206	286	e145	460	635	253	596	90	228	60
10	105	136	198	296	e137	802	666	304	392	310	205	58
11	146	162	214	625	e134	779	670	719	270	229	191	60
12	218	155	196	487	e135	896	698	733	264	160	189	52
13	199	157	184	394	e130	947	649	692	276	125	191	48
14	195	156	177	419	e150	775	652	1300	284	111	181	55
15	205	164	179	453	e240	728	727	1140	308	148	173	56
16	192	175	188	420	e290	656	794	867	412	508	200	63
17	167	168	193	e250	e270	664	694	705	430	1010	288	66
18	70	152	177	e230	e255	537	676	431	616	643	248	62
19	78	125	153	e210	e240	499	669	427	566	435	210	51
20	76	123	152	e200	e235	524	633	384	440	227	181	48
21	78	126	265	e170	e230	600	563	347	238	174	164	49
22	75	125	244	e180	e220	621	686	332	304	159	146	54
23	350	124	208	e185	e215	498	853	474	423	132	131	48
24	656	110	199	e180	e235	498	799	674	272	121	134	41
25	423	118	195	e155	e430	446	736	856	220	105	134	37
26	343	157	189	e165	e870	457	644	701	200	95	124	35
27	341	749	189	e165	e1300	469	637	396	174	95	113	35
28	368	966	175	e160	3620	470	658	349	152	82	105	35
29	336	749	166	e165	2760	562	585	308	140	79	97	35
30	310	668	152	e185	---	525	392	269	142	88	90	35
31	295	---	90	e180	---	471	---	230	---	606	84	---
TOTAL	6413	7247	6455	9243	13430	20024	21263	15560	9431	6546	10627	1652
MEAN	207	242	208	298	463	646	709	502	314	211	343	55.1
MAX	656	966	393	911	3620	1420	1560	1300	707	1010	2080	81
MIN	70	110	90	92	130	344	392	230	133	78	84	35
CFSM	1.11	1.29	1.11	1.59	2.48	3.45	3.79	2.68	1.68	1.13	1.83	.29
IN.	1.28	1.44	1.28	1.84	2.67	3.98	4.23	3.10	1.88	1.30	2.11	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	140	224	259	262	262	524	668	321	164	105	84.0	91.6
MAX	721	760	1018	897	800	1627	1441	902	776	639	629	666
(WY)	1978	1973	1984	1996	1984	1986	1977	1983	1947	1976	1976	1938
MIN	18.2	21.4	38.4	42.0	26.8	113	231	71.5	19.4	7.08	3.94	8.19
(WY)	1974	1965	1965	1931	1980	1940	1966	1941	1965	1965	1965	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1929 - 2000

ANNUAL TOTAL	84300.9	127891					
ANNUAL MEAN	231	349	258	1976			
HIGHEST ANNUAL MEAN			527	1965			
LOWEST ANNUAL MEAN			66.9	1965			
HIGHEST DAILY MEAN	3900	Jan 25	3620	Feb 28	7010	Jan 20	1996
LOWEST DAILY MEAN	7.4	Sep 1	a 35	Sep 26	b 2.1	Aug 8	1965
ANNUAL SEVEN-DAY MINIMUM	7.5	Aug 31	36	Sep 24	3.0	Aug 13	1965
INSTANTANEOUS PEAK FLOW			c 5250	Feb 28	c 14800	Jul 20	1945
INSTANTANEOUS PEAK STAGE			15.71	Feb 28	d 24.36	Jul 20	1945
ANNUAL RUNOFF (CFSM)	1.24	1.87			1.38		
ANNUAL RUNOFF (INCHES)	16.77	25.44			18.77		
10 PERCENT EXCEEDS	602	727	614				
50 PERCENT EXCEEDS	152	220	136				
90 PERCENT EXCEEDS	12	80	28				

- a Also occurred on September 27-30.
- b Also occurred on September 13, 1977.
- c From rating curve extended above 2,600 ft<sup>3</sup>/s as explained above.
- d From high-water mark in well.
- e Estimated.

04280350 METTAWEE RIVER NEAR PAWLET, VT

LOCATION.--Lat 43°22'14", long 73°13'00", Rutland County, Hydrologic Unit 02010001, on left bank, 10 ft downstream from highway bridge, 1.0 mi southwest of Butternut Bend, and 2.5 mi northwest of Pawlet.

DRAINAGE AREA.--70.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1984 to current year.

REVISED RECORDS.--WDR NH-VT-97-1: 1993, 1994, 1996 (P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 525 ft above sea level, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Jan. 4	2215	1,160	4.19	July 16	0615	1,320	4.35
Feb. 28	0730	* 2,410	* 5.20	July 31	1500	794	3.77
Apr. 4	0945	963	3.98				

Minimum discharge, 31 ft<sup>3</sup>/s, September 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	94	154	e54	e86	385	201	217	144	65	258	55
2	81	91	138	e53	e77	333	198	256	137	59	198	57
3	72	142	134	e60	e74	268	241	218	130	56	172	63
4	82	110	145	e300	e78	232	713	199	113	82	153	57
5	82	98	138	530	e74	210	614	209	102	92	135	53
6	74	90	131	288	e73	190	450	205	176	65	122	49
7	67	85	131	247	e68	182	355	185	306	59	150	47
8	63	81	120	209	e64	189	313	170	182	55	169	45
9	63	78	112	186	e62	254	368	160	164	91	136	44
10	63	82	115	225	e66	351	330	198	150	227	136	42
11	66	90	128	341	e67	272	318	286	129	120	137	40
12	60	78	110	256	e62	405	313	225	154	90	187	40
13	56	80	105	204	e55	312	296	276	139	76	149	64
14	71	78	100	e155	e80	267	344	392	169	70	148	47
15	70	76	103	e150	e300	258	366	282	150	71	154	56
16	64	71	105	e133	e205	287	355	247	132	637	178	47
17	62	67	98	e110	e150	279	307	240	143	383	148	42
18	59	65	89	e102	e120	240	282	263	145	247	130	40
19	55	63	81	e99	e115	230	262	283	139	196	118	39
20	56	63	85	e98	e110	228	237	249	118	163	106	42
21	56	66	118	e97	e103	239	291	229	108	144	97	40
22	54	63	96	e93	e98	236	357	219	118	131	89	36
23	320	62	85	e92	e100	228	324	209	106	113	99	36
24	270	64	e75	e102	e135	220	322	332	92	101	109	42
25	202	63	e70	e115	e305	215	289	297	85	91	88	38
26	172	90	e66	e105	e295	229	279	270	83	83	79	36
27	150	392	e64	e95	e600	209	307	238	78	87	73	34
28	132	259	e60	e89	1440	265	284	216	71	79	68	33
29	119	205	e58	e85	560	273	257	198	71	74	64	32
30	108	176	e56	e88	---	244	237	178	75	83	61	32
31	101	---	e55	e93	---	219	---	158	---	378	58	---
TOTAL	3058	3122	3125	4854	5622	7949	9810	7304	3909	4268	3969	1328
MEAN	98.6	104	101	157	194	256	327	236	130	138	128	44.3
MAX	320	392	154	530	1440	405	713	392	306	637	258	64
MIN	54	62	55	53	55	182	198	158	71	55	58	32
CFSM	1.41	1.48	1.44	2.23	2.76	3.65	4.66	3.36	1.86	1.96	1.82	.63
IN.	1.62	1.65	1.66	2.57	2.98	4.21	5.20	3.87	2.07	2.26	2.10	.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2000, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	73.9	125	125	144	111	199	268	153	77.2	59.8	49.3	41.6				
MAX	286	233	317	344	194	274	559	371	141	169	128	99.3				
(WY)	1988	1989	1997	1998	2000	1998	1994	1996	1986	1996	2000	1987				
MIN	24.5	32.7	45.8	45.3	45.5	96.5	115	55.4	32.8	13.8	13.6	10.6				
(WY)	1998	1999	1990	1989	1987	1989	1995	1987	1999	1995	1999	1995				

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1985 - 2000

ANNUAL TOTAL	39446.7	58318	
ANNUAL MEAN	108	159	119
HIGHEST ANNUAL MEAN			159
LOWEST ANNUAL MEAN			75.9
HIGHEST DAILY MEAN	2100	Jan 24	1440
LOWEST DAILY MEAN	7.3	Sep 5	a 32
ANNUAL SEVEN-DAY MINIMUM	8.2	Sep 2	35
INSTANTANEOUS PEAK FLOW			2410
INSTANTANEOUS PEAK STAGE			5.20
INSTANTANEOUS LOW FLOW			31
ANNUAL RUNOFF (CFSM)	1.54	2.27	1.69
ANNUAL RUNOFF (INCHES)	20.90	30.90	23.00
10 PERCENT EXCEEDS	238	302	249
50 PERCENT EXCEEDS	79	118	80
90 PERCENT EXCEEDS	13	56	23

a Also occurred on September 30.  
b Ice jam.  
c Estimated.

04282000 OTTER CREEK AT CENTER RUTLAND, VT

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

DRAINAGE AREA.--307 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: May 1928 to current year.

Water-quality records: Water years 1955, 1971.

REVISED RECORDS.--WSP 1084: 1929.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 474.80 ft above sea level; prior to October 1, 1964, datum was 1.00 ft higher. Prior to July 22, 1929, nonrecording gage at same site.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplants and Chittenden Reservoir 14 mi upstream on East Creek. These reservoirs have a combined usable capacity of about 819.8 million ft<sup>3</sup>. Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150 million ft<sup>3</sup>.

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

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	1330	3,410	7.56	Aug. 1	0545	* 4,480	* 8.77
Apr. 5	0715	4,170	8.44				

Minimum daily discharge, 94 ft<sup>3</sup>/s, September 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	851	329	614	246	e292	1830	1010	850	487	346	3830	254
2	476	310	531	201	e279	1220	1020	1150	449	264	1870	174
3	347	772	539	300	e270	1000	1470	1020	407	288	1000	154
4	332	881	493	1280	e265	862	2900	867	366	298	781	158
5	441	620	502	2530	e202	794	3950	786	361	324	541	231
6	392	535	518	1410	e200	726	2570	870	526	328	433	229
7	444	428	534	1090	e237	690	1570	803	1500	298	510	241
8	409	390	591	816	e245	740	1320	708	1020	265	678	194
9	289	421	465	713	e245	1040	1490	680	744	261	556	145
10	261	423	433	739	e243	2000	1490	778	674	1110	558	139
11	339	429	535	1200	e232	1570	1320	1520	530	779	489	165
12	362	412	462	1090	e208	1250	1330	1220	680	498	695	193
13	273	338	439	699	e185	1110	1170	1140	637	386	539	215
14	314	349	435	e400	e280	931	1190	1720	731	314	492	197
15	310	411	371	e425	420	905	1410	1140	701	323	648	186
16	272	437	395	e472	373	1110	1590	885	602	668	876	211
17	245	379	415	e445	330	1210	1320	872	884	1630	808	161
18	271	351	337	e420	324	918	1120	840	997	1490	616	135
19	283	345	234	e425	318	871	1090	1100	916	860	518	119
20	276	351	243	e405	256	854	985	922	713	588	459	185
21	287	399	565	e394	275	890	1100	794	593	485	431	152
22	278	392	539	e375	302	980	1550	739	684	451	395	132
23	1070	371	371	e320	297	1060	1440	697	705	365	393	117
24	1480	361	e245	e315	372	1180	1320	1180	503	357	530	133
25	982	296	e168	e294	917	1100	1200	1260	396	321	507	148
26	767	437	e185	e292	1170	1170	1040	991	513	300	433	140
27	643	1460	e295	e292	1430	1160	1170	801	480	335	381	124
28	497	1490	e275	e302	2960	1780	1170	680	421	339	321	114
29	491	965	275	e338	3020	2480	1020	607	357	266	346	103
30	374	757	281	e243	---	1890	928	595	424	583	333	94
31	352	---	227	e270	---	1240	---	535	---	2370	323	---
TOTAL	14408	15839	12512	18741	16147	36561	43253	28750	19001	17490	21290	4943
MEAN	465	528	404	605	557	1179	1442	927	633	564	687	165
MAX	1480	1490	614	2530	3020	2480	3950	1720	1500	2370	3830	254
MIN	245	296	168	201	185	690	928	535	357	261	321	94
CFSM	1.51	1.72	1.31	1.97	1.81	3.84	4.70	3.02	2.06	1.84	2.24	.54
IN.	1.75	1.92	1.52	2.27	1.96	4.43	5.24	3.48	2.30	2.12	2.58	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2000, BY WATER YEAR (WY)

MEAN	354	505	509	482	460	831	1460	828	435	288	244	257
MAX	1227	1025	1291	1094	1564	2376	3078	2120	1565	1047	1591	1385
(WY)	1988	1960	1984	1949	1981	1936	1969	1940	1947	1976	1976	1938
MIN	86.5	141	126	100	110	231	445	271	130	78.2	65.5	78.4
(WY)	1965	1965	1948	1948	1980	1965	1995	1941	1965	1965	1999	1964

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1928 - 2000
ANNUAL TOTAL	160229	248935	
ANNUAL MEAN	439	680	553
HIGHEST ANNUAL MEAN			1049
LOWEST ANNUAL MEAN			239
HIGHEST DAILY MEAN	3190	Mar 23	3950
LOWEST DAILY MEAN	38	Aug 3	94
ANNUAL SEVEN-DAY MINIMUM	48	Aug 1	122
INSTANTANEOUS PEAK FLOW			4480
INSTANTANEOUS PEAK STAGE			8.77
ANNUAL RUNOFF (CFSM)	1.43	2.22	a 12.45
ANNUAL RUNOFF (INCHES)	19.42	30.16	24.49
10 PERCENT EXCEEDS	926	1320	1200
50 PERCENT EXCEEDS	323	490	340
90 PERCENT EXCEEDS	69	232	134

a At datum then in use.  
e Estimated.

04282500 OTTER CREEK AT MIDDLEBURY, VT

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

DRAINAGE AREA.--628 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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: 1903-04. 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 sea level. Nonrecording gage at site 1,800 ft upstream at datum 10 ft lower, April 1, 1903 to April 30, 1907, and October 5, 1910 to January 31, 1920, nonrecording gage at present site and datum, October 1, 1928 to October 17, 1933.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by Chittenden Reservoir, usable capacity, 819 million ft<sup>3</sup> on East Creek.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft<sup>3</sup>/s, November 4, 1927, gage height, 13.3 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,640 ft<sup>3</sup>/s, March 5, gage height, 5.14 ft; minimum daily discharge, 189 ft<sup>3</sup>/s, September 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	849	706	1810	e460	e485	e2520	2420	2310	1320	749	1650	451
2	1010	656	1660	451	e520	e2640	2480	2250	1130	641	1910	394
3	804	778	1460	481	e480	e2950	2540	2150	936	499	2030	366
4	642	1080	1330	866	e475	e3220	2930	2070	790	499	2120	315
5	691	1180	1180	1360	e440	3630	2950	2010	685	511	2140	314
6	726	1050	1050	1510	e410	3510	2850	1950	665	502	2050	366
7	687	884	1010	1660	e395	3210	2900	1860	1330	514	1820	359
8	644	759	985	1770	e405	2920	3050	1760	1630	459	1520	355
9	605	694	970	1840	e390	2750	3280	1730	1720	429	1330	311
10	530	701	899	1860	e380	2800	3510	1810	1690	723	1110	248
11	478	769	938	2040	e395	2610	3540	2330	1520	1320	943	231
12	511	764	912	2120	e380	2580	3500	2180	1280	1290	927	248
13	516	741	814	e1870	e380	2570	3400	2210	1200	945	978	337
14	462	666	809	e1760	e370	2560	3310	2480	1130	704	865	401
15	518	658	796	e1600	e432	2540	3250	2410	1150	541	934	375
16	521	684	790	e1550	e460	2500	3170	2410	1170	634	1220	377
17	468	711	836	e1420	e450	2410	2980	2410	1120	1870	1440	365
18	432	672	791	e1240	e430	2320	2870	2390	1340	1830	1380	299
19	451	625	659	e1050	e410	2250	2790	2410	1490	1850	1160	256
20	492	622	558	e920	e415	2160	2690	2320	1510	1820	921	232
21	515	731	773	e775	e420	2090	2650	2230	1410	1610	769	257
22	515	743	1030	e705	e435	2050	2660	2130	1220	1280	701	263
23	868	729	958	e650	e475	2020	2650	2020	1150	940	638	243
24	1740	725	e740	e610	e575	2010	2680	2040	1110	703	689	221
25	1720	703	e575	e600	e880	2000	2650	2100	924	622	781	221
26	1700	664	e405	e570	e1480	2150	2600	2100	831	526	759	235
27	1610	1440	e420	e545	e2020	2070	2580	2080	864	460	652	271
28	1450	1780	e410	e520	2670	2240	2570	2020	843	459	595	227
29	1280	1850	e435	e480	2590	2360	2490	1910	709	471	542	206
30	1080	1880	e465	e470	---	2280	2410	1720	677	512	511	189
31	846	---	e430	e475	---	2340	---	1520	---	844	472	---
TOTAL	25361	26645	26898	34228	20047	78260	86350	65320	34544	26757	35557	8933
MEAN	818	888	868	1104	691	2525	2878	2107	1151	863	1147	298
MAX	1740	1880	1810	2120	2670	3630	3540	2480	1720	1870	2140	451
MIN	432	622	405	451	370	2000	2410	1520	665	429	472	189
CFSM	1.30	1.41	1.38	1.76	1.10	4.02	4.58	3.36	1.83	1.37	1.83	.47
IN.	1.50	1.58	1.59	2.03	1.19	4.64	5.11	3.87	2.05	1.58	2.11	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903-07,10-20, 28-00 BY WATER YEAR (WY)

MEAN	641	869	911	887	859	1528	2547	1527	821	546	464	481
MAX	2021	1897	2610	2509	2414	4538	4500	3717	3025	1833	2624	2411
(WY)	1988	1976	1984	1949	1981	1936	1960	1996	1947	1996	1976	1938
MIN	172	260	246	205	229	384	885	370	208	126	129	168
(WY)	1965	1965	1948	1948	1980	1940	1995	1903	1965	1965	1965	1982

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1903-07, 10-20, 28-00

ANNUAL TOTAL	340693	468900		
ANNUAL MEAN	933	1281	1005	
HIGHEST ANNUAL MEAN			1878	1976
LOWEST ANNUAL MEAN			397	1965
HIGHEST DAILY MEAN	3100	Apr 8	3630	Mar 5
LOWEST DAILY MEAN	125	Sep 3	189	Sep 30
ANNUAL SEVEN-DAY MINIMUM	127	Sep 1	224	Sep 24
INSTANTANEOUS PEAK FLOW			3640	Mar 5
INSTANTANEOUS PEAK STAGE			5.14	Mar 5
ANNUAL RUNOFF (CFSM)	1.49	2.04		1.60
ANNUAL RUNOFF (INCHES)	20.18	27.78		21.75
10 PERCENT EXCEEDS	2220	2580	2330	
50 PERCENT EXCEEDS	706	939	636	
90 PERCENT EXCEEDS	148	404	260	

e Estimated.



ST. LAWRENCE RIVER BASIN

04282525 NEW HAVEN RIVER AT BROOKSVILLE NEAR MIDDLEBURY, VT

LOCATION.--Lat 44°03'42", long 73°10'16", Rutland County, Hydrologic Unit 02010002, on left bank, at downstream side of Dog Team Road bridge, 0.2 mi south of Brooksville, 0.6 mi upstream from mouth, 1.6 mi downstream of Muddy Branch, 3.4 mi north of Middlebury.

DRAINAGE AREA.-- 115 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: October 1990 to current year.

REVISED RECORDS.--WDR NH-VT-97-1 1991(P), 1992(P), 1993(P), 1994(P), 1995(P), 1996(P).

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 275 ft above sea level, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 23	1530	1,840	6.72	Apr. 4	1300	3,210	7.84
Nov. 27	1030	1,630	6.50	May 11	0030	* 5,760	* 9.32
Feb. 28	1015	3,970	8.34	May 14	0215	1,650	6.53
Mar. 9	2330	2,420	7.24	July 16	2045	2,040	6.90
Mar. 28	1545	1,850	6.73				

Minimum discharge, 41 ft<sup>3</sup>/s, September 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	150	216	e93	e69	446	320	286	151	88	185	54
2	115	143	194	e105	e68	398	376	396	156	72	169	55
3	101	329	194	248	e68	314	707	321	143	66	250	76
4	143	230	218	589	e67	252	2100	281	128	71	270	74
5	174	178	209	626	e65	238	971	364	130	80	138	68
6	136	158	189	245	e63	213	524	370	237	65	105	57
7	120	143	183	212	e58	202	438	352	355	59	95	53
8	106	136	171	180	e55	240	447	333	194	55	95	50
9	125	129	154	169	e54	641	487	514	181	60	92	49
10	119	137	147	199	e53	1120	442	1270	169	159	82	45
11	143	166	192	544	e53	437	433	2000	152	97	110	43
12	126	134	162	286	e52	404	415	628	156	70	199	45
13	106	142	149	e180	e52	299	386	502	145	59	125	79
14	137	154	145	e160	e51	249	461	936	150	67	105	63
15	152	169	150	e132	e51	251	840	464	134	58	241	70
16	125	149	217	e110	e51	323	839	362	119	394	384	87
17	114	144	217	e90	e50	281	493	332	164	515	229	63
18	122	134	160	e82	e50	224	384	430	156	305	152	54
19	109	136	111	e80	e50	222	340	577	140	184	121	51
20	109	192	118	e79	e54	236	320	368	112	131	104	47
21	121	402	371	e78	e51	280	429	317	102	106	95	45
22	109	258	229	e77	e59	296	700	285	104	106	83	50
23	903	237	e180	e76	e68	309	712	260	90	91	94	44
24	1110	207	e130	e75	e100	325	868	412	83	81	152	49
25	424	183	e115	e75	e590	308	588	398	78	74	101	55
26	276	214	e105	e74	826	622	458	323	89	65	83	47
27	224	988	e96	e73	1670	378	440	253	106	61	74	43
28	208	471	e90	e72	2880	971	415	221	96	60	71	46
29	193	300	e86	e72	835	795	348	203	94	60	65	47
30	177	253	e84	e70	---	484	325	182	101	207	64	44
31	165	---	e82	e70	---	381	---	166	---	123	58	---
TOTAL	6462	6766	5064	5221	8213	12139	17006	14106	4215	3689	4191	1653
MEAN	208	226	163	168	283	392	567	455	140	119	135	55.1
MAX	1110	988	371	626	2880	1120	2100	2000	355	515	384	87
MIN	101	129	82	70	50	202	320	166	78	55	58	43
CFSM	1.81	1.96	1.42	1.46	2.46	3.41	4.93	3.96	1.22	1.03	1.18	.48
IN.	2.09	2.19	1.64	1.69	2.66	3.93	5.50	4.56	1.36	1.19	1.36	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2000, BY WATER YEAR (WY)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000		
MEAN	185	211	189	204	139	296	439	278	153	117	107	
MAX	409	369	409	450	283	554	763	592	448	344	263	
(WY)	1991	1991	1997	1998	2000	1998	1994	1996	1998	1998	1998	
MIN	86.4	108	99.2	101	46.5	146	182	126	51.0	44.7	25.3	47.9
(WY)	1995	1995	1996	1994	1992	1996	1995	1995	1993	1999	1999	1996

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1991 - 2000

ANNUAL TOTAL	59064	88725	
ANNUAL MEAN	162	242	199
HIGHEST ANNUAL MEAN			292
LOWEST ANNUAL MEAN			128
HIGHEST DAILY MEAN	2080	Sep 17	2880
LOWEST DAILY MEAN	13	Sep 4	43
ANNUAL SEVEN-DAY MINIMUM	14	Sep 1	47
INSTANTANEOUS PEAK FLOW			5760
INSTANTANEOUS PEAK STAGE			9.32
INSTANTANEOUS LOW FLOW			d 41
ANNUAL RUNOFF (CFSM)	1.41	2.11	f 12
ANNUAL RUNOFF (INCHES)	19.11	28.70	14.18
10 PERCENT EXCEEDS	300	485	416
50 PERCENT EXCEEDS	126	150	126
90 PERCENT EXCEEDS	26	56	50

- a Also occurred on September 5-7, 1999.
- b From rating curve extended above 5,300 ft<sup>3</sup>/s.
- c From floodmarks.
- d Also occurred on September 12.
- e Estimated.
- f Also occurred on September 6, 7, 1999.

04282650 LITTLE OTTER CREEK AT FERRISBURG, VT

LOCATION.--Lat 44°11'51", long 73°14'58", Addison County, Hydrologic Unit 02010002, on left bank, downstream side of highway bridge on Route 7, 0.5 mi south of Ferrisburg, 2.2 mi north of Vergennes, 2.6 mi downstream of Mud Creek.

DRAINAGE AREA.-- 57.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1990 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 145 ft above sea level, from topographic map. Prior to October 23, 1990, nonrecording gage at same site and datum.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 27	1130	Ice Jam	* 5.77	May 10	1545	565	3.41
Feb. 28	1315	* 1,590	4.89				

Minimum discharge, 2.8 ft<sup>3</sup>/s, July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e20	32	92	e23	e9.0	595	85	65	26	5.3	6.7	4.1
2	e15	27	70	e30	e8.6	373	73	59	22	5.3	12	e5.6
3	e13	73	50	e48	e8.2	215	123	52	21	4.6	13	e7.0
4	e15	70	58	e150	e8.2	151	338	45	17	4.6	10	e5.8
5	e23	61	63	323	e8.0	130	432	42	14	4.2	9.5	e5.2
6	e20	50	56	346	e8.0	106	335	43	16	3.9	6.6	e4.7
7	e17	39	49	247	e8.0	93	188	44	35	3.5	4.6	4.1
8	e15	32	43	146	e7.8	95	144	42	29	3.1	4.3	3.8
9	e15	28	39	110	e7.8	144	171	84	24	3.2	e4.7	3.9
10	e15	26	38	119	e7.8	207	205	150	26	6.4	5.4	3.8
11	e15	30	37	368	e7.8	193	255	531	23	9.5	4.7	3.3
12	e16	26	34	291	e7.8	161	285	510	24	7.0	41	3.2
13	e14	25	30	192	e7.5	156	282	352	22	3.9	70	5.2
14	e24	26	28	e97	e7.2	143	280	361	23	3.2	57	7.8
15	e37	25	32	e60	e7.0	135	290	302	22	3.3	49	8.4
16	e26	23	47	e36	e7.0	140	249	192	18	14	62	11
17	e22	21	47	e31	e7.0	105	186	113	14	25	68	9.2
18	e21	19	e35	e27	e7.2	100	137	92	12	49	56	7.2
19	19	18	e33	e21	e7.2	86	107	112	11	66	37	6.3
20	17	17	e52	e18	e7.4	96	88	87	9.1	39	27	5.4
21	16	20	94	e16	e8.0	127	112	73	7.5	25	19	5.3
22	14	20	82	e15	e9.6	140	216	63	7.0	28	13	4.9
23	153	19	e70	e13	e20	136	312	57	6.9	28	10	5.2
24	334	19	e60	e12	e70	127	384	94	6.0	16	14	4.6
25	341	18	e40	e11	e260	109	350	130	5.5	9.9	13	4.8
26	253	24	e32	e10	e500	102	233	118	7.3	7.4	11	4.7
27	147	259	e29	e10	e900	93	153	81	7.9	6.0	7.7	4.1
28	90	281	e25	e9.6	1460	119	128	58	7.1	4.9	6.4	3.5
29	61	225	e22	e9.5	1050	156	105	46	5.7	4.3	5.8	3.6
30	45	148	e20	e9.3	---	142	84	38	5.1	4.8	5.2	3.2
31	37	---	e20	e9.0	---	112	---	32	---	5.2	5.0	---
TOTAL	1870	1701	1427	2807.4	4432.1	4787	6330	4068	474.1	403.5	658.6	158.9
MEAN	60.3	56.7	46.0	90.6	153	154	211	131	15.8	13.0	21.2	5.30
MAX	341	281	94	368	1460	595	432	531	35	66	70	11
MIN	13	17	20	9.0	7.0	86	73	32	5.1	3.1	4.3	3.2
CFSM	1.06	.99	.81	1.59	2.68	2.70	3.70	2.30	.28	.23	.37	.09
IN.	1.22	1.11	.93	1.83	2.89	3.12	4.12	2.65	.31	.26	.43	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
MEAN	54.1	72.5	64.2	87.3	51.1	114	151	66.7	32.5	22.9	26.5	19.6
MAX	178	174	226	259	153	193	332	203	127	123	107	58.7
(WY)	1991	1991	1997	1996	2000	1990	1993	1996	1998	1998	1990	1998
MIN	5.73	19.2	24.2	22.0	18.0	35.6	34.8	15.3	4.16	2.83	1.61	5.12
(WY)	1995	1995	1996	1994	1992	1996	1995	1995	1995	1999	1999	1997

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1990 - 2000
ANNUAL TOTAL	17541.64	29117.6	
ANNUAL MEAN	48.1	79.6	
HIGHEST ANNUAL MEAN			103
LOWEST ANNUAL MEAN			28.7
HIGHEST DAILY MEAN	600	Sep 17	1620
LOWEST DAILY MEAN	.96	Aug 4	.96
ANNUAL SEVEN-DAY MINIMUM	1.1	Jul 31	1.1
INSTANTANEOUS PEAK FLOW		1590	Feb 28
INSTANTANEOUS PEAK STAGE		b 5.77	Feb 27
INSTANTANEOUS LOW FLOW		2.8	Jul 9
ANNUAL RUNOFF (CFSM)	.84	1.39	1.09
ANNUAL RUNOFF (INCHES)	11.43	18.97	14.77
10 PERCENT EXCEEDS	127	219	156
50 PERCENT EXCEEDS	23	26	25
90 PERCENT EXCEEDS	1.8	5.2	5.1

a From rating curve extended above 920 ft<sup>3</sup>/s.  
b Ice Jam.  
c Estimated.

ST. LAWRENCE RIVER BASIN

04282780 LEWIS CREEK NEAR NORTH FERRISBURG, VT

LOCATION.--Lat 44°14'57", long 73°13'44", Addison County, Hydrologic Unit 02010002, on right bank, 100 ft east of State Highway 7 crossing, 1.1 mi southwest of North Ferrisburg, 1.2 mi south of Mount Philo peak, 3.1 mi north of Ferrisburg.

DRAINAGE AREA.--77.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1990 to current year. Published as "at North Ferrisburg" prior to October 1996.

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Oct. 24	0900	998	3.87	Apr. 15	0130	860	3.74
Feb. 27	1645	Ice Jam	* 5.44	Apr. 23	1430	810	3.69
Feb. 28	0515	* 3,380	5.30	May 10	0745	2,120	4.66
Mar. 10	0645	801	3.68	May 13	0615	890	3.77
Apr. 3	1545	1,130	3.98				

Minimum discharge, 14 ft<sup>3</sup>/s, September 11, 12, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	64	117	e42	e25	520	165	137	75	29	24	18
2	37	61	e95	e45	e24	437	311	117	69	27	31	25
3	32	91	e86	e120	e23	309	911	102	63	25	26	28
4	36	84	114	308	e23	229	578	133	58	26	23	24
5	53	67	112	282	e23	191	372	138	55	24	21	23
6	46	61	102	e86	e22	154	300	144	60	22	19	20
7	42	56	91	e78	e22	138	275	136	88	21	19	18
8	37	51	80	e67	e19	154	323	392	69	20	21	17
9	37	48	72	e57	e18	350	307	627	69	22	24	16
10	38	48	69	e100	e18	560	295	1430	74	31	23	15
11	38	57	79	445	e18	270	285	561	64	30	32	15
12	40	52	71	227	e18	248	282	425	63	24	70	16
13	35	54	65	e90	e18	195	415	678	59	21	46	22
14	49	57	64	e72	e18	166	592	367	63	20	36	20
15	69	67	66	e70	e18	176	634	274	59	19	66	22
16	52	62	90	e64	e17	199	359	215	52	23	99	25
17	47	58	95	e60	e17	166	263	205	48	31	85	21
18	47	54	74	e58	e17	154	208	255	46	44	51	19
19	44	55	e68	e52	e17	130	175	184	43	47	40	18
20	40	61	e95	e48	e17	140	242	164	39	31	35	19
21	40	120	150	e46	e17	164	426	146	36	27	32	17
22	38	95	109	e43	e19	176	500	133	36	31	28	16
23	280	78	e95	e40	e30	188	702	197	35	37	27	15
24	807	68	e73	e37	e95	201	498	253	32	30	34	18
25	324	63	e53	e35	e400	180	342	217	31	25	30	19
26	188	73	e49	e34	e1150	196	283	151	37	23	25	17
27	138	527	e46	e32	e1690	160	249	125	36	21	23	16
28	110	317	e43	e31	e2500	244	200	108	33	19	22	15
29	93	191	e40	e30	981	301	163	94	29	19	21	15
30	79	150	e40	e28	---	225	137	79	29	30	20	15
31	68	---	e40	e26	---	179	---	76	---	27	19	---
TOTAL	3034	2890	2443	2753	7274	7100	10792	8263	1550	826	1072	564
MEAN	97.9	96.3	78.8	88.8	251	229	360	267	51.7	26.6	34.6	18.8
MAX	807	527	150	445	2500	560	911	1430	88	47	99	28
MIN	32	48	40	26	17	130	137	76	29	19	19	15
CFSM	1.27	1.25	1.02	1.15	3.25	2.97	4.66	3.45	.67	.35	.45	.24
IN.	1.46	1.39	1.18	1.33	3.51	3.42	5.20	3.98	.75	.40	.52	.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
MEAN	89.0	110	112	120	101	186	246	128	59.7	46.5	42.8	39.7
MAX	247	238	300	259	251	299	446	349	151	182	139	92.0
(WY)	1991	1991	1997	1996	2000	1999	1993	1996	1996	1998	1990	1998
MIN	22.6	47.5	41.6	42.1	32.8	69.8	77.1	44.0	15.7	9.98	7.44	16.9
(WY)	1995	1995	1993	1993	1993	1996	1995	1999	1995	1999	1999	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1990 - 2000

ANNUAL TOTAL	31381.5	48561	
ANNUAL MEAN	86.0	133	105
HIGHEST ANNUAL MEAN			152
LOWEST ANNUAL MEAN			54.2
HIGHEST DAILY MEAN	1080	Mar 18	e 2500
LOWEST DAILY MEAN	4.2	Sep 4	a 15
ANNUAL SEVEN-DAY MINIMUM	4.5	Aug 31	16
INSTANTANEOUS PEAK FLOW			b 3380
INSTANTANEOUS PEAK STAGE			c 5.44
INSTANTANEOUS LOW FLOW			d 14
ANNUAL RUNOFF (CFSM)	1.11	1.72	f 4.0
ANNUAL RUNOFF (INCHES)	15.12	23.40	f 4.0
10 PERCENT EXCEEDS	170	308	231
50 PERCENT EXCEEDS	53	58	60
90 PERCENT EXCEEDS	7.6	19	17

- a Also occurred on September 11, 23, 28-30.
- b From rating curve extended above 550 ft<sup>3</sup>/s.
- c Ice jam.
- d Also occurred on September 12, 30.
- e Estimated.
- f Also occurred September 4, 5, 1999.

04282795 LAPLATTE RIVER AT SHELBURNE FALLS, VT

LOCATION.--Lat 44°22'12", long 73°13'00", Chittenden County, Hydrologic Unit 02010003, on left bank, 150 ft upstream of small right bank tributary, 300 ft upstream of Shelburne Falls bridge, at Shelburne Falls, 0.9 mi southeast of Shelburne, 1.3 mi upstream of Munroe Brook, 2.0 mi above mouth.

DRAINAGE AREA.--44.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1990 to current year.

GAGE.--Nonrecording gage at site 100 ft downstream, March to October 23, 1990. Water-stage recorder, October 24, 1990, to current year. Elevation of gage is 150 ft above sea level, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 598 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 27	1015	Ice Jam	* 6.43	May 10	2230	990	5.07
Feb. 28	0300	* 1,450	5.92				

Minimum discharge, 2.9 ft<sup>3</sup>/s, July 29, September 01.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	e21	57	e13	e7.0	224	80	60	25	7.9	6.5	6.0
2	6.8	e19	e47	e13	e6.6	156	72	56	22	7.1	6.0	46
3	5.2	e48	38	e17	e6.4	122	117	46	20	6.6	5.4	24
4	6.0	e42	63	e50	e6.2	92	401	40	18	6.3	5.0	20
5	12	e30	64	126	e6.2	85	283	83	17	6.0	5.3	14
6	9.5	23	52	53	e6.0	80	149	80	19	5.0	4.2	9.7
7	7.9	20	43	e32	e5.8	69	117	80	34	4.9	3.8	7.7
8	6.6	18	36	e23	e5.8	75	116	91	23	4.4	4.2	6.3
9	5.7	16	30	e20	e5.8	138	160	286	23	5.1	5.2	5.4
10	5.4	14	26	e25	e5.8	165	162	400	29	8.0	5.7	4.9
11	5.9	15	29	245	e5.8	99	174	730	25	9.3	8.7	4.4
12	6.4	14	27	99	e5.9	100	167	296	29	6.7	16	4.1
13	6.3	14	24	e42	e5.6	96	164	172	25	4.9	12	6.9
14	15	15	22	e28	e5.5	83	275	305	33	3.8	8.4	8.8
15	29	15	24	e24	e5.5	102	342	154	27	3.9	9.9	11
16	18	16	51	e21	e5.4	111	248	98	27	5.2	16	16
17	13	15	45	e19	e5.3	88	156	75	22	6.2	19	9.6
18	12	14	e30	e17	e5.3	73	114	72	21	8.4	11	7.5
19	11	13	e25	e16	e5.3	69	92	87	19	7.5	8.3	6.6
20	9.6	13	e19	e15	e5.4	77	79	66	16	6.2	6.7	6.1
21	e9.1	19	e78	e13	e5.8	104	130	64	14	5.2	6.1	5.9
22	8.6	22	67	e11	e6.0	107	268	55	13	5.1	5.1	5.2
23	e150	19	e37	e10	e8.0	100	289	51	12	5.4	5.1	5.5
24	e435	18	e25	e9.0	e20	95	385	91	10	5.4	6.4	6.8
25	e193	17	e19	e8.0	e90	82	268	145	9.0	4.3	6.7	8.3
26	102	22	e18	e7.8	e380	81	151	128	9.1	3.7	5.3	7.2
27	64	285	e17	e7.5	e700	73	119	79	9.4	3.6	4.7	6.2
28	45	222	e15	e7.5	1250	128	104	59	9.5	3.6	4.0	5.9
29	34	108	e14	e7.3	498	174	83	48	8.2	3.9	3.8	5.7
30	26	75	e13	e7.2	---	122	70	36	8.0	11	3.5	5.3
31	e22	---	e13	e7.0	---	98	---	29	---	7.1	3.2	---
TOTAL	1288.3	1202	1068	993.3	3074.4	3268	5335	4062	576.2	181.7	221.2	287.0
MEAN	41.6	40.1	34.5	32.0	106	105	178	131	19.2	5.86	7.14	9.57
MAX	435	285	78	245	1250	224	401	730	34	11	19	46
MIN	5.2	13	13	7.0	5.3	69	70	29	8.0	3.6	3.2	4.1
CFSM	.93	.90	.77	.72	2.38	2.36	3.99	2.94	.43	.13	.16	.21
IN.	1.07	1.00	.89	.83	2.56	2.73	4.45	3.39	.48	.15	.18	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
MEAN	37.1	54.9	46.7	54.0	36.8	77.1	121	58.3	24.6	24.5	22.2	13.4
MAX	113	135	150	159	106	122	249	181	79.4	146	99.7	60.4
(WY)	1991	1991	1997	1996	2000	1999	1993	1996	1996	1998	1990	1998
MIN	3.97	11.1	16.5	14.0	8.61	32.3	28.8	15.0	4.86	1.69	1.72	2.62
(WY)	1995	1995	1993	1993	1993	1996	1995	1998	1999	1995	1999	1995

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1990 - 2000

ANNUAL TOTAL	12537.22	21557.1	
ANNUAL MEAN	34.3	58.9	46.8
HIGHEST ANNUAL MEAN			70.7
LOWEST ANNUAL MEAN			21.8
HIGHEST DAILY MEAN	435	Oct 24	1410
LOWEST DAILY MEAN	.76	Aug 3	.23
ANNUAL SEVEN-DAY MINIMUM	.86	Aug 30	.33
INSTANTANEOUS PEAK FLOW		1450	Feb 28
INSTANTANEOUS PEAK STAGE		b 6.43	Feb 27
INSTANTANEOUS LOW FLOW		c 2.9	Jul 29
ANNUAL RUNOFF (CFSM)	.77	1.32	1.05
ANNUAL RUNOFF (INCHES)	10.46	17.98	14.24
10 PERCENT EXCEEDS	89	150	111
50 PERCENT EXCEEDS	16	18	19
90 PERCENT EXCEEDS	1.5	5.3	3.8

- a From rating curve extended above 750 ft<sup>3</sup>/s.
- b Ice jam.
- c Also occurred September 1.
- e Estimated.

## ST. LAWRENCE RIVER BASIN

## 04282815 ENGLSBY BROOK AT BURLINGTON, VT

**LOCATION.**--Lat 44°27'28", long 73°13'09", Chittenden County, Hydrologic Unit 02010003, on right bank, 125 ft downstream from RR culvert, 0.25 mi upstream from mouth, 0.35 mi downstream from Pine Street culvert, 0.8 mi northwest from junction of US State Highways 189 and 7, 1.2 mi south of Post Office in Burlington, VT.

**DRAINAGE AREA.**-- About 0.6 mi<sup>2</sup>. Unknown amount of drainage area affected by stormwater diversions.

**PERIOD OF RECORD.**--Discharge records: October 1999 to current year.

Water-quality records: October 1999 to current year.

**GAGE.**--Concrete control with v-notch weir, water-stage recorder, and crest-stage gage. Elevation of gage is 105 ft above sea level, from topographic map.

