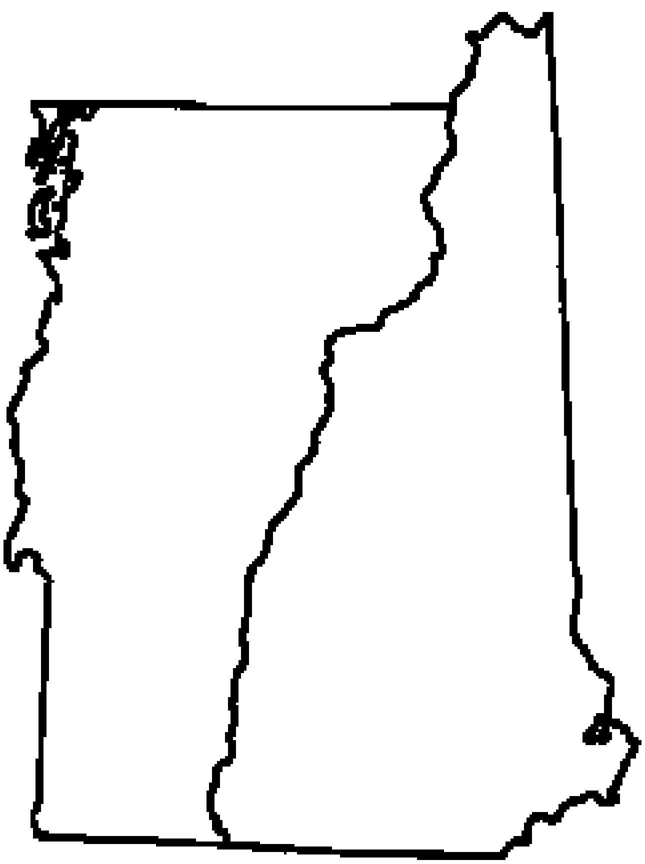
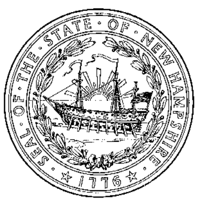
Prepared in cooperation with the
States of New Hampshire and Vermont and with other agencies

Water Resources Data
New Hampshire and Vermont
Water Year 2003



Water-Data Report NH-VT-03-1



U.S. Department of the Interior
U.S. Geological Survey

CALENDAR FOR WATER YEAR 2003

2002

OCTOBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
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NOVEMBER

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2003

JANUARY

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FEBRUARY

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27	28	29	30	31		

AUGUST

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31						

SEPTEMBER

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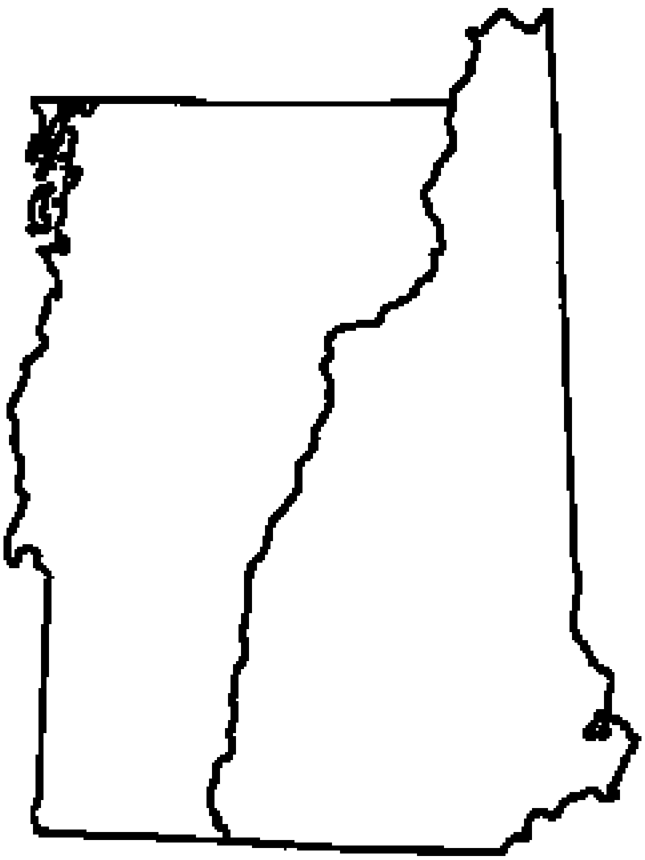
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Water Resources Data
New Hampshire and Vermont
Water Year 2003

By Chandlee Keirstead, Richard G. Kiah, Robert O. Brown, and Sanborn L. Ward



Prepared by the New Hampshire/Vermont District office, Pembroke, N.H., in cooperation with the States of New Hampshire and Vermont and with other agencies

Water-Data Report NH-VT-03-1

U.S. Department of the Interior
U.S. Geological Survey

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
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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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H.L. Sirotnak
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G.S. Hilgendorf

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

This report was prepared in cooperation with the States of New Hampshire and Vermont and with other agencies under the general supervision of Brian R. Mrazik, Chief, New Hampshire-Vermont District.

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13. ABSTRACT (Maximum 200 words)

Water-resources data for the 2003 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 87 gaging stations, stage records for 6 lakes, monthend contents for 2 lakes and reservoirs, water levels for 38 observation wells. Also included are data for 37 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 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.

12. **SUBJECT TERMS**

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

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CONTENTS

Preface...... iii
Report documentation page....iv
List of surface-water stations, in downstream order, for which records are published.... vii
List of ground-water stations for which records are published....xi
List of discontinued surface-water-discharge stations xiii
List of discontinued surface-water-quality stations xvi
Introduction....1
Cooperation....4
Summary of hydrologic conditions....4
Streamflow....4
Floods and droughts....6
Reservoir storage....6
Ground-water levels....7
Downstream order and station number....7
Numbering system for wells and miscellaneous sites....9
Special networks and programs....9
Explanation of stage- and water-discharge records....14
Data collection and computation....14
Data presentation....15
Station manuscript....15
Peak discharge greater than base discharge....17
Data table of daily mean values....17
Statistics of monthly mean data....17
Summary statistics....17
Identifying estimated daily discharge....19
Accuracy of field data and computed results....19
Other data records available....19
Explanation of precipitation records....20
Data collection and computation....20
Data presentation....20
Explanation of water-quality records....20
Collection and examination of data....20
Water analysis....20
Surface-water-quality records....21
Classification of records....21
Accuracy of the records....21
Arrangement of records....21
On-site measurements and sample collection....22
Water temperature....22
Sediment....22
Laboratory measurements....22
Data presentation....23
Remark codes....24

Water-quality control data 24
Blank samples 24
Reference samples 25
Replicate samples 25
Spike samples 25
Explanation of ground-water-level records 25
Site identification numbers 25
Data collection and computation 25
Data presentation 26
Water-level tables 27
Hydrographs 27
Ground-water-quality data 27
Data collection and computation 27
Laboratory measurements 27
Access to USGS water data 28
Definition of terms 29
Techniques of Water-Resources Investigations of the U.S. Geological Survey 45
Surface-water records 50
Surface-water-discharge and surface-water-quality records 50
Discharge at partial-record stations and miscellaneous sites 266
Crest-stage partial-record stations 266
Miscellaneous sites 274
Ground-water records 276
Ground-water levels 276
Ground-water levels in New Hampshire 276
Ground-water levels in Vermont 302
Water quality of miscellaneous ground-water wells 314
Index 317

ILLUSTRATIONS

Figure 1. Location of surface-water data-collection sites 2
Figure 2. Location of ground-water data-collection sites 3
Figure 3. Comparison of discharge at two long-term index-gaging stations during the 2003 water year with median discharge for period 1971–2000 5
Figure 4. System for numbering wells and miscellaneous sites (latitude and longitude). 9

TABLE

Table 1. Monthend ground-water conditions as measured in 37 wells in New Hampshire and Vermont 8

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]

NORTH ATLANTIC SLOPE BASINS

ANDROSCOGGIN RIVER BASIN	Station No.	Page
Umbagog Lake (head of Androscoggin River):		
Magalloway River:		
Diamond River near Wentworth Location, NH (d)	01052500	50
Androscoggin River:		
Androscoggin River at Errol, NH (d)	01053500	52
Androscoggin River near Gorham, NH (d)	01054000	54
SACO RIVER BASIN		
Saco River:		
Ellis River near Jackson, NH (d)	01064300	56
Saco River near Conway, NH (d)	01064500	58
Bearcamp River at South Tamworth, NH (d)	01064801	60
PISCATAQUA RIVER BASIN		
Salmon Falls River (head of Piscataqua River) at Milton, NH (d)	01072100	62
Piscataqua River:		
Cocheco River near Rochester, NH (d)	01072800	64
Oyster River near Durham, NH (d)	01073000	66
Lamprey River near Newmarket, NH (d)	01073500	68
Exeter River at Haigh Road, near Brentwood, NH (d)	01073587	70
Winnicut River at Greenland, near Portsmouth, NH (d)	01073785	72
MERRIMACK RIVER BASIN		
Pemigewasset River (head of Merrimack River):		
East Branch Pemigewasset River at Lincoln, NH (d)	01074520	76
Pemigewasset River at Woodstock, NH (d)	01075000	78
Baker River:		
Baker River near Rumney, NH (d)	01076000	80
Pemigewasset River at Plymouth, NH (d)	01076500	82
Smith River near Bristol, NH (d)	01078000	84
Lake Winnipesaukee:		
Poorfarm Brook at Ellacoya State Park near Gilford, NH (d)	01079602	86
Shannon Brook near Moultonborough, NH (d)	01079900	88
Lake Winnipesaukee at Weirs Beach, NH (e)	01080000	90
Lake Winnipesaukee Outlet at Lakeport, NH (d)	01080500	92
Winnipesaukee River at Tilton, NH (d)	01081000	94

NORTH ATLANTIC SLOPE BASINS--Continued

MERRIMACK RIVER BASIN--Continued	Station No.	Page
Merrimack River:		
Merrimack River at Franklin Junction, NH (d)	01081500	96
Contoocook River:		
Contoocook River at Peterborough, NH (d)	01082000	98
Contoocook River below Hopkinton Dam, at West Hopkinton, NH (d)	01085500	100
West Branch Warner River near Bradford, NH (d)	01085800	102
Warner River at Davisville, NH (d)	01086000	104
Soucook River at Pembroke Road near Concord, NH (d)	01089100	106
Merrimack River near Goffs Falls, below Manchester, NH (d)	01092000	108
Souhegan River:		
Stony Brook:		
Stony Brook Tributary near Temple, NH (d)	01093800	110
Souhegan River at Merrimack, NH (d)	01094000	112
Beaver Brook at North Pelham, NH (d)	010965852	114
Spicket River, at Island Pond Road, at North Salem, NH (d)	01100505	116

CONNECTICUT RIVER BASIN		
Connecticut River:		
Connecticut River below Indian Stream, near Pittsburg, NH (d)(c)	01129200	118
Mohawk River near Colebrook, NH (d)	01129440	122
Connecticut River at North Stratford, NH (d)(c)	01129500	124
Upper Ammonoosuc River near Groveton, NH (d)	01130000	128
Connecticut River near Dalton, NH (d)	01131500	130
Passumpsic River:		
East Branch Passumpsic River near East Haven, VT (d)	01133000	132
Moose River at Victory, VT (d)(c)(s)	01134500	134
Sleepers River:		
Pope Brook (site W-3) near North Danville, VT (d)	01135150	138
Sleepers River (site W-5) near St. Johnsbury, VT (d)	01135300	140
Passumpsic River at Passumpsic, VT (d)(c)(s)	01135500	142
Ammonoosuc River at Bethlehem Junction, NH (d)	01137500	146
Connecticut River at Wells River, VT (d)(c)(s)	01138500	148
Wells River at Wells River, VT (d)	01139000	152
Waits River:		
East Orange Branch at East Orange, VT (d)	01139800	154
White River:		
Third Branch White River:		
Ayers Brook at Randolph, VT (d)(c)(s)	01142500	156
White River at West Hartford, VT (d)(c)(s)	01144000	160
Connecticut River at West Lebanon, NH (d)	01144500	164
Mascoma River at Mascoma, NH (d)	01150500	166
Ottauquechee River:		
Ottauquechee River near West Bridgewater, VT (d)	01150900	168
Ottauquechee River at North Hartland, VT (d)	01151500	170
Sugar River at West Claremont, NH (d)(c)(s)	01152500	172

NORTH ATLANTIC SLOPE BASINS--Continued

CONNECTICUT RIVER BASIN--Continued	Station No.	Page
Williams River near Rockingham, VT (d)	01153550	176
Saxtons River at Saxtons River, VT (d)	01154000	178
Connecticut River at North Walpole, NH (d)(c)(s)	01154500	180
West River:		
West River at Jamaica, VT (d)	01155500	184
Ashuelot River:		
Ashuelot River below Surry Mountain Dam near Keene, NH (d)	01158000	186
Otter Brook below Otter Brook Dam near Keene, NH (d)	01158600	188
Ashuelot River at West Swanzey, NH (d)	01160350	190
Ashuelot River at Hinsdale, NH (d)	01161000	192
HUDSON RIVER BASIN		
Hudson River:		
Hoosic River:		
Walloomsac River near North Bennington, VT (d)	01334000	194
ST. LAWRENCE RIVER BASIN		
St. Lawrence River:		
Lake Champlain (head of Richelieu River):		
Lake Bomoseen at Outlet, near Fair Haven, VT (e)	04279490	196
Poultney River below Fair Haven, VT (d)	04280000	198
Mettawee River near Pawlet, VT (d)	04280350	200
Otter Creek:		
Otter Creek at Center Rutland, VT (d)	04282000	202
Otter Creek at Middlebury, VT (d)	04282500	204
New Haven River at Brooksville near Middlebury, VT (d)	04282525	206
Little Otter Creek at Ferrisburg, VT (d)	04282650	208
Lewis Creek near North Ferrisburg, VT (d)	04282780	210
LaPlatte River at Shelburne Falls, VT (d)	04282795	212
Englesby Brook at Burlington, VT (d)	04282815	214
Winooski River:		
East Barre Detention Reservoir at East Barre, VT (e)	04283500	216
Wrightsville Detention Reservoir at Wrightsville, VT (e)	04285000	217
North Branch Winooski River at Wrightsville, VT (d)	04285500	218
Winooski River at Montpelier, VT (d)	04286000	220
Dog River at Northfield Falls, VT (d)	04287000	222
Mad River near Moretown, VT (d)	04288000	224
West Branch Little River near Stowe, VT (d)	04288225	226
Ranch Brook at Ranch Camp, near Stowe, VT (d)	04288230	232
Waterbury Reservoir (head of Little River) near Waterbury, VT (e)	04288500	238
Little River near Waterbury, VT (d)	04289000	240
Winooski River near Essex Junction, VT (d)	04290500	242
Lamoille River:		
Lamoille River at Johnson, VT (d)	04292000	244
Lamoille River at East Georgia, VT (d)	04292500	246

NORTH ATLANTIC SLOPE BASINS--Continued

ST. LAWRENCE RIVER BASIN--Continued	Station No.	Page
Missisquoi River:		
Missisquoi River near North Troy, VT (d)	04293000	248
Missisquoi River near East Berkshire, VT (d)	04293500	250
Missisquoi River at Swanton, VT (d)	04294000	252
Pike River at East Franklin, near Enosburg Falls, VT (d)	04294300	254
Lake Champlain at Burlington, VT (e)	04294500	256
Richelieu River (Lake Champlain) at Rouses Point, NY (e)	04295000	258
St. Francis River:		
Lake Memphremagog (head of Magog River) at Newport, VT (e)	04295500	260
Black River at Coventry, VT (d)	04296000	262
Clyde River at Newport, VT (d)	04296500	264

New Hampshire

BELKNAP COUNTY

Barnstead well BAW 10 276

CARROLL COUNTY

Albany well ADW 14 277
Albany well ADW 15 278
Ossipee well OXW 38 279

CHESHIRE COUNTY

Keene well KEW 2 280

COOS COUNTY

Colebrook well CTW 73 281
Errol well ETW 1 282
Lancaster well LCW 1 283
Shelburne well SJW 2 284

GRAFTON COUNTY

Campton well CBW 34 285
Enfield well ENW 30 286
Lisbon well LLW 19 287

HILLSBOROUGH COUNTY

Greenfield well GSW 75 288
Milford well MOW 36 289
Litchfield well LMW 83 314
Nashua well NAW 218 290

MERRIMACK COUNTY

Concord well CVW 2 291
Concord well CVW 4 292
Franklin well FKW 1 293
Hooksett well HTW 5 294
New London well NLW 1 295
Warner well WCW 1 296
Warner well WCW 5 314

ROCKINGHAM COUNTY

Deerfield well DDW 46 297

STRAFFORD COUNTY

Lee well LIW 1 298
Lee well LIW 28 314
New Durham well NFW 53 299

SULLIVAN COUNTY

Newport well NPW 3 300
Newport well NPW 6 301

Vermont

BENNINGTON COUNTY

North Pownal well PQW 1 302

CHITTENDEN COUNTY

Milton well MJW 3 303

ESSEX COUNTY

Brighton well BIW 1 304

FRANKLIN COUNTY

East Berkshire well BKW 1 305

LAMOILLE COUNTY

Morrisville well MPW 1 306

ORANGE COUNTY

West Fairlee well WOW 1 307

ORLEANS COUNTY

Glover well GLW 1 308

RUTLAND COUNTY

Pittsford well PFW 8 309

WASHINGTON COUNTY

Waitsfield well WAW 2 310

WINDSOR COUNTY

Chester well CKW 1 311
Hartland well HLW 54 312
Rochester well RJW 1 313

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

[a, approximately]

Station name	Station No.	Drainage area (mi^2)	Period of record (water years)
SACO RIVER BASIN			
Lucy Brook near North Conway, N.H.	01064400	4.68	1964–92
Cold Brook at South Tamworth, N.H.	01064800	5.41	1963–73
Ossipee River at Effingham Falls, N.H.	01065000	330	1942–90
PISCATAQUA RIVER BASIN			
Mohawk Brook near Center Strafford, N.H.	01072850	8.87	1964–77
Cocheco River at Dover, N.H.	01072880	173	1992–96
Dudley Brook near Exeter, N.H.	01073600	4.97	1962–85
MERRIMACK RIVER BASIN			
East Branch Pemigewasset River near Lincoln, N.H.	01074500	104	1928–53
Baker River at Wentworth, N.H.	01075500	58.8	1940–1952
Stevens Brook near Wentworth, N.H.	01075800	2.94	1963–98
Squam River at Ashland, N.H.	01077000	57.6	1939–95
Poorfarm Brook near Gilford, N.H.	01079600	5.0	1978–80
Nubanusit Brook near Peterborough, N.H.	01083000*	46.9	1921–31, 1945–89
Contoocook River near Elmwood, N.H.	01083500	168	1917–24
North Branch Contoocook River near Antrim, N.H.	01084000	54.8	1924–70
Beards Brook near Hillsboro, N.H.	01084500	55.4	1945–70
Contoocook River near Henniker, N.H.	01085000*	368	1940–77
Blackwater River near Webster, N.H.	01087000*	129	1918–20, 1927–89
Contoocook River at Penacook, N.H.	01088000	766	1929–77
Merrimack River at Garvins Falls, N.H.	01088500	2,427	1904–15
Soucook River near Concord, N.H.	01089000	76.8	1952–87
Suncook River at North Chichester, N.H.	01089500	157	1918–27, 1928–70
Merrimack River at Manchester, N.H.	01090500	2,854	1924–50
Piscataquog River below Everett Dam near East Weare, N.H.	01090800*	63.1	1963–89

Discontinued surface-water discharge stations--Continued

[a, approximately]

Station name	Station No.	Drainage area (mi^2)	Period of record (water years)
MERRIMACK RIVER BASIN--Continued			
South Branch Piscataquog River near Goffstown, N.H.	01091000	104	1940–78
Piscataquog River near Goffstown, N.H.	01091500*	202	1940–78
Sucker Brook at Auburn, N.H.	01093000	27.8	1938–70
Souhegan River (Site WLR-1) near Milford, N.H.	01093852	103	1994–96
Souhegan River (Site WLR-5) near Milford, N.H.	01093875	119	1994–96
CONNECTICUT RIVER BASIN			
Big Brook near Pittsburg, N.H.	01127880	6.36	1963–85
Connecticut River at First Connecticut Lake near Pittsburg, N.H.	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, N.H.	01136500	a34	1903–07
Ammonoosuc River near Bath, N.H.	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, N.H.	01140500	3,100	1900–21
Ompompanoosuc River at Union Village, Vt.	01141500*	130	1940–89
Mink Brook near Etna, N.H.	01141800	4.60	1962–98
White River near Bethel, Vt.	01142000	241	1931–55
Mascoma River at West Canaan, N.H.	01145000*	80.5	1939–78
Kent Brook near Sherburne, Vt.	01150800*	3.31	1964–74
Ottauquechee 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
Cold River at Drewsville, N.H.	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 below Townshend Dam near Townshend, Vt.	01155910*	282	1995–2000

Discontinued surface-water discharge stations--Continued

[a, approximately]

Station name	Station No.	Drainage area (mi^2)	Period of record (water years)
CONNECTICUT RIVER BASIN--Continued			
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, N.H.	01157000	71.1	1922–80
Otter Brook near Keene, N.H.	01158500	42.3	1924–58
Pratt Brook at Chesham, N.H.	01159000	11.2	1919–21
Minnewawa Brook at Marlborough, N.H.	01159500	31.7	1919–22
South Branch Ashuelot River at Webb near Marlborough, N.H.	01160000	36.0	1920–78
Beaver Brook at Wilmington, Vt.	01167800	6.38	1963–77
HUDSON RIVER BASIN			
Batten Kill at Arlington, Vt.	01329000	152	1929–84
ST. LAWRENCE RIVER BASIN			
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
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
Stone Bridge Brook near Georgia Plains, Vt.	04292700	8.45	1963–74, 1991–2000
Brownington Branch near Evansville, Vt.	04296200*	2.15	1963–74

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 No.	Drainage area (mi^2)	Type of record	Period of record (water years)
Merrimack River at Concord, N.H.	01088400	2300	sc,wt	1980–82
Connecticut River at Wells River, Vt.	01138500	2644	sc,wt	1980–82
Connecticut River at N. Walpole, N.H.	01154500	5493	sc,wt	1981
Connecticut River at Walpole, N.H.	01155050	5612	sc,wt	1975–80
West River at Newfane, Vt.	01156000	308	wt	1960–65
South Branch Ashuelot River at Webb, near Marlborough, N.H.	01160000	36.0	wt, sc	1954–78
Beaver Brook at Wilmington, Vt.	01167800	6.38	wt,sc	1972–77
Winooski River above Chase Mill at Burlington, Vt.	04290550	--	wt,sc,do	1979–81
Winooski River below Chase Mill at Burlington, Vt.	04290560	--	wt,sc,do	1979–82
Black River at Coventry, Vt.	04296000	122	wt,sc	1978–81
Clyde River at Newport, Vt.	04296500	142	wt,sc	1975–78

Water Resources Data for New Hampshire and Vermont, 2003

By Chandlee Keirstead, Richard G. Kiah, Robert O. Brown, and Sanborn L. Ward

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 87 gaging stations; stage records for 6 lakes; month end contents for 2 lakes and reservoirs; and water levels at 38 observation wells. Also included are data for 37 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 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 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-02-1.” For archiving and

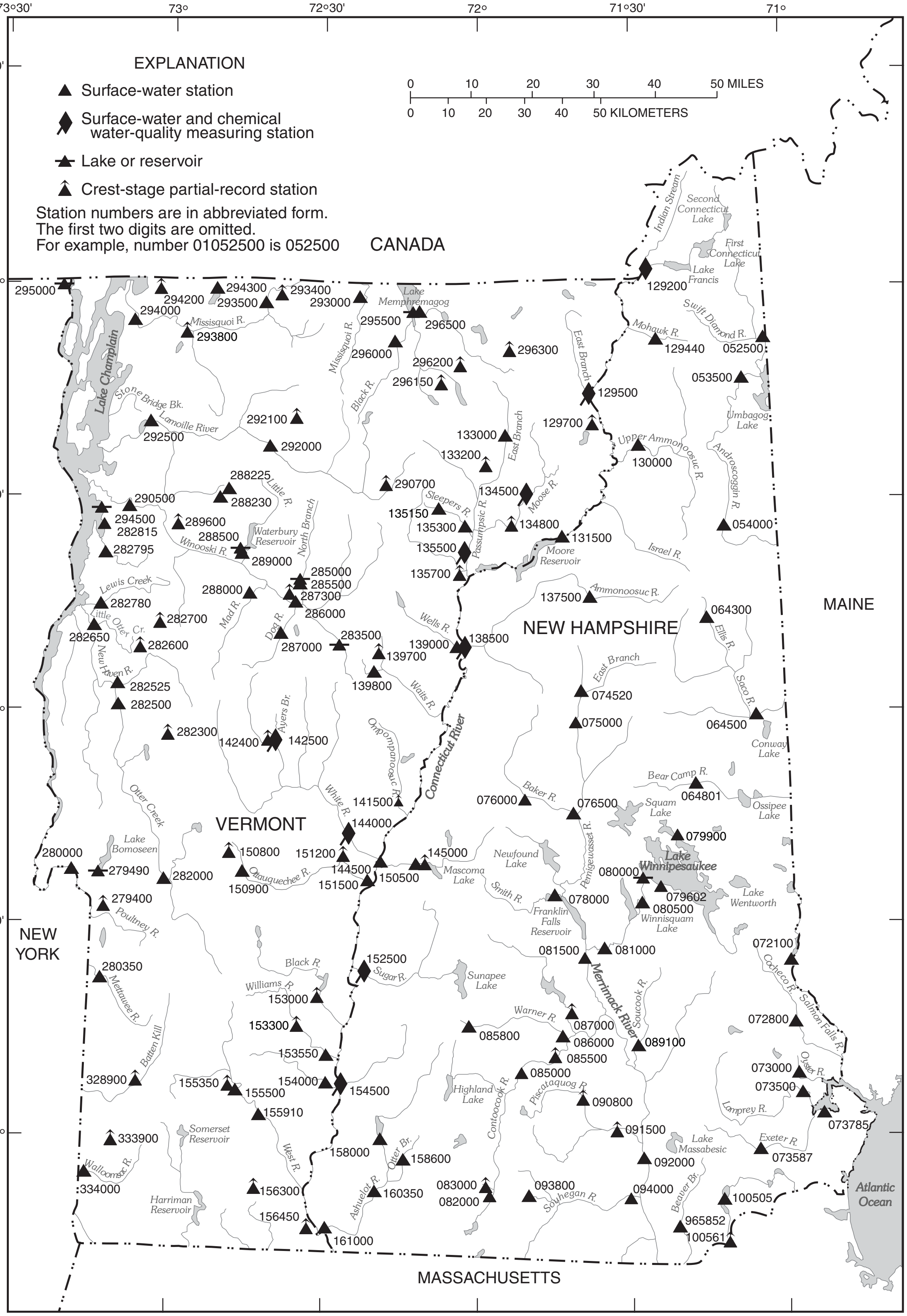

Figure 1. Location of surface-water data-collection sites.

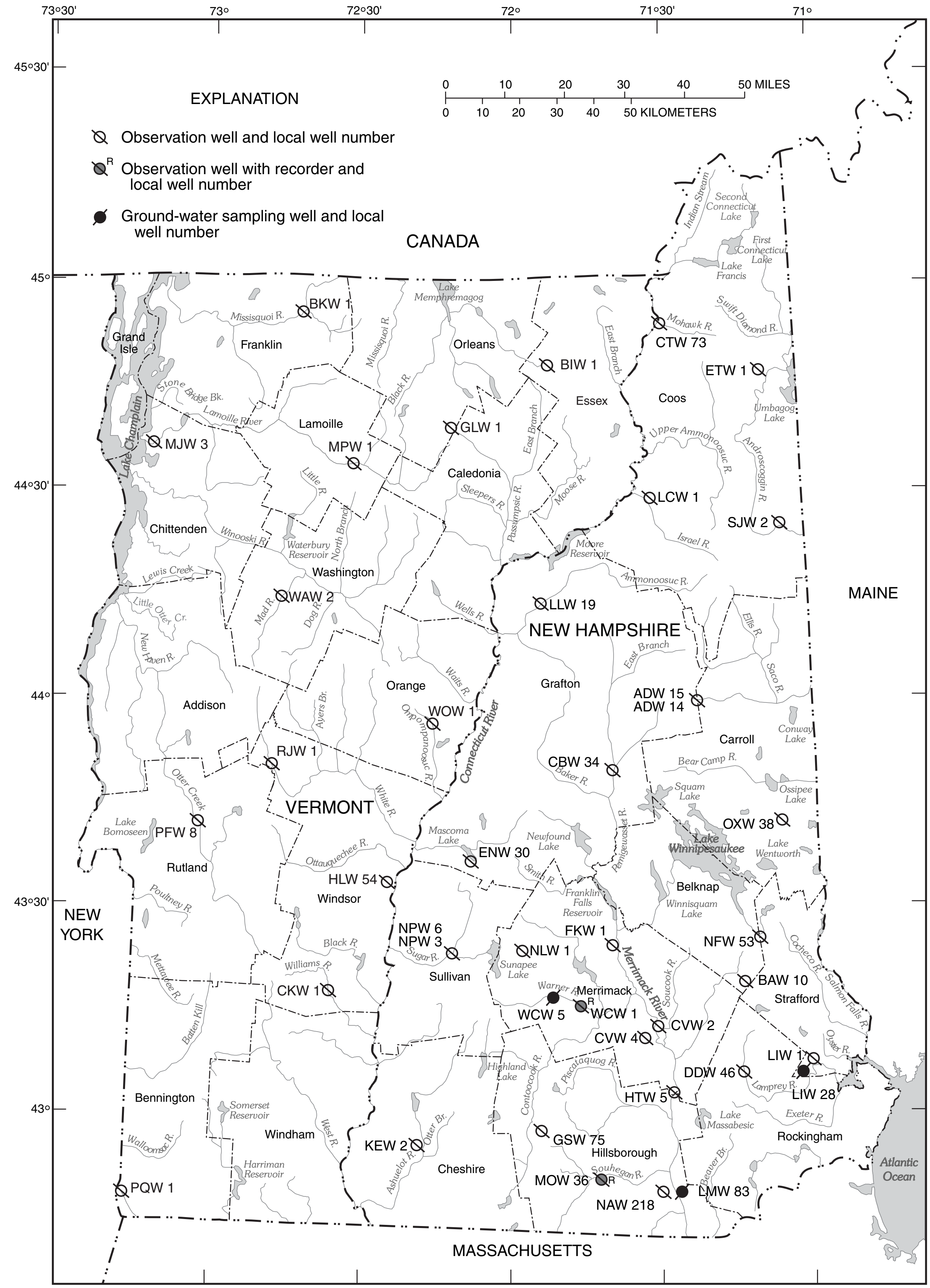

Figure 2. Location of ground-water data-collection sites.

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://waterdata.usgs.gov/nh/nwis

http://waterdata.usgs.gov/usa/nwis/rt

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, Michael Nolin, Commissioner

Vermont Department of Environmental Conservation, Jeffrey Wennberg, Commissioner

City of Keene, John A. MacLean, 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 2003 water year was in the below-normal to normal range throughout New Hampshire and Vermont (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 1971 through September 2000). Annual runoff was in the below-normal range for 32 streamflow gaging sites having long-term records primarily within the Androscoggin, Saco, Piscataqua, northern Merrimack, central and northern Connecticut, and central and northern parts of the St. Lawrence River Basins (Missisquoi and Winooski Rivers). Runoff was in the normal range at 20 sites, primarily within the Hudson and southern parts of the Merrimack, Connecticut, and the St. Lawrence River Basins (Otter Creek).

The 2003 monthly and annual mean discharges and the monthly and annual median discharges for the reference period of 1971-2000 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 2003 water-year runoff of 85 and 80 percent of median, respectively (compared to 76 and

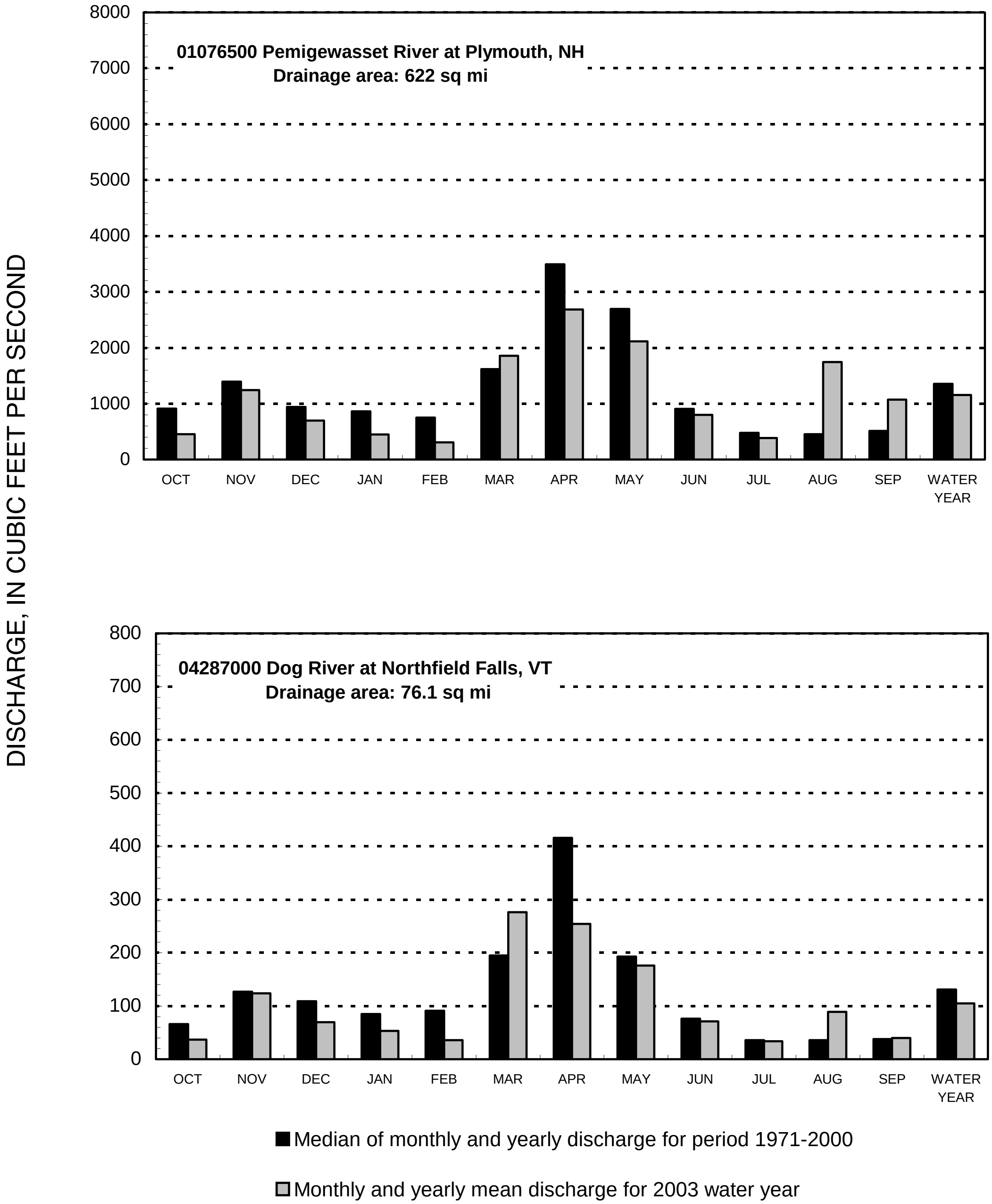

Figure 3. Comparison of discharge at two long-term index-gaging stations during the 2003 water year with median discharge for period 1971–2000.

81 percent a year ago for each site), and were used with other stations as indicators of monthly runoff across both States. The following table is a summary of mean runoff for a number of sites using the 30-year reference period.

Station No.	Mean runoff in 2003 water year		
	Mean ft^3/s	Percent of median	Range
01054000	1,711	68	below-normal
01064500	740	75	below-normal
01073500	264	92	normal
01076500	1,154	85	below-normal
01078000	120	80	below-normal
01092000	4,928	92	normal
01138500	3,825	74	below-normal
01152500	394	94	normal
01154500	7,951	80	below-normal
01161000	705	92	normal
01334000	229	101	normal
04282500	1,020	94	normal
04287000	105	80	below-normal
04292500	1,163	87	normal
04293500	846	87	below-normal
04296000	244	91	normal

Additional statistics for each streamflow-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

No significant widespread flooding occurred in New Hampshire or Vermont during the 2003 water year. Localized flooding occurred on August 12, 2003, across west-central New Hampshire. Rainfall amounts across the area ranged from 2.8 to 3.5 inches with some locally higher amounts. In the Merrimack River Basin, the West Branch Warner River gage near Bradford, New Hampshire recorded a new maximum discharge of 881 ft^3/s on August 12. On the basis of 41 years of record, this flow was greater than a 20-year but less than a 25-year flood.

Annual peak discharges at streamflow-gaging stations were recorded during the months of March, April, and August 2003 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 a 2-year to a 25-year recurrence interval throughout the water year.

Minimum streamflows occurred during October 2002, March and the summer months of July, August, and September 2003. During these months, runoff across both states declined to levels less than about a 95-percent flow duration (percent of time daily flows will be equaled or exceeded) to greater than about a 99-percent flow duration except for the central Connecticut and the Hudson River Basins, which declined to levels less than about a 90-percent flow duration to greater than about a 95-percent flow duration. As a result, four streamflow-gaging stations with long-term records measured record-low monthly streamflows. In the Connecticut River Basin, the Connecticut River below Indian Stream near Pittsburg, New Hampshire recorded the lowest annual mean in its 46-year history.

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 14,250 million cubic feet or 64 percent of capacity. Average reservoir storage rose to 70 percent of capacity through November, then followed a steady seasonal decline to a minimum capacity for the water year of 42 percent by the end of February. Average reservoir storage then increased to a maximum average capacity of 90 percent for the water year by the end of June and finally declined seasonally to a capacity of 79 percent at the end of September, which is a combined usable storage of 17,560 million cubic feet.

Ground-Water Levels

The ground-water observation-well network consisted of 26 wells in New Hampshire, and 12 wells in Vermont, during the 2003 water year. Most observation wells are of small diameter and located in sandy material.

The monthend observations are organized in table 1. Well locations are referenced by well name and are found on figure 2. Ground-water levels summarized in table 1 are based on levels from observation wells across New Hampshire and Vermont from October 2002 to September 2003.

Ground-water levels in central New Hampshire were generally in the **below-normal** range from October through March 2003. The other parts of the State were generally in the **normal** range throughout the year. Vermont ground-water conditions were also generally in the **normal** range with the exception of northwestern Vermont, as indicated by well BIW-1. This region was consistently **below-normal** from May through the end of the water year.

No new extreme water levels were established during the 2003 water year, for wells with long periods of record dating back into the 1960s.

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 also are available through the World Wide Web at:

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 01076500, which appears just to the left of the station name, includes a 2-digit part number “01” plus the 6-digit (or 8-digit) downstream order number “076500.” In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

Table 1. Monthend ground-water conditions as measured in 37 wells in New Hampshire and Vermont.

[+, above normal, within the highest 25 percent pf record for this month; -, below normal, within the lowest 25 percent of record for this month; N, normal within the 25- to -75 percentile range; -----, no data; Values are compared to the period of record for each well in the table below. See figure 2 for well locations.]

Ground-water well No.	Location	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
						New Hampshire ground-water wells							
ADW-14	Albany	-	N	-	-	-	-	N	N	N	-	+	+
ADW-15	Albany	-	N	-	-	-	-	N	N	N	-	+	+
BAW-10	Barnstead	-----	-----	-----	+	+	-----	-	-----	N	N	+	+
CBW-34	Campton	-	N	N	-	-	N	-	N	N	N	+	+
CTW-73	Colebrook	-	N	-----	N	-	N	-	-	N	-----	-	-
CVW-2	Concord	-	-	-	-	-	-	-	-	-	-	-	-
CVW-4	Concord	-	-	-	N	-	N	N	N	N	N	N	+
DDW-46	Deerfield	-	-	-	N	-	-	+	N	N	N	+	+
ENW-30	Enfield	-	-	-	-	-	-	N	N	N	N	+	+
ETW-1	Errol	-	-	-	-	-	-	-	-	-	-	-	-----
FKW-1	Franklin	-	-	-	-	-	-	-	-	-	-	N	N
GSW-75	Greenfield	-	-	-	-	-	-	-	-----	N	N	N	N
HTW-5	Hooksett	N	N	N	N	N	N	N	N	N	N	+	+
KEW-2	Keene	N	+	N	N	N	+	N	N	+	+	+	+
LCW-1	Lancaster	N	N	N	-----	-	N	-	-	N	-	-	N
LIW-1	Lee	-	N	N	-	-	+	N	N	N	N	N	N
LLW-19	Lisbon	N	N	+	+	+	+	N	N	N	N	N	+
NAW-218	Nashua	+	+	+	+	+	+	+	N	N	N	+	+
NFW-53	New Durham	-	-	-	-	-	N	N	N	-	-	N	+
NLW-1	New London	-	N	N	N	N	+	N	N	N	N	+	+
NPW-3	Newport	-	N	N	-	-	N	N	N	N	-	+	+
NPW-6	Newport	-	N	N	-	-	N	N	N	N	-	+	+
OXW-38	Ossipee	-	-	-	-	-	-	N	N	N	N	N	N
SJW-2	Shelburne	N	-	-	-	N	N	N	-	-	-	N	N
WCW-1	Warner	N	N	N	N	N	-	N	N	N	N	+	+
						Vermont ground-water wells							
BIW-1	Brighton	-----	-----	N	N	N	N	N	N	N	+	N	N
BKW-1	Berkshire	-	-	N	N	N	+	N	-	-	-	-	-
CKW-1	Chester	-	+	N	-	-	+	N	-	N	N	+	+
GLW-1	Glover	-----	-----	N	N	-	N	N	N	N	N	N	N
HLW-54	Hartland	-	N	N	N	N	N	N	+	-	-	N	+
MJW-3	Milton	-	N	N	-	-	N	-	-	N	N	N	N
MPW-1	Morristown	N	N	-	N	N	-	-	N	N	N	N	N
PFW-8	Pittsford	N	-----	N	N	N	N	N	N	-	N	N	N
PQW-1	Pownal	-----	+	+	N	N	N	N	N	N	N	+	N
RJW-1	Rochester	N	-----	N	N	-	+	-	N	N	+	+	+
WAW-2	Waitsfield	N	+	N	N	N	+	N	N	N	+	+	+
WOW-1	West Fairlee	N	-	N	N	N	N	N	N	N	N	+	+

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as “01,” “02,” and so forth, would be assigned as one would for wells (see fig. 4). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

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.

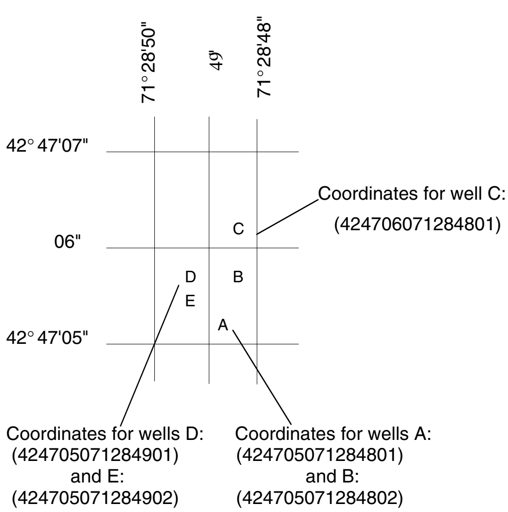

Figure 4. System for numbering wells and miscellaneous sites (latitude and longitude).

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from *http://water.usgs.gov/hbn/*.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation’s largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world’s oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from http://water.usgs.gov/nasqan/.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from http://bqs.usgs.gov/acidrain/.

The USGS National Water-Quality Assessment (NAWQA) Program 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; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 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 is 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 water-resources managers to use in making decisions 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 semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from http://water.usgs.gov/nawqa/.

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 2003, the NECB NAWQA study collected water samples from 3 ground water wells (fig. 2). Data from these sites are presented in the Miscellaneous Surface-Water Quality and Miscellaneous Ground-Water Quality sections of this report.

Water samples were collected from 1 public-supply gravel-packed well and 2 domestic bedrock wells during July 2003 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 surficial and bedrock aquifer systems and analyzed for major ions, nutrients, trace elements, radon gas, 48 pesticide compounds, and 86 volative organic compounds (VOCs).

Sampling protocols were followed to obtain and evaluate accurate water-quality data (Koterba and others, 1995). Untreated water samples were collected using a sample line connected to a faucet either at the well head (where available) or at a nearby pumphouse. 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.

Analyses of Pesticides in Surface-water and Ground-water Samples (Schedule 2001)

Selected ground-water samples from the New England Coastal Basins NAWQA study were analyzed for pesticides on schedule 2001 during the 2003 water year. Sampling sites are shown in figure 2. This table lists the pesticides on the schedule, the unit of measure (micrograms per liter, μg/L), the U.S. Geological Survey National Water Information System parameter code, and the laboratory reporting level. **Only pesticides measured at estimated concentrations 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^{o}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)
82660	2,6-Diethylaniline	0.006
49260	Acetochlor (Harness Plus, Surpass)	0.006
46342	Alachlor (Lasso, Bullet)	0.0045
39632	Atrazine (Atrex, Atred)	0.007
04040	Atrazine, Deethyl- (Metabolite of Atrazine)	0.006
82686	Azinphos, Methyl- (Guthion, Gusathion)	0.050
82673	Benfluralin (Benefin, Balan)	0.010
04028	Butylate (Genate Plus, Suntan+)	0.0021
82680	Carbaryl (Sevin, Denapan)	0.041
82674	Carbofuran (Furandan, Curaterr)	0.020
38933	Chlorpyrifos (Brodan, Dursban)	0.005
04041	Cyanazine (Bledex, Fortrol)	0.018
82682	Dacthal DCPA (Chlorthal-dimethyl)	0.003
34653	DDE, p,p'	0.0025
39572	Diazinon (Basudin, Diazatol)	0.005
39381	Dieldrin (Panoram D-31, Octalox)	0.0048
82660	Diethylanaline (Metabolite of Alachlor)	0.002
82677	Disulfoton (Disyston, Frumin AL)	0.021
82668	EPTC (Eptam, Farmarox)	0.002
82663	Ethalfluralin (Sonalan, Curbit)	0.009
82672	Ethoprophos (Mocap, Ethoprop)	0.005
04095	Fonofos (Dyfonate, Capfos)	0.0027
34253	HCH,alpha- (alpha-BHC, alpha-lindane)	0.046
39341	HCH,gamma- (Lindane, gamma-BHC)	0.004
82666	Linuron (Lorex, Linex)	0.035
39532	Malathion	0.027
39415	Metolachlor (Dual, Pennant)	0.013
82630	Metribuzin (Lexon, Sencor)	0.006
82671	Molinate (Ordram)	0.0016
82684	Napropamide (Devrinol)	0.007
39542	Parathion, Ethyl- (Roethyl-P, Alkron)	0.010
82667	Parathion, Methyl- (Penncap-M)	0.006
82669	Pebulate (Tillam, PEBL)	0.0041
82683	Pendimethalin (Prowl, Stomp, Pre-M)	0.022
82687	Permethrin,cis- (Ambush, Astro)	0.006
82664	Phorate (Thimet, Granutox)	0.011
04037	Prometon (Pramitol, Princep)	0.015
82676	Pronamide (Kerb) (Propyzamide)	0.0041
04024	Propachlor (Ramrod, Satecid)	0.010
82679	Propanil (Stampede, Stam)	0.011
82685	Propargite (Omite, Alkyl sulfite)	0.023
04035	Simazine (Princep, Caliber 91)	0.005

PCode	Compound name (Common name)	LRL (µg/L)
82670	Tebuthiuron (Spike, Tebusan)	0.016
82665	Terbacil (Sinbar)	0.034
82675	Terbufos (Counter, Contraven)	0.017
82681	Thiobencarb (Bolero, Saturn)	0.005
82678	Tri-allate (Avadex BW, Far-Go)	0.0023
82661	Trifluralin (Treflan, Gowan)	0.009

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 2003. 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^{o}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	*tert*-butylbenzene	0.10
77223	(1-Methylethyl) benzene	Isopropylbenzene	0.06
77350	(1-Methylpropyl) benzene	*sec*-butylbenzene	0.06
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
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	0.064
34496	1,1-Dichloroethane	1,1-dichloroethane	0.035
34501	1,1-Dichloroethene	1,1-dichloroethene	0.044
77168	1,1-Dichloropropene	1,1-dichloropropene	0.05
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	0.12
77222	1,2,4-Trimethylbenzene	1,2,4-trimethylbenzene	0.056
82625	1,2-Dibromo-3-chloropropane	1,2-dibromo-3-chloropropane (DBCP)	0.05
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	0.029
77135	1,2-Dimethylbenzene	*o*-xylene	0.07
85795	1,3 & 1,4-Dimethylbenzene	*m* & *p*-xylene	0.06
77226	1,3,5-Trimethylbenzene	1,3,5-trimethylbenzene	0.044
34566	1,3-Dichlorobenzene	1,3-dichlorobenzene	0.030
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	0.040
77277	1-Chloro-4-methylbenzene	4-chlorotoluene	0.056
77356	4-Isopropyl-1-methylbenzene	*p*-Isopropyltoluene	0.12
77170	2,2-Dichloropropane	2,2-dichloropropane	0.05
81595	2-Butanone	Methyl-ethyl ketone	5.0
77220	2-Ethyltoluene	0-Ethyl toluene	0.06
77103	2-Hexanone	2-hexanone	0.70
34215	Acrylonitrile	2-Propenenitrile	1.20
78109	3-Chloro-1-propene	3-chloropropene	0.12
78133	4-Methyl-2-pentanone	Methyl isobutyl ketone	0.37
81552	Acetone	Acetone	7.1
34030	Benzene	Benzene	0.021
81555	Bromobenzene	Bromobenzene	0.036
77297	Bromochloromethane	Bromochloromethane	0.12
32101	Bromodichloromethane	Bromodichloromethane	0.048
50002	Bromoethene	Vinyl Bromide	0.10
34413	Bromomethane	Methyl bromide	0.26
77041	Carbon disulfide	Carbon Disulfide	0.075
34301	Chlorobenzene	Chlorobenzene	0.028
34311	Chloroethane	Chloroethane	0.12
39175	Chloroethene	Vinyl Chloride	0.11
34418	Chloromethane	Methyl chloride	0.17
77093	*cis*-1,2-Dichloroethene	*cis*-1,2-dichloroethene	0.038
34704	*cis*-1,3-Dichloropropene	*cis*-1,3-dichloropropene	0.09
32105	Dibromochloromethane	Dibromochloromethane	0.18
30217	Dibromomethane	Dibromomethane	0.05
34668	Dichlorodifluoromethane	Dichlorodifluoromethane	0.18
34423	Dichloromethane	Methylene Chloride	0.16
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 *tert*-butyl ether	Ethyl-*t*-butyl ether (ETBE)	0.054
34371	Ethylbenzene	Ethylbenzene	0.03

PCode	Compound name	Common name	LRL (µg/L)
39702	Hexachlorobutadiene	Hexachlorobutadiene	0.14
77424	Iodomethane	Methyl iodide	0.35
49991	Methyl acrylate	Methyl Acrylate	1.40
81593	Methyl acrylonitrile	Methyl Acrylonitrile	0.57
81597	Methyl methacrylate	Methyl Methacrylate	0.35
78032	Methyl *tert*-butyl ether	Methyl-*t*-butyl ether (MTBE)	0.17
34010	Methylbenzene	Toluene	0.05
77342	*n*-Butylbenzene	*n*-butylbenzene	0.19
77224	*n*-Propylbenzene	*n*-propylbenzene	0.042
34696	Naphthalene	Naphthalene	0.50
50005	*tert*-Amyl methyl ether	*tert*-amyl methyl ether (TAME)	0.08
34475	Tetrachloroethene	Tetrachloroethene	0.027
32102	Tetrachloromethane	Carbon tetrachloride	0.06
81607	Tetrahydrofuran	Tetrahydrofuran	2.20
34546	*trans*-1,2-Dichloroethene	*trans*-1,2-dichloroethene	0.032
34699	*trans*-1,3-Dichloropropene	*trans*-1,3-dichloropropene	0.09
73547	*trans*-1,4-Dichloro-2-butene	*trans*-1,4-dichloro-2-butene	0.70
32104	Tribromomethane	Bromoform	0.10
39180	Trichloroethene	Trichloroethene	0.038
34488	Trichlorofluoromethane	Trichlorofluoromethane	0.09
32106	Trichloromethane	Chloroform	0.024

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from *http://water.usgs.gov/nsip/*.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (fig. 1) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with a current meter or acoustic Doppler current profiler, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRIs), Book 3, Chapters 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).

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

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using ultrasonic or acoustic instruments at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

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

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator’s log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station 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 term indicates the time period for which records have been published 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented 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, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://water.usgs.gov/nwis/nwis*). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

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 arithmetic 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 is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect 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 volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 values. 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or for the designated period.

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.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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 equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.
>
> Cubic feet per square mile (CFSM) 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.
>
> Inches (INCHES) indicate 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 table lists annual maximum stage and discharge at crest-stage stations, and the second table lists 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 often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a 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. This identification is shown either by flagging individual daily values with the letter "e" and noting in a table footnote, "e–Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

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

The degree of accuracy of the records is stated in the REMARKS in the station description. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent of the true value; "good" within 10 percent; and "fair," within 15 percent. "Poor" indicates that daily discharges have less than "fair" accuracy. Different accuracies may be attributed to different parts of a given record.

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

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values 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 Data Records Available

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

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol "---" in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

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

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

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

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 at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report 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 *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one 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 continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer 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. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 1.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

Rating classifications for continuous water temperature records:

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than]

Rating			
Excellent	**Good**	**Fair**	**Poor**
≤ 0.2°C	> ±0.2 to 0.5°C	> ±0.5 to 0.8°C	> ±0.8°C

Arrangement of Records

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

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must 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 TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1–A9. These TWRIs are listed in this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

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

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

At other stations, suspended-sediment samples are collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Samples for dissolved oxygen, pH, temperature, and specific conductance are analyzed locally. Samples for suspended sediment are analyzed in the USGS laboratory in Louisville, Kentucky. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter C1. Methods used by the USGS laboratories are given in the TWRIs, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. 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, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

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

LOCATION.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

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

INSTRUMENTATION.—Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (*http://waterdata.usgs.gov/nwis*). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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

Remark Codes

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

Printed Output	Remark
E or 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.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of “E.” These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

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

Data Collection and Computation

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

Most methods for collecting and analyzing water samples are described in the TWRIs referred to in the On-site Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRIs Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Water-level measurements in this report are given in feet with reference to land-surface datum (lsd). 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 above sea level is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported daily.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth of water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown in figure 2; each well is identified on the map by its local well or county well number.

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

AQUIFER.—This entry designates by name and geologic age the aquifer that the well taps.

WELL CHARACTERISTICS.—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and changes since construction.

INSTRUMENTATION.—This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on continuous, monthly, or some other frequency of measurement.