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

**EXTREMES FOR CURRENT YEAR.**--Peak discharges greater than base discharge of 46 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
May 9	0700	87	4.13	July 18	1145	* 158	* 4.84
May 10	1830	60	3.74	Aug. 3	1215	55	3.66

Minimum daily discharge, .00 ft<sup>3</sup>/s, October 3, January 17 to February 22, July 29, August 29-31, September 9-11,30.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.16	.23	.06	e.00	1.0	.52	.60	.23	.14	.28	.81
2	.00	.15	.19	.54	e.00	.96	.72	.66	.20	.06	.04	1.3
3	.00	.75	.24	.43	e.00	.71	1.9	.43	.15	.29	2.3	.24
4	1.3	.19	.49	2.5	e.00	.61	6.1	.39	.18	.22	.05	.28
5	.26	.14	.31	.59	e.00	.70	1.8	1.7	.12	.07	.03	.02
6	1.7	.12	.30	.23	e.00	.57	1.2	.81	.78	.04	.03	.01
7	.17	.10	.25	.17	e.00	.49	.84	.57	.39	.02	.03	.01
8	.15	.10	.20	.17	e.00	.55	1.7	.75	.34	.02	.04	.01
9	.11	.10	.18	.14	e.00	.85	2.6	16	1.6	.37	.27	.00
10	.30	.10	.18	2.1	e.00	.68	3.3	12	.48	.26	.02	.00
11	.48	.08	.15	1.8	e.00	.50	2.8	5.3	1.4	.04	.39	.00
12	.14	.08	.21	.42	e.00	1.3	2.7	2.6	.54	.02	.14	.05
13	.09	.12	.22	.24	e.00	.75	2.5	5.4	.57	.02	.03	1.3
14	1.8	.13	.21	e.08	e.00	.94	3.3	3.0	.77	.02	.43	.04
15	.48	.11	.51	e.02	e.00	.97	2.5	1.5	.96	.07	.10	1.6
16	.33	.09	.41	e.01	e.00	.82	1.5	1.4	.69	.80	4.0	.13
17	.39	.08	.26	e.00	e.00	.62	1.2	.97	.33	.58	.23	.02
18	.50	.07	.15	e.00	e.00	.51	.84	1.8	.31	e11	.04	.01
19	.25	.07	.11	e.00	e.00	.63	.72	1.0	.23	.49	.04	.01
20	.15	.73	1.4	e.00	e.00	.75	.62	.76	.14	.09	.03	.01
21	.11	.53	1.8	e.00	e.00	.77	3.7	.69	.12	.05	.03	.06
22	.13	.20	.41	e.00	e.00	.72	3.3	.67	.13	.03	.02	.03
23	5.4	.17	.25	e.00	e.30	e.65	6.0	.56	.11	.02	.52	.01
24	1.8	.13	.17	e.00	e2.3	e.60	5.4	1.5	.06	.02	.07	.52
25	.68	.10	.10	e.00	9.4	e.57	2.0	2.2	.06	.02	2.0	.02
26	.44	1.5	.11	e.00	5.9	e.52	1.4	.86	.06	.01	.01	.01
27	.37	4.1	.08	e.00	15	.48	1.0	.59	.93	.02	.01	.07
28	.33	.71	.03	e.00	11	1.4	.86	.44	.15	.01	.01	.04
29	.23	.41	.04	e.00	2.3	.96	.71	.36	.10	.00	.00	.01
30	.21	.30	.08	e.00	---	.64	.58	.30	.81	.02	.00	.00
31	.18	---	.06	e.00	---	.71	---	.25	---	.02	.00	---
TOTAL	18.60	11.62	9.33	9.50	46.20	22.93	64.31	66.06	12.94	14.84	11.19	6.62
MEAN	.60	.39	.30	.31	1.59	.74	2.14	2.13	.43	.48	.36	.22
MAX	5.4	4.1	1.8	2.5	15	1.4	6.1	16	1.6	11	4.0	1.6
MIN	.00	.07	.03	.00	.00	.48	.52	.25	.06	.00	.00	.00
CFSM	1.00	.65	.50	.51	2.66	1.23	3.57	3.55	.72	.80	.60	.37
IN.	1.15	.72	.58	.59	2.86	1.42	3.99	4.10	.80	.92	.69	.41

## SUMMARY STATISTICS

## FOR 2000 WATER YEAR

ANNUAL TOTAL	294.14
ANNUAL MEAN	.80
HIGHEST ANNUAL MEAN	
LOWEST ANNUAL MEAN	
HIGHEST DAILY MEAN	16 May 9
LOWEST DAILY MEAN	a.00 Oct 2
ANNUAL SEVEN-DAY MINIMUM	.00 Jan 17
INSTANTANEOUS PEAK FLOW	b158 Jul 18
INSTANTANEOUS PEAK STAGE	c4.84 Jul 18
ANNUAL RUNOFF (CFSM)	1.34
ANNUAL RUNOFF (INCHES)	18.24
10 PERCENT EXCEEDS	1.8
50 PERCENT EXCEEDS	.23
90 PERCENT EXCEEDS	.00

a Also occurred on October 3, January 17 to February 22, July 29, August 29-31, September 9-11, 30.

b. From rating curve extended above 3.0 ft on basis of culvert computation.

c. From crest-stage gage.

e Estimated.

04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--October 1999 to current year.

SPECIFIC CONDUCTANCE: October 1999 to current year.

WATER TEMPERATURE: October 1999 to current year.

DISSOLVED OXYGEN: October 1999 to current year.

pH: October 1999 to current year.

TURBIDITY: October 1999 to current year.

INSTRUMENTATION.--Water quality monitor July 1999 to current year.

REMARKS.--Specific conductance records rated excellent except for the following periods: October 5-19, November 4-23, January 12-16, May 18 to June 20 rated good; June 29 to September 19 rated poor. Water temperature records rated excellent except for the period February 28 to March 1 which is rated good. Dissolved oxygen records rated good except for the period May 25 to August 7 which is rated fair. pH records rated good except for the periods February 28 to March 2 and June 29 to August 2 which are rated fair. Turbidity records rated good except for the period May 23 to June 29 which is rated fair. Interruptions in the record due to malfunctions of the instrument. Extremes for current year are only for those values reported.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum 4,580 microsiemens January 4; minimum 186 microsiemens May 9.

WATER TEMPERATURE: Maximum 77.7°F September 1; minimum 32.1°F January 5.

DISSOLVED OXYGEN: Maximum 16.8 mg/L November 13; minimum 0.3 mg/L June 27.

pH: Maximum 8.2 units July 18; minimum 6.5 units June 29.

TURBIDITY: Maximum 1,400 NTU October 6; minimum 1.0 NTU May 25.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	981	911	950	1030	1010	1020	944	889	919	1390	1240	1310
2	---	---	---	1050	1020	1030	971	944	956	1350	651	1080
3	---	---	---	1040	290	737	953	874	940	1160	945	1020
4	1070	189	753	1000	984	995	879	668	801	4580	697	1450
5	947	823	878	1020	1000	1010	885	873	879	1010	782	931
6	915	243	533	1040	1020	1030	908	786	883	1040	1010	1030
7	891	831	873	1060	1040	1050	919	747	857	1030	1010	1020
8	959	891	907	1070	1060	1070	954	919	935	1030	1010	1020
9	961	873	932	1070	1050	1060	980	954	965	1030	1010	1020
10	989	449	960	1090	1050	1080	985	974	981	1780	358	937
11	865	341	670	1090	1050	1080	1010	983	991	780	487	691
12	924	865	899	1130	1090	1120	1020	1010	1020	905	769	833
13	967	899	931	1100	994	1040	1030	1020	1020	1050	905	971
14	977	313	697	1110	1040	1100	1030	1010	1020	1170	1050	1120
15	831	759	787	1080	1020	1050	4110	959	1800	1280	1170	1240
16	905	831	867	1130	1080	1110	1120	917	1010	1300	1260	1280
17	949	903	926	1150	1130	1140	999	969	989	---	---	---
18	953	934	943	1170	1150	1160	1070	999	1020	---	---	---
19	1010	929	971	1170	1160	1160	1130	1070	1110	---	---	---
20	1040	1010	1030	1180	327	1090	1140	275	1030	---	---	---
21	1050	1040	1040	1100	409	904	820	513	736	---	---	---
22	1070	938	1050	1110	1060	1080	890	820	859	---	---	---
23	938	281	472	1070	1040	1050	942	890	917	---	---	---
24	672	480	599	1070	1040	1050	1060	942	995	---	---	---
25	803	671	742	1080	1070	1080	1120	1060	1100	---	---	---
26	859	803	834	1090	294	668	1130	1080	1110	---	---	---
27	898	859	878	674	278	553	1140	1080	1120	---	---	---
28	939	898	921	772	674	724	1250	1140	1210	---	---	---
29	955	933	942	838	772	804	1250	1230	1240	---	---	---
30	982	947	959	889	838	860	2030	1040	1380	---	---	---
31	1010	980	996	---	---	---	2160	1390	1620	---	---	---
MONTH	1070	189	860	1180	278	997	4110	275	1050	---	---	---

## ST. LAWRENCE RIVER BASIN

## 04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

## WATER-QUALITY RECORDS

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	1030	949	1000	1110	1080	1100	815	742	798
2	---	---	---	1070	1000	1020	1100	656	1000	808	613	715
3	---	---	---	1880	1040	1370	1090	526	961	821	801	811
4	---	---	---	1310	1120	1190	1020	327	662	834	804	820
5	---	---	---	1470	1130	1220	846	758	809	902	360	760
6	---	---	---	1250	1190	1220	873	840	861	833	615	758
7	---	---	---	1230	1170	1210	943	840	892	817	781	801
8	---	---	---	1210	1120	1170	965	573	873	828	539	763
9	---	---	---	1160	1040	1110	1670	573	921	824	186	478
10	---	---	---	1150	1090	1100	3060	956	1670	598	263	477
11	---	---	---	1780	1100	1210	1060	816	885	556	383	485
12	---	---	---	2880	1250	1540	2480	835	1170	558	527	541
13	---	---	---	1740	1100	1310	953	775	888	616	286	542
14	---	---	---	1590	1130	1270	916	698	799	574	428	505
15	---	---	---	1130	999	1060	792	713	743	581	551	567
16	---	---	---	1250	994	1050	823	792	811	619	581	603
17	---	---	---	4330	1020	1940	870	805	837	613	588	603
18	---	---	---	2700	1250	1600	916	870	892	842	461	682
19	---	---	---	1520	1190	1330	932	910	921	811	744	771
20	---	---	---	1280	1120	1220	933	910	923	748	673	734
21	---	---	---	1180	1070	1130	1010	464	766	749	728	742
22	---	---	---	1100	1070	1090	738	509	685	787	719	758
23	---	---	---	1080	1030	1070	728	424	580	824	782	799
24	---	---	---	1080	1060	1070	617	350	525	854	446	756
25	---	---	---	1100	1080	1090	715	617	670	863	375	778
26	---	---	---	1100	1080	1090	738	713	722	775	757	765
27	---	---	---	1140	1080	1100	790	738	768	787	764	771
28	744	464	628	1420	886	1080	802	779	788	823	787	802
29	949	727	819	1220	1120	1170	798	782	791	829	810	818
30	---	---	---	1140	1110	1130	810	783	795	845	829	835
31	---	---	---	1120	1010	1080	---	---	---	873	845	856
MONTH	---	---	---	4330	886	1200	3060	327	857	902	186	706

## SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	877	866	871	1120	1050	1080	2290	716	1420	2890	248	1860
2	898	873	887	1270	1110	1170	1600	1090	1380	904	317	749
3	911	895	901	1270	680	1090	1980	298	1450	926	715	835
4	913	837	898	1140	681	1000	2650	1970	2370	996	630	796
5	914	787	867	1240	1140	1190	1970	1810	1850	1550	977	1210
6	918	453	707	1380	1240	1310	1820	1700	1780	1730	1510	1600
7	911	697	879	1500	1380	1440	1980	1580	1760	1970	1680	1820
8	900	519	831	1620	1500	1560	2070	1950	2000	2080	1830	1940
9	1010	362	789	1660	524	1350	2740	762	1400	---	---	---
10	876	811	839	1400	732	1060	2050	1620	1920	---	---	---
11	944	462	759	1490	1210	1330	2180	360	1370	---	---	---
12	918	846	863	1670	1440	1550	2000	1140	1780	2330	792	1950
13	895	610	817	1910	1650	1740	2110	1650	1890	998	282	829
14	939	610	883	1900	1820	1850	2150	620	1720	1410	998	1160
15	888	383	816	1900	939	1390	1580	871	1310	1510	339	869
16	843	513	794	2050	652	1230	1700	482	1020	1060	857	951
17	845	760	820	1380	782	1190	1440	1070	1190	1760	1060	1230
18	872	782	843	---	---	---	1870	1440	1720	1650	1350	1540
19	899	782	858	---	---	---	1930	1860	1890	1900	1540	1640
20	1020	892	953	1520	955	1180	2030	1870	1940	1700	1550	1610
21	1040	1020	1030	1720	1360	1590	2060	1950	2000	2090	692	1230
22	1050	915	1020	1660	1300	1550	2300	2000	2100	1780	697	1130
23	1060	967	1010	1680	1310	1590	2390	427	1460	1740	1130	1490
24	1150	1050	1080	1750	1580	1680	1720	659	1260	1860	232	892
25	1150	1120	1130	1860	1630	1750	1830	1520	1730	1380	879	1090
26	1180	1120	1140	1980	1800	1880	1900	1670	1790	1510	1250	1400
27	1200	301	908	1990	1730	1820	2140	1870	1990	1940	828	1560
28	1050	978	1010	2170	1870	1970	2160	1830	2040	1310	431	745
29	1140	912	1060	---	---	---	---	---	---	1540	1310	1430
30	1090	504	921	2340	1810	2030	---	---	---	---	---	---
31	---	---	---	2120	1850	1990	---	---	---	---	---	---
MONTH	1200	301	906	2340	524	1480	2740	298	1700	2890	232	1290

## 04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

## WATER-QUALITY RECORDS

## WATER TEMPERATURE, (DEGREES) FARENHEIT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	58.3	54.9	56.7	50.9	46.6	48.9	34.7	33.6	34.0	33.6	32.7	33.1
2	---	---	---	53.1	48.4	50.2	34.5	33.6	34.0	33.3	32.4	32.7
3	---	---	---	57.2	47.5	53.8	38.7	34.5	36.7	32.7	32.4	32.5
4	53.2	48.9	51.1	47.7	44.1	46.4	41.7	38.5	40.8	32.9	32.2	32.5
5	50.7	48.6	50.0	47.3	42.3	44.8	46.4	41.7	44.1	32.7	32.1	32.4
6	58.6	47.8	53.8	47.5	44.6	46.8	48.6	46.0	47.1	32.7	32.4	32.5
7	47.8	45.3	46.6	44.6	40.1	42.6	46.0	40.3	43.2	33.4	32.7	32.9
8	50.2	44.2	46.8	41.0	38.8	40.1	41.2	38.7	39.9	33.1	32.7	32.9
9	54.7	49.8	52.3	45.1	39.7	42.1	39.7	37.4	38.5	33.3	32.9	33.1
10	57.7	51.3	53.6	48.2	43.9	46.2	42.4	36.7	39.6	33.8	32.5	33.3
11	57.7	52.2	54.9	43.9	38.3	40.1	41.7	36.1	37.9	34.4	33.0	33.8
12	52.2	48.9	50.5	39.6	37.4	38.7	36.7	35.4	36.0	34.2	32.4	32.9
13	55.0	49.8	52.2	43.2	39.0	41.4	37.8	35.6	36.7	32.8	32.5	32.6
14	55.0	47.3	50.0	44.4	42.4	43.3	38.7	37.2	37.8	33.1	32.5	32.7
15	49.3	45.5	47.5	43.3	40.1	41.9	40.8	36.3	38.8	32.6	32.3	32.5
16	53.2	48.0	50.5	40.1	37.8	39.2	41.7	39.6	40.6	32.7	32.3	32.5
17	54.5	53.1	53.8	38.7	36.9	37.6	39.6	34.7	37.2	---	---	---
18	53.2	46.4	50.0	39.6	37.6	38.5	34.7	33.4	33.8	---	---	---
19	46.4	43.3	44.6	43.2	39.6	41.4	34.0	33.3	33.4	---	---	---
20	48.0	44.8	46.4	48.6	42.4	44.2	34.3	33.1	33.6	---	---	---
21	49.1	46.6	47.8	47.8	45.7	46.8	35.6	33.6	34.5	---	---	---
22	49.3	46.6	47.7	50.4	45.0	47.5	34.2	32.9	33.4	---	---	---
23	50.5	47.7	48.6	52.0	49.6	50.7	33.4	32.7	33.1	---	---	---
24	48.6	45.7	47.7	54.1	49.1	51.6	33.1	32.7	32.9	---	---	---
25	45.9	44.1	45.0	50.7	45.0	47.5	33.4	32.7	33.1	---	---	---
26	49.5	44.1	46.8	50.7	44.8	46.6	33.4	32.9	33.1	---	---	---
27	47.1	43.2	46.0	52.3	47.5	49.6	33.4	32.7	33.1	---	---	---
28	45.1	40.6	43.2	47.5	43.2	45.1	33.6	32.5	33.1	---	---	---
29	48.4	44.6	46.0	43.3	40.1	42.1	33.6	32.9	33.3	---	---	---
30	49.8	43.9	46.9	40.1	34.7	37.8	34.0	32.7	33.1	---	---	---
31	51.8	49.6	50.7	---	---	---	33.4	32.5	32.9	---	---	---
MONTH	58.6	40.6	49.2	57.2	34.7	44.5	48.6	32.5	36.4	---	---	---

## WATER TEMPERATURE, (DEGREES) FARENHEIT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	38.4	33.9	36.1	51.8	39.3	44.7	51.6	43.6	47.2
2	---	---	---	40.0	36.0	37.6	45.0	43.2	44.1	57.4	46.7	50.8
3	---	---	---	36.5	34.6	35.4	44.3	42.4	43.5	60.5	43.9	51.5
4	---	---	---	40.5	33.8	36.5	47.3	43.9	45.6	62.5	47.9	54.9
5	---	---	---	39.1	35.5	36.9	44.6	40.7	42.6	63.8	54.7	58.8
6	---	---	---	40.7	33.8	36.4	42.1	39.0	40.7	58.8	55.1	56.6
7	---	---	---	40.0	33.9	36.9	45.7	40.7	42.8	66.6	55.6	60.2
8	---	---	---	43.2	35.1	38.8	51.9	42.2	45.5	59.0	56.0	57.4
9	---	---	---	47.0	39.6	42.7	43.0	32.4	36.0	61.8	55.7	58.2
10	---	---	---	39.6	34.0	36.2	43.6	36.0	39.2	58.5	54.0	55.6
11	---	---	---	35.8	33.8	34.4	43.1	36.9	39.6	54.8	52.3	53.5
12	---	---	---	35.9	34.0	35.1	44.1	36.2	39.1	59.2	51.0	55.2
13	---	---	---	39.1	33.2	34.9	48.0	36.3	41.5	61.5	55.3	57.8
14	---	---	---	39.4	33.2	35.5	48.5	37.9	42.8	58.9	54.3	56.9
15	---	---	---	41.7	35.8	38.6	56.6	42.6	49.1	54.3	51.6	53.0
16	---	---	---	38.9	34.0	37.5	50.2	42.5	46.2	56.7	49.9	53.3
17	---	---	---	35.0	32.9	33.6	45.7	39.8	42.5	58.5	51.7	55.2
18	---	---	---	34.5	32.8	33.4	47.5	40.7	44.0	58.6	53.5	55.5
19	---	---	---	37.3	32.8	34.3	49.4	42.5	45.4	53.5	48.9	51.0
20	---	---	---	41.9	33.6	36.8	53.5	44.7	48.2	52.5	46.9	50.1
21	---	---	---	45.6	34.5	39.1	46.8	44.4	45.9	54.1	50.7	52.2
22	---	---	---	47.5	36.2	41.0	46.8	43.8	45.0	57.5	51.9	54.1
23	---	---	---	48.6	37.4	42.2	44.5	42.8	43.8	57.7	53.3	55.2
24	---	---	---	48.9	38.2	42.6	46.8	42.6	44.3	59.2	54.5	56.6
25	---	---	---	44.5	37.3	41.5	52.4	41.0	45.7	58.5	54.6	56.4
26	---	---	---	46.2	40.4	43.1	46.6	41.0	44.2	57.0	54.0	55.2
27	---	---	---	46.9	38.1	42.5	48.9	43.1	45.4	56.5	53.2	54.6
28	38.3	34.6	35.7	46.3	41.4	44.0	54.9	43.2	47.7	56.7	52.9	54.4
29	38.0	34.3	35.5	43.4	39.7	41.5	57.5	43.5	50.1	58.2	52.1	55.2
30	---	---	---	42.3	39.1	40.7	56.4	44.4	49.3	61.0	52.7	56.9
31	---	---	---	49.6	38.9	43.2	---	---	---	61.8	55.0	58.3
MONTH	---	---	---	49.6	32.8	38.4	57.5	32.4	44.2	66.6	43.6	54.9



## ST. LAWRENCE RIVER BASIN

## 04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

## WATER-QUALITY RECORDS

## WATER TEMPERATURE, (DEGREES) FARENHEIT, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	64.0	57.0	60.1	65.8	60.8	63.7	66.3	61.6	65.1	77.7	67.0	70.5
2	62.0	57.1	59.4	67.4	62.2	64.8	69.6	63.5	66.3	69.9	64.1	65.9
3	60.7	55.5	58.4	66.3	62.6	63.6	72.6	65.1	68.4	64.1	62.6	63.3
4	57.3	53.9	56.0	67.0	63.7	65.3	67.9	63.2	65.2	64.6	57.5	61.3
5	58.0	51.6	55.1	65.9	61.7	63.8	66.9	61.9	64.2	58.6	55.0	56.9
6	56.1	54.0	55.1	63.2	59.0	61.3	64.8	60.2	62.5	58.7	53.7	56.2
7	58.5	52.8	55.4	63.1	59.8	61.4	66.6	61.7	63.9	59.8	54.8	57.3
8	58.3	52.5	55.0	64.2	58.5	61.4	66.7	63.6	65.2	62.4	57.9	60.1
9	58.2	56.0	56.9	64.6	61.3	62.3	69.1	62.1	66.5	---	---	---
10	59.0	55.8	56.9	65.9	61.0	63.5	69.1	63.8	66.3	---	---	---
11	55.9	53.5	54.3	65.8	60.1	63.0	72.3	63.4	66.8	---	---	---
12	57.2	53.6	55.1	65.9	60.0	63.1	67.3	64.4	65.9	65.4	62.9	64.1
13	57.6	53.6	55.5	68.1	61.7	64.9	67.6	62.1	65.1	67.5	61.5	63.9
14	56.9	55.1	56.1	69.3	64.3	67.0	70.6	63.5	65.9	62.2	59.8	61.1
15	67.0	55.5	59.8	68.2	64.0	65.8	69.2	64.4	66.6	63.9	60.0	61.9
16	66.7	61.9	64.5	66.8	62.2	65.1	71.3	65.1	67.9	60.0	56.9	57.9
17	65.2	61.6	63.9	71.3	63.6	66.6	65.3	60.2	62.7	58.2	55.0	56.7
18	61.6	57.9	59.8	67.6	63.4	65.8	63.7	57.8	61.0	60.9	57.4	58.9
19	62.9	57.3	60.0	63.6	60.8	62.4	64.6	60.3	62.2	61.7	57.7	59.6
20	64.2	59.1	61.8	63.7	58.4	61.0	62.3	58.7	60.5	63.2	59.0	61.1
21	62.6	60.0	61.3	60.7	58.4	59.7	64.1	58.6	61.3	62.8	59.0	61.5
22	65.6	61.7	63.4	62.4	59.1	60.4	63.5	57.9	60.9	59.2	55.7	57.9
23	65.8	61.0	63.3	63.5	58.7	60.9	65.8	60.3	62.5	58.0	54.9	56.0
24	63.1	58.3	61.2	64.9	58.7	61.7	65.2	61.7	63.3	60.1	54.9	58.0
25	65.2	61.0	63.2	66.8	59.6	63.2	65.7	59.7	62.8	55.1	52.8	53.9
26	67.9	61.9	64.9	66.8	61.4	64.1	66.3	60.5	63.7	54.5	50.8	52.6
27	70.5	63.6	67.9	65.2	61.2	63.2	64.8	62.6	63.6	56.0	50.2	52.8
28	66.9	62.9	65.2	68.4	61.6	65.0	65.0	59.5	62.4	55.7	48.6	51.0
29	64.6	61.6	63.2	---	---	---	---	---	---	50.3	46.2	48.5
30	65.5	60.6	63.1	68.3	64.4	65.7	---	---	---	---	---	---
31	---	---	---	66.5	63.8	65.1	---	---	---	---	---	---
MONTH	70.5	51.6	59.9	71.3	58.4	63.5	72.6	57.8	64.2	77.7	46.2	58.8

## OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	10.7	7.2	8.5	14.0	11.9	12.9	13.1	9.8	11.5
2	---	---	---	9.8	6.1	8.1	13.8	11.7	12.7	14.4	10.9	12.7
3	---	---	---	8.0	6.2	7.1	13.3	11.0	11.9	14.7	12.6	13.6
4	---	---	---	9.7	6.9	8.3	11.5	10.4	10.9	14.2	11.8	13.4
5	---	---	---	11.3	7.6	9.1	13.0	9.3	10.8	14.2	13.0	13.7
6	---	---	---	10.9	6.8	8.5	11.9	9.0	9.8	13.9	12.4	13.2
7	---	---	---	11.3	6.8	8.9	13.2	8.8	10.6	13.5	12.4	12.9
8	---	---	---	11.7	8.1	9.8	14.9	10.4	12.0	13.8	12.2	13.0
9	---	---	---	12.4	6.7	9.7	14.8	10.5	12.2	13.2	12.1	12.7
10	---	---	---	8.2	5.5	7.2	14.6	10.1	11.8	14.1	11.7	12.9
11	---	---	---	11.6	7.4	9.4	14.9	9.7	12.1	14.0	12.9	13.4
12	---	---	---	13.7	8.4	10.3	14.7	11.1	12.5	14.4	13.1	13.6
13	---	---	---	16.8	4.8	9.8	13.5	11.1	12.0	14.3	12.3	13.5
14	---	---	---	9.9	6.7	8.1	15.5	10.8	12.4	13.4	11.7	12.6
15	---	---	---	12.4	6.4	9.2	12.7	10.7	11.7	12.2	10.0	11.3
16	---	---	---	12.4	7.4	9.7	12.2	10.9	11.4	10.4	8.0	9.1
17	---	---	---	15.1	7.8	10.9	14.8	11.4	12.8	---	---	---
18	---	---	---	12.1	6.5	9.2	15.4	12.3	13.6	---	---	---
19	---	---	---	12.8	6.2	9.6	15.0	12.3	13.2	---	---	---
20	---	---	---	13.0	7.1	9.1	14.7	11.4	13.0	---	---	---
21	---	---	---	9.6	6.9	7.8	14.3	12.6	13.8	---	---	---
22	---	---	---	11.2	4.9	7.9	14.4	12.7	13.6	---	---	---
23	---	---	---	9.7	6.2	8.0	14.7	12.8	13.6	---	---	---
24	---	---	---	10.7	7.4	8.4	14.6	12.1	13.4	---	---	---
25	11.6	9.9	10.8	12.0	6.7	8.9	13.5	11.4	12.5	---	---	---
26	11.2	9.6	10.4	10.4	7.9	9.6	13.1	11.1	11.9	---	---	---
27	11.2	9.6	10.4	10.1	9.4	9.7	13.8	11.3	12.4	---	---	---
28	12.2	9.7	10.8	10.8	9.4	10.1	---	---	---	---	---	---
29	11.6	9.0	9.9	12.3	10.0	10.9	15.4	8.8	11.2	---	---	---
30	11.3	8.3	9.8	13.6	10.8	11.9	14.2	8.9	10.8	---	---	---
31	9.4	7.5	8.3	---	---	---	12.6	9.1	11.2	---	---	---
MONTH	---	---	---	16.8	4.8	9.1	15.5	8.8	12.2	---	---	---

04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

WATER-QUALITY RECORDS

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	13.3	12.4	13.0	---	---	---	---	---	---
4	---	---	---	13.7	11.9	12.8	---	---	---	---	---	---
5	---	---	---	13.1	12.3	12.7	---	---	---	---	---	---
6	---	---	---	13.9	12.5	13.1	---	---	---	---	---	---
7	---	---	---	13.9	12.3	13.0	---	---	---	---	---	---
8	---	---	---	13.5	11.4	12.6	---	---	---	---	---	---
9	---	---	---	12.3	10.7	11.6	---	---	---	---	---	---
10	---	---	---	14.3	11.8	13.4	---	---	---	---	---	---
11	---	---	---	14.4	13.2	13.8	---	---	---	---	---	---
12	---	---	---	13.8	12.5	13.5	---	---	---	---	---	---
13	---	---	---	14.8	13.1	14.0	---	---	---	---	---	---
14	---	---	---	14.8	13.3	14.0	---	---	---	---	---	---
15	---	---	---	14.0	12.2	13.3	---	---	---	---	---	---
16	---	---	---	13.9	12.2	13.1	---	---	---	---	---	---
17	---	---	---	15.4	13.6	14.4	---	---	---	---	---	---
18	---	---	---	15.4	13.6	14.5	---	---	---	---	---	---
19	---	---	---	15.4	13.9	14.5	---	---	---	---	---	---
20	---	---	---	15.2	12.6	14.2	---	---	---	---	---	---
21	---	---	---	15.0	12.5	13.8	---	---	---	---	---	---
22	---	---	---	14.7	11.7	13.3	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	9.2	8.2	8.6
27	---	---	---	---	---	---	---	---	---	9.3	8.4	8.7
28	---	---	---	---	---	---	---	---	---	9.8	8.2	8.8
29	---	---	---	---	---	---	---	---	---	9.7	8.0	8.8
30	---	---	---	---	---	---	---	---	---	9.7	7.3	8.5
31	---	---	---	---	---	---	---	---	---	9.6	6.8	8.0
MONTH	---	---	---	15.4	10.7	13.4	---	---	---	---	---	---

OXYGEN DISSOLVED (MG/L), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	9.1	6.5	7.5	8.1	4.2	6.5	7.8	1.7	4.5	---	---	---
2	8.5	5.6	7.0	6.8	1.4	4.7	6.0	1.9	3.5	---	---	---
3	10.3	5.8	7.4	7.8	1.4	4.0	8.0	1.4	4.4	---	---	---
4	9.5	6.3	7.7	7.9	4.9	6.6	4.7	1.8	3.3	---	---	---
5	10.4	5.6	7.4	7.4	4.3	5.6	3.7	1.3	2.5	---	---	---
6	8.7	5.9	7.8	5.6	2.6	4.0	4.2	2.2	3.1	---	---	---
7	10.1	7.5	8.7	6.6	2.7	4.1	5.7	1.2	3.2	---	---	---
8	9.2	6.2	8.1	6.0	2.4	3.8	4.9	2.8	3.9	---	---	---
9	9.0	6.1	7.9	8.8	2.3	4.9	8.4	3.1	4.8	---	---	---
10	9.0	7.5	8.2	8.7	4.4	6.8	5.9	2.5	4.0	---	---	---
11	9.4	7.8	8.7	6.8	3.2	4.7	7.9	2.2	4.2	---	---	---
12	9.5	8.2	8.8	6.1	2.6	4.1	7.8	2.5	5.0	---	---	---
13	9.7	8.2	8.8	6.8	2.4	4.2	6.1	2.0	3.6	---	---	---
14	10.0	8.3	9.1	6.1	2.6	4.2	8.3	1.8	4.5	---	---	---
15	10.2	6.9	8.5	6.5	1.4	4.2	7.2	2.9	5.3	---	---	---
16	8.1	6.3	7.3	8.5	1.4	6.6	9.3	2.5	7.7	---	---	---
17	7.8	5.7	6.4	8.1	4.9	6.2	8.4	4.8	6.7	---	---	---
18	8.7	5.8	7.3	8.5	6.3	7.2	6.3	3.3	4.5	---	---	---
19	9.3	5.4	7.2	8.0	7.1	7.5	5.4	1.7	3.5	---	---	---
20	8.9	4.8	6.5	7.1	2.8	5.3	6.7	1.4	4.0	---	---	---
21	7.2	4.9	5.8	3.7	2.4	3.0	---	---	---	---	---	---
22	8.9	4.8	6.0	4.1	1.6	3.1	---	---	---	---	---	---
23	8.9	3.7	6.0	4.3	.6	3.4	---	---	---	---	---	---
24	9.9	3.0	6.1	4.6	1.7	3.6	---	---	---	---	---	---
25	7.4	2.5	4.9	4.3	2.3	3.5	---	---	---	---	---	---
26	9.5	.8	4.7	4.5	2.8	3.9	---	---	---	---	---	---
27	7.6	.3	4.6	4.8	3.3	4.1	---	---	---	---	---	---
28	6.9	3.6	5.5	4.3	3.0	3.8	---	---	---	---	---	---
29	6.9	1.7	4.8	---	---	---	---	---	---	---	---	---
30	8.7	4.9	7.0	4.6	2.9	3.7	---	---	---	---	---	---
31	---	---	---	4.6	1.9	3.2	---	---	---	---	---	---
MONTH	10.4	.3	7.1	8.8	.6	4.7	9.3	1.2	4.3	---	---	---



ST. LAWRENCE RIVER BASIN

04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

WATER-QUALITY RECORDS

PH, WATER, WHOLE, FIELD, STANDARD UNITS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	JUNE			JULY			AUGUST			SEPTEMBER		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	7.4	7.1	7.2	7.5	7.1	7.3	7.7	7.3	7.4			
2	---	---	---	7.3	7.0	7.2	---	---	---	7.9	7.5	7.7			
3	---	---	---	7.6	7.0	7.1	---	---	---	7.8	7.5	7.6			
4	---	---	---	7.5	7.2	7.4	---	---	---	7.8	7.4	7.5			
5	---	---	---	7.3	7.1	7.2	---	---	---	7.5	7.3	7.4			
6	---	---	---	7.2	7.0	7.1	---	---	---	7.4	7.3	7.4			
7	---	---	---	7.3	7.1	7.2	---	---	---	7.4	7.3	7.3			
8	---	---	---	7.2	7.1	7.2	7.1	7.0	7.0	7.3	7.2	7.2			
9	---	---	---	7.6	7.1	7.2	7.6	7.0	7.0	---	---	---			
10	---	---	---	7.7	7.4	7.5	7.0	6.9	7.0	---	---	---			
11	---	---	---	7.5	7.4	7.4	7.5	7.0	7.1	---	---	---			
12	---	---	---	7.5	7.4	7.5	7.4	7.0	7.1	7.3	7.2	7.2			
13	---	---	---	7.6	7.5	7.5	7.1	7.0	7.0	7.6	7.3	7.5			
14	---	---	---	7.7	7.5	7.6	7.5	7.0	7.1	7.3	7.1	7.2			
15	---	---	---	7.8	7.4	7.6	7.2	7.0	7.1	7.8	7.1	7.5			
16	---	---	---	7.9	7.4	7.7	7.7	7.0	7.5	7.6	7.5	7.6			
17	---	---	---	8.1	7.6	7.7	7.5	7.2	7.3	7.5	7.3	7.4			
18	---	---	---	8.2	7.6	8.0	7.2	7.1	7.1	7.3	7.3	7.3			
19	---	---	---	8.0	7.5	7.8	7.2	7.1	7.1	7.4	7.3	7.3			
20	---	---	---	7.7	7.5	7.6	7.3	7.2	7.2	7.3	7.3	7.3			
21	---	---	---	7.7	7.1	7.5	7.3	7.2	7.3	7.4	7.2	7.3			
22	---	---	---	7.8	7.6	7.6	7.4	7.2	7.3	7.5	7.3	7.3			
23	---	---	---	7.7	7.5	7.6	7.7	7.3	7.3	7.4	7.3	7.4			
24	---	---	---	7.7	7.3	7.5	7.4	7.2	7.2	7.7	7.3	7.5			
25	---	---	---	7.3	7.0	7.1	7.2	7.2	7.2	7.6	7.4	7.5			
26	---	---	---	7.1	7.0	7.0	7.3	7.2	7.3	7.5	7.4	7.4			
27	---	---	---	7.0	7.0	7.0	7.3	7.2	7.2	7.5	7.4	7.4			
28	---	---	---	7.1	7.0	7.1	7.4	7.3	7.3	7.6	7.3	7.4			
29	7.4	6.5	7.2	---	---	---	---	---	---	7.6	7.5	7.6			
30	7.6	7.1	7.4	7.3	7.1	7.2	---	---	---	---	---	---			
31	---	---	---	7.2	7.2	7.2	---	---	---	---	---	---			
MONTH	---	---	---	8.2	7.0	7.4	7.7	6.9	7.2	7.9	7.1	7.4			

TURBIDITY (NTU), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	300	2.8	20	140	2.0	8.2	4.3	2.5	3.1	---	---	---			
2	---	---	---	64	2.1	5.9	4.1	3.1	3.6	---	---	---			
3	---	---	---	99	1.0	14	12	3.3	4.8	---	---	---			
4	120	4.6	31	4.1	2.0	3.1	20	2.0	6.6	---	---	---			
5	4.8	3.0	3.7	6.0	3.2	4.3	4.5	2.2	2.9	---	---	---			
6	1400	3.4	570	5.3	3.4	4.3	21	2.8	5.1	---	---	---			
7	46	16	26	9.9	3.9	4.9	11	2.8	5.1	---	---	---			
8	230	12	54	6.4	3.7	5.2	5.3	3.6	4.4	---	---	---			
9	51	9.7	17	8.8	3.7	5.2	5.7	3.6	4.8	---	---	---			
10	220	8.6	18	14	4.1	6.0	6.5	4.2	5.4	---	---	---			
11	220	5.4	18	8.8	4.4	6.2	15	4.8	6.5	---	---	---			
12	45	7.1	10	42	6.1	11	7.9	6.5	7.1	---	---	---			
13	12	8.6	9.5	8.3	4.2	5.7	7.5	5.9	6.9	---	---	---			
14	150	8.0	31	9.9	4.6	6.2	9.5	6.6	7.3	---	---	---			
15	8.9	6.3	7.3	5.9	4.5	5.0	54	1.9	18	---	---	---			
16	8.5	6.8	7.4	7.3	4.7	6.2	50	1.9	13	---	---	---			
17	10	6.7	8.0	8.6	6.3	7.4	4.9	2.5	3.4	---	---	---			
18	17	5.7	7.4	11	6.9	8.3	7.0	3.6	5.3	---	---	---			
19	9.5	5.1	6.6	11	6.3	7.6	7.5	5.5	6.6	---	---	---			
20	5.6	4.3	5.1	260	7.4	35	---	---	---	---	---	---			
21	6.2	4.1	4.5	82	19	28	---	---	---	---	---	---			
22	20	4.5	5.9	23	19	21	---	---	---	---	---	---			
23	230	9.5	68	38	5.1	14	---	---	---	---	---	---			
24	26	6.1	11	8.8	5.0	6.1	---	---	---	---	---	---			
25	6.1	2.1	3.3	7.2	5.2	6.3	---	---	---	---	---	---			
26	7.8	1.5	2.0	79	5.5	22	---	---	---	---	---	---			
27	7.3	1.4	2.0	770	6.0	65	---	---	---	---	---	---			
28	5.3	1.8	2.8	15	2.3	4.1	---	---	---	---	---	---			
29	57	1.5	4.5	4.2	1.9	2.4	---	---	---	---	---	---			
30	3.7	1.6	2.6	3.4	2.1	2.5	---	---	---	---	---	---			
31	4.7	1.9	2.7	---	---	---	---	---	---	---	---	---			
MONTH	1400	1.4	33	770	1.0	11	54	1.9	6.3	---	---	---			

ST. LAWRENCE RIVER BASIN

04282815 ENGLSBY BROOK AT BURLINGTON, VT -- Continued

WATER-QUALITY RECORDS

TURBIDITY (NTU), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	26	4.6	9.9
2	---	---	---	---	---	---	---	---	---	24	5.1	8.5
3	---	---	---	---	---	---	---	---	---	20	4.5	8.3
4	---	---	---	---	---	---	---	---	---	31	4.7	8.4
5	---	---	---	---	---	---	---	---	---	500	5.8	62
6	---	---	---	---	---	---	---	---	---	240	4.8	24
7	---	---	---	---	---	---	---	---	---	29	4.7	10
8	---	---	---	---	---	---	130	5.8	29	63	5.0	15
9	---	---	---	---	---	---	60	8.4	19	1300	5.6	400
10	---	---	---	---	---	---	140	8.3	53	1000	29	260
11	---	---	---	---	---	---	54	8.0	17	840	41	130
12	---	---	---	---	---	---	81	9.2	26	170	16	56
13	---	---	---	---	---	---	38	5.7	14	---	---	---
14	---	---	---	---	---	---	170	6.5	36	---	---	---
15	---	---	---	---	---	---	44	9.4	18	---	---	---
16	---	---	---	---	---	---	17	6.2	8.6	---	---	---
17	---	---	---	---	---	---	13	5.4	7.1	---	---	---
18	---	---	---	---	---	---	14	5.0	6.9	300	9.7	76
19	---	---	---	---	---	---	8.8	4.3	5.8	10	4.7	6.6
20	---	---	---	---	---	---	11	4.7	6.0	12	4.4	6.3
21	---	---	---	---	---	---	580	5.0	81	10	4.2	5.6
22	---	---	---	---	---	---	74	9.7	25	10	4.4	5.6
23	---	---	---	---	---	---	150	6.6	56	27	4.3	6.7
24	---	---	---	---	---	---	80	12	35	67	4.7	17
25	---	---	---	---	---	---	16	6.8	10	280	1.0	33
26	---	---	---	---	---	---	13	5.2	7.2	25	4.8	8.1
27	---	---	---	---	---	---	8.6	4.7	5.7	15	4.0	5.3
28	---	---	---	---	---	---	23	4.5	7.9	6.2	4.2	5.1
29	---	---	---	---	---	---	14	4.3	6.5	9.5	4.7	6.0
30	---	---	---	---	---	---	13	4.0	6.7	7.8	5.3	6.0
31	---	---	---	---	---	---	---	---	---	12	5.7	7.2
MONTH	---	---	---	---	---	---	580	4.0	21	1300	1.0	46

TURBIDITY (NTU), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	7.4	5.5	6.3	17	6.1	9.1	82	1.3	23	450	19	76
2	15	5.4	7.9	18	11	14	39	12	15	290	6.8	47
3	20	5.3	8.0	75	9.1	19	1300	12	110	84	4.4	9.4
4	31	6.0	11	10	6.1	8.1	20	9.5	13	74	3.8	11
5	14	6.3	8.5	25	9.9	12	27	12	15	25	6.3	10
6	98	6.4	22	16	12	14	22	11	14	36	8.1	12
7	11	4.8	5.8	18	12	14	42	11	16	20	10	13
8	64	6.2	14	22	11	15	20	9.8	13	20	8.2	11
9	140	4.4	27	---	---	---	330	11	42	---	---	---
10	21	5.2	6.7	88	8.8	18	15	11	13	---	---	---
11	120	5.7	27	18	9.1	13	300	11	33	---	---	---
12	7.7	4.7	5.6	38	10	15	68	11	15	140	11	21
13	55	4.4	12	30	8.2	15	21	10	12	560	6.7	38
14	33	4.1	7.8	30	9.0	12	150	9.9	26	14	7.5	11
15	860	4.5	43	50	7.0	15	29	10	13	190	9.3	39
16	860	4.4	31	92	8.3	23	960	12	95	14	6.2	7.7
17	---	---	---	130	7.6	25	18	7.5	11	16	7.6	12
18	---	---	---	1300	5.4	200	15	10	13	18	13	16
19	---	---	---	37	8.2	15	50	11	22	20	10	15
20	160	5.9	25	15	7.4	10	67	14	22	28	10	14
21	27	5.1	9.9	18	12	14	100	14	20	68	13	24
22	36	5.1	9.8	18	11	12	40	9.3	17	29	11	15
23	9.9	4.4	6.3	14	8.6	10	200	9.9	31	56	13	17
24	16	8.2	11	12	5.4	8.5	38	8.2	12	220	7.0	24
25	---	---	---	39	7.1	10	31	11	15	46	8.0	14
26	---	---	---	12	7.1	9.1	24	9.3	13	26	13	16
27	---	---	---	51	8.6	22	20	11	14	54	12	23
28	86	6.9	23	17	6.7	10	18	8.0	12	46	9.2	17
29	---	---	---	81	7.1	15	---	---	---	16	6.0	12
30	220	6.1	27	30	9.4	15	---	---	---	---	---	---
31	---	---	---	16	10	12	---	---	---	---	---	---
MONTH	860	4.1	15	1300	5.4	20	1300	1.3	24	560	3.8	20

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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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 sea level (levels by U.S. Army Corps of Engineers). Prior to November 21, 1934, nonrecording gage at same site and datum.

REMARKS.--Records fair. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River Basin). Flow regulated by powerplant at Wrightsville Detention Reservoir since September 1985. Occasional diurnal fluctuation at low flow caused by small mill upstream; more frequent diurnal fluctuation prior to 1968. Maximum discharge since construction of Wrightsville Detention Reservoir in 1935, 1,100 ft<sup>3</sup>/s, July 5 and October 24, 1990, gage height 4.32 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft<sup>3</sup>/s, November 3, 1927, by computation of peak flow over dam 0.8 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft<sup>3</sup>/s, May 10, gage height, 3.40 ft; maximum gage height, 3.75 ft, February 4 (ice jam); minimum daily discharge, 3.8 ft<sup>3</sup>/s, September 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	83	179	e33	e177	351	353	218	78	46	33	27
2	85	70	148	39	e34	259	435	233	59	29	129	28
3	79	79	97	75	e35	220	747	234	57	28	65	27
4	99	114	102	152	e145	210	927	223	52	28	69	28
5	138	74	110	192	e34	207	976	272	49	27	42	56
6	113	68	108	182	e34	134	906	295	74	27	27	27
7	107	66	89	168	e33	115	853	257	229	26	27	30
8	74	59	76	105	e33	129	799	244	149	27	28	20
9	93	50	68	80	e33	184	768	465	109	33	42	14
10	103	59	68	71	e34	419	472	850	95	28	44	6.8
11	98	51	73	108	e60	361	339	987	95	23	27	3.8
12	89	42	94	132	e28	265	288	957	132	19	56	4.8
13	76	50	79	e80	e28	221	250	908	108	13	43	7.9
14	116	62	69	e110	e105	208	252	894	115	7.6	41	6.7
15	156	113	69	e87	e25	208	474	757	89	11	59	32
16	123	96	71	e38	e25	203	818	340	83	17	156	71
17	113	86	96	e82	e23	206	686	190	77	27	188	38
18	106	75	71	e90	e24	e114	336	172	57	45	69	27
19	101	74	44	e170	e60	170	268	415	56	35	52	27
20	91	85	46	e181	e56	134	246	285	33	30	41	32
21	101	185	121	e119	e56	137	412	211	34	27	47	23
22	92	212	132	e174	e16	191	774	186	40	27	30	16
23	342	237	95	e61	e15	214	800	128	29	27	35	13
24	779	207	70	e165	e48	374	774	173	27	30	140	13
25	530	195	53	e47	e104	514	550	356	31	19	80	15
26	255	196	53	e170	168	491	397	390	52	10	60	14
27	198	672	53	e82	176	512	319	262	50	7.9	31	9.3
28	193	798	e37	e44	398	701	268	196	63	5.6	28	8.5
29	119	529	39	e280	650	884	236	162	36	4.1	27	11
30	89	217	e42	e65	---	849	230	103	64	14	27	26
31	86	---	e38	e50	---	633	---	83	---	21	27	---
TOTAL	4905	4904	2490	3432	2657	9818	15953	11446	2222	719.2	1770	662.8
MEAN	158	163	80.3	111	91.6	317	532	369	74.1	23.2	57.1	22.1
MAX	779	798	179	280	650	884	976	987	229	46	188	71
MIN	74	42	37	33	15	114	230	83	27	4.1	27	3.8
MEAN(+)	158	168	75.1	112	99.7	316	529	367	74.2	23.7	57.6	19.0
CFSM(+)	2.28	2.43	1.08	1.62	1.44	4.57	7.64	5.30	1.07	0.34	0.80	0.27
IN(+)	2.63	2.72	1.25	1.86	1.55	5.27	8.53	6.11	1.20	0.40	0.93	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2000, BY WATER YEAR (WY)

MEAN	108	139	112	85.3	70.8	176	453	245	89.6	50.3	49.2	53.4
MAX	437	248	318	279	348	556	714	617	396	271	278	230
(WY)	1991	1984	1974	1998	1981	1936	1994	1972	1984	1973	1995	1938
MIN	6.00	25.9	28.0	17.5	14.6	21.4	121	47.3	15.8	7.91	8.47	5.10
(WY)	1964	1954	1948	1940	1980	1940	1995	1941	1949	1953	1942	1963

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1934 - 2000
ANNUAL TOTAL	42297.4	60979.0	
ANNUAL MEAN	116	167	136
HIGHEST ANNUAL MEAN			226
LOWEST ANNUAL MEAN			71.4
HIGHEST DAILY MEAN	864	Apr 4	1620
LOWEST DAILY MEAN	6.9	Aug 2	3.8
ANNUAL SEVEN-DAY MINIMUM	7.2	Sep 8	9.1
INSTANTANEOUS PEAK FLOW		1060	May 10
INSTANTANEOUS PEAK STAGE		b 3.75	Feb 4
10 PERCENT EXCEEDS	228	424	400
50 PERCENT EXCEEDS	70	85	62
90 PERCENT EXCEEDS	9.1	26	14

a From rating curve extended above 1030 ft<sup>3</sup>/s.

e Estimated.

(+) Adjusted for change in contents in Wrightsville Detention Reservoir.

b Ice jam.

NOTE: All statistics are based on unadjusted daily and monthly mean data.

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 mi<sup>2</sup>. **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 sea level (levels by U.S. Army Corps of Engineers). Prior to August 30, 1960, nonrecording gage, and August 30 to September 30, 1960, water-stage recorder, at present site at datum 1,127.9 ft above sea level. Reservoir is formed by earthfill dam completed by U.S. Army Corps of Engineers in 1935 for flood control. Usable capacity, 525 million ft<sup>3</sup> 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, determined from capacity tables furnished by U.S. Army Corps of Engineers. **EXTREMES FOR PERIOD OF RECORD.**--Maximum elevation, 1,163.9 ft, present datum, March 22, 1936; minimum not determined. **EXTREMES FOR CURRENT YEAR.**--Maximum elevation, 1,142.76 ft September 4,5; 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 Winooski River at Wrightsville, 0.3 mi downstream from Long Meadow Brook, and 4.2 mi upstream from mouth. **DRAINAGE AREA**, 66.5 mi<sup>2</sup>. **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 612.75 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to July 28, 1960, nonrecording gage at present site at datum 612.75 ft above sea level. 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 million ft<sup>3</sup> between elevations 612.75 ft (bottom of outlet opening) and 620.00 ft; for flood control, 851.5 million ft<sup>3</sup> between elevations 620.00 ft and 685.00 ft (crest of spillway). Reservoir used for storage of water for power September 1985 to current year. Usable capacity for storage of water power 774 million ft<sup>3</sup> between elevation 631.00 ft, sill of gate and 685.00 ft, crest of spillway. Total usable capacity 873.5 million ft<sup>3</sup>. Figures given herein represent usable contents, determined from capacity tables furnished by U.S. Army Corps of Engineers. **EXTREMES FOR PERIOD OF RECORD.**--Maximum elevation, 676.4 ft, present datum, March 22, 1936, from graph based on gage readings; minimum observed, 613.00 ft, August 17, 1949, and August 17-19, 1950. **EXTREMES FOR CURRENT YEAR.**--Maximum elevation, 651.35 ft, May 11; minimum, 632.89 ft, September 22.

MONTHEND ELEVATION AND CONTENTS AT 2400, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

Date	Elevation (feet)	Contents (millions of cubic feet)	Change in contents	
			Millions of cubic feet	Equivalent, cubic feet per second
<b>04283500 East Barre Detention Reservoir</b>				
Sep. 30.	1136.48	16.9	--	--
Oct. 31.	1131.24	7.2	-9.7	-3.62
Nov. 30.	1133.55	10.6	+3.4	+1.31
Dec. 31.	1130.63	6.4	-4.2	-1.57
CAL YR 1999	--	--	-0.6	-0.02
Jan. 31.	1130.78	6.6	+0.2	+0.07
Feb. 29.	1136.87	18.0	+11.4	+4.55
Mar. 31.	1137.04	18.6	+0.6	+0.22
Apr. 30.	1134.31	11.9	-6.7	-2.58
May 31.	1131.36	7.4	-4.5	-1.68
June 30.	1131.78	7.9	+0.5	+0.19
July 31.	1130.52	6.2	-1.7	-0.63
Aug. 31.	1130.34	6.0	-0.2	-0.07
Sep. 30.	1130.37	6.0	0.0	0.00
WTR YR 2000	--	--	-10.9	-0.34
<b>04285000 Wrightsville Detention Reservoir</b>				
Sep. 30.	633.61	98.5	--	--
Oct. 31.	633.47	97.4	-1.1	-0.41
Nov. 30.	635.11	110.4	+13.0	+5.02
Dec. 31.	633.35	96.5	-13.9	-5.19
CAL YR 1999	--	--	-0.9	-0.03
Jan. 31.	633.78	99.8	+3.3	+1.23
Feb. 29.	636.27	120.0	+20.2	+8.06
Mar. 31.	636.09	118.5	-1.5	-0.56
Apr. 30.	635.17	110.9	-7.6	-2.93
May 31.	634.31	104.0	-6.9	-2.58
June 30.	634.35	104.3	+0.3	+0.12
July 31.	634.53	105.7	+1.4	+0.52
Aug. 31.	634.01	101.6	-4.1	-1.53
Sep. 30.	632.96	93.5	-8.1	-3.12
WTR YR 2000	--	--	-5.0	-0.16

## 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 railroad depot at Montpelier.

**DRAINAGE AREA.**--397 mi<sup>2</sup>.

**PERIOD OF RECORD.**--Discharge records: 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 sea level. Prior to June 16, 1914, nonrecording gage at site 0.9 mi upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

**REMARKS.**--Records good except those for estimated daily discharges, which are fair. Flow regulated by several small powerplants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492 million ft<sup>3</sup>, which regulated runoff from 24 mi<sup>2</sup>, and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River Basin).

**EXTREMES OUTSIDE PERIOD OF RECORD.**--Maximum discharge since at least 1830, 57,000 ft<sup>3</sup>/s, November 3, 1927, gage height, 27.1 ft, from rating curve extended above 9,090 ft<sup>3</sup>/s.

**EXTREMES FOR CURRENT YEAR.**--Maximum discharge, 6,090 ft<sup>3</sup>/s, May 10, gage height 10.54 ft; maximum gage height, 13.17 ft, February 28 (ice jam); minimum daily discharge, 95 ft<sup>3</sup>/s, September 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	732	366	756	e300	e188	e1200	1820	1060	573	302	178	123
2	389	387	663	e380	e220	e980	2110	1260	522	218	272	277
3	323	509	640	e450	e175	e850	3050	1080	448	196	217	233
4	408	537	663	e970	e220	e740	4540	935	412	268	308	189
5	587	429	630	e1450	e168	e700	3970	1080	382	218	201	209
6	461	410	620	e750	e163	e650	3090	1200	504	216	145	284
7	401	324	616	e640	e160	e585	2710	1110	1430	168	142	228
8	325	305	548	e540	e160	e640	2700	993	781	162	177	222
9	335	318	519	e470	e158	e1150	3150	1830	680	171	236	291
10	335	326	513	e455	e161	e2400	2560	3020	644	218	240	308
11	340	339	579	e1000	e170	e1370	1980	4700	527	201	193	216
12	352	295	481	e875	e160	e1080	1790	3120	718	159	186	187
13	298	311	462	e580	e160	e875	1550	2490	625	134	161	101
14	362	328	446	e400	e190	e750	1670	2870	594	128	176	117
15	532	457	450	e385	e160	830	2420	2220	541	124	340	246
16	403	457	568	e375	e150	998	2960	1530	484	153	599	369
17	338	419	670	e365	e140	910	2300	1180	479	220	632	196
18	338	358	520	e350	e138	672	1610	1230	459	297	353	150
19	340	366	335	e340	e147	726	1400	1950	381	235	250	178
20	321	447	414	e325	e150	678	1300	1360	321	245	182	199
21	373	621	723	e315	e150	738	1700	1100	304	257	203	226
22	346	627	781	e295	e152	977	2970	1020	279	183	246	175
23	1280	623	610	e280	e170	1290	2970	918	296	172	145	205
24	2040	558	e345	e275	e300	1720	3070	1140	226	164	307	306
25	1200	536	e280	e263	e600	1860	2660	1450	220	154	244	250
26	776	621	e470	e250	e1100	2320	2080	1340	329	109	185	121
27	636	2810	e400	e235	e975	2030	1870	1030	275	108	143	95
28	568	2420	e360	e222	e1800	3330	1720	854	282	105	121	106
29	482	1590	e370	e210	e2700	3670	1360	767	235	159	119	98
30	419	991	e340	e205	---	2910	1200	665	362	250	123	108
31	375	---	e310	e195	---	2330	---	617	---	215	120	---
TOTAL	16415	19085	16082	14145	11285	41959	70280	47119	14313	5909	7144	6013
MEAN	530	636	519	456	389	1354	2343	1520	477	191	230	200
MAX	2040	2810	781	1450	2700	3670	4540	4700	1430	302	632	369
MIN	298	295	280	195	138	585	1200	617	220	105	119	95

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1923, 1928 - 2000, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1928	1929	1930
MEAN	387	519	490	431	391	906	1866	953	475	274	243	237	
MAX	1432	1164	1504	1226	1475	3442	3275	2374	1785	1245	1008	934	
(WY)	1946	1991	1984	1935	1981	1936	1933	1972	1947	1973	1990	1938	
MIN	74.3	152	126	109	91.6	153	555	254	131	88.5	86.5	60.1	
(WY)	1964	1979	1915	1940	1940	1940	1995	1921	1995	1991	1999	1921	

## SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1914 - 1923, 1928 - 2000

	1999 CALENDAR YEAR	2000 WATER YEAR	1914 - 1923, 1928 - 2000
ANNUAL TOTAL	205846	269749	
ANNUAL MEAN	564	737	
HIGHEST ANNUAL MEAN			967
LOWEST ANNUAL MEAN			270
HIGHEST DAILY MEAN	3950	Sep 17	4700 May 11
LOWEST DAILY MEAN	53	Sep 5	95 Sep 27
ANNUAL SEVEN-DAY MINIMUM	56	Sep 3	133 Aug 26
INSTANTANEOUS PEAK FLOW			6090 May 10
INSTANTANEOUS PEAK STAGE			a 13.17 Feb 28
10 PERCENT EXCEEDS	1160		1890
50 PERCENT EXCEEDS	400		400
90 PERCENT EXCEEDS	89		160

a Ice jam.  
e Estimated.



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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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 sea level (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Infrequent diurnal fluctuation at low flow by powerplant upstream; regulation much greater prior to 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 28	1700	1,910	5.00	May 10	2130	* 3,370	* 6.52
Apr. 4	0945	2,280	5.44				

Minimum discharge, 14 ft<sup>3</sup>/s, September 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	81	176	62	e47	265	388	201	96	42	83	22
2	88	79	153	65	e45	218	475	244	92	35	92	21
3	76	144	146	183	e42	183	705	193	87	32	130	27
4	103	113	150	346	e40	156	1460	170	77	34	189	25
5	120	94	143	476	e38	145	738	205	71	32	83	23
6	101	86	134	e192	e38	133	488	192	142	29	60	22
7	89	80	125	e145	e37	128	417	185	e360	27	54	20
8	78	78	112	e125	e36	151	447	180	172	26	48	19
9	79	74	105	e115	e37	370	554	335	120	26	45	17
10	74	75	102	e105	e38	676	438	727	110	46	39	16
11	75	80	123	e215	e37	335	380	873	97	33	34	16
12	67	71	108	195	e38	288	356	410	104	27	37	16
13	61	73	103	e120	e36	223	314	339	95	24	34	17
14	67	83	99	e95	e36	197	342	449	105	22	41	16
15	65	97	101	e90	e36	202	587	305	e101	21	81	26
16	58	92	111	e88	e34	282	506	254	96	119	93	29
17	55	86	113	e85	e33	273	357	220	93	225	82	22
18	56	81	e92	e82	e31	212	296	274	91	117	60	19
19	51	84	e70	e80	e34	209	262	308	82	78	46	17
20	52	97	e85	e75	e35	186	237	234	70	55	39	17
21	56	199	167	e72	e34	194	323	212	64	45	36	17
22	51	161	126	e68	e34	243	518	193	62	43	32	17
23	395	135	106	e65	e36	347	638	176	51	37	35	15
24	374	117	e90	e63	e50	458	601	242	45	34	51	16
25	207	101	e85	e60	e130	449	427	232	44	30	38	17
26	150	183	e92	e60	211	674	343	194	51	28	32	16
27	127	964	e80	e56	189	519	334	166	46	27	29	15
28	110	396	e70	e52	678	1150	295	147	41	27	28	15
29	101	276	e70	e49	417	780	252	133	40	74	25	15
30	92	221	e66	e47	---	533	223	119	57	143	24	15
31	87	---	e60	e45	---	427	---	106	---	67	23	---
TOTAL	3293	4501	3363	3576	2527	10606	13701	8218	2762	1605	1723	565
MEAN	106	150	108	115	87.1	342	457	265	92.1	51.8	55.6	18.8
MAX	395	964	176	476	678	1150	1460	873	360	225	189	29
MIN	51	71	60	45	31	128	223	106	40	21	23	15
CFSM	1.40	1.97	1.43	1.52	1.15	4.50	6.00	3.48	1.21	.68	.73	.25
IN.	1.61	2.20	1.64	1.75	1.24	5.18	6.70	4.02	1.35	.78	.84	.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	73.2	107	112	1978	92.2	88.6	212	1995	42.6	38.4	39.7	1965
	301	245	349	1979	264	439	831	1996	176	219	259	1966
	1978	1996	1984	1996	1981	1936	1969	1972	1947	1973	1976	1938
	8.19	19.0	28.7	1964	21.5	18.6	37.0	1964	8.96	8.77	9.19	1963
	1964	1954	1948	1940	1940	1940	1940	1995	1941	1965	1965	1963

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1935 - 2000

ANNUAL TOTAL	45520.8	56440	
ANNUAL MEAN	125	154	125
HIGHEST ANNUAL MEAN			205
LOWEST ANNUAL MEAN			51.6
HIGHEST DAILY MEAN	1200	Sep 17	1460
LOWEST DAILY MEAN	7.3	Sep 5	a 15
ANNUAL SEVEN-DAY MINIMUM	7.8	Sep 1	16
INSTANTANEOUS PEAK FLOW			b 3370
INSTANTANEOUS PEAK STAGE			6.52
INSTANTANEOUS LOW FLOW			14
ANNUAL RUNOFF (CFSM)	1.64	2.03	1.64
ANNUAL RUNOFF (INCHES)	22.25	27.59	22.32
10 PERCENT EXCEEDS	258	376	275
50 PERCENT EXCEEDS	80	90	64
90 PERCENT EXCEEDS	13	27	17

a Also occurred on September 27-30.

b From rating curve extended above 1,500 ft<sup>3</sup>/s on basis of flow over dam at gage height 8.49 ft.

c Also occurred on September 5,6,14.

e Estimated.



## 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 mi<sup>2</sup>.

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 sea level (levels by U.S. Corps of Engineers). Prior to December 10, 1938, nonrecording gage at same site and datum.

REMARKS.--Records good. 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, 1.58 billion ft<sup>3</sup> between elevations 500.0 ft and 592.0 ft, sill of taintor gate; for flood control, 1.23 billion ft<sup>3</sup>, between elevations 592.0 ft and 617.5 ft, crest of spillway; total usable capacity, 2.81 billion ft<sup>3</sup>.

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, October 16, 1938, July 3, 12, 13, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 597.86 ft, May 11; minimum elevation, 548.94 ft, September 15.

ELEVATION (SEA LEVEL), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
INSTANTANEOUS OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	589.74	588.03	590.69	585.54	570.66	569.15	584.64	590.74	588.66	590.29	566.90	549.85
2	590.03	587.16	589.91	585.81	570.13	569.14	584.91	590.87	588.98	590.42	566.07	550.09
3	590.04	586.67	589.15	586.32	569.29	569.29	586.36	590.63	588.98	590.07	565.66	550.09
4	589.89	585.82	589.53	587.07	569.29	569.61	591.37	590.48	589.23	590.03	564.91	550.41
5	589.74	584.94	589.45	587.36	568.05	569.85	592.78	591.48	589.29	589.98	563.55	550.26
6	589.63	585.03	589.16	587.19	566.71	569.68	592.68	591.69	589.44	589.89	562.60	550.14
7	589.45	585.34	588.28	586.81	565.36	569.46	592.50	591.98	589.72	589.94	561.64	550.04
8	589.26	585.40	588.10	586.17	564.69	569.40	592.52	591.95	589.69	590.04	560.70	549.95
9	589.65	585.43	588.09	585.95	e563.60	570.81	592.85	595.45	589.62	589.98	559.81	549.86
10	589.97	585.51	588.14	585.50	e562.90	572.92	592.57	596.34	589.78	589.08	558.33	550.00
11	589.92	585.20	588.60	585.38	562.55	573.84	592.23	598.31	590.28	588.10	557.41	549.91
12	589.84	584.94	589.04	584.89	562.82	574.26	591.92	597.10	590.27	587.04	556.33	549.85
13	589.64	584.83	588.89	584.07	562.24	574.05	591.52	596.14	590.10	586.04	555.22	549.90
14	589.92	585.21	588.71	583.52	561.69	573.53	591.35	595.79	589.92	585.20	554.12	549.81
15	590.06	585.38	588.60	582.96	561.50	573.48	592.89	594.31	589.73	584.19	553.27	549.44
16	590.05	585.47	588.54	582.01	560.94	573.37	593.60	593.05	589.51	583.20	552.68	549.99
17	590.00	585.40	588.43	581.14	560.69	573.00	593.02	592.27	589.45	582.28	551.92	550.40
18	590.00	585.18	588.25	580.15	560.24	572.90	592.48	592.32	589.73	581.56	550.67	549.88
19	589.85	584.87	588.45	579.48	560.08	572.90	592.09	592.20	589.63	580.68	550.15	549.84
20	589.69	585.10	588.41	578.75	559.77	572.97	591.83	591.79	589.26	579.63	550.25	549.60
21	589.52	586.16	588.53	578.15	559.49	573.00	592.94	591.28	588.92	578.56	550.06	549.82
22	589.47	587.05	588.41	577.52	558.84	572.88	593.46	590.68	588.65	577.46	549.85	549.75
23	592.35	588.59	588.07	576.64	558.83	573.64	593.63	590.05	588.70	576.39	549.64	549.93
24	593.66	589.31	587.83	575.83	558.02	575.01	593.44	590.12	588.89	575.24	550.09	550.13
25	592.92	589.33	587.68	575.12	558.65	576.47	592.92	590.47	589.08	574.03	550.22	550.24
26	592.30	589.62	587.57	574.22	559.39	577.93	592.48	590.72	589.00	572.76	550.18	550.18
27	591.76	592.45	587.22	573.74	561.31	579.43	592.11	590.43	589.46	571.57	550.12	550.01
28	591.07	592.40	586.81	572.84	568.22	583.10	591.71	589.91	589.72	570.57	549.98	550.00
29	590.31	592.00	586.46	572.31	569.03	584.70	591.35	589.27	589.89	569.75	549.88	550.22
30	589.51	591.43	586.13	572.60	---	585.02	591.09	588.52	590.11	568.50	550.12	550.15
31	588.84	---	585.69	571.47	---	584.90	---	588.29	---	567.65	550.00	---
MEAN	590.26	586.97	588.28	580.86	563.28	574.18	591.71	592.08	589.46	581.94	555.24	549.99
MAX	593.66	592.45	590.69	587.36	570.66	585.02	593.63	598.31	590.28	590.42	566.90	550.41
MIN	588.84	584.83	585.69	571.47	558.02	569.14	584.64	588.29	588.65	567.65	549.64	549.44
(†)	1463.8	1560.5	1352.6	930.5	868.4	1325.1	1547.2	1444.4	1509.2	835.0	461.7	464.4
(‡)	-14.7	+37.3	-77.6	-157.6	-24.8	+170.5	+85.7	-38.4	+25.0	-251.7	-139.4	+1.04

CAL YR 1999 MEAN 584.11 MAX 594.36 MIN 553.33  
WTR YR 2000 MEAN 578.76 MAX 598.31 MIN 549.44

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

e Estimated.

## 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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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 December 8, 1937. Datum of gage is 428.00 ft above sea level (levels by U.S. Army Corps of Engineers). July 7 to October 31, 1910, nonrecording gage at site 2 mi upstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow completely regulated by Waterbury Reservoir (station 04288500).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,520 ft<sup>3</sup>/s, March 18, 1936, gage height, 19.38 ft; minimum daily discharge, 0.6 ft<sup>3</sup>/s several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft<sup>3</sup>/s, December 9, 1937, gage height, 14.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,160 ft<sup>3</sup>/s, May 11, gage height, 12.51 ft; minimum daily discharge, 11 ft<sup>3</sup>/s, September 2,10,16,17,21,23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	555	562	119	329	446	557	567	25	15	330	78
2	17	553	560	25	345	290	559	569	25	15	323	11
3	119	553	559	246	206	271	565	567	142	227	317	73
4	259	551	428	298	218	188	589	566	21	108	432	83
5	255	518	338	480	328	185	656	571	94	89	425	42
6	218	112	403	477	436	268	743	570	167	90	322	73
7	233	18	352	330	435	275	698	535	176	33	335	66
8	205	96	274	367	347	266	664	570	196	16	353	59
9	17	104	183	341	247	320	742	1020	261	140	363	61
10	17	102	170	350	230	404	729	1980	132	463	414	11
11	198	235	94	477	228	189	638	1210	23	474	334	68
12	171	208	26	474	22	277	584	1460	237	476	377	59
13	206	167	259	472	225	454	571	1190	272	453	324	57
14	230	22	263	469	246	240	572	1120	281	465	327	66
15	186	189	240	332	153	296	604	1220	260	459	332	176
16	212	175	271	343	227	454	1020	1010	252	459	413	11
17	216	195	268	337	149	454	953	710	175	458	411	11
18	183	293	241	463	192	249	736	589	17	456	408	164
19	208	243	26	458	138	232	612	623	165	454	202	62
20	213	165	176	455	165	291	572	577	259	452	100	95
21	209	253	255	453	157	306	627	569	237	450	137	11
22	156	262	257	453	240	252	917	567	237	449	86	57
23	166	211	309	454	190	240	1010	566	125	446	180	11
24	909	324	237	453	275	207	1070	569	16	445	165	64
25	918	491	168	450	254	120	896	570	16	442	96	71
26	675	320	179	450	257	216	729	570	122	440	96	75
27	574	556	271	332	242	104	618	568	17	375	86	90
28	561	647	272	330	330	257	572	566	16	334	96	59
29	561	590	251	162	446	453	570	565	15	342	77	13
30	559	565	253	305	---	557	569	562	15	e330	12	65
31	556	---	327	442	---	550	---	315	---	e340	72	---
TOTAL	9528	9273	8472	11597	7257	9311	20942	23211	3996	10195	7945	1842
MEAN	307	309	273	374	250	300	698	749	133	329	256	61.4
MAX	918	647	562	480	446	557	1070	1980	281	476	432	176
MIN	17	18	26	25	22	104	557	315	15	15	12	11

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2000, BY WATER YEAR (WY)

MEAN	187	224	233	223	263	308	458	401	213	145	153	143
MAX	749	494	477	476	527	1121	1111	954	646	433	421	375
(WY)	1946	1996	1974	1991	1947	1936	1976	1940	1973	1973	1962	1938
MIN	18.9	10.4	9.39	16.8	53.3	12.0	72.4	28.8	1.31	31.4	28.5	30.4
(WY)	1942	1941	1939	1938	1936	1938	1940	1938	1938	1977	1999	1984

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1936 - 2000
ANNUAL TOTAL	85081	123569	
ANNUAL MEAN	233	338	244
HIGHEST ANNUAL MEAN			456
LOWEST ANNUAL MEAN			146
HIGHEST DAILY MEAN	1390	Sep 18	1980
LOWEST DAILY MEAN	17	Jul 23	586
ANNUAL SEVEN-DAY MINIMUM	17	Jul 31	31
INSTANTANEOUS PEAK FLOW			3160
INSTANTANEOUS PEAK STAGE			12.51
10 PERCENT EXCEEDS	487	586	560
50 PERCENT EXCEEDS	211	275	192
90 PERCENT EXCEEDS	18	59	8.9

a Also occurred on September 10,16,17,21,23.

b See Extremes for Period of Record.

e Estimated.



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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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.

REVISED RECORDS.--WSP 894: Drainage area. WSP 1114: 1933, 1934(M). WSP 1237: 1912(M), 1930, 1932(M).

GAGE.--Water-stage recorder. Elevation of gage is 506.7 ft above sea level, by levels. Prior to December 31, 1913, nonrecording gage at bridge 0.7 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by powerplant upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 29	0215	5,640	10.99	May 9	2245	7,000	12.31
Apr. 4	1745	6,270	11.63	May 11	0730	* 9,070	* 13.98

Minimum daily discharge, 115 ft<sup>3</sup>/s, September 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	661	349	533	e215	e197	1360	1280	814	419	261	268	131
2	537	339	448	e218	e199	953	1490	822	397	289	266	135
3	371	315	449	e350	e200	778	2260	842	302	248	302	141
4	343	337	545	e540	e200	655	4970	724	298	207	383	154
5	339	323	616	1110	e197	622	4020	1120	305	256	277	163
6	414	321	538	e720	e190	475	2170	1010	292	221	252	141
7	388	314	512	e450	e190	419	1930	799	721	188	193	132
8	370	287	472	e360	e197	435	1780	742	585	153	253	120
9	313	423	396	e340	e190	973	2170	3190	519	148	330	117
10	210	329	366	e360	e188	2200	1960	4520	555	185	319	115
11	305	304	432	e520	e188	1190	1570	7010	512	205	234	118
12	255	254	452	e700	e190	e750	1350	2660	586	226	247	129
13	251	255	440	e560	e193	e600	1120	1720	473	166	225	123
14	535	287	410	e340	e196	e560	1170	2060	428	136	205	132
15	691	556	478	e240	e200	e550	2500	1310	411	149	314	206
16	474	462	463	e150	e205	e760	3680	936	398	173	580	343
17	394	449	554	e250	e205	e660	2150	752	362	209	774	376
18	375	400	400	e245	e210	e600	1450	1020	316	230	450	291
19	363	362	185	e240	e205	e560	1250	1970	253	303	381	148
20	335	409	268	e230	e210	e540	1170	1140	217	236	301	135
21	253	1020	528	e230	e210	508	1830	814	222	152	167	135
22	328	927	676	e225	e200	748	3230	718	225	152	173	134
23	1170	788	362	e220	e203	1130	3040	682	244	153	174	134
24	2560	601	335	e220	e210	1630	3220	974	228	149	355	149
25	1280	551	e250	e215	e265	1620	2430	1410	224	147	352	176
26	836	607	e220	e210	e400	1610	1710	1440	208	144	256	176
27	593	3400	e218	e225	e700	1590	1370	1070	321	143	209	185
28	459	2200	e210	e205	e2500	2540	1220	746	444	139	184	150
29	390	1160	e200	e200	2350	4190	1060	615	356	172	136	174
30	363	731	e213	e197	---	2180	989	485	229	272	133	167
31	358	---	e210	e195	---	1610	---	403	---	286	132	---
TOTAL	16514	19060	12379	10480	10988	34996	61539	44518	11050	6098	8825	4930
MEAN	533	635	399	338	379	1129	2051	1436	368	197	285	164
MAX	2560	3400	676	1110	2500	4190	4970	7010	721	303	774	376
MIN	210	254	185	150	188	419	989	403	208	136	132	115
CFSM	1.72	2.05	1.29	1.09	1.22	3.64	6.62	4.63	1.19	.63	.92	.53
IN.	1.98	2.29	1.49	1.26	1.32	4.20	7.38	5.34	1.33	.73	1.06	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2000, BY WATER YEAR (WY)

	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
MEAN	399	512	457	378	340	726	1635	800	411	272	252	256	1481	1173	1390	959	1624	2711	2868	1903	1344	1028	843	655	1991	1991	1991	1996	1981	1936	1933	1972	1973	1973	1990	1938	84.1	140	162	93.0	114	157	556	245	123	88.5	77.6	93.6	1964	1954	1948	1948	1934	1940	1995	1965	1988	1911	1999	1978																													

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1912 - 2000

ANNUAL TOTAL	173411	241377	
ANNUAL MEAN	475	660	538
HIGHEST ANNUAL MEAN			819
LOWEST ANNUAL MEAN			305
HIGHEST DAILY MEAN	4230	Sep 17	7010
LOWEST DAILY MEAN	52	Sep 2	115
ANNUAL SEVEN-DAY MINIMUM	55	Sep 2	122
INSTANTANEOUS PEAK FLOW			9070
INSTANTANEOUS PEAK STAGE			13.98
INSTANTANEOUS LOW FLOW			109
ANNUAL RUNOFF (CFSM)	1.53	2.13	1.74
ANNUAL RUNOFF (INCHES)	20.81	28.97	23.59
10 PERCENT EXCEEDS	881	1610	1170
50 PERCENT EXCEEDS	343	359	291
90 PERCENT EXCEEDS	76	160	132

e Estimated.

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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: August 1929 to current year. Prior to October 1937, published as "near Milton". Water-quality records: Water years 1955, 1967-74.

REVISED RECORDS.--WSP 894: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 285 ft above sea level, from topographic map. Prior to December 1, 1937, at site 3.5 mi downstream at different datum.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,400 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	1045	Ice Jam	* 18.14	May 11	2030	* 14,600	10.20
Apr. 5	0830	12,400	9.62				

Minimum daily discharge, 272 ft<sup>3</sup>/s, September 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1350	933	1490	e630	e540	e3800	3020	1940	936	798	613	311
2	1190	874	1190	e700	e560	2850	3030	1990	921	726	618	313
3	912	957	1160	e1120	e560	2180	4600	2020	821	646	515	381
4	918	963	1490	e1700	e560	1670	8380	1760	709	836	775	412
5	1010	876	1660	e2850	e560	1460	11300	2870	630	810	640	444
6	939	825	1460	2340	e550	1320	5930	2930	696	705	493	379
7	927	793	1310	e1300	e570	1100	4130	2230	984	543	487	334
8	841	703	1200	e1040	e540	1200	3810	2020	1150	503	572	312
9	812	659	1060	e920	e520	2290	4460	5890	990	441	602	289
10	793	803	986	e880	e530	4830	4190	11500	1030	472	629	278
11	811	686	1200	e1550	e500	3690	3490	12800	1000	658	525	272
12	916	699	1210	e2150	e490	e1700	2950	9780	1150	581	779	279
13	778	614	1110	e1200	e470	e1480	2510	4240	1020	487	578	326
14	1180	661	1070	e960	e500	e1350	2710	4540	890	404	466	355
15	1910	961	1050	e780	e540	e1340	5000	3390	849	384	528	402
16	1330	1150	1170	e680	e530	e1900	8210	2340	1050	409	826	674
17	1100	1000	1370	e640	e560	e1800	5710	1910	928	447	1420	786
18	1020	948	1170	e630	e530	e1450	3460	1820	854	600	1050	673
19	931	904	743	e620	e550	e1370	2750	3520	791	850	779	478
20	859	1200	699	e620	e530	e1350	2510	2600	581	588	711	370
21	802	2750	1310	e600	e520	e1370	3230	1920	550	470	592	335
22	761	2800	1410	e590	e560	e1550	5760	1600	580	408	450	334
23	2410	2580	1280	e580	e570	2300	6390	1420	604	453	431	326
24	7420	1970	1030	e580	e590	3260	7640	1590	563	417	739	352
25	4610	1500	e790	e670	e800	3520	5920	2620	526	368	817	517
26	2390	1520	e740	e600	e1100	3450	3980	3420	490	348	635	520
27	1750	5550	e800	e630	e3000	3380	3090	2620	612	330	500	465
28	1310	6270	e690	e590	e5700	4100	2630	1940	1070	334	457	414
29	1120	3150	e650	e630	e4800	8010	2280	1510	811	743	405	320
30	1000	2020	e680	e570	---	6020	2190	1250	670	939	341	396
31	957	---	e730	e550	---	3880	---	1000	---	710	324	---
TOTAL	45057	47319	33908	29900	28330	80970	135260	102980	24456	17408	19297	12047
MEAN	1453	1577	1094	965	977	2612	4509	3322	815	562	622	402
MAX	7420	6270	1660	2850	5700	8010	11300	12800	1150	939	1420	786
MIN	761	614	650	550	470	1100	2190	1000	490	330	324	272
CFSM	2.12	2.30	1.59	1.41	1.42	3.81	6.57	4.84	1.19	.82	.91	.59
IN.	2.44	2.57	1.84	1.62	1.54	4.39	7.33	5.58	1.33	.94	1.05	.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2000, BY WATER YEAR (WY)

MEAN	996	1304	1102	901	800	1658	3652	1853	962	640	605	632
MAX	3330	2695	3076	2197	4101	5622	6211	4022	2545	2609	1885	1987
(WY)	1946	1984	1974	1998	1981	1936	1933	1940	1973	1998	1976	1938
MIN	237	306	405	224	293	399	1253	638	293	223	198	218
(WY)	1954	1954	1948	1948	1962	1940	1995	1987	1988	1991	1934	1978

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1929 - 2000

ANNUAL TOTAL	410985	576932	
ANNUAL MEAN	1126	1576	1258
HIGHEST ANNUAL MEAN			1776
LOWEST ANNUAL MEAN			791
HIGHEST DAILY MEAN	8190	Sep 18	21700
LOWEST DAILY MEAN	125	Sep 11	74
ANNUAL SEVEN-DAY MINIMUM	129	Sep 7	122
INSTANTANEOUS PEAK FLOW		14600	23700
INSTANTANEOUS PEAK STAGE		a 18.14	a 21.64
ANNUAL RUNOFF (CFSM)	1.64	2.30	1.83
ANNUAL RUNOFF (INCHES)	22.29	31.29	24.92
10 PERCENT EXCEEDS	2270	3520	2800
50 PERCENT EXCEEDS	840	917	712
90 PERCENT EXCEEDS	225	443	298

a Ice jam.  
e Estimated.

04292700 STONE BRIDGE BROOK NEAR GEORGIA PLAINS, VT

LOCATION.--Lat 44°42'13", long 73°10'54", Franklin County, Hydrologic Unit 02010005, on left bank, 20 ft upstream from Lake Road culvert, 0.1 mi downstream of small left bank tributary, 1.0 mi upstream of large right bank tributary, 1.3 mi west of West Georgia, 1.5 mi southwest of Georgia Plains, and 2.8 mi upstream of mouth.

DRAINAGE AREA.--8.45 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: February 1963 to September 1974, March 1990 to current year (discontinued).

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 27	1630	* 342	* 6.18	May 9	1715	285	5.87
Apr. 4	1330	103	4.56	May 11	0215	153	5.01
Apr. 15	0345	79	4.30				

Minimum discharge, .75 ft<sup>3</sup>/s, September 10, 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	4.9	7.4	2.7	e3.6	30	18	8.1	4.0	2.5	4.3	1.1
2	8.8	4.5	5.9	e4.0	e3.6	23	15	10	3.9	2.2	5.4	1.0
3	4.9	5.0	6.7	8.5	e3.5	17	25	8.8	3.5	4.1	5.2	1.2
4	9.4	5.8	13	11	e3.4	15	74	7.4	2.8	6.6	3.5	1.4
5	15	5.4	15	15	e3.4	14	43	15	2.5	4.3	2.1	1.2
6	9.8	4.4	11	11	e3.3	15	24	14	3.6	2.8	1.6	1.1
7	6.4	3.9	9.3	6.3	e3.2	16	20	11	4.7	1.9	1.6	1.0
8	4.7	3.3	8.5	4.8	e3.3	15	22	10	4.2	1.7	1.5	1.0
9	4.4	3.3	7.7	4.2	e3.2	27	32	112	5.6	1.5	1.9	.93
10	3.7	3.2	7.1	5.6	e3.2	31	32	90	5.7	1.7	1.6	.80
11	4.1	2.9	8.4	18	e3.3	18	30	101	6.1	1.4	1.4	.89
12	4.7	2.9	8.2	17	e3.2	12	27	42	5.9	1.3	1.5	1.2
13	4.5	3.3	7.2	12	e3.2	13	25	25	4.7	1.2	1.3	2.4
14	6.8	3.6	6.5	e6.1	e3.0	14	33	29	4.2	1.0	1.4	2.0
15	11	4.6	6.8	e5.2	e3.0	14	68	20	4.1	1.0	1.2	5.5
16	7.8	4.8	7.8	e5.0	e3.0	27	48	15	6.0	2.1	2.3	4.8
17	5.9	4.3	8.4	e4.9	e2.9	17	27	12	5.5	2.1	1.9	3.7
18	6.1	3.7	6.6	e5.2	e2.8	19	19	15	4.5	2.4	1.8	2.5
19	5.6	3.7	6.7	e5.0	e2.9	14	15	24	4.0	2.2	1.8	2.0
20	4.6	4.1	e10	e5.0	e3.2	13	10	16	3.1	1.9	1.7	1.8
21	3.9	6.7	16	e4.9	e3.1	13	15	13	2.5	1.7	1.2	1.7
22	3.7	8.1	e12	e4.5	e3.7	13	21	11	2.7	2.5	1.1	1.4
23	12	6.3	e8.3	e4.3	e4.6	14	25	9.2	2.7	2.8	1.6	1.4
24	38	5.3	e6.0	e4.3	e6.5	14	58	12	2.4	2.2	2.5	3.2
25	24	4.6	e4.6	e4.2	e30	13	38	15	2.0	1.9	1.8	2.9
26	13	7.3	e4.1	e4.1	e70	13	20	14	1.7	1.4	1.5	2.6
27	8.8	29	e3.7	e4.0	230	12	15	11	4.1	1.1	1.3	2.2
28	7.0	26	e3.4	e3.7	169	15	12	8.3	3.4	1.1	1.3	2.6
29	5.9	14	e3.2	e3.5	56	30	10	7.0	2.5	2.0	1.2	2.3
30	5.2	9.5	2.7	e3.5	---	22	8.8	5.6	2.1	6.9	1.2	2.2
31	5.2	---	2.9	e3.6	---	19	---	4.5	---	3.2	1.1	---
TOTAL	266.9	198.4	235.1	201.1	637.1	542	829.8	695.9	114.7	72.7	60.8	60.02
MEAN	8.61	6.61	7.58	6.49	22.0	17.5	27.7	22.4	3.82	2.35	1.96	2.00
MAX	38	29	16	18	230	31	74	112	6.1	6.9	5.4	5.5
MIN	3.7	2.9	2.7	2.7	2.8	12	8.8	4.5	1.7	1.0	1.1	.80
CFSM	1.02	.78	.90	.77	2.60	2.07	3.27	2.66	.45	.28	.23	.24
IN.	1.17	.87	1.03	.89	2.80	2.39	3.65	3.06	.50	.32	.27	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1974, 1990 - 2000, BY WATER YEAR (WY)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
MEAN	6.40	9.72	9.49	7.55	6.26	14.4	22.6	10.6	4.93	4.79	4.02	3.50												
MAX	22.0	19.9	30.5	26.1	22.0	27.3	47.6	26.1	19.1	18.3	11.9	9.95												
(WY)	1991	1997	1974	1998	2000	1998	1994	1996	1973	1990	1973	1973												
MIN	1.79	2.95	3.78	2.79	1.75	2.64	5.98	3.85	1.23	.81	1.02	.88												
(WY)	1965	1967	1967	1967	1964	1965	1995	1995	1966	1966	1999	1964												

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1963 - 1974, 1990 - 2000

ANNUAL TOTAL	2170.01	3914.52		
ANNUAL MEAN	5.95	10.7	8.61	
HIGHEST ANNUAL MEAN			12.7	1998
LOWEST ANNUAL MEAN			4.15	1965
HIGHEST DAILY MEAN	45	Mar 23	230	Feb 27
LOWEST DAILY MEAN	.29	Sep 2	.80	Sep 10
ANNUAL SEVEN-DAY MINIMUM	.32	Aug 30	.99	Sep 5
INSTANTANEOUS PEAK FLOW			a 342	Feb 27
INSTANTANEOUS PEAK STAGE			6.18	Feb 27
INSTANTANEOUS LOW FLOW			b .75	Sep 10
ANNUAL RUNOFF (CFSM)	.70		1.27	
ANNUAL RUNOFF (INCHES)	9.55		17.23	
10 PERCENT EXCEEDS	12		24	
50 PERCENT EXCEEDS	4.6		4.9	
90 PERCENT EXCEEDS	.63		1.5	

a From rating curve extended above 70 ft<sup>3</sup>/s.  
b Also occurred on September 11.  
e Estimated.