DATUM.—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, and so forth), 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 National Geodetic Vertical Datum of 1929 (NGVD 29); it is reported with a precision depending on the method of determination.

REMARKS.—This entry describes factors that may influence the water level in a well or the measurement of the water level, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder’s float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide.

Most methods for collecting and analyzing water samples are described in the TWRIs. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS District office (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed on site. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from *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.waterdata.usgs.gov/nwis/current/?type=flow

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.)

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from *http://water.usgs.gov/glossaries.html*.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

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

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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

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 that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1–March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

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

Ash mass is the mass or amount of residue present after the residue from a 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^3), and periphyton and benthic organisms in grams per square meter (g/m^2). (See also "Biomass" and "Dry mass")

Aspect is the direction toward which a slope faces with respect to the compass.

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

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

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

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also "Phytoplankton"and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

sphere 4/3 πr^3 cone 1/3 $\pi r^2 h$ cylinder $\pi r^2 h$.

pi (π) is the ratio of the circumference to the diameter of a circle; pi = 3.14159….

From cell volume, total algal biomass expressed as biovolume (μm^3/mL) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See “Cubic foot per second-day”)

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also “Biochemical oxygen demand (BOD)”]

***Clostridium perfringens** (C. perfringens)* is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

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

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 where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. 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^3/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 or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-foot” sometimes is used synonymously with “cubic foot per second” but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft^3/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, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

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

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Sediment” and “Suspended-sediment concentration”)

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Vertical Datum of 1929,” and “North American Vertical Datum of 1988”)

Diatoms *(Bacillariophyta)* are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also “Phytoplankton” and “Periphyton”)

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

Discharge, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

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 and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water 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 concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved solids concentration in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the “residue-on-evaporation” method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L $CaCO_3$) can be converted to carbonate concentration by multiplying by 0.60.

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

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

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

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas 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 contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

Dry mass refers to the mass of residue present after drying in an oven at 105° C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

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. (See also "Wet weight")

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41° C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus feacalis, Streptococcus feacium, Streptococcus avium,* and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

Escherichia coli *(E. coli)* are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5°C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35° C plus or minus 1.0° C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also “Bacteria”)

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also “Phytoplankton”)

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 a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term “stage,” although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae *(Chlorophyta)* are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating “moss” in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter (μm^3/mL). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu m^3/cm^2$). (See also “Phytoplankton” and “Periphyton”)

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

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

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

Hilsenhoff's Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = sum\frac{(n)(a)}{N} \quad ,$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See "Datum")

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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 USGS. Each hydrologic unit is identified by an 8-digit number.

Inch (IN., in.), in reference to streamflow, 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 distributed uniformly on it. (See also "Annual runoff")

Instantaneous discharge is the discharge at a particular instant of time. (See also "Discharge")

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L} \quad ,$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L}\log_e\frac{I}{I_o} \quad .$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

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*

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or **low tide** is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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.

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

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

Micrograms per gram (UG/G, µg/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, µg/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, µg/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. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, µS/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, 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 milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, 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 29) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations**,** 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* (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

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.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian**,** Mexican, and United States first-order terrestrial leveling networks.

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 sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

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

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

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 USGS 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 uses 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, as 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
Cobble	>64 – 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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, mass, or volume.

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, 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. Although 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 7.0 standard units are termed “acidic,” and solutions with a pH greater than 7.0 are termed “basic.” Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

Phytoplankton is the plant part of the plankton. They usually are 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 commonly are known as algae. (See also “Plankton”)

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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.

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

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [mg C/(m^2/time)] for periphyton and macrophytes or per volume [mg C/(m^3/time)] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [mg O/(m^2/time)] for periphyton and macrophytes or per volume [mg O/(m^3/time)] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also “Primary productivity”)

Radioisotopes are isotopic forms of elements 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.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

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

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 nonexceedance 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 nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. 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.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105° C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25° C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water 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.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

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.

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26–50 percent
1	> 75 percent	4	5–25 percent
2	51–75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and, thus, the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of “suspended, recoverable” constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

Suspended solids, total residue at 105°C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as “suspended, total.” Determinations of “suspended, total” constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

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.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropeda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	*Hexagenia*
Species:	*Hexagenia limbata*

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

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

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35° C. In the laboratory, these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35° C plus or minus 1.0° C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

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.

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

Total length (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

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

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) 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 VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are 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.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

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

Water year in USGS 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, 2002, is called the “2002 water year.”

Watershed (See “Drainage basin”)

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

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

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

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

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also “Plankton”)

TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, 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.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at http://water.usgs.gov/pubs/twri/. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at http://www.usgs.gov/sales.html, or by FAX to (303)236-469 of an order form available online at http://mac.usgs.gov/isb/pubs/forms/. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

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, chap. D1. 1975. 65 p.

1–D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

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, chap. D1. 1974. 116 p.

2–D2. *Application of seismic-refraction techniques to hydrologic studies,* by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 p.

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, chap. E1. 1971. 126 p.

2–E2. *Borehole geophysics applied to ground-water investigations,* by W.S. Keys: USGS–TWRI book 2, chap. E2. 1990. 150 p.

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, chap. F1. 1989. 97 p.

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, chap. A1. 1967. 30 p.

3–A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.

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3–A6. *General procedure for gaging streams,* by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.

3–A7. *Stage measurement at gaging stations,* by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.

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3–A9. *Measurement of time of travel in streams by dye tracing,* by F.A. Kilpatrick and

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3–A11. *Measurement of discharge by the moving-boat method,* by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.

3–A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.

3–A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.

3–A14. *Use of flumes in measuring discharge,* by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.

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3–A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.

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3–A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A19. 1990. 31 p.

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Section B. Ground-Water Techniques

3–B1. *Aquifer-test design, observation, and data analysis,* by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.

3–B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.

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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, chap. B7. 1992. 190 p.

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3–C1. *Fluvial sediment concepts,* by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.

3–C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.

3–C3. *Computation of fluvial-sediment discharge,* by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

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Section A. Statistical Analysis

4–A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.

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4–D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS–TWRI book 4, chap. D1. 1970. 17 p.

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

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, chap. A2. 1991. 68 p.

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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, chap. A4. 1992. 108 p.

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Book 7. Automated Data Processing and Computations

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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, chap. C2. 1978. 90 p.

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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, chap. A1. 1968. 23 p.

8–A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 p.

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, chap. B2. 1968. 15 p.

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, chap. A1. 1998. 47 p.

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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, chap. A4. 1999. 156 p.

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9–A7. *National field manual for the collection of water-quality data: Biological indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.

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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, chap. A9. 1998. 60 p.

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, NH

LOCATION.--Lat 44° 52'39", long 71° 03'28", 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^2.

PERIOD OF RECORD.--
DISCHARGE: July 1941 to current year.
CHEMICAL ANALYSES: Water year 1954.

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

GAGE.--Water-stage recorder. Elevation of gage is 1,259.48 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good, except for periods of ice effect, Oct. 31 to Nov. 10, Nov. 17-22, and Nov. 25 to Apr. 12, which are fair. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft^3/s, Mar. 31, 1998, gage height, 12.11 ft, from rating curve extended above 7,500 ft^3/s; maximum gage height, 12.23 ft, Feb. 21, 1981 (backwater from ice); minimum discharge, 6.8 ft^3/s, Aug. 27-28, 1949, Sept. 1, 1952, gage height, 0.81 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 16	1000	*4,640	*8.29	No other peak greater than base discharge.			

Minimum discharge, 25 ft^3/s, Sept. 14, gage height, 1.72 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	e93	e113	e132	e54	e47	e598	729	222	116	45	38
2	66	e77	e104	e125	e55	e47	e416	1,820	213	79	58	35
3	55	e65	e98	e118	e55	e49	e316	2,340	180	67	56	33
4	48	e74	e93	e119	e57	e47	e269	943	149	59	54	65
5	46	e72	e89	e136	e57	e47	e218	641	142	54	55	77
6	43	e70	e85	e132	e59	e46	e201	547	317	56	395	54
7	40	e73	e82	e129	e60	e45	e179	554	246	49	574	42
8	37	e68	e79	e126	e60	e45	e168	482	192	69	246	37
9	35	e75	e77	e125	e60	e46	e155	445	166	118	162	33
10	34	e143	e75	e123	e59	e46	e154	416	178	68	381	30
11	34	793	e74	e116	e59	e46	e240	333	166	87	439	29
12	34	771	e72	e112	e58	e46	e322	666	150	116	268	27
13	34	680	e71	e110	e56	e45	806	655	129	73	187	26
14	38	477	e71	e104	e53	e45	709	552	1,860	56	138	26
15	42	310	e148	e98	e51	e45	2,160	433	2,010	46	101	26
16	41	246	e140	e92	e49	e45	4,060	344	715	41	82	38
17	128	e193	e110	e87	e47	e47	1,970	289	417	42	86	66
18	183	e172	e98	e83	e47	e56	866	254	298	39	188	48
19	145	e155	e90	e76	e48	e86	642	228	242	35	126	36
20	350	e146	e98	e75	e48	e103	1,160	205	211	32	83	49
21	226	e143	e371	e73	e49	e191	1,830	195	179	30	67	66
22	149	e166	e438	e67	e50	e341	1,700	193	155	96	58	48
23	115	534	e251	e63	e51	e429	1,190	174	142	122	50	76
24	96	383	e192	e60	e51	e463	879	161	128	200	43	223
25	84	e246	e167	e58	e51	e441	658	160	107	455	39	114
26	92	e172	e154	e60	e50	e433	689	165	91	176	42	132
27	252	e134	e136	e61	e49	e528	1,100	240	80	104	42	106
28	225	e113	e127	e59	e47	e524	1,000	209	73	91	38	74
29	159	e115	e119	e57	---	e675	1,180	235	66	75	37	149
30	124	e125	e112	e56	---	e1,820	870	326	150	59	50	145
31	e98	---	e107	e54	---	e1,040	---	292	---	49	45	---
TOTAL	3,140	6,884	4,041	2,886	1,490	7,914	26,705	15,226	9,374	2,759	4,235	1,948
MEAN	101	229	130	93.1	53.2	255	890	491	312	89.0	137	64.9
MAX	350	793	438	136	60	1,820	4,060	2,340	2,010	455	574	223
MIN	34	65	71	54	47	45	154	160	66	30	37	26
CFSM	0.67	1.51	0.86	0.61	0.35	1.68	5.86	3.23	2.06	0.59	0.90	0.43
IN.	0.77	1.68	0.99	0.71	0.36	1.94	6.54	3.73	2.29	0.68	1.04	0.48

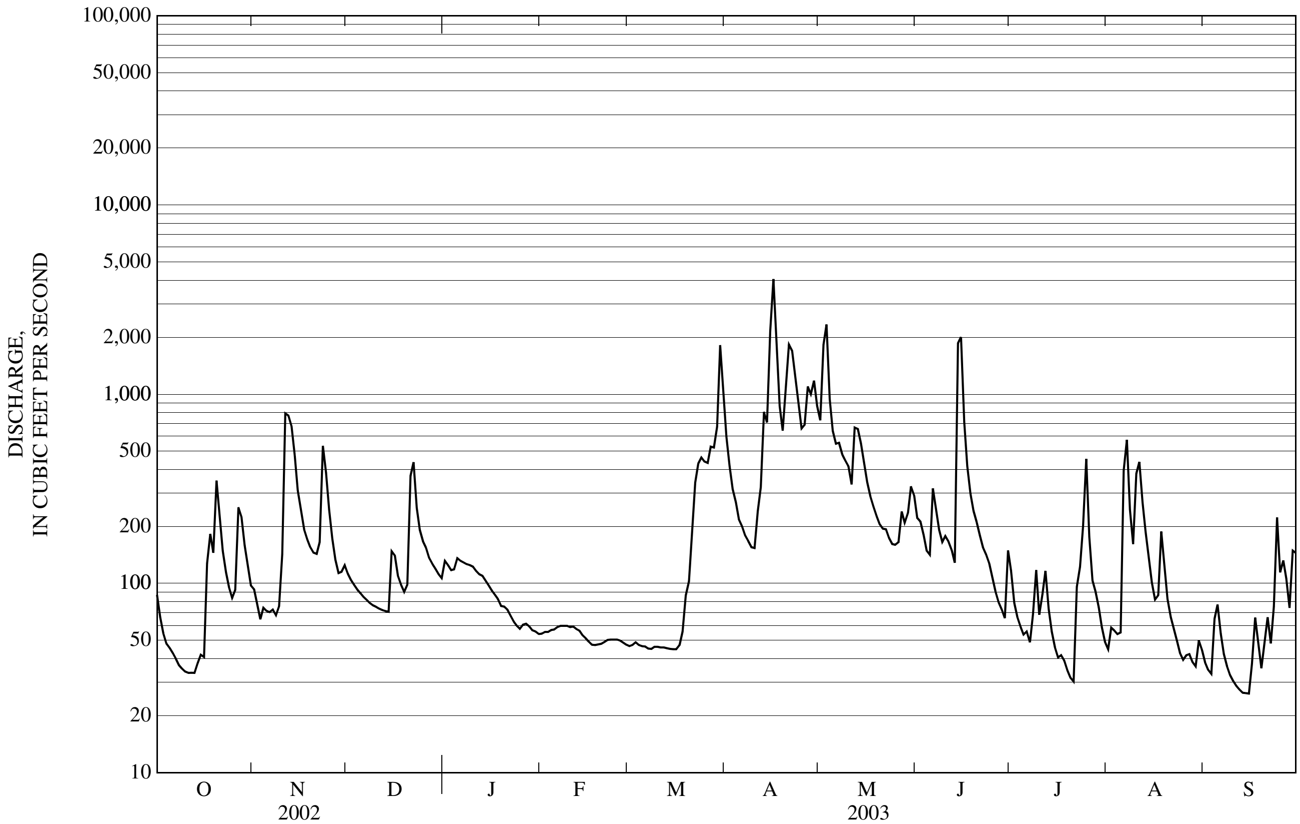
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	261	332	227	166	147	290	1,080	915	321	169	135	147
MAX	869	733	739	575	783	936	1,754	2,115	804	703	492	836
(WY)	(1991)	(1964)	(1974)	(1995)	(1981)	(1998)	(2002)	(1972)	(1943)	(1996)	(1988)	(1954)
MIN	40.9	83.2	53.4	53.9	43.4	54.6	402	297	105	35.1	15.0	16.8
(WY)	(1953)	(1979)	(1979)	(1948)	(1942)	(1967)	(1972)	(1998)	(1963)	(1952)	(1952)	(1952)

e Estimated

01052500 DIAMOND RIVER NEAR WENTWORTH LOCATION, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1941 - 2003	
ANNUAL TOTAL	123,845.9		86,602			
ANNUAL MEAN	339		237		349	
HIGHEST ANNUAL MEAN					524	1996
LOWEST ANNUAL MEAN					225	1965
HIGHEST DAILY MEAN	7,040	Apr 18	4,060	Apr 16	9,900	Mar 31, 1998
LOWEST DAILY MEAN	9.2	Sep 10	26	Sep 13	6.8	Aug 28, 1949
ANNUAL SEVEN-DAY MINIMUM	10	Sep 5	28	Sep 9	9.0	Sep 11, 1952
MAXIMUM PEAK FLOW			4,640	Apr 16	12,800	Mar 31, 1998
MAXIMUM PEAK STAGE			8.29	Apr 16	12.23	Feb 21, 1981
INSTANTANEOUS LOW FLOW			25	Sep 14	6.8	Aug 27, 1949
ANNUAL RUNOFF (CFSM)	2.23		1.56		2.30	
ANNUAL RUNOFF (INCHES)	30.31		21.19		31.24	
10 PERCENT EXCEEDS	701		562		840	
50 PERCENT EXCEEDS	112		104		157	
90 PERCENT EXCEEDS	27		43		51	



01053500 ANDROSCOGGIN RIVER AT ERROL, NH

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

DRAINAGE AREA.--1,046 mi^2.

PERIOD OF RECORD.--
DISCHARGE: January 1905 to current year. November and December 1912, monthly discharges only, published in WSP 1301. Prior to 1922, published as "at Errol Dam." Records for water years 1923-44 have not been published but are available in the files of the U.S. Geological Survey.
CHEMICAL ANALYSES: Water years 1955, 1958.

REVISED RECORDS.--WDR ME-81-1: Drainage area. WDR ME-97-1: 1906-43(M) 1978-84(M).

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, combined usable capacity about 28.1 billion ft^3, with final regulation at Errol Dam, 0.4 mi upstream. Telephone and satellite gage-height telemeters at station. Gage is operated in conjunction with a co-located precipitation gage. Records for precipitation are located in WDR ME-03-1.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft^3/s, May 22, 1969, gage height 9.40 ft; minimum daily discharge, leakage only at various times when gates in dam were closed in water years 1918, 1919, 1923, 1924, 1928, and 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,890 ft^3/s, June 14, 15, gage height, 4.46 ft; minimum daily discharge, 886 ft^3/s, Aug. 7.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

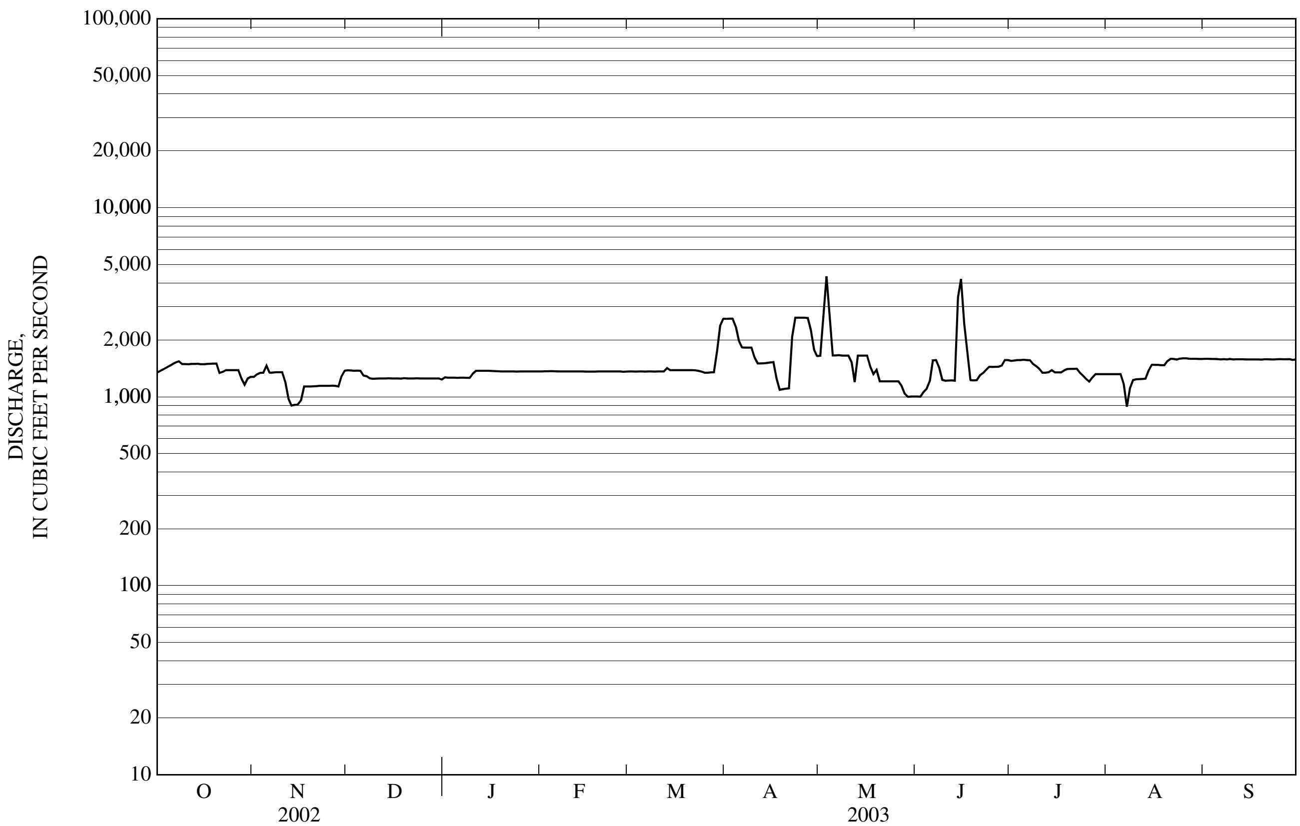
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,340	1,280	1,380	1,270	1,360	1,360	2,590	1,650	1,000	1,550	1,320	1,590
2	1,370	1,310	1,380	1,260	1,360	1,360	2,590	2,690	1,000	1,550	1,320	1,590
3	1,400	1,340	1,370	1,260	1,370	1,360	2,590	4,340	1,060	1,560	1,320	1,590
4	1,430	1,340	1,380	1,260	1,370	1,360	2,350	2,790	1,100	1,570	1,320	1,590
5	1,460	1,460	1,370	1,260	1,360	1,360	1,980	1,650	1,210	1,570	1,320	1,580
6	1,490	1,340	1,300	1,260	1,360	1,360	1,830	1,660	1,560	1,560	1,170	1,580
7	1,520	1,340	1,280	1,260	1,360	1,360	1,820	1,660	1,560	1,560	886	1,580
8	1,540	1,350	1,250	1,260	1,360	1,360	1,820	1,650	1,430	1,490	1,110	1,580
9	1,490	1,350	1,250	1,260	1,360	1,360	1,820	1,650	1,230	1,450	1,230	1,590
10	1,490	1,350	1,250	1,330	1,360	1,360	1,620	1,650	1,220	1,410	1,240	1,580
11	1,490	1,200	1,250	1,370	1,360	1,360	1,500	1,530	1,220	1,340	1,240	1,580
12	1,490	977	1,250	1,370	1,360	1,360	1,500	1,200	1,220	1,340	1,240	1,580
13	1,490	899	1,250	1,370	1,360	1,420	1,500	1,650	1,220	1,350	1,250	1,580
14	1,490	907	1,250	1,370	1,360	1,380	1,510	1,650	3,360	1,380	1,380	1,580
15	1,490	907	1,250	1,370	1,360	1,380	1,520	1,650	4,200	1,350	1,480	1,580
16	1,490	956	1,250	1,370	1,360	1,380	1,520	1,650	2,440	1,350	1,470	1,580
17	1,490	1,130	1,250	1,370	1,360	1,380	1,260	1,450	1,730	1,350	1,470	1,580
18	1,490	1,130	1,250	1,360	1,360	1,380	1,090	1,320	1,220	1,380	1,470	1,580
19	1,500	1,130	1,250	1,360	1,360	1,380	1,100	1,390	1,220	1,400	1,470	1,570
20	1,500	1,140	1,250	1,360	1,360	1,380	1,100	1,210	1,220	1,410	1,550	1,580
21	1,340	1,140	1,250	1,360	1,360	1,380	1,110	1,210	1,300	1,410	1,590	1,580
22	1,350	1,140	1,250	1,360	1,360	1,380	2,070	1,210	1,330	1,410	1,590	1,580
23	1,380	1,140	1,250	1,360	1,360	1,370	2,620	1,210	1,390	1,340	1,570	1,580
24	1,380	1,140	1,250	1,360	1,360	1,360	2,620	1,210	1,440	1,290	1,590	1,580
25	1,380	1,140	1,250	1,360	1,360	1,340	2,620	1,210	1,440	1,240	1,600	1,580
26	1,380	1,150	1,250	1,360	1,360	1,340	2,620	1,210	1,440	1,200	1,600	1,580
27	1,380	1,140	1,250	1,360	1,360	1,350	2,610	1,140	1,440	1,270	1,590	1,580
28	1,250	1,130	1,250	1,360	1,360	1,350	2,260	1,040	1,460	1,320	1,590	1,580
29	1,160	1,280	1,250	1,360	---	1,750	1,780	999	1,560	1,320	1,590	1,570
30	1,250	1,380	1,250	1,360	---	2,380	1,640	1,000	1,560	1,320	1,590	1,580
31	1,270	---	1,230	1,360	---	2,590	---	1,000	---	1,320	1,590	---
TOTAL	43,970	35,616	39,440	41,310	38,100	44,990	56,560	48,529	45,780	43,360	43,746	47,430
MEAN	1,418	1,187	1,272	1,333	1,361	1,451	1,885	1,565	1,526	1,399	1,411	1,581
MAX	1,540	1,460	1,380	1,370	1,370	2,590	2,620	4,340	4,200	1,570	1,600	1,590
MIN	1,160	899	1,230	1,260	1,360	1,340	1,090	999	1,000	1,200	886	1,570

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1,582	1,540	1,690	1,780	1,845	1,850	2,166	3,077	2,261	1,774	1,677	1,681
MAX	3,949	3,745	4,722	3,589	3,644	5,454	4,736	8,192	7,129	4,621	2,265	4,738
(WY)	(1955)	(1908)	(1974)	(1970)	(1996)	(1936)	(1913)	(1974)	(1917)	(1996)	(1990)	(1954)
MIN	921	759	844	760	718	592	770	1,027	763	808	840	902
(WY)	(1922)	(1922)	(1909)	(1909)	(1911)	(1948)	(1940)	(1941)	(1911)	(1915)	(1915)	(1911)

01053500 ANDROSCOGGIN RIVER AT ERROL, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1905 - 2003	
ANNUAL TOTAL	632,426		528,831			
ANNUAL MEAN	1,733		1,449		1,909	
HIGHEST ANNUAL MEAN					3,117	1996
LOWEST ANNUAL MEAN					1,046	1911
HIGHEST DAILY MEAN	10,600	Apr 18	4,340	May 3	16,100	May 22, 1969
LOWEST DAILY MEAN	797	May 2	886	Aug 7	0.00	Oct 31, 1917
ANNUAL SEVEN-DAY MINIMUM	987	Nov 12	987	Nov 12	152	Mar 21, 1948
MAXIMUM PEAK FLOW			4,890	Jun 14	16,500	May 22, 1969
MAXIMUM PEAK STAGE			4.46	Jun 14	9.40	May 22, 1969
10 PERCENT EXCEEDS	2,500		1,650		2,610	
50 PERCENT EXCEEDS	1,340		1,360		1,680	
90 PERCENT EXCEEDS	1,130		1,200		1,130	



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^2.

PERIOD OF RECORD.--
DISCHARGE: October 1913 to current year. October 1922 to September 1928, monthly discharge only, published in WSP 1301. Discharges for December 1917 not used in long-term statistics because of unknown discharge on Dec. 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 National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1922, nonrecording gage showing head and tailwater elevations at site 3 mi upstream at different datum.

REMARKS.--Records good, except for periods of ice effect, Jan. 21-24 and Feb. 13-19, which are fair. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes, combined usable capacity about 28.1 billion ft^3, with final regulation at Errol Dam 35 mi upstream. Diurnal fluctuations caused by power plant 0.8 mi upstream. Satellite gage-height telemeter at station.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,890 ft^3/s, Mar. 30, gage height, 6.78 ft; minimum daily discharge, 1,240 ft^3/s, Oct. 30.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,440	1,290	1,490	1,310	1,410	1,310	3,940	2,230	1,420	1,600	1,330	1,520
2	1,470	1,300	1,440	1,380	1,400	1,330	3,560	3,030	1,350	1,510	1,340	1,540
3	1,450	1,300	1,450	1,340	1,390	1,330	3,310	7,030	1,290	1,490	1,350	1,540
4	1,420	1,320	1,450	1,340	1,390	1,350	3,020	5,200	1,260	1,450	1,350	1,730
5	1,440	1,420	1,480	1,330	1,390	1,330	2,530	2,790	1,270	1,510	1,340	1,760
6	1,440	1,380	1,440	1,310	1,390	1,330	2,190	2,360	1,800	1,510	1,850	1,620
7	1,420	1,380	1,320	1,310	1,400	1,330	2,120	2,260	1,880	1,470	1,710	1,570
8	1,430	1,350	1,360	1,320	1,390	1,320	2,100	2,220	1,730	1,500	1,360	1,590
9	1,430	1,350	1,330	1,310	1,370	1,320	2,040	2,140	1,480	1,500	1,470	1,540
10	1,390	1,400	1,360	1,320	1,370	1,380	1,980	2,190	1,380	1,460	2,300	1,540
11	1,370	1,690	1,320	1,410	1,380	1,330	1,870	2,100	1,350	1,420	2,550	1,530
12	1,410	1,950	1,310	1,410	1,370	1,310	2,040	1,970	1,340	1,590	2,010	1,530
13	1,410	1,910	1,280	1,410	e1,390	1,320	2,670	2,710	1,320	1,460	1,510	1,530
14	1,460	1,800	1,310	1,400	e1,400	1,340	2,740	2,880	3,640	1,340	1,580	1,540
15	1,410	1,490	1,330	1,450	e1,400	1,260	2,700	2,520	6,750	1,310	1,540	1,560
16	1,480	1,280	1,330	1,420	e1,400	1,310	4,220	2,200	3,960	1,350	1,540	1,640
17	1,680	1,360	1,310	1,410	e1,400	1,310	3,200	2,050	2,520	1,330	1,530	1,820
18	1,700	1,440	1,300	1,460	e1,400	1,370	2,260	1,690	1,730	1,310	1,540	1,680
19	1,590	1,360	1,320	1,380	e1,390	1,380	1,900	1,610	1,490	1,360	1,540	1,620
20	1,790	1,350	1,320	1,400	1,380	1,410	1,850	1,530	1,420	1,320	1,490	1,690
21	1,680	1,380	1,420	e1,410	1,350	1,510	2,180	1,450	1,400	1,350	1,570	1,830
22	1,380	1,430	1,510	e1,430	1,350	1,690	2,670	1,440	1,430	1,470	1,560	1,690
23	1,440	1,910	1,430	e1,430	1,350	1,880	3,480	1,380	1,440	1,490	1,560	1,790
24	1,380	2,100	1,390	e1,440	1,340	1,990	3,420	1,380	1,510	1,420	1,510	2,350
25	1,390	1,730	1,350	1,430	1,350	2,170	3,280	1,380	1,490	1,550	1,540	2,010
26	1,420	1,480	1,350	1,410	1,340	2,380	3,280	1,430	1,450	1,410	1,540	1,810
27	1,600	1,410	1,350	1,400	1,370	2,590	3,870	1,620	1,410	1,270	1,550	1,730
28	1,530	1,330	1,300	1,390	1,370	2,680	3,760	1,510	1,380	1,420	1,520	1,710
29	1,310	1,280	1,310	1,400	---	3,540	3,030	1,390	1,470	1,380	1,550	1,780
30	1,240	1,510	1,340	1,440	---	6,820	2,530	1,620	1,530	1,320	1,530	1,840
31	1,310	---	1,280	1,390	---	5,070	---	1,610	---	1,270	1,560	---
TOTAL	45,310	44,680	42,280	42,990	38,630	58,990	83,740	68,920	54,890	44,140	49,220	50,630
MEAN	1,462	1,489	1,364	1,387	1,380	1,903	2,791	2,223	1,830	1,424	1,588	1,688
MAX	1,790	2,100	1,510	1,460	1,410	6,820	4,220	7,030	6,750	1,600	2,550	2,350
MIN	1,240	1,280	1,280	1,310	1,340	1,260	1,850	1,380	1,260	1,270	1,330	1,520

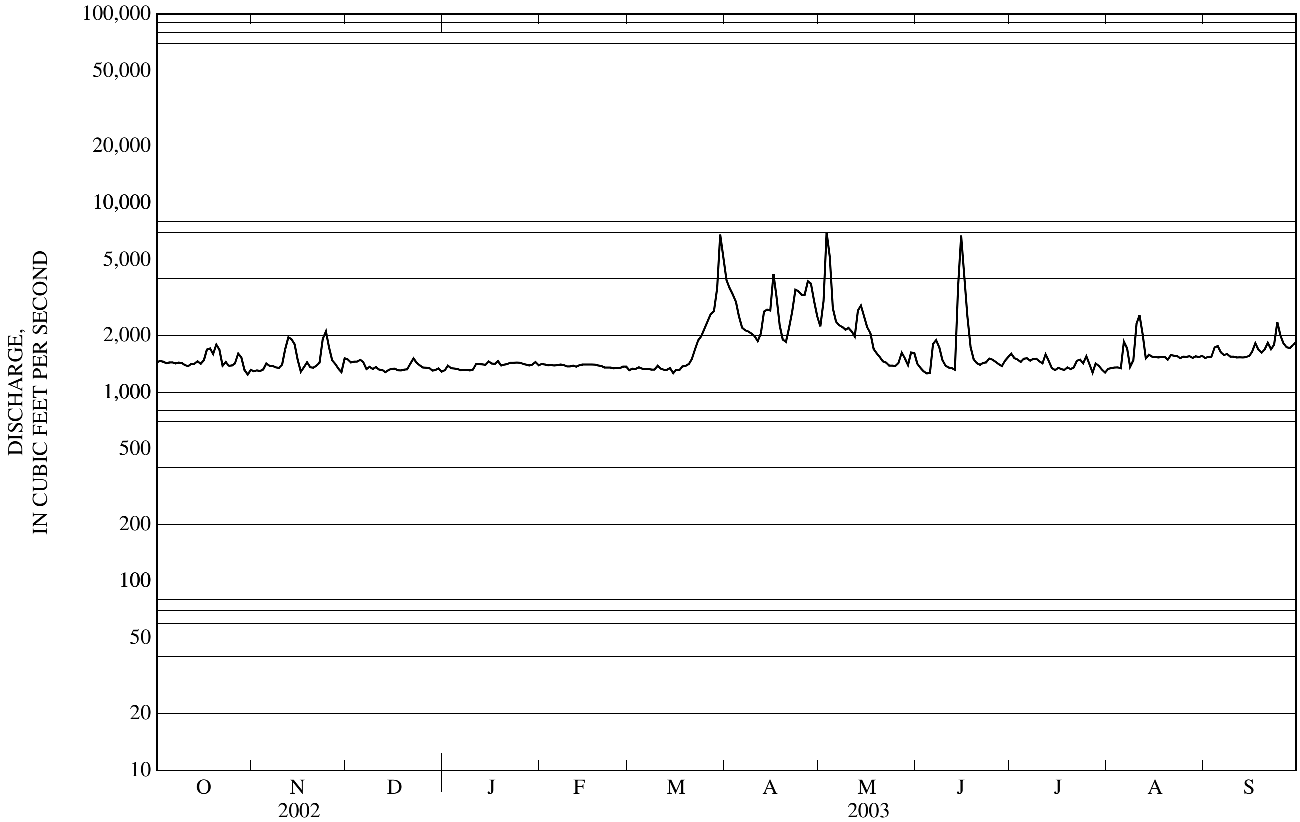
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2,037	2,087	2,123	2,131	2,150	2,490	3,953	4,241	2,793	2,072	1,920	1,966
MAX	4,894	4,292	5,811	4,044	4,294	7,684	6,474	10,050	10,560	5,840	2,792	6,387
(WY)	(1955)	(1991)	(1974)	(1970)	(1996)	(1936)	(1976)	(1937)	(1917)	(1996)	(1990)	(1954)
MIN	1,374	1,365	1,257	1,276	1,299	1,376	1,755	1,746	1,545	1,424	1,462	1,330
(WY)	(1942)	(2002)	(1953)	(1953)	(1922)	(1922)	(1965)	(1941)	(1915)	(2003)	(1995)	(1995)

e Estimated

01054000 ANDROSCOGGIN RIVER NEAR GORHAM, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1914 - 2003	
ANNUAL TOTAL	800,340		624,420			
ANNUAL MEAN	2,193		1,711		2,501	
HIGHEST ANNUAL MEAN					4,147	1996
LOWEST ANNUAL MEAN					1,689	1965
HIGHEST DAILY MEAN	15,100	Apr 18	7,030	May 3	20,000	Jun 18, 1917
LOWEST DAILY MEAN	1,240	Oct 30	1,240	Oct 30	795	Mar 15, 1948
ANNUAL SEVEN-DAY MINIMUM	1,270	Jan 5	1,300	Oct 29	866	Mar 10, 1948
MAXIMUM PEAK FLOW			7,890	Mar 30	21,900	Apr 30, 1923
MAXIMUM PEAK STAGE			6.78	Mar 30		
10 PERCENT EXCEEDS	3,410		2,440		3,730	
50 PERCENT EXCEEDS	1,500		1,440		2,000	
90 PERCENT EXCEEDS	1,290		1,320		1,580	



01064300 ELLIS RIVER NEAR JACKSON, NH

LOCATION.--Lat 44° 13'08", long 71° 14'59", 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^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 1,500 ft above National Geodetic Vertical Datum of 1929, 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, which are fair.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 10	0415	*991	*4.49	No other peak greater than base discharge.			

Minimum daily discharge, e4.6 ft^3/s, Mar. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	10	15	e11	8.6	e5.1	e28	46	38	15	13	15
2	7.2	9.4	e14	e11	8.6	e5.0	25	187	43	15	17	15
3	9.4	e11	e14	e10	8.1	e5.3	21	100	32	15	14	15
4	8.2	e9.8	e14	e10	7.9	e5.1	19	56	28	14	15	65
5	22	9.4	e14	e10	7.5	e5.1	19	50	36	14	36	28
6	12	10	e14	11	7.2	e5.0	19	47	69	13	121	21
7	10	9.4	e13	11	7.1	e4.8	e15	53	39	12	40	19
8	9.4	e9.8	e12	11	e6.7	e4.9	14	46	33	13	36	18
9	8.7	13	e12	11	6.9	e5.0	14	41	32	12	35	17
10	9.2	28	13	10	6.8	e4.8	16	37	33	12	363	17
11	9.2	108	14	9.9	e6.5	e4.7	16	37	29	20	83	16
12	8.9	57	13	9.7	e6.3	e4.8	21	85	27	15	62	16
13	9.2	65	12	9.7	e6.1	e4.7	26	63	26	13	54	15
14	13	36	e11	9.6	e6.6	e4.6	24	60	103	12	42	15
15	9.7	26	e11	9.3	e7.2	e4.7	57	44	58	11	35	15
16	11	22	12	9.3	e7.6	e4.8	128	39	40	13	32	32
17	43	20	e10	9.2	e8.1	e11	50	35	33	12	29	21
18	17	20	e10	9.2	e8.2	e27	31	33	29	16	27	18
19	17	e17	11	9.5	e7.4	e16	30	35	27	15	25	34
20	30	17	e22	9.9	e6.7	e11	46	36	25	12	23	85
21	16	17	e32	9.7	e6.3	e62	72	35	23	13	22	39
22	12	28	19	10	e6.2	48	69	31	22	26	21	28
23	12	44	15	11	e6.1	37	63	28	22	18	19	162
24	11	25	e13	13	e6.3	28	44	27	21	19	18	80
25	11	20	e27	14	e5.7	27	32	48	19	24	18	44
26	14	18	e24	13	e5.6	46	45	63	18	16	19	36
27	21	16	e20	12	e5.4	46	146	66	17	15	18	32
28	15	e14	e15	10	e5.4	33	85	46	16	15	18	37
29	13	e13	e12	9.5	---	166	108	54	15	14	17	55
30	11	e13.5	e12	8.9	---	143	64	44	18	13	17	36
31	11	---	12	8.6	---	44	---	37	---	12	16	---
TOTAL	418.7	716.3	462	321.0	193.1	823.4	1,347	1,609	971	459	1,305	1,046
MEAN	13.5	23.9	14.9	10.4	6.90	26.6	44.9	51.9	32.4	14.8	42.1	34.9
MAX	43	108	32	14	8.6	166	146	187	103	26	363	162
MIN	7.2	9.4	10	8.6	5.4	4.6	14	27	15	11	13	15
CFSM	1.24	2.19	1.37	0.95	0.63	2.44	4.12	4.76	2.97	1.36	3.86	3.20
IN.	1.43	2.44	1.58	1.10	0.66	2.81	4.60	5.49	3.31	1.57	4.45	3.57

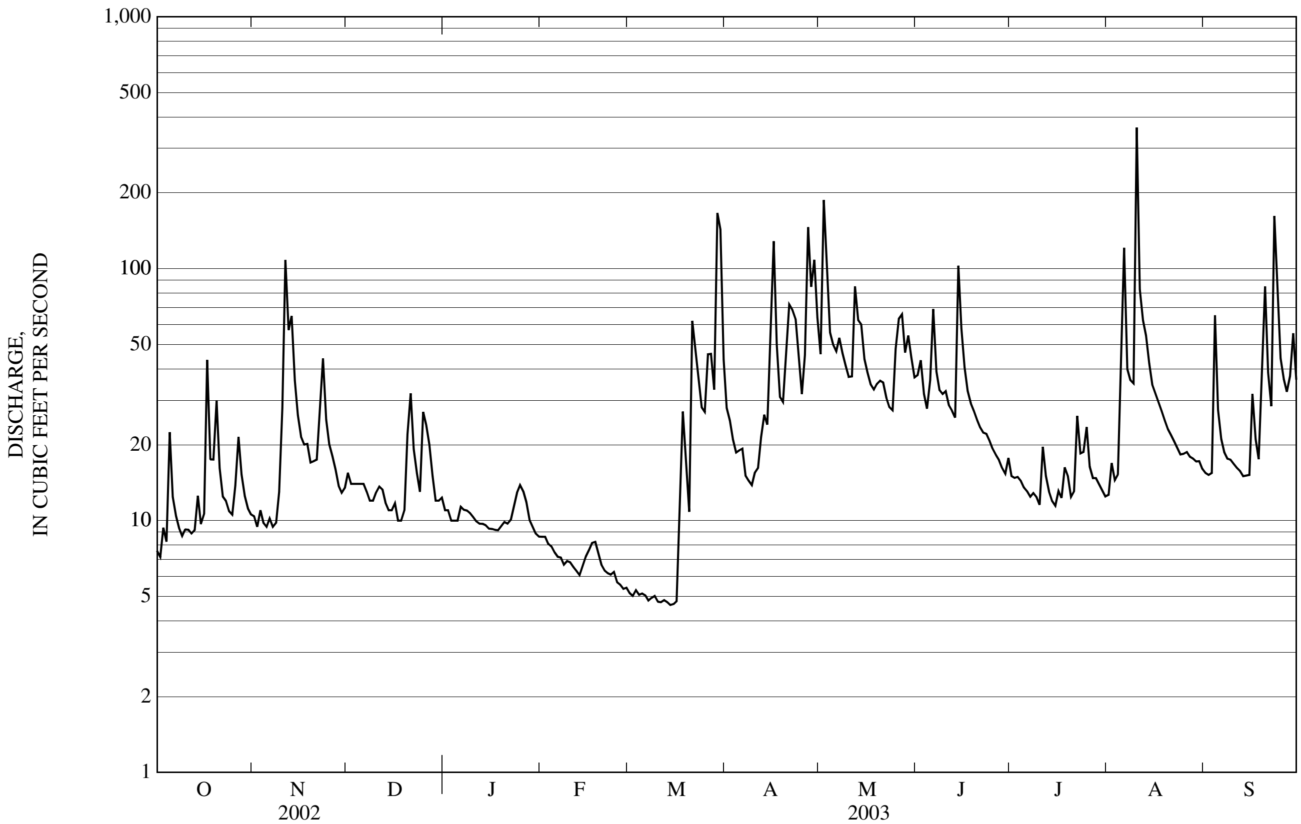
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	29.4	35.8	24.8	17.6	15.2	27.0	69.5	83.1	42.5	22.8	19.6	19.6
MAX	80.9	90.1	104	57.6	109	75.6	150	159	123	60.5	62.5	65.0
(WY)	(1996)	(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	10.0	7.46	6.98
(WY)	(1970)	(1979)	(1979)	(1977)	(1977)	(1969)	(1995)	(1993)	(1970)	(2001)	(1980)	(1978)

01064300 ELLIS RIVER NEAR JACKSON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	10,377.2		9,671.5			
ANNUAL MEAN	28.4		26.5		34.1	
HIGHEST ANNUAL MEAN					53.0	1996
LOWEST ANNUAL MEAN					21.6	1965
HIGHEST DAILY MEAN	647	Apr 14	363	Aug 10	1,160	Jun 30, 1973
LOWEST DAILY MEAN	5.2	Sep 10	e4.6	Mar 14	a2.2	Mar 2, 1980
ANNUAL SEVEN-DAY MINIMUM	5.7	Sep 4	4.7	Mar 10	2.3	Mar 1, 1980
MAXIMUM PEAK FLOW			b991	Aug 10	b4,500	Nov 3, 1966
MAXIMUM PEAK STAGE			4.49	Aug 10	c18.90	Nov 3, 1966
INSTANTANEOUS LOW FLOW			d		f	
ANNUAL RUNOFF (CFSM)	2.61		2.43		3.13	
ANNUAL RUNOFF (INCHES)	35.42		33.01		42.51	
10 PERCENT EXCEEDS	49		54		69	
50 PERCENT EXCEEDS	13		16		18	
90 PERCENT EXCEEDS	7.2		7.3		8.2	

a Also occurred on March 3, 4, 1980
b From rating curve extended above 390 ft^3/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 Minimum not determined, occurred during ice effect in March
e Estimated
f Minimum not determined, occurred during ice effect in March 1980



01064500 SACO RIVER NEAR CONWAY, NH

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

DRAINAGE AREA.--385 mi^2.

PERIOD OF RECORD.--
DISCHARGE: October 1903 to December 1909, February 1929 to current year. Monthly discharge only for some periods, published in WSP 1301. Prior to 1912 published as "at Center Conway".
GAGE HEIGHT: August to September 1903, January 1910 to June 1912.

REVISED RECORDS.--WSP 1301: 1908-09. WDR ME-81-1: Drainage area. WDR 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 National Geodetic Vertical Datum of 1929. Aug. 26, 1903 to June 30, 1912, nonrecording gage at site 0.8 mi downstream at different datum.

REMARKS.--Records good, except for periods of ice effect, Nov. 29 to Dec. 10, Dec. 17-19, Dec. 25 to Mar. 25, and period of no gage-height record, Jan. 19-27, which are fair. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft^3/s, Mar. 27, 1953, gage height, 17.20 ft; maximum gage height, 19.03 ft, Mar. 7, 1979 (backwater from ice); minimum discharge, 40 ft^3/s, Mar. 16, 1932, gage height, 1.61 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 10	1545	*11,700	*8.88	No other peak greater than base discharge.			

Minimum discharge, 126 ft^3/s, Oct. 4, gage height, 2.11 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	303	e477	e382	e319	e204	2,190	1,810	921	259	172	278
2	142	284	e435	e372	e327	e200	1,770	2,280	949	236	322	268
3	132	233	e397	e362	e345	e192	1,510	4,130	859	232	403	261
4	127	233	e362	e345	e332	e185	1,340	2,290	738	224	299	704
5	152	236	e331	e356	e296	e204	1,200	1,840	749	215	386	790
6	266	254	e307	e334	e253	e200	1,110	1,690	1,310	207	2,060	475
7	202	302	e290	e313	e251	e205	983	1,590	1,040	195	1,450	377
8	167	262	e272	e300	e258	e217	943	1,500	864	194	902	328
9	149	266	e251	e299	e265	e215	869	1,350	781	185	738	296
10	139	302	e243	e280	e258	e203	822	1,310	775	179	6,830	276
11	138	926	324	e264	e238	e214	926	1,190	699	242	3,580	261
12	139	1,560	366	e266	e226	e219	958	2,010	654	465	2,420	248
13	143	1,650	367	e253	e199	e208	1,370	1,840	576	299	2,270	236
14	163	1,300	396	e236	e176	e184	1,360	1,850	1,030	240	1,550	232
15	211	924	497	e216	e181	e200	1,530	1,510	1,140	210	1,170	245
16	187	738	446	e246	e194	e189	3,870	1,290	855	200	969	581
17	917	680	e329	e253	e219	e210	2,750	1,170	706	230	829	826
18	698	718	e282	e234	e241	e368	1,820	1,080	618	215	820	478
19	434	617	e310	e246	e264	e764	1,470	1,020	574	257	772	396
20	480	571	384	e262	e264	e607	1,460	968	529	247	646	1,180
21	447	572	982	e245	e251	e870	1,890	896	487	201	558	1,110
22	344	637	824	e229	e245	e1,920	2,120	835	457	221	502	705
23	292	1,550	619	e235	e239	e1,630	2,220	768	430	299	459	1,110
24	263	1,190	524	e248	e231	e1,430	1,890	749	397	302	408	3,190
25	237	910	e460	e262	e219	e1,420	1,510	816	374	364	380	1,380
26	251	782	e400	e272	e202	1,590	1,560	1,020	344	329	374	1,070
27	509	704	e422	e279	e219	2,650	4,260	1,880	323	251	356	900
28	518	586	e411	e279	e209	2,250	3,040	1,310	300	215	325	833
29	412	e570	e405	e298	---	2,540	2,810	1,270	278	197	305	1,050
30	349	e524	e389	e306	---	6,610	2,490	1,110	268	183	309	948
31	309	---	e387	e302	---	3,360	---	973	---	170	295	---
TOTAL	9,078	20,384	12,889	8,774	6,921	31,458	54,041	45,345	20,025	7,463	32,859	21,032
MEAN	293	679	416	283	247	1,015	1,801	1,463	668	241	1,060	701
MAX	917	1,650	982	382	345	6,610	4,260	4,130	1,310	465	6,830	3,190
MIN	127	233	243	216	176	184	822	749	268	170	172	232
CFSM	0.76	1.76	1.08	0.74	0.64	2.64	4.68	3.80	1.73	0.63	2.75	1.82
IN.	0.88	1.97	1.25	0.85	0.67	3.04	5.22	4.38	1.93	0.72	3.17	2.03

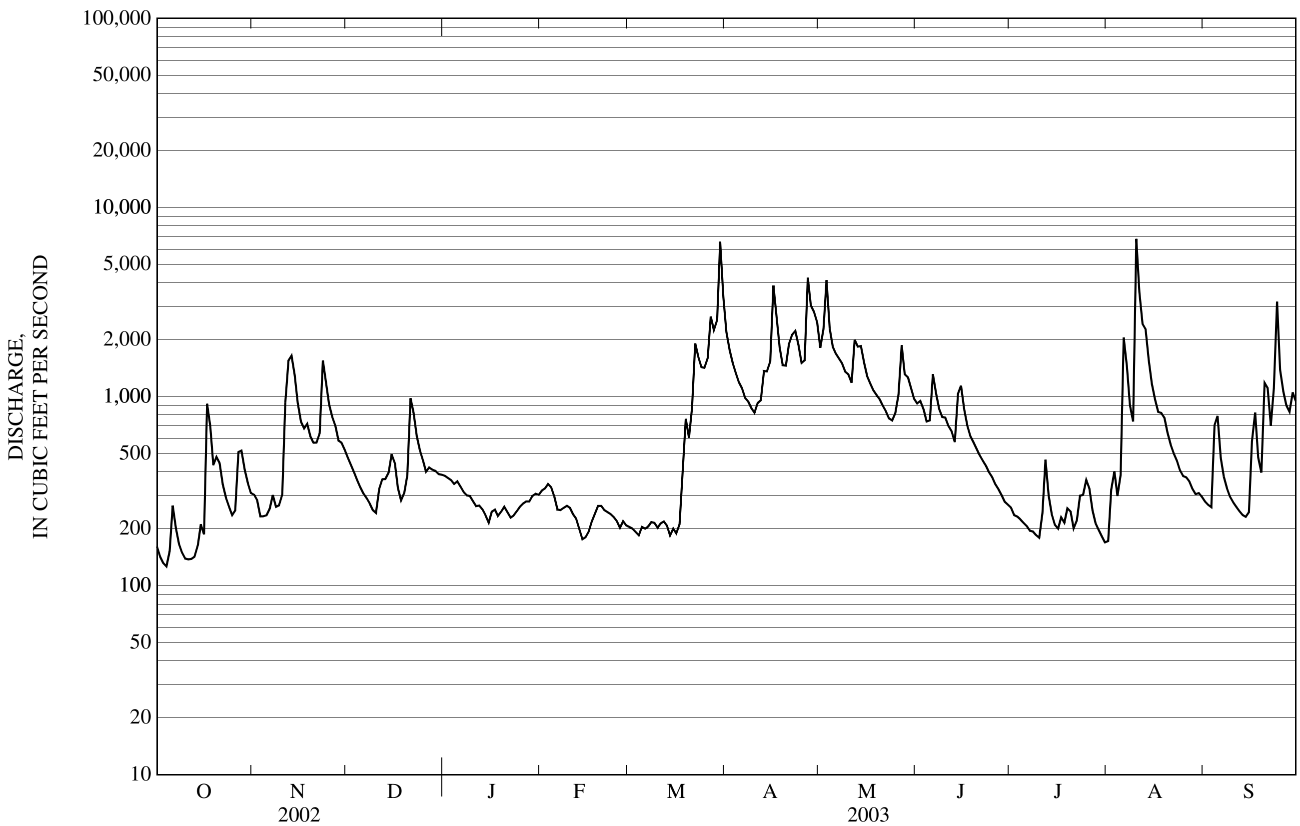
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	635	944	756	566	504	969	2,620	2,212	845	435	361	392
MAX	2,369	2,493	2,656	1,887	3,170	5,986	4,564	4,609	3,644	2,043	1,685	1,794
(WY)	(1978)	(1908)	(1974)	(1986)	(1981)	(1936)	(1987)	(1940)	(1998)	(1973)	(1990)	(1954)
MIN	114	211	152	144	124	146	871	614	300	158	120	102
(WY)	(1948)	(1909)	(1956)	(1940)	(1940)	(1940)	(1995)	(1941)	(1964)	(1991)	(2001)	(1948)

e Estimated

01064500 SACO RIVER NEAR CONWAY, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	267,818		270,269			
ANNUAL MEAN	734		740		937	
HIGHEST ANNUAL MEAN					1,463	1973
LOWEST ANNUAL MEAN					489	1965
HIGHEST DAILY MEAN	14,900	Apr 14	6,830	Aug 10	33,900	Mar 19, 1936
LOWEST DAILY MEAN	74	Sep 12	127	Oct 4	66	Aug 4, 1959
ANNUAL SEVEN-DAY MINIMUM	84	Sep 6	148	Oct 8	74	Aug 3, 1959
MAXIMUM PEAK FLOW			11,700	Aug 10	47,200	Mar 27, 1953
MAXIMUM PEAK STAGE			8.88	Aug 10	19.03	Mar 7, 1979
INSTANTANEOUS LOW FLOW			126	Oct 4	40	Mar 16, 1932
ANNUAL RUNOFF (CFSM)	1.91		1.92		2.43	
ANNUAL RUNOFF (INCHES)	25.88		26.11		33.07	
10 PERCENT EXCEEDS	1,550		1,640		2,170	
50 PERCENT EXCEEDS	382		386		459	
90 PERCENT EXCEEDS	110		203		184	



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, and 1.1 mi west of Whittier.

DRAINAGE AREA.--67.6 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. Formerly published as Bear Camp River.

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 10	1245	*2,960	*7.51	No other peak greater than base discharge.			

Minimum discharge, 8.0 ft^3/s, July 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	32	86	e75	41	29	453	198	122	15	11	16
2	10	29	75	e79	44	e29	329	337	114	14	51	16
3	10	25	e62	e79	e45	e30	274	589	92	13	52	16
4	9.6	25	e56	e79	e45	29	236	375	77	12	36	103
5	14	25	e60	e81	52	29	200	265	73	11	55	102
6	23	31	e69	e78	46	e31	181	211	141	10	332	63
7	16	48	e60	e71	44	e32	157	199	107	9.3	331	46
8	13	41	e61	e68	43	e32	143	176	96	8.9	168	35
9	12	42	e48	e69	41	e31	131	163	87	8.6	120	28
10	11	63	e48	e66	39	31	126	153	90	8.4	1,960	23
11	11	123	e50	e62	38	30	150	133	75	16	858	21
12	12	171	e56	e62	37	e29	189	277	70	32	436	19
13	13	287	61	e59	35	e28	309	288	60	19	388	17
14	16	185	e86	e56	33	e27	308	271	128	14	243	17
15	16	127	e130	e54	31	e27	353	210	134	12	155	27
16	17	102	116	e53	29	e27	594	170	96	13	110	94
17	61	98	89	e53	29	38	406	143	75	18	87	119
18	54	128	77	e52	e29	e69	265	124	61	15	86	70
19	35	108	e70	e50	e28	e128	204	111	55	16	75	57
20	36	95	e110	e48	e28	e150	191	98	49	14	60	226
21	36	99	e275	e47	e26	e310	210	89	42	12	49	166
22	43	151	e200	e47	e31	547	226	82	37	12	42	103
23	36	386	137	e46	e35	554	280	74	35	20	36	260
24	30	256	109	e46	36	510	235	70	34	23	29	493
25	26	185	e93	e46	34	498	186	69	29	20	25	255
26	33	150	e91	e46	31	557	240	130	25	17	23	175
27	86	127	e98	e45	30	771	738	348	22	14	22	131
28	72	103	e94	e42	30	680	476	223	19	12	20	116
29	53	e99	e92	e42	---	754	350	235	17	11	17	215
30	42	95	e79	e41	---	1,300	266	174	16	9.9	18	160
31	36	---	e77	41	---	765	---	134	---	9.0	18	---
TOTAL	893.6	3,436	2,815	1,783	1,010	8,102	8,406	6,119	2,078	439.1	5,913	3,189
MEAN	28.8	115	90.8	57.5	36.1	261	280	197	69.3	14.2	191	106
MAX	86	386	275	81	52	1,300	738	589	141	32	1,960	493
MIN	9.6	25	48	41	26	27	126	69	16	8.4	11	16
CFSM	0.43	1.69	1.34	0.85	0.53	3.87	4.14	2.92	1.02	0.21	2.82	1.57
IN.	0.49	1.89	1.55	0.98	0.56	4.46	4.63	3.37	1.14	0.24	3.25	1.75

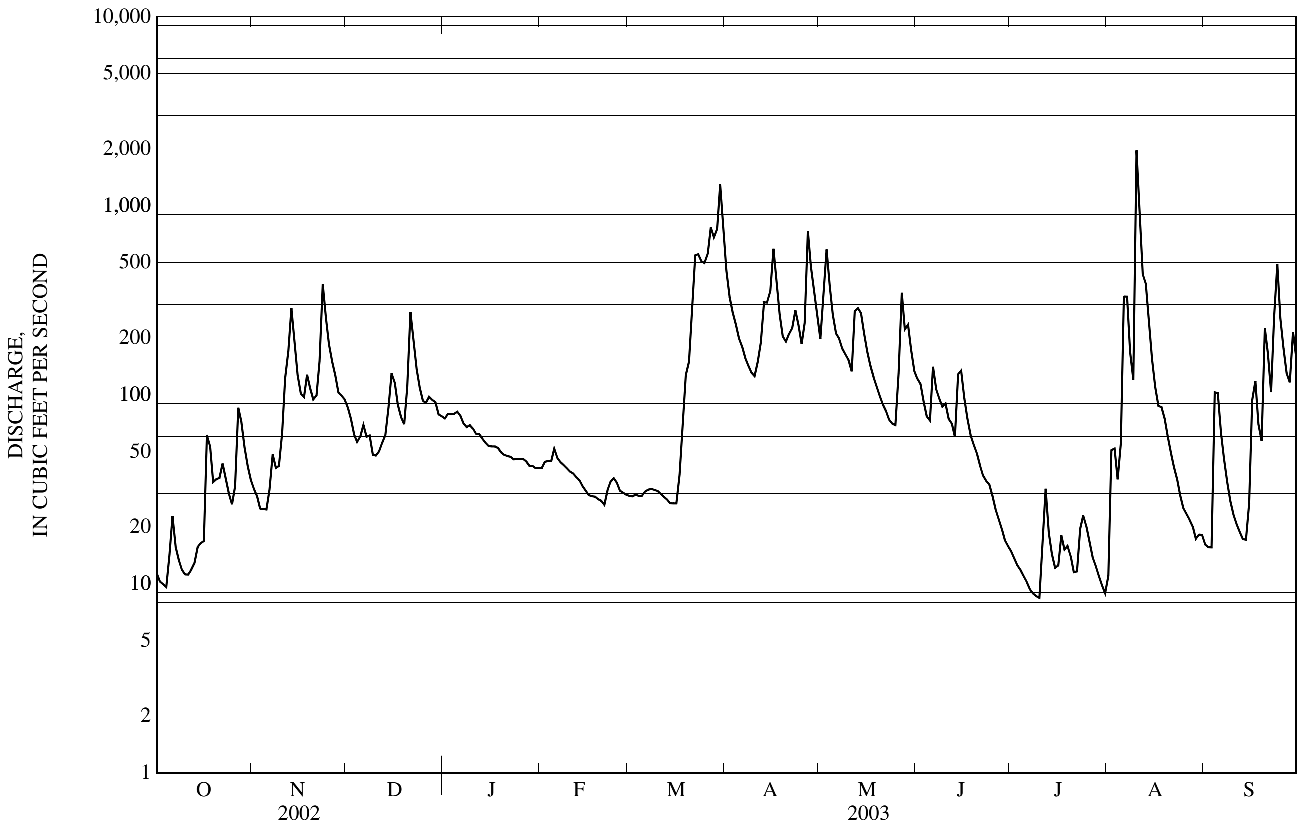
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	97.3	149	142	115	108	239	421	190	138	62.6	46.7	56.7
MAX	258	302	410	331	242	436	632	398	811	178	191	243
(WY)	(1996)	(1996)	(1997)	(1996)	(1997)	(1998)	(1993)	(1996)	(1998)	(1996)	(2003)	(1999)
MIN	23.5	35.6	60.3	34.2	36.1	86.7	129	77.4	34.7	14.2	4.63	9.43
(WY)	(2002)	(2002)	(1998)	(2002)	(2003)	(2001)	(1995)	(1993)	(1999)	(2003)	(2002)	(2002)

01064801 BEARCAMP RIVER AT SOUTH TAMWORTH, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	36,573.9		44,183.7			
ANNUAL MEAN	100		121		147	
HIGHEST ANNUAL MEAN					217	1996
LOWEST ANNUAL MEAN					91.1	2002
HIGHEST DAILY MEAN	882	Apr 14	1,960	Aug 10	5,370	Jun 14, 1998
LOWEST DAILY MEAN	a2.1	Sep 12	8.4	Jul 10	a2.1	Sep 12, 2002
ANNUAL SEVEN-DAY MINIMUM	2.5	Sep 8	9.7	Jul 4	2.5	Sep 8, 2002
MAXIMUM PEAK FLOW			2,960	Aug 10	6,150	Jun 14, 1998
MAXIMUM PEAK STAGE			7.51	Aug 10	9.64	Jun 14, 1998
INSTANTANEOUS LOW FLOW			b8.0	Jul 10	c2.0	Sep 13, 2002
ANNUAL RUNOFF (CFSM)	1.48		1.79		2.18	
ANNUAL RUNOFF (INCHES)	20.13		24.31		29.60	
10 PERCENT EXCEEDS	247		278		338	
50 PERCENT EXCEEDS	58		61		68	
90 PERCENT EXCEEDS	5.5		16		16	

a Also occurred September 13, 14, 2002
b Also occurred July 11
c Also occurred September 14, 2002
e Estimated



01072100 SALMON FALLS RIVER AT MILTON, NH

LOCATION.--Lat 43° 24'48", long 70° 59'15", Strafford County, Hydrologic Unit 01060003, on right bank, just downstream from Milton Pond at Milton, 4.2 mi east of Farmington, and 7.4 mi north of Rochester.

DRAINAGE AREA.--108 mi^2.

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

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

REMARKS.--Records good except for periods of data corrections, October 1-19, which are poor. 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^3.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,310 ft^3/s, Mar. 31, gage height, 4.99 ft; minimum daily discharge, 14 ft^3/s, October 2, 3.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	237	231	236	44	50	1,060	244	302	41	21	31
2	14	236	148	234	45	51	610	244	237	31	24	31
3	14	235	93	161	75	51	461	279	179	28	34	31
4	15	233	92	105	90	51	492	293	180	27	43	31
5	15	e232	93	106	91	52	488	284	180	26	60	31
6	15	232	95	107	91	52	446	264	143	e24	72	31
7	15	231	95	108	92	76	364	207	97	e22	81	31
8	15	224	95	108	92	93	329	184	105	21	94	30
9	15	222	95	108	92	93	345	193	113	e20	90	30
10	15	220	95	159	92	92	347	197	103	e19	85	30
11	15	221	95	191	94	91	361	195	94	19	89	29
12	15	219	95	189	95	77	458	222	100	18	138	29
13	16	219	95	187	94	67	579	258	104	e18	166	29
14	16	219	96	185	94	67	581	277	111	17	158	29
15	15	217	98	182	93	67	525	271	117	17	149	29
16	15	216	101	97	92	67	486	188	116	20	144	33
17	16	e213	102	42	91	67	459	147	108	25	142	36
18	16	170	146	42	91	67	343	150	103	27	104	36
19	17	132	171	42	92	68	270	150	100	29	57	35
20	32	e132	171	43	91	112	270	118	97	e27	56	36
21	98	e132	175	43	90	186	261	91	91	25	56	36
22	131	e185	177	42	89	221	259	161	90	25	56	57
23	e168	e225	221	42	90	301	271	186	66	26	55	76
24	194	e231	253	42	90	457	303	173	47	26	54	118
25	203	e239	252	43	90	554	420	166	54	25	43	154
26	222	239	251	43	89	609	454	171	55	23	32	156
27	224	236	248	44	89	720	488	307	57	22	32	147
28	235	237	246	43	65	819	515	379	68	21	31	139
29	241	235	246	43	---	802	349	360	62	20	31	135
30	239	233	243	43	---	903	246	339	55	20	31	133
31	238	---	239	44	---	1,160	---	312	---	20	31	---
TOTAL	2,514	6,452	4,853	3,104	2,423	8,143	12,840	7,010	3,334	729	2,259	1,779
MEAN	81.1	215	157	100	86.5	263	428	226	111	23.5	72.9	59.3
MAX	241	239	253	236	95	1,160	1,060	379	302	41	166	156
MIN	14	132	92	42	44	50	246	91	47	17	21	29

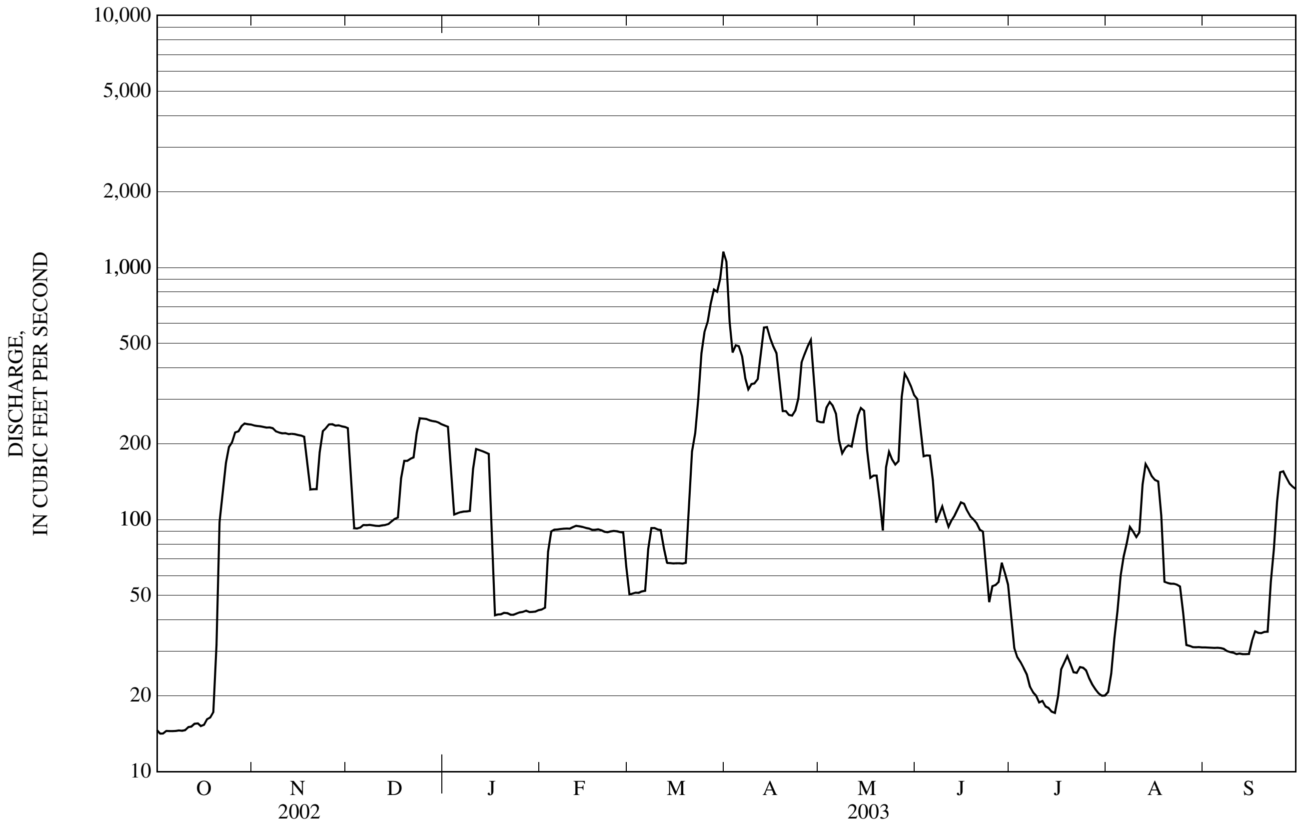
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	176	194	218	172	182	312	430	223	134	65.4	59.9	73.8
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	81.1	62.7	27.7	27.1	60.8	108	103	55.4	35.5	23.5	19.8	15.0
(WY)	(2003)	(2002)	(2002)	(2002)	(1977)	(1993)	(1985)	(1985)	(1999)	(2003)	(2002)	(2002)

01072100 SALMON FALLS RIVER AT MILTON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	42,746		55,440			
ANNUAL MEAN	117		152		187	
HIGHEST ANNUAL MEAN					307	1984
LOWEST ANNUAL MEAN					94.7	2002
HIGHEST DAILY MEAN	983	May 15	1,160	Mar 31	3,220	Mar 15, 1977
LOWEST DAILY MEAN	a14	Sep 19	b14	Oct 2	c14	Sep 19, 2002
ANNUAL SEVEN-DAY MINIMUM	14	Sep 16	15	Oct 1	14	Sep 16, 2002
MAXIMUM PEAK FLOW			1,310	Mar 31	4,000	Apr 6, 1984
MAXIMUM PEAK STAGE			4.99	Mar 31	6.70	Apr 6, 1984
10 PERCENT EXCEEDS	245		305		395	
50 PERCENT EXCEEDS	93		95		131	
90 PERCENT EXCEEDS	15		24		36	

a Also occurred September 20-22, 2002
b Also occurred October 3
c Also occurred September 20-22 and October 2-3, 2002
e Estimated



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^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. 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.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1630	923	7.25	Mar 31	0445	*969	*7.43
Mar 27	2130	842	6.93				

Minimum daily discharge, 5.0 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	33	79	88	e48	e85	632	188	188	32	14	10
2	7.7	29	e75	102	e52	e95	447	173	211	28	41	12
3	7.0	27	e70	e95	e54	e117	392	245	163	25	54	12
4	5.9	25	e65	e95	e60	e108	372	250	125	24	51	21
5	7.2	25	e60	e97	e73	e104	329	189	107	22	44	20
6	6.9	40	e60	91	e86	e103	295	164	104	20	40	17
7	6.6	57	e58	87	e86	e94	266	148	96	19	49	17
8	6.6	59	e55	e85	e78	e89	239	144	97	18	78	15
9	5.8	49	e50	e85	e72	e91	220	150	91	17	70	12
10	5.0	43	e45	e80	e68	e92	209	152	86	17	62	10
11	5.1	40	e45	e72	e65	e87	255	132	78	17	54	9.5
12	6.0	40	53	e70	e62	e86	459	182	72	19	56	9.3
13	6.7	88	55	e68	e60	e84	566	230	65	20	81	8.8
14	16	118	105	e65	e58	e82	441	238	78	18	84	8.7
15	11	87	247	e60	e57	e78	349	231	87	17	71	8.8
16	13	72	231	e60	e56	e79	305	182	74	17	56	32
17	35	83	e165	e60	e57	e98	267	181	63	33	44	25
18	34	117	e140	e57	e57	e145	221	160	55	29	38	21
19	26	127	e125	e53	e58	e210	195	137	54	27	35	29
20	20	102	130	e51	e58	e230	180	119	60	24	34	52
21	16	90	303	e49	e59	e450	166	110	55	20	30	50
22	12	117	285	e47	e61	806	156	106	51	19	25	37
23	12	215	197	e47	e88	806	194	97	59	18	22	49
24	14	216	156	e47	e140	704	234	92	59	18	20	145
25	21	165	126	e46	e144	615	263	97	56	18	17	133
26	36	137	e100	e46	e122	618	226	119	49	17	15	106
27	74	124	e105	e45	e98	737	475	305	46	15	13	93
28	67	108	e103	e44	e92	758	511	354	51	14	11	84
29	48	89	e100	e43	---	626	322	307	44	12	10	75
30	40	86	e95	e42	---	746	231	248	37	11	10	69
31	36	---	e90	e47	---	921	---	182	---	11	10	---
TOTAL	616.2	2,608	3,573	2,024	2,069	9,944	9,417	5,612	2,461	616	1,239	1,191.1
MEAN	19.9	86.9	115	65.3	73.9	321	314	181	82.0	19.9	40.0	39.7
MAX	74	216	303	102	144	921	632	354	211	33	84	145
MIN	5.0	25	45	42	48	78	156	92	37	11	10	8.7

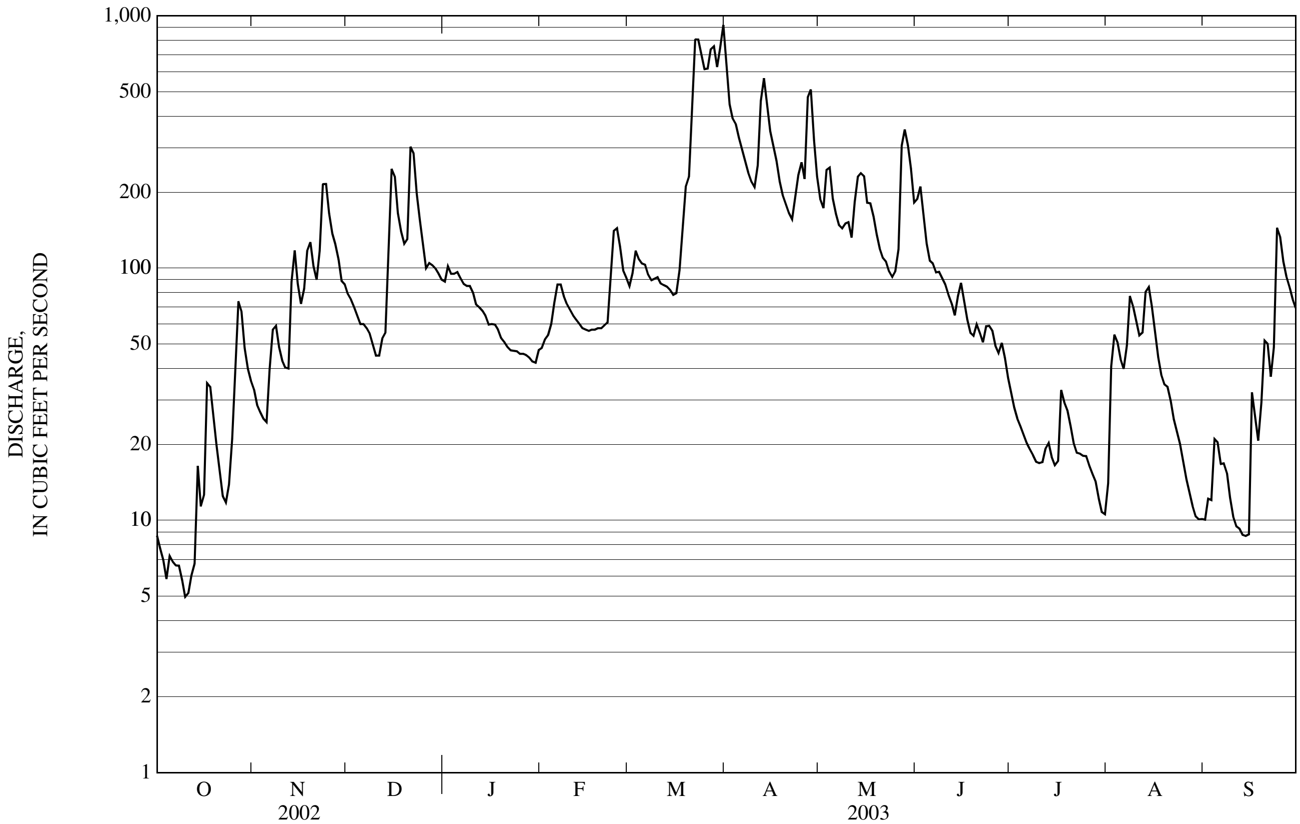
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.8	123	130	134	150	284	300	155	122	53.1	21.8	28.8
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	13.0	13.3	26.7	28.4	59.7	160	127	66.5	18.8	11.6	4.58	4.85
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(2001)	(1999)	(1995)	(2002)	(1995)

01072800 COCHECO RIVER NEAR ROCHESTER, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1995 - 2003	
ANNUAL TOTAL	30,798.8		41,370.3			
ANNUAL MEAN	84.4		113		136	
HIGHEST ANNUAL MEAN					197	1996
LOWEST ANNUAL MEAN					70.2	2002
HIGHEST DAILY MEAN	804	May 15	921	Mar 31	2,940	Jun 15, 1998
LOWEST DAILY MEAN	a2.0	Sep 14	5.0	Oct 10	a2.0	Sep 14, 2002
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 9	6.0	Oct 7	2.5	Sep 1, 1995
MAXIMUM PEAK FLOW			969	Mar 31	3,700	Jun 15, 1998
MAXIMUM PEAK STAGE			7.43	Mar 31	15.51	Jun 15, 1998
10 PERCENT EXCEEDS	208		247		320	
50 PERCENT EXCEEDS	55		68		74	
90 PERCENT EXCEEDS	5.1		14		12	

a Also occurred September 15, 2002
e Estimated



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 Old Concord Road bridge, 2.5 mi west of Durham, and 7 mi upstream from mouth.

DRAINAGE AREA.--12.1 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 1, 1964, at datum 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges and those below 1.0 ft^3/s, which are fair.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 22	0000	*169	*3.16	No peak greater than base discharge.			

Minimum discharge, 0.18 ft^3/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.29	2.6	8.1	15	e6.7	18	85	24	27	2.6	3.4	0.93
2	e0.28	2.7	7.1	19	8.7	21	68	22	28	2.2	13	1.1
3	e0.23	2.7	6.6	18	11	32	64	21	18	1.9	5.9	0.91
4	e0.20	2.7	5.6	17	13	30	57	19	14	1.6	7.9	3.5
5	0.41	3.0	5.1	16	16	28	53	17	17	1.5	7.5	4.0
6	0.82	8.6	5.2	15	15	26	48	16	16	1.1	4.9	2.2
7	0.67	10	5.2	15	13	22	45	16	13	1.00	3.5	1.3
8	0.77	6.0	5.8	14	12	21	40	18	15	0.87	4.4	0.83
9	0.84	4.4	9.6	13	11	22	37	19	13	0.73	6.1	0.73
10	0.71	3.7	8.4	13	10	22	38	17	11	0.90	6.2	0.64
11	0.39	3.5	7.7	12	9.3	19	50	14	13	1.9	4.7	0.58
12	0.79	4.2	11	11	8.6	18	88	40	14	2.2	3.7	0.76
13	1.6	16	12	10	e7.6	19	77	33	12	1.4	3.3	0.94
14	1.5	13	46	10	e6.9	16	57	28	15	0.87	3.1	1.2
15	0.83	7.9	82	9.4	e8.1	16	46	24	13	0.67	2.5	1.1
16	2.9	6.1	43	e9.5	e8.6	16	39	21	10	1.8	2.1	8.1
17	14	16	29	e9.9	e7.8	22	31	17	8.7	2.5	2.2	6.4
18	5.9	39	20	e9.6	e7.2	35	27	14	8.3	1.6	2.8	2.9
19	3.0	24	16	e8.5	e7.9	43	25	13	8.6	1.3	2.7	5.0
20	2.0	17	29	e8.3	8.5	42	23	11	8.7	0.98	2.1	11
21	1.7	16	63	e7.9	9.0	100	21	11	6.9	0.68	1.6	7.1
22	1.3	20	42	e7.2	10	147	22	13	5.9	1.5	1.2	5.2
23	1.6	22	31	e7.1	20	e130	27	11	8.9	5.7	1.1	12
24	2.4	17	24	e7.3	23	e116	24	11	8.2	2.9	0.80	20
25	2.5	14	20	e7.3	23	116	21	13	7.3	1.7	0.68	8.4
26	6.5	13	17	e7.0	22	118	30	24	5.9	0.93	0.76	8.0
27	13	11	19	e7.0	21	129	83	59	4.8	0.77	0.63	11
28	6.0	10	17	e6.5	19	108	54	35	4.2	0.61	0.56	11
29	3.8	8.7	16	e6.7	---	99	38	31	3.3	0.47	0.44	10
30	3.1	8.3	16	e6.2	---	134	29	23	3.0	0.35	0.40	8.6
31	2.7	---	15	e6.2	---	126	---	19	---	0.30	0.88	---
TOTAL	82.73	333.1	642.4	329.6	343.9	1,811	1,347	654	341.7	45.53	101.05	155.42
MEAN	2.67	11.1	20.7	10.6	12.3	58.4	44.9	21.1	11.4	1.47	3.26	5.18
MAX	14	39	82	19	23	147	88	59	28	5.7	13	20
MIN	0.20	2.6	5.1	6.2	6.7	16	21	11	3.0	0.30	0.40	0.58
CFSM	0.22	0.92	1.71	0.88	1.02	4.83	3.71	1.74	0.94	0.12	0.27	0.43
IN.	0.25	1.02	1.97	1.01	1.06	5.57	4.14	2.01	1.05	0.14	0.31	0.48

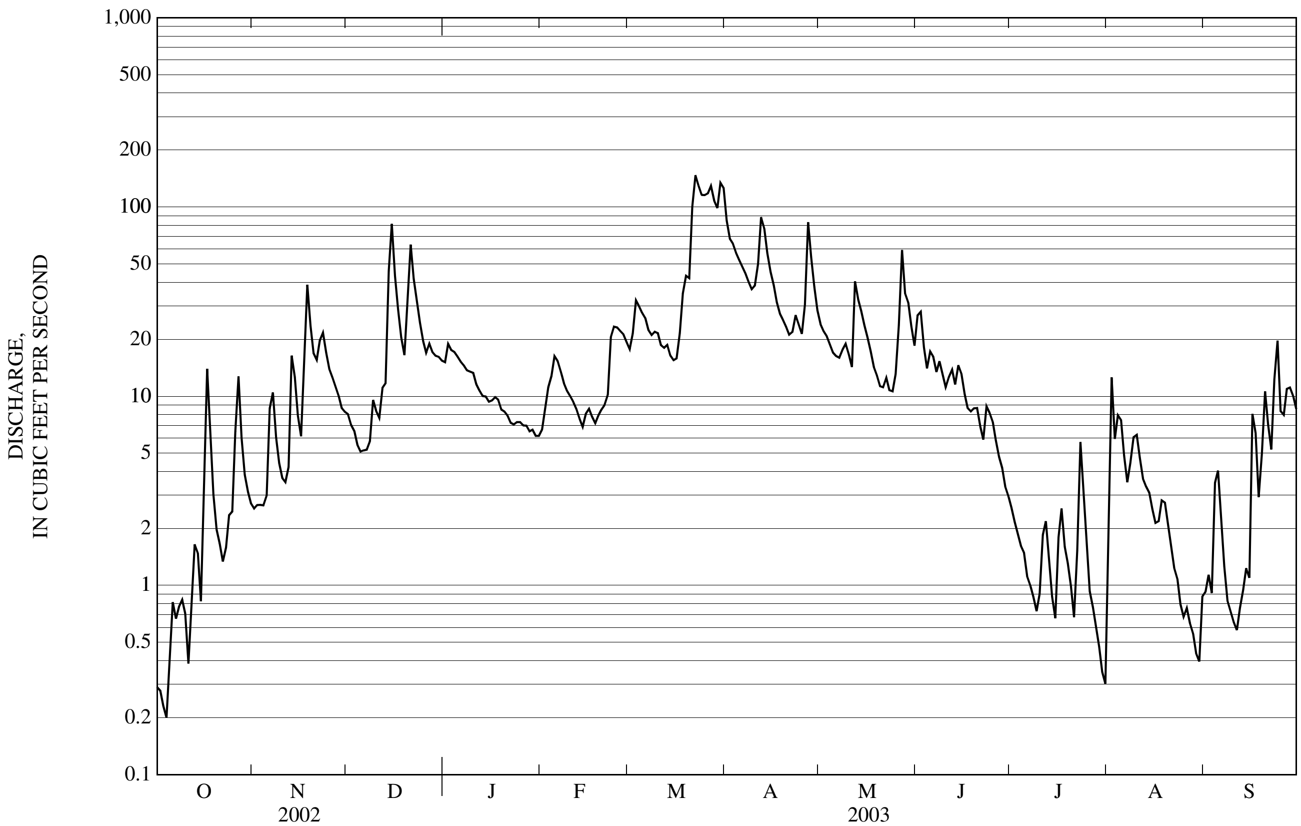
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.38	17.7	21.8	18.9	21.5	47.9	48.4	24.5	12.4	4.91	3.38	4.26
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	0.55	0.93	2.73	2.25	3.47	13.5	13.7	6.51	2.07	0.65	0.52	0.40
(WY)	(2002)	(2002)	(1966)	(1981)	(1980)	(1967)	(1999)	(2001)	(1936)	(1949)	(1999)	(2002)

01073000 OYSTER RIVER NEAR DURHAM, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	4,161.81		6,187.43			
ANNUAL MEAN	11.4		17.0		19.4	
HIGHEST ANNUAL MEAN					32.3	1952
LOWEST ANNUAL MEAN					8.89	2002
HIGHEST DAILY MEAN	120	May 14	147	Mar 22	856	Oct 21, 1996
LOWEST DAILY MEAN	0.15	Sep 14	0.20	Oct 4	0.01	Sep 6, 1999
ANNUAL SEVEN-DAY MINIMUM	0.18	Sep 9	0.41	Oct 1	0.04	Sep 2, 1999
MAXIMUM PEAK FLOW			169	Mar 22	1,160	Oct 21, 1996
MAXIMUM PEAK STAGE			3.16	Mar 22	8.45	Mar 19, 1936
INSTANTANEOUS LOW FLOW			0.18	Oct 5	a0.01	Sep 6, 1999
ANNUAL RUNOFF (CFSM)	0.94		1.40		1.60	
ANNUAL RUNOFF (INCHES)	12.79		19.02		21.77	
10 PERCENT EXCEEDS	29		39		47	
50 PERCENT EXCEEDS	7.2		9.6		9.8	
90 PERCENT EXCEEDS	0.41		0.89		1.1	

a Also occurred September 7, 1999
e Estimated



01073500 LAMPREY RIVER NEAR NEWMARKET, NH

LOCATION.--Lat 43° 06'09", long 70° 57'll", Rockingham County, Hydrologic Unit 01060003, on right bank, 200 ft upstream from Packers Falls and Packer Falls Road, 1.8 mi northwest of Newmarket Town Hall, 2.6 mi southwest of Durham, and 4.6 mi upstream from mouth.

DRAINAGE AREA.--183 mi^2.

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

REVISED RECORDS.--WSP 1231: 1936-37. WDR NH-VT-97-1: 1997 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 38.28 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for December 26-30 and September 6-8 and 21-22, which are fair, and October 1-4 and 9-15, which are poor. Some regulation by Pawtuckaway and Mendums Ponds. These reservoirs have a usable capacity of about 600 million ft^3. Occasional diversion upstream from station for municipal supply of Durham.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,130 ft^3/s, Mar. 26, gage height, 7.26 ft; minimum daily discharge, 3.9 ft^3/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e7.0	94	233	280	97	277	2,010	387	472	83	14	14
2	e6.0	93	208	290	106	268	1,610	339	468	74	58	14
3	e6.0	79	189	284	129	359	1,260	313	422	64	73	15
4	e4.0	69	169	271	152	381	1,080	304	352	56	96	23
5	5.1	65	174	290	183	368	929	295	324	47	136	30
6	4.8	79	185	289	183	360	831	268	327	41	131	e29
7	4.2	128	159	271	179	336	761	245	292	37	130	e26
8	3.9	127	153	251	168	302	678	243	290	33	147	e23
9	e4.0	112	146	246	154	284	597	253	272	30	163	19
10	e4.0	96	143	240	142	289	559	252	259	27	165	17
11	e4.0	86	141	214	135	274	603	240	226	29	152	16
12	e7.7	84	141	211	126	257	789	344	214	38	134	14
13	e9.1	156	165	194	118	254	942	412	202	34	121	14
14	e11	197	297	191	110	247	991	440	212	27	129	16
15	e9.8	189	607	169	104	237	866	429	216	24	119	15
16	44	170	605	166	98	229	706	396	205	26	98	30
17	102	200	556	169	96	256	567	340	180	31	85	64
18	69	323	452	162	97	366	476	291	155	29	68	46
19	54	368	387	151	100	482	405	253	146	29	61	46
20	47	364	393	153	112	516	368	221	136	26	61	58
21	42	316	578	150	122	776	339	197	127	23	61	e44
22	37	315	632	141	126	1,080	318	195	122	21	53	e43
23	50	340	624	132	182	1,440	315	182	155	23	46	50
24	47	370	540	129	270	1,730	332	175	154	23	38	126
25	44	370	437	126	295	1,850	329	192	137	23	32	131
26	50	334	e285	127	311	1,880	337	233	122	22	29	149
27	90	338	e365	128	318	1,870	611	539	112	18	25	155
28	73	327	e330	122	308	1,960	665	626	118	15	21	132
29	83	279	e315	118	---	1,890	610	674	105	13	17	116
30	102	255	e305	109	---	1,900	483	627	92	12	16	99
31	92	---	288	98	---	2,050	---	545	---	11	15	---
TOTAL	1,116.6	6,323	10,202	5,872	4,521	24,768	21,367	10,450	6,614	989	2,494	1,574
MEAN	36.0	211	329	189	161	799	712	337	220	31.9	80.5	52.5
MAX	102	370	632	290	318	2,050	2,010	674	472	83	165	155
MIN	3.9	65	141	98	96	229	315	175	92	11	14	14
CFSM	0.20	1.15	1.80	1.04	0.88	4.37	3.89	1.84	1.20	0.17	0.44	0.29
IN.	0.23	1.29	2.07	1.19	0.92	5.03	4.34	2.12	1.34	0.20	0.51	0.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	127	259	328	282	303	610	687	348	192	92.0	70.3	69.7
MAX	879	742	851	796	811	1,866	1,756	1,400	1,117	599	621	650
(WY)	(1997)	(1952)	(1997)	(1956)	(1970)	(1936)	(1987)	(1954)	(1998)	(1938)	(1938)	(1954)
MIN	11.1	15.9	45.9	46.4	49.7	210	170	90.2	27.0	12.2	4.79	3.44
(WY)	(1948)	(1942)	(1942)	(1944)	(1980)	(1989)	(1985)	(2001)	(1999)	(1993)	(1999)	(1957)

01073500 LAMPREY RIVER NEAR NEWMARKET, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	63,337.2		96,290.6			
ANNUAL MEAN	174		264		280	
HIGHEST ANNUAL MEAN					441	1984
LOWEST ANNUAL MEAN					137	1965
HIGHEST DAILY MEAN	1,020	May 15	2,050	Mar 31	7,360	Apr 7, 1987
LOWEST DAILY MEAN	1.8	Aug 20	3.9	Oct 8	a0.66	Jul 27, 1994
ANNUAL SEVEN-DAY MINIMUM	2.9	Sep 9	4.3	Oct 4	2.0	Sep 10, 1995
MAXIMUM PEAK FLOW			2,130	Mar 26	7,570	Apr 7, 1987
MAXIMUM PEAK STAGE			7.26	Mar 26	15.14	Apr 7, 1987
ANNUAL RUNOFF (CFSM)	0.95		1.44		1.53	
ANNUAL RUNOFF (INCHES)	12.88		19.57		20.80	
10 PERCENT EXCEEDS	454		586		649	
50 PERCENT EXCEEDS	125		156		167	
90 PERCENT EXCEEDS	4.5		22		23	

a During refilling after repairs at Wiswall Dam
e Estimated

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, 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^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 60.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation by power plant upstream.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 23	0100	*825	7.95	Mar 31	1030	622	7.24
Mar 24	1345	Ice jam	*7.99				

Minimum daily discharge, 1.3 ft^3/s, Oct. 8-11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	7.3	54	104	e50	e102	543	140	160	18	3.5	3.4
2	1.5	7.0	e48	115	e52	e107	440	126	163	20	21	3.8
3	1.5	8.2	e45	117	e56	e126	370	116	144	13	27	3.8
4	1.5	7.1	e40	e115	e65	e129	337	108	118	14	44	6.1
5	1.7	6.7	38	e115	e76	e129	319	101	107	13	65	9.2
6	1.8	15	36	111	e83	e122	272	93	120	12	67	7.7
7	1.4	27	e35	107	e84	e116	263	90	103	10	48	5.7
8	1.3	21	35	105	e79	e112	244	89	109	9.2	50	4.9
9	1.3	17	e33	101	e76	e116	223	89	110	10	59	4.6
10	1.3	15	e31	96	e71	e114	207	87	108	10	58	3.4
11	1.3	14	30	e90	e67	e103	215	71	94	11	28	3.0
12	2.0	16	38	87	e64	e103	292	85	85	14	34	2.6
13	3.1	37	48	e82	e61	e105	355	131	76	13	32	2.5
14	3.8	41	88	e78	e56	e97	326	144	76	9.8	30	2.6
15	2.9	34	197	e70	e55	e94	291	134	76	7.9	27	2.6
16	4.4	29	227	e68	e53	e95	257	118	67	7.3	23	15
17	12	40	e205	e70	e53	e111	221	104	59	10	23	27
18	7.6	72	e175	e70	e55	e157	197	91	53	9.0	21	22
19	8.7	83	e150	e67	e56	e220	178	78	53	8.7	18	36
20	7.1	80	e145	e65	e56	e283	157	70	53	8.6	16	12
21	5.8	79	211	e64	e56	e453	141	66	47	7.1	7.1	3.1
22	4.8	82	232	e63	e61	e690	108	65	45	6.0	9.8	3.9
23	5.2	84	204	e62	e81	e750	132	67	52	5.6	8.4	13
24	6.5	81	181	e61	e111	e650	132	73	54	5.7	7.0	36
25	5.6	77	162	e60	e119	e625	130	62	48	5.6	6.6	30
26	10	71	e120	e60	e115	594	126	86	43	4.5	5.8	23
27	19	69	e125	e60	e111	592	179	174	38	3.9	5.0	28
28	18	67	e125	e58	e107	567	200	216	32	3.4	4.2	29
29	12	59	e120	e54	---	504	178	224	28	3.0	3.7	28
30	9.6	58	e110	e51	---	540	159	208	26	2.6	3.4	26
31	8.5	---	e105	e50	---	608	---	175	---	2.2	3.3	---
TOTAL	172.8	1,304.3	3,393	2,476	2,029	9,114	7,192	3,481	2,347	278.1	758.8	397.9
MEAN	5.57	43.5	109	79.9	72.5	294	240	112	78.2	8.97	24.5	13.3
MAX	19	84	232	117	119	750	543	224	163	20	67	36
MIN	1.3	6.7	30	50	50	94	108	62	26	2.2	3.3	2.5

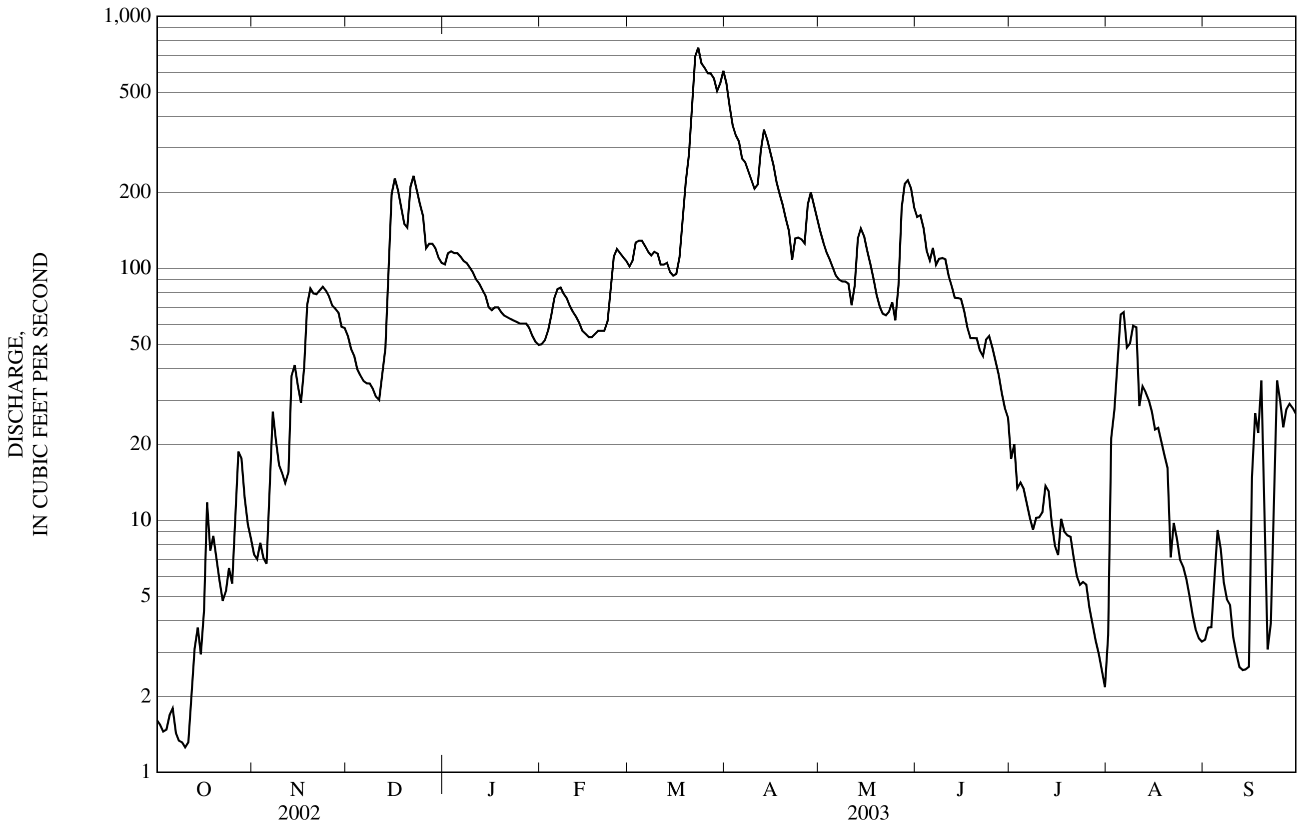
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	63.8	55.1	99.6	87.6	122	245	210	113	103	25.5	9.70	13.1
MAX	335	132	304	133	252	376	336	169	361	80.4	29.9	55.4
(WY)	(1997)	(1997)	(1997)	(1998)	(1998)	(2001)	(2001)	(1998)	(1998)	(1998)	(2000)	(1999)
MIN	1.94	4.26	12.5	16.9	37.2	91.6	80.2	42.5	12.8	5.60	1.47	1.58
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(1999)	(2001)	(1999)	(1999)	(1997)	(1997)

01073587 EXETER RIVER AT HAIGH ROAD NEAR BRENTWOOD, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1996 - 2003	
ANNUAL TOTAL	21,235.3		32,943.9			
ANNUAL MEAN	58.2		90.3		95.3	
HIGHEST ANNUAL MEAN					142	1997
LOWEST ANNUAL MEAN					46.4	2002
HIGHEST DAILY MEAN	361	May 15	e750	Mar 23	2,630	Oct 22, 1996
LOWEST DAILY MEAN	1.1	Sep 12	a1.3	Oct 8	0.73	Sep 10, 1997
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 9	1.4	Oct 5	0.77	Sep 4, 1997
MAXIMUM PEAK FLOW			825	Mar 23	3,060	Oct 22, 1996
MAXIMUM PEAK STAGE			b7.99	Mar 24	11.44	Oct 22, 1996
10 PERCENT EXCEEDS	160		206		224	
50 PERCENT EXCEEDS	34		60		53	
90 PERCENT EXCEEDS	1.5		4.3		2.7	

a Also occurred on October 9-11
b Ice jam
e Estimated



01073785 WINNICUT RIVER AT GREENLAND, NEAR PORTSMOUTH, NH

LOCATION.--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 Portsmouth Avenue (NH 33), 0.8 mi west of Portsmouth Ave. and Post Road (NH 151) intersection in Greenland, and 5.1 mi southwest of State Street and Middle Street (US 1) intersection in Portsmouth.

DRAINAGE AREA.--14.1 mi^2.

PERIOD OF RECORD.--Discharge records: July to September 2002. Miscellaneous discharge measurements: Water years 1999-2000.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for July 22-September 30, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
No peak greater than base discharge.							

Minimum discharge, 0.30 ft^3/s, August 22, 24, 27-29 and September 12-23.

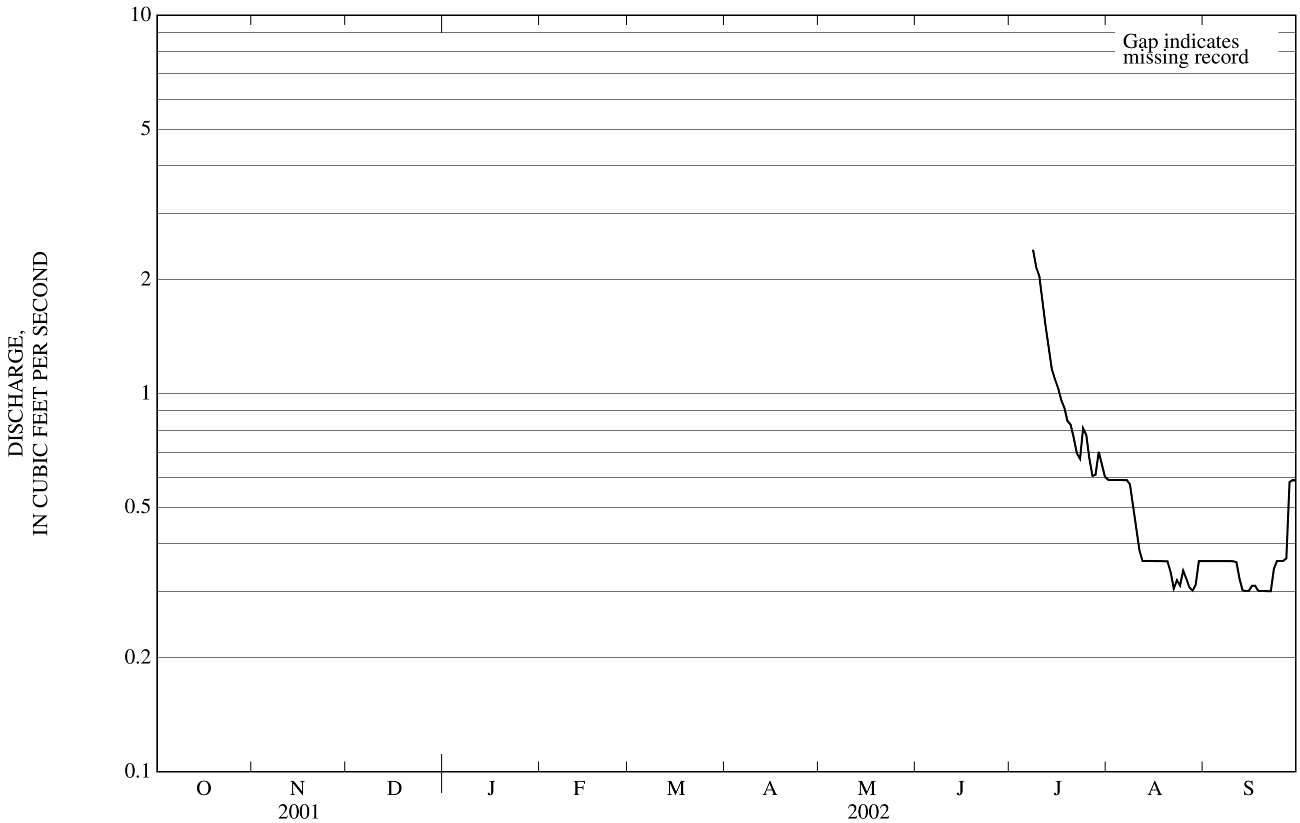
DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	0.59	0.36
2	---	---	---	---	---	---	---	---	---	---	0.59	0.36
3	---	---	---	---	---	---	---	---	---	---	0.59	0.36
4	---	---	---	---	---	---	---	---	---	---	0.59	0.36
5	---	---	---	---	---	---	---	---	---	---	0.59	0.36
6	---	---	---	---	---	---	---	---	---	---	0.59	0.36
7	---	---	---	---	---	---	---	---	---	---	0.59	0.36
8	---	---	---	---	---	---	---	---	---	2.4	0.58	0.36
9	---	---	---	---	---	---	---	---	---	2.2	0.51	0.36
10	---	---	---	---	---	---	---	---	---	2.0	0.44	0.36
11	---	---	---	---	---	---	---	---	---	1.8	0.39	0.36
12	---	---	---	---	---	---	---	---	---	1.5	0.36	0.32
13	---	---	---	---	---	---	---	---	---	1.3	0.36	0.30
14	---	---	---	---	---	---	---	---	---	1.2	0.36	0.30
15	---	---	---	---	---	---	---	---	---	1.1	0.36	0.30
16	---	---	---	---	---	---	---	---	---	1.0	0.36	0.31
17	---	---	---	---	---	---	---	---	---	0.96	0.36	0.31
18	---	---	---	---	---	---	---	---	---	0.92	0.36	0.30
19	---	---	---	---	---	---	---	---	---	0.85	0.36	0.30
20	---	---	---	---	---	---	---	---	---	0.83	0.36	0.30
21	---	---	---	---	---	---	---	---	---	0.77	0.34	0.30
22	---	---	---	---	---	---	---	---	---	0.69	0.30	0.30
23	---	---	---	---	---	---	---	---	---	0.67	0.32	0.34
24	---	---	---	---	---	---	---	---	---	0.81	0.31	0.36
25	---	---	---	---	---	---	---	---	---	0.78	0.34	0.36
26	---	---	---	---	---	---	---	---	---	0.67	0.32	0.36
27	---	---	---	---	---	---	---	---	---	0.60	0.31	0.37
28	---	---	---	---	---	---	---	---	---	0.61	0.30	0.58
29	---	---	---	---	---	---	---	---	---	0.70	0.31	0.59
30	---	---	---	---	---	---	---	---	---	0.65	0.36	0.59
31	---	---	---	---	---	---	---	---	---	0.60	0.36	---
TOTAL	---	---	---	---	---	---	---	---	---	---	12.86	10.85
MEAN	---	---	---	---	---	---	---	---	---	---	0.41	0.36
MAX	---	---	---	---	---	---	---	---	---	---	0.59	0.59
MIN	---	---	---	---	---	---	---	---	---	---	0.30	0.30
CFSM	---	---	---	---	---	---	---	---	---	---	0.03	0.03
IN.	---	---	---	---	---	---	---	---	---	---	0.03	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	---	---	---	---	---	---	---	---	---	---	0.41	0.36
MAX	---	---	---	---	---	---	---	---	---	---	0.41	0.36
(WY)	---	---	---	---	---	---	---	---	---	---	(2002)	(2002)
MIN	---	---	---	---	---	---	---	---	---	---	0.41	0.36
(WY)	---	---	---	---	---	---	---	---	---	---	(2002)	(2002)

01073785 WINNICUT RIVER AT GREENLAND, NEAR PORTSMOUTH, NH—Continued



01073785 WINNICUT RIVER AT GREENLAND, NEAR PORTSMOUTH, NH

LOCATION.--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 Portsmouth Avenue (NH 33), 0.8 mi west of Portsmouth Ave. and Post Road (NH 151) intersection in Greenland, and 5.1 mi southwest of State Street and Middle Street (US 1) intersection in Portsmouth.

DRAINAGE AREA.--14.1 mi^2.