ST. LAWRENCE RIVER BASIN

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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: August 1931 to current year.

REVISED RECORDS.--WSP 924: 1940. WSP 1114: 1933(M), 1936-39.

GAGE.--Water-stage recorder. Elevation of gage is 580 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation at low flow caused by small powerplant upstream; greater regulation prior to 1967.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,940 ft<sup>3</sup>/s, July 15, 1997, gage height, 13.84 ft; minimum, 9.4 ft<sup>3</sup>/s, August 28, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Mar. 29	0645	3,520	7.97	May 11	0945	3,790	8.26
Apr. 4	2000	* 3,960	* 8.44				

Minimum discharge, 39 ft<sup>3</sup>/s, September 11, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	186	254	e97	e72	e700	621	463	168	158	72	42
2	169	161	227	e100	e74	e640	873	732	152	110	84	78
3	130	155	241	e350	e74	e530	1580	564	143	97	71	126
4	142	142	362	e440	e68	e310	3190	519	127	302	104	103
5	298	125	400	e520	e66	e270	2460	913	118	175	61	91
6	353	116	313	e240	e66	256	889	652	137	119	52	64
7	294	109	272	e195	e67	246	887	652	200	96	56	54
8	190	106	221	e175	e69	313	957	572	146	91	77	48
9	275	102	191	e168	e71	993	1220	1570	170	81	81	45
10	236	108	187	164	e74	1890	831	1940	137	403	66	42
11	413	107	387	380	e76	717	611	3040	499	293	62	40
12	265	96	303	393	e78	456	504	1020	374	141	88	40
13	185	100	255	e190	e77	322	419	585	223	100	57	83
14	524	160	228	e160	e79	250	525	636	172	82	49	62
15	457	393	214	e145	e82	308	1670	420	155	85	56	128
16	266	260	268	e130	e83	1030	2330	329	337	82	193	264
17	222	215	300	e120	e84	649	918	272	234	83	177	175
18	233	193	189	e112	e84	356	583	466	185	136	126	136
19	191	191	117	e103	e84	323	534	793	154	116	90	104
20	160	319	147	e98	e85	299	564	396	125	79	83	78
21	152	993	369	e94	e85	305	1100	306	110	67	80	66
22	140	759	277	e85	e85	431	1650	267	187	79	65	61
23	782	962	180	e82	e90	694	1580	235	138	95	77	54
24	1770	629	138	e78	e130	1050	1860	318	107	73	228	94
25	728	416	102	e76	e350	985	1180	699	95	62	131	101
26	398	519	e113	e74	e330	1100	839	775	99	55	82	73
27	307	2430	e110	e72	e460	957	612	531	233	51	66	63
28	237	1080	e105	e70	e1800	1640	517	356	208	52	64	94
29	201	524	e99	e71	e960	2720	520	275	110	71	55	81
30	175	380	e98	e70	---	1130	592	223	115	126	49	68
31	168	---	e97	e71	---	753	---	189	---	83	46	---
TOTAL	10409	12036	6764	5123	5803	22623	32616	20708	5358	3643	2648	2558
MEAN	336	401	218	165	200	730	1087	668	179	118	85.4	85.3
MAX	1770	2430	400	520	1800	2720	3190	3040	499	403	228	264
MIN	130	96	97	70	66	246	419	189	95	51	46	40
CFSM	2.56	3.06	1.67	1.26	1.53	5.57	8.30	5.10	1.36	.90	.65	.65
IN.	2.96	3.42	1.92	1.45	1.65	6.42	9.26	5.88	1.52	1.03	.75	.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

MEAN	220	287	228	169	142	378	874	418	186	121	111	135
MAX	653	630	585	661	796	1225	1522	991	626	412	454	421
(WY)	1946	1960	1974	1998	1981	1936	1933	1940	1978	1997	1976	1945
MIN	51.3	97.6	60.9	53.9	34.0	57.0	265	143	43.7	32.0	19.7	31.5
(WY)	1949	1979	1956	1940	1980	1941	1995	1977	1933	1934	1934	1953

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1931 - 2000

ANNUAL TOTAL	92390	130289	
ANNUAL MEAN	253	356	272
HIGHEST ANNUAL MEAN			385
LOWEST ANNUAL MEAN			168
HIGHEST DAILY MEAN	3040	Sep 17	6870
LOWEST DAILY MEAN	20	Sep 4	11
ANNUAL SEVEN-DAY MINIMUM	21	Sep 1	15
INSTANTANEOUS PEAK FLOW			8940
INSTANTANEOUS PEAK STAGE		8.44	13.84
INSTANTANEOUS LOW FLOW		a 39	9.4
ANNUAL RUNOFF (CFSM)	1.93	2.72	2.08
ANNUAL RUNOFF (INCHES)	26.24	37.00	28.22
10 PERCENT EXCEEDS	512	888	632
50 PERCENT EXCEEDS	147	176	128
90 PERCENT EXCEEDS	36	68	46

a Also occurred on September 12.

e Estimated.

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT

LOCATION.--Lat 44°57'30", long 72°41'55", Franklin County, Hydrologic Unit 02010007, on left bank, 1.7 mi north of intersection of State Highways 105 and 118 in East Berkshire, 1.7 mi upstream from Trout River, 3 mi south of Richford, and 3.8 mi downstream from North Branch.

DRAINAGE AREA.--479 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for some periods, published in WSP 1307. Prior to October 1977, published as "near Richford."  
Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft above sea level, from topographic map. Prior to August 1, 1915, nonrecording gage at site 0.2 mi downstream at datum 4.35 ft lower. August 1, 1915, to September 30, 1923, water-stage recorder at present site and datum. October 1, 1928, to September 30, 1929, nonrecording gage at former site at datum 4.6 ft lower.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diurnal fluctuation at low flow prior to 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 45,000 ft<sup>3</sup>/s during flood of November 1927, gage height, 23.1 ft, from floodmarks, from rating curve extended above 14,100 ft<sup>3</sup>/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.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,600 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 28	1645	Ice Jam	* 17.42	May 11	0015	* 8,220	10.49
Mar. 28	2330	8,190	10.47				

Minimum discharge, 109 ft<sup>3</sup>/s, September 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1130	721	1230	e440	e310	e4000	2720	1410	590	409	210	150
2	789	671	975	e450	e310	e3500	2790	1690	516	344	214	186
3	588	603	939	e660	e310	3250	3900	1600	475	340	206	267
4	810	550	1150	e2000	e300	2470	6310	1330	438	609	251	273
5	1170	501	1440	e1800	e290	1840	7210	1640	394	628	245	231
6	1280	449	1300	e1450	e300	1530	5120	1650	392	435	182	197
7	1150	416	1200	e1120	e290	1300	3300	1550	474	344	157	161
8	858	389	1030	1070	e295	1330	3280	1580	457	297	161	142
9	918	369	870	852	e300	3000	3790	2610	456	271	231	130
10	944	360	807	689	e310	5390	3420	5130	418	625	263	119
11	1670	353	1410	1350	e320	4370	2600	7290	699	855	251	113
12	1320	329	1300	1760	e310	2480	2050	5780	1190	488	387	111
13	923	341	1100	1360	e300	1770	1690	3180	760	330	342	135
14	1730	471	978	e1070	e310	1370	1810	2600	533	259	266	151
15	2110	1020	914	e790	e320	1400	4100	1870	438	233	208	264
16	1370	1020	1250	e650	e320	4110	5600	1310	438	219	452	437
17	1090	850	1320	e600	e330	3960	4460	1060	732	214	591	448
18	1070	803	952	e560	e330	2500	2630	1720	583	418	423	330
19	931	748	e760	e540	e330	2000	1950	2820	461	572	316	272
20	799	1230	e600	e500	e340	1730	1710	2100	382	344	253	224
21	690	3340	e690	e460	e340	1660	2230	1500	331	253	244	196
22	613	3070	e600	e440	e330	2030	3880	1160	501	236	221	183
23	1700	2810	e510	e415	e430	2680	4550	907	518	314	219	161
24	4660	2190	e460	e390	e650	3560	5210	1000	385	266	466	273
25	3560	1530	e420	e380	e1300	3690	4760	2010	312	216	447	321
26	2050	1480	e440	e370	e1200	3750	3360	2440	297	184	302	277
27	1440	4440	e415	e360	e2400	3570	2410	1890	319	164	237	238
28	1120	4670	e405	e340	e5800	4720	1920	1390	512	152	211	301
29	913	2890	e400	e340	e4900	6470	1580	1070	375	164	193	298
30	773	1720	e390	e330	---	5740	1620	850	333	208	177	259
31	686	---	e380	e320	---	3790	---	682	---	242	162	---
TOTAL	40855	40334	26635	23856	23575	94960	101960	64819	14709	10633	8488	6848
MEAN	1318	1344	859	770	813	3063	3399	2091	490	343	274	228
MAX	4660	4670	1440	2000	5800	6470	7210	7290	1190	855	591	448
MIN	588	329	380	320	290	1300	1580	682	297	152	157	111
CFSM	2.75	2.81	1.79	1.61	1.70	6.40	7.10	4.37	1.02	.72	.57	.48
IN.	3.17	3.13	2.07	1.85	1.83	7.37	7.92	5.03	1.14	.83	.66	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 1923, 1929 - 2000, BY WATER YEAR (WY)

	1915	1916	1917	1918	1919	1920	1921	1922	1923	1929	2000	
MEAN	778	1031	846	656	521	1370	2971	1313	668	414	350	415
MAX	2295	2385	2330	2284	2439	4013	4882	3187	2129	1671	1528	1365
(WY)	1978	1984	1984	1998	1981	1936	1969	1940	1978	1974	1976	1954
MIN	87.4	241	270	157	115	240	922	453	175	86.0	63.3	57.5
(WY)	1949	1954	1956	1918	1980	1941	1995	1977	1999	1991	1934	1921

SUMMARY STATISTICS

FOR 1999 CALENDAR YEAR

FOR 2000 WATER YEAR

WATER YEARS 1915-1923, 1929-2000

ANNUAL TOTAL	289750	457672		
ANNUAL MEAN	794	1250	943	
HIGHEST ANNUAL MEAN			1415	1974
LOWEST ANNUAL MEAN			580	1965
HIGHEST DAILY MEAN	5330	Sep 18	7290	May 11
LOWEST DAILY MEAN	48	Sep 6	111	Sep 12
ANNUAL SEVEN-DAY MINIMUM	52	Sep 1	129	Sep 8
INSTANTANEOUS PEAK FLOW			8220	May 11
INSTANTANEOUS PEAK STAGE			a 17.42	Feb 28
INSTANTANEOUS LOW FLOW			109	Sep 12
ANNUAL RUNOFF (CFSM)	1.66	2.61	1.97	
ANNUAL RUNOFF (INCHES)	22.50	35.54	26.74	
10 PERCENT EXCEEDS	1710	3380	2230	
50 PERCENT EXCEEDS	451	650	467	
90 PERCENT EXCEEDS	101	229	143	

a Ice Jam.  
e Estimated.

ST. LAWRENCE RIVER BASIN

0429400 MISSISQUOI RIVER AT SWANTON, VT

LOCATION.--Lat 44°55'00", long 73°07'44", Franklin County, Hydrologic Unit 02010007, on left bank, at old railroad abutment, 0.3 mi upstream of dam and Depot Street (Route 78) bridge, 0.3 mi southwest of Post Office in Swanton, 1.1 mi west of Hwy 78 and Interstate 89 interchange, and 7.9 mi upstream of mouth.

DRAINAGE AREA.--850 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: March 1990 to current year.

GAGE.--Water-stage recorder and crest stage gage. Elevation of gage is 105 ft above sea level, from topographic map. July 6, 1989, to February 28, 1990, nonrecording gage at same site and datum.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft<sup>3</sup>/s and maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)	Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Feb. 29	0030	* 21,200	* 6.69	Apr. 4	2015	14,100	5.23
Mar. 10	0500	12,900	4.97	Apr. 16	0500	13,000	5.00
Mar. 29	0800	14,100	5.23	May 11	0830	16,800	5.81

Minimum daily discharge, 143 ft<sup>3</sup>/s, September 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	1290	2360	e490	e410	8670	5280	2290	1130	566	398	355
2	1490	1130	1710	e520	e390	6590	4570	2650	947	703	609	211
3	1030	1410	1650	e990	e385	5010	6510	2770	767	824	423	196
4	1320	980	1830	e1680	e385	4080	11200	2200	667	1140	555	474
5	2680	1110	2560	e3600	e430	2720	12800	3040	873	1320	356	567
6	2140	533	2450	2440	e440	2170	10000	3170	745	806	419	397
7	2040	722	2200	1770	e400	1950	7000	2580	655	755	473	384
8	1510	942	2050	1320	e375	2000	6230	2730	818	480	420	356
9	1310	717	1690	1270	e380	4270	7490	5700	847	574	339	169
10	1540	417	1410	1350	e370	11100	6740	10000	540	1010	360	143
11	2710	658	2000	2860	e380	7850	5420	15300	1170	1640	431	390
12	2590	540	2410	3630	e375	4850	4280	12100	1800	913	511	180
13	1640	498	2120	e1950	e390	2990	3370	7170	1480	669	605	227
14	2560	545	1810	e910	e360	2060	3560	5440	892	618	637	375
15	4180	1410	1720	e750	e340	2180	7670	3820	774	261	426	525
16	2600	1500	2050	e780	e360	5860	11800	2430	896	390	570	755
17	1900	1490	2730	e730	e370	7420	8940	1990	747	412	1120	871
18	2020	1340	2050	e720	e405	4030	5600	1860	1090	687	726	753
19	1670	1250	809	e650	e410	3320	3530	4860	1010	951	499	544
20	1390	1710	1120	e570	e400	2740	2930	3630	680	763	555	483
21	1200	5880	2320	e550	e390	2420	3500	2490	597	583	471	369
22	1210	5790	2880	e540	e405	2990	6570	2010	785	292	542	612
23	2010	5130	1850	e520	e400	4060	8290	1570	910	303	395	250
24	9740	4160	e900	e520	e470	5640	10400	1450	644	684	719	260
25	7660	2890	e550	e475	e930	6090	9350	3030	526	540	751	537
26	4610	2670	e500	e470	e1500	6310	6750	4890	720	294	449	577
27	2890	8020	e560	e460	e4200	5910	4590	3400	619	246	584	513
28	2240	8580	e530	e470	e11900	6380	3400	2450	906	398	446	383
29	1710	6100	e510	e450	13500	12000	2530	1820	788	254	298	538
30	1470	3540	e480	e480	---	10500	2550	1500	623	566	388	510
31	1230	---	e475	e440	---	7670	---	1170	---	690	396	---
TOTAL	76560	72952	50284	34355	41450	161830	192850	121510	25646	20332	15871	12904
MEAN	2470	2432	1622	1108	1429	5220	6428	3920	855	656	512	430
MAX	9740	8580	2880	3630	13500	12000	12800	15300	1800	1640	1120	871
MIN	1030	417	475	440	340	1950	2530	1170	526	246	298	143

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2000, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	
MEAN	1528	1954	1530	1682	940	2847	4731	1960	888	924	591	621
MAX	2507	3082	3894	4324	1670	5220	7078	3920	1440	2042	1130	1512
(WY)	1991	1996	1997	1998	1996	2000	1993	2000	1998	1997	1990	1999
MIN	295	1024	596	429	317	801	1527	629	363	148	188	165
(WY)	1995	1992	1993	1994	1993	1994	1995	1998	1999	1991	1999	1995

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1990 - 2000
ANNUAL TOTAL	515033	826544	
ANNUAL MEAN	1411	2258	1668
HIGHEST ANNUAL MEAN			2258
LOWEST ANNUAL MEAN			1137
HIGHEST DAILY MEAN	9740	Oct 24	29500
LOWEST DAILY MEAN	33	Sep 7	33
ANNUAL SEVEN-DAY MINIMUM	70	Sep 2	263
INSTANTANEOUS PEAK FLOW		21200	Feb 29
INSTANTANEOUS PEAK STAGE		6.69	Feb 29
10 PERCENT EXCEEDS	3010	6140	4180
50 PERCENT EXCEEDS	782	1120	838
90 PERCENT EXCEEDS	154	389	230

e Estimated.

## 04294500 LAKE CHAMPLAIN AT BURLINGTON, VT

**LOCATION.**--Lat 44°28'52", long 73°13'27", Chittenden County, Hydrologic Unit 02010003, 50 ft south of Gulf Oil Co. dock at Burlington, 0.1 mi north of Burlington Water Department pumping station, and 0.5 mi north of railroad station.

**PERIOD OF RECORD.**--Gage heights: May 1907 to current year.

Water-quality records: Water year 1971.

**REVISED RECORDS.**--WSP 684: 1912-29 (datum correction). WSP 1207: 1938 (datum correction).

**GAGE.**--Water-stage recorder. Datum of gage is 92.86 ft above sea level. Prior to July 20, 1937, nonrecording gage at site 0.7 mi south, and July 20, 1937, to September 7, 1939, nonrecording gage at site 0.1 mi south, both at present datum.

**EXTREMES FOR PERIOD OF RECORD.**--Maximum gage height, 101.86 ft, April 27, 1993; minimum observed, 92.61 ft December 4, 1908.

**EXTREMES FOR CURRENT YEAR.**--Maximum gage height, 101.03 ft, May 14,15, affected by seiche; minimum , 94.59 ft, September 30, affected by seiche.

**ELEVATION (FEET NGVD), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95.46	95.93	96.15	95.56	95.54	96.85	98.49	100.46	99.77	97.28	96.05	95.50
2	95.49	95.86	96.13	95.55	95.52	97.05	98.50	100.40	99.64	97.18	96.09	95.47
3	95.49	95.89	96.12	95.54	95.49	97.16	98.56	100.32	99.56	97.14	96.14	95.46
4	95.54	95.82	96.13	95.55	95.46	97.21	98.78	100.20	e99.40	97.09	96.16	95.44
5	95.56	95.80	96.11	95.69	95.42	97.25	99.11	100.15	e99.24	97.02	96.15	95.38
6	95.52	95.80	96.13	95.72	95.40	97.26	99.31	100.11	e99.12	96.96	96.10	95.35
7	95.52	95.79	96.16	95.77	95.36	97.25	99.41	100.03	99.10	96.90	96.07	95.26
8	95.45	95.74	96.15	95.78	95.33	97.25	99.50	99.99	99.00	96.83	96.05	95.19
9	95.41	95.63	96.12	95.77	95.28	97.24	99.70	100.05	98.95	96.74	96.05	95.19
10	95.44	95.65	96.07	95.80	95.29	97.43	99.82	100.23	98.89	96.70	96.02	95.18
11	95.47	95.65	96.05	95.88	95.28	97.58	99.93	100.56	98.83	96.65	96.02	95.11
12	95.47	95.54	96.06	95.97	95.26	97.71	99.99	100.84	98.74	96.63	96.04	95.04
13	95.41	95.53	96.05	96.02	95.23	97.73	99.99	100.90	98.66	96.59	96.01	95.09
14	95.49	95.43	96.04	96.03	95.27	97.71	99.95	101.00	98.53	96.53	95.97	95.09
15	95.50	95.47	96.01	96.01	95.29	97.70	99.97	100.55	98.41	96.47	95.94	95.10
16	95.46	95.45	95.97	95.95	95.25	97.74	100.18	100.99	98.40	96.48	95.94	95.07
17	95.47	95.44	95.97	95.97	95.26	97.87	100.32	100.92	98.34	96.53	95.95	95.01
18	95.53	95.40	95.99	95.93	95.25	97.88	100.31	100.79	98.28	96.58	95.96	95.01
19	95.51	95.35	95.96	95.90	95.25	97.84	100.27	100.82	98.20	96.56	95.93	94.98
20	95.47	95.31	95.83	95.87	95.22	97.82	100.24	100.77	98.12	96.54	95.88	94.96
21	95.48	95.38	95.91	95.85	95.20	97.82	100.23	100.69	98.02	96.49	95.85	94.91
22	95.41	95.42	95.92	95.81	95.18	97.80	100.33	100.59	97.94	96.45	95.80	94.90
23	95.50	95.48	95.90	95.75	95.15	97.80	100.49	100.49	97.88	96.41	95.74	94.85
24	95.67	95.49	95.90	95.72	95.15	97.84	100.65	100.41	97.79	96.37	95.73	94.82
25	95.85	95.52	95.84	95.71	95.20	97.85	100.78	100.39	97.68	96.33	95.73	94.82
26	95.90	95.55	95.75	95.70	95.25	97.90	100.80	100.35	97.61	96.27	95.69	94.81
27	95.98	95.70	95.75	95.67	95.44	97.94	100.77	100.31	97.57	96.21	95.66	94.76
28	95.96	95.92	95.70	95.63	95.98	98.02	100.73	100.24	97.51	96.15	95.65	94.74
29	95.98	96.06	95.67	95.60	96.52	98.17	100.66	100.15	97.43	96.12	95.60	94.71
30	95.96	96.14	95.64	95.56	---	98.37	100.58	100.00	97.36	96.08	95.53	94.62
31	95.91	---	95.62	95.56	---	98.46	---	99.86	---	96.04	95.50	---
MEAN	95.59	95.64	95.96	95.77	95.37	97.66	99.94	100.44	98.47	96.59	95.90	95.06
MAX	95.98	96.14	96.16	96.03	96.52	98.46	100.80	101.00	99.77	97.28	96.16	95.50
MIN	95.41	95.31	95.62	95.54	95.15	96.85	98.49	99.86	97.36	96.04	95.50	94.62
CAL YR 1999	MEAN 95.70	MAX 98.37	MIN 93.81									
WTR YR 2000	MEAN 96.87	MAX 101.00	MIN 94.62									

e Estimated.



## 04295500 LAKE MEMPHREMAGOG AT NEWPORT, VT

LOCATION.--Lat 44°56'15", long 72°12'21", Orleans County, Hydrologic Unit 01110000, on west side of bridge on U.S. Highway 5 at Newport.

PERIOD OF RECORD.--Gage heights: May 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft above sea level. Prior to July 21, 1934, nonrecording gage on highway bridge 0.1 mi southeast at same datum. July 21, 1934, to August 22, 1961, nonrecording gage on east side, and August 23, 1961, to Oct. 18, 1966, on west side of bridge at present site and datum.

REMARKS.--Elevation of lake regulated by powerplant and gates at Magog, Quebec.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height observed, 12.92 ft April 20, 1933; minimum recorded, 6.48 ft, November 2, 1968, affected by seiche; but may have been lower during period of use of nonrecording gage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.46 ft, April 25, 26, affected by seiche; minimum gage height, 7.24 ft, February 26, affected by seiche.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.58	9.26	9.86	9.04	8.29	7.78	9.37	9.83	9.49	8.90	8.99	8.82
2	9.45	9.20	9.76	9.00	8.28	7.94	9.38	9.76	9.47	8.89	8.98	8.81
3	9.31	9.14	9.69	8.99	8.27	8.04	9.42	9.59	9.49	8.93	9.00	8.79
4	9.21	9.16	9.68	9.02	8.27	8.12	9.60	9.45	9.43	8.98	9.02	8.81
5	9.13	9.10	9.70	9.04	8.27	8.17	9.87	9.46	9.38	9.03	9.01	8.75
6	9.12	9.11	9.74	9.04	8.27	8.20	10.01	9.48	9.35	9.02	8.98	8.68
7	9.11	9.08	9.80	9.04	8.27	8.21	10.06	9.52	9.34	9.02	8.97	8.63
8	9.01	9.00	9.75	9.04	8.27	8.20	10.10	9.59	9.25	9.00	9.00	8.58
9	9.00	8.87	9.68	9.02	8.12	8.24	10.18	9.65	9.26	8.98	9.01	8.57
10	8.99	8.89	9.60	9.01	7.86	8.33	10.22	9.80	9.21	9.04	9.05	8.52
11	9.04	8.89	9.69	9.03	7.83	8.44	10.19	10.11	9.23	9.08	9.04	8.47
12	9.01	8.78	9.59	9.07	7.78	8.53	10.15	10.24	9.21	9.06	9.05	8.41
13	8.92	8.77	9.50	9.10	7.74	8.53	10.04	10.20	9.18	9.05	9.03	8.45
14	9.10	8.77	9.50	9.08	7.72	8.50	9.90	10.21	9.12	9.04	9.01	8.39
15	9.03	8.87	9.46	9.05	7.72	8.44	9.86	10.12	9.07	9.04	9.01	8.41
16	9.01	8.92	9.44	9.02	7.69	8.49	9.97	10.00	9.08	9.05	9.06	8.47
17	9.03	8.91	9.48	8.98	7.65	8.59	10.00	9.84	9.12	9.03	9.11	8.45
18	9.10	8.87	9.46	8.94	7.63	8.56	9.94	9.73	9.11	9.07	9.10	8.49
19	9.01	8.86	9.43	8.87	7.59	8.52	9.86	9.75	9.08	9.08	9.09	8.46
20	8.96	8.90	9.38	8.81	7.54	8.46	9.79	9.65	9.03	9.05	9.07	8.48
21	8.96	9.01	9.44	8.75	7.49	8.40	9.78	9.53	8.95	9.02	9.04	8.48
22	8.88	9.10	9.44	8.68	7.44	8.37	9.91	9.40	8.94	9.04	9.00	8.50
23	8.99	9.19	9.42	8.65	7.37	8.38	10.15	9.28	8.94	9.04	8.98	8.45
24	9.15	9.25	9.41	8.59	7.33	8.44	10.38	9.26	8.89	9.04	9.02	8.52
25	9.25	9.31	9.36	8.57	7.28	8.52	10.44	9.32	8.82	9.03	9.00	8.51
26	9.29	9.37	9.31	8.53	7.24	8.61	10.44	9.40	8.80	9.01	8.98	8.50
27	9.35	9.60	9.28	8.49	7.34	8.67	10.37	9.49	8.84	9.00	8.98	8.49
28	9.30	9.81	9.23	8.44	7.50	8.79	e10.29	9.51	8.86	9.00	8.95	8.52
29	9.31	9.87	9.17	8.39	7.63	9.01	10.13	9.51	8.87	9.00	8.89	8.46
30	9.27	9.90	9.12	8.36	---	9.22	10.04	9.49	8.90	9.02	8.87	8.41
31	9.27	---	9.09	8.33	---	9.32	---	9.47	---	9.00	8.85	---
MEAN	9.13	9.13	9.50	8.84	7.78	8.45	9.99	9.67	9.12	9.02	9.00	8.54
MAX	9.58	9.90	9.86	9.10	8.29	9.32	10.44	10.24	9.49	9.08	9.11	8.82
MIN	8.88	8.77	9.09	8.33	7.24	7.78	9.37	9.26	8.80	8.89	8.85	8.39

CAL YR 1999 MEAN 8.80 MAX 9.90 MIN 7.05  
WTR YR 2000 MEAN 9.02 MAX 10.44 MIN 7.24

e Estimated.



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 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge records: 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. Datum of gage is 682.36 ft above sea level. May 25, 1909, to September 20, 1915, nonrecording gage, and September 21, 1915, to September 30, 1924, November 16, 1928, to May 4, 1936, water-stage recorder, at site 0.65 mi upstream at different datum. March 6, 1957, to May 11, 1994, water-stage recorder and records of power generation.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by powerplant and reservoirs upstream. No instantaneous peak stage or discharge available for period of March 6, 1957 to May 11, 1994 due to diversion of flow around station through canal and penstock of Newport No. 11 powerplant.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft<sup>3</sup>/s, March 20, 1936, gage height, 5.76 ft, site and datum then in use; maximum daily, 3,610 ft<sup>3</sup>/s, March 20, 1936; minimum daily discharge, 2.6 ft<sup>3</sup>/s, June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,270 ft<sup>3</sup>/s, April 6, gage height, 6.76 ft; minimum daily discharge, 57 ft<sup>3</sup>/s, July 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	321	374	408	212	118	410	832	647	383	167	68	98
2	281	343	415	175	118	442	784	620	375	166	66	99
3	283	294	389	206	e115	440	789	593	331	164	67	99
4	235	270	384	208	e113	438	966	562	322	162	79	101
5	198	228	378	204	e115	437	1160	536	262	161	87	103
6	207	180	355	204	106	436	1250	513	194	148	93	106
7	217	163	315	204	106	383	1200	506	183	136	137	115
8	245	171	291	204	e105	271	1060	519	168	135	157	147
9	294	170	294	204	96	304	1010	629	161	135	157	134
10	271	170	246	233	96	404	965	799	161	116	124	161
11	251	143	205	277	96	438	944	965	164	101	94	120
12	250	115	206	276	e96	438	900	1100	182	101	94	103
13	229	115	206	274	e96	436	831	1130	226	101	95	105
14	194	116	206	235	98	434	776	1040	261	101	95	104
15	191	117	207	182	96	436	805	920	244	101	95	139
16	191	117	208	170	96	441	875	821	227	101	129	163
17	191	117	229	e140	e95	389	860	740	227	101	172	179
18	191	117	278	e125	e96	367	874	696	225	69	166	259
19	191	166	258	e120	96	368	852	667	140	57	173	288
20	191	204	258	e115	96	338	800	635	98	59	190	287
21	245	205	240	e113	96	339	771	614	137	65	189	288
22	264	204	186	e112	96	341	827	588	195	86	164	257
23	216	204	156	e110	96	342	908	545	194	148	178	219
24	207	249	156	113	96	412	997	501	191	76	158	171
25	312	284	156	115	107	439	1030	509	135	96	155	162
26	379	285	164	114	113	442	986	512	104	176	154	161
27	379	331	176	113	117	444	904	496	108	136	154	123
28	381	378	150	e110	267	514	826	484	106	92	154	112
29	381	378	119	e112	369	781	755	466	105	94	154	128
30	381	380	119	e113	---	829	696	427	117	95	124	150
31	379	---	120	119	---	872	---	401	---	79	95	---
TOTAL	8146	6588	7478	5212	3406	13805	27233	20181	5926	3525	4017	4681
MEAN	263	220	241	168	117	445	908	651	198	114	130	156
MAX	381	380	415	277	369	872	1250	1130	383	176	190	288
MIN	191	115	119	110	95	271	696	401	98	57	66	98
CFSM	1.85	1.55	1.70	1.18	.83	3.14	6.39	4.58	1.39	.80	.91	1.10
IN.	2.13	1.73	1.96	1.37	.89	3.62	7.13	5.29	1.55	.92	1.05	1.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909-24, 28-36, 38-00, BY WATER YEAR (WY)

	1909-24	28-36	38-00	1909-24	28-36	38-00	1909-24	28-36	38-00	1909-24	28-36	38-00
MEAN	179	233	223	186	159	282	693	494	239	150	129	130
MAX	576	560	599	452	477	1136	1192	1042	545	464	369	523
(WY)	1946	1919	1984	1998	1981	1936	1933	1972	1978	1973	1976	1924
MIN	50.7	79.5	80.4	62.9	19.1	72.8	186	151	74.0	47.2	39.6	41.9
(WY)	1962	1923	1923	1948	1979	1911	1979	1998	1988	1991	1909	1984

SUMMARY STATISTICS

	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1909-24, 28-36, 38-00
ANNUAL TOTAL	79969	110198	
ANNUAL MEAN	219	301	257
HIGHEST ANNUAL MEAN			394
LOWEST ANNUAL MEAN			153
HIGHEST DAILY MEAN	822	Apr 9	1250
LOWEST DAILY MEAN	25	Sep 10	57
ANNUAL SEVEN-DAY MINIMUM	27	Sep 1	77
INSTANTANEOUS PEAK FLOW		1270	Apr 6
INSTANTANEOUS PEAK STAGE		6.76	Apr 6
ANNUAL RUNOFF (CFSM)	1.54	2.12	1.81
ANNUAL RUNOFF (INCHES)	20.95	28.87	24.55
10 PERCENT EXCEEDS	441	778	527
50 PERCENT EXCEEDS	190	204	180
90 PERCENT EXCEEDS	48	96	63

- a No instantaneous peak stage or discharge available for period of March 6, 1957 to May 11, 1994, as explained above in remarks.
- b Site and datum then in use.
- e Estimated.



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

## Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

## Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>MERRIMACK RIVER BASIN</b>								
Pemigewasset River at Woodstock, NH (01075000)	Lat 43°58'34", Long 71°40'48", Grafton County, Hydrologic Unit 01070001, on right bank, 0.2 mi east of Woodstock and 0.7 mi upstream from Eastman Brook. Drainage area is 193 mi <sup>2</sup> .	1940-77†, 1978-80, 1985-00	04-09-00	a 11.95	21,200	10-24-59	16.13	47,000
Baker River near Rumney, NH (01076000)	Lat 43°47'46", Long 71°50'42", Grafton County, Hydrologic Unit 01070001, on right bank, 200 ft upstream from small right bank tributary, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney. Drainage area is 143 mi <sup>2</sup> .	1929-77†, 1978-81, 1985-00	04-09-00	11.19	7,920	06-15-42	15.50	21,400
Merrimack River at Franklin Junction, NH (01081500)	Lat 43°25'26", Long 71°39'12", Merrimack County, Hydrologic Unit 01070002, on right bank at Franklin Junction, 1 mi downstream from confluence of Pemigewasset and Winnepesau- kee Rivers. Drainage area is 1,507 mi <sup>2</sup> .	1903-78†, 1983-00	04-11-00	13.66	17,300	03-19-36	36.4	83,000
Contoocook River at Peterbor- ough, NH (01082000)	Lat 42°51'45", Long 71°57'35", Hillsborough County, Hydro- logic Unit 01070003, 1 mi south of Peterborough, and 1.5 mi upstream from Nuba- nusit Brook. Drainage area is 68.1 mi <sup>2</sup> .	1945-77†, 1978-00	04-23-00	3.89	804	04-06-87	6.62	2,860
Nubanusit Brook below Edward Mac- dowell Dam near Peter- borough, NH (01083000)	Lat 42°53'43", Long 71°59'13", Hillsborough County, Hydro- logic Unit 01070003, on left bank 300 ft downstream from Edward Macdowell Reservoir, 2.2 mi northwest of Peterbor- ough, and 2.7 mi upstream from mouth. Drainage area is 44.0 mi <sup>2</sup> .	1920-31†b, 1945-89†b, 1990-97b, 1998-00	04-25-00	5.46	570	04-11-31	b	1,130

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>MERRIMACK RIVER BASIN--Continued</b>								
Contoocook River near Henniker, NH (01085000)	Lat 43°09'10", Long 71°51'24", Merrimack County, Hydrologic Unit 01070003, 0.6 mi down- stream from Sand Brook and 2.5 mi southwest of Henniker. Drainage area is 368 mi <sup>2</sup> .	1940-77‡, 1988-00	04-24-00	9.88	3520	c 09-21-38	c 21.30	c 22,200
Contoocook River below Hopkinton Dam, at West Hop- kinton, NH (01085500)	Lat 43°11'31", Long 71°44'51", Merrimack County, Hydrologic Unit 01070003, on right bank 400 ft downstream from cov- ered bridge at West Hopkin- ton, 0.2 mi downstream from Hopkinton Dam, and 5.9 mi upstream from Warner River. Drainage area is 427 mi <sup>2</sup> .	1903-07‡, 1963-89‡, 1990-00	04-25-00	7.66	4,610	04-08-87	10.89	7,530
Warner River at Davis- ville, NH (01086000)	Lat 43°15'06", Long 71°43'54", Merrimack County, Hydrologic Unit 01070003, on left bank 60 ft downstream from bridge on State Highway 127 at Davisville, 2.2 mi northwest of Contoocook, and 2.4 mi upstream from mouth. Drainage area is 146 mi <sup>2</sup> .	1939-78 1999-00	04-10-00	7.51	1,870	03-27-53	9.88	4,510
Blackwater River near Webster, NH (01087000)	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 Black- water Dam, 2.5 mi southeast of Webster, and 6.5 mi upstream from mouth. Drainage area is 129 mi <sup>2</sup> .	1918-20‡ 1927-89‡, 1990-00	04-11-00	6.84	2,080	03-19-36	11.78	11,000
Piscataquog River below Everett Dam near East Weare, NH (01090800)	Lat 43°05'29", Long 71°39'36", Hillsborough County, Hydro- logic Unit 01070002, on right bank 500 ft downstream from Everett Dam and 1.4 mi south- east of East Weare. Drainage area is 63.1 mi <sup>2</sup> .	1963-89‡, 1990-00	04-25-00	7.77	933	06-12-84	9.09	1,770
Piscataquog River near Goffstown, NH (01091500)	Lat 43°00'58", Long 71°33'03", Hillsborough County, Hydro- logic Unit 01070002, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown. Drainage area is 202 mi <sup>2</sup> .	1939-78‡, 1983-00	04-22-00	7.07	2,060	04-06-87	11.28	7,600
Souhegan River at Merri- mack, NH (01094000)	Lat 42°51'27", Long 71°30'24", Hillsborough County, Hydro- logic Unit 01070002, at head of Wildcat Falls, 0.9 mi southwest of Merrimack, 1.5 mi upstream from mouth. Drainage area is 171 mi <sup>2</sup> .	1909-76‡, 1979-00	4-23-00	6.67	2,430	03-19-36	16.2	16,900

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>CONNECTICUT RIVER BASIN</b>								
Paul Stream Tributary near Brunswick Springs, VT (01129700)	Lat 44°41'06", Long 71°37'18", Essex County, Hydrologic Unit 01080101, at culvert on Macadam Road leading to Maid- stone Lake, 400 ft upstream of mouth at Paul Stream, 1.4 mi west along this road from it's intersection with State Route 102, 1.9 mi northeast of Maidstone Lake outlet, 3.5 mi south of Brun- swick Springs, and 4.6 mi south of North Stratford, NH. Drainage area is 1.29 mi <sup>2</sup> .	1966-78, 1999-00	05-10-00	11.16	41	03-18-68 06-30-73	bd 9.06 b 10.18	93 60
Quimby Brook near Lyndon- ville, VT (01133200)	Lat 44°34'52", long 71°59'11", Caledonia County, Hydrologic Unit 01080102, at culvert on Sutton Road, 0.1 mi north of Sutton Road and US Hwy 5 intersection, and 3.5 mi north of Lyndonville. Drain- age area is 2.32 mi <sup>2</sup> .	1964-74, 1999-00	04-04-00	10.95	67	05-04-72	13.51	200
Kirby Brook at Concord, VT (01134800)	Lat 44°26'31", long 71°52'45", Essex County, Hydrologic Unit 01080102, at culvert on U.S. Highway 2, 700 ft upstream from mouth, and 1.2 mi north- east of Concord. Drainage area is 8.05 mi <sup>2</sup> .	1964-74†, 1999-00	04-04-00	6.87	310	06-30-73	b 6.35	1,600
Waits River Tributary near West Topsham, VT (01139700)	Lat 44°08'29", long 72°18'52", Orange County, Hydrologic Unit 01080103, at culvert on US Hwy 302, 800 ft upstream of Waits River, 0.3 mi east of US Hwy 302 and State Hwy 25 intersection, and 2.0 mi north of West Topsham. Drain- age Area is 1.09 mi <sup>2</sup> .	1964-74, 1999-00	03-28-00	9.82	31	12-21-73	10.91	94
Ompompanoosuc River at Union Village, VT (01141500)	Lat 43°47'23", Long 72°15'19", Orange County, Hydrologic Unit 01080103, on right bank 800 ft upstream from covered bridge at Union Village, 200 ft downstream from Avery Brook, 700 ft downstream from Union Village Reservoir, and 4.0 mi upstream from mouth. Drainage area is 130 mi <sup>2</sup> .	1940-89†, 1990-00	04-04-00	9.81	1,900	06-03-47	b	4,800
Third Branch White River Tributary at Ran- dolph, VT (01142400)	Lat 43°55'54", long 72°40'54", Orange County, Hydrologic Unit 01080105, at culvert on State 12A, 0.3 mi upstream of mouth, 0.8 mi west of junc- tions of State 12 and 12A, and 1.0 mi northwest of Randolph. Drainage area is 0.77 mi <sup>2</sup> .	1964-74, 1999-00	07-16-00	12.65	130	06-27-98	c 16.61	b 327