PERIOD OF RECORD.--Discharge records: July 2002 to current year. Miscellaneous discharge measurements: Water years 1999-2000.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for October 1-15 and September 13-21, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 15	0215	*343	*4.92	Mar 30	2330	198	4.60
Mar 21	1900	267	4.74	May 27	0430	226	4.63

Minimum discharge, 0.50 ft^3/s, Oct. 11, 12.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.59	7.1	14	19	9.0	22	87	34	55	18	1.9	1.1
2	0.59	16	11	29	10	25	73	32	65	17	8.5	1.2
3	0.59	13	9.5	25	13	e45	64	27	38	16	10	1.4
4	0.59	9.4	7.9	22	15	e40	58	23	31	15	17	1.9
5	0.59	7.7	7.0	22	20	e34	55	20	41	13	18	2.2
6	0.59	17	7.0	21	19	30	52	19	36	11	19	2.0
7	0.59	23	7.0	21	16	e29	52	17	28	9.4	14	2.0
8	0.59	13	7.0	20	14	e29	46	18	35	8.4	16	1.8
9	0.59	13	6.5	20	13	31	45	19	29	6.7	16	1.6
10	0.59	12	5.8	19	12	37	49	17	26	5.3	13	1.6
11	0.53	14	5.7	e18	12	32	64	14	20	6.6	13	1.5
12	0.58	15	14	e17	e12	29	112	37	17	7.6	14	e1.4
13	0.59	33	18	e16	e12	31	76	37	16	4.6	12	e1.2
14	0.59	26	83	e15	e11	e28	60	36	20	4.6	11	e1.1
15	0.59	23	203	e14	e11	e24	53	32	18	e3.2	7.3	e0.80
16	1.8	21	74	e13	e10	26	44	27	16	e3.0	5.3	e1.0
17	20	40	57	12	e10	37	35	23	15	e3.1	6.4	e1.6
18	6.9	64	46	12	e10	59	29	18	14	3.0	5.5	e1.2
19	3.3	43	37	13	e10	65	28	17	17	3.4	3.8	e1.0
20	2.4	33	45	12	10	49	25	14	18	3.5	2.7	e1.6
21	1.9	30	93	11	12	163	23	13	14	2.9	2.2	e1.2
22	1.6	39	51	e11	16	168	27	13	15	2.6	2.0	e1.0
23	1.4	41	41	e10	38	157	46	13	24	2.6	2.0	3.9
24	1.5	32	35	10	51	142	34	14	21	2.7	1.9	11
25	1.9	26	28	9.4	43	134	29	25	17	2.5	1.8	5.9
26	5.3	26	27	9.0	e38	125	39	38	13	2.3	1.8	6.6
27	18	24	27	9.0	e34	124	126	144	25	2.1	1.8	8.1
28	8.3	20	24	9.5	e28	92	60	66	44	2.0	1.6	8.0
29	5.6	16	22	9.0	---	83	50	75	22	1.9	1.4	8.6
30	4.3	14	20	8.6	---	161	40	50	19	1.7	1.3	6.6
31	3.5	---	19	8.5	---	141	---	40	---	1.6	1.2	---
TOTAL	96.48	711.2	1,052.4	465.0	509.0	2,192	1,581	972	769	187.3	233.4	90.10
MEAN	3.11	23.7	33.9	15.0	18.2	70.7	52.7	31.4	25.6	6.04	7.53	3.00
MAX	20	64	203	29	51	168	126	144	65	18	19	11
MIN	0.53	7.1	5.7	8.5	9.0	22	23	13	13	1.6	1.2	0.80
CFSM	0.22	1.68	2.41	1.06	1.29	5.01	3.74	2.22	1.82	0.43	0.53	0.21
IN.	0.25	1.88	2.78	1.23	1.34	5.78	4.17	2.56	2.03	0.49	0.62	0.24

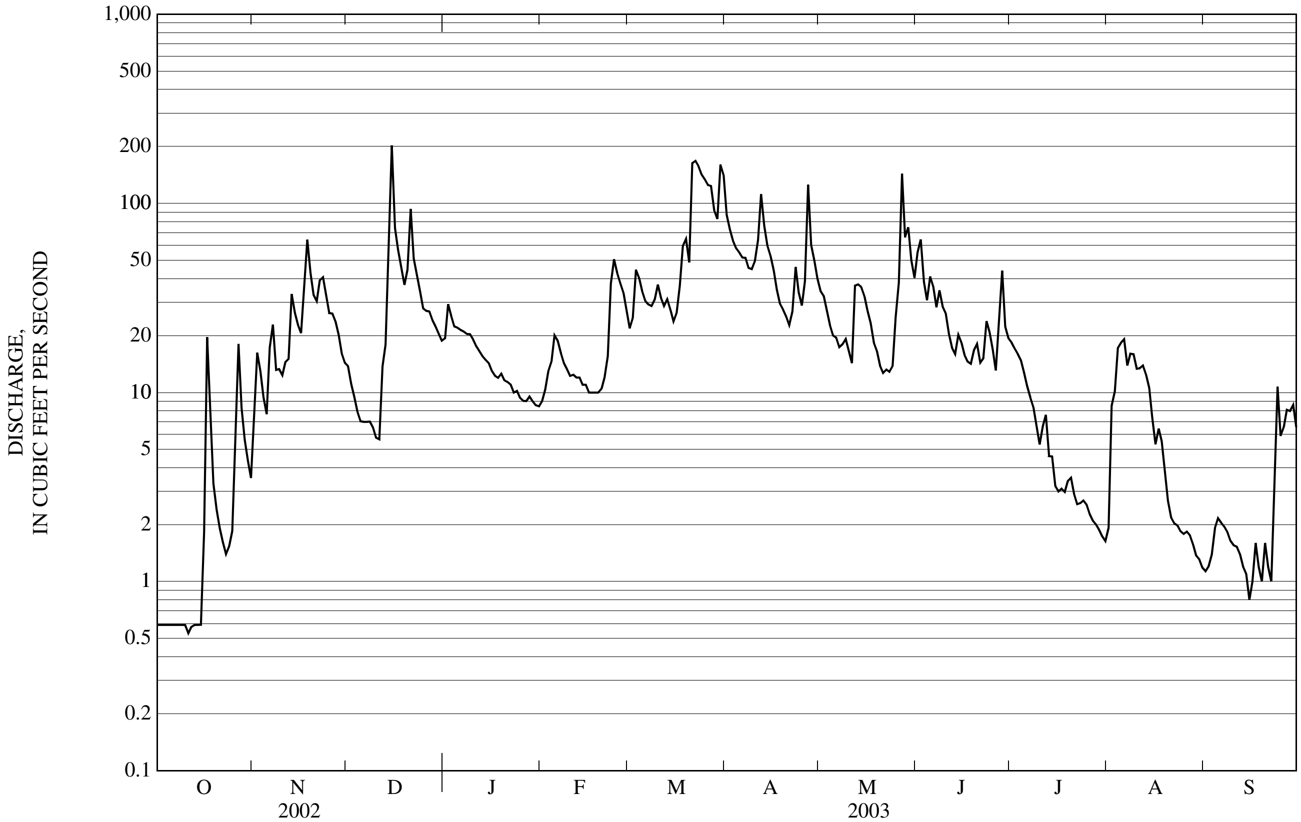
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.11	23.7	33.9	15.0	18.2	70.7	52.7	31.4	25.6	6.04	3.97	1.68
MAX	3.11	23.7	33.9	15.0	18.2	70.7	52.7	31.4	25.6	6.04	7.53	3.00
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	3.11	23.7	33.9	15.0	18.2	70.7	52.7	31.4	25.6	6.04	0.41	0.36
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)

01073785 WINNICUT RIVER AT GREENLAND, NEAR PORTSMOUTH, NH—Continued

SUMMARY STATISTICS	FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	8,858.88			
ANNUAL MEAN	24.3		24.3	
HIGHEST ANNUAL MEAN			24.3	2003
LOWEST ANNUAL MEAN			24.3	2003
HIGHEST DAILY MEAN	203	Dec 15	203	Dec 15, 2002
LOWEST DAILY MEAN	0.53	Oct 11	a0.30	Aug 22, 2002
ANNUAL SEVEN-DAY MINIMUM	0.58	Oct 6	0.30	Sep 13, 2002
MAXIMUM PEAK FLOW	b343	Dec 15	b343	Dec 15, 2002
MAXIMUM PEAK STAGE	4.92	Dec 15	4.92	Dec 15, 2002
INSTANTANEOUS LOW FLOW	c0.50	Oct 11	d0.30	Aug 22, 2002
ANNUAL RUNOFF (CFSM)	1.72		1.72	
ANNUAL RUNOFF (INCHES)	23.37		23.39	
10 PERCENT EXCEEDS	52		52	
50 PERCENT EXCEEDS	16		16	
90 PERCENT EXCEEDS	1.6		1.6	

a Also occurred on August 28 and September 13-15 and 18-22, 2002
b From rating curve extended above 120 ft^3/s, on basis of theoretical flow computations over dam
c Also occurred on October 12
d Also occurred on August 24, 27-29 and September 12-13, 2002
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, 1,900 ft downstream of Pollard Brook, 1.8 mi above mouth, east of the center of Lincoln.

DRAINAGE AREA.--115 mi^2.

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 01074500) are not equivalent because of difference in drainage areas.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 830 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to August 17, 2001, at datum 5.00 ft higher.

REMARKS.--Records good except those above 1,000 ft^3/s, which are fair, and those for estimated daily discharges, which are poor.

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^3/s. Flood in October 1959 reached a discharge of 24,200 ft^3/s, by computation of peak flow over dam.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2345	4,030	9.75	Aug 10	0600	*10,100	*11.84

Minimum discharge, 35 ft^3/s, Mar. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	115	203	e170	e67	45	503	623	293	84	81	75
2	53	100	170	e145	73	45	429	1,280	438	78	156	79
3	54	91	147	e135	70	44	366	1,130	314	74	117	77
4	54	103	121	124	68	43	321	720	261	72	107	476
5	124	102	e155	e115	e66	43	295	619	285	61	269	226
6	114	103	178	110	62	e49	269	594	470	60	463	134
7	78	101	153	e105	61	45	228	560	342	54	393	104
8	70	94	e150	e102	59	43	209	531	298	56	260	93
9	61	99	e135	e100	58	42	193	522	275	54	221	90
10	68	137	e120	e98	57	41	188	473	276	51	3,410	85
11	72	665	e130	e96	56	e40	202	438	237	102	1,080	81
12	69	631	e125	e94	54	39	223	795	220	106	1,230	77
13	70	714	120	92	e52	39	319	614	197	68	871	71
14	151	487	126	e88	e51	37	295	781	413	58	638	84
15	108	370	132	e86	e50	37	428	593	352	54	479	98
16	93	303	112	e83	e49	e37	1,050	507	274	65	382	202
17	477	289	e90	e80	e48	e45	651	452	233	76	324	178
18	258	324	e82	77	e47	93	475	414	205	118	310	110
19	212	256	98	75	e49	100	418	393	189	191	274	96
20	371	236	e200	e75	51	69	509	374	167	89	208	215
21	238	247	e590	e72	49	e325	702	350	150	79	174	167
22	186	317	258	e71	48	e600	746	319	140	220	153	123
23	159	610	194	e71	50	e410	725	289	132	226	134	681
24	143	402	161	e70	50	291	606	274	117	278	119	740
25	130	319	e150	69	46	288	501	275	103	475	112	364
26	154	285	e155	75	e47	355	522	328	100	224	111	281
27	232	262	e150	76	e49	454	897	457	95	154	101	233
28	189	219	e185	72	e47	387	829	362	88	142	92	218
29	151	238	e180	e70	---	1,030	1,050	370	81	115	89	345
30	132	236	e165	e69	---	1,700	818	340	94	91	97	261
31	119	---	153	e68	---	716	---	305	---	82	82	---
TOTAL	4,450	8,455	5,088	2,833	1,534	7,532	14,967	16,082	6,839	3,657	12,537	6,064
MEAN	144	282	164	91.4	54.8	243	499	519	228	118	404	202
MAX	477	714	590	170	73	1,700	1,050	1,280	470	475	3,410	740
MIN	53	91	82	68	46	37	188	274	81	51	81	71
CFSM	1.25	2.45	1.43	0.79	0.48	2.11	4.34	4.51	1.98	1.03	3.52	1.76
IN.	1.44	2.74	1.65	0.92	0.50	2.44	4.84	5.20	2.21	1.18	4.06	1.96

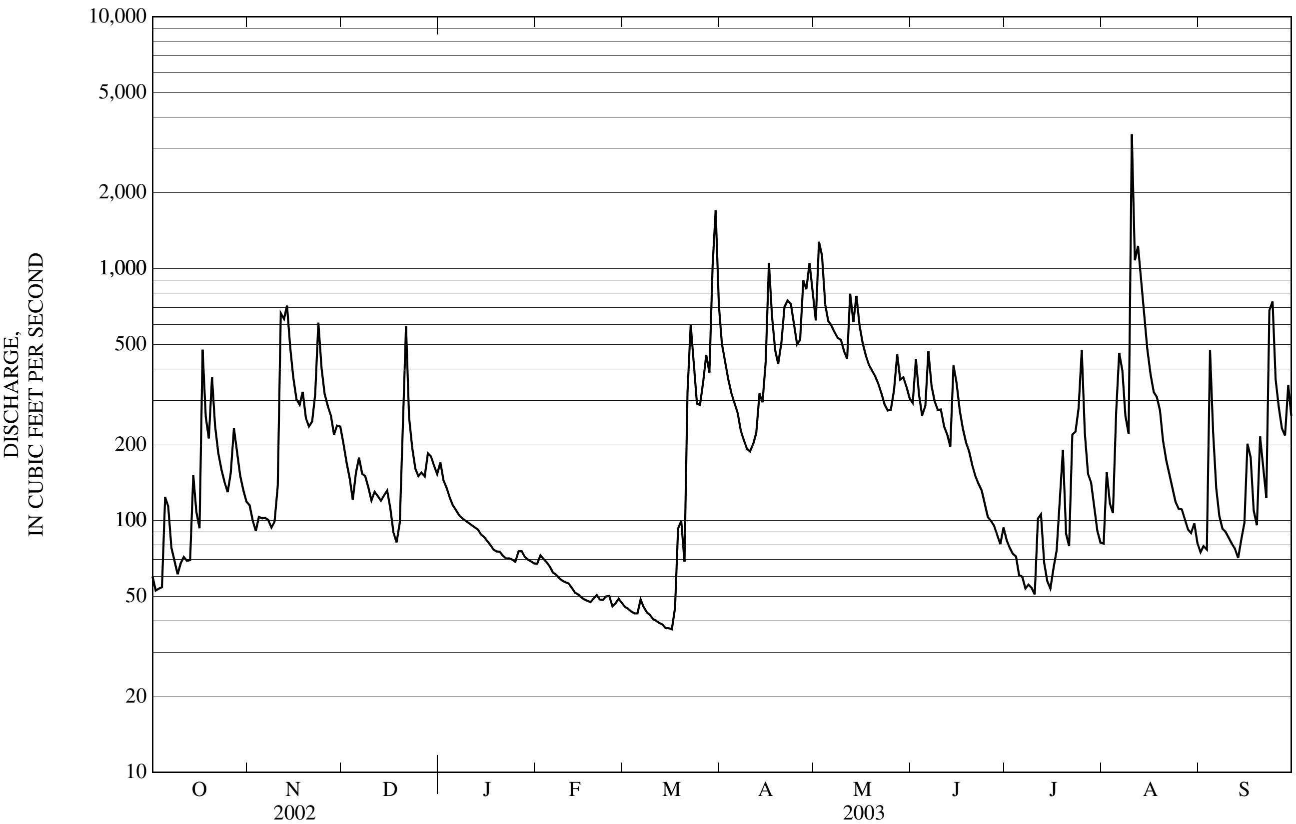
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	254	339	241	224	138	251	790	701	313	179	134	163
MAX	740	760	509	564	389	535	1,319	1,323	646	525	404	655
(WY)	(1996)	(1996)	(1997)	(1996)	(1996)	(1998)	(2002)	(1996)	(1998)	(1996)	(2003)	(1999)
MIN	78.7	139	83.5	65.0	54.8	52.8	264	412	179	67.0	31.3	59.0
(WY)	(2002)	(1995)	(1998)	(2002)	(2003)	(2001)	(1995)	(1993)	(1999)	(2001)	(2001)	(2002)

01074520 EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1993 - 2003	
ANNUAL TOTAL	102,045		90,038			
ANNUAL MEAN	280		247		312	
HIGHEST ANNUAL MEAN					507	1996
LOWEST ANNUAL MEAN					202	1995
HIGHEST DAILY MEAN	9,090	Apr 14	3,410	Aug 10	9,090	Apr 14, 2002
LOWEST DAILY MEAN	a31	Sep 7	b37	Mar 14	25	Sep 18, 2001
ANNUAL SEVEN-DAY MINIMUM	32	Sep 4	39	Mar 10	26	Sep 14, 2001
MAXIMUM PEAK FLOW			10,100	Aug 10	c16,900	Apr 14, 2002
MAXIMUM PEAK STAGE			11.84	Aug 10	d11.07	Oct 22, 1995
INSTANTANEOUS LOW FLOW			35	Mar 14	f25	Sep 18, 2001
ANNUAL RUNOFF (CFSM)	2.43		2.15		2.71	
ANNUAL RUNOFF (INCHES)	33.01		29.13		36.84	
10 PERCENT EXCEEDS	481		572		672	
50 PERCENT EXCEEDS	132		150		163	
90 PERCENT EXCEEDS	44		54		64	

a Also occurred on September 9, 10, 2002
b Also occurred on March 15, 16
c From rating curve extended above 5,800 ft^3/s
d At datum then in use
e Estimated
f Also occurred on September 19, 20, 2001



01075000 PEMIGEWASSET RIVER AT WOODSTOCK, NH

LOCATION.--Lat 43° 58'34", long 71° 40'48", Grafton County, Hydrologic Unit 01070001, on right bank 300 ft upstream of southern State Highway 175 bridge, 0.2 mi east of Woodstock, 0.7 mi upstream from Eastman Brook, and 4.8 mi south of Town Hall in Lincoln.

DRAINAGE AREA.--193 mi^2.

PERIOD OF RECORD.--Discharge records: October 1939 to 1977, October 2001 to current year. Partial-record station: October 1977 to September 2001. Peak streamflow: Water years 1940 to 1980, 1985 to current year. Miscellaneous discharge measurements only: Water years 1978 to 2001. Water-quality records: Water years 1970-73.

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

GAGE.--Water-stage recorder. Elevation of gage is 615 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Prior to 1978, some diurnal fluctuation caused by power plants upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Aug 10	0715	*14,300	*10.35	No other peak greater than base discharge.			

Minimum daily discharge, e77 ft^3/s, Feb. 26.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	115	182	296	292	e125	87	929	1,090	429	133	142	125
2	99	162	249	267	e130	e85	733	2,270	712	116	298	119
3	97	129	218	e215	e130	e84	606	2,470	494	108	264	117
4	99	149	e170	214	e125	e80	518	1,340	394	101	297	801
5	222	151	185	e205	e120	85	444	1,090	405	95	504	441
6	233	157	e240	194	e118	97	415	1,030	857	96	1,010	247
7	152	165	e200	179	116	e90	357	946	563	89	939	189
8	133	141	e215	e170	114	88	339	880	456	91	505	161
9	115	151	152	e170	111	e86	313	845	409	88	391	143
10	117	219	e145	e165	108	e83	310	774	437	81	6,340	132
11	128	1,220	e215	e155	107	82	369	683	372	133	2,050	125
12	125	1,330	e245	e165	103	82	433	1,690	349	189	1,960	118
13	129	1,490	220	e160	97	81	696	1,240	306	125	1,410	112
14	250	905	228	e155	93	e78	606	1,790	746	102	897	119
15	205	609	252	e150	92	79	850	1,160	625	88	638	151
16	163	474	203	e150	90	81	2,440	883	440	125	505	313
17	672	432	e160	e145	90	101	1,310	747	359	162	430	329
18	417	614	e130	e140	89	e200	826	646	315	151	380	194
19	310	435	e160	e140	93	e260	662	591	293	357	364	159
20	564	370	291	e140	94	e190	803	551	263	163	294	328
21	362	382	e950	e135	93	e560	1,270	509	235	132	256	295
22	274	519	501	e132	96	e1,150	1,390	461	218	450	229	209
23	233	1,350	351	e130	e100	948	1,370	412	210	483	207	1,590
24	205	759	281	e130	e100	e735	1,110	390	187	590	183	1,630
25	185	540	217	e125	e94	e720	850	388	166	1,150	171	629
26	224	451	e240	e140	e77	e800	967	481	155	420	171	463
27	426	394	e215	e140	e90	1,070	2,190	776	143	280	160	372
28	348	316	e215	e135	e87	898	1,680	557	131	258	144	353
29	263	317	246	e130	---	1,780	2,070	597	124	215	139	841
30	219	333	e200	e125	---	3,990	1,590	559	142	174	162	511
31	192	---	218	e125	---	1,510	---	479	---	148	140	---
TOTAL	7,276	14,846	7,808	5,018	2,882	16,260	28,446	28,325	10,935	6,893	21,580	11,316
MEAN	235	495	252	162	103	525	948	914	364	222	696	377
MAX	672	1,490	950	292	130	3,990	2,440	2,470	857	1,150	6,340	1,630
MIN	97	129	130	125	77	78	310	388	124	81	139	112
CFSM	1.22	2.56	1.31	0.84	0.53	2.72	4.91	4.73	1.89	1.15	3.61	1.95
IN.	1.40	2.86	1.50	0.97	0.56	3.13	5.48	5.46	2.11	1.33	4.16	2.18

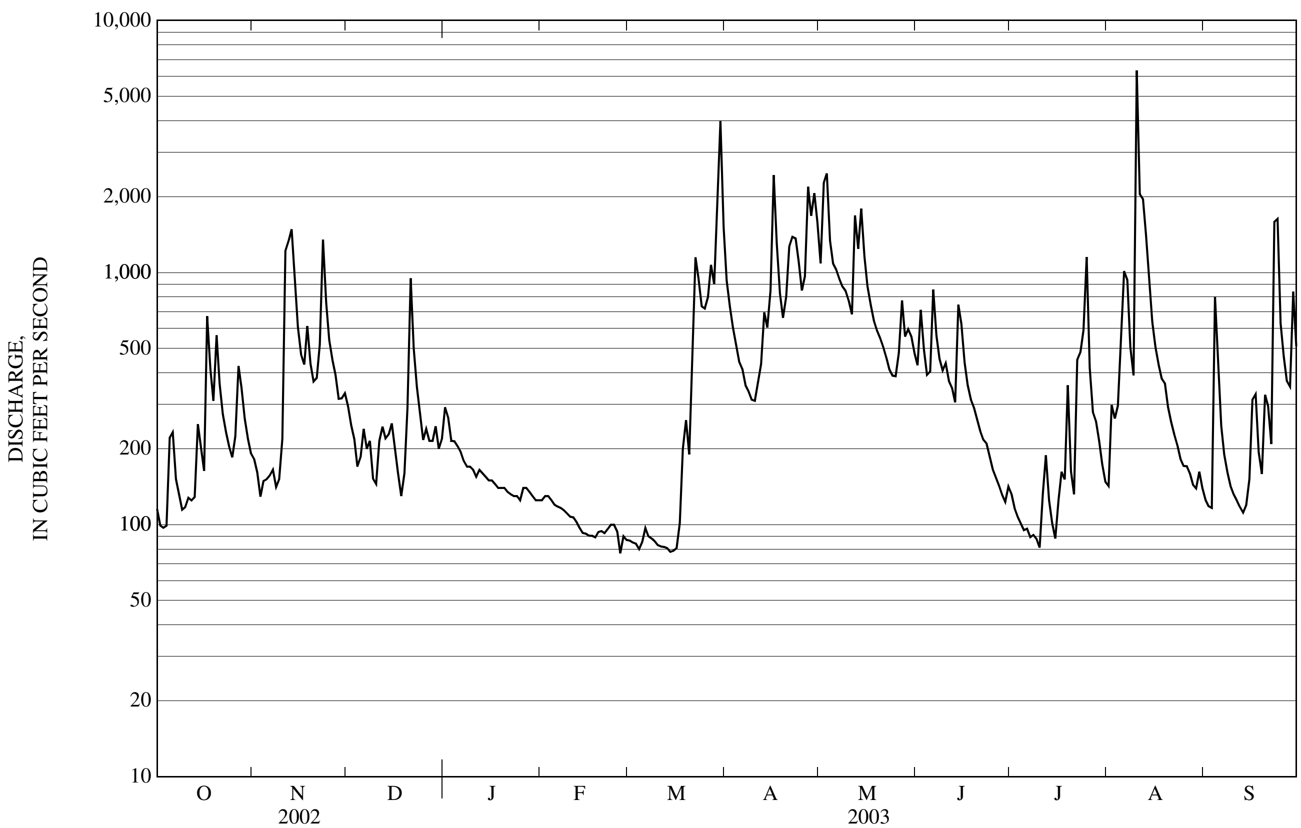
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1977, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	357	543	415	243	210	434	1,330	1,354	496	261	213	256
MAX	1,192	1,428	1,693	671	670	1,699	2,087	2,448	1,263	668	696	1,212
(WY)	(1960)	(1960)	(1974)	(1949)	(1973)	(1953)	(2002)	(1972)	(1973)	(1973)	(2003)	(1954)
MIN	65.9	122	77.7	55.9	57.3	65.7	554	403	159	94.8	76.1	64.4
(WY)	(1948)	(1948)	(1948)	(1948)	(1940)	(1940)	(1965)	(1941)	(1953)	(1953)	(1942)	(1948)

01075000 PEMIGEWASSET RIVER AT WOODSTOCK, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 77, 2002 - 03	
ANNUAL TOTAL	170,042		161,585			
ANNUAL MEAN	466		443		510	
HIGHEST ANNUAL MEAN					703	1973
LOWEST ANNUAL MEAN					335	1965
HIGHEST DAILY MEAN	13,000	Apr 14	6,340	Aug 10	16,900	Oct 24, 1959
LOWEST DAILY MEAN	37	Sep 10	e77	Feb 26	37	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	40	Sep 5	81	Mar 10	40	Sep 5, 2002
MAXIMUM PEAK FLOW			14,300	Aug 10	a47,000	Oct 24, 1959
MAXIMUM PEAK STAGE			10.35	Aug 10	16.13	Oct 24, 1959
ANNUAL RUNOFF (CFSM)	2.41		2.29		2.64	
ANNUAL RUNOFF (INCHES)	32.77		31.14		35.91	
10 PERCENT EXCEEDS	868		1,020		1,220	
50 PERCENT EXCEEDS	222		233		242	
90 PERCENT EXCEEDS	71		97		93	

a From rating curve extended above 14,000 ft^3/s on basis of contracted-opening measurement of peak flow
e Estimated



01076000 BAKER RIVER NEAR RUMNEY, NH

LOCATION.--Lat 43° 47'46", Long 71° 50'42", Grafton County, Hydrologic Unit 01070001, on right bank, 200 ft upstream from small right bank tributary, 0.3 mi upstream from Halls Brook, 1.8 mi southeast of West Rumney, and 1.8 mi southwest of Rumney.

DRAINAGE AREA.--143 mi^2.

PERIOD OF RECORD.--Discharge records: October 1928 to September 1977, October 2001 to current year. October 1928 monthly discharge only, published in WSP 1301. Partial-record station: October 1977 to September 2001. Peak streamflow: Water years 1928 to 1977, 1985 to 1993, 1995 to current year. Miscellaneous discharge measurements only: Water years 1978 to 1988, 1990 to 2001. Water quality records: Water years 1953-54.

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

GAGE.--Water-stage recorder. Concrete control September 10, 1938 to June 12, 1976. Elevation of gage is 495 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. High flow slightly affected by retarding reservoirs since 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since valley was settled about 1766, 25,900 ft^3/s, November 3, 1927, gage height 17.4 ft, from flood marks, from rating extended above 3,800 ft^3/s on the basis of slope-area measurements at gage heights 13.03 ft, 14,49 ft, and 15.50 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0630	ice jam	*6.81	Mar 30	0115	*3,470	6.64

Minimum discharge, 22 ft^3/s, July 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	80	156	e115	e63	57	928	386	258	41	61	51
2	34	75	122	e120	65	57	743	583	282	35	210	45
3	33	62	105	119	67	e56	607	858	221	32	209	43
4	32	61	95	123	e66	e52	493	550	178	29	214	422
5	32	59	102	e123	79	e56	396	428	185	28	306	319
6	48	67	113	118	76	e59	338	376	314	26	273	188
7	37	95	101	e106	74	e58	287	359	248	24	404	132
8	33	85	99	e101	70	e54	270	328	222	24	228	101
9	30	81	78	e103	69	e54	250	314	195	23	166	82
10	27	116	76	e101	66	e51	250	291	180	23	1,340	69
11	28	337	83	93	66	e49	337	255	154	34	789	60
12	30	370	88	96	65	e48	432	759	150	54	532	53
13	33	596	93	88	64	e47	766	705	128	41	451	48
14	38	437	110	85	61	e45	715	808	202	35	331	46
15	47	296	167	80	60	e44	887	587	214	30	227	49
16	42	221	155	e79	e59	e44	1,430	450	160	36	179	138
17	147	211	120	e80	e58	66	925	365	128	75	192	189
18	144	391	104	e77	e57	e115	655	310	110	51	160	123
19	106	308	104	e73	e56	e210	521	271	98	60	164	95
20	96	249	120	e70	54	275	519	237	87	48	130	122
21	86	255	331	e67	53	e490	578	210	78	38	108	120
22	73	335	292	e66	55	e830	565	192	71	150	91	92
23	63	807	227	e65	62	e975	561	173	68	132	78	542
24	56	539	184	e65	e63	884	525	164	61	169	65	840
25	51	379	135	e65	e62	997	465	178	54	369	57	413
26	68	291	135	e65	57	1,160	596	237	48	181	54	305
27	191	240	148	e64	61	1,250	1,070	416	44	127	51	228
28	176	187	142	e62	59	1,150	780	326	40	119	46	205
29	139	165	139	e61	---	1,580	656	389	36	98	43	632
30	110	171	120	e61	---	2,260	508	389	37	77	68	413
31	91	---	117	e61	---	1,280	---	297	---	62	64	---
TOTAL	2,161	7,566	4,161	2,652	1,767	14,353	18,053	12,191	4,251	2,271	7,291	6,165
MEAN	69.7	252	134	85.5	63.1	463	602	393	142	73.3	235	206
MAX	191	807	331	123	79	2,260	1,430	858	314	369	1,340	840
MIN	27	59	76	61	53	44	250	164	36	23	43	43
CFSM	0.49	1.76	0.94	0.60	0.44	3.24	4.21	2.75	0.99	0.51	1.64	1.44
IN.	0.56	1.97	1.08	0.69	0.46	3.73	4.70	3.17	1.11	0.59	1.90	1.60

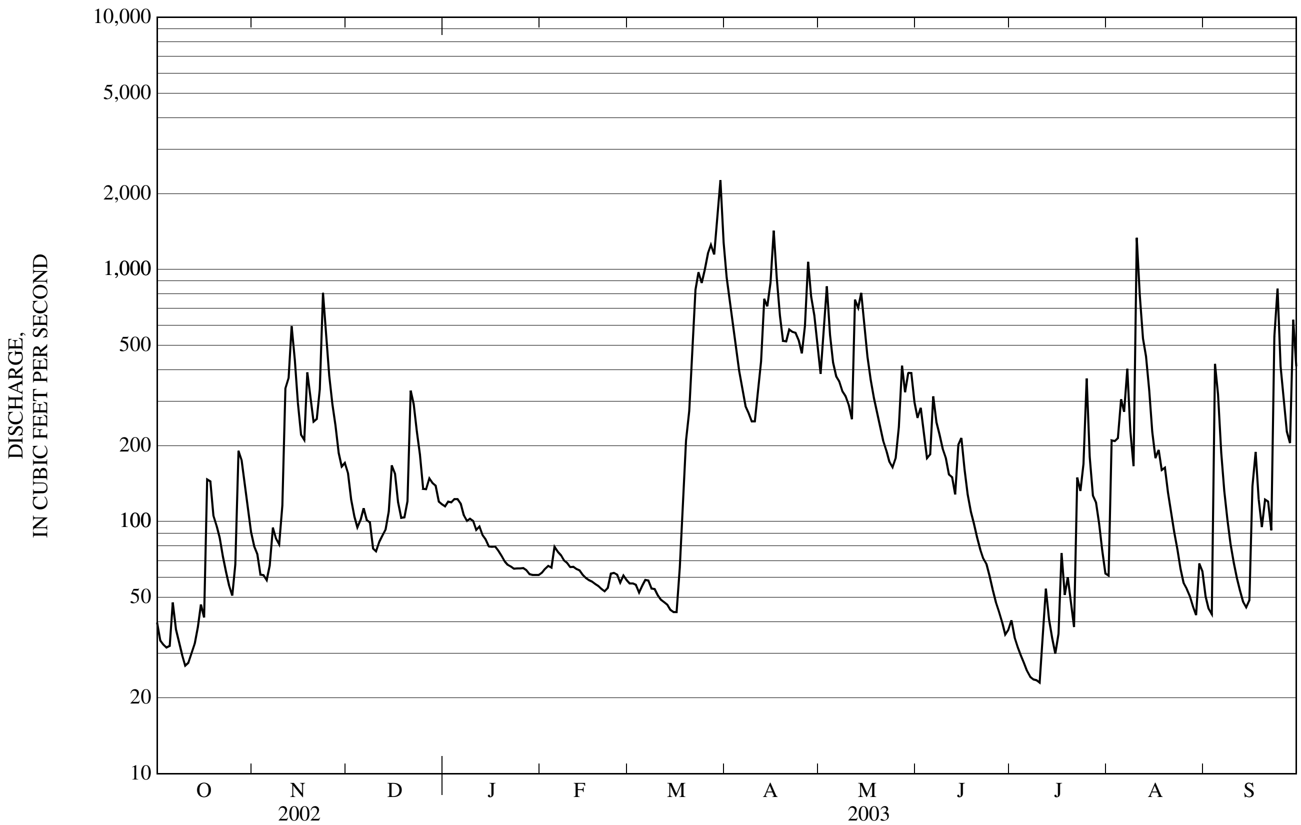
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1977, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	136	233	220	149	132	364	867	456	195	101	73.9	93.7
MAX	588	739	714	434	402	2,473	1,575	962	619	518	324	816
(WY)	(1960)	(1960)	(1974)	(1935)	(1970)	(1936)	(1969)	(1940)	(1973)	(1973)	(1943)	(1938)
MIN	18.2	59.1	34.6	26.0	37.8	52.9	390	141	47.4	21.8	15.2	17.6
(WY)	(1948)	(1953)	(1948)	(1948)	(1948)	(1940)	(1957)	(1941)	(1964)	(1933)	(2002)	(1963)

01076000 BAKER RIVER NEAR RUMNEY, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 77, 2002 - 03	
ANNUAL TOTAL	75,537.8		82,882			
ANNUAL MEAN	207		227		252	
HIGHEST ANNUAL MEAN					388	1973
LOWEST ANNUAL MEAN					121	1965
HIGHEST DAILY MEAN	3,600	Apr 14	2,260	Mar 30	12,600	Mar 19, 1936
LOWEST DAILY MEAN	9.3	Sep 11	a23	Jul 9	9.3	Sep 11, 2002
ANNUAL SEVEN-DAY MINIMUM	11	Sep 5	25	Jul 4	11	Sep 5, 2002
MAXIMUM PEAK FLOW			3,470	Mar 30	b21,400	Jun 15, 1942
MAXIMUM PEAK STAGE			6.81	Mar 22	15.50	Jun 15, 1942
INSTANTANEOUS LOW FLOW			c22	Jul 10	d6.5	Dec 4, 1947
ANNUAL RUNOFF (CFSM)	1.45		1.59		1.76	
ANNUAL RUNOFF (INCHES)	19.65		21.56		23.97	
10 PERCENT EXCEEDS	431		570		605	
50 PERCENT EXCEEDS	120		115		110	
90 PERCENT EXCEEDS	17		44		33	

a Also occurred on July 10
b From rating extended above 3,800 ft^3/s on basis of slope-area measurements as explained above
c Also occurred on July 11
d Caused by ice conditions upstream
e Estimated



01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH

LOCATION.--Lat 43° 45'33", long 71° 41'10", Grafton County, Hydrologic Unit 01070001, on right bank, 150 ft downstream from Holderness Road bridge in Plymouth, 0.1 mi northeast of Plymouth Town Hall, and 0.3 mi downstream from Baker River.

DRAINAGE AREA.--622 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Stage-discharge relationship at times is affected by variable slope. Some diurnal fluctuation during period 1940-52 caused by power plants upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0715	15,300	10.58
Aug 10	1345	*a23,700	13.08
Aug 10	1545	a	*13.41

Minimum discharge, 171 ft^3/s, July 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	429	e765	e650	e335	e270	3,880	2,320	1,200	282	287	322
2	223	408	e655	e675	e345	e270	2,920	2,920	1,320	244	621	297
3	212	324	e550	e630	e355	e265	2,310	6,270	1,160	229	827	285
4	203	331	e455	e615	e350	e250	1,910	3,610	945	216	730	1,830
5	228	341	e485	e600	e375	e260	1,560	2,550	909	203	1,170	1,790
6	453	370	e555	e575	e360	e285	1,420	2,190	1,620	194	1,620	937
7	314	439	e540	e530	e350	e275	1,210	2,040	1,350	187	2,540	659
8	259	389	e515	e505	e340	e267	1,170	1,840	1,140	181	1,330	523
9	232	401	e470	e500	e335	e263	1,060	1,670	1,010	180	1,020	434
10	215	444	e440	e490	e325	e250	1,010	1,630	994	177	13,400	380
11	227	1,410	e485	e460	e320	e245	1,260	1,410	879	239	7,590	347
12	237	2,870	e555	e470	e315	e240	1,430	3,830	834	408	4,420	319
13	246	3,250	e560	e455	e305	e235	2,790	3,820	732	293	4,040	295
14	329	2,470	e590	e440	e295	e230	2,640	4,090	1,140	233	2,440	315
15	412	1,510	e695	e425	e285	e225	2,750	3,060	1,380	204	1,580	417
16	334	1,180	e735	e420	e280	e230	6,270	2,180	1,010	211	1,250	654
17	784	1,070	e560	e415	e277	e300	4,740	1,710	811	359	1,130	1,110
18	936	1,670	e455	e400	e275	e500	2,800	1,470	697	298	1,110	670
19	657	1,390	e480	e385	e275	e800	2,050	1,320	637	466	1,050	518
20	792	1,110	e690	e375	e270	e880	2,050	1,220	580	360	851	783
21	711	1,070	e2,320	e365	e270	e1,640	2,810	1,110	512	257	709	915
22	546	1,230	e1,530	e360	e275	e3,760	3,080	1,030	466	474	614	632
23	454	3,880	e1,100	e355	e300	e3,690	3,190	928	448	649	543	1,590
24	405	2,650	e890	e350	e305	e3,090	2,710	892	414	843	469	5,980
25	362	1,620	e685	e350	e295	e3,270	2,130	921	369	1,540	424	2,190
26	388	1,290	e660	e355	e265	e3,760	2,250	1,090	333	887	407	1,450
27	904	1,120	e685	e360	e275	e4,470	5,190	2,250	299	585	392	1,160
28	911	e915	e655	e350	e275	e4,180	4,320	1,560	283	489	353	1,040
29	705	e850	e675	e340	---	4,900	4,040	1,650	259	431	327	2,520
30	565	e840	e620	e335	---	12,100	3,550	1,660	261	357	378	1,810
31	481	---	e595	e335	---	6,120	---	1,350	---	301	382	---
TOTAL	13,984	37,271	21,650	13,870	8,627	57,520	80,500	65,591	23,992	11,977	54,004	32,172
MEAN	451	1,242	698	447	308	1,855	2,683	2,116	800	386	1,742	1,072
MAX	936	3,880	2,320	675	375	12,100	6,270	6,270	1,620	1,540	13,400	5,980
MIN	203	324	440	335	265	225	1,010	892	259	177	287	285
CFSM	0.73	2.00	1.12	0.72	0.50	2.98	4.31	3.40	1.29	0.62	2.80	1.72
IN.	0.84	2.23	1.29	0.83	0.52	3.44	4.81	3.92	1.43	0.72	3.23	1.92

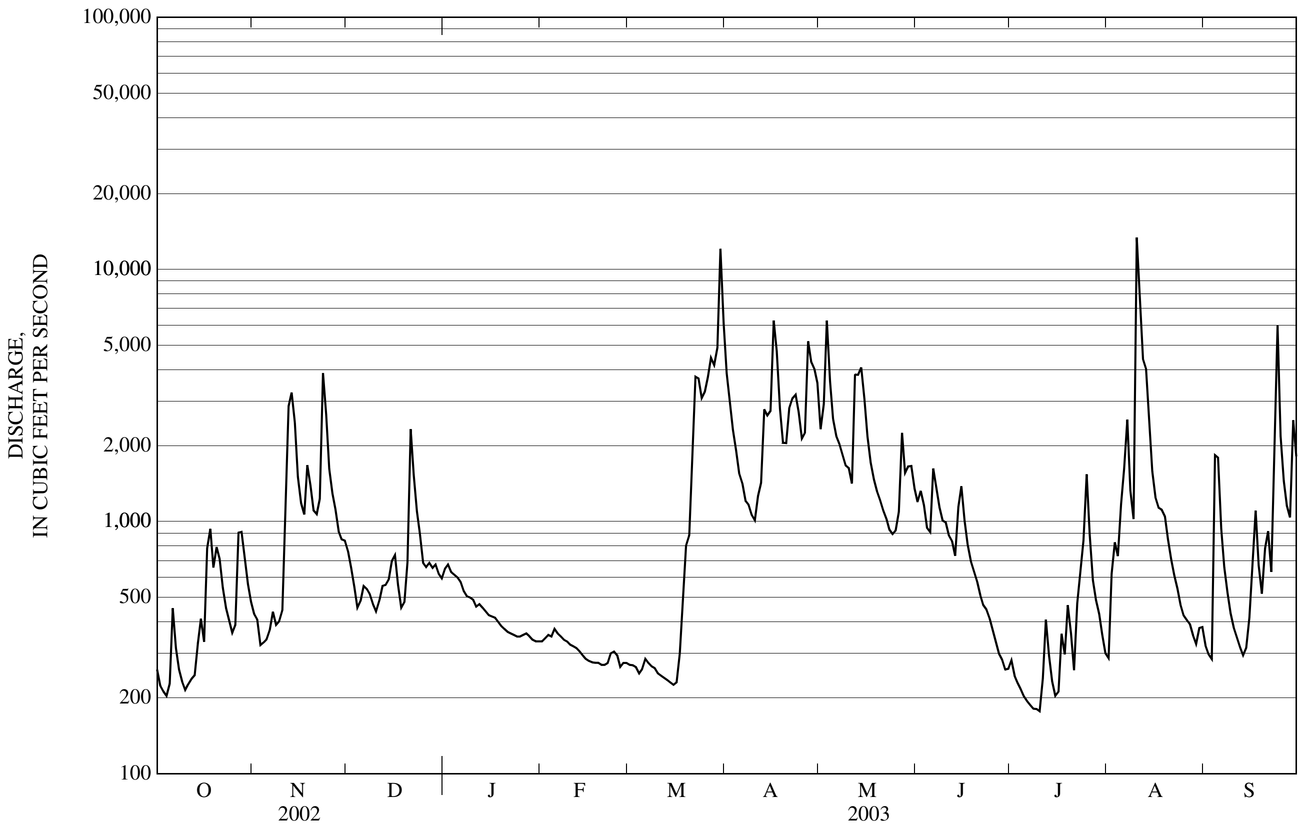
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	953	1,327	1,128	868	729	1,728	3,933	2,762	1,152	635	513	595
MAX	3,423	4,578	4,588	3,191	4,379	9,266	7,206	5,304	3,878	3,103	3,345	3,813
(WY)	(1978)	(1928)	(1974)	(1996)	(1981)	(1936)	(1969)	(1940)	(1917)	(1973)	(1990)	(1938)
MIN	129	308	216	148	138	205	1,222	806	283	160	111	107
(WY)	(1948)	(1979)	(1948)	(1931)	(1931)	(1940)	(1995)	(1921)	(1921)	(1923)	(1923)	(1923)

01076500 PEMIGEWASSET RIVER AT PLYMOUTH, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	404,093		421,158			
ANNUAL MEAN	1,107		1,154		1,361	
HIGHEST ANNUAL MEAN					2,156	1996
LOWEST ANNUAL MEAN					735	1965
HIGHEST DAILY MEAN	20,000	Apr 14	13,400	Aug 10	57,300	Mar 19, 1936
LOWEST DAILY MEAN	93	Sep 10	177	Jul 10	45	Sep 20, 1923
ANNUAL SEVEN-DAY MINIMUM	99	Sep 5	191	Jul 4	66	Oct 11, 1923
MAXIMUM PEAK FLOW			a23,700	Aug 10	65,400	Mar 19, 1936
MAXIMUM PEAK STAGE			13.41	Aug 10	b29.00	Mar 19, 1936
INSTANTANEOUS LOW FLOW			c171	Jul 10	d39	Oct 1, 1948
ANNUAL RUNOFF (CFSM)	1.78		1.86		2.19	
ANNUAL RUNOFF (INCHES)	24.17		25.19		29.73	
10 PERCENT EXCEEDS	2,340		2,800		3,170	
50 PERCENT EXCEEDS	596		614		675	
90 PERCENT EXCEEDS	141		262		236	

a Discharge affected by variable slope
b From floodmarks
c Also occurred on July 11
d Also occurred on October 3, 1948
e Estimated



01078000 SMITH RIVER NEAR BRISTOL, NH

LOCATION.--Lat 43° 34'04", long 71° 44'54", Merrimack County, Hydrologic Unit 01070001, on right bank, 0.6 mi upstream of Borough Road bridge, 1.5 mi upstream from mouth, 1.7 mi southwest of Post Office in Bristol, and 3.8 mi northwest of Hill.

DRAINAGE AREA.--85.8 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft above National Geodetic Vertical Datum of 1929 (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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	1945	*1,170	*5.79	No other peak greater than base discharge.			

Minimum discharge, 7.1 ft^3/s, Oct. 9, 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	24	71	59	e35	39	681	215	153	19	17	14
2	11	22	61	e60	e37	39	453	278	164	17	65	14
3	9.1	20	48	e58	e39	e38	359	556	130	15	82	14
4	8.3	19	e35	e59	e41	e37	313	464	107	14	61	36
5	9.5	19	e33	e68	e45	e37	262	315	95	13	103	62
6	8.3	24	e37	e65	e52	e36	241	239	105	12	101	46
7	7.7	35	39	63	e51	e35	209	200	96	11	159	33
8	7.8	38	40	62	e48	e35	188	178	121	11	119	26
9	7.3	34	34	e60	e46	e35	169	189	109	11	77	21
10	7.2	39	33	e58	e44	e34	166	185	93	11	195	18
11	7.1	71	e33	e54	e42	e34	226	158	79	24	390	16
12	8.8	73	e34	e52	e41	e33	361	334	73	32	236	15
13	9.2	181	42	e49	e39	e32	562	413	66	28	255	13
14	11	178	52	e47	e38	e32	573	362	116	20	161	15
15	11	114	101	e46	e35	e32	597	293	137	16	109	16
16	13	84	108	e45	e34	e35	781	233	100	18	80	37
17	35	78	84	e45	e34	e39	779	183	77	19	67	60
18	45	121	68	e44	e34	e55	589	155	64	19	59	46
19	29	122	58	e45	e35	e100	396	139	59	17	58	39
20	22	95	64	e45	e35	176	363	121	53	15	51	80
21	20	94	143	e45	e36	244	377	109	48	13	45	75
22	17	121	160	e43	e38	468	381	103	45	15	36	52
23	16	280	123	e41	e42	588	379	95	43	16	32	100
24	15	255	e96	e40	47	619	336	98	41	16	27	241
25	14	168	e77	e39	45	674	290	131	35	17	22	147
26	21	129	e69	e39	41	728	324	172	31	18	21	97
27	50	107	e74	e38	40	818	615	337	28	17	19	82
28	52	96	e72	e38	40	797	509	288	24	15	17	75
29	40	75	e66	e38	---	829	352	305	23	13	15	194
30	31	77	61	e37	---	1,130	264	226	21	11	15	180
31	26	---	59	e35	---	1,020	---	162	---	11	15	---
TOTAL	582.3	2,793	2,075	1,517	1,134	8,848	12,095	7,236	2,336	504	2,709	1,864
MEAN	18.8	93.1	66.9	48.9	40.5	285	403	233	77.9	16.3	87.4	62.1
MAX	52	280	160	68	52	1,130	781	556	164	32	390	241
MIN	7.1	19	33	35	34	32	166	95	21	11	15	13
CFSM	0.22	1.09	0.78	0.57	0.47	3.33	4.70	2.72	0.91	0.19	1.02	0.72
IN.	0.25	1.21	0.90	0.66	0.49	3.84	5.24	3.14	1.01	0.22	1.17	0.81

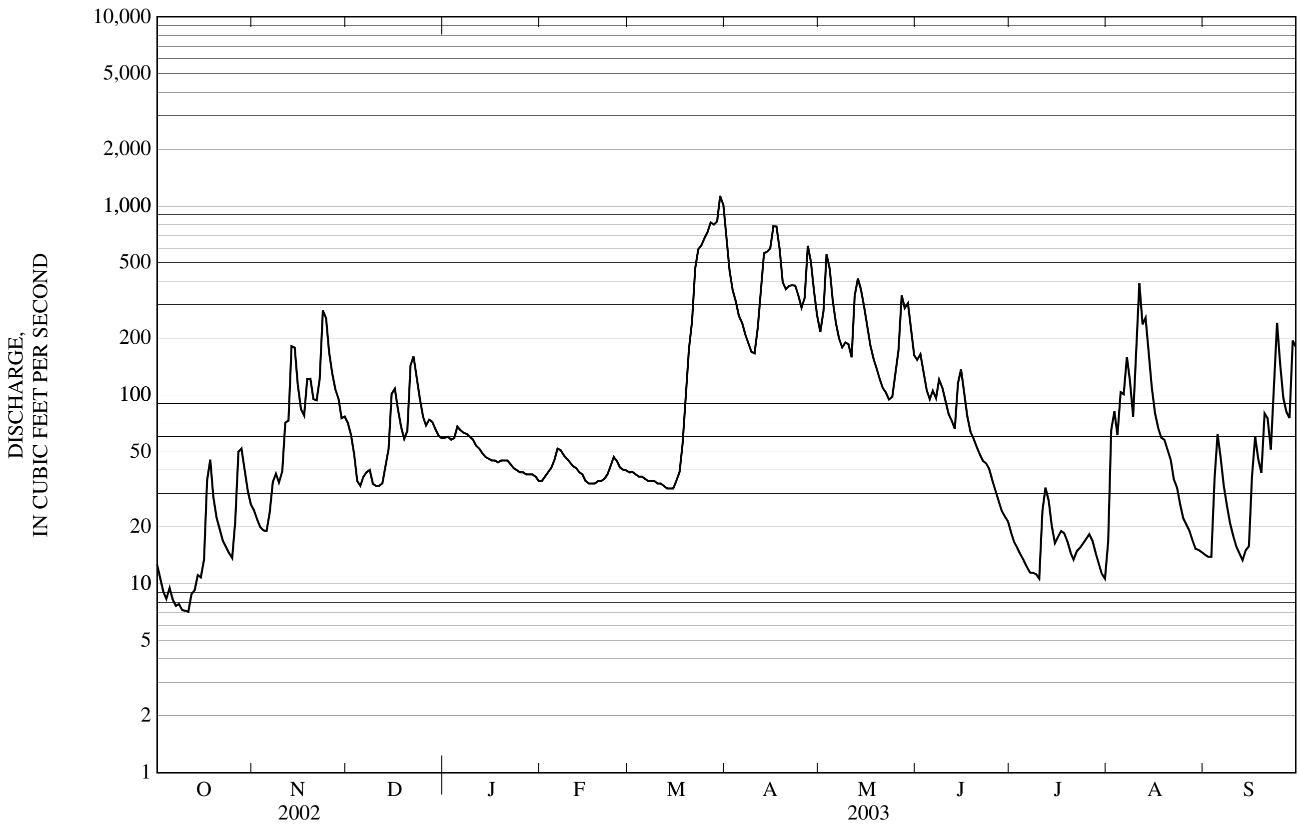
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.0	129	132	100	97.3	251	481	224	104	52.6	37.2	41.1
MAX	279	379	393	300	578	1,242	1,077	504	391	387	340	457
(WY)	(1997)	(1928)	(1974)	(1996)	(1981)	(1936)	(1969)	(1954)	(1998)	(1973)	(1990)	(1938)
MIN	8.45	20.1	22.3	19.2	20.6	29.7	134	71.5	20.5	9.00	4.54	7.36
(WY)	(1948)	(2002)	(1923)	(1940)	(1980)	(1940)	(1995)	(1941)	(1964)	(1965)	(1965)	(2002)

01078000 SMITH RIVER NEAR BRISTOL, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1918 - 2003	
ANNUAL TOTAL	32,691.4		43,693.3			
ANNUAL MEAN	89.6		120		143	
HIGHEST ANNUAL MEAN					240	1996
LOWEST ANNUAL MEAN					64.7	1965
HIGHEST DAILY MEAN	689	Apr 2	1,130	Mar 30	6,890	Mar 19, 1936
LOWEST DAILY MEAN	3.2	Aug 18	7.1	Oct 11	2.7	Aug 2, 1933
ANNUAL SEVEN-DAY MINIMUM	3.4	Aug 16	7.7	Oct 6	3.2	Sep 20, 1939
MAXIMUM PEAK FLOW			1,170	Mar 30	a8,100	Mar 19, 1936
MAXIMUM PEAK STAGE			5.79	Mar 30	b16.09	Mar 19, 1936
INSTANTANEOUS LOW FLOW			c7.1	Oct 9	2.7	Aug 2, 1933
ANNUAL RUNOFF (CFSM)	1.04		1.40		1.67	
ANNUAL RUNOFF (INCHES)	14.17		18.94		22.71	
10 PERCENT EXCEEDS	221		328		347	
50 PERCENT EXCEEDS	56		50		67	
90 PERCENT EXCEEDS	5.9		15		17	

a From rating curve extended above 2,700 ft^3/s on basis of contracted-opening measurement of peak flow
b From flood marks
c Also occurred on October 10, 11
e Estimated



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^2.

PERIOD OF RECORD.--Discharge records: June 1998 to current year. Peak streamflow: Water years 1998 to current year. Water-quality discrete samples: Water years 1998, 1999.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 515 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	1900	ice jam	*6.95	Apr 16	2315	146	4.27
Mar 26	2215	131	4.17	Aug 5	2015	146	4.27
Mar 29	2330	220	4.81	Aug 12	1715	*317	5.25

Minimum discharge, 0.18 ft^3/s, July 31.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.42	1.2	e8.0	e6.0	e3.0	2.8	42	19	16	0.93	3.6	2.9
2	0.37	1.2	e6.0	e6.2	e3.6	3.1	31	35	15	0.85	5.8	2.7
3	0.40	e1.0	e5.0	e5.7	e3.5	3.2	26	39	10	0.90	2.6	2.7
4	0.41	1.1	e4.3	e6.0	e4.0	2.7	22	26	8.6	0.65	1.9	9.1
5	0.52	1.1	e3.4	e6.0	5.6	2.8	20	23	8.9	0.55	26	5.5
6	0.42	2.0	e3.0	5.4	4.2	3.1	15	25	11	0.49	31	4.1
7	0.38	2.6	e2.4	5.1	4.0	2.9	14	24	8.6	0.44	25	3.6
8	0.35	e1.2	2.2	5.0	e4.0	2.9	12	24	8.6	0.43	19	3.3
9	0.33	1.6	e2.2	5.3	e4.0	3.0	11	28	7.2	0.44	13	2.9
10	0.32	e2.3	e2.1	e5.0	e4.0	2.8	12	23	6.5	0.43	11	2.8
11	0.33	e2.7	1.9	e4.8	4.0	2.6	15	18	5.3	2.2	11	2.4
12	0.39	4.9	2.6	4.5	3.9	2.7	28	24	5.0	1.6	66	2.2
13	0.44	13	3.5	2.8	3.6	2.7	31	23	4.4	0.96	73	2.0
14	0.59	e7.1	e6.0	e3.5	3.2	2.7	30	27	12	0.92	44	1.9
15	0.42	e4.6	e12	e4.3	3.4	2.6	45	18	7.9	0.70	41	1.9
16	0.63	e4.0	8.7	4.2	2.9	2.8	115	12	5.5	1.5	32	11
17	2.8	e7.7	e7.2	4.3	2.9	4.2	68	12	4.5	1.4	25	4.5
18	1.5	10	e6.0	e4.2	3.3	e15	36	11	3.9	1.0	35	3.2
19	1.00	6.6	e6.0	e4.1	2.9	e16	28	9.0	3.9	0.92	20	4.9
20	0.79	6.2	e10	e4.0	2.8	e16	27	8.0	3.6	0.73	11	5.4
21	0.73	7.1	25	e3.9	2.9	e58	27	7.9	3.2	0.59	9.0	4.4
22	0.90	27	17	e3.7	3.2	e72	32	7.3	3.3	0.57	7.5	3.7
23	0.96	48	13	e3.7	4.4	66	42	6.4	3.6	0.56	6.6	15
24	0.81	26	9.8	e3.6	3.7	52	33	6.7	2.7	0.55	5.3	10
25	0.75	e17	e7.8	e3.5	3.2	53	24	11	2.4	0.46	4.8	6.1
26	2.4	e13	e7.9	e3.5	e3.1	83	35	17	1.9	0.38	4.4	5.6
27	3.2	11	e7.5	e3.4	2.8	100	72	30	1.6	0.34	4.1	4.9
28	2.0	e8.3	e7.2	e3.2	2.9	69	38	30	1.3	0.32	3.5	4.9
29	1.6	e5.2	e7.0	e3.2	---	101	28	36	1.2	0.28	3.3	6.1
30	1.4	7.1	e6.8	e3.1	---	138	24	27	1.1	0.25	3.2	4.9
31	1.3	---	e6.5	e3.0	---	68	---	18	---	0.22	2.9	---
TOTAL	28.86	251.8	218.0	134.2	99.0	956.6	983	625.3	178.7	22.56	551.5	144.6
MEAN	0.93	8.39	7.03	4.33	3.54	30.9	32.8	20.2	5.96	0.73	17.8	4.82
MAX	3.2	48	25	6.2	5.6	138	115	39	16	2.2	73	15
MIN	0.32	1.0	1.9	2.8	2.8	2.6	11	6.4	1.1	0.22	1.9	1.9
CFSM	0.15	1.32	1.10	0.68	0.55	4.84	5.14	3.16	0.93	0.11	2.79	0.76
IN.	0.17	1.47	1.27	0.78	0.58	5.58	5.73	3.65	1.04	0.13	3.22	0.84

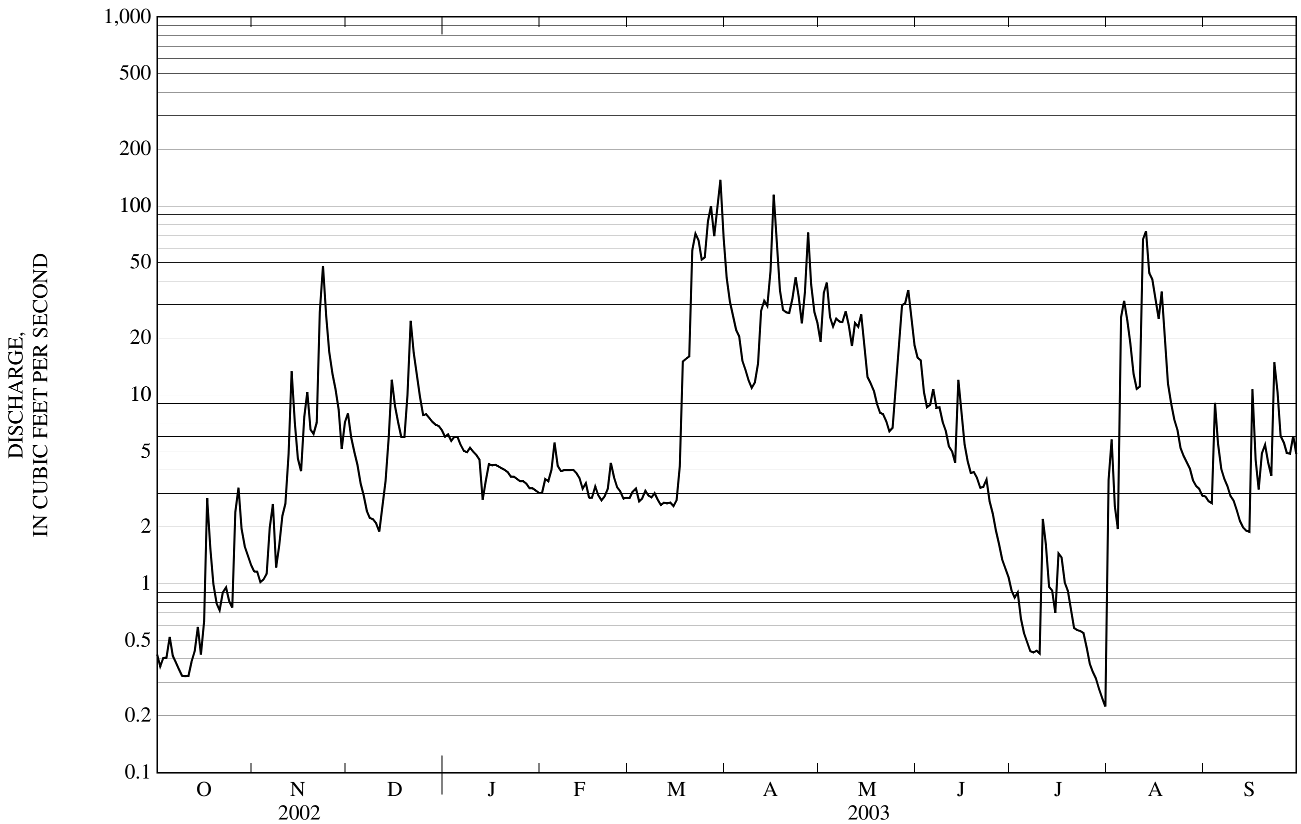
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.27	6.04	6.24	5.43	6.52	22.7	31.9	14.4	14.3	3.99	4.66	6.40
MAX	12.6	8.39	10.6	12.5	12.6	30.9	50.2	20.2	52.0	13.9	17.8	29.1
(WY)	(2000)	(2003)	(2001)	(1999)	(1999)	(2003)	(2001)	(2003)	(1998)	(1998)	(2003)	(1999)
MIN	0.85	0.52	0.87	1.21	3.16	3.84	22.1	7.15	1.88	0.73	0.23	0.45
(WY)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(1999)	(1999)	(1999)	(2003)	(2002)	(2002)

01079602 POORFARM BROOK AT ELLACOYA STATE PARK NEAR GILFORD, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	2,839.33		4,194.12			
ANNUAL MEAN	7.78		11.5		9.97	
HIGHEST ANNUAL MEAN					11.5	2003
LOWEST ANNUAL MEAN					6.60	2002
HIGHEST DAILY MEAN	59	May 14	138	Mar 30	398	Jun 14, 1998
LOWEST DAILY MEAN	0.09	Aug 19	0.22	Jul 31	0.09	Aug 19, 2002
ANNUAL SEVEN-DAY MINIMUM	0.10	Aug 15	0.32	Jul 25	0.10	Aug 15, 2002
MAXIMUM PEAK FLOW			317	Aug 12	730	Jun 14, 1998
MAXIMUM PEAK STAGE			a6.95	Mar 21	b7.33	Sep 16, 1999
INSTANTANEOUS LOW FLOW			0.18	Jul 31	c0.07	Aug 15, 2002
ANNUAL RUNOFF (CFSM)	1.22		1.80		1.56	
ANNUAL RUNOFF (INCHES)	16.56		24.45		21.23	
10 PERCENT EXCEEDS	23		30		27	
50 PERCENT EXCEEDS	2.8		4.4		4.4	
90 PERCENT EXCEEDS	0.26		0.73		0.52	

a Ice jam
b Maximum observed gage height
c Also occurred on August 17-21, 28, 2002
e Estimated



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^2.

PERIOD OF RECORD.--Discharge records: August 1998 to current year. Peak streamflow: Water years 1999 to current year. Water-quality discrete samples: Water years 1998, 1999. Discharge measurements only: Water year 1991.

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

REMARKS.--Records good except those for estimated daily discharges and discharges below 1 ft^3/s, which are poor.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0130	*192	*6.37	No other peak greater than base discharge.			

Minimum discharge, 0.27 ft^3/s, Oct. 3, 4, Sept. 13, 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.37	1.1	5.2	6.0	e3.0	e3.7	42	16	12	1.2	1.2	0.47
2	0.32	1.1	4.1	6.3	e4.1	e4.0	33	26	11	1.0	9.6	0.47
3	0.32	0.95	3.6	5.2	e3.6	4.0	30	36	8.8	0.89	3.7	0.42
4	0.29	0.97	2.8	e5.6	e3.4	e3.8	26	23	7.6	0.80	2.3	4.2
5	0.47	1.2	3.1	6.1	e6.8	4.0	22	18	7.9	0.69	2.4	2.6
6	0.46	2.9	3.5	5.3	e5.5	4.4	20	16	10	0.56	5.2	1.2
7	0.43	3.8	3.2	5.2	e5.0	e3.9	18	15	7.9	0.48	4.5	0.73
8	0.42	2.7	3.2	5.4	4.9	3.9	17	13	8.1	0.44	2.7	0.55
9	0.41	2.1	e2.2	5.1	4.5	4.0	16	15	7.6	0.42	1.9	0.44
10	0.42	2.2	e2.7	4.9	4.3	e3.6	16	13	7.1	0.47	2.6	0.36
11	0.43	2.6	e2.8	e4.8	4.2	e3.7	19	11	5.6	1.9	3.4	0.33
12	0.49	4.8	4.2	e4.7	e4.0	3.5	26	23	5.6	2.3	7.3	0.30
13	0.63	22	3.7	e4.6	e4.0	3.2	36	20	4.8	1.3	15	0.30
14	1.3	12	6.2	e4.4	e3.9	3.0	34	19	16	0.93	5.9	0.30
15	1.4	7.5	8.8	e4.3	e3.7	3.0	39	16	11	0.71	3.5	0.38
16	1.4	5.6	6.1	e4.3	e3.6	3.2	65	14	7.5	1.2	2.7	5.7
17	2.3	5.7	4.5	e4.2	e3.6	6.3	42	12	6.1	1.8	3.0	3.4
18	2.6	7.5	3.6	e4.2	e3.5	22	28	11	5.4	1.1	3.1	1.5
19	1.9	5.1	3.6	e4.1	e3.4	35	23	9.8	5.1	0.95	2.1	1.2
20	2.0	4.6	9.5	e4.1	e3.4	26	22	8.7	4.5	0.76	1.5	2.0
21	1.8	4.9	e29	e4.0	e3.3	e64	23	8.3	3.9	0.65	1.1	1.5
22	1.6	18	16	e4.0	e3.8	e82	24	8.1	3.7	0.65	0.97	0.91
23	1.5	37	12	e3.9	e5.0	e67	27	7.1	3.7	0.85	0.82	6.3
24	1.6	20	9.2	e3.9	4.7	57	23	7.0	3.1	1.2	0.66	11
25	1.6	12	e7.4	e3.8	3.9	59	19	7.7	2.5	1.1	0.56	4.7
26	2.9	9.7	e7.2	e3.8	e3.7	70	22	13	2.1	0.81	0.54	3.5
27	4.1	8.2	7.0	e3.4	e4.1	97	38	22	1.9	0.60	0.53	3.0
28	2.3	6.8	6.7	e3.2	e3.9	78	27	16	1.7	0.59	0.42	2.9
29	1.7	6.0	6.5	e3.1	---	88	21	15	1.8	0.44	0.37	4.9
30	1.4	5.8	6.0	e2.9	---	139	17	15	1.4	0.38	0.48	3.3
31	1.1	---	6.1	e2.9	---	71	---	11	---	0.33	0.46	---
TOTAL	39.96	224.82	199.7	137.7	114.8	1,020.2	815	465.7	185.4	27.50	90.51	68.86
MEAN	1.29	7.49	6.44	4.44	4.10	32.9	27.2	15.0	6.18	0.89	2.92	2.30
MAX	4.1	37	29	6.3	6.8	139	65	36	16	2.3	15	11
MIN	0.29	0.95	2.2	2.9	3.0	3.0	16	7.0	1.4	0.33	0.37	0.30
CFSM	0.18	1.07	0.92	0.64	0.59	4.71	3.89	2.15	0.88	0.13	0.42	0.33
IN.	0.21	1.20	1.06	0.73	0.61	5.43	4.34	2.48	0.99	0.15	0.48	0.37

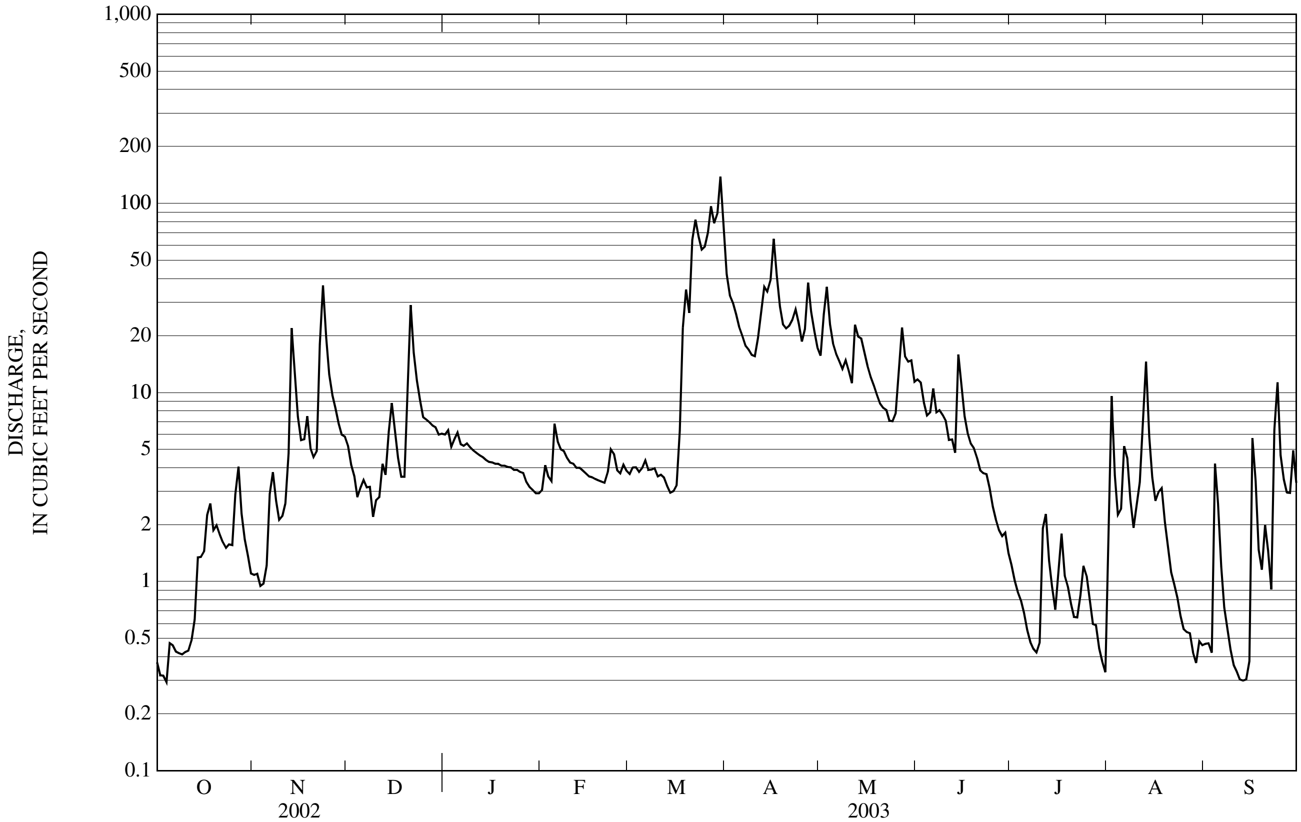
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	5.26	8.02	7.90	6.31	8.05	25.7	31.5	12.7	6.37	2.06	1.93	4.25
MAX	11.7	11.0	12.5	13.8	13.0	34.8	62.6	17.4	10.4	5.48	3.99	18.1
(WY)	(2000)	(2000)	(2001)	(1999)	(1999)	(2000)	(2001)	(2002)	(2001)	(2000)	(1998)	(1999)
MIN	0.74	0.97	3.39	2.33	3.10	8.56	14.6	6.02	1.49	0.89	0.055	0.32
(WY)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(1999)	(1999)	(1999)	(2003)	(2002)	(2002)

01079900 SHANNON BROOK NEAR MOULTONBOROUGH, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1998 - 2003	
ANNUAL TOTAL	2,895.34		3,390.15			
ANNUAL MEAN	7.93		9.29		9.98	
HIGHEST ANNUAL MEAN					12.4	2000
LOWEST ANNUAL MEAN					7.09	2002
HIGHEST DAILY MEAN	78	May 14	139	Mar 30	190	Sep 17, 1999
LOWEST DAILY MEAN	ab0.00	Aug 28	0.29	Oct 4	ab0.00	Aug 28, 2002
ANNUAL SEVEN-DAY MINIMUM	b0.00	Sep 9	0.34	Sep 9	0.00	Sep 9, 2002
MAXIMUM PEAK FLOW			192	Mar 30	333	Sep 17, 1999
MAXIMUM PEAK STAGE			6.37	Mar 30	7.22	Sep 17, 1999
INSTANTANEOUS LOW FLOW			c0.27	Oct 3	bd0.00	Aug 27, 2002
ANNUAL RUNOFF (CFSM)	1.13		1.33		1.43	
ANNUAL RUNOFF (INCHES)	15.41		18.04		19.39	
10 PERCENT EXCEEDS	20		23		24	
50 PERCENT EXCEEDS	4.1		4.0		4.8	
90 PERCENT EXCEEDS	0.07		0.56		0.49	

a Also occurred on September 11-15, 2002
b Discharge <0.01 ft^3/s but may have been >0.00 ft^3/s
c Also occurred on October 4 and September 13, 14
d Also occurred on August 28, 29 and September 10-15, 2002
e Estimated



01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH

LOCATION.--Lat 43° 36'27", long 71° 27'34", Belknap County, Hydrologic Unit 01070002, 600 ft east of Weirs Beach Post Office, 1,600 ft north of US Highway 3 bridge across Paugus Bay at Weirs Beach, 4.7 mi southeast of Meredith, and 5.3 mi north of Laconia Post Office.

DRAINAGE AREA.--363 mi^2, at outlet at Lakeport.

PERIOD OF RECORD.--Gage heights: September 1933 to current year. Prior to November 1937, month end 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. WDR NH-VT-02-1: 1988-2001 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. Prior to November 1937, nonrecording gage at lake outlet at Lakeport at datum 0.55 ft higher. November 24, 1937 to November 7, 1965, water-stage recorder at site 500 ft southeast at datum 0.08 ft lower. November 7, 1965 to September 1987, at water-stage recorder at present site at datum 0.08 ft lower.

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7.21 billion ft^3 between elevations 500.57 ft and 504.24 ft above National Geodetic Vertical Datum of 1929. Stage regulated at outlet and by Wentworth, Merrymeeting, and other lakes. Capacities given herein are computed from gage height at midnight on last day of month.

Capacity table
furnished by State of New Hampshire, Department of Environmental Services

Gage-height, in feet	Contents, in millions of cubic feet
2.0	13,840
3.0	15,810
4.0	17,800
5.0	19,810

EXTREMES FOR PERIOD OF RECORD.--Maximum daily gage height, 5.94 ft (datum then in use), June 4, 1984; minimum daily gage height, 0.63 ft (datum then in use), December 11, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 4.28 ft, May 30, 31, and June 1; minimum daily gage height, 2.22 ft, March 18-20.

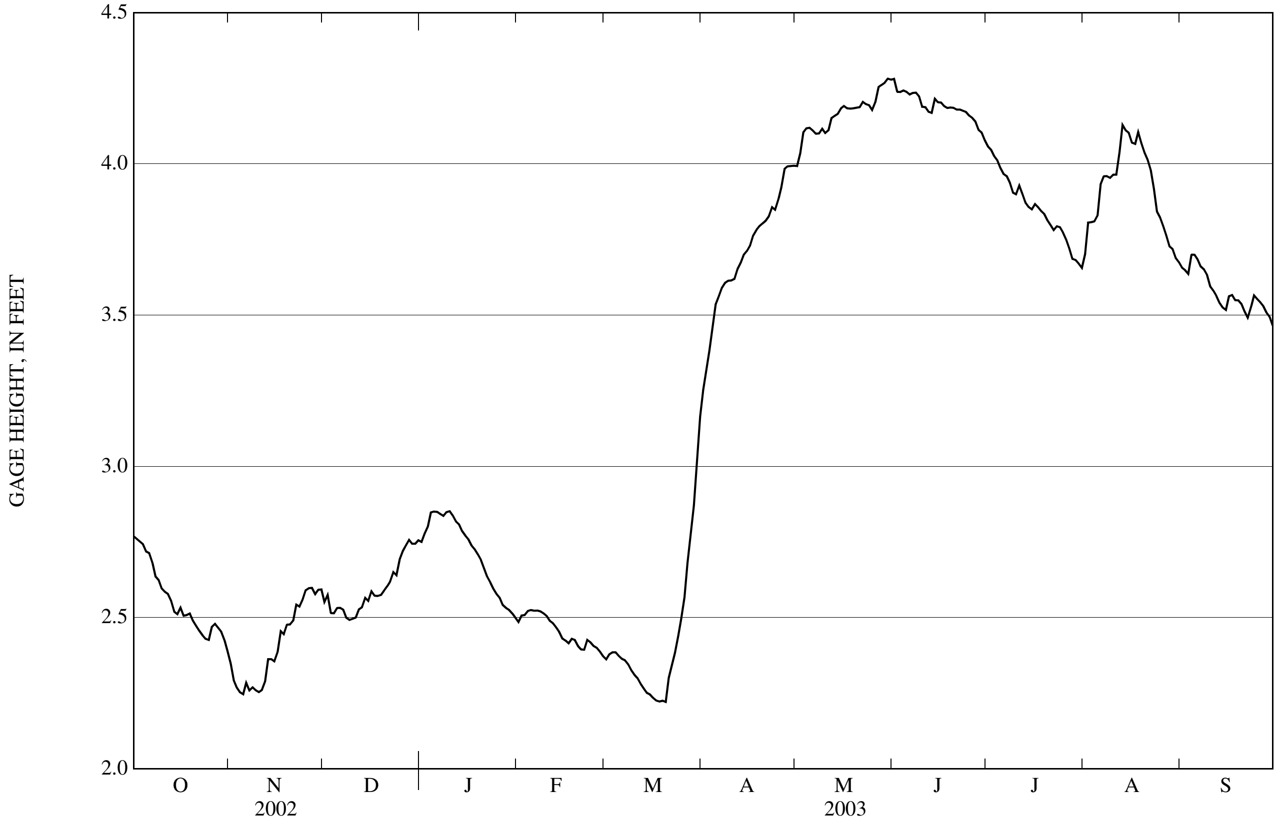
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.77	2.35	2.55	2.75	2.48	2.36	3.25	3.99	4.28	4.06	3.70	3.66
2	2.76	2.29	2.57	e2.78	2.51	2.38	3.32	4.04	4.24	4.05	3.81	3.65
3	2.75	2.27	2.51	2.80	2.51	2.39	3.38	4.10	4.24	4.03	3.81	3.64
4	2.74	2.25	2.51	2.85	2.52	2.39	3.46	4.12	4.24	4.01	3.81	3.70
5	2.72	2.25	2.53	2.85	2.52	2.37	3.54	4.12	4.24	3.99	3.83	3.70
6	2.71	2.28	2.53	2.85	2.52	2.36	3.56	4.11	4.23	3.97	3.93	3.68
7	2.68	2.26	2.53	2.84	2.52	2.36	3.59	4.10	4.24	3.96	3.96	3.66
8	2.64	2.27	2.50	2.84	2.52	2.35	3.61	4.10	4.24	3.94	3.96	3.65
9	2.62	2.26	2.49	2.85	2.51	2.33	3.61	4.12	4.22	3.91	3.95	3.63
10	2.60	2.25	2.50	2.85	2.51	2.31	3.61	4.10	4.19	3.90	3.96	3.60
11	2.59	2.26	2.50	2.84	2.49	2.30	3.62	4.11	4.19	3.93	3.96	3.58
12	2.58	2.29	2.53	2.82	2.48	2.28	3.65	4.15	4.17	3.90	4.04	3.56
13	2.56	2.36	2.53	2.81	2.47	2.26	3.67	4.16	4.17	3.87	4.13	3.54
14	2.52	2.36	2.56	2.79	2.45	2.25	3.70	4.17	4.22	3.86	4.11	3.53
15	2.51	2.35	2.55	2.77	2.43	2.25	3.71	4.18	4.20	3.85	4.10	3.52
16	2.53	2.38	2.59	2.76	2.42	2.23	3.73	4.19	4.20	3.87	4.07	3.56
17	2.51	2.45	2.57	2.74	2.41	2.23	3.76	4.18	4.19	3.86	4.07	3.57
18	2.51	2.44	2.57	2.73	2.43	2.22	3.78	4.18	4.19	3.84	4.11	3.55
19	2.51	2.48	e2.57	2.71	2.43	2.22	3.79	4.18	4.19	3.83	4.07	3.55
20	2.49	2.48	e2.59	2.69	2.41	2.22	3.80	4.19	4.19	3.81	4.04	3.54
21	2.47	2.49	e2.60	2.66	2.39	2.30	3.81	4.19	4.18	3.80	4.01	3.51
22	2.46	2.54	e2.62	2.63	2.39	2.34	3.83	4.21	4.18	3.78	3.98	3.49
23	2.44	2.54	2.65	2.62	2.43	2.38	3.86	4.20	4.18	3.79	3.92	3.52
24	2.43	2.56	2.64	2.59	2.42	2.44	3.85	4.19	4.17	3.79	3.84	3.57
25	2.43	2.59	2.69	2.58	2.41	2.50	3.88	4.18	4.16	3.77	3.82	3.55
26	2.47	2.60	2.72	2.57	2.40	2.57	3.92	4.20	4.15	3.75	3.79	3.54
27	2.48	2.60	2.74	2.54	2.39	2.68	3.98	4.25	4.14	3.72	3.76	3.53
28	2.47	2.58	2.76	2.53	2.37	2.78	3.99	4.26	4.11	3.69	3.73	3.51
29	2.45	2.59	2.74	2.52	---	2.87	3.99	4.27	4.10	3.68	3.72	3.49
30	2.43	2.59	2.74	2.51	---	3.03	3.99	4.28	4.08	3.67	3.69	3.47
31	2.39	---	2.76	2.50	---	3.16	---	4.28	---	3.66	3.68	---
MEAN	2.56	2.41	2.59	2.72	2.46	2.42	3.71	4.16	4.19	3.86	3.91	3.58
MAX	2.77	2.60	2.76	2.85	2.52	3.16	3.99	4.28	4.28	4.06	4.13	3.70
MIN	2.39	2.25	2.49	2.50	2.37	2.22	3.25	3.99	4.08	3.66	3.68	3.47
(†)	14,600	15,020	15,370	14,860	14,600	16,260	17,840	18,400	17,980	17,120	17,160	16,740
(‡)	-295	162	131	-190	-107	620	610	209	-162	-321	15	-162

CAL YR 2002 MEAN 3.02 MAX 4.57 MIN 1.58 (†) -71
WTR YR 2003 MEAN 3.22 MAX 4.28 MIN 2.22 (‡) -68

(†) Capacity in millions of cubic feet at midnight of last day of the month
(‡) Change in contents, equivalent in cubic feet per second
e Estimated

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH—Continued



01080500 LAKE WINNIPESAUKEE OUTLET AT LAKEPORT, NH

LOCATION.--Lat 43° 32'57", long 71° 27'54", Belknap County, Hydrologic Unit 01070002, on right bank, 100 ft upstream from Elm Street bridge across Paugus Bay, 150 ft upstream of dam across Paugus Bay, 0.2 mi northwest of Elm Street and US 3 intersection in Lakeport, and 1.4 mi north of Laconia Post Office.

DRAINAGE AREA.--363 mi^2.

PERIOD OF RECORD.--Discharge records: January 1860 to December 1911 (monthly gage heights only, published in WSP 301), June 1933 to September 1983. October 1987 to current year. Precipitation Records: January 1860 to December 1911 (yearly total only, published in WSP 301). Water-quality discrete samples: Water years 1954, 1955, 1978 to 1980, 1998, 1999. Discharge measurements only: Water years 1984 to 1986.

GAGE.--Acoustic velocity meter and measuring flume. Datum of gage is 500.55 ft above National Geodetic Vertical Datum of 1929. January 1860 to December 1911, nonrecording gage at site 150 ft downstream at same datum. June 1, 1933 to September 30, 1936, nonrecording gage and continuous-recording current meter at present site and datum. October 1, 1936 to May 23, 1944, discharge computed from flow over spillway and through gates and wheels at site 150 ft downstream. May 24, 1944 to September 1983, record obtained from water-stage recorder, deflection meter, and measuring flume.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow completely regulated by Winnipesaukee (station 01080000), Wentworth, Merrymeeting, and other lakes. Daily discharge computed from the acoustic flowmeter.

COOPERATION.--Records were provided by New Hampshire Department of Environmental Services.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 959 ft^3/s, May 4; minimum daily discharge, 43 ft^3/s, Oct. 26.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	259	583	230	467	476	409	381	945	954	262	243	250
2	260	571	231	466	462	477	380	949	758	264	248	247
3	258	570	225	464	462	461	512	948	611	263	250	250
4	255	349	226	e464	462	461	585	959	610	264	252	324
5	254	229	228	e470	402	461	584	958	604	264	253	363
6	255	e230	229	e469	373	459	587	953	614	262	253	363
7	256	e230	229	469	372	465	738	829	620	264	252	361
8	253	e230	228	471	374	465	852	748	618	263	336	350
9	254	e230	228	468	374	462	939	745	620	261	405	359
10	254	e230	229	571	433	461	938	746	619	258	406	362
11	251	e230	250	613	462	462	e943	747	619	253	406	362
12	251	e230	244	610	467	463	e940	743	623	259	525	366
13	251	e230	247	612	460	459	e940	668	474	260	615	365
14	251	234	257	610	460	458	e940	628	408	260	702	363
15	114	233	254	609	459	459	949	507	408	260	760	368
16	47	230	254	609	460	458	823	412	320	253	757	512
17	45	226	251	607	472	461	736	404	259	250	755	573
18	45	227	253	607	464	459	740	404	259	252	755	568
19	45	232	256	608	463	459	739	312	260	251	760	566
20	45	236	253	608	463	459	741	257	259	252	761	573
21	45	231	255	605	462	460	742	251	259	252	759	564
22	44	230	256	604	457	461	736	467	258	252	668	584
23	44	233	259	604	458	462	741	605	257	252	609	596
24	44	233	250	602	461	408	642	601	260	254	603	671
25	44	234	256	605	460	374	767	598	262	254	498	744
26	43	232	250	605	461	375	938	600	265	253	403	741
27	44	230	256	535	459	374	941	603	267	252	306	740
28	44	230	254	464	459	378	947	607	262	249	249	736
29	476	233	254	464	---	376	944	608	267	250	250	742
30	628	231	460	462	---	375	942	818	265	251	250	742
31	572	---	502	459	---	376	---	955	---	250	249	---
TOTAL	5,931	8,077	8,054	16,881	12,497	13,597	23,327	20,575	13,139	7,944	14,538	14,705
MEAN	191	269	260	545	446	439	778	664	438	256	469	490
MAX	628	583	502	613	476	477	949	959	954	264	761	744
MIN	43	226	225	459	372	374	380	251	257	249	243	247

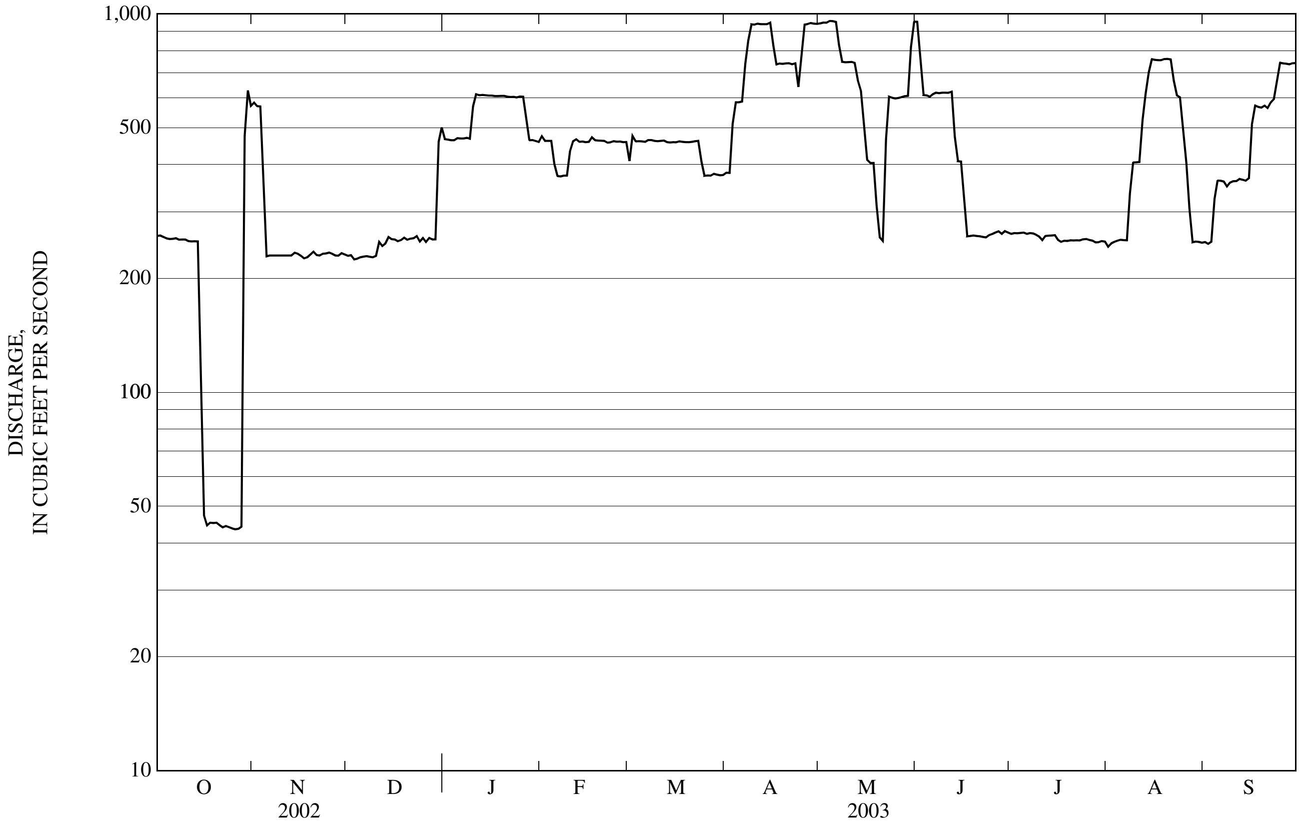
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	327	391	514	689	761	656	710	737	540	393	365	359
MAX	909	993	1,245	1,671	1,672	1,550	2,596	2,074	1,548	1,612	783	868
(WY)	(1978)	(1982)	(1955)	(1955)	(1958)	(1951)	(1936)	(1996)	(1954)	(1998)	(1967)	(1951)
MIN	79.8	149	49.3	40.6	34.2	33.2	92.8	75.2	148	161	185	202
(WY)	(2001)	(1942)	(1942)	(2002)	(2002)	(1942)	(1942)	(1957)	(1957)	(1957)	(1957)	(1957)

01080500 LAKE WINNIPESAUKEE OUTLET AT LAKEPORT, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1933 - 2003	
ANNUAL TOTAL	97,519		159,265			
ANNUAL MEAN	267		436		535	
HIGHEST ANNUAL MEAN					858	1973
LOWEST ANNUAL MEAN					174	1942
HIGHEST DAILY MEAN	a1,470	May 19	959	May 4	2,890	Mar 31, 1936
LOWEST DAILY MEAN	29	Jan 14	43	Oct 26	b0.00	Sep 29, 1962
ANNUAL SEVEN-DAY MINIMUM	30	Jan 11	44	Oct 22	2.0	Oct 13, 1988
10 PERCENT EXCEEDS	528		745		1,080	
50 PERCENT EXCEEDS	249		408		360	
90 PERCENT EXCEEDS	34		230		225	

a Also occurred May 20-22, 2002
b Dam closed
e Estimated



01081000 WINNIPESAUKEE RIVER AT TILTON, NH

LOCATION.--Lat 43° 26'30", long 71° 35'17" (revised), Belknap County, Hydrologic Unit 01070002, on right bank, 150 ft upstream of Bridge/School Street bridge, 300 ft south of Town Hall in Tilton, and 0.3 mi upstream from Packer Brook.

DRAINAGE AREA.--471 mi^2.

PERIOD OF RECORD.--Discharge records: January 1937 to current year. Water-quality discrete samples: Water years 1953, 1975 to 1978, 1980 to 1999.

REVISED RECORDS.--WSP 1901: 1960.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft^3/s, Mar. 30, gage height, 5.11 ft; minimum daily discharge, 55 ft^3/s, Oct. 31 and Nov. 1,

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	55	458	565	511	476	1,320	1,130	1,040	244	236	245
2	233	64	452	577	517	485	1,190	1,020	1,040	241	260	246
3	233	66	370	574	531	484	1,140	1,350	939	240	253	248
4	234	90	e241	587	566	e484	1,150	1,340	797	239	256	286
5	237	185	248	578	570	481	1,120	1,340	781	239	280	287
6	235	203	252	587	568	478	1,100	1,460	781	239	434	281
7	234	199	251	605	547	e480	1,080	1,380	777	244	639	275
8	233	205	249	700	565	477	1,050	1,180	775	237	715	263
9	231	205	e252	724	562	476	1,130	1,170	719	237	692	264
10	232	203	e249	720	540	477	1,140	1,160	603	235	686	261
11	233	206	246	714	488	476	1,180	1,130	608	252	643	262
12	235	216	256	704	482	476	1,250	1,160	600	249	603	331
13	233	249	256	709	e482	476	1,330	1,140	500	243	801	480
14	234	251	277	707	e480	476	1,280	961	399	238	925	498
15	346	244	304	707	e480	476	1,240	869	386	229	840	497
16	622	248	313	636	e480	475	1,250	608	379	222	811	585
17	637	270	297	562	478	481	1,230	413	366	219	807	677
18	532	280	284	e557	480	497	1,190	390	359	218	904	675
19	490	265	280	e557	478	512	1,170	386	357	217	1,020	678
20	406	243	297	e552	477	521	1,150	381	353	214	968	683
21	336	247	328	e552	478	670	1,140	419	349	212	933	676
22	247	287	327	e533	484	912	1,140	598	349	213	773	671
23	98	338	320	e533	493	982	1,150	767	349	215	858	715
24	66	322	323	e527	493	1,000	1,020	786	343	218	838	762
25	59	295	321	e515	491	1,020	800	807	314	219	648	737
26	73	280	e325	515	e494	1,110	1,130	840	250	216	346	712
27	81	329	319	498	485	1,360	1,250	899	240	215	284	707
28	74	458	313	e509	482	1,430	1,220	865	241	213	266	712
29	65	465	311	515	---	1,380	1,170	860	243	213	243	768
30	59	463	389	515	---	1,500	1,140	908	245	214	248	807
31	55	---	548	512	---	1,490	---	1,020	---	214	246	---
TOTAL	7,516	7,431	9,656	18,346	14,182	22,518	34,850	28,737	15,482	7,058	18,456	15,289
MEAN	242	248	311	592	506	726	1,162	927	516	228	595	510
MAX	637	465	548	724	570	1,500	1,330	1,460	1,040	252	1,020	807
MIN	55	55	241	498	477	475	800	381	240	212	236	245

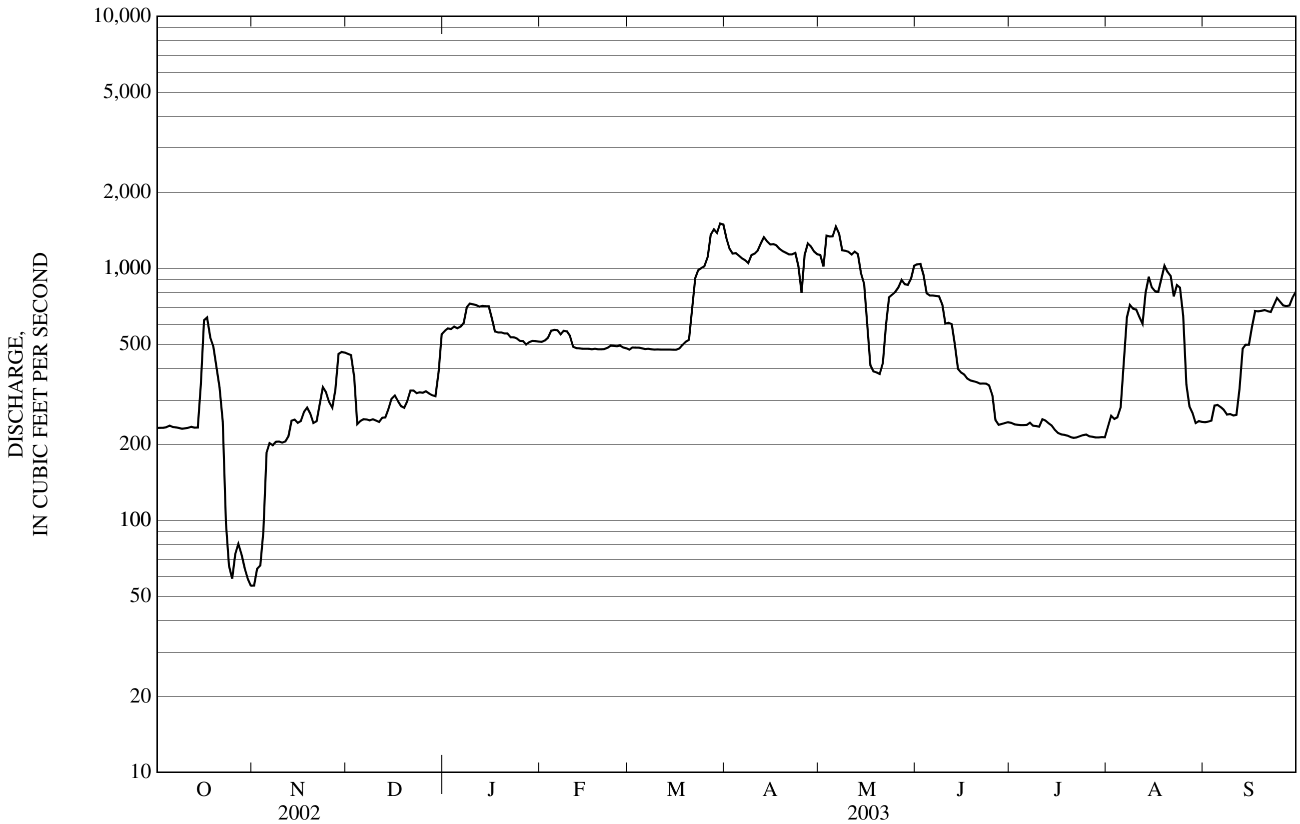
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	416	512	702	834	910	954	1,155	964	709	459	407	401
MAX	1,257	1,304	2,209	1,855	1,889	2,043	2,745	2,605	2,821	1,922	897	954
(WY)	(1978)	(1976)	(1984)	(1952)	(1958)	(1983)	(1953)	(1954)	(1984)	(1998)	(1986)	(1938)
MIN	201	205	136	90.5	89.8	337	376	217	201	179	181	182
(WY)	(2002)	(2002)	(1942)	(2002)	(2002)	(2002)	(2002)	(1957)	(1957)	(1957)	(1957)	(1957)

01081000 WINNIPESAUKEE RIVER AT TILTON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1937 - 2003	
ANNUAL TOTAL	124,790		199,521			
ANNUAL MEAN	342		547		698	
HIGHEST ANNUAL MEAN					1,229	1984
LOWEST ANNUAL MEAN					304	1965
HIGHEST DAILY MEAN	1,770	May 19	1,500	Mar 30	4,480	May 31, 1984
LOWEST DAILY MEAN	a55	Oct 31	a55	Oct 31	b48	Aug 31, 1941
ANNUAL SEVEN-DAY MINIMUM	63	Oct 28	63	Oct 28	52	Oct 26, 2000
MAXIMUM PEAK FLOW			1,580	Mar 30	4,580	May 31, 1984
MAXIMUM PEAK STAGE			5.11	Mar 30	8.68	May 31, 1984
10 PERCENT EXCEEDS	722		1,140		1,410	
50 PERCENT EXCEEDS	242		480		525	
90 PERCENT EXCEEDS	78		221		260	

a Also occurred on November 1
b Also occurred on November 9, 2000
e Estimated



01081500 MERRIMACK RIVER AT FRANKLIN JUNCTION, NH

LOCATION.--Lat 43° 25'22", long 71° 39'12", Merrimack County, Hydrologic Unit 01070002, on right bank at Franklin Junction, 1 mi downstream from confluence of Pemigewasset and Winnipesaukee Rivers, 1.5 mi south of Post Office in Franklin, and 3.5 mi southwest of southwest of Town Hall in Tilton.

DRAINAGE AREA.--1,507 mi^2.

PERIOD OF RECORD.--Discharge: August 1903 to December 1903, April 1904 to September 1904, November 1904, April 1905 to September 1978, October 2001 to current year. Partial-record station: October 1978 to September 2001. Peak streamflow: Water years 1904 to 1978, 1983 to current year. Miscellaneous discharge measurements only: Water years 1979 to 1984, 1990 to 2001. Water-quality records: Water years 1954-55.

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

GAGE.--Water-stage recorder. Datum of gage is 250.4 ft above National Geodetic Vertical Datum of 1929, unadjusted. Prior to September 13, 1923, nonrecording gage at bridge 350 ft downstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by power plants, by Franklin Falls Reservoir (4 mi upstream) since 1942, and by Squam, Little Squam, Newfound, Winnipesaukee, Winnisquam, Wentworth, Merrymeeting, and other lakes and reservoirs in the Merrimack River basin.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 83,000 ft^3/s, March 19, 1936, gage height 36.4 ft, from floodmarks, from rating curve extended above 30,000 ft^3/s on basis of slope-area measurement and computation of flow over dam at gage height 29.5 ft and velocity-area study; minimum daily, 150 ft^3/s, October 4, 1903. Maximum discharge since construction of Franklin Falls Reservoir in 1942, 22,400 ft^3/s, April 4, 1951, gage height 16.34 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,800 ft^3/s, Mar. 31, gage height, 12.47 ft; minimum daily discharge, 490 ft^3/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	640	665	1,820	1,360	e990	988	10,500	5,360	3,730	662	863	738
2	636	710	1,400	1,800	e1,030	1,000	7,520	4,720	2,970	716	936	740
3	511	719	e1,020	1,590	e1,090	e1,050	5,880	7,290	3,220	667	1,540	729
4	490	600	1,080	1,430	e1,110	e1,080	5,250	7,840	2,460	692	1,300	1,380
5	506	674	883	e1,420	e1,080	1,050	4,510	6,100	2,300	678	1,680	2,950
6	504	830	1,080	1,690	e1,080	e980	4,330	5,290	2,690	651	2,440	1,840
7	627	780	1,140	1,580	1,070	e945	3,930	5,140	3,320	660	3,770	1,180
8	652	740	1,100	1,370	e1,130	932	3,440	4,430	2,870	610	3,520	1,170
9	654	736	e1,380	1,560	e1,100	934	3,470	4,250	2,280	588	2,880	929
10	561	737	e1,000	1,580	e1,100	937	3,380	4,200	2,150	577	5,180	733
11	523	1,230	e880	e1,380	1,010	e960	3,510	3,960	2,000	657	12,500	708
12	516	3,090	989	e1,430	e995	1,040	4,150	4,770	1,930	714	8,270	914
13	512	3,420	1,090	e1,320	e945	980	5,420	6,480	1,750	789	6,410	1,020
14	513	4,040	1,340	e1,190	e930	e980	6,180	6,010	1,890	693	5,580	1,100
15	779	2,650	1,300	e1,260	e905	987	5,880	5,980	2,560	666	4,200	995
16	1,370	1,970	1,630	e1,180	e860	982	7,380	4,680	2,180	644	3,230	1,820
17	1,080	1,740	1,280	e1,160	e945	1,150	8,900	3,440	1,690	627	3,050	1,880
18	1,900	2,100	1,220	e1,080	e985	1,230	7,170	3,130	1,470	606	2,750	1,900
19	1,360	2,500	978	e1,070	e945	1,420	5,530	2,890	1,480	609	2,590	1,470
20	1,110	2,090	1,310	e1,100	e960	2,070	4,900	2,500	1,400	790	2,610	1,430
21	1,190	1,800	1,660	e1,050	e960	2,860	5,160	2,140	1,150	695	2,140	2,140
22	1,080	1,590	3,050	e990	e950	4,560	5,630	2,280	1,010	627	1,960	2,380
23	921	3,410	2,180	e980	e970	6,640	5,750	2,690	1,170	1,220	1,620	2,170
24	574	4,530	1,840	e1,000	908	6,440	5,630	2,560	1,150	1,360	1,600	4,890
25	678	3,290	1,360	e1,000	e1,120	6,390	4,930	2,270	1,090	1,550	1,510	5,720
26	650	2,140	1,430	e1,000	e960	7,060	5,040	2,960	1,020	1,900	1,010	2,890
27	948	2,180	e1,450	e980	e1,010	8,540	6,540	4,180	850	1,130	988	2,790
28	1,450	2,010	e1,430	e990	e985	8,950	7,450	4,320	850	762	814	2,560
29	979	1,630	1,400	e910	---	8,550	6,520	4,040	781	912	753	3,070
30	957	1,820	1,360	e920	---	11,800	6,230	3,930	744	850	715	4,160
31	779	---	1,550	e970	---	13,800	---	3,930	---	777	736	---
TOTAL	25,650	56,421	42,630	38,340	28,123	107,285	170,110	133,760	56,155	25,079	89,145	58,396
MEAN	827	1,881	1,375	1,237	1,004	3,461	5,670	4,315	1,872	809	2,876	1,947
MAX	1,900	4,530	3,050	1,800	1,130	13,800	10,500	7,840	3,730	1,900	12,500	5,720
MIN	490	600	880	910	860	932	3,380	2,140	744	577	715	708
CFSM	0.55	1.25	0.91	0.82	0.67	2.30	3.76	2.86	1.24	0.54	1.91	1.29
IN.	0.63	1.39	1.05	0.95	0.69	2.65	4.20	3.30	1.39	0.62	2.20	1.44

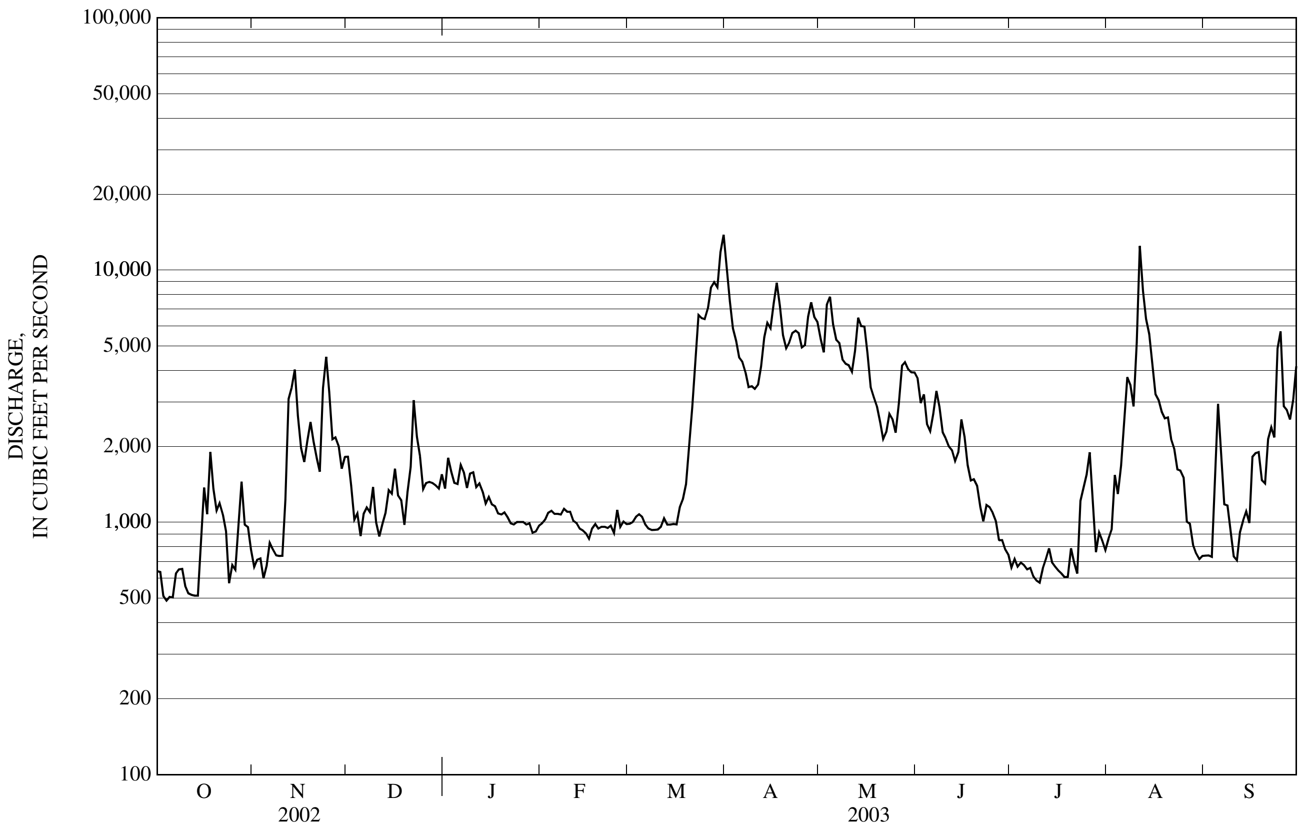
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1978, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1,776	2,357	2,371	2,101	2,053	3,459	7,065	4,994	2,530	1,570	1,319	1,450
MAX	5,919	7,416	7,176	5,085	4,834	15,650	12,960	9,898	7,709	7,938	3,133	6,810
(WY)	(1978)	(1928)	(1974)	(1978)	(1970)	(1936)	(1969)	(1937)	(1922)	(1973)	(1915)	(1938)
MIN	545	806	759	637	754	921	3,255	1,665	947	713	517	523
(WY)	(1962)	(1953)	(1948)	(2002)	(1940)	(1940)	(1957)	(1941)	(1964)	(1953)	(1965)	(2002)

01081500 MERRIMACK RIVER AT FRANKLIN JUNCTION, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903 - 78, 2002 - 03	
ANNUAL TOTAL	688,096		831,094			
ANNUAL MEAN	1,885		2,277		2,753	
HIGHEST ANNUAL MEAN					4,184	1973
LOWEST ANNUAL MEAN					1,381	1965
HIGHEST DAILY MEAN	15,900	Apr 16	13,800	Mar 31	73,700	Mar 19, 1936
LOWEST DAILY MEAN	401	Sep 13	490	Oct 4	150	Oct 4, 1903
ANNUAL SEVEN-DAY MINIMUM	409	Sep 9	559	Oct 1	406	Oct 8, 1964
MAXIMUM PEAK FLOW			14,800	Mar 31	a83,000	Mar 19, 1936
MAXIMUM PEAK STAGE			12.47	Mar 31	b36.40	Mar 19, 1936
ANNUAL RUNOFF (CFSM)	1.25		1.51		1.83	
ANNUAL RUNOFF (INCHES)	16.99		20.52		24.82	
10 PERCENT EXCEEDS	4,090		5,460		5,820	
50 PERCENT EXCEEDS	1,110		1,360		1,780	
90 PERCENT EXCEEDS	501		693		867	

a From rating curve extended above 30,000 ft^3/s as explained above
b From floodmarks
e Estimated



01082000 CONTOOCOOK RIVER AT PETERBOROUGH, NH

LOCATION.--Lat 42° 51'45", long 71° 57'35", Hillsborough County, Hydrologic Unit 01070003, on left bank, 1,200 ft downstream from mill dam, 0.3 mi northwest of Noone, 1.2 mi south of Town Hall in Peterborough, and 1.3 mi upstream from Nubanusit Brook.