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>CONNECTICUT RIVER BASIN--Continued</b>								
Mascoma River at West Canaan, NH (01145000)	Lat 43°39'00", Long 72°04'50", Grafton County, Hydrologic Unit 01080104, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan and at mile 19.3. Drainage area is 80.5 mi <sup>2</sup> .	1939-78†, 1985-00	04-09-00	7.02	2,250	03-27-53 c 09-22-38	8.94 9.60	3,780 4,320
Kent Brook near Killing- ton, VT (01150800)	Lat 43°40'24", long 72°48'33", Rutland County, Hydrologic Unit 01080105, at culvert on State Highway 100, 1.4 mi upstream from mouth, and 2.0 mi northwest of the Vil- lage of Killington. Drainage area is 3.31 mi <sup>2</sup> .	1964-74†, 1999-00	04-04-00	8.27	253	06-30-73	b 12.81	600
Ottauquechee River Tributary near Quechee, VT (01151200)	Lat 43°39'37", long 72°25'55", Windsor County, Hydrologic Unit 01080106, at culvert on gravel road, 50 ft east along this road from it's intersec- tion with West Hartford- Quechee Road, 0.2 mi upstream of mouth, and 1.2 mi north- west of Quechee. Drainage area is 0.82 mi <sup>2</sup> .	1964-74, 1999-00	04-04-00	10.08	21	06-30-73	13.35	93
Black River at North Spring- field, VT (01153000)	Lat 43°20'00", Long 72°30'55", Windsor County, Hydrologic Unit 01080106, on right bank, 800 ft downstream from North Springfield Dam, 1,300 ft upstream from Great Brook, and 8.1 mi upstream from mouth. Drainage area is 158 mi <sup>2</sup> .	1929-89†, 1990-00	03-30-00	7.47	3,560	09-22-38	17.68	15,500
Middle Branch Williams River Tributary at Chester, VT (01153300)	Lat 43°16'13", long 72°36'32", Windsor County, Hydrologic Unit 01080107, at culvert on Lovers Lane, 0.2 mi from Lov- ers Lane and State Highway 11 intersection, 0.8 mi north- east of junction of State Highways 11 and 35 in Chester, and 1.5 mi upstream of mouth. Drainage area is 3.16 mi <sup>2</sup> .	1964-78, 1999-00	03-28-00	20.45	157	08-10-76	e	f 367
West River Tributary near Jamaica, VT (01153350)	Lat 43°07'32", long 72°48'47", Windham County, Hydrologic Unit 01080107, at culvert on State Hwy 100, 0.5 mi upstream of mouth, 2.0 mi west of Ball Mountain Dam, and 2.5 mi northwest of Jamaica. Drainage area is 0.90 mi <sup>2</sup> .	1964-78, 1999-00	03-28-00	10.09	85	06-30-73	b 15.14	320

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>CONNECTICUT RIVER BASIN--Continued</b>								
Whetstone Brook Tributary near Marlboro, VT (01156300)	Lat 42°52'42", long 72°42'32", Windham County, Hydrologic Unit 01080104, at culvert on State Highway 9, 800 ft upstream of mouth, 0.5 mi west of Hidden Lake, and 1.5 mi northwest of Marlboro. Drainage area is 1.05 mi <sup>2</sup> .	1963-74, 1999-00	03-28-00	10.00	112	07-29-69	b 7.65	230
Connecticut River Tributary near Vernon, VT (01156450)	Lat 42°47'01", long 72°31'57", Windham County, Hydrologic Unit 01080104, at downstream culvert on Tyler Hill Road, 0.3 mi west of Tyler Hill Road and State Hwy 142 inter- section, 0.6 mi upstream of mouth, 1.3 mi northwest of Vernon Dam, and 1.8 mi north- west of Vernon. Drainage area is 1.12 mi <sup>2</sup> .	1964-74, 1999-00	03-28-00	7.00	36	04-25-70	10.91	128
<b>HUDSON RIVER BASIN</b>								
Tanner Brook near Sun- derland, VT (01328900)	Lat 43°07'52", long 73°05'45", Bennington County, Hydrologic Unit 02020003, at culvert on U.S. Highway 7, 1.3 mi north of Sunderland and 2.5 mi southwest of Manchester. Drainage area is 2.60 mi <sup>2</sup> .	1964-74, 1999-00	07-16-00	10.43	29	02-05-70	11.84	84
Paran Creek near South Shafts- bury, VT (01333900)	Lat 42°58'13", long 73°11'19", Bennington County, Hydrologic Unit 02020003, at culvert on Cider Mill Road, 400 ft north of Cider Mill Road and Airport Road intersection, 1.3 mi southeast of Shafts- bury Center, 2.0 mi northeast of South Shaftsbury. Drainage area is 2.38 mi <sup>2</sup> .	1964-78, 1999-00	05-10-00	6.40	33	06-30-73	11.52	d 193
<b>ST. LAWRENCE RIVER BASIN</b>								
Poultney River Tributary at East Poultney, VT (04279400)	Lat 43°32'17", long 73°12'36", Rutland County, Hydrologic Unit 02010001, at culvert on Lewis Road, 0.5 mi west of Town Hill, 0.8 mi southeast of Lewis Road and Hannon Road intersection, 0.8 mi north of East Poultney. Drainage area is 1.13 mi <sup>2</sup> .	1964-78, 1999-00	02-28-00	8.58	57	04-14-64	b 12.36	98
Brandy Brook at Bread Loaf, VT (04282300)	Lat 43°57'19", long 72°59'47", Addison County, Hydrologic Unit 02010002, at culvert on State Highway 125, 0.3 miles upstream of confluence with South Branch Middlebury River, and 2.6 miles south- east of Ripton. Drainage area is 2.24 mi <sup>2</sup> .	1963-78, 2000	07-16-00	17.98	546	07-16-00	17.98	546

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>ST. LAWRENCE RIVER BASIN--Continued</b>								
Little Otter Creek Tributary near Bristol, VT (04282600)	Lat 44°08'35", long 73°07'03", Addison County, Hydrologic Unit 02010002, at culvert on Plank Road, 200 ft east of Plank Road and Sawyer Road intersection, 2.0 mi north- west of Bristol, and 2.2 mi northeast of New Haven. Drainage area is 1.48 mi <sup>2</sup> .	1964-78, 1999-00	05-10-00	10.87	36	06-30-73	13.16	64
Lewis Creek Tributary at Starks- boro, VT (04282700)	Lat 44°13'02", long 72°03'19", Addison County, Hydrologic Unit 02010002, at culvert on State Route 116, 0.7 mi south of Starksboro, 0.9 mi west of East Mountain, and 4.6 mi north along State Route 116 from the junction of State Highways 116 and 17. Drainage area is 5.31 mi <sup>2</sup> .	1963-74†, 1999-00	05-10-00	16.54	212	12-21-73	b 5.25	1,350
Sunny Brook near Mont- pelier, VT (04287300)	Lat 44°16'08", long 72°37'37", Washington County, Hydrologic Unit 02010003, at culvert on U.S. Highway 2, 500 ft north- east of Interstate 89 over- pass over U.S. Highway 2, 0.3 mi upstream from mouth, and 2.5 mi west of U.S. High- way 2 and Bailey Avenue Extension intersection in Montpelier. Drainage area is 2.31 mi <sup>2</sup> .	1964-74†, 1999-00	05-10-00	7.18	287	06-13-73	b 7.40	342
Bryant Brook at Water- bury Center, VT (04288400)	Lat 44°22'41", long 72°43'29", Washington County, Hydrologic Unit 02010003, at culvert on State Highway 100, 0.3 mi west of Waterbury Center, and 3.0 mi north of Waterbury. Drainage area is 2.64 mi <sup>2</sup> .	1964-78, 1999-00	05-10-00	13.67	257	06-30-73	13.94	302
Winooski River Tributary near Richmond, VT (04289600)	Lat 44°26'09", long 72°58'46", Chittenden County, Hydrologic Unit 02010003, at culvert on Browns Trace Road, 0.3 mi south of Browns Trace Road and Governor Peck Road inter- section, 2.3 mi north of Richmond, and 2.4 mi south of Jerico Center. Drainage area is 0.71 mi <sup>2</sup> .	1964-74, 1999-00	05-10-00	12.49	48	06-15-72	b 14.59	102
Bailey Brook at East Hardwick, VT (04290700)	Lat 44°31'41", long 72°18'16", Caldonia County, Hydrologic Unit 02010005, at culvert on Hardwick Street, 800 ft north of railroad crossing, 0.4 mi upstream of mouth, and 0.6 mi northeast of East Hardwick, Drainage area is 2.52 mi <sup>2</sup> .	1964-78, 1999-00	04-04-00	11.76	88	06-30-73	15.92	285

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>ST. LAWRENCE RIVER BASIN--Continued</b>								
Stony Brook near Eden, VT (04292100)	Lat 44°41'38", long 72°35'00", Lamoille County, Hydrologic Unit 02010005, at culvert on State Highway 100, 400 ft upstream from mouth, 2.1 mi south of Eden, and 2.2 mi north of the junction of State Highways 100 and 100C in North Hyde Park. Drainage area is 4.21 mi <sup>2</sup> .	1964-74†, 1999-00	04-04-00	6.68	229	06-30-73	b 3.64	890
Whittaker Brook at Richford, VT (04293400)	Lat 44°59'14", long 72°39'15", Franklin County, Hydrologic Unit 02010007, at culvert on State Highway 105, 100 ft upstream of mouth, 0.2 mi east of a railroad bridge over State Highway 105, and 1.0 mi southeast of the junc- tion of State Highways 105 and 139 in Richford. Drainage area is 0.64 mi <sup>2</sup> .	1963-78, 1999-00	04-04-00	10.81	108	04-14-64	12.49	190
Missisquoi River Tributary at Sheldon Junction, VT (04293800)	Lat 44°54'01", long 72°57'40", Franklin County, Hydrologic Unit 02010007, at culvert on State Highway 105, 40 ft west of the State Highway 105 and Bergeron Road (TH21) inter- section, 0.5 mi upstream of mouth, 0.8 mi west of Sheldon Junction, and 0.9 mi east of Sheldon Springs. Drainage area is 1.69 mi <sup>2</sup> .	1963-78, 1999-00	02-28-00	12.99	79	06-30-73	13.63	108
Saxe Brook near Highgate Springs, VT (04294200)	Lat 44°59'38", long 73°03'59", Franklin County, Hydrologic Unit 02010007, at culvert on Ballard Road, 100 ft north of Ballard Road and St. Armand Road intersection, 0.4 mi upstream of mouth at Rock River, 1.5 mi south of US-Canada Border Bench Mark 629A, and 2.3 mi northeast of Highgate Springs. Drainage area is 2.79 mi <sup>2</sup> .	1963-74, 1999-00	02-27-00	14.06	104	04-03-74	14.28	117
Lord Brook near Evans- ville, VT (04296150)	Lat 44°46'59", long 72°07'08", Orleans County, Hydrologic Unit 01110000, at culvert on State Highway 16, 0.2 mi east of State Highway 16 and Fiske Road intersection, 1.3 mi upstream of mouth, 1.5 mi south of Evansville, and 3.6 mi northeast of Barton. Drainage area is 4.76 mi <sup>2</sup> .	1964-78, 1999-00	05-11-00	12.66	195	05-20-69	15.26	410

## Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2000 maximum			Period of record maximum		
			Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)	Date	Gage height (ft)	Dis- charge (ft <sup>3</sup> /s)
<b>ST. LAWRENCE RIVER BASIN--Continued</b>								
Brownington Branch near Evans- ville, VT (04296200)	Lat 44°50'02", long 72°04'00", Orleans County, Hydrologic Unit 01110000, at culvert on State Highway 5A, 2.9 mi north of the junction of State Highways 5A and 58, and 4.0 mi northeast of Evans- ville. Drainage area is 2.15 mi <sup>2</sup> .	1964-74†, 1999-00	04-04-00	6.54	87	12-21-73	b 7.91	170
Pherrins River Tributary near Island Pond, VT (04296300)	Lat 44°50'33", long 71°54'32", Essex County, Hydrologic Unit 01110000, at culvert on State Highway 114, 200 ft upstream of mouth, 800 ft south of State Highway 111 and 114 junction, and 2.3 mi north- west of Island Pond. Drainage area is 1.05 mi <sup>2</sup> .	1964-78, 1999-00	05-11-00	10.43	50	05-20-69	12.53	140

† Operated as a continuous-record gaging station.

a From maximum indicator clip.

b At a different site and datum.

c Extreme outside period of record.

d Different culvert at site.

e Not determined.

f Discharge is an estimate.



## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Miscellaneous Sites

Discharge measurements in the following table were made at miscellaneous sites throughout New Hampshire and Vermont.

## Discharge measurements made at miscellaneous sites

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<b>SACO RIVER BASIN</b>						
01065000 Ossipee River	Saco River	Lat 43°47'44", Long 71°03'36", Carroll County, Hydrologic Unit 01060002, 0.3 mi upstream from State Highway 153 at Effingham Falls, 0.3 mi downstream from the outlet of Ossipee Lake (Berry Bay), and 4 mi northwest of Effingham.	330	1924-90†, 1998-99	10-12-99 04-07-00 06-21-00	857 2,960 440
<b>PISCATAQUA RIVER BASIN</b>						
01073785 Winnicut River	Piscataqua River	Lat 43°02'12", Long 70°50'55", Rockingham County, Hydrologic Unit 01060003, on left bank 20 ft upstream of State Fish and Game Department dam, 150 ft downstream from State Highway 33, and 0.8 mi west of Green- land.	14.1		08-26-99 01-12-00 03-23-00 04-11-00 04-24-00 04-25-00 06-06-00 06-20-00 07-20-00 09-12-00	0.40 35.5 30.3 23.4 154 114 9.40 9.09 16.3 1.45
01075000 Mohawk Brook	Isinglass River	Lat 43°15'47", Long 71°05'50", Strafford County, Hydrologic Unit 01070002, on left bank 0.5 mi down- stream from bridge on State Highway 202A, and 1.2 mi east of Center Strafford.	8.87	1964-77	06-05-00 06-20-00 07-20-00 09-18-00	3.90 5.99 3.12 1.07
<b>MERRIMACK RIVER BASIN</b>						
01075000 Pemigewasset River	Merrimack River	Lat 43°58'34", Long 71°40'48", Grafton County, Hydrologic Unit 01070001, 0.2 mi east of Woodstock and 0.7 mi upstream from Eastman Brook.	193	1940-77‡, 1978-99	10-14-99 03-29-00 06-13-00	742 3,130 316
01076000 Baker River	Pemigewasset River	Lat 43°47'46", Long 71°50'42", Grafton County, Hydrologic Unit 01070001, 0.3 mi upstream from Halls Brook, and 1.8 mi southwest of Rumney, NH.	143	1929-77‡, 1978-99	10-14-99 03-30-00 06-19-00	125 1,240 153
01077510 Newfound River	Pemigewasset River	Lat 43°37'05", Long 71°44'25", Grafton County, Hydrologic Unit 01070001, below outlet of Newfound Lake, 1.7 mi north of Bristol, NH, off State Highway 3A.	98	1983-87 1991-99	10-28-99 04-06-00 07-10-00 09-20-00	122 1,010 56.8 39.2
01081500 Merrimack River	Atlantic Ocean	Lat 43°25'26", Long 71°39'12", Merrimack County Hydrologic Unit 01070002, at Franklin Junction, NH, 1 mi downstream from confluence of Pemigewasset and Winnipesaukee Rivers.	1,507	1903-78‡, 1979-99	10-29-99 04-05-00 09-21-00	1,800 16,200 916
01082000 Contoocook River	Merrimack River	Lat 42°51'45", Long 71°57'35", Hillsborough County, Hydrologic Unit 01070003, 1 mi south of Peterborough, NH, and 1.5 mi upstream from Nubanusit Brook.	68.1	1945-77, 1978-99	10-19-99 04-18-00	68.9 161
01083000 Nubanusit Brook	Contoocook River	Lat 42°53'43", Long 71°59'13", Hillsborough County, Hydrologic Unit 01070003, on left bank 300 ft down- stream from Edward MacDowell Reser- voir, 2.2 mi northwest of Peterborough, NH and 2.7 mi upstream from mouth.	44.0	1920-31‡a, 1945-89‡a, 1990-97a, 1999	10-19-99 04-18-00 06-30-00	66.8 88.5 35.9

## Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<b>MERRIMACK RIVER BASIN--Continued</b>						
01085000 Contoocook River	Merrimack River	Lat 43°09'10", Long 71°51'24", Merrimack County, Hydrologic Unit 01070003, 0.6 mi downstream from Sand Brook and 2.5 mi southwest of Henniker, NH.	368	1939-77+, 1978-99	11-03-99 03-31-00 07-21-00	397 2240 272
01085500 Contoocook River	Merrimack River	Lat 43°11'31", Long 71°44'05", Merrimack County, Hydrologic Unit 01070003, on right bank 400 ft downstream from covered bridge at West Hopkinton, NH, 0.2 mi downstream from Hopkinton Dam, and 5.9 mi upstream from Warner River.	427	1903-07+, 1963-89, 1990-99	11-02-99 04-07-00 04-11-00 09-22-00	358 1740 3200 328
01086000 Warner River	Merrimack River	Lat 43°15'06", Long 71°43'54", Merrimack County, Hydrologic Unit 01070003, on left bank 60 ft downstream from bridge on State Highway 127 at Davisville, 2.2 mi northwest of Contoocook, and 2.4 mi upstream from mouth.	146	1939-78, 1999	10-28-99 04-06-00 06-12-00 07-24-00	129 861 213 72.9
01087000 Blackwater River	Merrimack River	Lat 43°17'45", Long 71°41'46", Merrimack County, Hydrologic Unit 01070003, on left bank 0.2 mi west of Dingit Corner, NH, 2.4 mi downstream from Blackwater Dam, 2.5 mi southeast of Webster, and 6.5 mi upstream from mouth.	129	1927-89+, 1990-99	12-20-99 04-06-00 09-20-00	174 1,440 48.1
01088400 Merrimack River	Merrimack River	Lat 43°12'32", Long 71°31'51", Merrimack County, Hydrologic Unit 01070002, on downstream side of bridge on Loudon Road in Concord.	2,300	1979-82+, 1999	09-22-99 04-07-00 07-19-00	8,600 19,000 2,810
01090800 Piscataquog River	Merrimack River	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, NH.	63.1	1963-89+, 1990-99	10-15-99 04-12-00 06-29-00	65.9 306 35.2
01091500 Piscataquog River	Merrimack River	Lat 43°00'58", Long 71°33'03", Hillsborough County, Hydrologic Unit 01070002, 0.2 mi upstream from Harry Brook, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown, NH.	202	1939-78+, 1979-99	11-03-99 04-13-00 06-28-00	483 841 46.4
01094000 Souhegan River	Merrimack River	Lat 42°51'27", Long 71°30'24", Hillsborough County, Hydrologic Unit 01070002, at head of Wildcat Falls, 0.9 mi southwest of Merrimack, NH, 1.5 mi upstream from mouth.	171	1909-76+, 1977-99	10-14-99 04-24-00 06-27-00	136 1870 168
<b>CONNECTICUT RIVER BASIN</b>						
01141500 Ompompa-noosuc River	Connecticut River	Lat 44°47'23", Long 71°15'19", Coos County, Hydrologic Unit 01080103, on right bank 800 ft upstream from covered bridge at Union Village, VT, 200 ft downstream from Avery Brook, 700 ft downstream from Union Village Reservoir, and 4.0 mi upstream from mouth (Revised).	130	1940-89+, 1990-99	10-18-99 12-17-99 04-04-00 05-23-00	86.2 183 1,740 292

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

## Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<b>CONNECTICUT RIVER BASIN</b>						
01145000 Mascoma River	Connecticut River	Lat 43°39'00", Long 72°04'50", Grafton County, Hydrologic Unit 01080104, on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mi east of West Canaan, 1.2 mi downstream from Indian River, 3.5 mi west of Canaan and at mile 19.3.	80.5	1939-78†, 1985-99	10-28-99 04-10-00 07-24-00	88.0 1,340 22.4
01152010 Sugar River	Connecticut River	Lat 43°23'10", Long 72°05'30", Sullivan County, Hydrologic Unit 01080107, behind Crutch Factory at Sunapee, NH, and 800 ft downstream from State Highway 11, and 2,000 ft below outlet of Lake Sunapee.	46	1983-87 1991-99	10-12-99 04-10-00 07-19-00	150 296 32.4
01153000 Black River	Connecticut River	Lat 43°20'00", Long 72°30'55", Windsor County, Hydrologic Unit 01080106, on right bank at North Springfield, VT, 800 ft downstream from North Springfield Dam, 1,300 ft upstream from Great Brook, and 8.1 mi upstream from mouth.	158	1929-89†, 1990-99	10-14-99 12-06-99 04-07-00 05-24-00	116 266 845 699
01160248 South Branch Ashuelot River	Ashuelot River	Lat 42°52'34", Long 72°16'39", Cheshire County, Hydrologic Unit 01080201, at Route 32 bridge, 800 ft northeast from Monadnock Regional High School in Swanzey, NH, 2.3 mi upstream from mouth, and 3.5 mi south of Keene, NH	75.3	1994-99		

† Operated as a continuous-record gaging station.

a At different site and datum.

b Spillway discharge only.















WATER QUALITY AT MISCELLANEOUS GROUND-WATER WELLS  
(WATER YEAR 1999 TO SEPTEMBER 2000)

Remarks: G/M, gallons per minute; "E", estimated concentration; "<", less than; BEDROCK, Fractured-bedrock aquifers; Organic pesticide compounds, analyzed by NWQL Schedule 2001, and volatile organic compounds (VOCs), analyzed by NWQL Schedule 2020, are listed with minimum reporting levels in the section "EXPLANATION OF RECORDS". Water-quality data presented in this table were collected by the New England Coastal Basins National Water-Quality Assessment Program (NAWQA) as part of a ground-water study in crystalline-bedrock aquifers. Only pesticides and VOCs identified by the analyses (either as estimated values or values measured at or above the minimum reporting level) for one or more samples are listed in the water-quality tables. Location of wells are shown in figure 4.

LOCAL IDENT- I- FIER	STATION NUMBER	LAT- I- TUDE	LONG- I- TUDE	GEO- LOGIC UNIT	DATE	TIME	FLOW RATE (G/M) (00059)	BARO- METRIC PRES- SURE OF (MM HG) (00025)
<b>BELKNAP COUNTY</b>								
NH-BLW 122	432735071273401	43 27 36 N	071 27 30 W	BEDROCK	09-11-00	1100	.8	748
NH-NHW 22	433325071420301	43 33 21 N	071 42 03 W	BEDROCK	08-15-00	1100	.8	740.5
<b>CARROLL COUNTY</b>								
NH-HJW 5	440852071221401	44 08 51 N	071 22 14 W	BEDROCK	08-24-00	1100	.8	726
NH-SEW 36	434700071212701	43 47 00 N	071 21 28 W	BEDROCK	09-25-00	1100	.8	732
NH-WRW 37	433650071101101	43 36 50 N	071 10 12 W	BEDROCK	08-28-00	1100	1	750
<b>GRAFTON COUNTY</b>								
NH-HRW 66	434335071361101	43 43 34 N	071 36 11 W	BEDROCK	08-10-00	1100	1	739
NH-WDW 6	435534071530501	43 55 34 N	071 53 05 W	BEDROCK	08-16-00	1100	.8	734
<b>HILLSBOROUGH COUNTY</b>								
NH-B4W 558	424548071403201	42 45 47 N	071 40 33 W	BEDROCK	06-22-00	1100	1	745
NH-HGW 59	425948072024801	42 59 53 N	072 02 54 W	BEDROCK	08-14-00	1100	1	724
NH-HSW 354	424528071321101	42 45 28 N	071 32 11 W	BEDROCK	06-05-00	1100	1	756
NH-LMW 83	424905071260101	42 49 05 N	071 26 01 W	BEDROCK	06-19-00	1100	1	758
<b>MERRIMACK COUNTY</b>								
NH-CVW 122	431300071342701	43 13 00 N	071 34 27 W	BEDROCK	08-29-00	1100	1	751
NH-HUW 118	431350071421001	43 13 50 N	071 42 08 W	BEDROCK	08-21-00	1100	.8	757
<b>ROCKINGHAM COUNTY</b>								
NH-AUW 174	430140071193801	43 01 39 N	071 19 37 W	BEDROCK	08-09-00	1100	1	749
NH-KFW 51	425532070565501	42 55 33 N	070 56 56 W	BEDROCK	06-07-00	1100	1	755
NH-SAW 156	424843071112201	42 48 43 N	071 11 22 W	BEDROCK	06-06-00	1100	1	758
<b>STRAFFORD COUNTY</b>								
NH-LIW 28	430616071020801	43 06 17 N	071 02 10 W	BEDROCK	06-08-00	1100	1	757

## MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENT- I- FIER		DATE	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE ( $\mu$ S/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
<b>BELKNAP COUNTY</b>											
NH-BLW	122	09-11-00	.5	.1	8.9	568	23.0	11.7	2.7	2.0	1.3
NH-NHW	22	08-15-00	26	2.7	6.1	79	20.0	11.5	6.7	2.6	1
<b>CARROLL COUNTY</b>											
NH-HJW	5	08-24-00	74	8	5.7	36	21.0	9.9	4.5	.36	.5
NH-SEW	36	09-25-00	41	4.4	7.0	130	14.0	10.5	14	1.4	.6
NH-WRW	37	08-28-00	1	.1	8.7	1,220	21.5	11.5	3.2	2.4	1.4
<b>GRAFTON COUNTY</b>											
NH-HRW	66	08-10-00	3.2	.3	7.7	232	23.0	11.4	38	4.5	1.3
NH-WDW	6	08-16-00	2	.2	8.0	232	22.0	11.5	30	3.6	1.1
<b>HILLSBOROUGH COUNTY</b>											
NH-B4W	558	06-22-00	27	2.3	7.4	137	26.5	12.1	15	2.5	2.6
NH-HGW	59	08-14-00	13.0	1.30	6.80	167	16.0	12.0	25	2.1	1.7
NH-HSW	354	06-05-00	3	.3	8.2	23	20.0	11.0	20	12	.6
NH-LMW	83	06-19-00	61	5.9	6.4	253	21.0	11.3	38	1.8	1.6
<b>MERRIMACK COUNTY</b>											
NH-CVW	122	08-29-00	27	2.8	5.4	1480	24.5	13.5	62	12	2.2
NH-HUW	118	08-21-00	1	.1	8.6	135	--	10.3	17	3.0	.9
<b>ROCKINGHAM COUNTY</b>											
NH-AUW	174	08-09-00	2	.2	8.3	235	23.0	12.7	27	5.8	.9
NH-KFW	51	06-07-00	2	.2	7.9	507	--	9.7	49	27	1.3
NH-SAW	156	06-06-00	2	.2	7.	386	--	11.0	56	5.3	2.2
<b>STRAFFORD COUNTY</b>											
NH-LIW	28	06-08-00	57	5.9	6.8	444	--	9.7	48	11	1.0

MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENTIFIER	DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS FIX END FIELD CAC0 <sub>3</sub> (MG/L) (39036)	ALKA-LINITY WAT DIS TOT IT MG/L AS CAC0 <sub>3</sub> (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO <sub>3</sub> (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO <sub>3</sub> (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO <sub>2</sub> ) (00955)	SULFATE DIS-SOLVED (MG/L AS SO <sub>4</sub> ) (00945)	
<b>BELKNAP COUNTY</b>											
NH-BLW	122	09-11-00	120	190	190	220	6	51	6.2	10	.8
NH-NHW	22	08-15-00	2.3	27	25	31	0	1.3	<.	13	6.3
<b>CARROLL COUNTY</b>											
NH-HJW	5	08-24-00	2.5	11	11	13	0	.5	1.5	9.9	2.9
NH-SEW	36	09-25-00	10	54	52	63	0	2.6	1.8	16	3.5
NH-WRW	37	08-28-00	260	560	518	606	8	50	18	11	<.3
<b>GRAFTON COUNTY</b>											
NH-HRW	66	08-10-00	3.9	110	114	139	0	1.5	.2	17	7.6
NH-WDW	6	08-16-00	12	81	81	99	0	17	1.2	15	10
<b>HILLSBOROUGH COUNTY</b>											
NH-B4W	558	06-22-00	4.8	50	47	57	0	3.4	.2	16	8.4
NH-HGW	59	08-14-00	3.8	69	69	85	0	2.5	.2	15	12
NH-HSW	354	06-05-00	14	100	93	113	0	13	<.1	14	15
NH-LMW	83	06-19-00	7.9	84	86	105	0	11	<.1	10	20
<b>MERRIMACK COUNTY</b>											
NH-CVW	122	08-29-00	180	12	13	16	0	440	.6	20	10
NH-HUW	118	08-21-00	6.2	53	51	62	0	1.6	.4	17	13
<b>ROCKINGHAM COUNTY</b>											
NH-AUW	174	08-09-00	11	94	94	115	0	4.8	.9	19	16
NH-KFW	51	06-07-00	11	180	184	224	0	23	.2	13	54
NH-SAW	156	06-06-00	9.8	100	107	130	0	47	.1	21	19
<b>STRAFFORD COUNTY</b>											
NH-LIW	28	06-08-00	18	120	124	151	0	42	<.1	8.7	18

## MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENT- I- FIER	DATE	SULFIDE TOTAL FIELD (MG/L AS S) (00745)	NITRO- GEN,AM- MONIA+ ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	
<b>BELKNAP COUNTY</b>											
NH-BLW	122	09-11-00	.045	E.09	.06	<.05	<.01	.019	.02	2.30	515
NH-NHW	22	08-15-00	.011	<.1	<.02	.06	<.01	<.00	<.01	20.92	200
<b>CARROLL COUNTY</b>											
NH-HJW	5	08-24-00	.003	<.1	<.02	.38	<.01	<.006	<.01	5.17	265
NH-SEW	36	09-25-00	.001	<.1	<.02	<.05	<.01	E.004	<.01	36.2	477
NH-WRW	37	08-28-00	.008	<.1	<.02	.05	<.01	.016	.02	28.50	700
<b>GRAFTON COUNTY</b>											
NH-HRW	66	08-10-00	.010	<.1	<.02	<.05	<.01	<.006	<.01	25.63	640
NH-WDW	6	08-16-00	.012	<.1	<.02	<.05	<.01	<.006	<.01	55.15	380
<b>HILLSBOROUGH COUNTY</b>											
NH-B4W	558	06-22-00	.002	<.1	<.02	<.05	<.01	.006	<.01	30.70	320
NH-HGW	59	08-14-00	.00	<.1	<.02	.07	<.01	E.004	<.01	25.6	550
NH-HSW	354	06-05-00	.011	<.1	<.02	<.05	<.01	<.006	<.01	--	500
NH-LMW	83	06-19-00	<.001	<.1	<.02	.85	<.01	<.006	<.01	26.21	303
<b>MERRIMACK COUNTY</b>											
NH-CVW	122	08-29-00	.004	<.1	<.02	.29	<.01	.023	.02	24.49	500
NH-HUW	118	08-21-00	.004	<.1	<.02	<.05	<.01	.045	.01	1.25	261
<b>ROCKINGHAM COUNTY</b>											
NH-AUW	174	08-09-00	.028	<.1	<.02	<.05	<.01	<.006	<.01	1.16	538
NH-KFW	51	06-07-00	.004	E.06	.02	<.05	<.01	E.005	<.01	2.70	175
NH-SAW	156	06-06-00	.001	<.1	<.02	<.05	<.01	.007	<.01	5.35	500
<b>STRAFFORD COUNTY</b>											
NH-LIW	28	06-08-00	<.016	<.1	<.02	3.2	<.01	<.006	<.01	36.95	175

MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENTIFIER	DATE	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	TURBIDITY (NTU) (00076)	ALUMINUM DIS-SOLVED (µG/L) AS AL) (01106)	ANTI-MONY, DIS-SOLVED (µG/L) AS SB) (01095)	ARSENIC DIS-SOLVED (µG/L) AS AS) (01000)	BARIUM, DIS-SOLVED (µG/L) AS BA) (01005)	BERYL, DIS-SOLVED (µG/L) AS BE) (01010)	BORON, DIS-SOLVED (µG/L) AS B) (01020)
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BELKNAP COUNTY

NH-BLW	122	09-11-00	690	305	.73	<1	<1	<.9	48	<1	39.5
NH-NHW	22	08-15-00	890	53	6.3	<1	<1	<.9	1	<1	<12

CARROLL COUNTY

NH-HJW	5	08-24-00	1330	29	.15	140	<1	<.9	<1	2	<12
NH-SEW	36	09-25-00	1060	85	.03	<1	<1	2	<1	<1	13.2
NH-WRW	37	08-28-00	205	652	.31	3	<1	<.9	29	<1	39.4

GRAFTON COUNTY

NH-HRW	66	08-10-00	690	154	2.62	<1	<1	1	12	<1	<12
NH-WDW	6	08-16-00	790	149	.99	1	<1	1	2	<1	12.3

HILLSBOROUGH COUNTY

NH-B4W	558	06-22-00	302	89	1.3	--	<1	<.9	25	<1	<12
NH-HGW	59	08-14-00	1450	108	.27	<1	<1	<.9	11	<1	<12
NH-HSW	354	06-05-00	380	143	.17	--	<1	7	90	<1	<12
NH-LMW	83	06-19-00	160	159	.91	--	<1	2	3	<1	26.6

MERRIMACK COUNTY

NH-CVW	122	08-29-00	620	876	4.6	265	<1	2	12	8	E7.4
NH-HUW	118	08-21-00	670	95	.25	<1	<1	E.6	3	<1	<12

ROCKINGHAM COUNTY

NH-AUW	174	08-09-00	270	145	1.03	<1	<1	<.9	81	<1	<12
NH-KFW	51	06-07-00	120	300	.10	--	2	25	10	<1	<12
NH-SAW	156	06-06-00	190	270	.37	--	<1	17	4	<1	E8.2

STRAFFORD COUNTY

NH-LIW	28	06-08-00	254	244	.06	--	<1	2	1	<1	E7.4
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## MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENT- I- FIER	DATE	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CADMIUM DIS- SOLVED (µG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (µG/L AS CR) (01030)	CHRO- COBALT, DIS- SOLVED (µG/L AS CO) (01035)	COPPER, DIS- SOLVED (µG/L AS CU) (01040)	IRON, DIS- SOLVED (µG/L AS FE) (01046)	IRON FERROUS WATER TOTAL FIELD (µG/L) (99032)	LEAD, DIS- SOLVED (µG/L AS PB) (01049)	LITHIUM DIS- SOLVED (µG/L AS LI) (01130)	
<b>BELKNAP COUNTY</b>											
NH-BLW	122	09-11-00	.18	<1	<.8	<1	<1	15	10	<1	14
NH-NHW	22	08-15-00	<.01	<1	<.8	<1	11	<10	<10	<1	2
<b>CARROLL COUNTY</b>											
NH-HJW	5	08-24-00	<.01	<1	<.8	<1	17	<10	<10	4	7
NH-SEW	36	09-25-00	<.01	<1	.8	<1	3	<10	<10	<1	35
NH-WRW	37	08-28-00	.27	<1	<.8	<1	<1	64	50	<1	1,230
<b>GRAFTON COUNTY</b>											
NH-HRW	66	08-10-00	.03	<1	<.8	<1	<1	55	50	<1	4
NH-WDW	6	08-16-00	.02	<1	<.8	<1	<1	100	80	<1	4
<b>HILLSBOROUGH COUNTY</b>											
NH-B4W	558	06-22-00	<.01	<1	<.8	<1	12	<10	<10	<1	4
NH-HGW	59	08-14-00	.04	<1	<.8	<1	6	<10	10	<1	5
NH-HSW	354	06-05-00	.01	<1	<.8	<1	<1	33	10	<1	.8
NH-LMW	83	06-19-00	<.01	<1	<.8	<1	7	10	<10	<1	.5
<b>MERRIMACK COUNTY</b>											
NH-CVW	122	08-29-00	.07	2	E.8	<1	416	39	20	8	19
NH-HUW	118	08-21-00	<.01	<1	.8	<1	<1	29	30	<1	5
<b>ROCKINGHAM COUNTY</b>											
NH-AUW	174	08-09-00	.01	<1	<.8	<1	<1	62	80	<1	4
NH-KFW	51	06-07-00	.07	<1	<.8	<1	<1	330	260	<1	5
NH-SAW	156	06-06-00	.06	<1	<.8	<1	<1	190	200	<1	23
<b>STRAFFORD COUNTY</b>											
NH-LIW	28	06-08-00	.01	<1	<.8	<1	3	<10	<10	<1	1

LOCAL IDENTIFIER	DATE	MANGANESE, DIS-SOLVED (µG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (µG/L AS MO) (01060)	NICKEL, DIS-SOLVED (µG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (µG/L AS SE) (01145)	SILVER, DIS-SOLVED (µG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (µG/L AS SR) (01080)	THALLIUM, DIS-SOLVED (µG/L AS TL) (01057)	VANADIUM, DIS-SOLVED (µG/L AS V) (01085)	
<b>BELKNAP COUNTY</b>										
NH-BLW	122	09-11-00	<1	1	<1	<.7	<1	185.9	<.9	<1.0
NH-NHW	22	08-15-00	12	<1	1	<.7	<1	58.85	<.9	<1.0
<b>CARROLL COUNTY</b>										
NH-HJW	5	08-24-00	2	1	<1	<.7	<1	17.45	<.9	<1.0
NH-SEW	36	09-25-00	<1	17	<1	<.7	<1	78.05	<.9	<1.0
NH-WRW	37	08-28-00	3	1	<1	<.7	<1	313.3	<.9	1.7
<b>GRAFTON COUNTY</b>										
NH-HRW	66	08-10-00	487	<1	<1	<.7	<1	236.3	<.9	<1.0
NH-WDW	6	08-16-00	193	<1	<1	<.7	<1	92.83	<.9	<1.0
<b>HILLSBOROUGH COUNTY</b>										
NH-B4W	558	06-22-00	5	2	<1	.9	<1	100.5	<.9	1.8
NH-HGW	59	08-14-00	<1	<1	3	<.7	<1	406.7	<.9	<1.0
NH-HSW	354	06-05-00	3	2	<1	<.7	<1	360.2	<.9	<1.0
NH-LMW	83	06-19-00	<1	<1	1	<.7	<1	100.3	<.9	<1.0
<b>MERRIMACK COUNTY</b>										
NH-CVW	122	08-29-00	703	<1	3	<.7	<1	156.6	<.9	<1.0
NH-HUW	118	08-21-00	114	2	<1	<.7	<1	79.25	<.9	<1.0
<b>ROCKINGHAM COUNTY</b>										
NH-AUW	174	08-09-00	35	2	<1	<.7	<1	1661	<.9	<1.0
NH-KFW	51	06-07-00	75	2	2	<.7	<1	233.6	<.9	<1.0
NH-SAW	156	06-06-00	545	<1	2	<.7	<1	144.4	<.9	<1.0
<b>STRAFFORD COUNTY</b>										
NH-LIW	28	06-08-00	<1	<1	3	<.7	<1	178.8	<.9	<1.0



## MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENT- I- FIER	DATE	ZINC, DIS- SOLVED (µG/L AS ZN) (01090)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µG/L) (04040)	PRO- METON, WATER, DISS, REC (µG/L) (04037)	PRON- AMIDE WATER, FLTRD 0.7 U GF, REC (µG/L) (82676)	1,1-DI- CHLORO- ETHANE TOTAL (µG/L) (34496)	BENZENE 123-TRI METHYL- WATER UNFLTRD RECOVER (µG/L) (77221)	BENZENE 124-TRI METHYL RECOVER (µG/L) (77222)	BENZENE 135-TRI METHYL WATER UNFLTRD REC (µG/L) (77226)	
<b>BELKNAP COUNTY</b>										
NH-BLW	122	09-11-00	<1	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-NHW	22	08-15-00	7	<.002	<.018	<.003	<.066	<.12	<.056	<.044
<b>CARROLL COUNTY</b>										
NH-HJW	5	08-24-00	6	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-SEW	36	09-25-00	3	<.002	<.018	E.0020	<.066	<.12	<.056	<.044
NH-WRW	37	08-28-00	<1	<.002	<.018	<.003	<.066	E.0506	.126	E.0877
<b>GRAFTON COUNTY</b>										
NH-HRW	66	08-10-00	<1	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-WDW	6	08-16-00	<1	<.002	<.018	<.003	<.066	<.12	E.0142	<.044
<b>HILLSBOROUGH COUNTY</b>										
NH-B4W	558	06-22-00	--	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-HGW	59	08-14-00	6	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-HSW	354	06-05-00	--	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-LMW	83	06-19-00	13	<.002	.0206	<.003	<.066	<.12	<.056	<.044
<b>MERRIMACK COUNTY</b>										
NH-CVW	122	08-29-00	463	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-HUW	118	08-21-00	<1	<.002	<.018	<.003	<.066	<.12	<.056	<.044
<b>ROCKINGHAM COUNTY</b>										
NH-AUW	174	08-09-00	<1	<.002	<.018	<.003	<.066	<.12	<.056	<.044
NH-KFW	51	06-07-00	--	E.0047	<.018	<.003	E.0823	<.12	<.056	<.044
NH-SAW	156	06-06-00	--	<.002	<.018	<.003	<.066	<.12	<.056	<.044
<b>STRAFFORD COUNTY</b>										
NH-LIW	28	06-08-00	--	<.002	<.018	<.003	<.066	<.12	<.056	<.044

MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENTIFIER	DATE	ISO-PROPYL-BENZENE WATER WHOLE REC (µG/L) (77223)	BENZENE N-PROPY WATER UNFLTRD REC (µG/L) (77224)	CHLORO-FORM TOTAL (µG/L) (32106)	DI-CHLORO-DI-FLUORO-METHANE TOTAL (µG/L) (34668)	ETHER TERT-PENTYL METHYL UNFLTRD RECOVER (µG/L) (50005)	METHYL TERT-BUTYL ETHER WAT UNF REC (µG/L) (78032)	METHYL-CHLO-RIDE TOTAL (µG/L) (34418)	OXYLENE WATER WHOLE TOTAL (µG/L) (77135)
<b>BELKNAP COUNTY</b>									
NH-BLW 122	09-11-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-NHW 22	08-15-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
<b>CARROLL COUNTY</b>									
NH-HJW 5	08-24-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-SEW 36	09-25-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-WRW 37	08-28-00	E.0318	E.0476	E.0386	<.27	<.11	<.17	E.0295	E.0550
<b>GRAFTON COUNTY</b>									
NH-HRW 66	08-10-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-WDW 6	08-16-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
<b>HILLSBOROUGH COUNTY</b>									
NH-B4W 558	06-22-00	<.032	<.042	<.052	<.27	<.11	E.119	<.5	<.038
NH-HGW 59	08-14-00	<.032	<.042	<.052	<.27	.113	1.34	<.5	<.038
NH-HSW 354	06-05-00	<.032	<.042	<.052	E.201	<.11	<.17	<.5	<.038
NH-LMW 83	06-19-00	<.032	<.042	E.0319	<.27	<.11	E.151	<.5	<.038
<b>MERRIMACK COUNTY</b>									
NH-CVW 122	08-29-00	<.032	<.042	E.0113	<.27	<.11	<.17	<.5	<.038
NH-HUW 118	08-21-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
<b>ROCKINGHAM COUNTY</b>									
NH-AUW 174	08-09-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-KFW 51	06-07-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
NH-SAW 156	06-06-00	<.032	<.042	<.052	<.27	<.11	<.17	<.5	<.038
<b>STRAFFORD COUNTY</b>									
NH-LIW 28	06-08-00	<.032	<.042	<.052	<.27	E.0381	.406	<.5	<.038

## MISCELLANEOUS GROUND-WATER QUALITY DATA FOR WELLS IN NEW HAMPSHIRE

LOCAL IDENT- I- FIER	DATE	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (µG/L) (77220)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	GROSS BETA, DIS- SOLVED AS CS-137) (03515)	RADIUM 226, DIS- SOLVED AS (PCI/L) (09503)	RADIUM 228 DIS- SOLVED AS RA-228) (81366)	RA-224 WATER FLTRD (PCI/L) (50833)	RADON 222 TOTAL (PCI/L) (82303)	URANIUM NATURAL DIS- SOLVED (µG/L AS U) (22703)	
<b>BELKNAP COUNTY</b>										
NH-BLW	122	09-11-00	<.06	3.8	<4.0	<1.0	<1.0	<1.0	1,000	<1
NH-NHW	22	08-15-00	<.06	<3.0	<4.0	<1.0	<1.0	<1.0	1,000	<1
<b>CARROLL COUNTY</b>										
NH-HJW	5	08-24-00	<.06	4.4	<4.0	<1.0	<1.0	<1.0	15,000	4
NH-SEW	36	09-25-00	<.06	17	12	<1.0	1.1	<1.0	15,000	8
NH-WRW	37	08-28-00	E.0875	<3.0	<4.0	<1.0	<1.0	<1.0	560	<1
<b>GRAFTON COUNTY</b>										
NH-HRW	66	08-10-00	<.06	<3.0	<4.0	<1.0	<1.0	<1.0	590	<1
NH-WDW	6	08-16-00	<.06	4.3	4.3	<1.0	1.3	1.11	1,200	<1
<b>HILLSBOROUGH COUNTY</b>										
NH-B4W	558	06-22-00	<.06	4.3	5.6	<1.0	<1.0	<1.0	1,900	1
NH-HGW	59	08-14-00	<.06	<3.0	<4.0	<1.0	<1.0	<1.0	80	<1
NH-HSW	354	06-05-00	<.06	9.9	7.6	<1.0	<1.0	<1.0	2,000	1
NH-LMW	83	06-19-00	<.06	<3.0	5.5	<1.0	<1.0	<1.0	2,400	<1
<b>MERRIMACK COUNTY</b>										
NH-CVW	122	08-29-00	<.06	35	82	6.75	<1.0	<1.0	220,000	13
NH-HUW	118	08-21-00	<.06	<3.0	<4.0	<1.0	<1.0	<1.0	1,200	<1
<b>ROCKINGHAM COUNTY</b>										
NH-AUW	174	08-09-00	<.06	11	14	<1.0	<1.0	<1.0	880	<1
NH-KFW	51	06-07-00	<.06	<3.0	<4.0	1.19	1.0	<1.0	770	2
NH-SAW	156	06-06-00	<.06	9.4	6.5	3.58	1.8	1.36	1,500	<1
<b>STRAFFORD COUNTY</b>										
NH-LIW	28	06-08-00	<.06	<3.0	<4.0	<1.0	<1.0	<1.0	1,600	<1

BELKNAP COUNTY

431916071125901. Local number, BAW 10, Town of Barnstead.

LOCATION.--Lat 43°19'16", long 71°12'59", Hydrologic Unit 01070002. Barnstead: about 0.8 miles north-northeast from junction of Rt. 126 and French Road and 1.6 miles west-southwest from Strafford NH.  
 Owner: Francesca Latawiec.