DRAINAGE AREA.--68.1 mi^2.

PERIOD OF RECORD.--Discharge records: July 1945 to September 1977, October 2001 to current year. Partial-record station: October 1978 to September 2001. Peak streamflow: Water years 1938, 1946 to current. Water-quality discrete samples: Water years 1974 to 1977, 1985 to 1999. Miscellaneous discharge measurements only: Waters years 1978, 1980 to 1986, 1989 to 2001.

GAGE.--Water-stage recorder. Elevation of gage is 720 ft (revised) above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated discharges, which are poor. Flow slightly regulated by mill and reservoirs upstream; regulation greater prior to 1965.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,860 ft^3/s, April 6, 1987, gage height 6.62 ft; maximum gage height, 6.82 ft, from peak-stage indicator, about January 29, 1976 (ice jam); minimum daily discharge, 0.8 ft^3/s, September 15, 16, 1953.

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1400	905	3.93	Mar 30	unknown	*1,350	*4.64
Mar 27	0245	1,150	4.32				

Minimum daily discharge, 5.2 ft^3/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	26	79	e51	27	e80	652	153	318	31	29	17
2	9.8	23	58	e95	e65	e85	493	159	346	29	78	33
3	9.4	17	60	e125	e67	e120	481	281	260	27	52	17
4	8.8	16	e62	e115	e52	e125	450	242	199	24	83	24
5	9.7	19	e47	e110	e73	e110	382	198	201	22	99	29
6	9.3	32	e48	e105	e72	e100	326	175	184	20	168	27
7	9.1	43	43	e105	e70	e95	275	157	163	18	122	24
8	8.9	40	e45	e100	e65	e95	242	157	176	18	249	22
9	8.6	37	e42	86	e55	e88	216	155	157	17	188	19
10	8.5	34	e41	e76	e60	e85	204	140	139	16	228	17
11	5.2	36	e40	e84	51	e80	241	127	120	16	192	16
12	20	48	e31	e78	63	e75	488	178	110	18	184	16
13	24	106	e30	e76	55	69	575	218	127	15	228	14
14	22	143	117	e73	51	e67	481	194	155	14	181	15
15	20	107	227	e71	46	e66	422	167	e165	14	143	16
16	24	76	182	e65	24	70	446	145	e130	16	108	25
17	51	81	e135	e61	29	107	383	129	103	19	98	23
18	45	104	e135	e52	57	e160	296	e115	60	18	89	20
19	33	90	e120	e64	57	e265	244	e107	93	17	55	21
20	35	88	e120	e48	50	e300	217	e100	e73	15	74	25
21	28	100	e290	e57	54	e470	197	e92	e68	21	63	23
22	21	160	255	e40	e44	e710	205	76	e70	16	30	21
23	17	233	206	e57	e88	856	252	91	108	19	43	59
24	20	186	173	e42	e108	748	212	67	86	28	36	107
25	20	155	142	e37	e113	771	184	113	68	32	43	85
26	28	133	144	e37	e106	851	183	194	57	27	20	94
27	44	119	e155	e56	e96	1,040	299	363	59	24	25	97
28	40	97	e135	e49	e86	e815	258	316	38	21	23	86
29	34	91	e100	e48	---	e750	207	375	40	19	20	145
30	26	84	e88	e47	---	e1,140	175	319	35	17	19	110
31	25	---	81	e46	---	e940	---	250	---	15	18	---
TOTAL	674.3	2,524	3,431	2,156	1,784	11,333	9,686	5,553	3,908	623	2,988	1,247
MEAN	21.8	84.1	111	69.5	63.7	366	323	179	130	20.1	96.4	41.6
MAX	51	233	290	125	113	1,140	652	375	346	32	249	145
MIN	5.2	16	30	37	24	66	175	67	35	14	18	14
CFSM	0.32	1.24	1.63	1.02	0.94	5.37	4.74	2.63	1.91	0.30	1.42	0.61
IN.	0.37	1.38	1.87	1.18	0.97	6.19	5.29	3.03	2.13	0.34	1.63	0.68

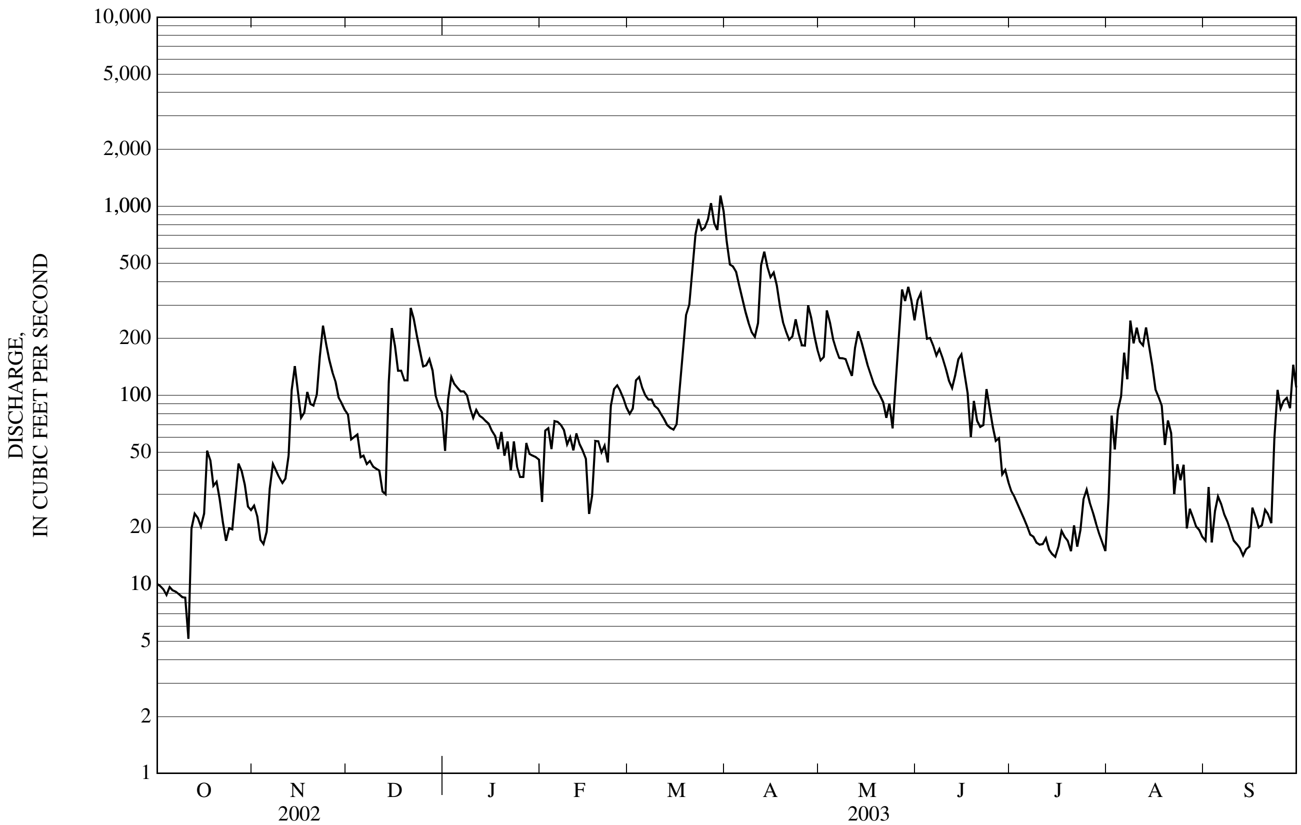
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1977, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	51.9	97.4	116	106	112	202	331	164	93.4	43.2	37.5	41.3
MAX	266	317	335	306	334	419	601	294	215	120	127	203
(WY)	(1956)	(1956)	(1974)	(1956)	(1970)	(1953)	(1960)	(1967)	(1948)	(1973)	(1969)	(1954)
MIN	9.79	13.5	29.4	24.1	29.6	45.1	139	50.7	18.1	13.0	7.73	7.65
(WY)	(1964)	(1965)	(1965)	(1977)	(1965)	(1965)	(1965)	(1965)	(1964)	(1966)	(1957)	(2002)

01082000 CONTOOCOOK RIVER AT PETERBOROUGH, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 77, 2002 - 03	
ANNUAL TOTAL	35,826.9		45,907.3			
ANNUAL MEAN	98.2		126		116	
HIGHEST ANNUAL MEAN					184	1960
LOWEST ANNUAL MEAN					34.1	1965
HIGHEST DAILY MEAN	604	May 14	e1,140	Mar 30	1,670	Mar 14, 1977
LOWEST DAILY MEAN	4.7	Sep 14	5.2	Oct 11	a0.80	Sep 15, 1953
ANNUAL SEVEN-DAY MINIMUM	5.7	Sep 9	8.5	Oct 5	4.7	Sep 20, 1953
MAXIMUM PEAK FLOW			1,350	Mar 30	2,860	Apr 6, 1987
MAXIMUM PEAK STAGE			b4.64	Mar 30	bc6.82	Jan 29, 1976
ANNUAL RUNOFF (CFSM)	1.44		1.85		1.70	
ANNUAL RUNOFF (INCHES)	19.57		25.08		23.14	
10 PERCENT EXCEEDS	274		262		274	
50 PERCENT EXCEEDS	58		76		68	
90 PERCENT EXCEEDS	8.8		18		15	

a Also occurred September 16, 1953
b From peak-stage indicator
c About. Ice jam
e Estimated



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

LOCATION.--Lat 43° 11'34", long 71° 44'52", Merrimack County, Hydrologic Unit 01070003, on right bank, 400 ft downstream from covered bridge at West Hopkinton, 0.2 mi downstream from Hopkinton Dam, 2.6 mi southwest of State Highways 103 and 127 intersection in Contoocook, 3.6 mi west of State Highway 103 and US 202 intersection in Hopkinton, and 6.0 mi upstream from Warner River.

DRAINAGE AREA.--427 mi^2.

PERIOD OF RECORD.--Discharge records: August 1903 to April 1907 (monthly discharges only, no winter records, published as "at West Hopkinton"), August 1963 to September 1989, October 2001 to current year. Partial-record station: October 1989 to September 30, 2001. Peak streamflow: Water years 1964 to current year. Miscellaneous discharge measurements only: Water years 1990-2001. Water-quality discrete samples: Water years 1965, 1967 to 1970, 1975 to 1999.

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

REMARKS.--Records fair. Flow regulated by power plants and by Nubanusit Lake, Edward Macdowell Reservoir since 1950, Highland Lake, Lake Franklin Pierce, Hopkinton Lake since 1962 (Reservoirs in Merrimack River basin), and other reservoirs upstream. Diversion from Hopkinton Lake to Everett Lake on Piscataquog River during periods of high flow in March 1968, April 1969, March 1977, March 1979, May-June 1984, April 1987, and March-April 2003.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,530 ft^3/s, April 8, 1987, gage height, 10.89 ft; minimum daily discharge, 15 ft^3/s, July 22, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,240 ft^3/s, Apr. 2, gage height, 9.45 ft; minimum daily discharge, 37 ft^3/s, July 31.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	507	630	573	300	381	3,700	1,180	1,530	183	65	66
2	132	340	578	596	305	340	5,430	1,080	1,650	172	108	72
3	83	126	522	613	321	372	6,050	1,390	1,640	149	146	83
4	83	102	436	609	332	524	5,010	1,550	1,250	112	227	74
5	82	101	428	629	342	477	3,900	1,400	1,010	106	248	267
6	82	160	e410	658	273	393	3,710	1,230	933	68	374	271
7	80	317	e400	629	277	434	4,010	1,080	859	108	495	233
8	64	457	e390	598	272	354	2,910	916	855	67	550	190
9	56	255	e370	582	358	382	2,190	908	889	70	506	162
10	57	261	e340	580	300	337	1,580	849	814	86	467	77
11	59	253	e330	514	394	378	1,690	718	712	90	672	67
12	61	255	e320	442	353	364	1,820	736	633	91	730	84
13	64	372	310	426	339	362	2,480	911	589	107	505	79
14	111	688	424	434	285	351	2,980	941	663	84	562	64
15	152	798	722	391	257	340	2,870	857	745	72	621	65
16	150	790	1,000	375	235	293	2,950	852	759	78	522	82
17	399	616	1,060	361	254	314	3,000	752	553	154	436	92
18	387	660	897	383	267	418	2,670	642	465	216	388	88
19	180	934	761	348	229	643	2,210	594	442	222	499	88
20	179	887	769	338	272	866	1,870	640	427	216	533	154
21	176	721	880	351	228	1,310	1,600	579	351	159	298	128
22	172	625	1,010	329	241	1,940	1,440	531	333	120	300	126
23	171	1,080	1,090	368	276	2,280	1,460	480	341	83	300	159
24	238	1,320	1,050	346	332	2,780	1,480	457	385	81	267	412
25	200	1,430	944	339	351	3,420	1,290	535	371	77	212	586
26	255	1,380	785	280	391	3,740	1,220	645	338	77	208	459
27	213	1,150	775	288	444	3,520	1,590	1,430	275	73	158	424
28	202	926	742	e310	386	3,470	1,820	1,660	255	70	195	427
29	436	770	706	308	---	2,220	1,690	1,630	222	43	158	510
30	512	686	654	284	---	1,060	1,400	1,730	195	66	72	558
31	492	---	614	286	---	1,490	---	1,620	---	37	68	---
TOTAL	5,693	18,967	20,347	13,568	8,614	35,553	78,020	30,523	20,484	3,337	10,890	6,147
MEAN	184	632	656	438	308	1,147	2,601	985	683	108	351	205
MAX	512	1,430	1,090	658	444	3,740	6,050	1,730	1,650	222	730	586
MIN	56	101	310	280	228	293	1,220	457	195	37	65	64

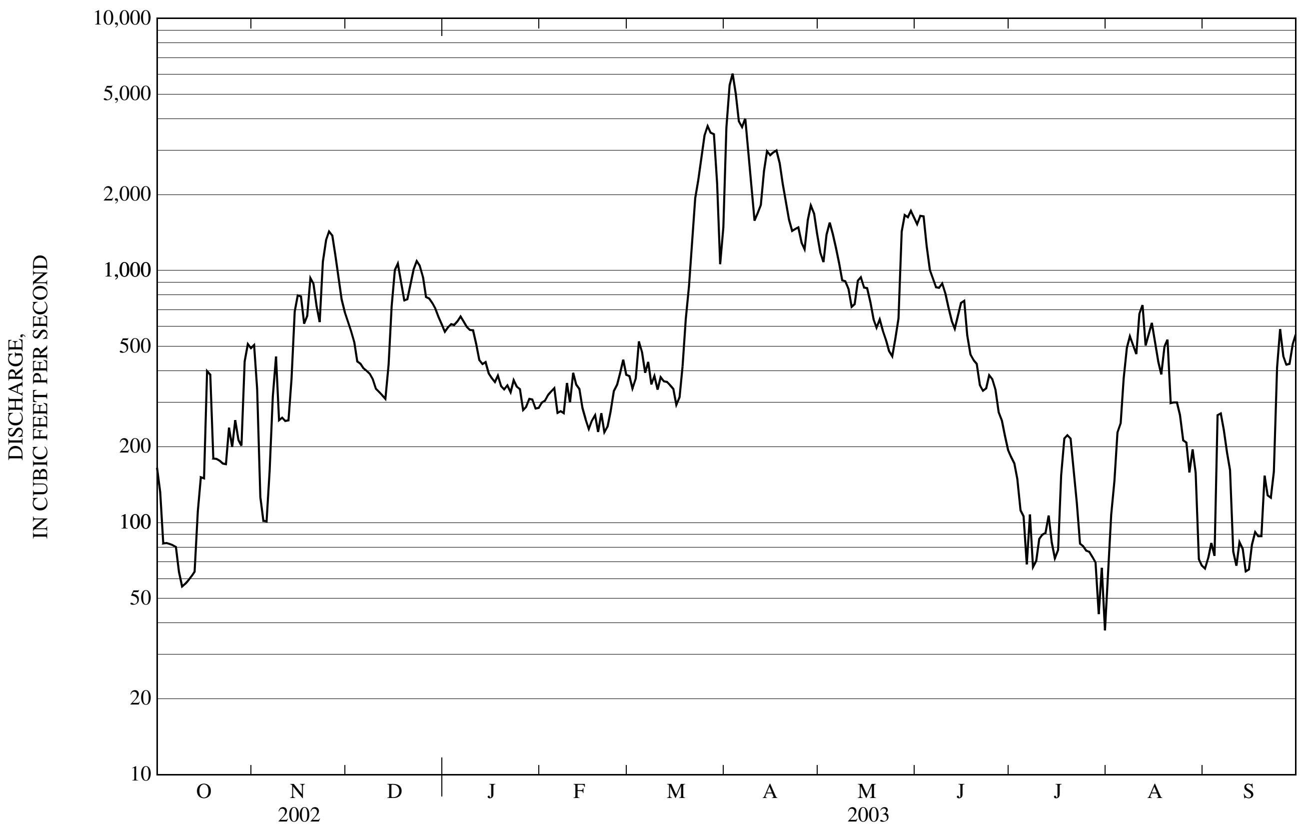
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1989, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	346	581	737	559	695	1,258	1,965	993	562	273	217	201
MAX	1,415	1,322	1,856	1,555	2,016	2,724	3,596	1,839	1,468	1,036	798	573
(WY)	(1976)	(1976)	(1974)	(1978)	(1984)	(1979)	(1987)	(1972)	(1984)	(1973)	(1986)	(1975)
MIN	61.0	88.8	175	110	163	363	521	330	105	61.4	43.0	48.4
(WY)	(1965)	(1965)	(1965)	(1981)	(1977)	(1965)	(1985)	(1985)	(1964)	(1978)	(1983)	(1983)

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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 89, 2002 - 03	
ANNUAL TOTAL	180,230		252,143			
ANNUAL MEAN	494		691		698	
HIGHEST ANNUAL MEAN					1,067	1973
LOWEST ANNUAL MEAN					229	1965
HIGHEST DAILY MEAN	3,070	May 15	6,050	Apr 3	7,500	Apr 9, 1987
LOWEST DAILY MEAN	26	Sep 1	37	Jul 31	15	Jul 22, 1965
ANNUAL SEVEN-DAY MINIMUM	34	Sep 8	62	Jul 26	24	Jul 12, 1965
MAXIMUM PEAK FLOW			6,240	Apr 2	7,530	Apr 8, 1987
MAXIMUM PEAK STAGE			9.45	Apr 2	10.89	Apr 8, 1987
10 PERCENT EXCEEDS	1,060		1,590		1,740	
50 PERCENT EXCEEDS	357		393		412	
90 PERCENT EXCEEDS	45		83		97	

e Estimated



01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH

LOCATION.--Lat 43° 15'33", long 72° 01'35", Merrimack County, Hydrologic Unit 01070003, on left bank, 75 ft downstream from small right-bank tributary, 200 ft upstream from Fairgrounds Road bridge, 3.5 mi west of Bradford, 4.0 mi west of State Highway 103 and 114 intersection near Bradford, and 4.3 mi south of Newbury.

DRAINAGE AREA.--5.75 mi^2.

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

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 935 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those below 1 ft^3/s, which are fair, and those for September 2-30, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2000	233	6.77	Aug 12	0800	*881	*9.19

Minimum discharge, 0.29 ft^3/s, Oct. 7.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.59	2.0	7.7	5.9	3.3	3.2	29	14	28	1.3	4.0	1.3
2	0.54	1.8	6.3	6.8	3.5	3.3	23	22	22	1.2	9.0	e1.7
3	0.46	1.5	5.1	5.9	3.4	e3.3	22	28	13	1.0	4.0	e2.3
4	0.44	1.5	4.6	e6.5	4.0	3.1	20	18	10	0.87	5.4	e6.9
5	0.79	1.6	4.3	6.1	6.1	3.2	17	14	11	0.76	7.1	e5.8
6	0.57	2.9	5.0	5.6	4.7	4.0	15	12	12	0.69	10	e2.7
7	0.45	6.3	4.3	5.6	4.4	3.7	13	12	9.4	0.66	12	e2.0
8	0.48	4.3	4.3	5.8	4.2	3.6	12	13	9.3	0.52	6.5	e1.7
9	0.42	6.3	3.9	5.7	3.9	3.7	11	13	8.3	0.62	4.7	e1.6
10	0.38	12	3.4	5.4	3.8	3.5	14	11	6.9	0.70	51	e1.5
11	0.39	8.7	3.3	5.2	3.7	3.3	22	9.7	5.9	2.6	17	e1.4
12	1.4	9.8	3.8	5.0	3.6	3.3	64	27	5.8	2.0	180	e1.3
13	1.5	31	3.5	4.9	3.4	3.3	60	20	5.4	1.3	41	e1.2
14	1.5	14	8.5	4.7	3.2	3.2	46	17	23	1.0	19	e1.4
15	1.00	9.2	17	4.8	3.1	3.2	79	14	12	0.86	10	e1.8
16	1.9	7.3	10	4.7	3.0	3.4	100	11	7.7	3.1	8.6	6.0
17	8.1	8.6	7.6	4.7	3.1	6.0	49	9.6	6.2	4.0	10	3.6
18	3.0	16	6.3	4.4	3.2	e24	28	8.7	5.3	2.2	35	2.3
19	1.8	9.4	5.7	4.6	3.0	e29	24	7.9	5.1	2.1	14	4.4
20	1.6	9.0	13	4.7	e2.9	e19	25	6.9	4.4	1.3	8.1	8.0
21	1.3	11	26	4.4	e3.1	66	25	7.0	4.0	0.99	5.7	4.3
22	1.1	32	14	4.4	3.5	99	27	7.0	4.8	1.4	4.5	3.0
23	1.2	48	11	4.6	4.1	79	26	6.4	4.8	1.3	3.6	20
24	1.3	19	8.6	4.6	e4.4	75	23	8.7	3.9	1.1	2.7	15
25	1.2	13	7.1	4.3	3.6	82	20	14	3.0	1.2	2.3	6.7
26	3.1	10	7.9	4.0	e3.3	92	38	38	2.5	0.86	2.2	6.2
27	8.6	9.2	6.4	3.6	e3.3	89	67	42	2.0	0.73	1.9	5.2
28	6.5	7.5	6.1	3.4	3.3	72	29	22	1.7	0.68	1.6	18
29	3.9	7.0	5.8	3.3	---	114	21	19	1.4	0.59	1.5	31
30	2.9	7.6	5.2	3.2	---	110	17	15	1.4	0.53	1.5	12
31	2.3	---	5.1	3.2	---	49	---	15	---	0.47	1.4	---
TOTAL	60.71	327.5	230.8	150.0	102.1	1,059.3	966	482.9	240.2	38.63	485.3	180.3
MEAN	1.96	10.9	7.45	4.84	3.65	34.2	32.2	15.6	8.01	1.25	15.7	6.01
MAX	8.6	48	26	6.8	6.1	114	100	42	28	4.0	180	31
MIN	0.38	1.5	3.3	3.2	2.9	3.1	11	6.4	1.4	0.47	1.4	1.2
CFSM	0.34	1.90	1.29	0.84	0.63	5.94	5.60	2.71	1.39	0.22	2.72	1.05
IN.	0.39	2.12	1.49	0.97	0.66	6.85	6.25	3.12	1.55	0.25	3.14	1.17

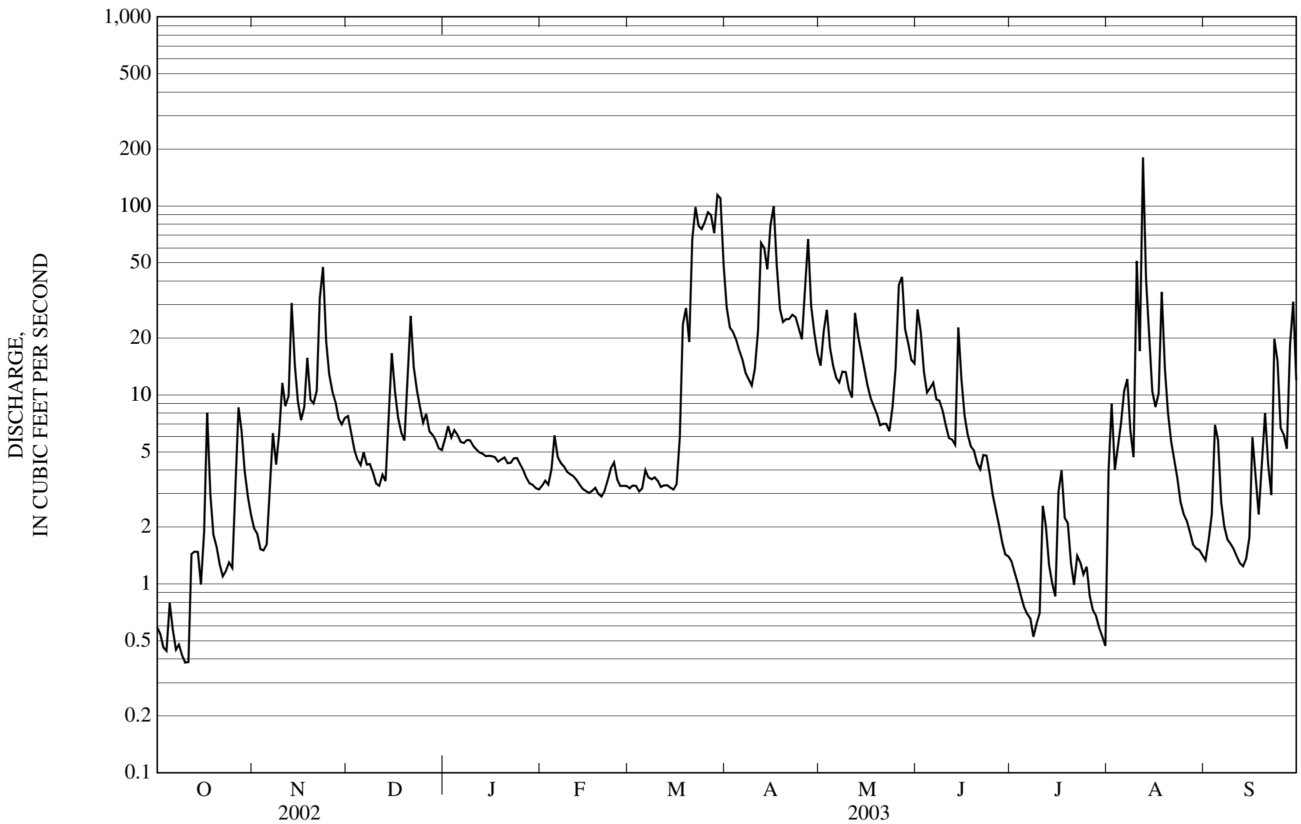
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.47	12.0	11.5	8.52	9.46	22.3	36.4	17.6	7.82	3.13	2.97	2.56
MAX	30.9	29.7	33.4	33.3	45.9	46.9	93.7	41.1	32.9	13.6	26.1	16.2
(WY)	(1976)	(1996)	(1997)	(1978)	(1981)	(1977)	(1969)	(1984)	(1998)	(1996)	(1990)	(1999)
MIN	0.49	0.87	2.64	1.87	0.95	4.57	10.5	5.01	1.04	0.26	0.17	0.17
(WY)	(1964)	(2002)	(2002)	(1977)	(1980)	(2001)	(1995)	(1965)	(1965)	(1965)	(1965)	(1964)

01085800 WEST BRANCH WARNER RIVER NEAR BRADFORD, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	3,093.02		4,323.74			
ANNUAL MEAN	8.47		11.8		11.8	
HIGHEST ANNUAL MEAN					18.6	1996
LOWEST ANNUAL MEAN					4.60	1965
HIGHEST DAILY MEAN	117	Apr 1	180	Aug 12	351	Oct 21, 1996
LOWEST DAILY MEAN	a0.13	Aug 21	0.38	Oct 10	0.07	Aug 7, 1965
ANNUAL SEVEN-DAY MINIMUM	0.16	Aug 16	0.50	Oct 5	0.09	Sep 16, 1964
MAXIMUM PEAK FLOW			b881	Aug 12	b881	Aug 12, 2003
MAXIMUM PEAK STAGE			9.19	Aug 12	9.19	Aug 12, 2003
INSTANTANEOUS LOW FLOW			0.29	Oct 7	c0.06	Sep 20, 1964
ANNUAL RUNOFF (CFSM)	1.47		2.06		2.06	
ANNUAL RUNOFF (INCHES)	20.01		27.97		27.93	
10 PERCENT EXCEEDS	20		27		28	
50 PERCENT EXCEEDS	5.1		5.1		5.0	
90 PERCENT EXCEEDS	0.39		1.3		0.66	

a Also occurred on August 22, 2002
b From rating curve extended above 300 ft^3/s
c About
e Estimated



01086000 WARNER RIVER AT DAVISVILLE, NH

LOCATION.--Lat 43° 15'03", long 71° 43'59", Merrimack County, Hydrologic Unit 01070003, on left bank, 60 ft downstream from bridge on State Highway 127 at Davisville, 2.2 mi northwest of State Highways 103 and 127 intersection in Contoocook, 2.3 mi upstream from mouth, and 4.8 mi southeast of Warner.

DRAINAGE AREA.--146 mi^2.

PERIOD OF RECORD.--Discharge records: October 1939 to September 1978, October 2001 to current year. Partial-record station: October 1998 to September 2001. Peak streamflow: Water years 1938, 1940 to 1978, 1999 to current. Water-quality discrete samples: Water years 1954, 1975 to 1978, 1999. Miscellaneous discharge measurements only: Water years 1991, 1999 to 2001.

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Elevation of gage is 380 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to December 22, 1939, chain gage at bridge 60 ft upstream at same datum.

REMARKS.--Records good except those for estimated discharges, which are fair. Prior to 1948, slight diurnal fluctuation at low flow caused by mill upstream.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	2345	*1,940	*7.59	Aug 13	1030	1,470	7.04

Minimum discharge, 8.7 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	54	191	158	84	100	1,370	434	344	45	28	65
2	13	47	e170	164	89	98	1,070	415	422	37	80	67
3	11	41	e154	162	99	102	906	720	374	33	100	73
4	9.6	40	e146	158	103	97	823	634	299	29	91	117
5	10	41	120	181	123	94	718	512	252	26	128	180
6	10	47	122	183	134	93	642	438	247	23	157	150
7	10	75	111	170	129	89	566	388	228	25	172	118
8	9.7	79	109	165	124	88	509	359	226	21	169	96
9	9.7	75	95	163	117	90	461	359	210	18	171	88
10	9.5	83	85	159	111	87	424	337	189	17	148	81
11	9.6	94	86	138	108	85	468	299	163	21	240	74
12	11	95	94	141	104	83	658	347	150	27	456	67
13	13	195	108	133	99	83	1,010	431	135	27	1,310	63
14	16	231	145	127	95	83	980	406	189	23	862	59
15	18	198	305	118	91	82	935	364	256	21	556	60
16	19	163	335	117	86	82	1,070	320	219	25	391	83
17	45	162	264	122	84	94	1,080	281	184	45	342	113
18	55	230	217	113	83	138	922	249	146	43	615	96
19	46	267	197	109	88	220	759	224	127	40	794	84
20	41	228	208	110	90	e287	642	199	115	35	580	117
21	37	203	301	106	90	386	565	181	100	30	397	123
22	32	235	326	102	92	778	515	177	95	27	293	105
23	35	406	290	98	109	1,080	524	162	99	30	229	119
24	36	453	256	97	132	1,190	504	172	95	40	182	318
25	31	386	216	95	130	1,280	459	236	87	40	148	271
26	36	330	181	94	118	1,370	433	286	74	38	129	207
27	78	289	202	94	110	1,520	821	550	65	36	113	171
28	80	251	207	90	105	1,500	769	542	70	32	98	157
29	72	e212	191	88	---	1,470	614	480	64	29	84	290
30	66	202	168	85	---	1,820	506	406	51	27	79	338
31	62	---	161	83	---	1,790	---	342	---	25	73	---
TOTAL	946.1	5,412	5,761	3,923	2,927	16,359	21,723	11,250	5,275	935	9,215	3,950
MEAN	30.5	180	186	127	105	528	724	363	176	30.2	297	132
MAX	80	453	335	183	134	1,820	1,370	720	422	45	1,310	338
MIN	9.5	40	85	83	83	82	424	162	51	17	28	59
CFSM	0.21	1.24	1.27	0.87	0.72	3.61	4.96	2.49	1.20	0.21	2.04	0.90
IN.	0.24	1.38	1.47	1.00	0.75	4.17	5.53	2.87	1.34	0.24	2.35	1.01

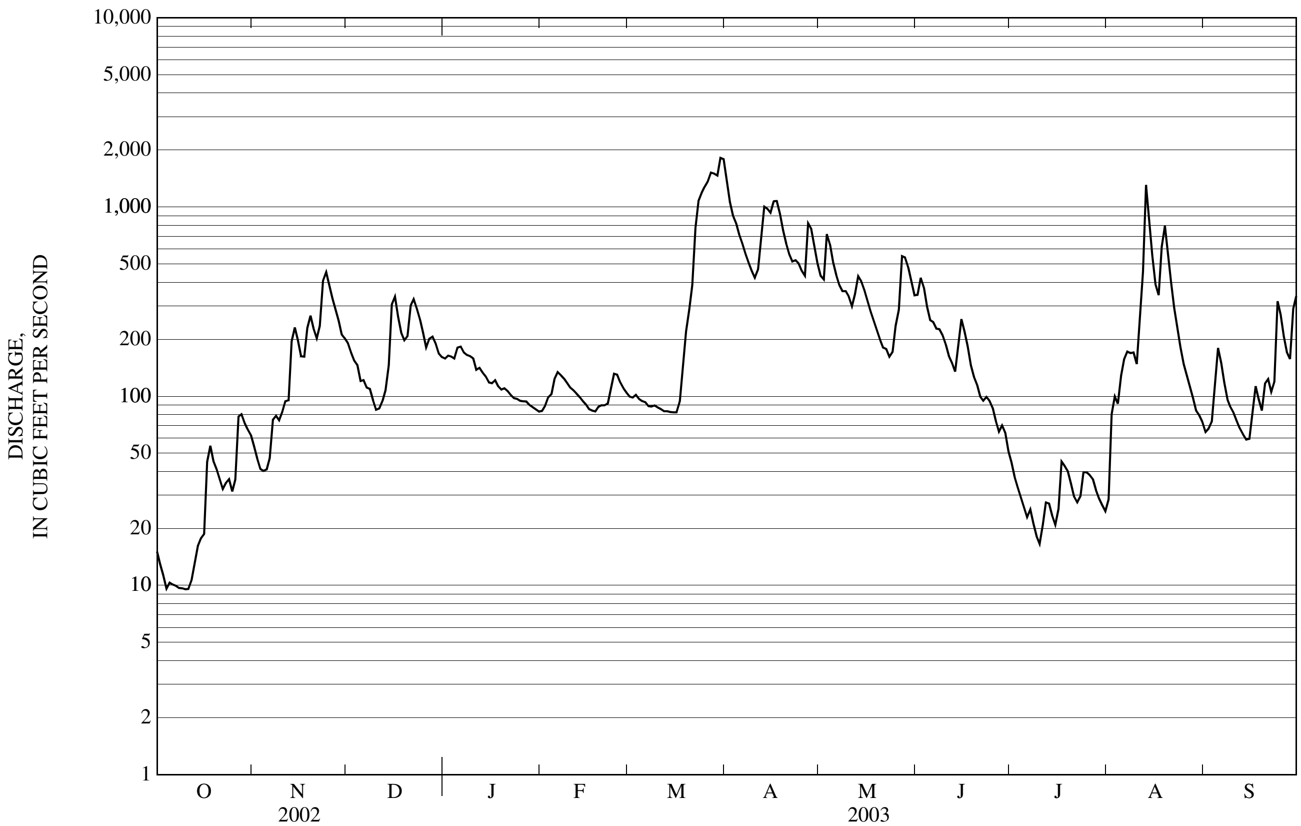
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1978, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	82.4	191	227	185	194	419	806	388	177	65.5	45.7	47.8
MAX	467	580	606	497	587	1,214	1,779	855	468	306	297	302
(WY)	(1978)	(1952)	(1974)	(1978)	(1970)	(1953)	(1969)	(1954)	(1940)	(1973)	(2003)	(1954)
MIN	6.37	19.5	49.0	44.0	40.3	60.1	298	112	30.5	9.80	3.74	6.00
(WY)	(1965)	(2002)	(1965)	(1940)	(1940)	(1940)	(1946)	(1941)	(1964)	(1965)	(1965)	(1965)

01086000 WARNER RIVER AT DAVISVILLE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 78, 2002 - 03	
ANNUAL TOTAL	59,662.6		87,676.1			
ANNUAL MEAN	163		240		235	
HIGHEST ANNUAL MEAN					366	1960
LOWEST ANNUAL MEAN					82.0	1965
HIGHEST DAILY MEAN	1,210	Apr 2	1,820	Mar 30	3,980	Mar 27, 1953
LOWEST DAILY MEAN	4.3	Aug 28	9.5	Oct 10	2.8	Aug 7, 1965
ANNUAL SEVEN-DAY MINIMUM	4.9	Aug 22	9.8	Oct 4	3.3	Aug 14, 1965
MAXIMUM PEAK FLOW			1,940	Mar 30	4,510	Mar 27, 1953
MAXIMUM PEAK STAGE			7.59	Mar 30	9.88	Aug 17, 1965
INSTANTANEOUS LOW FLOW			8.7	Oct 9	a2.6	Aug 17, 1965
ANNUAL RUNOFF (CFSM)	1.12		1.65		1.61	
ANNUAL RUNOFF (INCHES)	15.20		22.34		21.90	
10 PERCENT EXCEEDS	371		565		592	
50 PERCENT EXCEEDS	101		127		117	
90 PERCENT EXCEEDS	7.6		31		18	

a Also occurred on August 18, 1965
e Estimated



01089100 SOUCOOK 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, 550 ft upstream of French's Brook, 770 ft east of New Hampshire Highway 106 and Pembroke Road intersection, 2.9 mi downstream from U.S. Highways 4, 202, and New Hampshire State Highway 9 bridges, 2.9 mi east of the State Capitol Building in Concord, 4.7 mi southwest of Chichester.

DRAINAGE AREA.--81.9 mi^2.

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 265 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Records affected by the annual drawdown event at Shellcamp Pond 21.5 mi upstream.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 27	1500	*1,050	*8.73	Mar 30	2115	1,020	8.64

Minimum discharge, 7.8 ft^3/s, Oct. 9, 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	27	83	86	e44	62	606	174	164	23	17	29
2	12	25	e75	e90	e45	65	451	175	169	21	49	33
3	10	22	e65	e90	e47	e80	405	308	139	20	50	35
4	10	21	e60	e90	e51	e77	391	278	112	18	52	60
5	10	22	55	e95	65	72	358	220	102	18	53	107
6	9.7	30	57	90	e75	71	321	186	102	17	96	74
7	9.3	51	e54	83	77	e65	287	169	94	15	99	57
8	9.0	47	54	80	e70	61	261	164	97	15	76	48
9	8.3	42	e50	e80	66	e63	245	182	94	15	65	40
10	8.4	38	46	e77	61	e62	238	180	90	15	103	35
11	8.5	35	46	e71	59	e58	285	157	79	16	163	31
12	9.6	38	51	70	57	57	489	205	74	18	482	30
13	11	101	55	e65	e54	57	594	237	69	17	540	29
14	11	99	76	e61	e53	e55	459	230	86	15	372	29
15	11	73	169	e58	e52	53	377	210	106	14	242	29
16	12	61	168	e58	51	53	357	176	85	20	182	51
17	35	67	e138	e58	51	64	307	153	67	53	173	71
18	37	96	e117	e56	57	104	266	136	59	41	198	54
19	33	107	e100	e53	53	e152	234	123	56	31	188	50
20	34	88	99	e50	49	e165	203	109	53	26	130	67
21	28	79	162	e48	49	305	183	98	49	22	96	59
22	24	116	162	e47	49	e550	188	101	45	21	78	49
23	21	226	141	e46	67	e680	289	94	47	20	66	65
24	25	211	122	e46	e100	714	263	93	45	19	57	203
25	37	167	e105	e46	e105	743	229	119	40	18	49	134
26	40	143	e98	e46	e90	815	211	168	36	17	46	100
27	66	129	e104	e45	e72	983	334	363	33	15	42	93
28	54	110	e102	e43	68	876	306	293	30	14	37	88
29	43	e95	e100	e42	---	732	242	261	26	13	34	118
30	38	91	e98	e42	---	903	199	222	24	12	31	111
31	34	---	97	e42	---	913	---	172	---	11	30	---
TOTAL	711.8	2,457	2,909	1,954	1,737	9,710	9,578	5,756	2,272	610	3,896	1,979
MEAN	23.0	81.9	93.8	63.0	62.0	313	319	186	75.7	19.7	126	66.0
MAX	66	226	169	95	105	983	606	363	169	53	540	203
MIN	8.3	21	46	42	44	53	183	93	24	11	17	29
CFSM	0.28	1.00	1.15	0.77	0.76	3.82	3.90	2.27	0.92	0.24	1.53	0.81
IN.	0.32	1.12	1.32	0.89	0.79	4.41	4.35	2.61	1.03	0.28	1.77	0.90

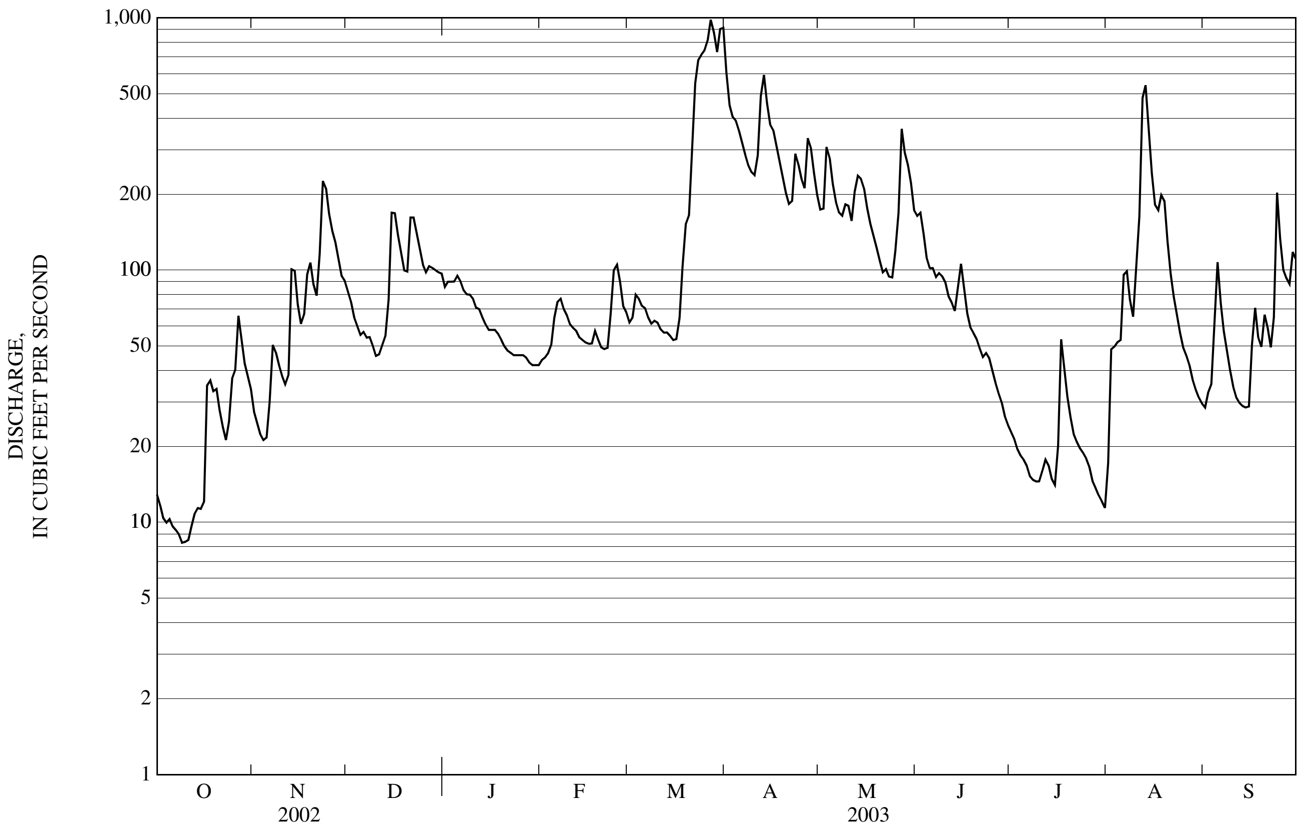
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	72.7	118	126	117	116	228	275	162	99.4	41.2	39.6	37.0
MAX	168	289	368	420	350	417	463	333	441	127	126	140
(WY)	(1992)	(1996)	(1997)	(1996)	(1996)	(1998)	(2001)	(1996)	(1998)	(1998)	(2003)	(1999)
MIN	12.7	12.7	26.5	20.9	34.6	134	120	55.5	16.1	11.6	7.86	8.33
(WY)	(1998)	(2002)	(2002)	(2002)	(1993)	(1992)	(1999)	(1999)	(1999)	(1993)	(2002)	(1995)

01089100 SOUCOOK RIVER AT PEMBROKE ROAD NEAR CONCORD, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	29,264.4		43,569.8			
ANNUAL MEAN	80.2		119		120	
HIGHEST ANNUAL MEAN					198	1996
LOWEST ANNUAL MEAN					68.0	2002
HIGHEST DAILY MEAN	542	May 14	983	Mar 27	2,020	Apr 17, 1996
LOWEST DAILY MEAN	5.8	Aug 28	8.3	Oct 9	5.8	Aug 28, 2002
ANNUAL SEVEN-DAY MINIMUM	6.2	Aug 17	9.0	Oct 6	6.2	Aug 17, 2002
MAXIMUM PEAK FLOW			1,050	Mar 27	2,320	Apr 17, 1996
MAXIMUM PEAK STAGE			8.73	Mar 27	11.59	Apr 17, 1996
INSTANTANEOUS LOW FLOW			a7.8	Oct 9	4.9	Aug 29, 2002
ANNUAL RUNOFF (CFSM)	0.98		1.46		1.46	
ANNUAL RUNOFF (INCHES)	13.29		19.79		19.84	
10 PERCENT EXCEEDS	188		264		276	
50 PERCENT EXCEEDS	51		66		70	
90 PERCENT EXCEEDS	8.9		19		14	

a Also occurred on October 10 and 11
e Estimated



01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH

LOCATION.--Lat 42° 56'53", long 71° 27'50", Hillsborough County, Hydrologic Unit 01070002, on right bank, 600 ft upstream from bridge on Interstate Highway 293, 0.8 mi downstream from Bowman Brook, 1.3 mi north of Goffs Falls, 2.2 mi downstream from Piscataquog River, and 3.0 mi south of Manchester City Hall on Elm Street.

DRAINAGE AREA.--3,092 mi^2.