AQUIFER.--Sandy till of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in, depth 25 ft.

DATUM.--Altitude of land-surface datum is 530 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

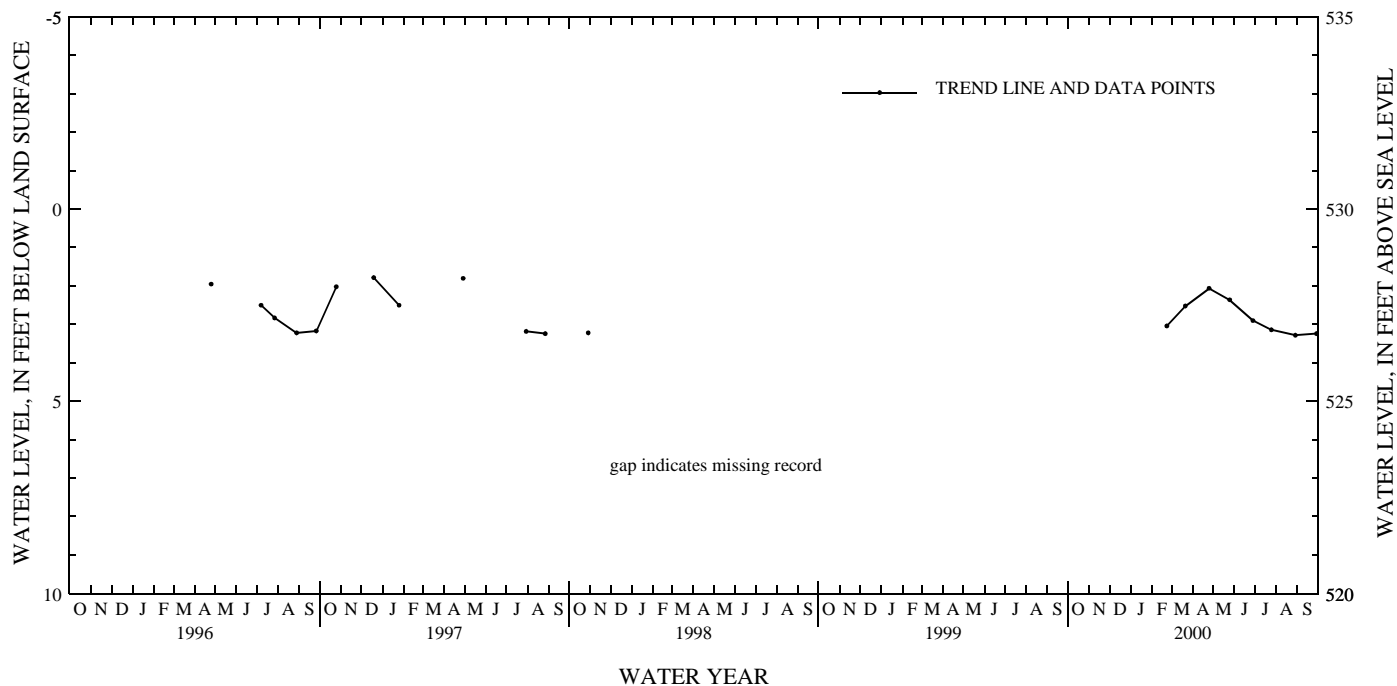
PERIOD OF RECORD.--June 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.78 ft below land-surface datum, December 19, 1996; lowest measured, 3.41 ft below land-surface datum, August 28, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
2000					
FEB 23	3.04	MAY 25	2.36	AUG 29	3.28
MAR 21	2.52	JUN 28	2.90	SEP 29	3.24
APR 25	2.06	JUL 25	3.14		

WATER YEAR 2000    HIGHEST    2.06    APR 25, 2000    LOWEST    3.28    AUG 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

CARROLL COUNTY

435948071220301. Local number, ADW 14, Town of Albany.

LOCATION.--Lat 43°59'48", long 71°22'03", Hydrologic Unit 01060002, approximately 1.5 mi west of Passaconaway and about 50 ft west of University of New Hampshire trail off Route 112 in Albany.

Owner: U.S. Department of Agriculture - Forest Service.

AQUIFER.--Silt, sand, and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 79.5 ft.

DATUM.--Elevation of land-surface datum is 1,250 ft above sea level from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

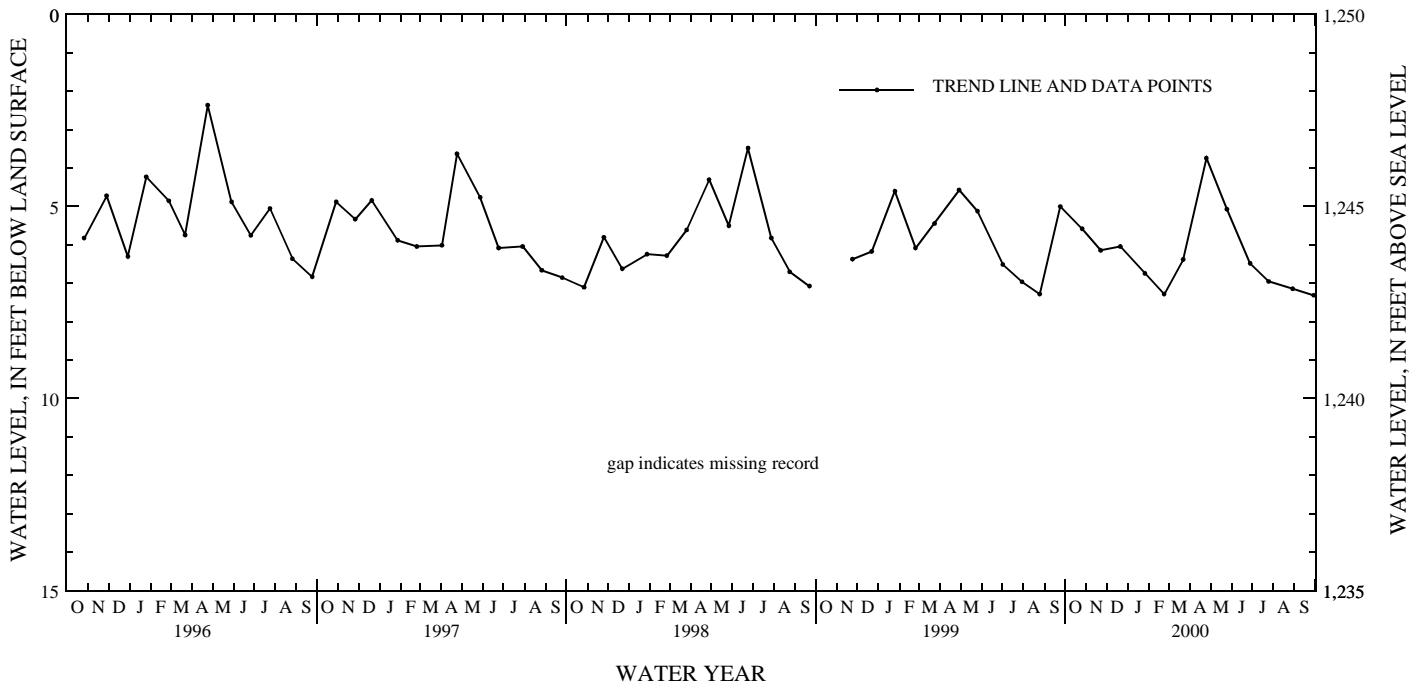
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.36 ft below land-surface datum, April 24, 1996; lowest measured, 7.50 ft below land-surface datum, September 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	5.58	FEB 23	7.28	JUN 28	6.48
NOV 22	6.14	MAR 22	6.38	JUL 25	6.95
DEC 21	6.04	APR 25	3.74	AUG 29	7.14
2000					
JAN 26	6.74	MAY 25	5.07	SEP 29	7.31

WATER YEAR 2000    HIGHEST    3.74 APR 25, 2000    LOWEST    7.31 SEP 29, 2000



CARROLL COUNTY

435948071220302. Local number, ADW 15, Town of Albany.

LOCATION.--Lat 43°59'48", long 71°22'03", Hydrologic Unit 01060002, approximately 1.5 mi west of Passaconaway and about 50 ft west of University of New Hampshire trail off Route 112 in Albany.

Owner: U.S. Department of Agriculture - Forest Service.

AQUIFER.--Silt, sand, and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 18 ft.

DATUM.--Elevation of land-surface datum is 1,250 ft above sea level from topographic map. Measuring point: Top of casing, 2.6 ft above land-surface datum.

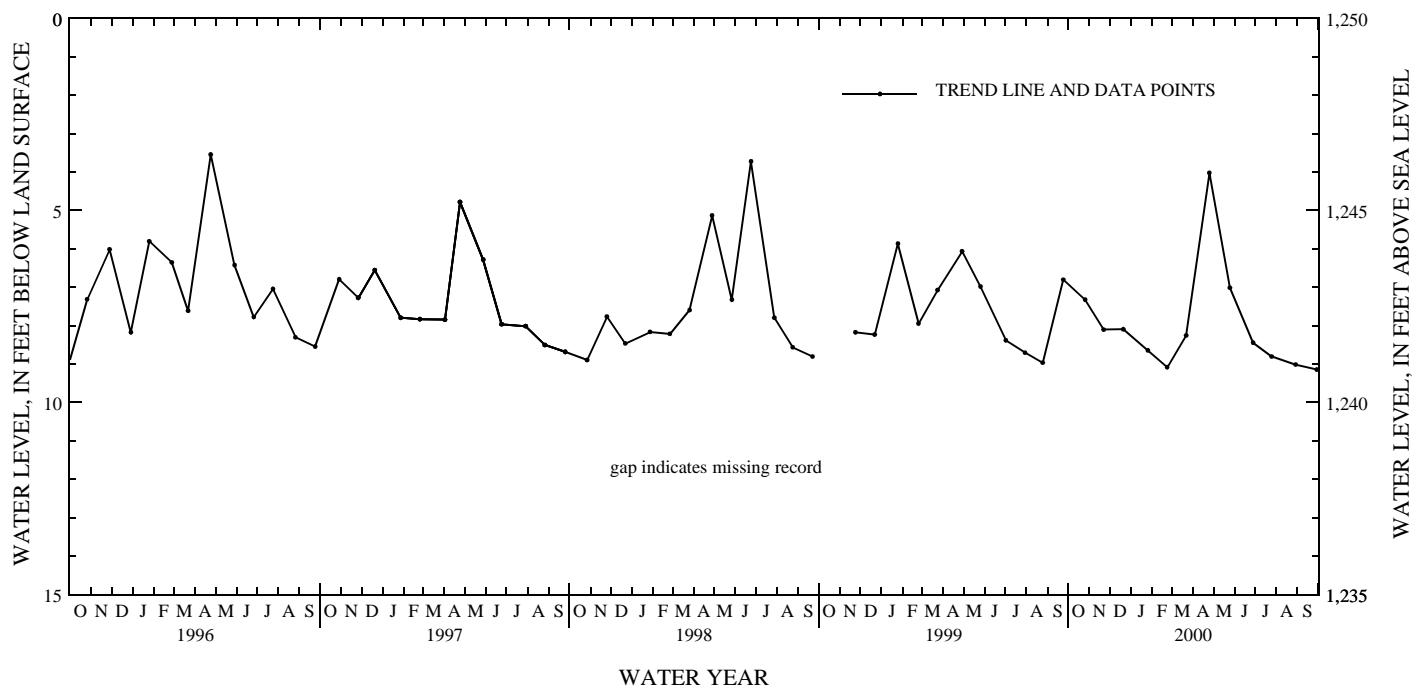
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.54 ft below land-surface datum, April 24, 1996; lowest measured, 9.26 ft below land-surface datum, September 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	7.32	FEB 23	9.08	JUN 28	8.44
NOV 22	8.10	MAR 22	8.25	JUL 25	8.80
DEC 21	8.09	APR 25	4.02	AUG 29	9.01
2000					
JAN 26	8.64	MAY 25	7.01	SEP 29	9.14

WATER YEAR 2000 HIGHEST 4.02 APR 25, 2000 LOWEST 9.14 SEP 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

CARROLL COUNTY

434221071051501. Local number, OXW 38, Town of Ossipee.

LOCATION.--Lat 43°42'21", long 71°05'15", Hydrologic Unit 01060002, in Pine River State Forest, 2 mi northeast of Ossipee and 1.2 mi east from junction of Routes 16 and 28.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 115 ft.

DATUM.--Elevation of land-surface datum is 550 ft above sea level from topographic map. Measuring point: Top of casing, 3.4 ft above land-surface datum.

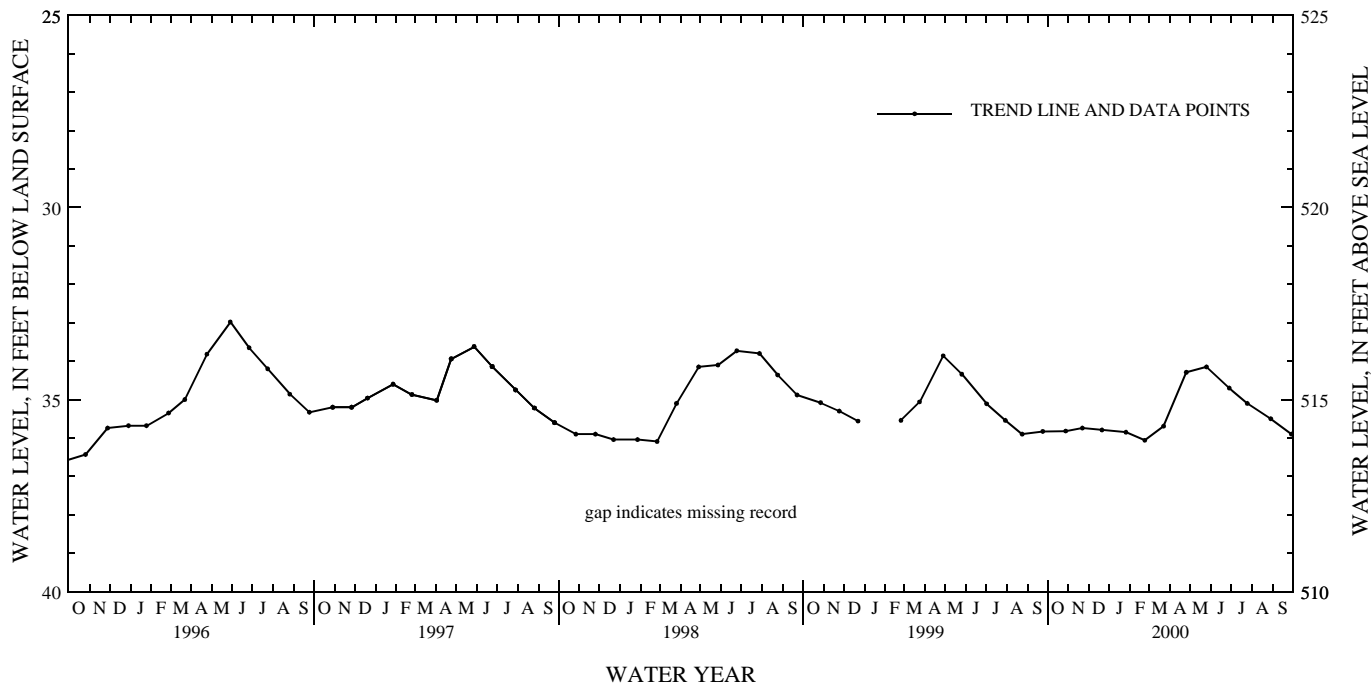
PERIOD OF RECORD.--1991 and April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.98 ft below land-surface datum, May 29, 1996; lowest measured, 37.00 ft below land-surface datum, September 23, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 28	35.82	FEB 23	36.06	JUN 28	34.70
NOV 22	35.74	MAR 22	35.69	JUL 25	35.10
DEC 21	35.79	APR 25	34.29	AUG 29	35.50
2000					
JAN 26	35.85	MAY 25	34.15	SEP 29	35.90

WATER YEAR 2000 HIGHEST 34.15 MAY 25, 2000 LOWEST 36.06 FEB 23, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

CHESHIRE COUNTY

425543072175801. Local number, KEW 2, Town of Keene.

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 Transportation.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 18 ft.

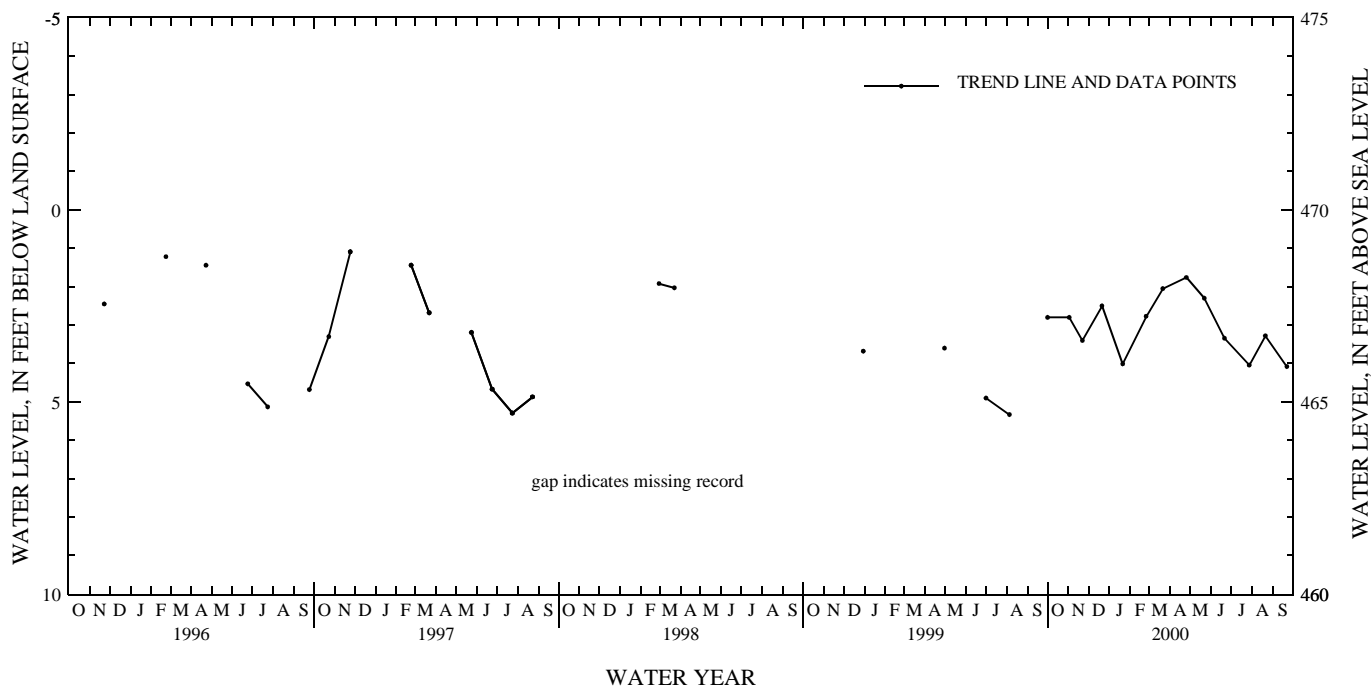
DATUM.--Elevation of land-surface datum is 470 ft above sea level from topographic map. Measuring point: Top of casing, 4.5 ft above land-surface datum.

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, September 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 01	2.80	FEB 25	2.77	JUL 28	4.04
NOV 02	2.80	MAR 21	2.05	AUG 21	3.28
22	3.40	APR 25	1.76	SEP 22	4.08
DEC 21	2.50	MAY 22	2.30		
2000					
JAN 21	4.01	JUN 21	3.34		
WATER YEAR 2000    HIGHEST    1.76 APR 25, 2000    LOWEST    4.08 SEP 22, 2000					





GROUND-WATER LEVELS IN NEW HAMPSHIRE

COOS COUNTY

445334071291701. Local number, CTW 73, Town of Colebrook.

LOCATION.--Lat 44°53'34", long 71°29'17", Hydrologic Unit 01080101, 0.5 mi east from the junction of Routes 3 and 26 in Colebrook, approximately 450 ft south of Route 26, and 100 ft south of the Mohawk River.

Owner: Lemieux's Ski-Doo Shop.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 27 ft.

DATUM.--Elevation of land-surface datum is 1,030 ft above sea level from topographic map. Measuring point: Top of casing, 3.2 ft above land-surface datum.

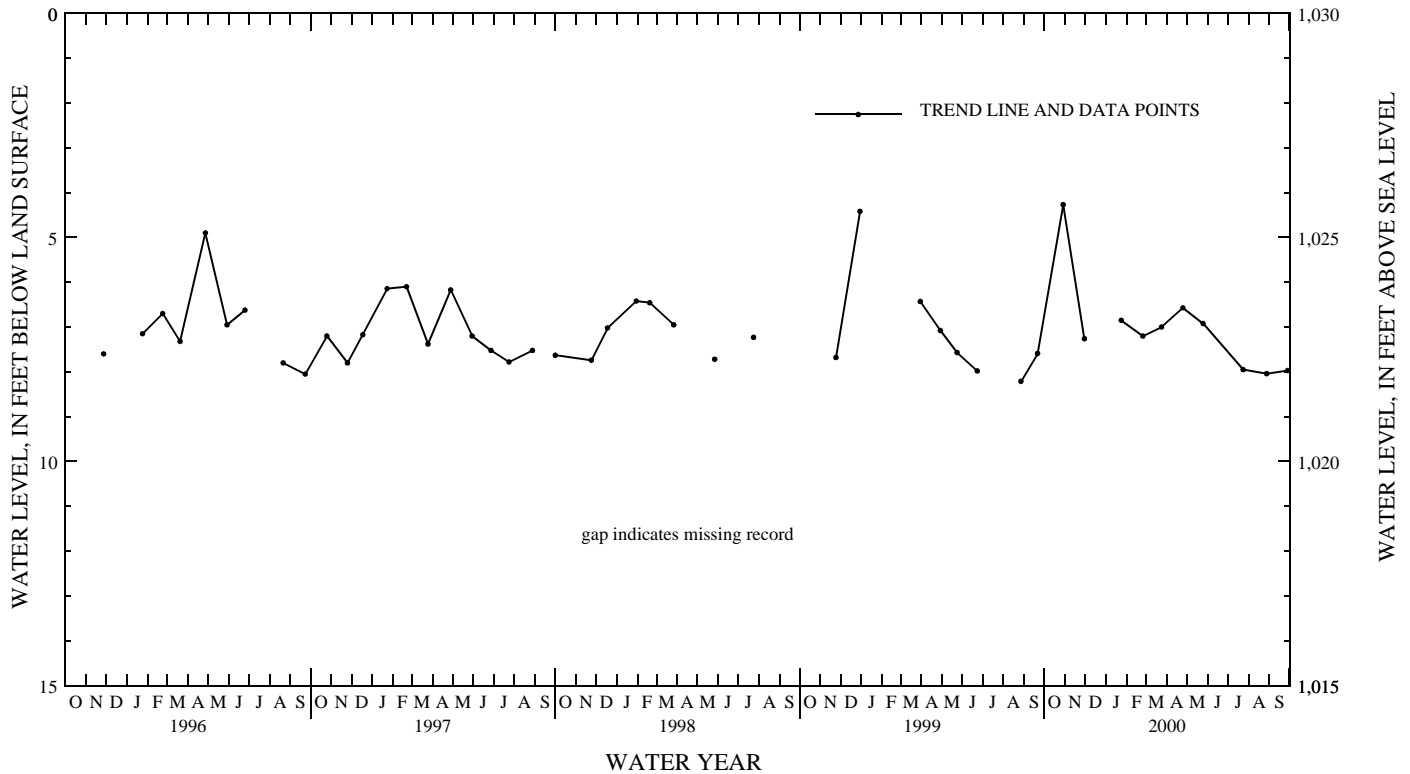
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.27 ft below land-surface datum, April 27, 1996, October 29, 1999; lowest measured, 8.21 ft below land-surface datum, August 27, 1999.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 29	4.27	MAR 24	7.00	AUG 28	8.04
NOV 30	7.26	APR 25	6.57	SEP 28	7.97
2000					
JAN 24	6.85	MAY 25	6.92		
FEB 25	7.20	JUL 24	7.95		

WATER YEAR 2000    HIGHEST    4.27    OCT 29, 1999    LOWEST    8.04    AUG 28, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

COOS COUNTY

444733071094901. Local number, ETW 1, Town of Errol.

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.

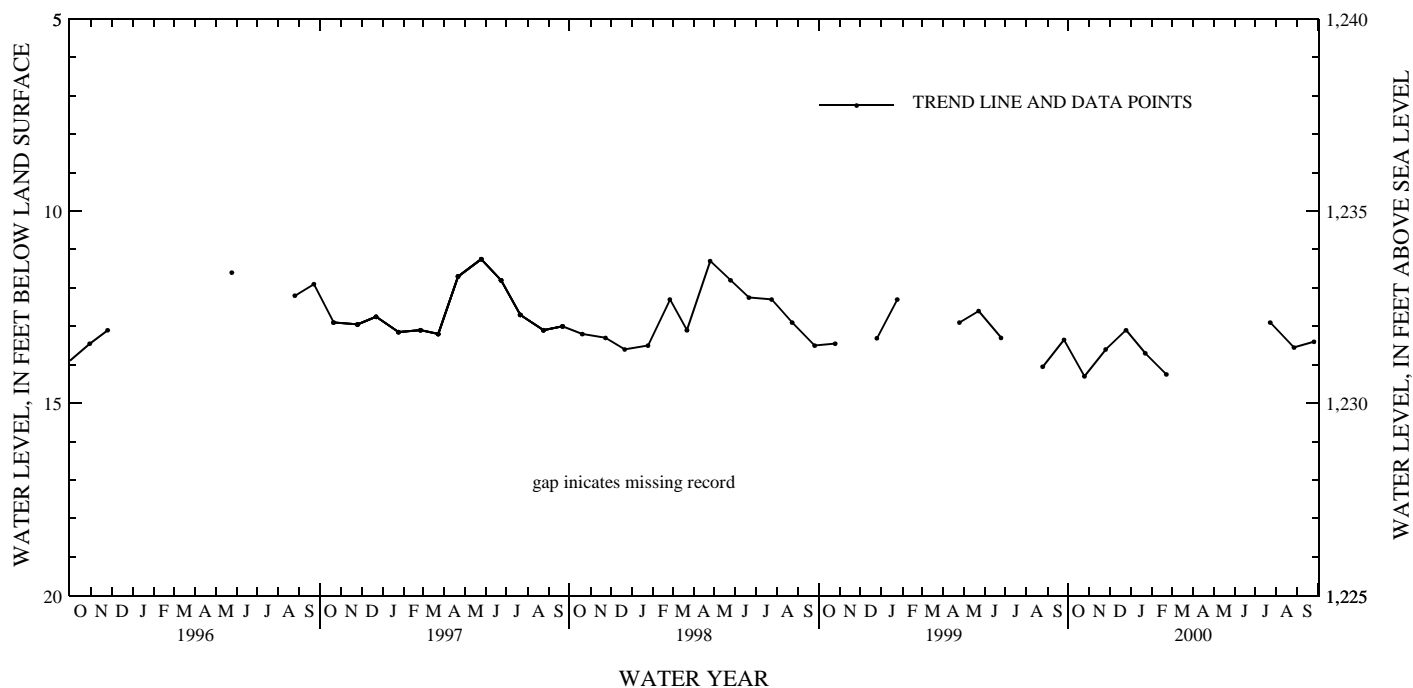
DATUM.--Elevation of land-surface datum is 1,245 ft above sea level from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

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, 14.30 ft below land-surface datum, October 25, 1999.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 25	14.30	JAN 22	13.70	AUG 27	13.55
NOV 25	13.60	FEB 22	14.25	SEP 25	13.40
DEC 25	13.10	JUL 23	12.90		
WATER YEAR 2000		HIGHEST 12.90	JUL 23, 2000	LOWEST 14.30	OCT 25, 1999



GROUND-WATER LEVELS IN NEW HAMPSHIRE

COOS COUNTY

442830071321001. Local number, LCW 1, Town of Lancaster.

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: Forbes Farm Partnership.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven, unused test well, diameter 2.5 in., depth 30 ft.

DATUM.--Elevation of land-surface datum is 940 ft above sea level from topographic map. 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.

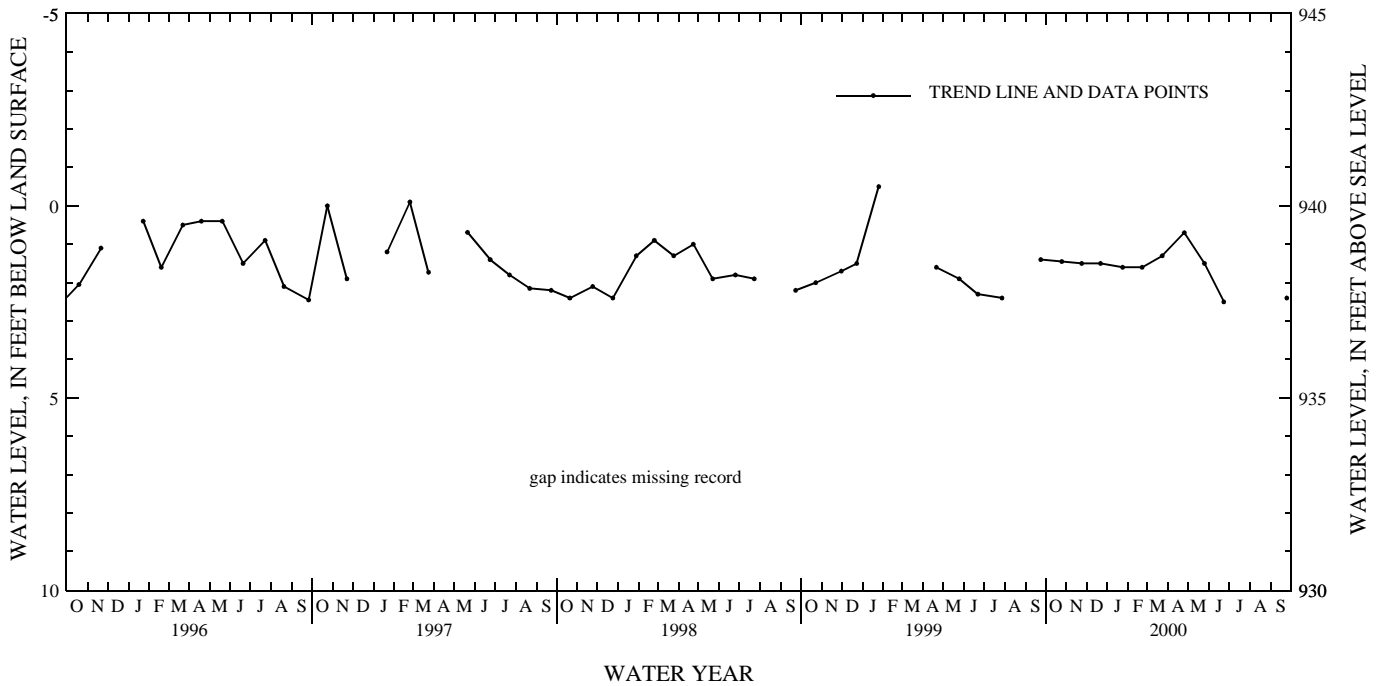
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing at 1.0 ft above land-surface datum, April 26, 1970, April 28, 1972, December 21, 1982, February 21, March 21, 1986, March 27, 1987; lowest measured, 2.67 ft below land-surface datum, September 24, 1972.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 25	1.45	FEB 22	1.60	JUN 23	2.50
NOV 24	1.50	MAR 23	1.30	SEP 25	2.40
DEC 22	1.50	APR 25	.70		
2000					
JAN 24	1.60	MAY 25	1.50		

WATER YEAR 2000 HIGHEST .70 APR 25, 2000 LOWEST 2.50 JUN 23, 2000

+ READINGS ABOVE LAND SURFACE DATUM



COOS COUNTY

442450071052301. Local number, SJW 2, Town of Shelburne.

LOCATION.--Lat 44°24'50", long 71°05'23", Hydrologic Unit 01040001, 1.2 mi northwest of Shelburne, approximately 300 ft south of North Rd., and 1,000 ft north of the Androscoggin River.

Owner: Oxford Paper Company.

AQUIFER.-- Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 40.7 ft.

DATUM.--Elevation of land-surface datum is 700 ft above sea level from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

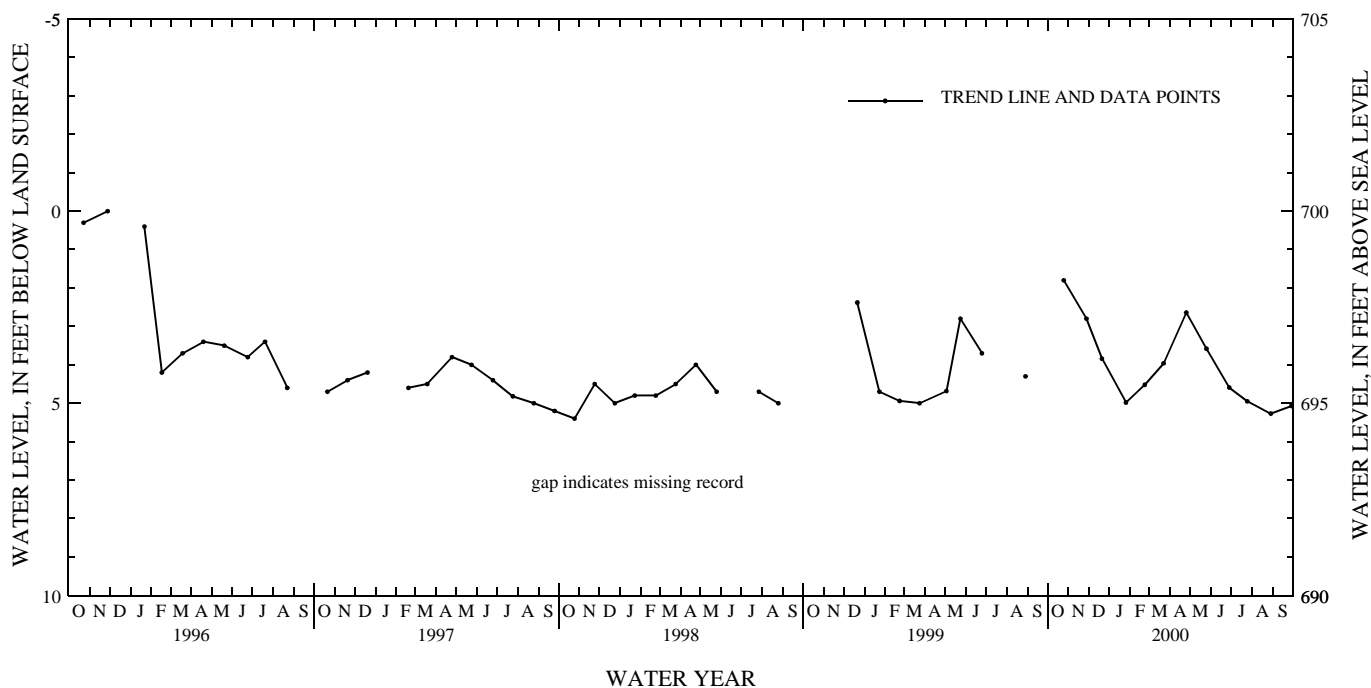
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.00 ft below land-surface datum (at land-surface), November 28, 1995; lowest measured, 5.40 ft below land-surface datum, October 25, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 25	1.80	FEB 23	4.52	JUN 28	4.59
NOV 28	2.80	MAR 22	3.96	JUL 25	4.95
DEC 21	3.84	APR 25	2.64	AUG 29	5.27
2000					
JAN 26	4.98	MAY 25	3.58	SEP 29	5.07

WATER YEAR 2000    HIGHEST    1.80    OCT 25, 1999    LOWEST    5.27    AUG 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

GRAFTON COUNTY

434952071390901. Local number, CBW 34, Town of Campton.

LOCATION.--Lat 43°49'52", long 71°39'09", Hydrologic Unit 01070001, approximately 600 ft northeast of Beebe River Station on east side of railroad tracks in Campton, about 1,000 ft east from I-93.

Owner: Beebe River Wood Products.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, depth 107 ft.

DATUM.--Elevation of land-surface datum is 541 ft above sea level. Measuring point: Top of casing, 2.6 ft above land-surface datum.

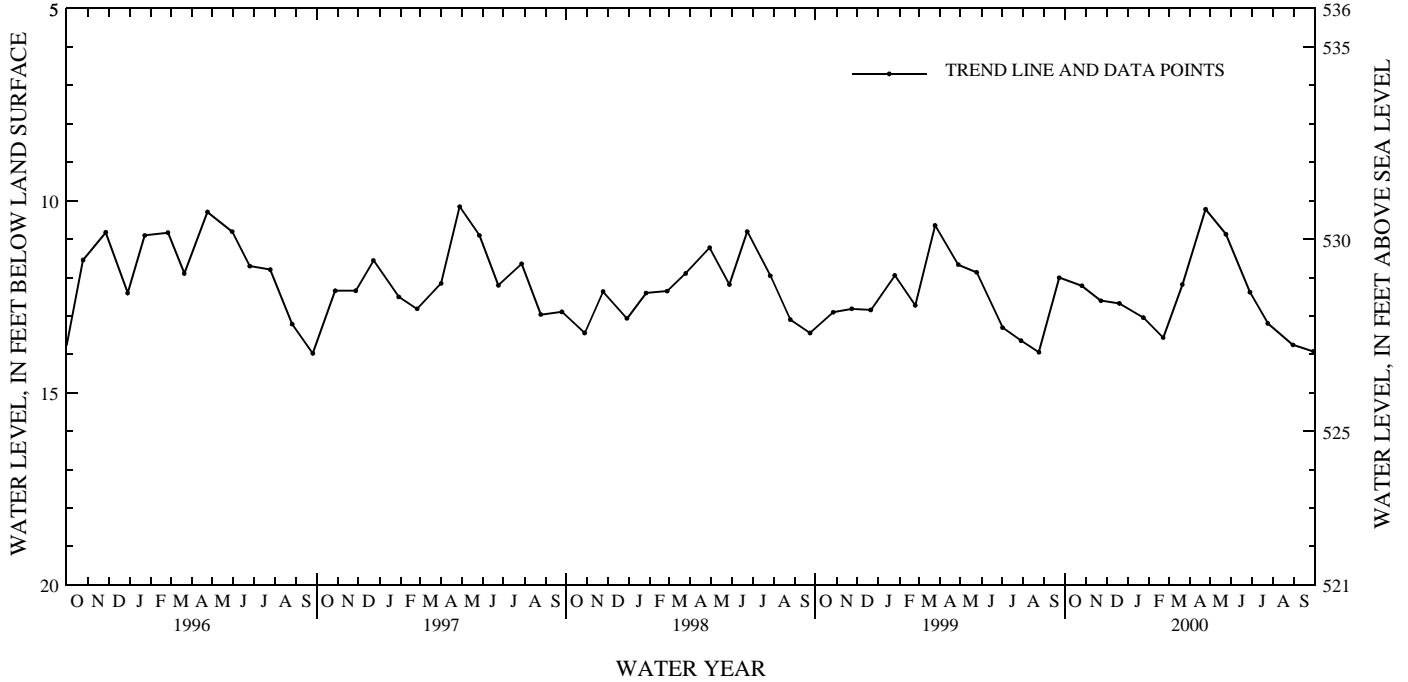
PERIOD OF RECORD.-- 1988, 1989 and May 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft below land-surface datum, April 28, 1997; lowest measured, 14.25 ft below land-surface datum, March 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	12.21	FEB 22	13.56	JUN 28	12.38
NOV 23	12.60	MAR 21	12.18	JUL 24	13.19
DEC 20	12.67	APR 24	10.22	AUG 30	13.75
2000					
JAN 24	13.04	MAY 24	10.87	SEP 29	13.92

WATER YEAR 2000    HIGHEST 10.22 APR 24, 2000    LOWEST 13.92 SEP 29, 2000



GRAFTON COUNTY

433616072074001. Local number, ENW 30, Town of Enfield.

LOCATION.--Lat 43°36'16", long 72°07'40", Hydrologic Unit 01080104, 50 ft north from the junction of Route 4A and Lakeview Drive in Enfield, and about 600 ft from the southeastern corner of Mascoma Lake.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 37.5 ft.

DATUM.--Elevation of land-surface datum is 758 ft above sea level. Measuring point: Top of casing, 2.8 ft above land-surface datum.

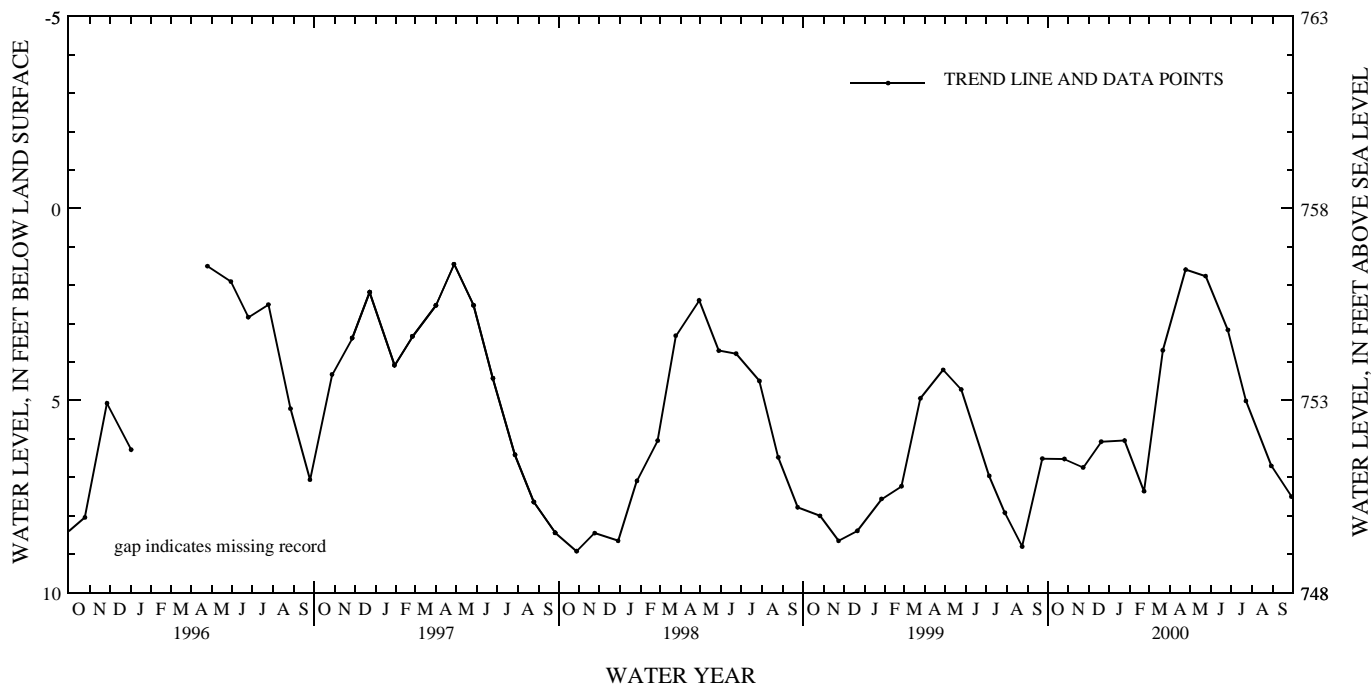
PERIOD OF RECORD.--1990, 1991, and April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft below land-surface datum, April 28, 1997; lowest measured, 8.92 ft below land-surface datum, October 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	6.52	FEB 22	7.36	JUN 26	3.16
NOV 23	6.74	MAR 21	3.69	JUL 23	5.01
DEC 20	6.07	APR 24	1.59	AUG 30	6.70
2000					
JAN 24	6.04	MAY 24	1.76	SEP 29	7.50

WATER YEAR 2000    HIGHEST    1.59    APR 24, 2000    LOWEST    7.50    SEP 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

GRAFTON COUNTY

441401071531501. Local number, LLW 19, Town of Lisbon.

LOCATION.--Lat 44°14'01", long 71°53'15", Hydrologic Unit 01080101, 0.4 mi southwest from the junction of Routes 302 and 117 in Lisbon, and approximately 75 ft east of Route 302.

Owner: Lester Presby.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 42 ft.

DATUM.--Elevation of land-surface datum is 590 ft above sea level from topographic map. Measuring point: Top of casing, 2.7 ft above land-surface datum.

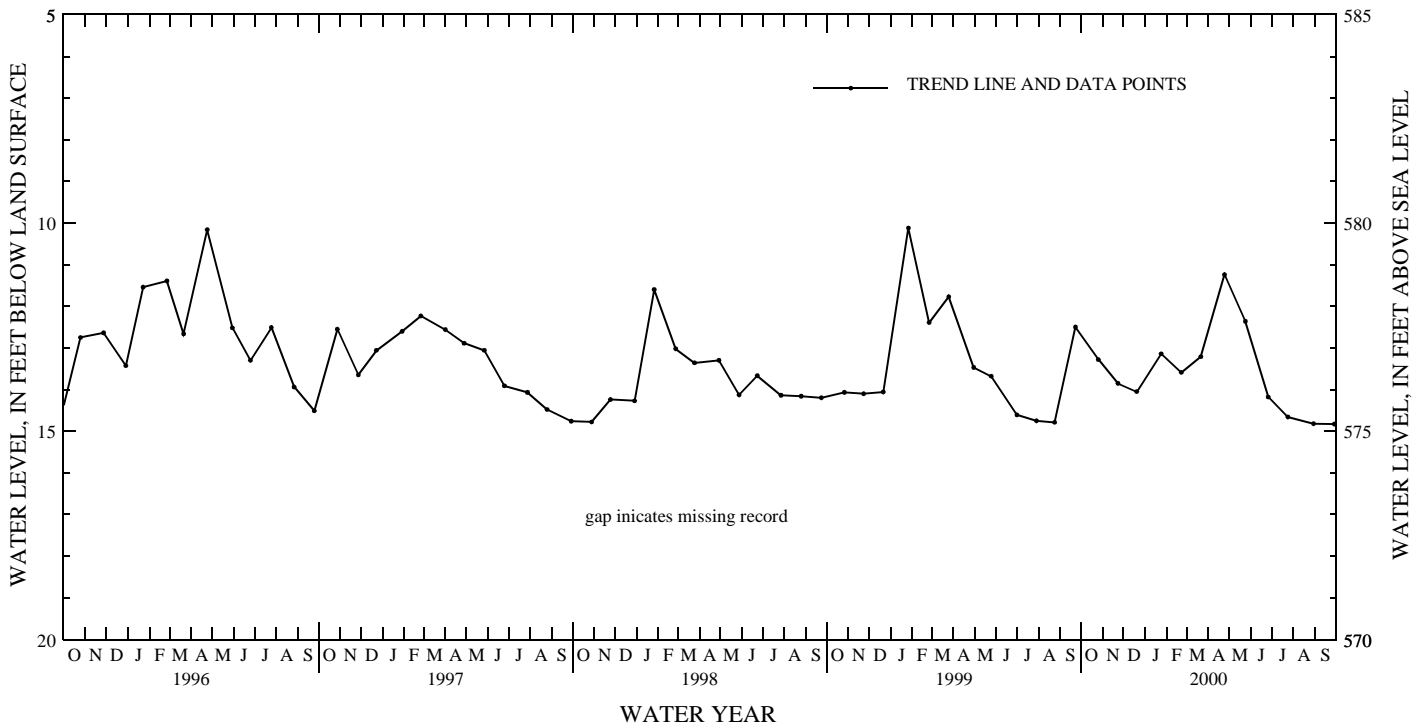
PERIOD OF RECORD.--1991 and May 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.12 ft below land-surface datum, January 26, 1999; lowest measured, 14.83 ft below land-surface datum, September 29, 2000.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	13.28	FEB 22	13.59	JUN 26	14.18
NOV 23	13.85	MAR 21	13.21	JUL 24	14.66
DEC 20	14.05	APR 24	11.24	AUG 30	14.82
2000					
JAN 24	13.14	MAY 24	12.36	SEP 29	14.83

WATER YEAR 2000    HIGHEST 11.24 APR 24, 2000    LOWEST 14.83 SEP 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

HILLSBOROUGH COUNTY

425744071532001. Local number, GSW 75, Town of Greenfield.

LOCATION.--Lat 42°57'44", long 71°53'20", Hydrologic Unit 01070003, in Greenfield State Park, 1.1 mi northwest from Greenfield and about 0.2 mi southwest from Route 31.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused test well, diameter 2 in., depth 68 ft.

DATUM.--Elevation of land-surface datum is 882 ft above sea level. Measuring point: Top of casing, 0.9 ft above land-surface datum.

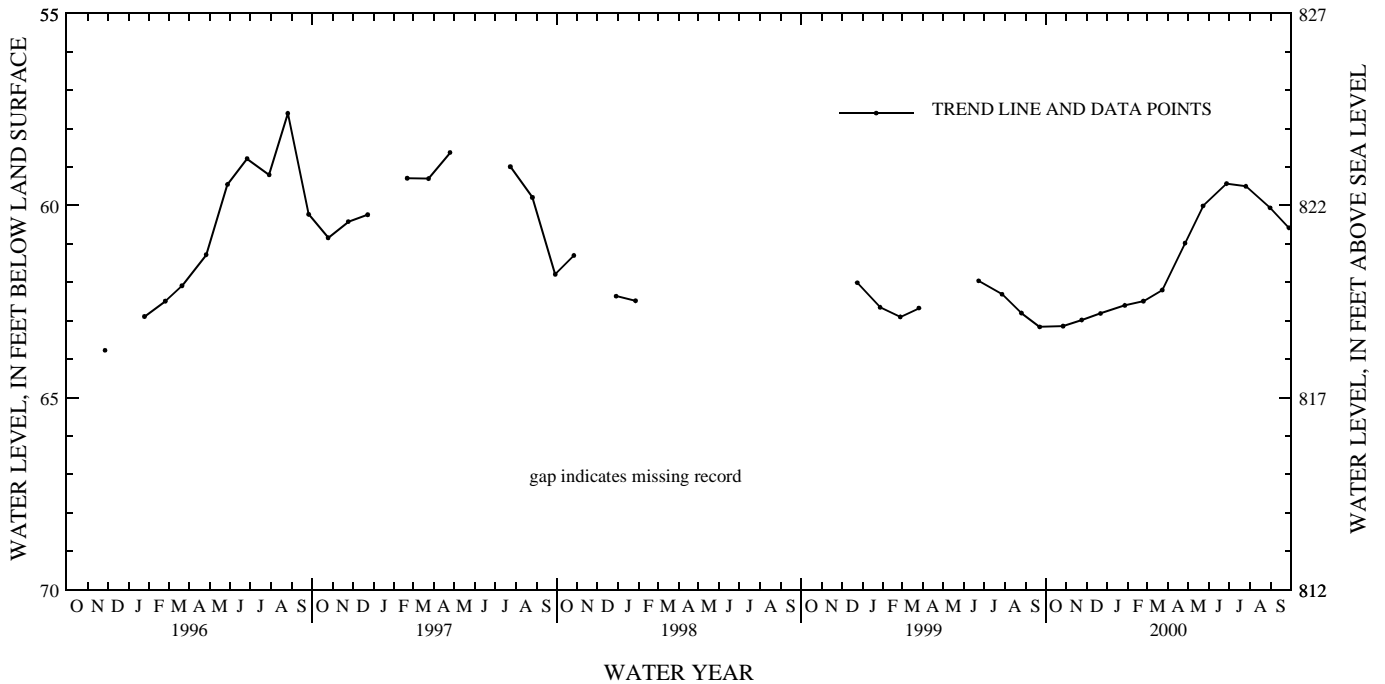
PERIOD OF RECORD.--July 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.60 ft below land-surface datum, August 26, 1996; lowest measured, 63.77 ft below land-surface datum, November 27, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	63.14	FEB 24	62.49	JUN 27	59.43
NOV 24	62.98	MAR 23	62.20	JUL 26	59.50
DEC 22	62.81	APR 26	60.98	AUG 31	60.06
2000					
JAN 27	62.60	MAY 23	60.01	SEP 28	60.58

WATER YEAR 2000 HIGHEST 59.43 JUN 27, 2000 LOWEST 63.14 OCT 27, 1999





GROUND-WATER LEVELS IN NEW HAMPSHIRE

HILLSBOROUGH COUNTY

425024071413001. Local number, MOW 36, Town of Milford.

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.

INSTRUMENTATION.--Electronic water-level recorder with hourly readings. Prior to October 1994, monthly readings were published.

DATUM.--Elevation of land-surface datum is 263 ft above sea level (levels by U.S. Geological Survey). Previously published as about 265 ft above sea level. Measuring point: Top of concrete casing on south side of well, 1.60 ft above land-surface datum, elevation 264.34 ft above sea level (levels by U.S. Geological Survey).

REMARKS.--Record complete.

PERIOD OF RECORD.--January 1962 to current year. Prior to May 1966, published in New Hampshire Basic-Data Report No.2, Ground-Water Series.

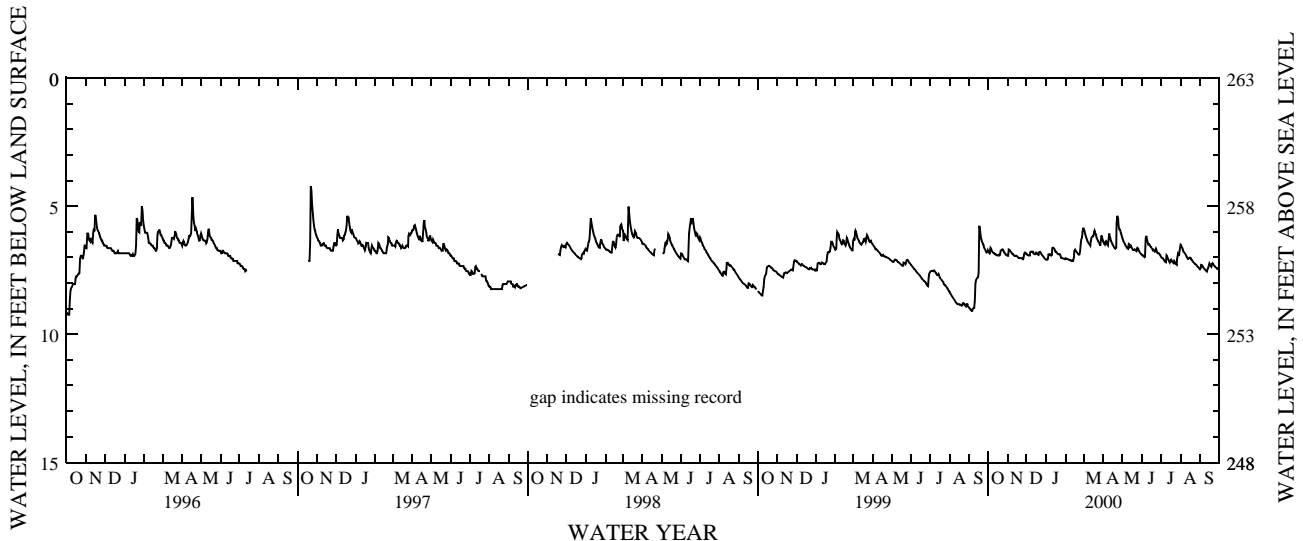
REVISED RECORDS.-- WRD NH-VT-00-1: 1999.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.94 ft below land-surface datum, October 22, 1996; lowest measured, 12.30 ft below land-surface datum, November 18, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999 (Revised)  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.31	7.62	7.14	7.51	6.7	6.31	6.49	7.13	7.3	7.56	8.34	8.97
2	8.34	7.64	7.17	7.51	6.67	6.26	6.54	7.15	7.33	7.54	8.4	9
3	8.37	7.66	7.19	7.45	6.14	6.34	6.57	7.17	7.36	7.52	8.44	9.02
4	8.4	7.68	7.22	7.22	6.01	6.02	6.6	7.17	7.39	7.52	8.48	9.06
5	8.43	7.7	7.25	7.2	6.06	5.96	6.65	7.11	7.43	7.52	8.53	9.09
6	8.45	7.72	7.27	7.21	6.1	6.07	6.68	7.08	7.45	7.54	8.56	9.09
7	8.48	7.74	7.29	7.24	6.22	6.16	6.69	7.09	7.47	7.5	8.6	9
8	8.49	7.75	7.31	7.27	6.31	6.25	6.71	7.11	7.51	7.52	8.64	8.98
9	8.3	7.77	7.27	7.27	6.38	6.31	6.74	7.12	7.55	7.57	8.67	8.97
10	8.16	7.79	7.27	7.2	6.44	6.35	6.77	7.15	7.58	7.59	8.72	8.7
11	7.85	7.69	7.28	7.2	6.49	6.4	6.8	7.18	7.61	7.65	8.76	8.01
12	7.72	7.6	7.31	7.21	6.48	6.45	6.82	7.19	7.63	7.69	8.79	7.86
13	7.67	7.59	7.32	7.25	6.33	6.49	6.86	7.21	7.66	7.67	8.82	7.81
14	7.63	7.58	7.35	7.27	6.34	6.5	6.89	7.23	7.69	7.64	8.82	7.79
15	7.41	7.58	7.37	7.26	6.42	6.45	6.92	7.26	7.72	7.71	8.82	7.78
16	7.35	7.61	7.38	7.21	6.49	6.43	6.94	7.28	7.76	7.76	8.83	7.59
17	7.34	7.59	7.39	7.17	6.53	6.4	6.9	7.3	7.8	7.8	8.85	5.76
18	7.33	7.56	7.41	7.13	6.45	6.28	6.93	7.32	7.82	7.85	8.84	5.87
19	7.33	7.55	7.43	6.9	6.24	6.26	6.95	7.33	7.85	7.89	8.86	6.11
20	7.35	7.53	7.45	6.79	6.29	6.32	6.97	7.2	7.88	7.9	8.89	6.27
21	7.37	7.5	7.46	6.77	6.38	6.39	6.97	7.2	7.91	7.94	8.88	6.37
22	7.4	7.49	7.42	6.8	6.46	6.24	6.98	7.24	7.93	7.98	8.79	6.41
23	7.42	7.48	7.42	6.77	6.54	6.12	6.99	7.27	7.95	8.03	8.78	6.48
24	7.44	7.48	7.4	6.63	6.61	6.17	7	7.2	7.97	8.08	8.82	6.55
25	7.47	7.5	7.43	6.39	6.65	6.25	7.01	7.1	8.02	8.09	8.87	6.62
26	7.5	7.44	7.45	6.38	6.68	6.33	7.03	7.09	8.07	8.12	8.9	6.69
27	7.52	7.17	7.47	6.43	6.72	6.39	7.05	7.12	8.11	8.15	8.91	6.74
28	7.52	7.11	7.48	6.5	6.72	6.38	7.07	7.16	8.13	8.18	8.82	6.78
29	7.54	7.11	7.48	6.56	---	6.35	7.09	7.21	7.76	8.23	8.83	6.82
30	7.56	7.13	7.46	6.62	---	6.42	7.12	7.23	7.6	8.27	8.9	6.77
31	7.59	---	7.51	6.67	---	6.46	---	7.27	---	8.31	8.94	---
MEAN	7.78	7.55	7.36	7.00	6.42	6.31	6.86	7.19	7.71	7.82	8.75	7.57
MAX	8.49	7.79	7.51	7.51	6.72	6.50	7.12	7.33	8.13	8.31	8.94	9.09
MIN	7.33	7.11	7.14	6.38	6.01	5.96	6.49	7.08	7.30	7.50	8.34	5.76

WTR YR 1999 MEAN 7.36 HIGH 5.76 LOW 9.09



GROUND-WATER LEVELS IN NEW HAMPSHIRE

HILLSBOROUGH COUNTY

425024071413001. Local number, MOW 36, Town of Milford --Continued

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.72	6.94	6.87	7.09	7.04	5.91	6.41	6.23	6.89	6.96	6.5	7.46
2	6.79	6.94	6.89	7.09	7.05	5.98	6.46	6.31	6.92	7	6.52	7.4
3	6.84	6.68	6.91	7.09	7.05	6.08	6.5	6.39	6.92	7.03	6.6	7.29
4	6.76	6.71	6.91	7.01	7.06	6.17	6.39	6.44	6.96	7.02	6.64	7.3
5	6.63	6.75	6.93	6.89	7.07	6.25	6.36	6.48	6.99	7.06	6.7	7.35
6	6.66	6.78	6.92	6.88	7.09	6.33	6.43	6.54	6.94	7.1	6.77	7.39
7	6.75	6.82	6.8	6.88	7.1	6.39	6.5	6.58	6.25	7.15	6.8	7.42
8	6.79	6.85	6.77	6.91	7.12	6.44	6.53	6.62	6.15	7.18	6.83	7.44
9	6.81	6.87	6.78	6.93	7.12	6.46	6.29	6.65	6.29	7.19	6.88	7.48
10	6.83	6.88	6.78	6.9	7.13	6.49	6.06	6.67	6.39	6.93	6.92	7.5
11	6.84	6.92	6.78	6.62	7.12	6.53	6.19	6.48	6.49	6.96	6.97	7.53
12	6.87	6.94	6.83	6.61	7.13	6.39	6.27	6.5	6.47	7.04	7.02	7.55
13	6.89	6.94	6.85	6.64	7.13	6.22	6.35	6.57	6.52	7.1	7.06	7.45
14	6.89	6.93	6.87	6.66	6.98	6.19	6.42	6.54	6.56	7.15	7.04	7.42
15	6.91	6.94	6.87	6.71	6.72	6.17	6.46	6.59	6.58	7.2	7.01	7.35
16	6.92	6.95	6.81	6.77	6.69	6.18	6.51	6.64	6.62	7.11	7	7.24
17	6.93	6.99	6.82	6.78	6.75	6.01	6.58	6.69	6.67	7.08	7.01	7.28
18	6.89	7.01	6.86	6.81	6.78	5.96	6.62	6.71	6.71	7.11	7.07	7.33
19	6.91	7.02	6.89	6.85	6.8	6.04	6.64	6.71	6.69	7.17	7.09	7.36
20	6.86	7.03	6.9	6.87	6.84	6.13	6.66	6.69	6.73	7.2	7.13	7.25
21	6.72	7.02	6.79	6.87	6.87	6.2	6.62	6.71	6.77	7.23	7.17	7.23
22	6.71	7.03	6.78	6.87	6.89	6.27	5.69	6.73	6.78	7.13	7.2	7.27
23	6.69	7.04	6.8	6.87	6.87	6.33	5.37	6.75	6.66	7.17	7.23	7.31
24	6.69	7.04	6.85	6.94	6.75	6.38	5.49	6.69	6.73	7.22	7.24	7.33
25	6.74	7.06	6.89	7.02	6.48	6.43	5.73	6.62	6.79	7.26	7.26	7.37
26	6.77	7.02	6.92	7.02	6.26	6.47	5.89	6.67	6.83	7.28	7.29	7.39
27	6.82	6.89	6.95	7.03	6.21	6.53	5.9	6.73	6.83	7.06	7.32	7.4
28	6.86	6.81	6.99	7.04	5.97	6.32	5.97	6.77	6.83	6.85	7.35	7.42
29	6.88	6.82	7.02	7.05	5.84	6.14	6.06	6.81	6.87	6.89	7.38	7.45
30	6.91	6.85	7.05	7.06	---	6.24	6.15	6.85	6.91	6.94	7.41	7.46
31	6.91	---	7.08	7.03	---	6.33	---	6.87	---	6.72	7.44	---
MEAN	6.81	6.92	6.88	6.90	6.82	6.26	6.25	6.62	6.69	7.08	7.03	7.38
MAX	6.93	7.06	7.08	7.09	7.13	6.53	6.66	6.87	6.99	7.28	7.44	7.55
MIN	6.63	6.68	6.77	6.61	5.84	5.91	5.37	6.23	6.15	6.72	6.50	7.23
CAL YR 1999	MEAN 7.19	HIGH 5.76	LOW 9.09									
WTR YR 2000	MEAN 6.80	HIGH 5.37	LOW 7.55									

GROUND-WATER LEVELS IN NEW HAMPSHIRE

HILLSBOROUGH COUNTY

424800071295301. Local number, NAW 218, City of Nashua.

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 Transportation.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 42.5 ft.

DATUM.--Elevation of land-surface datum is 205 ft above sea level from topographic map. Measuring point: Top of casing, 3.1 ft above land-surface datum.

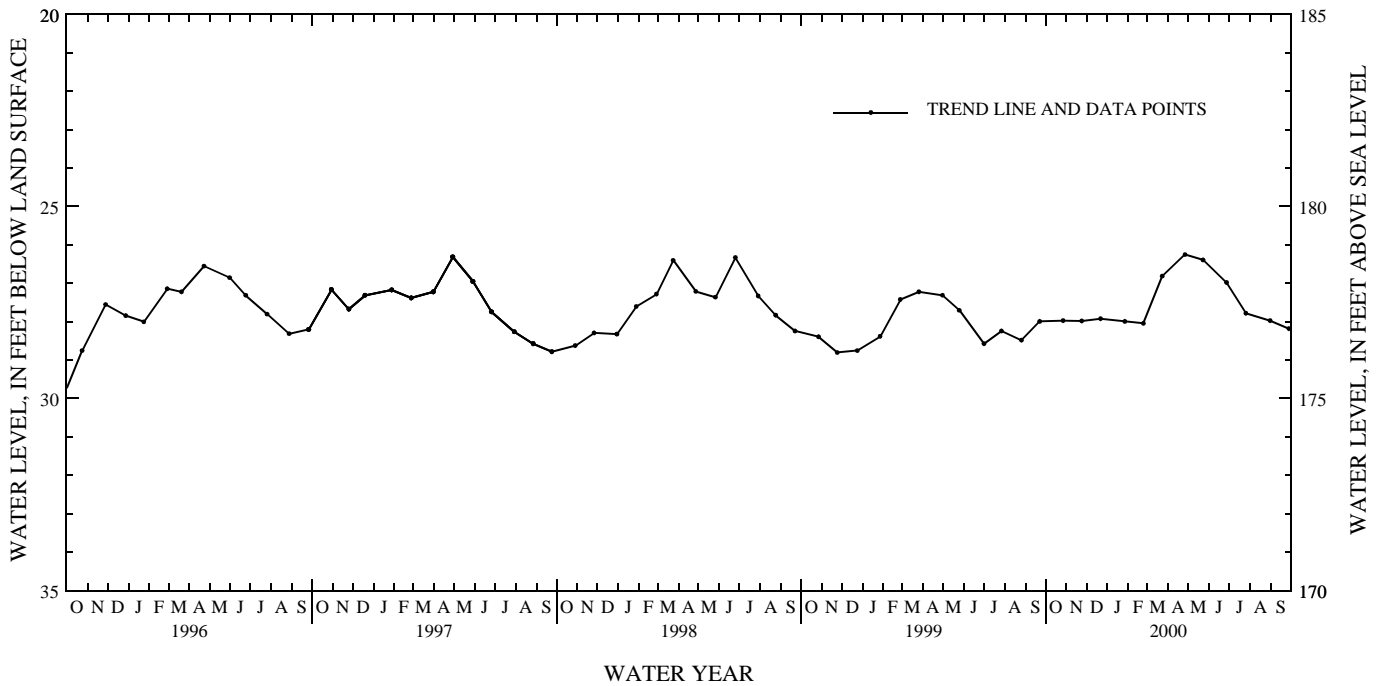
PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

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, November 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	27.97	FEB 24	28.04	JUN 27	26.98
NOV 24	27.98	MAR 23	26.81	JUL 26	27.78
DEC 22	27.92	APR 26	26.25	AUG 31	27.97
2000					
JAN 27	27.99	MAY 23	26.39	SEP 28	28.18

WATER YEAR 2000 HIGHEST 26.25 APR 26, 2000 LOWEST 28.18 SEP 28, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

MERRIMACK COUNTY

431224071303601. Local number, CVW 2, City of Concord.

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.--Elevation of land-surface datum is 340 ft above sea level from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

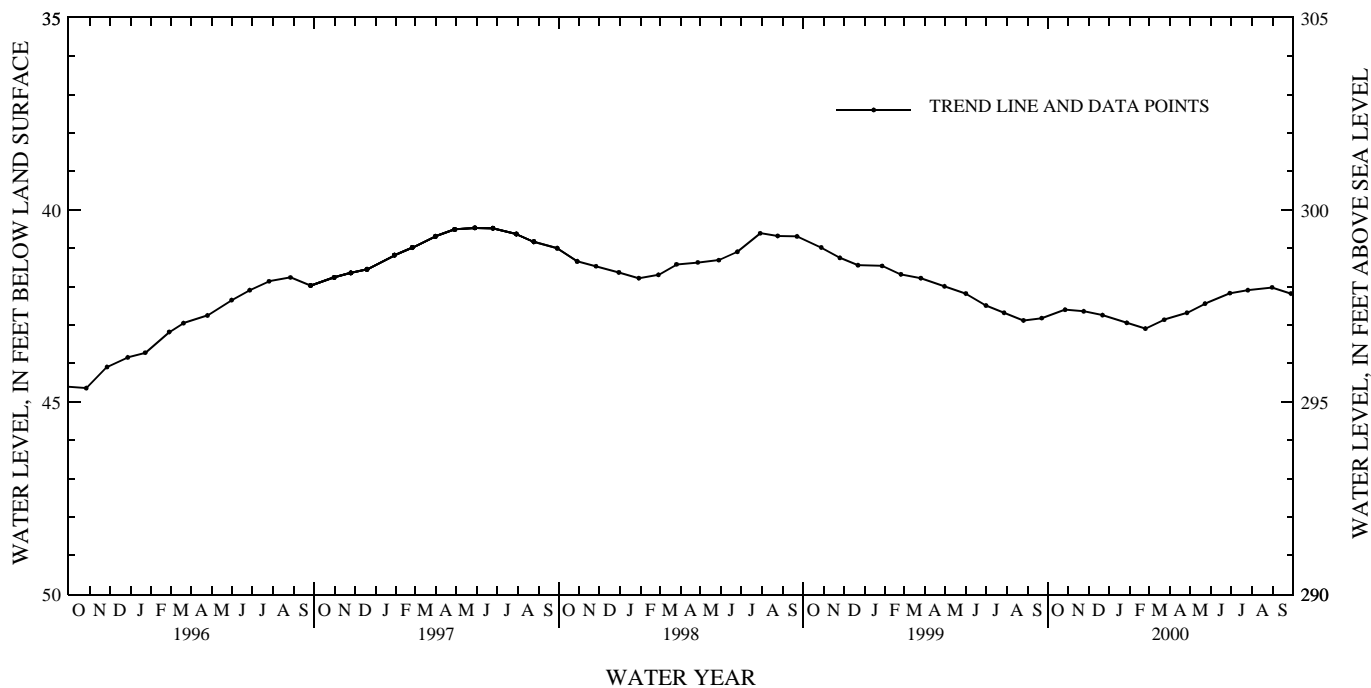
PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.85 ft below land-surface datum, August 27, 1973; lowest measured, 44.66 ft below land-surface datum, August 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	42.60	FEB 24	43.09	JUN 29	42.17
NOV 24	42.64	MAR 23	42.86	JUL 26	42.09
DEC 22	42.74	APR 26	42.68	AUG 31	42.02
2000					
JAN 27	42.94	MAY 23	42.44	SEP 28	42.18

WATER YEAR 2000    HIGHEST 42.02 AUG 31, 2000    LOWEST 43.09 FEB 24, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

MERRIMACK COUNTY

431049071324301. Local number, CVW 4, City of Concord.

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.--Elevation of land-surface datum is 285 ft above sea level from topographic map. Measuring point: Top of casing, 3.8 ft above land-surface datum.

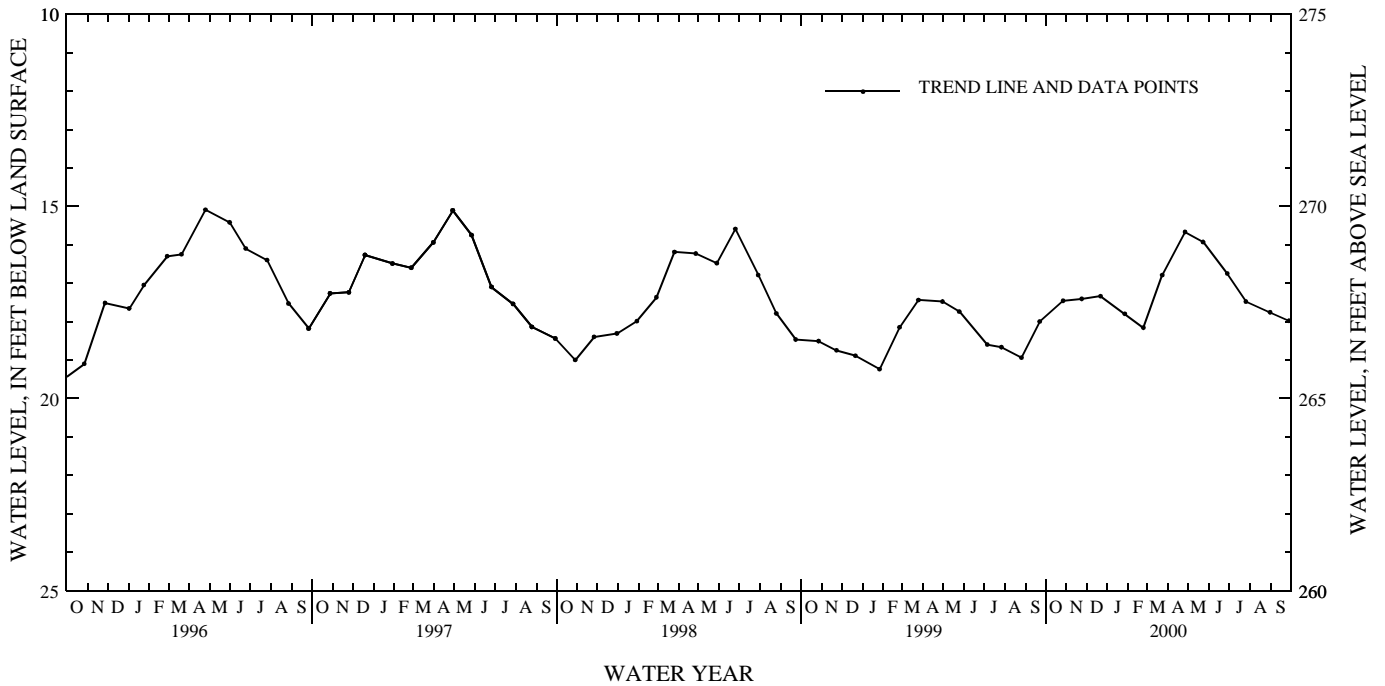
PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.94 ft below land-surface datum, June 5, 1984; lowest measured, 20.30 ft below land-surface datum, January 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	17.46	FEB 24	18.16	JUN 28	16.75
NOV 24	17.41	MAR 23	16.79	JUL 26	17.48
DEC 22	17.34	APR 26	15.67	AUG 31	17.76
2000					
JAN 27	17.80	MAY 23	15.93	SEP 28	17.98

WATER YEAR 2000 HIGHEST 15.67 APR 26, 2000 LOWEST 18.16 FEB 24, 2000



MERRIMACK COUNTY

432428071390701. Local number, FKW 1, Town of Franklin.

LOCATION.--Lat 43°24'28", long 71°39'09", Hydrologic Unit 01070002, about 700 ft northeast from entrance to Holy Cross Convent on U.S. Highway 3, and 2.5 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.--Elevation of land-surface datum is 290 ft above sea level from topographic map. Measuring point: Top of casing, 1.80 ft above land-surface datum.

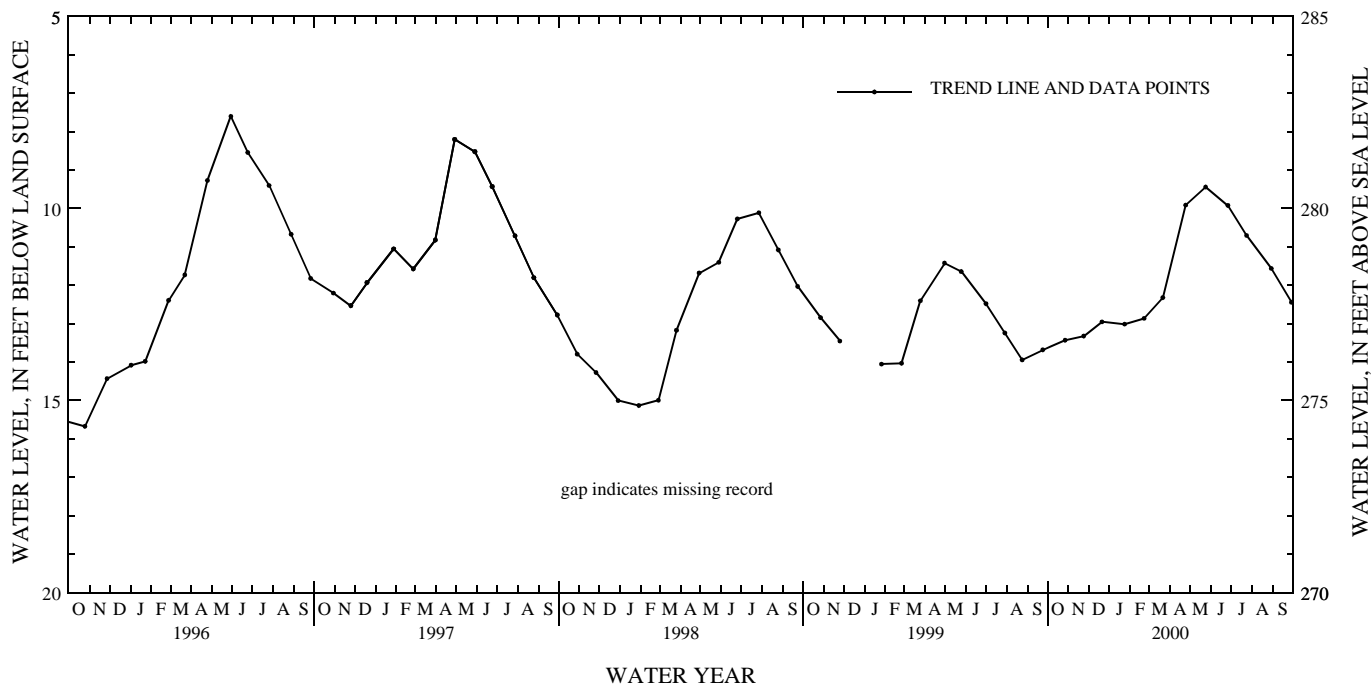
PERIOD OF RECORD.--October 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.18 ft below land-surface datum, June 5, 1984; lowest measured, 16.27 ft below land-surface datum, January 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	13.43	FEB 22	12.86	JUN 26	9.92
NOV 24	13.32	MAR 21	12.32	JUL 24	10.70
DEC 21	12.95	APR 24	9.91	AUG 30	11.56
2000					
JAN 24	13.01	MAY 24	9.44	SEP 29	12.44

WATER YEAR 2000    HIGHEST    9.44    MAY 24, 2000    LOWEST    13.43    OCT 27, 1999



GROUND-WATER LEVELS IN NEW HAMPSHIRE

MERRIMACK COUNTY

430235071275501. Local number, HTW 5, Town of Hooksett.

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 Transportation.

AQUIFER.--Crystalline rock of Devonian age.

WELL CHARACTERISTICS.--Drilled, unused bedrock well, diameter 6 in., depth 102.73 ft.

DATUM.--Elevation of land-surface datum is 258.93 ft above sea level from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

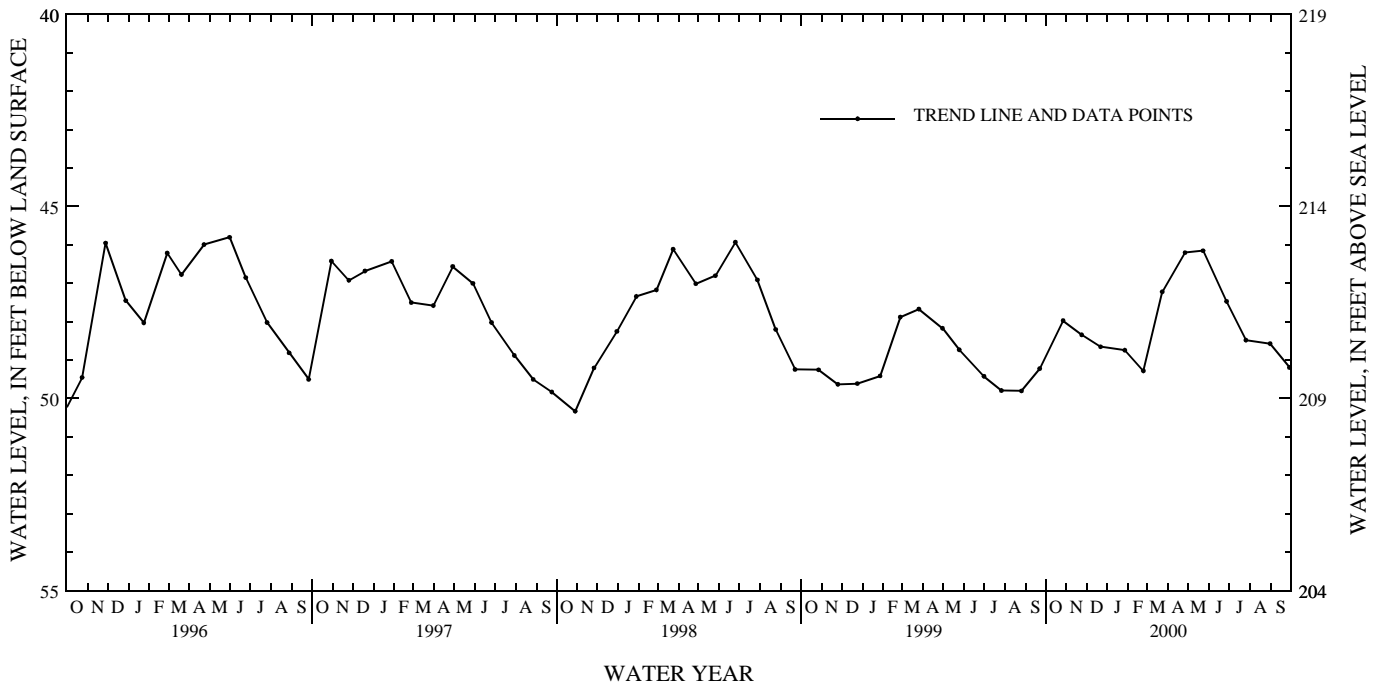
PERIOD OF RECORD.--April 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.69 ft below land-surface datum, April 28, 1967; lowest measured, 51.96 ft below land-surface datum, February 10, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	47.97	FEB 24	49.28	JUN 27	47.47
NOV 24	48.34	MAR 23	47.22	JUL 26	48.48
DEC 22	48.65	APR 26	46.20	AUG 31	48.57
2000					
JAN 27	48.74	MAY 23	46.15	SEP 29	49.19

WATER YEAR 2000    HIGHEST 46.15 MAY 23, 2000    LOWEST 49.28 FEB 24, 2000



MERRIMACK COUNTY

432343071570901. Local number, NLW 1, Town of New London.

LOCATION.--Lat 43°23'43", long 71°57'09", Hydrologic Unit 01070003, at north side of Golf Course Road, about 500 ft east of intersection of State Highway 114 and Golf Course Road, and 2.1 mi southeast of New London.