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

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

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

REMARKS.--Records good except those for January 22 to February 10 and February 16, which are fair, and those for October 1-28, which are poor. Flow regulated by power plants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1722, 150,000 ft^3/s, March 20, 1936, gage height, 35.19 ft, from floodmarks, from rating curve extended above 48,000 ft^3/s on basis of computation of flow over dam at gage heights 25.87 ft and 35.19 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 26,400 ft^3/s, Mar. 31, gage height, 9.92 ft; minimum daily discharge, 598 ft^3/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,060	2,000	4,420	3,930	e2,500	2,690	24,200	11,000	8,600	1,410	1,470	1,110
2	965	2,020	3,710	3,700	e2,900	2,880	22,200	9,360	8,040	1,320	1,890	1,400
3	918	1,780	3,170	4,300	e2,900	2,910	20,700	10,500	7,290	1,260	2,700	1,370
4	911	1,290	2,430	3,750	2,960	3,270	19,500	14,300	7,050	1,110	3,500	1,590
5	598	1,260	2,760	3,650	2,630	3,300	16,000	12,900	5,640	1,120	2,970	3,500
6	694	1,700	2,570	4,020	1,960	2,890	14,000	10,700	5,420	1,130	3,880	3,360
7	699	1,770	2,730	4,030	2,510	2,820	12,900	9,380	5,550	1,080	4,910	2,810
8	1,060	2,360	2,550	3,760	e2,500	2,690	12,800	8,740	6,010	1,020	5,700	2,190
9	769	2,060	2,480	3,510	e2,550	2,700	10,700	7,970	5,930	999	5,100	1,700
10	832	1,890	2,570	3,950	e2,600	2,800	10,000	7,770	4,480	920	4,810	1,670
11	727	1,950	2,310	3,530	2,640	2,520	9,770	7,400	4,170	1,090	10,200	1,270
12	785	3,620	2,240	3,360	2,590	2,570	11,700	7,430	4,110	1,110	14,700	1,220
13	779	5,090	2,230	3,210	2,460	2,630	14,300	9,640	3,970	1,130	12,600	1,250
14	786	5,410	3,150	3,200	2,180	2,530	15,900	10,600	3,820	1,200	11,200	1,570
15	764	5,630	4,500	2,940	2,250	2,580	15,600	10,400	4,600	1,150	8,790	2,190
16	1,510	4,730	5,140	3,000	e2,120	2,540	15,600	9,330	5,080	1,070	6,910	2,410
17	2,210	4,270	4,830	2,790	1,930	2,530	17,600	7,510	4,230	1,370	5,600	2,320
18	2,130	4,320	3,980	2,700	2,340	3,270	16,800	6,360	3,290	1,830	5,090	3,160
19	2,480	5,190	3,700	2,760	2,500	3,910	14,400	5,890	3,140	1,350	5,510	2,310
20	2,280	5,200	3,790	2,330	2,290	5,140	12,500	4,980	3,180	1,080	4,920	2,620
21	2,310	4,490	4,920	e2,500	2,070	6,540	11,100	4,250	2,630	1,680	4,620	2,220
22	1,600	4,960	5,760	e2,600	2,370	10,900	10,600	3,890	2,740	917	3,720	3,430
23	2,310	4,860	6,290	e2,200	2,650	15,200	10,900	4,420	2,390	1,180	3,330	4,050
24	2,140	8,000	5,390	e2,250	2,920	17,600	10,900	4,970	2,300	1,950	2,790	5,010
25	2,370	7,950	4,900	e2,100	2,990	18,500	10,200	4,780	2,510	2,160	3,040	7,450
26	1,680	6,770	3,340	e1,950	3,210	20,100	9,430	5,600	2,310	2,080	2,870	6,810
27	1,760	5,970	4,440	e2,250	2,800	23,200	11,100	8,950	2,080	2,340	2,230	4,610
28	2,430	4,960	3,970	e1,950	2,940	23,500	14,400	10,800	1,960	1,350	1,270	4,420
29	2,680	4,600	3,970	e1,950	---	22,400	13,700	10,400	1,620	1,210	1,150	5,370
30	1,960	4,000	3,680	e2,150	---	22,400	12,300	9,670	1,700	1,080	1,280	5,570
31	2,310	---	3,680	e2,100	---	25,700	---	9,040	---	1,420	1,250	---
TOTAL	46,507	120,100	115,600	92,420	71,260	265,210	421,800	258,930	125,840	41,116	150,000	89,960
MEAN	1,500	4,003	3,729	2,981	2,545	8,555	14,060	8,353	4,195	1,326	4,839	2,999
MAX	2,680	8,000	6,290	4,300	3,210	25,700	24,200	14,300	8,600	2,340	14,700	7,450
MIN	598	1,260	2,230	1,950	1,930	2,520	9,430	3,890	1,620	917	1,150	1,110

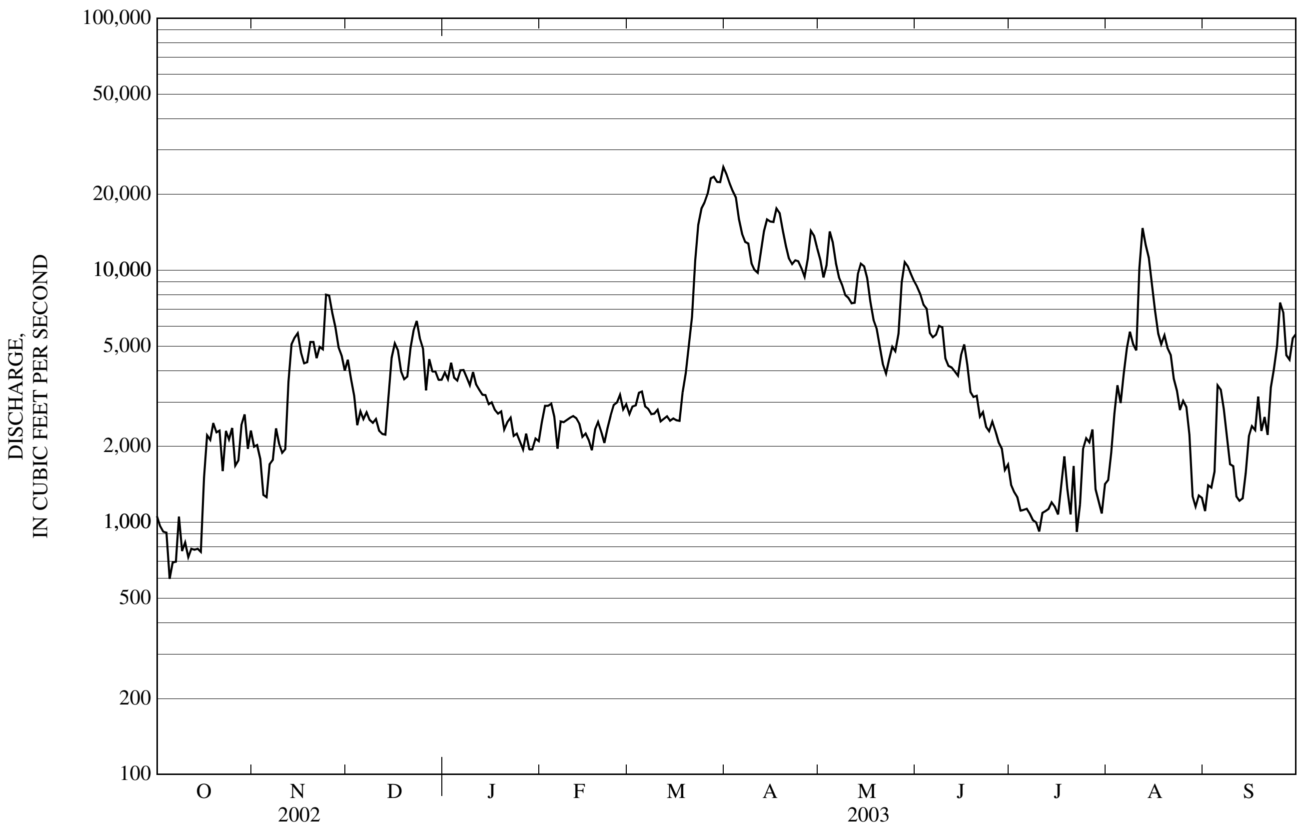
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2,985	4,640	5,209	4,473	4,675	7,992	13,980	8,621	4,531	2,427	1,983	2,100
MAX	10,380	12,910	13,690	10,840	11,370	18,240	25,660	18,250	16,480	11,470	8,576	14,500
(WY)	(1978)	(1996)	(1984)	(1978)	(1970)	(1953)	(1969)	(1954)	(1984)	(1973)	(1990)	(1938)
MIN	771	1,320	1,458	1,265	1,354	2,141	4,612	3,059	1,354	808	781	745
(WY)	(1965)	(2002)	(1979)	(2002)	(1980)	(1940)	(1995)	(1957)	(1964)	(1991)	(2002)	(1957)

01092000 MERRIMACK RIVER NEAR GOFFS FALLS, BELOW MANCHESTER, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1937 - 2003	
ANNUAL TOTAL	1,336,295		1,798,743			
ANNUAL MEAN	3,661		4,928		5,274	
HIGHEST ANNUAL MEAN					8,400	1984
LOWEST ANNUAL MEAN					2,248	1965
HIGHEST DAILY MEAN	19,100	Apr 16	25,700	Mar 31	94,800	Sep 23, 1938
LOWEST DAILY MEAN	a538	Sep 13	598	Oct 5	98	Oct 11, 1964
ANNUAL SEVEN-DAY MINIMUM	605	Sep 9	768	Oct 5	394	Sep 25, 1964
MAXIMUM PEAK FLOW			26,400	Mar 31	b102,000	Sep 23, 1938
MAXIMUM PEAK STAGE			9.92	Mar 31	25.87	Sep 23, 1938
10 PERCENT EXCEEDS	7,510		11,000		12,100	
50 PERCENT EXCEEDS	2,480		3,140		3,380	
90 PERCENT EXCEEDS	727		1,240		1,190	

a Also occurred on September 14 and 17, 2002
b From rating curve extended above 48,000 ft^3/s as explained above
e Estimated



01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH

LOCATION.--Lat 42° 51'36", long 71° 50'00", Hillsborough County, Hydrologic Unit 01070002, on left bank, 450 ft downstream from Putnam Road bridge, 2.9 mi north of Temple, 5.0 mi west of Wilton, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--3.60 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 900 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those below 0.3 ft^3/s and those for estimated daily discharges, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 110 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 26	2215	*117	*4.09	Mar 29	2145	115	4.08

Minimum discharge, 0.13 ft^3/s, Oct. 3, 4, 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.25	0.93	3.8	e4.6	2.4	2.8	20	8.4	25	1.1	1.9	0.39
2	0.21	0.84	3.4	e5.5	2.5	e3.2	17	17	19	1.0	3.1	0.67
3	0.15	0.79	2.9	e5.0	2.4	e3.8	20	24	12	1.1	1.6	0.73
4	0.17	0.78	e2.4	e5.4	2.9	e4.0	17	13	9.3	0.90	1.9	1.6
5	0.36	0.80	2.7	e5.0	3.6	e3.9	13	10	12	0.77	7.0	1.2
6	0.24	1.9	2.8	4.9	2.9	4.1	11	9.1	9.8	0.72	6.5	0.78
7	0.20	3.5	2.7	4.5	2.8	3.7	9.7	8.5	9.1	0.60	3.8	0.63
8	0.18	2.3	e2.5	4.7	2.7	3.6	9.1	10	10	0.56	14	0.52
9	0.16	2.8	e2.3	4.4	2.6	3.9	8.5	9.0	8.3	0.55	6.2	0.47
10	0.18	2.6	e2.2	3.9	2.6	3.6	9.6	7.6	6.9	0.59	12	0.45
11	0.21	2.1	2.2	e3.7	2.6	3.6	15	7.4	6.1	0.87	6.3	0.43
12	1.4	2.9	e2.2	e3.7	2.5	3.5	41	17	5.8	0.91	4.3	0.39
13	1.2	17	e2.3	e3.6	2.4	3.5	30	18	5.6	0.67	3.7	0.39
14	0.98	6.1	15	3.5	2.4	3.2	22	11	8.0	0.54	2.8	0.46
15	0.62	4.1	19	e3.5	2.3	3.2	21	9.0	6.0	0.50	2.2	0.52
16	2.3	3.1	8.9	e3.4	e2.3	3.5	21	7.7	4.7	0.83	1.7	1.5
17	6.5	4.0	5.9	e3.3	e2.3	e6.0	14	7.0	4.2	0.90	1.6	0.94
18	2.0	5.2	5.1	e3.2	e2.3	e30	11	6.5	4.1	0.61	1.4	0.62
19	1.1	4.2	e4.6	e3.1	e2.2	e22	9.5	5.9	4.2	0.55	1.3	2.1
20	0.85	4.9	e13	e2.9	e2.2	15	8.5	5.4	3.8	0.42	1.0	2.1
21	0.70	6.9	28	e2.8	2.3	58	8.0	5.4	3.5	0.36	0.88	1.2
22	0.60	24	13	e2.7	2.6	63	15	5.1	3.8	0.60	0.82	0.91
23	0.73	24	8.8	e2.6	4.8	45	16	5.2	4.6	0.96	0.74	6.4
24	0.74	10	6.9	e2.5	5.2	39	11	7.4	3.4	0.52	0.61	5.4
25	0.67	6.9	e6.0	e2.5	3.8	45	8.7	12	2.7	e0.54	0.58	2.8
26	2.3	6.1	e6.0	e2.4	e3.8	64	17	28	2.3	e0.42	0.66	3.0
27	4.2	5.4	5.7	e2.4	e3.4	58	29	30	2.0	e0.38	0.47	3.8
28	2.1	4.6	5.2	e2.4	2.9	38	16	24	1.6	e0.34	0.44	4.2
29	1.5	4.2	4.7	e2.4	---	53	11	26	1.4	0.31	0.45	7.3
30	1.2	4.1	4.2	2.4	---	57	9.4	16	1.5	0.28	0.46	3.9
31	1.0	---	4.2	2.4	---	30	---	12	---	0.24	0.48	---
TOTAL	35.00	167.04	198.6	109.3	79.7	680.1	469.0	382.6	200.7	19.64	90.89	55.80
MEAN	1.13	5.57	6.41	3.53	2.85	21.9	15.6	12.3	6.69	0.63	2.93	1.86
MAX	6.5	24	28	5.5	5.2	64	41	30	25	1.1	14	7.3
MIN	0.15	0.78	2.2	2.4	2.2	2.8	8.0	5.1	1.4	0.24	0.44	0.39
CFSM	0.31	1.55	1.78	0.98	0.79	6.09	4.34	3.43	1.86	0.18	0.81	0.52
IN.	0.36	1.73	2.05	1.13	0.82	7.03	4.85	3.95	2.07	0.20	0.94	0.58

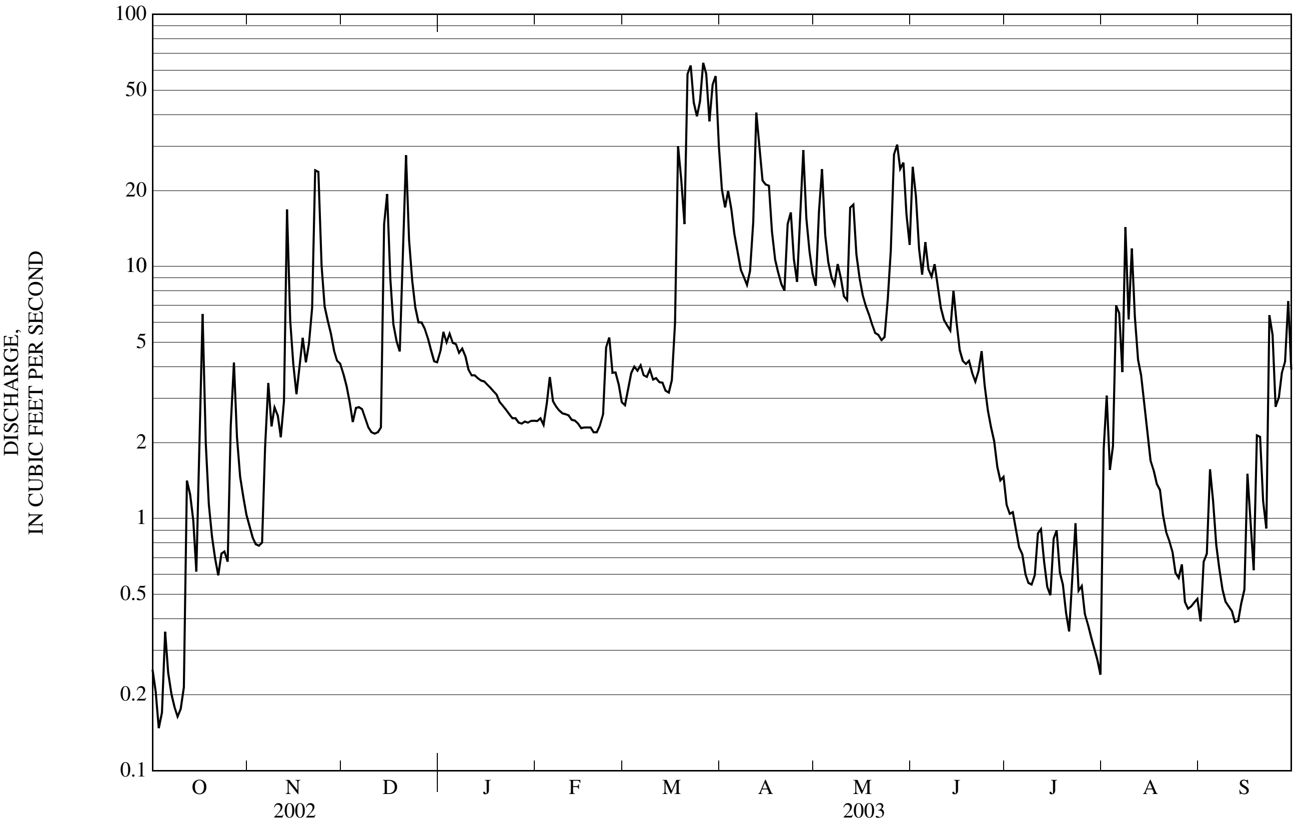
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4.25	7.32	8.13	6.95	6.77	14.1	18.7	9.34	5.09	1.80	1.45	1.65
MAX	22.9	18.9	29.4	37.2	19.0	30.9	38.9	28.6	17.1	7.26	6.51	10.2
(WY)	(1997)	(1996)	(1997)	(1999)	(1970)	(1983)	(1987)	(1984)	(1968)	(1968)	(1986)	(1999)
MIN	0.34	0.50	1.34	1.09	1.59	3.65	4.10	2.64	0.66	0.28	0.18	0.11
(WY)	(1965)	(2002)	(1979)	(1977)	(1977)	(1989)	(1985)	(1985)	(1964)	(1966)	(1966)	(1964)

01093800 STONY BROOK TRIBUTARY NEAR TEMPLE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1963 - 2003	
ANNUAL TOTAL	1,706.29		2,488.37			
ANNUAL MEAN	4.67		6.82		7.15	
HIGHEST ANNUAL MEAN					10.9	1984
LOWEST ANNUAL MEAN					2.58	1965
HIGHEST DAILY MEAN	59	May 14	64	Mar 26	343	Oct 21, 1996
LOWEST DAILY MEAN	a0.08	Aug 22	0.15	Oct 3	0.05	Aug 21, 1966
ANNUAL SEVEN-DAY MINIMUM	0.09	Aug 20	0.21	Oct 3	0.07	Sep 14, 1964
MAXIMUM PEAK FLOW			117	Mar 26	648	Oct 21, 1996
MAXIMUM PEAK STAGE			4.09	Mar 26	b7.81	Feb 3, 1970
INSTANTANEOUS LOW FLOW			c0.13	Oct 3	d0.00	Sep 26, 1976
ANNUAL RUNOFF (CFSM)	1.30		1.89		1.99	
ANNUAL RUNOFF (INCHES)	17.63		25.71		26.98	
10 PERCENT EXCEEDS	11		17		17	
50 PERCENT EXCEEDS	2.9		3.5		3.5	
90 PERCENT EXCEEDS	0.20		0.54		0.45	

a Also occurred on August 23, 2002
b Ice jam. Also occurred on December 21, 1973
c Also occurred on October 4 and 9
d No flow for part of September 26, 1976
e Estimated



01094000 SOUHEGAN RIVER AT MERRIMACK, NH

LOCATION.--Lat 42° 51'27", long 71° 30'24", Hillsborough County, Hydrologic Unit 01070002, on left bank, at head of Wildcat Falls, 0.6 mi upstream from south bound bridge on Everett Turnpike, 0.9 mi southwest of Merrimack Town Hall, 1.3 mi upstream from mouth, 1.7 mi northwest of Litchfield Town Hall.

DRAINAGE AREA.--171 mi^2.

PERIOD OF RECORD.--Discharge records: July 1909 to September 1976, October 2001 to current year. Partial-record station: October 1976 to September 2001. Peak streamflow: Water years 1910 to 1976, 1980, 1982 to current. Water-quality discrete samples: Water years 1953, 1967 to 1976, 1979 to 1984, 1986, 1987, 1989 to 1999. Miscellaneous discharge measurements only: Water years 1979 to 1984, 1986 to 1987, 1989 to 2001.

REVISED RECORDS.--WSP 431: 1909-14. WSP 726: Drainage area. WSP 781: 1924(M). WSP 1231: 1914-15(M), 1917(M), 1919-23(M), 1927-28(M), 1929, 1930-34(M).

GAGE.--Water-stage recorder. Datum of gage is 160.58 ft above National Geodetic Vertical Datum of 1929. Prior to April 12, 1911, nonrecording gage at site 300 ft downstream at datum 0.38 ft lower. April 12, 1911 to October 14, 1913, nonrecording gage at present site and datum.

REMARKS.--Records fair. Slight diurnal fluctuation at times caused by mill upstream. Diversion to Pennichuck Brook basin for municipal supply of Nashua during periods of low flow from August 1965 to October 1966, July 1969 to November 1971, October 1972, October 1973, July to September 1974, June to August 1975, June to September 1976. High flow slightly affected by retarding reservoirs since 1963.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,900 ft^3/s, March 19, 1936, gage height, 16.2 ft, from rating curve extended above 7,300 ft^3/s on basis of velocity-area studies and computation of flow over dam at gage height 12.78 ft; minimum discharge, 3.8 ft^3/s, August 17, September 8, October 1, 1965. Stage and discharge from the flood of March 19, 1936, are the greatest since 1830.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 27	1545	*2,410	*6.64	Mar 30	2115	2,300	6.52

Minimum discharge, 18 ft^3/s, Oct. 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	72	219	e245	134	247	1,580	459	626	80	31	30
2	25	54	203	e340	143	247	1,280	420	765	86	62	32
3	23	51	e180	e370	168	384	1,220	884	616	82	95	35
4	22	50	e155	e310	176	399	1,170	808	491	76	123	39
5	23	49	e155	e360	207	390	1,040	636	482	72	181	44
6	22	71	e147	e318	206	354	912	534	524	67	227	42
7	21	140	e140	e285	200	296	795	468	437	61	228	38
8	20	154	e135	e265	180	288	705	460	485	58	201	34
9	19	108	e124	e265	171	288	629	463	453	56	226	31
10	19	106	113	e250	161	279	581	419	392	54	183	29
11	19	107	e120	e225	154	269	672	370	335	55	227	28
12	23	97	154	e220	143	272	1,180	486	366	58	280	27
13	30	166	190	211	139	244	1,440	693	326	55	242	26
14	47	362	335	195	135	222	1,170	667	372	54	224	26
15	50	280	e900	162	133	248	985	546	400	51	185	27
16	46	218	794	171	124	242	897	456	317	50	150	36
17	145	217	e560	185	122	279	780	384	264	50	129	51
18	163	362	e410	159	e125	489	641	345	234	47	109	64
19	103	403	e350	145	128	e760	552	311	215	51	101	42
20	66	311	382	171	122	e760	494	274	206	47	92	50
21	58	294	882	162	128	1,070	455	244	193	41	73	54
22	51	377	812	143	169	1,770	408	234	198	38	62	48
23	48	649	654	135	251	1,880	512	233	263	39	57	59
24	49	633	540	e135	424	1,750	524	292	315	47	51	283
25	49	516	450	e130	470	1,740	458	381	247	44	46	215
26	66	435	e350	e130	390	1,820	438	501	204	39	42	145
27	123	383	e330	e130	333	2,190	945	1,220	169	35	40	125
28	113	339	e300	130	295	2,030	839	1,020	134	33	37	106
29	77	e290	e275	132	---	1,690	666	993	116	31	34	187
30	70	268	e250	129	---	2,060	543	807	101	30	33	166
31	77	---	e240	130	---	2,100	---	632	---	29	32	---
TOTAL	1,696	7,562	10,849	6,338	5,531	27,057	24,511	16,640	10,246	1,616	3,803	2,119
MEAN	54.7	252	350	204	198	873	817	537	342	52.1	123	70.6
MAX	163	649	900	370	470	2,190	1,580	1,220	765	86	280	283
MIN	19	49	113	129	122	222	408	233	101	29	31	26
CFSM	0.32	1.47	2.05	1.20	1.16	5.10	4.78	3.14	2.00	0.30	0.72	0.41
IN.	0.37	1.65	2.36	1.38	1.20	5.89	5.33	3.62	2.23	0.35	0.83	0.46

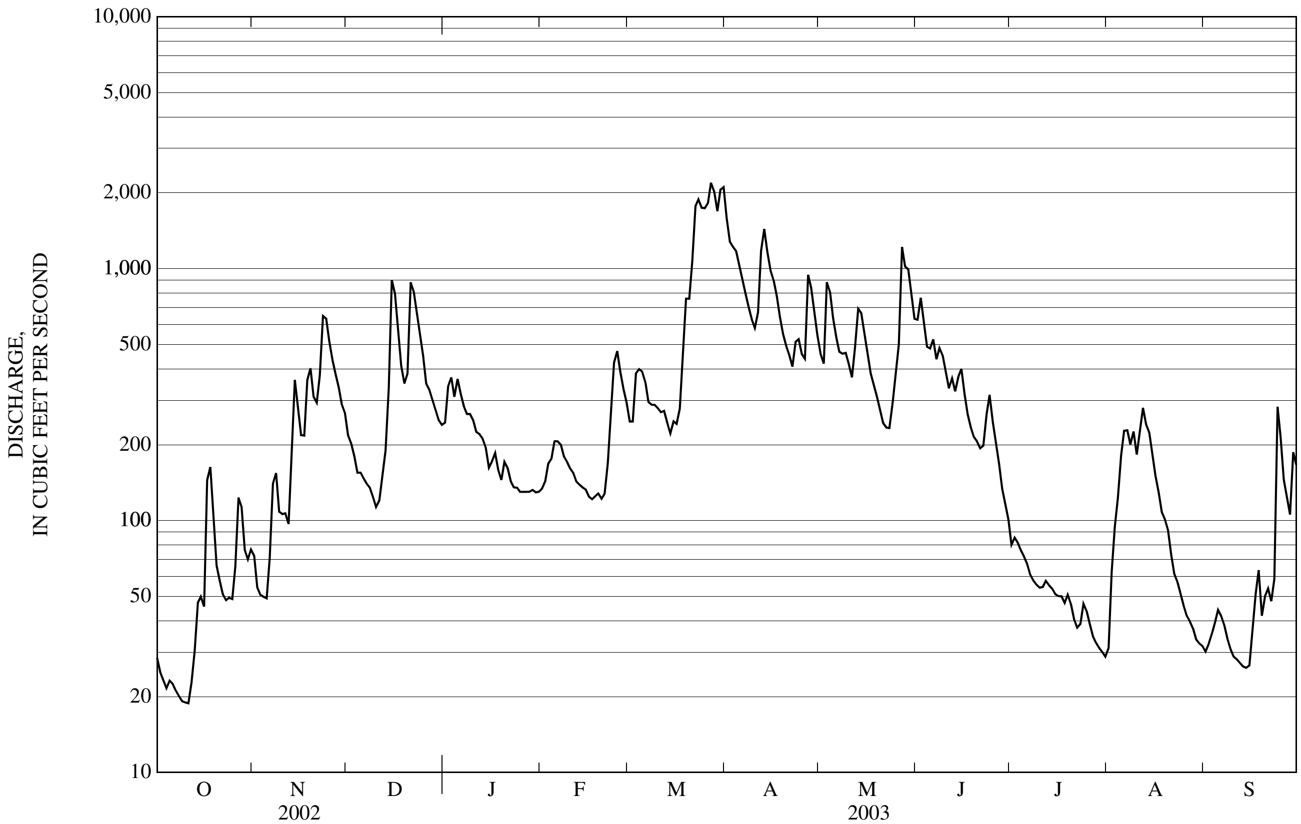
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 1976, 2002 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	106	223	283	267	270	627	770	381	215	101	78.2	88.0
MAX	718	824	849	752	825	2,278	1,664	916	664	405	769	799
(WY)	(1956)	(1956)	(1974)	(1956)	(1970)	(1936)	(1933)	(1954)	(1968)	(1938)	(1915)	(1938)
MIN	15.8	25.2	45.1	25.3	50.9	155	276	140	45.4	18.8	8.27	10.6
(WY)	(1965)	(1965)	(1930)	(1925)	(1911)	(1940)	(1927)	(1911)	(1964)	(1966)	(1966)	(1965)

01094000 SOUHEGAN RIVER AT MERRIMACK, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1909 - 76, 2002 - 03	
ANNUAL TOTAL	76,609		117,968			
ANNUAL MEAN	210		323		284	
HIGHEST ANNUAL MEAN					430	1956
LOWEST ANNUAL MEAN					97.9	1965
HIGHEST DAILY MEAN	1,660	May 15	2,190	Mar 27	14,200	Mar 19, 1936
LOWEST DAILY MEAN	a13	Sep 14	b19	Oct 9	4.0	Sep 8, 1965
ANNUAL SEVEN-DAY MINIMUM	15	Sep 9	20	Oct 5	4.8	Sep 26, 1965
MAXIMUM PEAK FLOW			2,410	Mar 27	c16,900	Mar 19, 1936
MAXIMUM PEAK STAGE			6.64	Mar 27	16.20	Mar 19, 1936
INSTANTANEOUS LOW FLOW			d18	Oct 10	f3.8	Aug 17, 1965
ANNUAL RUNOFF (CFSM)	1.23		1.89		1.66	
ANNUAL RUNOFF (INCHES)	16.67		25.66		22.55	
10 PERCENT EXCEEDS	533		771		691	
50 PERCENT EXCEEDS	135		203		151	
90 PERCENT EXCEEDS	21		38		31	

a Also occurred on September 15, 2002
b Also occurred on October 10 and 11
c From rating curve extended above 7,300 ft^3/s as explained above
d Also occurred on October 11
e Estimated
f Also occurred on September 8 and October 1, 1965



010965852 BEAVER BROOK AT NORTH PELHAM, NH

LOCATION.--Lat 42° 46'58", long 71° 21'15" (revised), Rockingham County, Hydrologic Unit 01070002, on right bank, 10 ft downstream from State Highway 128 bridge at the Windham-Pelham town line, 0.7 mi north of North Pelham, 1.3 mi south of State Highways 128 and 111 intersection in West Windham, and 4.7 mi north of Pelham.

DRAINAGE AREA.--47.8 mi^2.

PERIOD OF RECORD.--Discharge records: October 1986 to current year. Peak streamflow: Water years 1987 to current year. Water-quality discrete samples: Water years 1988 to 2000.

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

REMARKS.--Records good except those for October 1 to June 27, which are fair. Some regulation at low- and medium-flows.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 23	unknown	*482	*a9.03	Mar 31	1115	423	8.74

Minimum discharge, 1.6 ft^3/s, Oct. 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	10	29	77	e30	e80	355	101	127	22	5.7	4.2
2	2.5	16	26	108	e35	e95	288	91	126	20	29	6.2
3	2.1	18	27	e105	e42	e155	258	100	103	18	31	3.5
4	1.9	16	18	99	e50	e160	245	87	91	17	41	5.1
5	2.0	14	11	e95	e60	e135	e225	74	96	16	50	8.8
6	1.9	25	29	92	e58	e110	e210	67	96	15	38	5.3
7	1.9	36	27	e80	e54	e105	e195	65	88	14	31	5.1
8	1.8	22	18	e85	e49	e95	185	66	91	13	52	5.1
9	1.8	19	16	80	e46	e100	174	66	86	12	52	4.5
10	1.7	18	28	e70	e44	e95	164	60	72	12	38	4.5
11	1.8	20	14	e75	e42	e90	187	64	67	13	32	5.9
12	2.3	17	29	e70	e40	e90	282	108	65	13	32	12
13	4.0	56	44	e65	e38	e85	289	130	61	13	31	6.3
14	9.8	59	100	e60	e37	e85	248	122	62	12	49	4.6
15	8.5	36	244	e55	e34	e80	e210	108	79	11	39	4.0
16	6.6	30	212	e50	e33	e85	e180	91	66	12	30	7.9
17	8.4	41	169	e50	e34	e110	e150	83	53	10	29	7.5
18	12	84	146	e45	e39	e170	e125	71	48	7.2	29	10
19	9.8	79	127	e40	e41	e210	116	64	47	7.6	28	22
20	8.1	61	114	e38	e42	213	105	47	44	7.3	26	6.1
21	7.5	50	208	e38	e43	309	95	44	43	7.2	26	10
22	9.0	31	194	e35	e53	e460	91	44	52	7.2	24	9.3
23	8.5	42	164	e33	e110	e470	102	43	68	8.1	16	15
24	8.3	45	138	e33	e155	e445	98	50	69	8.6	16	49
25	7.7	37	116	e33	e150	414	90	55	54	7.7	5.5	30
26	11	36	e95	e33	e125	388	101	76	43	6.8	8.3	27
27	25	33	e105	e32	e95	389	179	197	37	6.0	7.6	37
28	19	31	e100	e31	e85	346	156	193	32	5.2	5.8	30
29	13	30	90	e29	---	303	136	236	30	4.8	4.6	23
30	11	30	e80	e28	---	361	119	186	25	4.2	4.6	21
31	11	---	77	e28	---	411	---	150	---	3.9	4.3	---
TOTAL	222.8	1,042	2,795	1,792	1,664	6,644	5,358	2,939	2,021	334.8	815.4	389.9
MEAN	7.19	34.7	90.2	57.8	59.4	214	179	94.8	67.4	10.8	26.3	13.0
MAX	25	84	244	108	155	470	355	236	127	22	52	49
MIN	1.7	10	11	28	30	80	90	43	25	3.9	4.3	3.5
CFSM	0.15	0.73	1.89	1.21	1.24	4.48	3.74	1.98	1.41	0.23	0.55	0.27
IN.	0.17	0.81	2.18	1.39	1.29	5.17	4.17	2.29	1.57	0.26	0.63	0.30

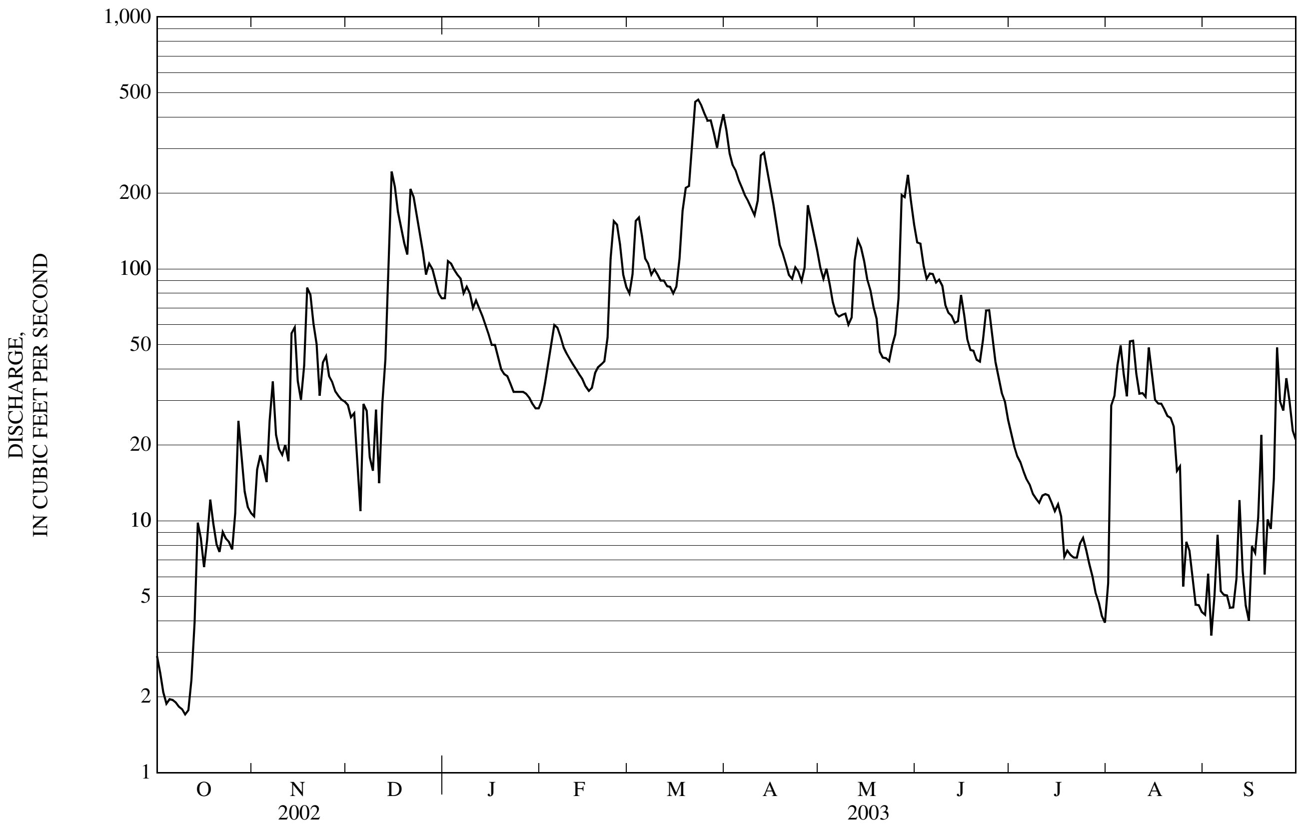
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	40.0	66.2	87.6	78.0	86.9	154	165	91.6	55.5	19.3	20.2	18.5
MAX	185	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	6.15	10.2	14.4	31.7	56.5	56.9	34.4	7.27	3.53	1.52	2.60
(WY)	(1998)	(2002)	(2002)	(2002)	(2002)	(1989)	(1999)	(1999)	(1999)	(1993)	(1999)	(2002)

010965852 BEAVER BROOK AT NORTH PELHAM, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	17,623.2		26,017.9			
ANNUAL MEAN	48.3		71.3		73.4	
HIGHEST ANNUAL MEAN					99.9	1996
LOWEST ANNUAL MEAN					39.0	2002
HIGHEST DAILY MEAN	309	May 15	470	Mar 23	1,500	Apr 6, 1987
LOWEST DAILY MEAN	1.6	Aug 27	1.7	Oct 10	0.83	Sep 4, 1999
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 21	1.8	Oct 5	0.92	Sep 2, 1999
MAXIMUM PEAK FLOW			482	Mar 23	1,850	Apr 6, 1987
MAXIMUM PEAK STAGE			a9.03	Mar 23	12.94	Oct 22, 1996
INSTANTANEOUS LOW FLOW			b1.6	Oct 10	c0.60	Sep 4, 1999
ANNUAL RUNOFF (CFSM)	1.01		1.49		1.54	
ANNUAL RUNOFF (INCHES)	13.72		20.25		20.86	
10 PERCENT EXCEEDS	131		176		164	
50 PERCENT EXCEEDS	29		42		45	
90 PERCENT EXCEEDS	2.3		6.2		5.5	

a From crest-stage gage
b Also occurred October 11
c Also occurred September 5 and 8, 1999
e Estimated



01100505 SPICKET RIVER AT NORTH SALEM, NH

LOCATION .--Lat 42° 50'57", long 71° 12'56", Rockingham County, Hydrologic Unit 01070002, on right bank, 70 ft downstream from Haverhill Road bridge, 100 ft southeast of North Main Street (old State Highway 111), Haverhill Road, and Island Pond Road intersection in Cowbell Corners, 1.0 mi north of Mill Pond Road and North Main Road intersection in North Salem, 2.4 mi southwest of Hampstead, and 4.8 mi north of Salem Town Hall.

DRAINAGE AREA.--16.5 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year. Prior to October 2001, published in error as "at Island Pond Road". Water-quality discrete samples: Water years 1975 to 1977.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and those below 1.5 ft^3/s, which are fair. Flows regulated by Island Pond 0.7 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 189 ft^3/s, Oct. 16, gage height, 5.12 ft; minimum daily discharge, 0.31 ft^3/s, July 30 and 31.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.81	14	11	29	11	30	129	0.69	32	3.0	0.77	1.4
2	0.75	13	10	34	13	33	124	0.74	88	2.7	3.5	1.5
3	0.64	11	10	34	14	e42	118	0.79	31	2.4	4.4	1.4
4	0.56	10	9.2	e39	14	44	115	0.61	6.5	2.2	7.7	1.6
5	0.74	9.4	8.9	38	15	47	111	0.55	10	2.2	9.6	1.5
6	0.58	11	8.9	36	e16	48	104	0.57	12	1.9	10	1.3
7	0.40	10	8.7	34	16	45	97	0.87	15	1.6	9.5	1.3
8	0.34	9.1	8.7	32	e17	42	91	1.2	42	1.4	11	1.1
9	0.33	8.6	8.9	31	16	40	84	1.4	59	1.3	21	0.92
10	0.32	7.9	8.6	30	16	39	78	0.88	25	1.2	28	1.0
11	0.32	8.0	8.8	27	16	37	76	0.66	24	1.8	25	1.1
12	0.71	8.7	11	26	e15	35	85	2.0	24	1.6	15	0.92
13	16	11	12	24	e14	35	77	1.8	22	1.4	6.3	1.0
14	104	10	21	22	e14	34	84	1.1	23	1.2	7.9	1.1
15	109	9.8	32	e22	e13	32	73	0.80	23	1.2	7.3	0.99
16	181	9.8	40	e20	e12	30	2.4	0.76	21	1.0	7.3	3.5
17	167	13	41	19	e12	32	1.4	0.70	20	0.99	7.8	1.6
18	146	14	38	e18	e12	39	0.98	0.59	20	0.82	7.2	1.6
19	127	14	35	e16	e13	49	0.95	0.53	19	e1.1	6.5	2.1
20	110	15	38	e16	13	58	0.88	0.43	9.4	e0.90	5.7	2.3
21	93	15	46	e15	12	81	0.82	0.46	9.3	e0.71	e5.1	2.0
22	77	16	49	e14	13	100	1.1	0.49	11	e0.65	e4.5	1.9
23	64	16	48	e14	20	113	1.3	0.50	14	e0.68	4.3	4.5
24	50	15	45	e13	e25	120	1.0	e0.70	14	e0.78	3.3	5.9
25	39	14	e45	e12	29	125	0.81	e1.0	13	e0.68	2.6	6.8
26	35	14	e51	12	32	128	1.5	e3.3	12	e0.58	2.4	7.6
27	31	14	46	13	33	130	2.5	3.5	11	e0.53	2.0	7.2
28	25	13	41	e11	32	128	1.2	14	7.7	e0.48	1.7	6.8
29	21	12	37	11	---	126	0.89	57	3.7	0.40	1.5	6.5
30	18	12	33	e11	---	130	0.74	34	3.3	0.31	1.5	5.5
31	16	---	30	11	---	132	---	19	---	0.31	1.5	---
TOTAL	1,435.50	358.3	840.7	684	478	2,104	1,464.47	151.62	624.9	38.02	231.87	83.93
MEAN	46.3	11.9	27.1	22.1	17.1	67.9	48.8	4.89	20.8	1.23	7.48	2.80
MAX	181	16	51	39	33	132	129	57	88	3.0	28	7.6
MIN	0.32	7.9	8.6	11	11	30	0.74	0.43	3.3	0.31	0.77	0.92

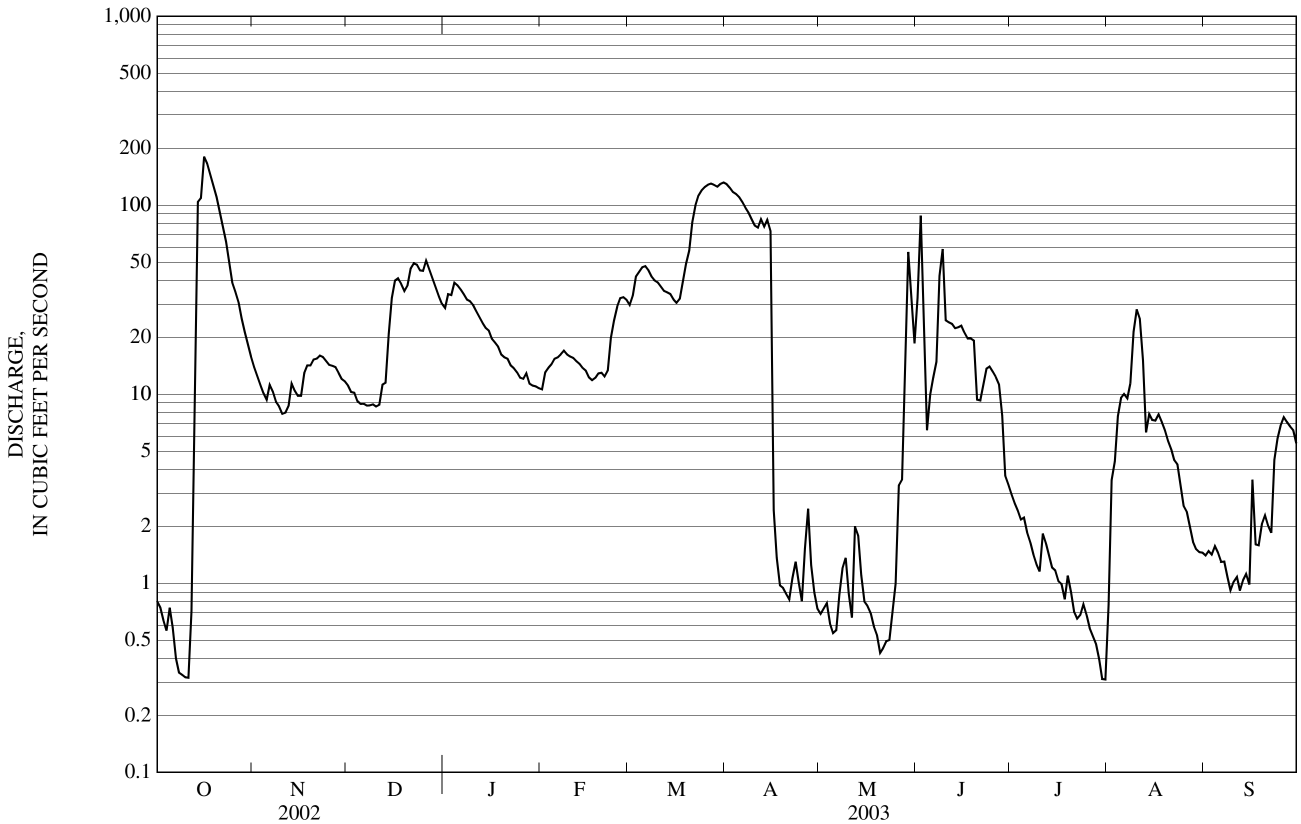
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

MEAN	45.5	12.4	20.0	13.9	13.7	43.8	40.5	15.8	17.2	1.41	3.39	1.53
MAX	46.3	21.0	29.8	22.1	17.6	67.9	70.8	41.4	29.9	2.21	7.48	2.80
(WY)	(2003)	(2001)	(2001)	(2003)	(2001)	(2003)	(2001)	(2002)	(2002)	(2002)	(2003)	(2003)
MIN	44.7	4.20	3.18	4.31	6.42	1.23	1.88	1.02	0.88	0.79	1.20	0.88
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2002)

01100505 SPICKET RIVER AT NORTH SALEM, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	5,354.08		8,495.31			
ANNUAL MEAN	14.7		23.3		17.6	
HIGHEST ANNUAL MEAN					23.3	2003
LOWEST ANNUAL MEAN					11.9	2002
HIGHEST DAILY MEAN	181	Oct 16	181	Oct 16	209	Oct 17, 2000
LOWEST DAILY MEAN	a0.32	Oct 10	b0.31	Jul 30	0.25	Jun 10, 2001
ANNUAL SEVEN-DAY MINIMUM	0.43	Oct 6	0.43	Oct 6	0.43	Oct 6, 2002
MAXIMUM PEAK FLOW			189	Oct 16	235	Oct 16, 2000
MAXIMUM PEAK STAGE			5.12	Oct 16	5.46	Oct 16, 2000
10 PERCENT EXCEEDS	44		68		48	
50 PERCENT EXCEEDS	4.5		12		4.7	
90 PERCENT EXCEEDS	0.73		0.76		0.74	

a Also occurred October 11, 2002
b Also occurred July 31
e Estimated



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, 2.7 mi west of US Highway 3 and State Highway 145 intersection in Pittsburg, 3.9 mi northeast of Post Office in Beecher Falls, and at mile 376.5.

DRAINAGE AREA.--254 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good except those for estimated daily 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^3/s, May 11, 2000, gage height, 8.37 ft, from rating curve extended above 2,600 ft^3/s; minimum daily 30 ft^3/s, August 6, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,220 ft^3/s, Mar. 30, gage height, 5.94 ft; minimum daily discharge, 102 ft^3/s, June 29.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	250	252	274	550	372	175	635	337	192	153	256	381
2	234	244	243	592	372	175	526	743	273	122	253	381
3	225	230	247	565	372	e175	451	963	232	162	254	381
4	219	229	e237	548	372	e177	392	449	175	189	286	381
5	214	235	e232	535	372	146	334	336	157	186	290	312
6	212	235	240	527	277	e132	330	285	227	183	288	161
7	208	236	237	521	188	e129	e306	291	222	180	385	161
8	207	230	236	514	e188	129	e301	277	175	181	305	244
9	205	237	e227	512	185	e129	297	273	153	180	282	292
10	204	293	224	502	e183	e129	300	293	154	178	323	292
11	204	493	224	497	e187	e129	347	238	148	185	1,030	292
12	201	447	224	493	e186	129	450	319	150	187	608	292
13	198	453	423	491	e186	e128	698	375	148	189	431	292
14	199	409	514	487	e188	e127	627	353	587	176	373	292
15	200	347	519	480	e188	127	1,220	319	522	174	346	355
16	201	318	520	477	e188	127	2,170	262	324	172	331	473
17	233	297	509	474	e196	129	1,050	235	236	171	325	472
18	270	299	499	471	e180	180	609	218	198	169	327	469
19	286	284	496	467	e175	217	498	205	172	169	350	466
20	736	276	503	463	175	236	643	185	161	167	364	465
21	458	280	566	464	175	283	893	149	146	167	360	463
22	338	296	618	e458	176	367	826	145	136	172	357	356
23	294	603	575	453	177	443	646	136	130	172	353	246
24	272	483	553	451	e178	486	535	130	126	193	350	170
25	259	381	540	447	e179	548	430	128	117	206	348	306
26	258	338	537	447	e177	710	351	128	114	195	344	298
27	362	310	527	e402	e177	920	702	136	110	182	365	296
28	349	276	521	e378	e175	803	555	130	106	184	386	292
29	299	273	519	376	---	1,450	481	139	102	187	382	298
30	274	283	511	376	---	2,720	363	245	134	203	385	314
31	257	---	510	372	---	1,130	---	226	---	237	386	---
TOTAL	8,326	9,567	12,805	14,790	6,144	12,885	17,966	8,648	5,827	5,571	11,423	9,893
MEAN	269	319	413	477	219	416	599	279	194	180	368	330
MAX	736	603	618	592	372	2,720	2,170	963	587	237	1,030	473
MIN	198	229	224	372	175	127	297	128	102	122	253	161

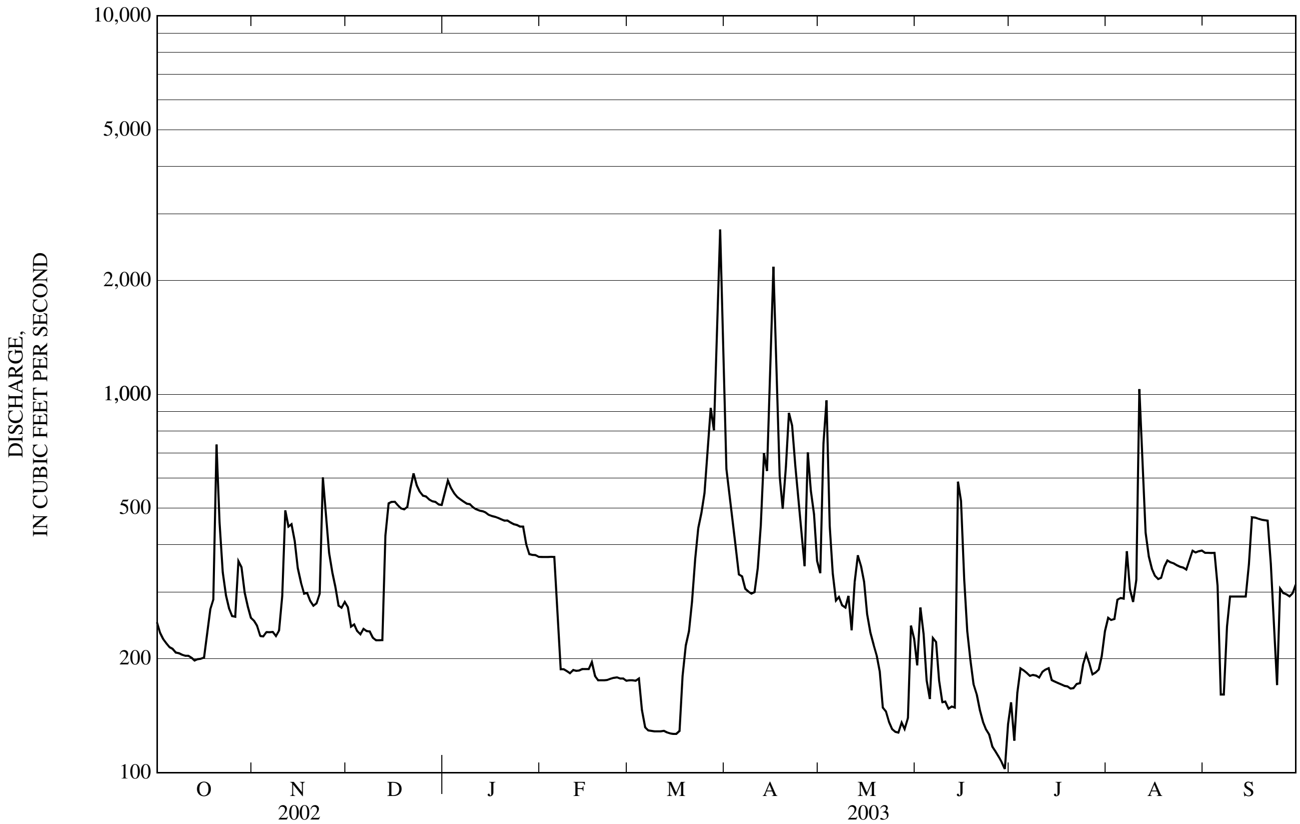
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	539	538	719	791	757	531	643	520	387	413	433	435
MAX	1,342	1,056	1,485	1,175	1,325	1,088	1,206	1,691	863	1,187	1,043	1,095
(WY)	(1978)	(1978)	(1960)	(1960)	(1974)	(1979)	(2002)	(1974)	(1984)	(1996)	(1976)	(1963)
MIN	111	181	310	462	219	118	247	162	80.9	55.7	64.7	111
(WY)	(1969)	(1967)	(2002)	(1979)	(2003)	(2001)	(1995)	(1988)	(1962)	(1965)	(1975)	(1968)

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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	211,137		123,845			
ANNUAL MEAN	578		339		558	
HIGHEST ANNUAL MEAN					789	1976
LOWEST ANNUAL MEAN					339	2003
HIGHEST DAILY MEAN	3,210	Apr 14	2,720	Mar 30	5,610	May 11, 2000
LOWEST DAILY MEAN	134	Feb 22	102	Jun 29	30	Aug 6, 1965
ANNUAL SEVEN-DAY MINIMUM	155	Mar 23	115	Jun 23	33	Aug 20, 1975
MAXIMUM PEAK FLOW			3,220	Mar 30	a5,820	May 11, 2000
MAXIMUM PEAK STAGE			5.94	Mar 30	8.37	May 11, 2000
10 PERCENT EXCEEDS	931		538		1,010	
50 PERCENT EXCEEDS	485		286		504	
90 PERCENT EXCEEDS	219		152		155	

a From rating curve extended above 2,600 ft^3/s
e Estimated



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

WATER-QUALITY RECORDS

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, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.5	14.0	15.5	6.5	4.0	5.0	2.0	---	---	2.0	0.0	1.0
2	18.0	15.5	16.5	5.0	3.0	4.0	2.0	---	---	1.5	0.0	1.0
3	16.5	14.0	15.5	6.0	3.0	4.0	1.0	---	---	2.0	0.0	1.0
4	15.0	13.0	14.5	5.5	3.0	4.0	1.0	---	---	2.0	0.0	1.0
5	16.5	14.5	15.5	5.0	3.0	4.0	2.0	---	---	2.5	0.5	1.0
6	16.5	13.0	14.5	5.0	3.5	4.0	2.0	0.0	1.0	2.0	0.5	1.5
7	15.5	13.0	14.0	4.5	2.0	3.5	2.0	0.0	1.0	2.0	0.0	1.0
8	15.0	12.0	13.5	5.5	2.5	3.5	2.0	---	---	2.0	0.0	1.0
9	14.5	12.0	13.0	6.0	3.0	4.0	1.0	---	---	2.0	0.0	1.0
10	15.0	13.0	13.5	7.0	3.0	5.0	2.0	---	---	2.0	0.0	1.0
11	15.0	13.0	14.0	7.5	5.0	6.0	2.0	0.5	1.0	1.5	0.0	0.5
12	15.5	12.0	14.0	6.5	5.5	6.0	2.5	0.0	1.5	2.0	0.0	1.0
13	15.5	13.0	14.0	6.0	4.5	5.5	2.5	0.0	1.0	2.0	0.0	1.0
14	14.0	11.0	12.5	6.0	4.0	5.0	2.5	1.0	1.5	2.0	---	---
15	14.0	10.5	12.0	5.5	3.5	5.0	2.5	0.5	1.5	2.0	---	---
16	13.0	10.5	11.5	4.5	2.5	3.5	2.5	0.5	1.5	2.0	---	---
17	11.5	9.5	10.5	3.5	1.5	2.5	2.0	0.0	1.0	2.0	---	---
18	11.0	9.0	9.5	3.0	1.0	2.0	2.0	0.0	1.0	2.0	---	---
19	10.0	7.0	9.0	4.0	1.5	2.5	2.5	0.0	1.0	2.5	---	---
20	7.0	5.5	6.5	4.5	2.5	3.5	2.5	0.5	1.5	2.5	---	---
21	7.0	5.5	6.0	4.0	2.0	3.5	2.0	0.5	1.5	1.5	---	---
22	7.5	5.0	6.0	5.0	3.0	3.5	2.0	0.0	1.0	1.5	---	---
23	7.5	5.0	6.5	4.0	1.0	2.5	2.0	0.5	1.0	2.0	---	---
24	8.5	6.0	7.0	2.5	0.5	1.5	2.0	0.0	1.0	2.0	---	---
25	9.0	6.5	7.5	3.0	1.0	2.0	2.0	0.5	1.0	2.0	---	---
26	8.0	6.5	7.0	3.0	1.0	2.0	2.0	0.0	1.0	2.5	0.0	1.0
27	7.0	4.5	5.5	2.0	0.5	1.5	2.0	0.0	1.0	1.5	---	---
28	6.0	4.5	5.5	2.0	0.0	1.0	2.0	0.5	1.5	2.0	---	---
29	6.5	4.0	5.5	2.0	0.5	1.0	2.0	0.0	1.5	2.5	0.0	1.0
30	6.5	3.5	5.0	2.5	0.5	1.5	2.0	0.0	1.0	2.5	---	---
31	6.5	3.5	5.0	---	---	---	2.5	0.5	1.5	2.5	---	---
MONTH	18.0	3.5	10.5	7.5	0.0	3.4	2.5	0.0	1.2	2.5	0.0	1.0

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

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	0.5	1.5	4.0	---	---	2.5	---	---	7.5	5.0	6.0
2	2.5	0.0	1.5	2.5	0.5	1.5	2.0	0.0	1.0	7.0	5.0	6.0
3	2.5	0.0	1.5	2.0	---	---	3.5	0.0	1.5	9.0	4.0	6.5
4	2.5	0.0	1.0	2.0	---	---	2.5	0.0	1.0	10.5	4.5	7.5
5	2.0	---	---	2.5	0.5	1.5	1.5	---	---	11.0	5.5	8.5
6	2.0	---	---	2.5	---	---	2.0	---	---	9.5	7.0	8.0
7	2.5	---	---	3.0	---	---	3.0	---	---	8.5	6.5	7.5
8	2.5	---	---	4.5	0.0	2.0	2.5	0.0	1.0	12.0	5.0	8.5
9	3.0	---	---	2.5	---	---	3.5	0.5	2.0	9.5	7.0	8.0
10	3.0	---	---	1.5	---	---	6.5	1.0	3.5	10.0	5.5	7.5
11	2.0	---	---	2.5	---	---	5.5	1.5	3.5	12.5	5.5	9.0
12	1.5	---	---	3.5	0.0	1.5	7.0	1.5	4.0	10.0	8.0	9.0
13	1.5	---	---	3.5	---	---	5.5	1.0	3.5	9.5	7.0	8.0
14	1.5	---	---	2.5	---	---	4.5	0.0	2.5	9.0	6.5	8.0
15	1.5	---	---	4.0	---	---	5.5	2.0	3.5	12.0	6.5	9.0
16	1.5	---	---	6.0	---	---	3.5	0.5	2.0	14.5	7.5	10.5
17	1.5	---	---	6.0	1.0	3.0	4.0	---	---	15.5	7.5	11.5
18	2.0	---	---	4.5	0.0	2.0	3.0	0.0	1.5	16.5	8.5	12.0
19	3.5	0.5	1.5	4.5	---	---	6.0	1.0	3.5	17.5	9.5	13.0
20	4.0	0.0	1.5	3.0	---	---	8.0	3.5	6.0	17.5	10.0	13.5
21	3.5	0.5	2.0	2.5	0.5	1.5	7.5	3.0	5.5	13.0	10.0	11.0
22	3.5	0.5	2.0	1.5	0.0	1.0	7.0	4.5	5.0	15.5	7.5	11.0
23	3.0	0.0	1.5	1.5	---	---	5.0	3.0	4.5	15.5	9.0	12.0
24	2.5	---	---	2.0	---	---	4.0	2.0	3.0	13.5	10.0	11.5
25	1.5	---	---	1.0	0.0	0.5	7.0	2.0	4.0	13.5	10.0	11.5
26	2.0	---	---	1.0	---	---	5.5	3.0	4.0	12.0	10.0	11.0
27	2.5	---	---	1.0	---	---	5.0	3.0	3.5	13.0	9.5	11.0
28	3.5	---	---	1.0	---	---	9.5	2.5	5.5	12.0	9.5	11.0
29	---	---	---	2.0	0.0	1.0	10.5	6.0	8.0	13.0	9.5	11.0
30	---	---	---	1.0	---	---	9.5	4.5	7.0	12.5	10.5	11.5
31	---	---	---	1.5	---	---	---	---	---	16.0	10.0	12.5
MONTH	4.0	0.0	1.6	6.0	0.0	1.6	10.5	0.0	3.6	17.5	4.0	9.8

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.5	10.5	11.5	19.5	13.5	16.5	13.0	11.0	12.0	15.0	12.0	13.5
2	14.5	9.5	12.0	19.0	13.5	16.0	13.5	11.0	12.0	15.0	12.5	14.0
3	15.5	9.0	12.0	16.5	13.0	14.5	15.5	11.0	13.0	15.5	12.5	14.0
4	17.0	9.0	13.0	17.0	12.5	14.0	16.5	12.0	14.0	14.5	13.5	14.0
5	13.0	10.5	11.5	16.5	12.5	14.0	16.0	13.5	14.5	15.5	13.0	14.0
6	16.5	10.5	13.0	17.5	12.0	14.0	16.0	13.0	14.0	17.0	12.0	14.0
7	14.5	11.0	13.0	16.5	11.5	13.5	18.0	15.0	16.0	14.0	12.0	13.0
8	17.5	11.5	14.0	17.0	12.0	14.0	15.5	13.5	14.5	16.5	11.5	13.5
9	15.0	11.5	13.0	16.0	11.5	13.0	16.5	12.5	14.0	16.5	12.5	14.0
10	17.0	11.5	14.0	16.5	10.5	13.0	17.0	13.5	15.0	16.0	12.5	14.0
11	14.0	11.0	12.5	13.0	11.5	12.0	18.5	16.5	17.5	17.5	13.0	14.5
12	18.5	11.5	14.5	16.5	11.0	13.0	18.5	15.5	16.5	16.5	13.5	14.5
13	15.0	11.5	13.5	13.5	11.5	12.5	18.0	14.0	15.5	17.0	13.0	14.5
14	13.0	11.0	12.0	16.5	11.0	13.0	16.5	16.5	15.0	17.0	14.0	15.0
15	14.5	11.0	12.5	17.5	11.0	13.5	16.0	13.0	14.5	17.5	14.0	15.5
16	17.0	10.0	13.0	13.5	11.5	12.5	15.0	13.0	13.5	16.5	14.5	15.5
17	18.5	11.5	14.5	16.0	11.5	13.0	15.5	12.5	13.5	17.5	14.0	15.5
18	17.5	12.0	15.0	16.0	11.5	13.0	16.0	12.5	14.0	17.5	14.0	15.5
19	15.0	12.5	14.0	14.5	11.0	12.5	15.0	12.0	13.5	18.0	14.0	16.0
20	19.0	12.0	15.5	16.5	11.0	13.0	14.5	12.5	13.5	17.5	15.5	16.5
21	20.0	12.0	15.5	14.5	11.0	12.5	15.5	12.5	13.5	17.0	15.5	16.0
22	16.5	13.0	14.5	15.5	11.5	13.0	15.0	12.0	13.5	17.5	15.5	16.0
23	16.5	13.0	14.5	14.0	11.5	12.5	14.0	11.5	13.0	17.0	15.0	16.0
24	21.0	13.0	16.0	14.5	12.0	13.0	14.5	12.0	13.0	18.0	13.5	15.5
25	20.5	13.0	16.5	17.5	12.5	15.0	14.0	12.0	13.0	18.0	14.5	15.5
26	22.0	13.5	17.0	16.0	12.5	14.0	15.5	12.0	13.5	17.5	14.5	15.5
27	21.0	14.0	17.0	14.0	12.0	13.0	15.0	12.5	14.0	18.5	15.0	16.5
28	20.0	12.5	16.0	14.0	11.5	12.5	14.5	12.5	13.5	17.5	15.5	16.5
29	20.5	12.5	16.0	16.0	12.0	13.5	15.5	12.5	13.5	16.5	15.0	15.5
30	19.0	13.5	16.5	15.0	11.5	13.0	14.5	12.5	13.5	16.5	14.0	15.0
31	---	---	---	16.5	11.5	13.0	15.5	12.5	14.0	---	---	---
MONTH	22.0	9.0	14.1	19.5	10.5	13.4	18.5	11.0	14.0	18.5	11.5	15.0
YEAR	22.0	0.0	---									

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^2.