Owner: Peter Danforth.

AQUIFER.--Sandy till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 21 ft, lined with stone to 21 ft, open end.

DATUM.--Elevation of land-surface datum is 1,020 ft above sea level from topographic map. Measuring point: Edge of 0.75-in. hole in wooden cover, 2.9 ft above land-surface datum.

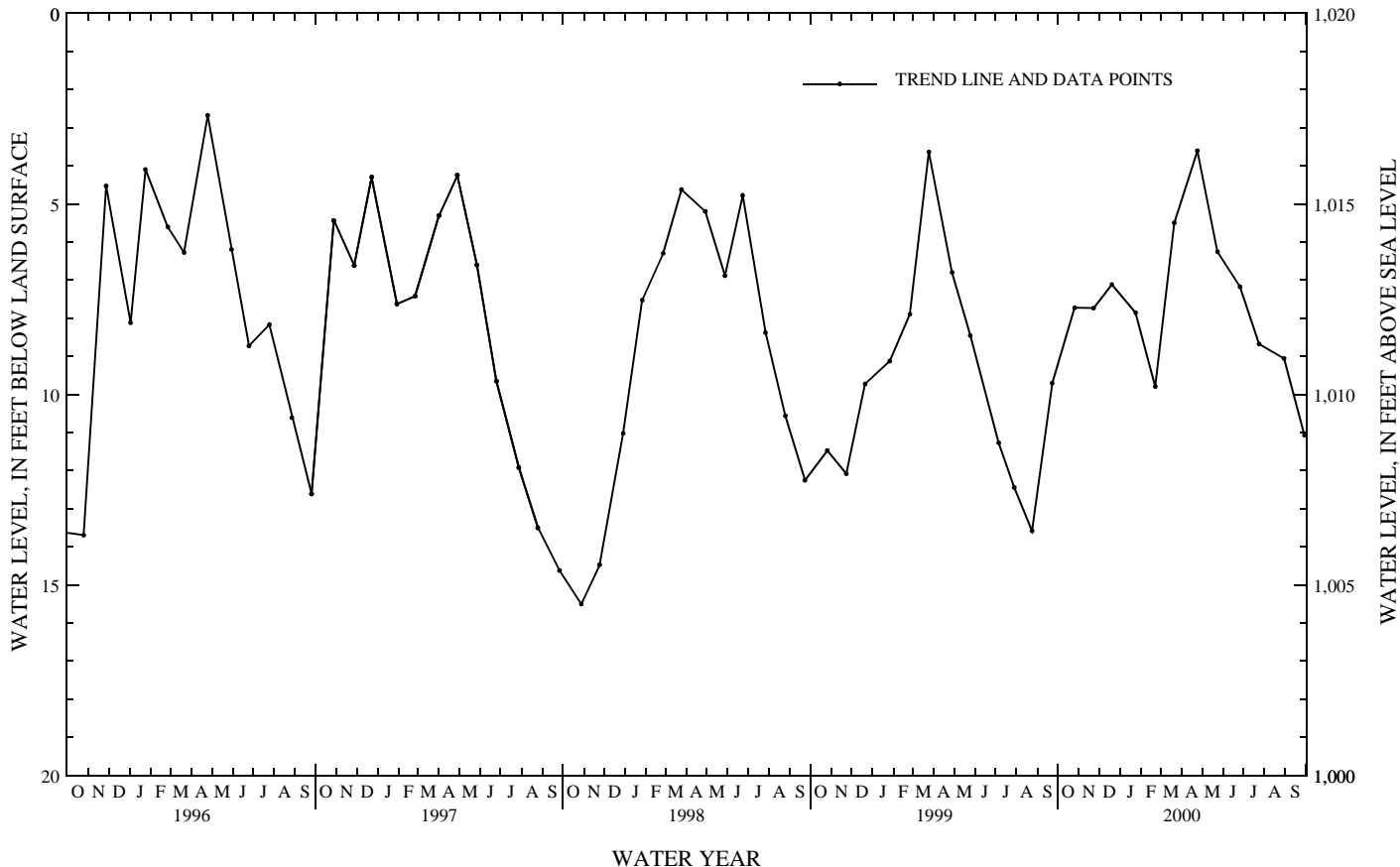
PERIOD OF RECORD.--October 1947 to current year. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; U.S. Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels in the United States, Northeastern States; U.S. Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.80 ft below land-surface datum, April 2, 1963; lowest measured, 16.90 ft below land-surface datum, December 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	7.73	FEB 22	9.79	JUN 26	7.18
NOV 23	7.74	MAR 21	5.50	JUL 24	8.68
DEC 20	7.12	APR 24	3.61	AUG 30	9.06
2000					
JAN 24	7.86	MAY 24	6.26	SEP 29	11.07

WATER YEAR 2000 HIGHEST 3.61 APR 24, 2000 LOWEST 11.07 SEP 29, 2000





GROUND-WATER LEVELS IN NEW HAMPSHIRE

MERRIMACK COUNTY

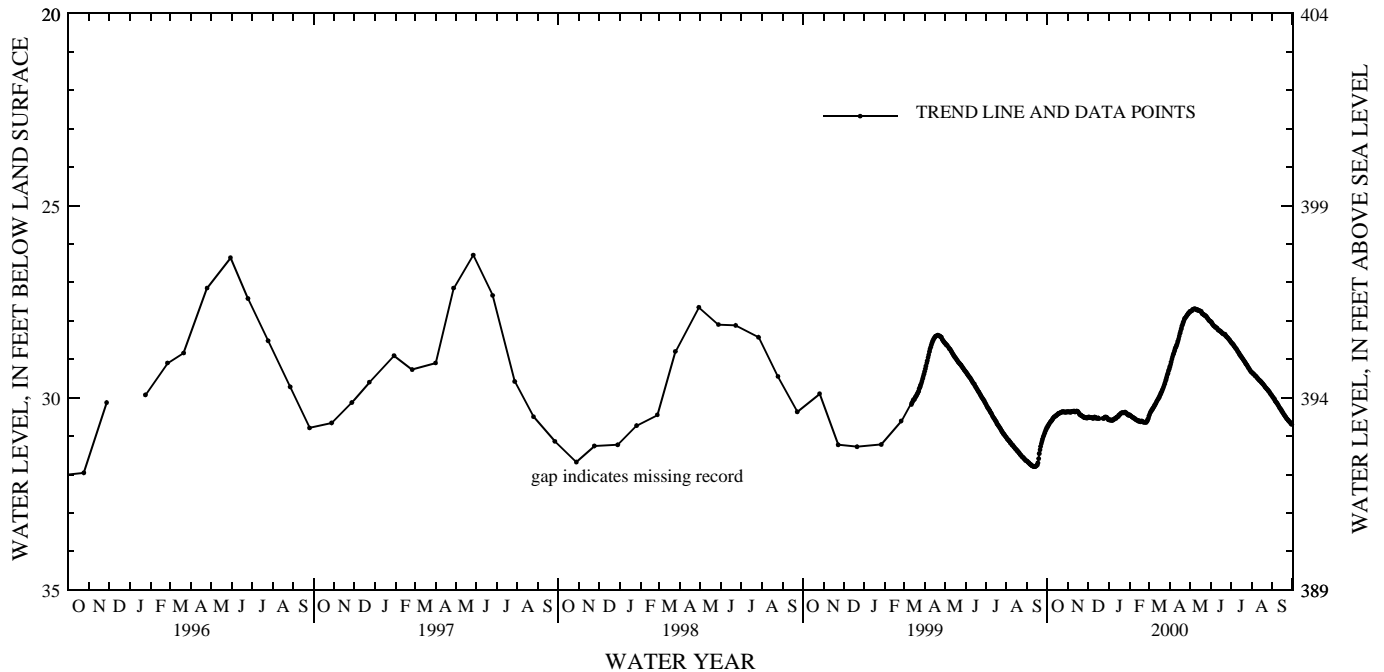
**431540071452801.** Local number, WCW 1, Town of Warner.  
**LOCATION.**--Lat 43°15'40", long 71°45'28", Hydrologic Unit 01070003, 44 ft northeast of edge of pavement of northbound lane of Interstate Highway 89, about 2 mi southeast of State Highway 103 overpass in Warner.  
 Owner: New Hampshire Department of Transportation.  
**AQUIFER.**--Sand and fine gravel of Pleistocene age.  
**WELL CHARACTERISTICS.**--Driven, unused water-table well, diameter 2 in., depth 42.8 ft.  
**INSTRUMENTATION.**--Electronic water-level recorder with hourly readings. Prior to March 1999, monthly readings were published.  
**DATUM.**--Elevation of land-surface datum is 424 ft above sea level from topographic map. 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, December 17, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30.77	30.37	30.51	30.58	30.46	30.47	29.20	27.76	28.02	28.55	29.34	29.97
2	30.74	30.37	30.51	30.58	30.47	30.42	29.14	27.75	28.04	28.57	29.36	29.99
3	30.71	30.37	30.51	30.59	30.48	30.38	29.07	27.75	28.07	28.59	29.37	30.02
4	30.68	30.38	30.52	30.58	30.50	30.36	29.00	27.73	28.10	28.61	29.39	30.04
5	30.65	30.38	30.52	30.59	30.51	30.32	28.94	27.71	28.12	28.63	29.41	30.08
6	30.63	30.37	30.52	30.60	30.52	30.30	28.88	27.70	28.14	28.66	29.43	30.11
7	30.61	30.36	30.53	30.58	30.53	30.27	28.84	27.69	28.15	28.69	29.44	30.13
8	30.59	30.36	30.54	30.57	30.55	30.24	28.78	27.69	28.17	28.71	29.46	30.15
9	30.56	30.36	30.54	30.56	30.55	30.21	28.72	27.69	28.17	28.73	29.48	30.18
10	30.53	30.35	30.51	30.55	30.57	30.18	28.68	27.71	28.19	28.75	29.50	30.21
11	30.51	30.37	30.51	30.53	30.57	30.15	28.64	27.71	28.21	28.79	29.52	30.24
12	30.50	30.37	30.53	30.54	30.59	30.11	28.59	27.72	28.24	28.81	29.54	30.27
13	30.48	30.36	30.53	30.51	30.60	30.08	28.53	27.72	28.25	28.84	29.56	30.29
14	30.47	30.35	30.54	30.50	30.60	30.05	28.47	27.73	28.26	28.87	29.57	30.32
15	30.46	30.36	30.54	30.49	30.62	30.02	28.40	27.74	28.27	28.90	29.59	30.35
16	30.44	30.37	30.53	30.46	30.61	29.99	28.33	27.74	28.28	28.92	29.61	30.38
17	30.43	30.40	30.55	30.44	30.63	29.95	28.27	27.76	28.30	28.95	29.63	30.41
18	30.41	30.43	---	30.43	30.62	29.91	28.21	27.76	28.32	28.97	29.65	30.44
19	30.41	30.45	---	30.41	30.61	29.87	28.14	27.81	28.33	29.00	29.67	30.46
20	30.40	30.45	---	30.40	30.62	29.83	28.09	27.82	28.35	29.02	29.69	30.49
21	30.39	30.47	---	30.39	30.64	29.79	28.04	27.83	28.35	29.05	29.72	30.51
22	30.38	30.48	---	30.39	30.64	29.75	27.99	27.85	28.35	29.08	29.74	30.54
23	30.37	30.49	30.54	30.40	30.64	29.70	27.94	27.86	28.38	29.11	29.76	30.56
24	30.37	30.50	30.54	30.40	30.64	29.65	27.92	27.87	28.41	29.13	29.78	30.58
25	30.38	30.52	30.54	30.38	30.65	29.60	27.90	27.88	28.42	29.16	29.80	30.60
26	30.37	30.52	30.51	30.39	30.64	29.54	27.87	27.91	28.44	29.19	29.82	30.62
27	30.38	30.52	30.51	30.41	30.61	29.48	27.85	27.93	28.46	29.22	29.84	30.64
28	30.38	30.53	30.51	30.42	30.57	29.42	27.82	27.95	28.48	29.24	29.87	30.66
29	30.38	30.53	30.52	30.45	30.53	29.37	27.80	27.98	28.50	29.27	29.90	30.69
30	30.37	30.53	30.54	30.46	---	29.31	27.78	28.00	28.52	29.30	29.92	30.70
31	30.37	---	30.57	30.44	---	29.26	---	28.01	---	29.32	29.94	---
MEAN	30.49	30.42	---	30.48	30.58	29.93	28.39	27.80	28.28	28.92	29.62	30.35
MAX	30.77	30.53	---	30.60	30.65	30.47	29.20	28.01	28.52	29.32	29.94	30.70
MIN	30.37	30.35	---	30.38	30.46	29.26	27.78	27.69	28.02	28.55	29.34	29.97

CAL YR 1999 MEAN 30.21 HIGH 28.38 LOW 31.80  
 WTR YR 2000 MEAN 29.64 HIGH 27.69 LOW 30.77



ROCKINGHAM COUNTY

430527071140101. Local number, DDW 46, Town of Deerfield.

LOCATION.--Lat 43°05'27", long 71°14'02", Hydrologic Unit 01060003, approximately 1.3 mi south from junction of Routes 107 and 43 and 25 ft east from Route 107, and about 4 mi south of Deerfield.

Owner: New Hampshire Department of Transportation.

AQUIFER.--Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 47.5 ft.

DATUM.--Elevation of land-surface datum is 272 ft above sea level from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

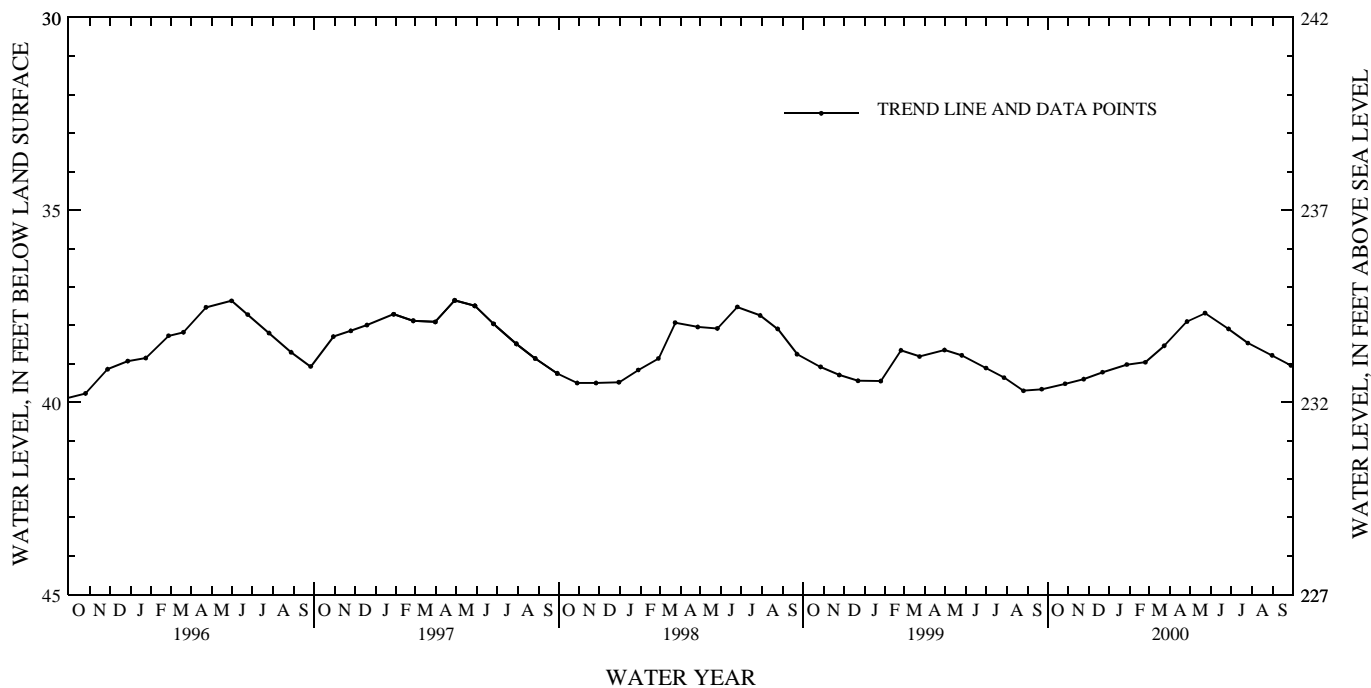
PERIOD OF RECORD.--1984-1986, 1989, and April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.35 ft below land-surface datum, April 29, 1997; lowest measured, 39.89 ft below land-surface datum, September 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	39.52	FEB 24	38.96	JUN 27	38.09
NOV 24	39.40	MAR 23	38.53	JUL 26	38.46
DEC 22	39.22	APR 26	37.90	AUG 31	38.78
2000					
JAN 27	39.02	MAY 23	37.68	SEP 28	39.04

WATER YEAR 2000 HIGHEST 37.68 MAY 23, 2000 LOWEST 39.52 OCT 27, 1999



GROUND-WATER LEVELS IN NEW HAMPSHIRE

STRAFFORD COUNTY

430721071005001. Local number, LIW 1, Town of Lee.

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: Brenda Nye.

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.--Elevation of land-surface datum is 190 ft above sea level from topographic map. 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; U.S. Geological Survey Water-Supply Paper Series.

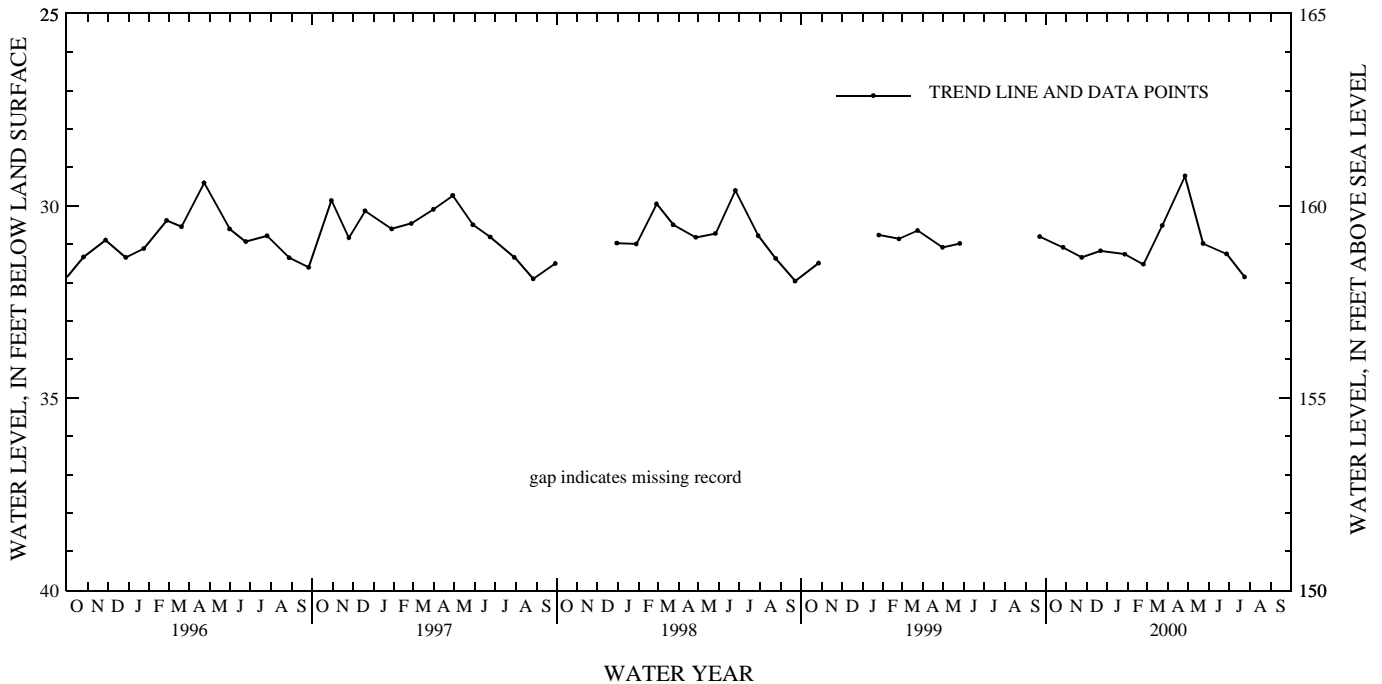
January 1956 to December 1972, published in Ground-Water Levels in the United States, Northeastern States; U.S. Geological Survey Water-Supply Paper Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.66 ft below land-surface datum, March 22, 1983; lowest measured, 32.40 ft below land-surface datum, December 18, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 27	31.08	FEB 24	31.52	JUN 27	31.25
NOV 24	31.34	MAR 23	30.51	JUL 24	31.85
DEC 22	31.17	APR 26	29.22		
2000					
JAN 27	31.26	MAY 23	30.98		

WATER YEAR 2000 HIGHEST 29.22 APR 26, 2000 LOWEST 31.85 JUL 24, 2000



STRAFFORD COUNTY

432534071095601. Local number, NFW 53, Town of New Durham.

LOCATION.--Lat 43°25'36", long 71°09'55", Hydrologic Unit 01060003, at the northwest corner of the Ridge Road and Stockbridge Corner Road intersection, approximately 0.25 mi south of Route 11, and 0.5 mi south of New Durham.  
 Owner: Town of New Durham.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused water-table well, diameter 2 in., depth 60 ft.

DATUM.--Elevation of land-surface datum is 545 ft above sea level from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

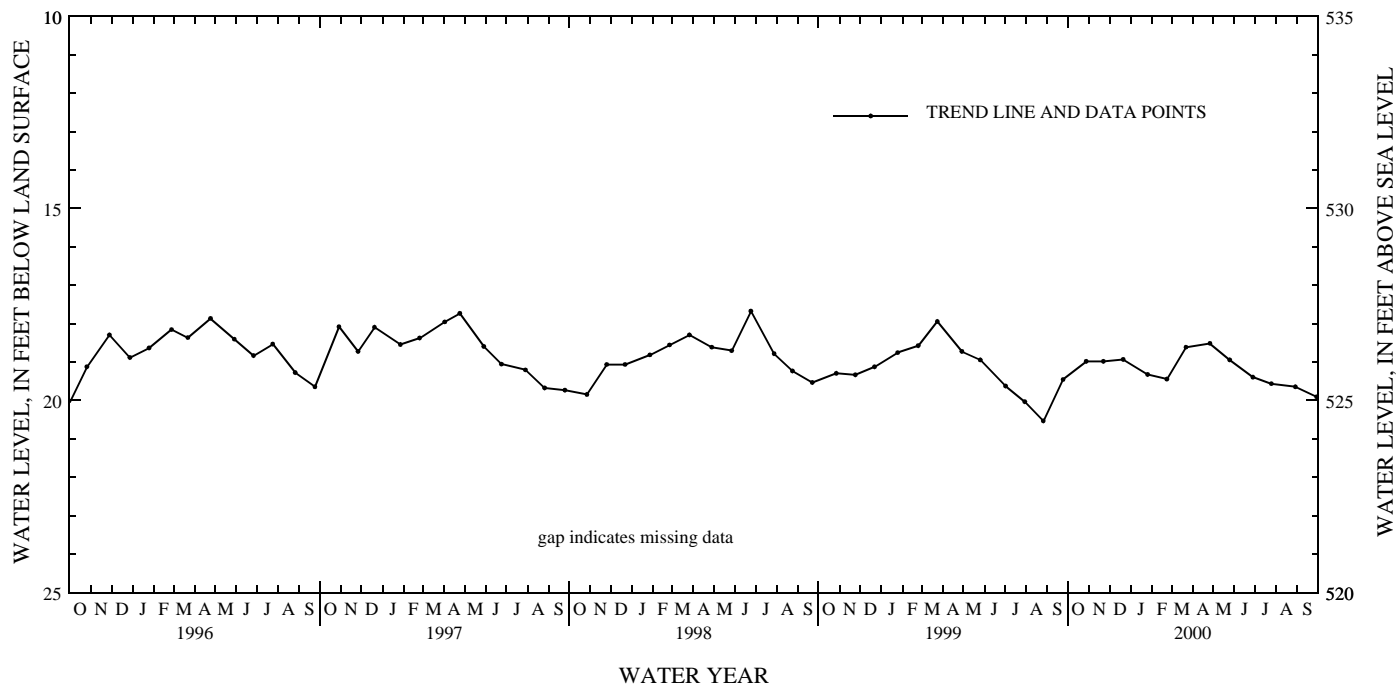
PERIOD OF RECORD.--1986 to 1988, 1991, and April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.67 ft below land-surface datum, June 24, 1998; lowest measured, 21.35 ft below land-surface datum, June 9, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 28	18.98	FEB 23	19.44	JUN 28	19.39
NOV 22	18.98	MAR 22	18.61	JUL 25	19.56
DEC 21	18.93	APR 26	18.51	AUG 29	19.64
2000					
JAN 26	19.32	MAY 25	18.94	SEP 29	19.90

WATER YEAR 2000 HIGHEST 18.51 APR 26, 2000 LOWEST 19.90 SEP 29, 2000



GROUND-WATER LEVELS IN NEW HAMPSHIRE

SULLIVAN COUNTY

432322072112401. Local number, NPW 3, Town of Newport.

LOCATION.--Lat 43°23'23", long 72°11'08", Hydrologic Unit 01080104, approximately 300 ft south of Corbin Road, 0.2 mi west of Route 10, and 1.8 mi north from the center of Newport.

Owner: U.S. Geological Survey.

AQUIFER.-- Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused test well, diameter 2 in., depth 57 ft.

DATUM.--Elevation of land-surface datum is 777 ft above sea level from topographic map. Measuring point: Top of casing, 3.5 ft above land-surface datum.

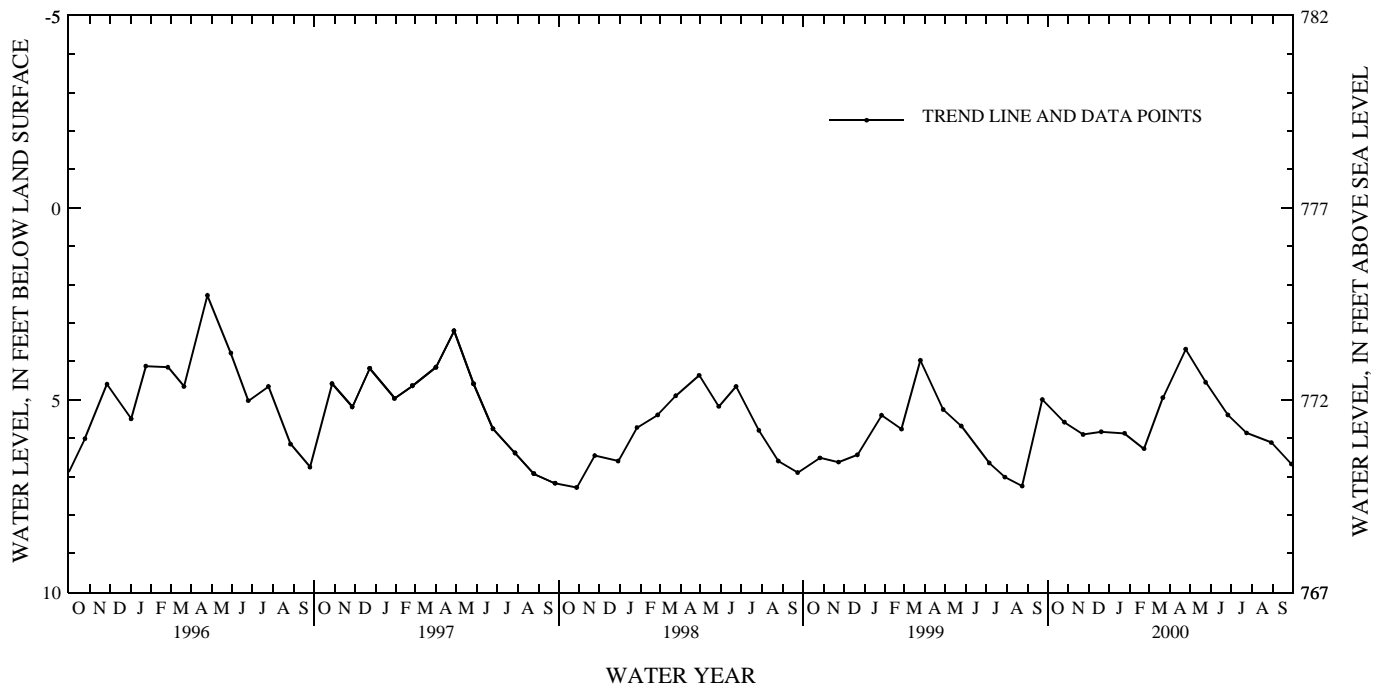
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.28 ft below land-surface datum, April 25, 1996; lowest measured, 7.28 ft below land-surface datum, October 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	5.58	FEB 22	6.27	JUN 26	5.39
NOV 23	5.90	MAR 21	4.94	JUL 24	5.86
DEC 20	5.83	APR 24	3.68	AUG 30	6.11
2000					
JAN 24	5.87	MAY 24	4.54	SEP 29	6.67

WATER YEAR 2000    HIGHEST    3.68    APR 24, 2000    LOWEST    6.67    SEP 29, 2000



SULLIVAN COUNTY

432322072112402. Local number, NPW 6, Town of Newport.

LOCATION.--Lat 43°23'23", long 72°11'08", Hydrologic Unit 01080104, approximately 300 ft south of Corbin Road, 0.2 mi west of Route 10, and 1.8 mi north from the center of Newport.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and fine gravel of Pleistocene age.

WELL CHARACTERISTICS.--Bored, unused test well, diameter 2 in., depth 57 ft.

DATUM.--Elevation of land-surface datum is 787 ft above sea level from topographic map. Measuring point: Top of casing, 3.4 ft above land-surface datum.

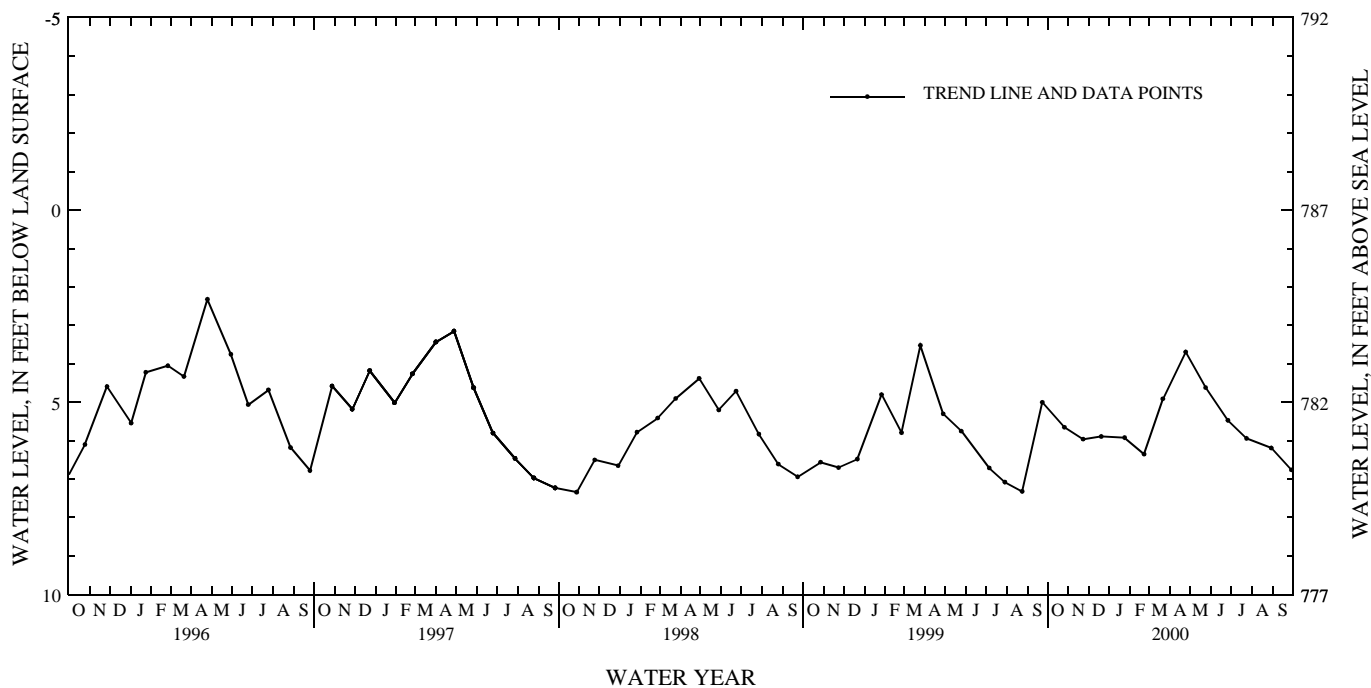
PERIOD OF RECORD.--April 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.32 ft below land-surface datum, April 25, 1996; lowest measured, 7.34 ft below land-surface datum, October 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 26	5.65	FEB 22	6.35	JUN 26	5.47
NOV 23	5.96	MAR 21	4.91	JUL 24	5.94
DEC 20	5.89	APR 24	3.69	AUG 30	6.19
2000					
JAN 24	5.92	MAY 24	4.62	SEP 29	6.76

WATER YEAR 2000 HIGHEST 3.69 APR 24, 2000 LOWEST 6.76 SEP 29, 2000



GROUND-WATER LEVELS IN VERMONT

ORLEANS COUNTY

443952072114001. Local number, GLW 1, Town of Glover.

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.--Elevation of land-surface datum is 1,200 ft above sea level from topographic map. Measuring point: Top of casing, .00 ft above land-surface datum.

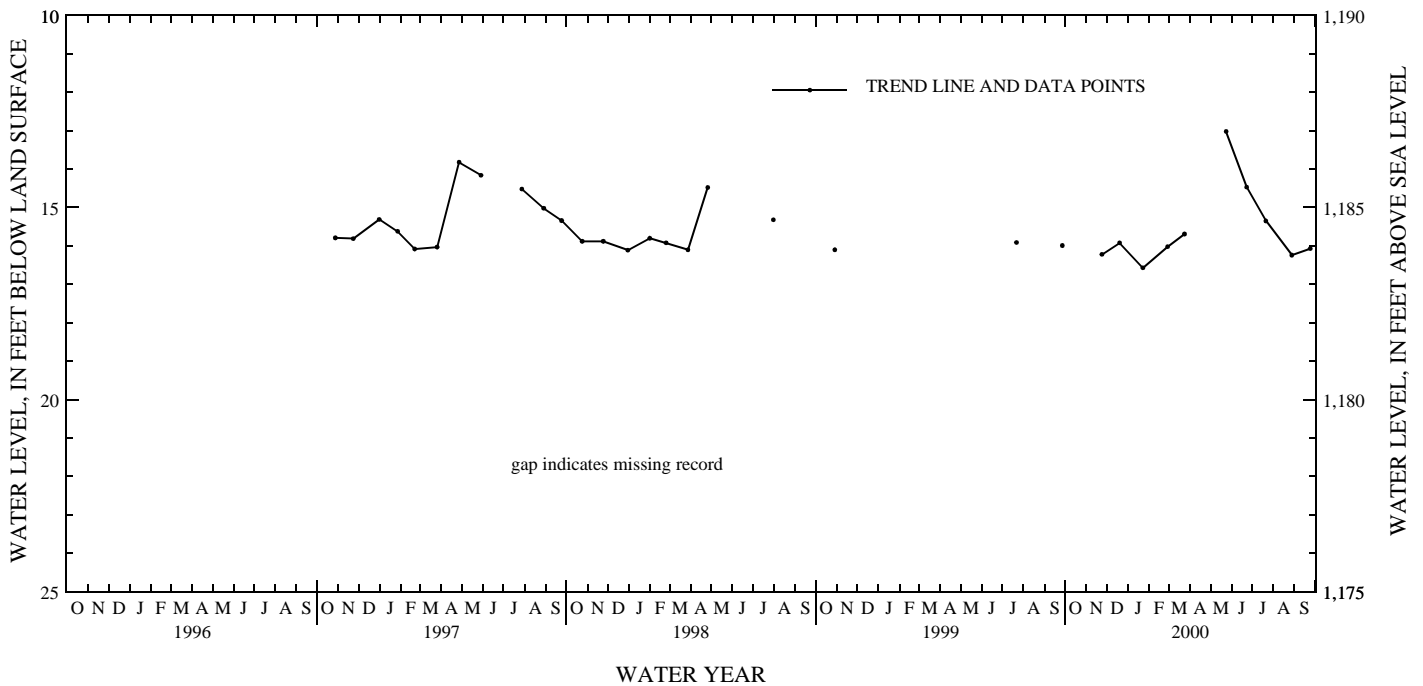
PERIOD OF RECORD.--November 1966 to September 1995, October 1996 to current year. Prior to 1977, published as Glover 1.

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, March 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEARS OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
NOV 24	16.22	MAR 24	15.69	AUG 28	16.24
DEC 20	15.92	MAY 24	13.02	SEP 24	16.07
2000					
JAN 23	16.57	JUN 23	14.47		
FEB 28	16.02	JUL 21	15.35		

WATER YEAR 2000 HIGHEST 13.02 MAY 24, 2000 LOWEST 16.57 JAN 23, 2000



RUTLAND COUNTY

434217073010601. Local number, PFW 8, Town of Pittsford.

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.--Elevation of land-surface datum is 490 ft above sea level from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

REMARKS.--Well pulled November 8, 1968, point replaced, depth changed from 43 to 42 ft, old 3-ft point was completely encrusted.

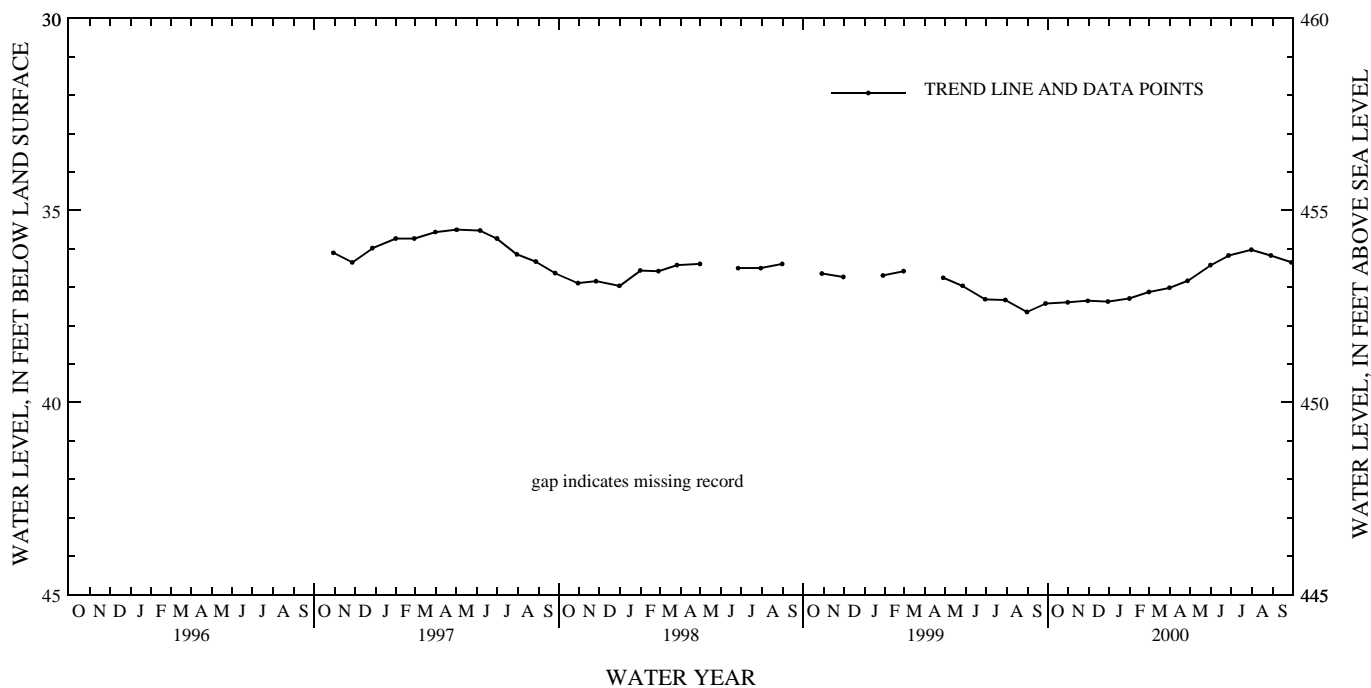
PERIOD OF RECORD.--October 1957 to September 1995, October 1996 to current year. Prior to October 1977, published as Pittsford 8.

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, October 18, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEARS OCTOBER 1999 TO SEPTEMBER 2000

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
1999					
OCT 31	37.39	FEB 29	37.12	JUN 27	36.17
NOV 30	37.35	MAR 31	37.01	JUL 31	36.02
DEC 30	37.37	APR 27	36.83	AUG 29	36.17
2000					
JAN 31	37.29	MAY 31	36.42	SEP 29	36.35

WATER YEAR 2000 HIGHEST 36.02 JUL 31, 2000 LOWEST 37.39 OCT 31, 1999





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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<i>Area</i>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<i>Volume</i>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<i>Mass</i>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

*Sea level:* In this report “sea level” refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)—a geodetic datum derived from a general adjustment for the first-order level nets of both the United States and Canada, formerly called Sea Level Datum of 1929.