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

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

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	1930	*1,430	*8.01	May 2	1515	1,190	7.65
Apr 15	2000	514	6.29	Jun 14	0830	741	6.83

Minimum discharge, 6.5 ft^3/s, Sept. 12, 13, 14, 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	19	31	e30	e25	17	135	112	51	21	11	8.2
2	14	17	36	e31	e25	16	105	468	70	17	14	8.0
3	15	20	e39	e27	e24	16	87	249	39	16	13	7.8
4	15	18	e38	e27	e23	15	74	134	33	15	15	15
5	16	16	e38	e29	e23	e15	61	99	35	14	15	12
6	12	e18	e38	e31	e21	e15	64	81	59	13	46	9.7
7	11	e16	e36	e32	e21	e14	57	93	45	12	37	8.7
8	11	e18	32	e32	e20	e15	52	78	45	18	22	8.4
9	9.6	26	28	e28	e20	e15	50	93	37	24	19	7.9
10	9.6	67	33	e28	20	e14	63	81	36	14	44	7.7
11	9.7	81	e34	e28	19	e14	83	64	30	22	93	7.3
12	9.6	57	34	e28	19	e14	131	144	29	18	36	6.9
13	9.4	96	33	e26	18	e14	141	120	25	14	26	6.6
14	13	55	e35	e27	17	e14	111	116	406	13	19	6.7
15	12	43	e34	e26	15	e14	288	85	134	13	15	6.9
16	13	37	e31	e26	15	e14	319	68	79	11	13	14
17	49	32	e29	e27	16	e24	150	57	52	12	16	13
18	28	37	e30	e27	18	e77	106	50	42	10	24	8.8
19	40	31	e30	e27	18	e78	101	44	38	9.6	16	8.0
20	59	32	e64	e28	18	e44	152	38	35	9.1	12	15
21	33	35	e86	e28	18	e144	163	38	30	9.5	11	13
22	26	58	48	e29	17	117	146	40	28	21	10	9.5
23	23	149	39	e32	e18	91	122	36	29	17	8.9	37
24	21	69	36	e36	e18	e85	111	34	26	84	8.2	35
25	21	49	52	e38	e16	e97	119	35	22	65	8.2	20
26	48	42	67	e38	e16	e163	152	37	21	23	9.2	25
27	67	36	e58	e33	e16	e141	181	44	22	18	9.0	15
28	35	e32	e42	e30	e16	e123	127	36	21	22	8.1	14
29	26	e34	e36	e28	---	609	121	49	19	15	8.4	41
30	21	e35	e34	e27	---	502	97	99	32	13	10	22
31	19	---	e31	e25	---	192	---	65	---	11	8.9	---
TOTAL	712.9	1,275	1,232	909	530	2,723	3,669	2,787	1,570	594.2	605.9	418.1
MEAN	23.0	42.5	39.7	29.3	18.9	87.8	122	89.9	52.3	19.2	19.5	13.9
MAX	67	149	86	38	25	609	319	468	406	84	93	41
MIN	9.4	16	28	25	15	14	50	34	19	9.1	8.1	6.6
CFSM	0.63	1.16	1.08	0.80	0.52	2.39	3.33	2.45	1.43	0.52	0.53	0.38
IN.	0.72	1.29	1.25	0.92	0.54	2.76	3.72	2.82	1.59	0.60	0.61	0.42

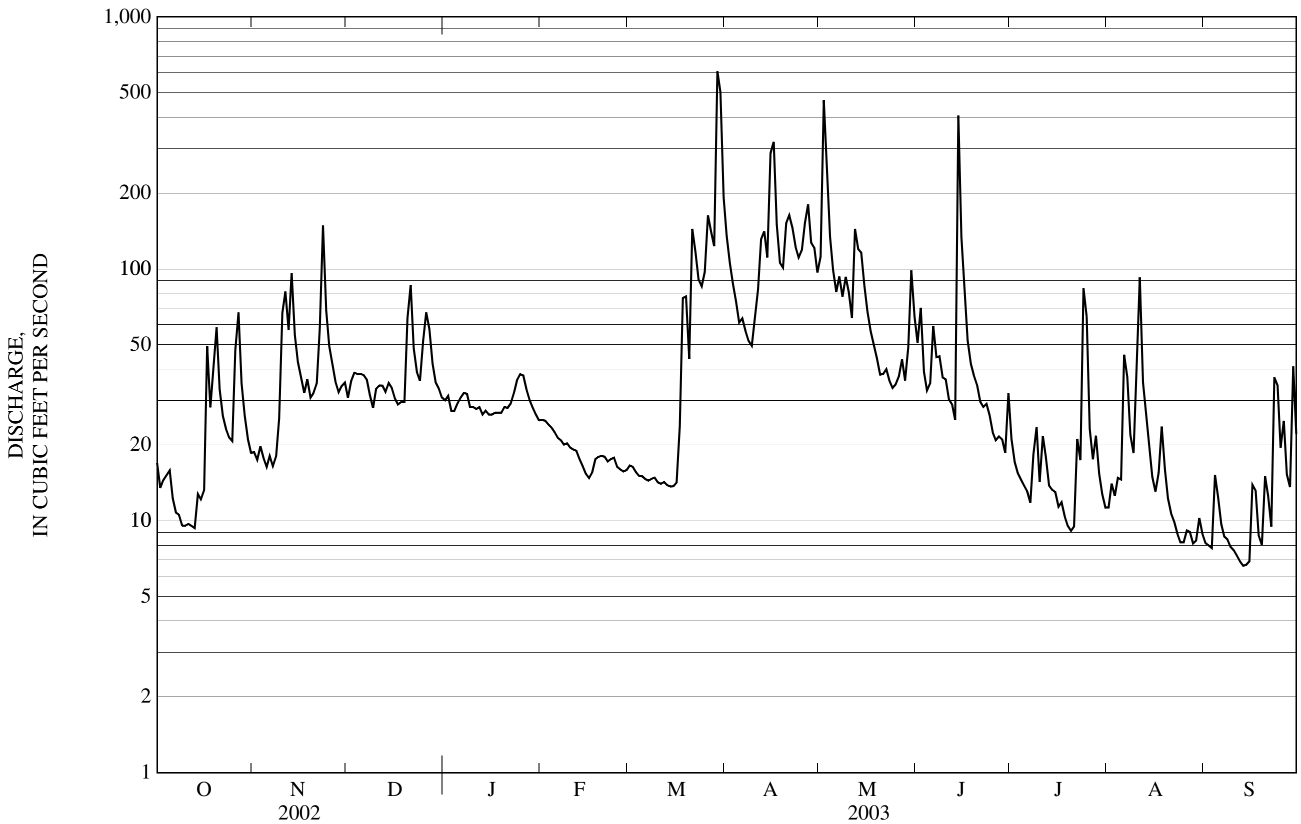
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	52.1	66.6	56.2	47.5	34.5	86.7	205	102	58.8	37.9	29.7	30.3
MAX	122	110	127	134	109	231	344	177	140	108	93.3	79.9
(WY)	(1991)	(1989)	(1991)	(1996)	(1996)	(1998)	(1996)	(1989)	(2002)	(1996)	(1988)	(1999)
MIN	23.0	33.0	25.9	22.1	13.4	18.8	74.2	51.3	26.7	13.0	9.91	11.1
(WY)	(2003)	(1995)	(1990)	(2002)	(1993)	(2001)	(1995)	(1998)	(1992)	(1991)	(2002)	(1995)

01129440 MOHAWK RIVER NEAR COLEBROOK, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	24,703.8		17,026.1			
ANNUAL MEAN	67.7		46.6		67.3	
HIGHEST ANNUAL MEAN					104	1996
LOWEST ANNUAL MEAN					44.1	1995
HIGHEST DAILY MEAN	1,040	Apr 14	609	Mar 29	2,450	Mar 31, 1998
LOWEST DAILY MEAN	4.9	Sep 10	6.6	Sep 13	4.9	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 4	7.1	Sep 9	5.3	Sep 4, 2002
MAXIMUM PEAK FLOW			1,430	Mar 29	a4,880	Mar 31, 1998
MAXIMUM PEAK STAGE			8.01	Mar 29	10.99	Mar 31, 1998
INSTANTANEOUS LOW FLOW			b6.5	Sep 12	c4.8	Sep 9, 2002
ANNUAL RUNOFF (CFSM)	1.84		1.27		1.83	
ANNUAL RUNOFF (INCHES)	25.04		17.26		24.92	
10 PERCENT EXCEEDS	130		105		133	
50 PERCENT EXCEEDS	34		28		38	
90 PERCENT EXCEEDS	9.5		11		15	

a From rating curve extended above 2,200 ft^3/s
b Also occurred September 13, 14, and 16
c Also occurred September 10 and 11, 2002
e Estimated



01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH

LOCATION.--Lat 44° 44'59", long 71° 37'54", Coos County, Hydrologic Unit 01080101, on left bank, at North Stratford, 400 ft downstream from Nulhegan River, 0.3 mi downstream of Vermont State Highway 105 bridge, 12.0 mi southwest of Colebrook, and at mile 344.5.

DRAINAGE AREA.--799 mi^2.

WATER-DISCHARGE RECORDS

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,600 ft^3/s, Mar. 30, gage height, 10.39 ft; minimum daily discharge, 285 ft^3/s, July 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	755	667	1,010	e907	e610	e413	3,860	1,980	942	565	399	512
2	624	625	e735	e1,170	e690	e407	2,860	4,720	1,130	416	425	499
3	579	535	e593	e1,180	e690	e398	2,240	6,670	1,100	345	425	487
4	511	548	e613	e1,140	e573	e405	1,870	3,600	791	366	427	545
5	476	543	e557	e1,070	e558	e391	1,570	2,440	639	365	499	570
6	454	555	e593	e1,020	e553	e391	1,420	1,980	809	355	1,650	416
7	423	628	e636	e962	e543	e387	1,270	1,920	908	331	1,810	302
8	411	580	e642	e918	e488	e371	1,280	1,760	915	351	1,110	298
9	389	613	e587	e868	e431	e365	1,150	1,990	725	449	779	375
10	377	885	e542	e845	e450	e364	1,150	2,160	739	386	1,170	388
11	372	1,890	e538	e839	e525	e351	1,520	1,650	667	389	3,210	382
12	361	1,840	e607	e817	e529	e343	1,980	2,380	592	475	2,820	358
13	354	1,880	e740	e803	e439	e340	3,160	3,060	548	398	1,640	376
14	386	1,760	e801	e796	e439	e337	2,870	2,740	4,180	365	1,230	373
15	388	1,360	e845	e775	e423	e343	3,800	2,220	4,230	335	966	373
16	382	1,160	e890	e766	e411	e343	7,020	1,760	2,400	325	779	521
17	627	1,020	e844	e755	e402	e349	5,580	1,440	1,570	325	674	617
18	849	1,080	e794	e755	e443	e369	3,080	1,230	1,150	315	630	574
19	808	1,030	e780	e755	e420	e442	2,320	1,080	916	297	589	553
20	2,000	944	e809	e755	e423	e655	2,510	947	783	286	580	567
21	1,710	979	e1,140	e755	e435	e1,110	3,290	867	656	285	555	589
22	1,150	1,070	e1,610	e755	e435	e1,490	3,230	855	561	338	530	561
23	899	3,070	e1,490	e755	e435	e2,110	2,890	766	518	423	507	640
24	767	2,740	e1,300	e748	e435	e2,180	2,530	683	475	761	480	967
25	674	1,860	e1,190	e741	e431	e2,430	2,260	649	428	1,240	467	577
26	696	1,490	e1,100	e702	e424	e2,920	2,470	657	389	677	469	630
27	1,320	1,260	e1,040	e684	e420	e3,550	3,340	746	360	485	480	533
28	1,320	977	e983	e678	e413	e3,440	3,300	703	340	509	508	482
29	1,030	804	e932	e660	---	e4,900	2,770	745	313	452	503	673
30	846	1,030	e907	e641	---	13,700	2,220	1,160	510	395	561	709
31	719	---	e899	e604	---	8,270	---	1,230	---	382	540	---
TOTAL	22,657	35,423	26,747	25,619	13,468	53,864	80,810	56,788	30,284	13,386	27,412	15,447
MEAN	731	1,181	863	826	481	1,738	2,694	1,832	1,009	432	884	515
MAX	2,000	3,070	1,610	1,180	690	13,700	7,020	6,670	4,230	1,240	3,210	967
MIN	354	535	538	604	402	337	1,150	649	313	285	399	298

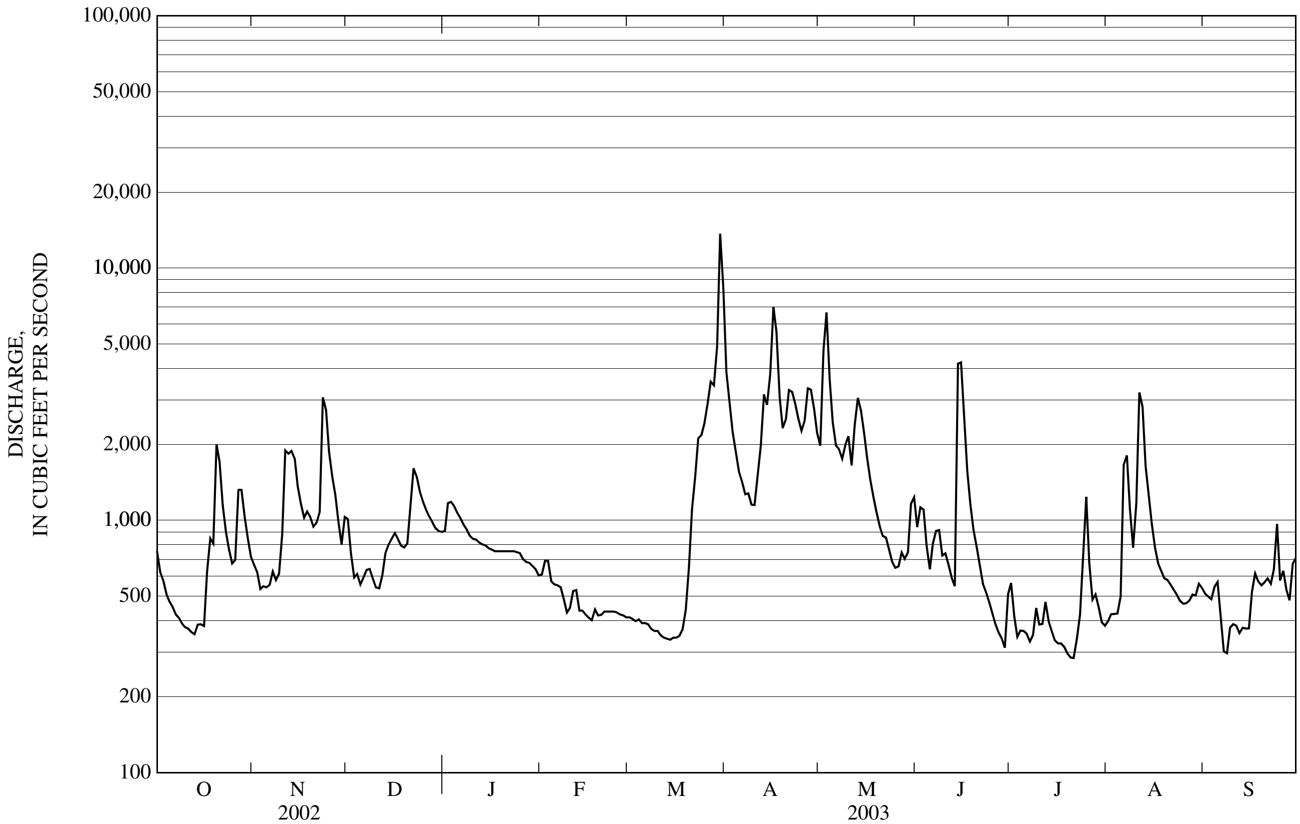
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1,272	1,585	1,522	1,357	1,213	1,642	3,915	2,529	1,279	892	839	909
MAX	3,445	3,119	3,095	2,537	3,295	6,254	7,348	6,018	3,724	2,818	2,475	3,203
(WY)	(1978)	(1960)	(1974)	(1998)	(1981)	(1936)	(1934)	(1972)	(1943)	(1996)	(1976)	(1954)
MIN	355	583	643	549	350	271	1,206	843	472	292	220	357
(WY)	(1949)	(1948)	(1948)	(1948)	(1940)	(1940)	(1995)	(1998)	(1962)	(1955)	(1940)	(1949)

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	638,868		401,905			
ANNUAL MEAN	1,750		1,101		1,579	
HIGHEST ANNUAL MEAN					2,246	1974
LOWEST ANNUAL MEAN					1,033	1995
HIGHEST DAILY MEAN	18,200	Apr 14	13,700	Mar 30	28,000	Mar 19, 1936
LOWEST DAILY MEAN	354	Oct 13	285	Jul 21	108	Sep 29, 1960
ANNUAL SEVEN-DAY MINIMUM	374	Oct 10	310	Jul 15	128	Aug 16, 1975
MAXIMUM PEAK FLOW			14,600	Mar 30	32,300	Mar 31, 1998
MAXIMUM PEAK STAGE			10.39	Mar 30	a20.60	Mar 6, 1979
10 PERCENT EXCEEDS	3,270		2,410		3,020	
50 PERCENT EXCEEDS	1,150		690		1,120	
90 PERCENT EXCEEDS	561		373		455	

a Ice jam. From floodmarks in well
e Estimated



01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH—Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: June 1999 to current year.

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

REMARKS.--Records fair.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.0	11.5	13.5	4.0	2.0	3.0	0.5	---	---	0.5	---	---
2	17.5	14.5	15.5	3.0	0.5	2.0	0.5	---	---	0.5	---	---
3	17.0	14.0	15.5	2.5	---	---	0.5	---	---	1.0	---	---
4	14.0	12.0	13.0	1.5	---	---	0.5	---	---	0.5	---	---
5	15.5	12.5	14.0	2.5	0.5	1.5	0.5	---	---	0.5	---	---
6	15.0	11.0	13.0	3.0	0.5	2.0	0.5	---	---	0.5	---	---
7	13.0	11.0	12.0	3.0	0.5	2.0	0.5	---	---	0.5	---	---
8	12.5	9.0	10.5	3.0	0.0	1.5	1.0	---	---	0.5	---	---
9	11.5	8.0	10.0	3.5	1.0	2.5	0.5	---	---	0.5	---	---
10	11.0	9.5	10.0	6.0	2.0	4.0	1.0	---	---	0.5	---	---
11	12.5	10.0	11.0	8.5	5.5	7.5	0.5	---	---	0.5	---	---
12	13.5	10.5	12.0	8.0	6.5	7.5	0.5	---	---	0.5	---	---
13	14.0	10.5	12.0	7.0	5.5	6.5	0.5	---	---	0.5	---	---
14	12.5	9.0	11.0	6.5	4.5	5.5	0.5	---	---	1.0	---	---
15	11.0	7.0	9.0	5.5	4.5	5.0	0.5	---	---	1.0	---	---
16	9.5	7.5	8.5	4.5	2.5	3.5	1.0	---	---	1.0	---	---
17	8.5	7.0	8.0	3.0	1.5	2.0	0.5	---	---	0.5	---	---
18	9.5	7.0	8.0	2.5	0.5	1.5	0.5	---	---	1.0	---	---
19	8.0	6.5	7.0	2.0	0.5	1.5	0.5	---	---	0.5	---	---
20	8.0	6.5	7.0	3.0	1.0	2.0	0.5	---	---	1.0	---	---
21	6.5	5.0	6.0	4.0	2.0	3.0	0.5	---	---	0.5	---	---
22	6.5	4.0	5.0	4.0	2.5	3.5	0.5	---	---	1.0	---	---
23	6.0	4.0	5.0	4.0	2.0	3.0	0.5	---	---	0.5	---	---
24	6.0	4.5	5.0	2.5	0.5	1.5	0.5	---	---	0.5	---	---
25	7.0	3.5	5.0	2.5	0.5	1.5	0.5	---	---	1.0	---	---
26	6.0	4.0	5.0	2.5	1.0	1.5	1.0	---	---	0.5	---	---
27	5.5	4.5	5.0	2.0	0.0	1.0	0.5	---	---	0.5	---	---
28	5.5	4.5	5.0	0.5	---	---	1.0	---	---	0.5	---	---
29	5.5	3.0	4.0	1.0	---	---	0.5	---	---	0.5	---	---
30	5.0	2.5	3.5	1.0	---	---	0.5	---	---	0.5	---	---
31	4.5	1.5	3.0	---	---	---	1.0	---	---	0.5	---	---
MONTH	17.5	1.5	8.8	8.5	0.0	3.0	1.0	---	---	1.0	---	---

01129500 CONNECTICUT RIVER AT NORTH STRATFORD, NH—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.5	---	---	1.0	---	---	2.0	---	---	8.5	7.0	8.0
2	0.5	---	---	0.5	---	---	2.0	0.5	1.5	9.0	6.0	7.5
3	0.5	---	---	1.0	---	---	3.0	0.5	1.5	7.5	5.0	6.5
4	0.5	---	---	0.5	---	---	2.5	1.0	1.5	9.5	6.5	8.0
5	0.5	---	---	0.5	---	---	1.5	---	---	11.0	7.0	9.0
6	1.0	---	---	0.5	---	---	2.0	---	---	9.5	8.0	9.0
7	0.5	---	---	0.5	---	---	3.5	---	---	9.0	7.5	8.5
8	1.0	---	---	0.5	---	---	3.0	0.5	1.5	11.0	7.0	9.0
9	0.5	---	---	1.0	---	---	3.0	1.0	2.0	10.0	8.5	9.5
10	1.0	---	---	0.5	---	---	6.5	1.5	4.0	10.5	7.0	9.0
11	1.0	---	---	1.0	---	---	6.0	3.0	4.5	12.0	7.5	10.0
12	1.0	---	---	0.5	---	---	7.0	3.0	5.0	11.0	9.0	10.0
13	0.5	---	---	0.5	---	---	6.0	3.5	5.0	10.0	8.5	9.0
14	1.0	---	---	0.5	---	---	5.0	3.0	4.0	9.0	8.0	8.5
15	1.0	---	---	0.5	---	---	6.5	3.5	5.0	10.0	8.0	9.0
16	0.5	---	---	0.5	---	---	5.5	2.0	4.5	13.0	8.5	10.5
17	0.5	---	---	0.5	---	---	3.0	1.0	2.0	14.5	10.0	12.0
18	1.0	---	---	0.5	---	---	3.5	2.0	2.5	15.5	10.5	13.0
19	0.5	---	---	0.5	---	---	5.0	1.5	3.5	17.5	12.0	14.5
20	0.5	---	---	0.5	---	---	8.5	4.0	6.0	18.5	13.5	16.0
21	0.5	---	---	0.5	---	---	8.5	6.5	7.5	15.5	13.0	15.0
22	0.5	---	---	0.5	---	---	7.5	6.0	7.0	16.5	11.5	13.5
23	0.5	---	---	0.5	---	---	6.5	4.5	5.5	16.5	12.0	14.0
24	0.5	---	---	0.5	---	---	5.0	3.0	4.0	15.5	13.0	14.0
25	0.5	---	---	0.5	---	---	6.0	3.0	4.5	15.5	12.0	13.5
26	1.0	---	---	0.5	---	---	6.0	4.5	5.0	13.5	12.5	13.0
27	0.5	---	---	1.0	---	---	6.0	3.5	4.5	14.5	12.0	13.0
28	1.0	---	---	1.0	---	---	7.5	4.0	6.0	14.0	12.0	13.0
29	---	---	---	2.5	---	---	10.5	6.5	8.5	14.5	12.5	13.0
30	---	---	---	2.0	0.0	1.0	10.0	7.5	8.5	14.0	12.0	13.0
31	---	---	---	1.0	---	---	---	---	---	15.5	12.0	14.0
MONTH	1.0	---	---	2.5	0.0	1.0	10.5	0.5	4.4	18.5	5.0	11.1
	JUNE			JULY			AUGUST			SEPTEMBER		
1	14.0	13.0	14.0	23.5	18.5	21.0	21.0	18.0	19.0	16.5	13.5	15.0
2	15.0	12.0	13.5	23.5	19.0	21.0	19.5	16.5	18.0	17.5	15.0	16.0
3	15.5	11.5	13.5	25.0	19.0	22.0	22.0	16.5	19.0	19.0	15.0	16.5
4	18.0	12.0	15.0	25.5	20.5	22.5	22.5	19.0	20.5	17.5	16.0	16.5
5	15.5	13.5	14.5	25.5	21.0	23.0	23.0	19.5	21.0	17.5	15.5	16.5
6	18.0	13.0	15.5	25.5	21.0	23.0	21.0	19.0	20.0	19.5	15.0	17.0
7	15.5	14.0	15.0	24.0	20.0	22.0	22.0	19.0	20.0	17.0	14.5	15.5
8	18.5	14.0	16.0	25.0	21.0	22.5	22.0	19.0	20.5	19.0	13.5	16.0
9	17.5	15.0	16.0	22.5	20.0	21.0	23.5	19.5	21.0	18.0	13.5	15.5
10	19.0	14.0	16.5	23.0	17.0	20.0	21.0	19.5	20.5	18.5	13.5	15.5
11	16.5	14.5	16.0	20.0	17.0	18.5	20.0	18.5	19.5	20.0	14.5	17.0
12	20.0	14.5	17.0	20.5	16.5	18.5	20.0	19.0	19.5	20.5	15.5	17.5
13	17.0	15.0	16.0	20.0	17.0	18.5	22.0	18.5	20.0	20.5	15.5	18.0
14	15.5	12.0	13.0	23.0	16.5	19.5	22.0	18.5	20.5	20.5	17.0	19.0
15	13.5	11.5	12.5	24.0	17.5	20.5	22.0	18.5	20.0	21.5	17.5	19.5
16	16.0	12.0	14.0	21.0	19.0	19.5	21.0	19.0	19.5	19.5	17.0	18.5
17	18.5	13.0	15.5	23.0	18.5	20.5	21.0	18.0	19.5	19.0	16.0	17.0
18	18.5	15.5	17.0	22.0	18.5	20.5	21.5	18.0	19.5	18.0	15.0	16.5
19	18.0	15.5	16.5	21.0	17.0	19.0	22.0	17.5	19.5	18.0	15.0	16.5
20	21.0	15.5	17.5	23.0	18.0	20.0	21.5	18.5	19.5	17.5	16.0	16.5
21	22.0	16.0	18.5	21.0	18.5	20.0	22.5	18.0	20.0	17.5	15.5	16.5
22	20.5	17.5	19.0	21.0	18.5	19.5	22.0	18.5	20.0	18.0	15.0	16.5
23	21.0	17.0	19.0	21.0	19.0	20.0	20.5	17.0	19.0	16.0	14.5	15.5
24	24.0	18.0	21.0	19.5	17.5	18.5	19.0	15.0	17.0	16.0	14.0	14.5
25	24.5	18.5	21.5	21.0	17.0	18.5	16.0	14.5	15.5	16.0	12.5	14.5
26	27.5	20.5	24.0	21.0	17.5	19.5	19.0	14.5	16.5	16.5	13.0	15.0
27	28.0	22.0	24.5	20.0	18.5	19.0	20.0	16.5	18.0	19.0	14.5	16.0
28	26.5	20.5	23.5	19.0	17.0	18.0	18.5	16.0	17.0	17.0	15.5	16.0
29	25.5	20.0	23.0	22.0	16.0	18.5	16.0	14.5	15.5	16.0	14.5	15.5
30	23.5	20.0	22.0	22.0	17.0	19.5	16.5	14.5	15.5	16.0	13.0	14.0
31	---	---	---	23.5	18.0	20.5	17.5	13.5	15.5	---	---	---
MONTH	28.0	11.5	17.4	25.5	16.0	20.1	23.5	13.5	18.9	21.5	12.5	16.3
YEAR	28.0	0.0	---									

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH

LOCATION.--Lat 44° 37'30", long 71° 28'10", Coos County, Hydrologic Unit 01080101, on left bank, 75 ft upstream from Emerson Road bridge, 0.2 mi downstream from Nash Stream, 2.8 mi northeast of Groveton, and 3.4 mi northwest of Stark.

DRAINAGE AREA.--232 mi^2.

PERIOD OF RECORD.--Discharge records: August 1940 to November 1980, October 1982 to current year.

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

REMARKS.--Records good except those for periods of estimated record, which are poor. Prior to May 21, 1969, some regulation by pond 9 mi upstream on Nash Stream. Small diversion upstream for municipal supply of Berlin.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	1745	*4,360	*6.36	May 2	2030	2,930	5.49

Minimum discharge, 53 ft^3/s, Jan. 1, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	151	269	e240	e129	e102	1,360	892	473	198	112	101
2	123	140	207	e265	e131	e104	1,010	1,650	505	e145	133	90
3	128	114	e199	e235	e133	e101	780	2,610	426	e130	167	85
4	126	127	e191	e219	e137	e97	635	1,680	344	e120	194	155
5	130	135	e193	e209	e138	e99	512	1,120	309	e112	190	277
6	136	138	e214	e200	e133	e102	478	921	439	109	245	174
7	117	142	e202	e191	e127	e98	439	860	408	103	525	134
8	106	129	e185	e186	e124	e97	412	772	369	175	298	111
9	93	155	e179	e182	e121	e96	369	814	319	187	228	97
10	85	222	e178	e178	e121	e95	361	877	310	143	793	87
11	85	638	e187	e174	e115	e96	462	704	283	181	1,170	81
12	90	945	e191	e169	e111	e101	565	1,080	265	327	648	76
13	82	958	e194	e164	e103	e94	984	1,290	244	210	468	70
14	107	803	e203	e161	e100	e93	938	1,300	1,440	e140	501	68
15	132	531	e235	e156	e99	e90	1,120	1,060	1,680	e110	322	70
16	118	409	e235	e152	e98	e89	2,170	833	902	e93	250	97
17	277	353	e198	e148	e100	e112	1,770	692	586	101	218	176
18	361	362	e176	e146	e101	e181	1,050	590	445	100	240	136
19	293	322	e198	e143	e108	e269	813	522	378	90	223	104
20	593	291	e238	e139	e114	e298	926	470	336	88	180	109
21	420	293	e615	e136	e110	e526	1,250	428	289	78	157	174
22	279	320	e522	e135	e112	e986	1,320	403	256	180	140	140
23	220	803	e350	e135	e114	e993	1,160	364	242	262	126	213
24	187	707	e277	e135	e117	e889	991	340	221	280	110	559
25	165	476	e243	e134	e114	e940	855	329	196	432	101	335
26	179	368	e223	e136	e110	e1,150	848	345	e170	280	103	252
27	279	330	e219	e136	e108	1,130	1,160	482	e155	186	110	202
28	267	236	e226	e134	e104	1,120	1,190	435	149	233	103	173
29	205	256	e223	e132	---	1,850	1,180	445	136	185	93	281
30	181	281	e215	e131	---	4,000	1,060	662	e165	146	119	277
31	158	---	e209	e130	---	2,760	---	610	---	123	116	---
TOTAL	5,870	11,135	7,394	5,131	3,232	18,758	28,168	25,580	12,440	5,247	8,383	4,904
MEAN	189	371	239	166	115	605	939	825	415	169	270	163
MAX	593	958	615	265	138	4,000	2,170	2,610	1,680	432	1,170	559
MIN	82	114	176	130	98	89	361	329	136	78	93	68
CFSM	0.82	1.60	1.03	0.71	0.50	2.61	4.05	3.56	1.79	0.73	1.17	0.70
IN.	0.94	1.79	1.19	0.82	0.52	3.01	4.52	4.10	1.99	0.84	1.34	0.79
(†)	1.40	1.91	2.07	2.33	2.92	3.16	2.79	2.10	2.20	2.08	2.06	2.01

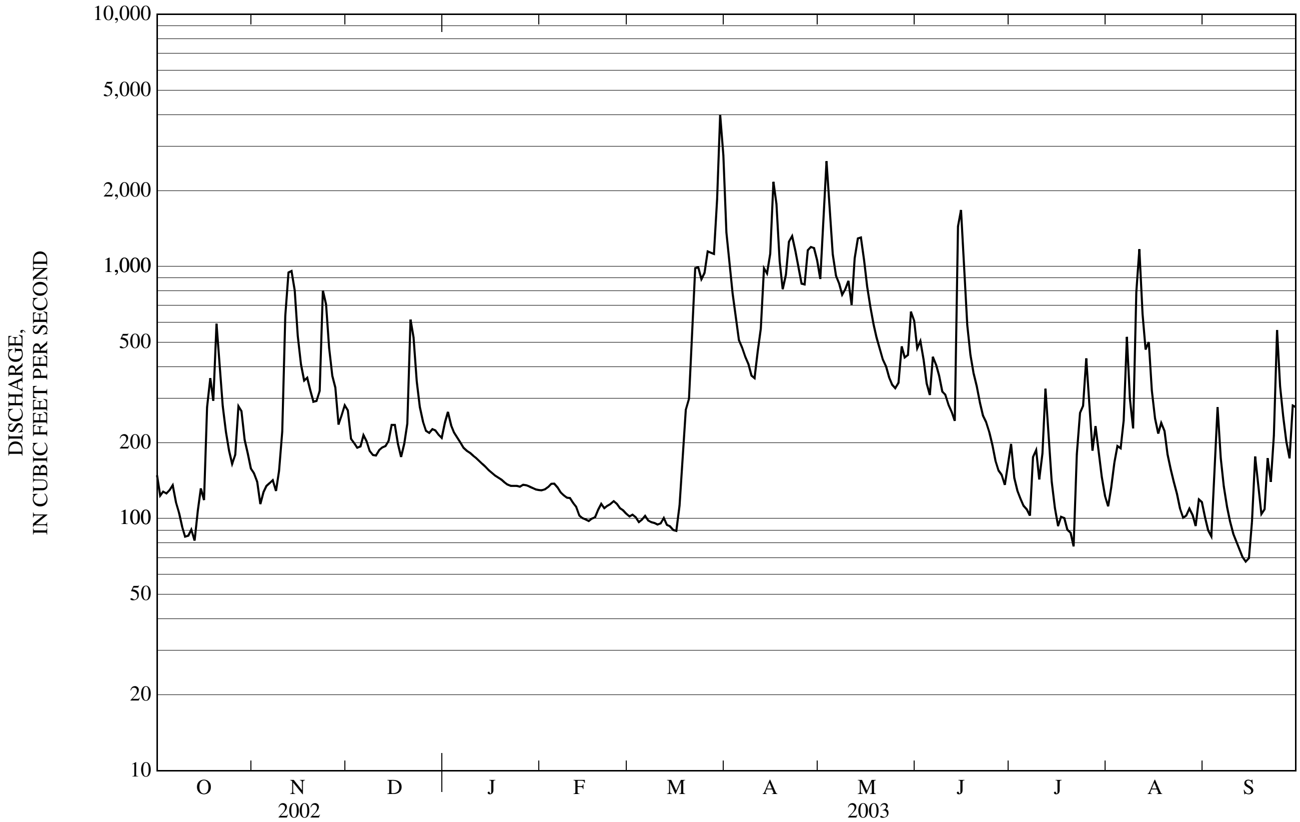
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	310	445	347	258	215	464	1,431	1,117	456	241	198	201
MAX	1,057	1,128	994	748	851	1,374	2,416	2,695	1,119	840	572	1,427
(WY)	(1991)	(1970)	(1974)	(1978)	(1970)	(1945)	(1954)	(1972)	(2002)	(1996)	(1969)	(1954)
MIN	69.7	118	68.6	53.3	56.6	74.4	532	402	179	94.0	57.2	51.0
(WY)	(1949)	(1948)	(1948)	(1948)	(1980)	(1941)	(1995)	(1941)	(1953)	(1991)	(2001)	(1948)

01130000 UPPER AMMONOOSUC RIVER NEAR GROVETON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	184,609		136,242			
ANNUAL MEAN	506		373		474	
HIGHEST ANNUAL MEAN					696	1954
LOWEST ANNUAL MEAN					297	1980
HIGHEST DAILY MEAN	7,900	Apr 15	4,000	Mar 30	8,350	Apr 23, 1954
LOWEST DAILY MEAN	27	Sep 10	68	Sep 14	27	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	30	Sep 5	78	Sep 9	30	Sep 5, 2002
MAXIMUM PEAK FLOW			4,360	Mar 30	a24,100	May 20, 1969
MAXIMUM PEAK STAGE			6.36	Mar 30	b12.01	May 20, 1969
INSTANTANEOUS LOW FLOW			c53	Jan 1	26	Sep 11, 2002
ANNUAL RUNOFF (CFSM)	2.18		1.61		2.04	
ANNUAL RUNOFF (INCHES)	29.60		21.85		27.73	
10 PERCENT EXCEEDS	967		942		1,110	
50 PERCENT EXCEEDS	216		200		243	
90 PERCENT EXCEEDS	67		101		95	

(†)Diversion in cubic feet per second for municipal supply of Berlin; records furnished by City of Berlin
a From rating curve extended above 8,700 ft^3/s on basis of contracted-opening measurement of peak flow
b From floodmarks. Caused by failure of dam on Nash Stream
c Result of freezeup
e Estimated



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 Dalton Hill Road bridge, 1,200 ft downstream from dam of Gilman Paper Co., 0.3 mi south of Post Office in Gilman, VT, 0.3 mi north of Dalton Hill Road and State Highway 135 intersection in Cusham, 1.2 mi downstream from Dalton, and at mile 300.1.

DRAINAGE AREA.--1,514 mi^2.

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.

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

GAGE.--Water-stage recorder. Datum of gage is 799.89 ft above National Geodetic Vertical Datum of 1929. Prior to 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 power plants 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^3.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,900 ft^3/s, Mar. 31, gage height, 17.75 ft; minimum daily discharge, 576 ft^3/s, Sep, 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,850	1,180	e1,940	1,540	e1,150	835	15,200	4,450	2,660	981	774	872
2	1,230	1,160	e1,480	2,090	1,240	780	8,000	5,160	2,220	1,280	759	726
3	1,150	1,130	1,100	2,220	1,190	701	5,420	11,400	2,390	786	835	675
4	1,130	1,020	e1,220	2,140	903	e810	4,380	10,900	2,030	734	873	989
5	967	1,000	e1,030	2,000	849	859	3,730	6,830	1,710	740	907	1,310
6	960	1,010	1,130	1,810	e1,050	791	3,170	5,040	1,760	756	1,080	1,220
7	919	1,020	1,270	1,730	e1,220	776	2,870	4,320	2,200	680	2,500	973
8	649	1,020	1,300	1,550	1,080	754	2,720	4,090	1,840	696	2,580	634
9	650	1,020	e1,190	1,510	787	723	2,550	3,910	1,840	850	1,470	602
10	767	1,150	e1,040	1,520	814	690	2,390	4,680	1,680	873	2,190	609
11	832	2,000	992	1,540	1,110	742	2,710	4,170	1,570	834	4,470	627
12	729	3,810	1,160	1,410	1,080	708	3,300	4,720	1,480	932	5,110	638
13	728	4,190	1,200	1,400	825	672	4,720	6,480	1,340	994	3,600	614
14	703	4,310	1,180	e1,350	831	698	5,570	6,890	2,920	909	2,970	576
15	659	3,330	1,520	e1,310	841	660	5,250	6,000	8,070	837	2,340	626
16	682	2,640	1,670	e1,320	769	674	8,340	4,750	6,080	685	1,960	736
17	986	2,260	1,570	e1,310	707	672	10,200	3,860	3,960	592	1,360	978
18	1,610	2,310	1,450	e1,310	898	730	7,800	3,260	2,810	593	1,410	1,170
19	1,690	2,350	1,270	e1,270	783	989	5,070	2,990	2,280	653	1,340	884
20	1,990	2,170	1,310	e1,240	792	1,540	4,370	2,450	1,730	609	1,340	819
21	3,030	2,080	2,050	e1,280	862	2,090	5,150	2,290	1,500	590	1,230	1,160
22	2,500	2,070	3,080	e1,280	853	2,980	6,020	2,020	1,480	683	1,110	1,020
23	2,050	3,420	2,980	e1,260	847	e4,400	5,830	2,020	1,220	901	1,000	1,060
24	1,410	5,700	2,520	e1,250	833	4,720	5,480	1,670	1,090	1,050	737	2,100
25	1,320	4,320	2,190	e1,230	823	e5,150	4,980	1,750	1,230	2,300	849	2,190
26	1,200	3,240	2,090	1,170	822	e6,050	4,870	1,720	1,040	2,430	825	1,710
27	1,500	2,680	1,870	1,170	831	7,220	5,680	1,990	1,020	1,300	813	1,190
28	2,040	e2,030	1,700	e1,360	835	7,440	6,570	2,190	905	1,280	766	1,160
29	2,040	e1,680	1,700	e1,170	---	e8,520	5,960	1,940	700	1,230	799	1,160
30	1,630	1,750	1,680	1,080	---	e15,100	5,360	2,430	851	965	814	1,500
31	1,370	---	1,550	985	---	19,400	---	2,910	---	786	854	---
TOTAL	40,971	69,050	49,432	44,805	25,625	98,874	163,660	129,280	63,606	29,529	49,665	30,528
MEAN	1,322	2,302	1,595	1,445	915	3,189	5,455	4,170	2,120	953	1,602	1,018
MAX	3,030	5,700	3,080	2,220	1,240	19,400	15,200	11,400	8,070	2,430	5,110	2,190
MIN	649	1,000	992	985	707	660	2,390	1,670	700	590	737	576

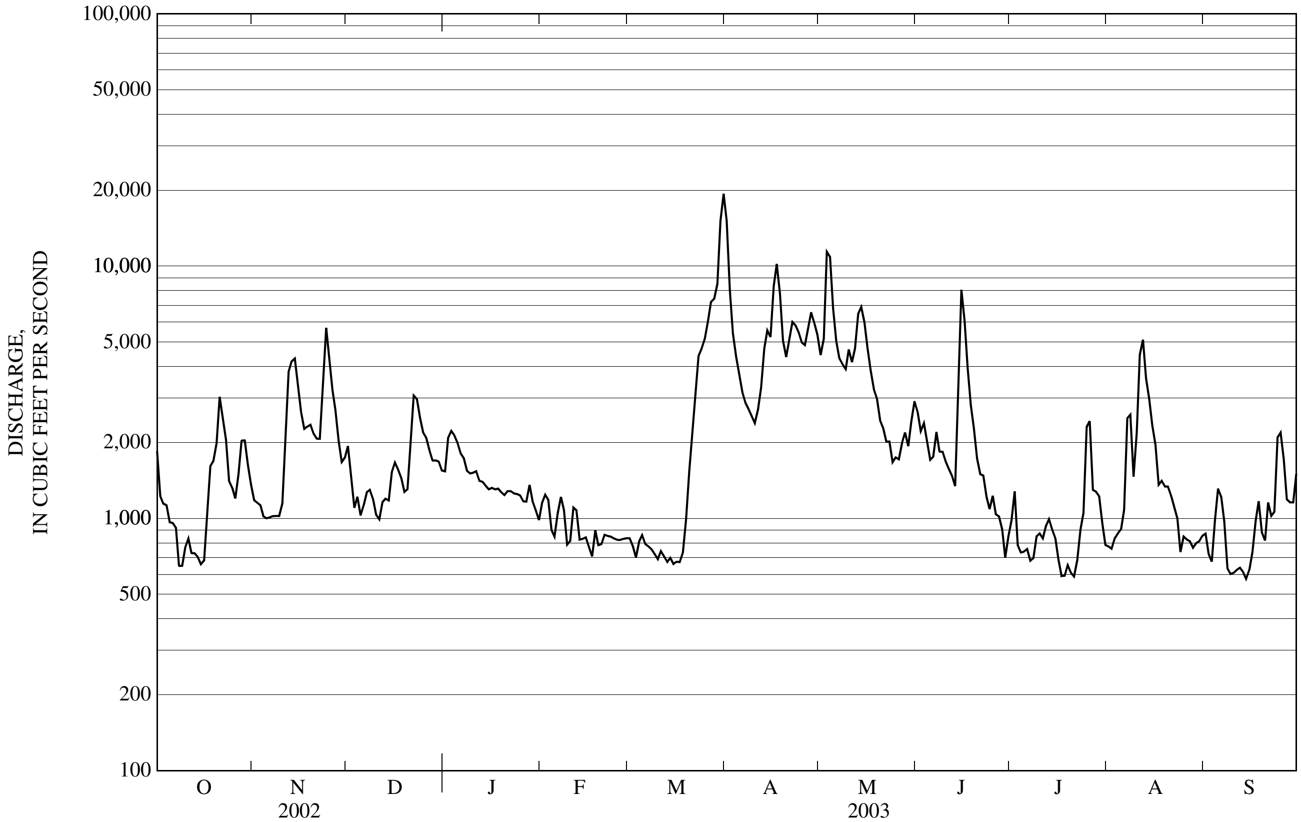
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1927 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	2,160	2,848	2,486	2,119	1,809	2,926	7,802	5,489	2,526	1,574	1,407	1,508
MAX	6,129	7,331	5,786	4,321	6,093	12,140	15,380	11,890	6,415	5,059	3,662	7,140
(WY)	(1978)	(1928)	(1974)	(1996)	(1981)	(1936)	(1934)	(1972)	(2002)	(1996)	(1976)	(1954)
MIN	654	1,066	860	751	533	482	2,631	1,951	1,030	654	406	654
(WY)	(1949)	(1948)	(1948)	(1948)	(1940)	(1940)	(1995)	(1941)	(1988)	(1955)	(1942)	(1995)

01131500 CONNECTICUT RIVER NEAR DALTON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1927 - 2003	
ANNUAL TOTAL	1,145,656		795,025			
ANNUAL MEAN	3,139		2,178		2,892	
HIGHEST ANNUAL MEAN					4,203	1996
LOWEST ANNUAL MEAN					1,934	1995
HIGHEST DAILY MEAN	30,500	Apr 16	19,400	Mar 31	46,500	Mar 20, 1936
LOWEST DAILY MEAN	429	Sep 9	576	Sep 14	115	Oct 3, 1937
ANNUAL SEVEN-DAY MINIMUM	618	Sep 8	613	Sep 9	265	Sep 8, 1957
MAXIMUM PEAK FLOW			19,900	Mar 31	48,300	Mar 20, 1936
MAXIMUM PEAK STAGE			17.75	Mar 31	25.60	Mar 20, 1936
10 PERCENT EXCEEDS	6,180		5,000		6,050	
50 PERCENT EXCEEDS	1,870		1,310		1,850	
90 PERCENT EXCEEDS	987		729		816	

e Estimated



01133000 EAST BRANCH PASSUMPSIC RIVER NEAR EAST HAVEN, VT

LOCATION.--Lat 44° 38'02", long 71° 53'53", Caledonia County, Hydrologic Unit 01080102, on right bank, in Town of Burke, downstream of Watkins Road, 0.5 mi upstream from Flower Brook, 0.9 mi south of Hartwellville, 2.1 mi south of East Haven, 4.2 mi east of Post Office in West Burke, and 8.4 mi upstream from mouth.

DRAINAGE AREA.--53.8 mi^2.

PERIOD OF RECORD.--Discharge records: July 1939 to October 1945, October 1948 to September 1979, October 1997 to current year. Prior to October 1951, published as Passumpsic River near East Haven.

REVISED RECORDS.--WSP 1141: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 943.88 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to October 1, 1973, at datum 2.00 ft higher.

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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2245	*1,530	*6.85	Jun 14	0945	825	5.20
May 2	1700	973	5.57	Aug 13	1300	913	5.42

Minimum discharge, 20 ft^3/s, Sept. 13.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	46	e53	e69	e37	e35	212	202	109	61	35	31
2	45	42	e50	e61	e37	e37	168	520	123	48	45	29
3	43	41	e47	e56	e38	e38	137	437	92	42	40	28
4	37	46	e44	e54	e39	e32	117	251	81	40	37	54
5	39	42	e44	e54	e37	e35	105	191	77	39	37	53
6	35	45	e45	e53	e35	e34	104	174	89	36	47	38
7	33	49	e46	e53	e33	e32	92	182	73	33	51	32
8	33	48	e46	e52	e32	e33	86	154	72	35	40	30
9	30	45	e45	e52	e34	e34	82	149	66	32	36	26
10	30	78	e43	e52	e34	e30	96	136	74	28	175	24
11	31	136	e36	e51	e31	e29	128	121	65	50	267	23
12	30	97	e38	e50	e30	e30	203	327	78	47	118	22
13	30	136	e42	e50	e29	e29	298	302	68	39	397	22
14	39	90	e46	e50	e29	e28	250	283	548	35	189	23
15	34	69	e48	e49	e28	e28	385	202	263	30	88	24
16	35	56	e49	e48	e28	e30	531	159	139	28	64	29
17	71	57	e47	e48	e29	e40	286	134	99	30	54	30
18	65	94	e45	e47	e30	e125	200	119	83	28	46	24
19	73	70	e47	e46	e32	132	180	106	74	24	41	23
20	127	65	e77	e44	e34	92	243	98	67	23	37	32
21	77	67	e130	e42	e38	273	286	103	59	25	36	33
22	59	80	e105	e41	e39	399	279	97	55	56	33	28
23	51	363	e83	e40	e41	271	270	86	52	53	30	123
24	47	169	e61	e39	e38	166	237	82	48	162	26	128
25	43	108	e57	e38	e37	204	219	86	44	143	25	61
26	56	88	e54	e38	e36	302	335	94	43	63	29	60
27	103	e71	e52	e36	e35	267	389	100	41	50	34	45
28	79	e64	e48	e35	e35	235	275	89	36	76	29	53
29	62	e59	e46	e35	---	692	234	101	34	49	27	156
30	52	e55	e45	e35	---	796	181	171	90	44	53	75
31	47	---	e51	e36	---	340	---	132	---	38	36	---
TOTAL	1,587	2,476	1,670	1,454	955	4,848	6,608	5,388	2,842	1,487	2,202	1,359
MEAN	51.2	82.5	53.9	46.9	34.1	156	220	174	94.7	48.0	71.0	45.3
MAX	127	363	130	69	41	796	531	520	548	162	397	156
MIN	30	41	36	35	28	28	82	82	34	23	25	22
CFSM	0.95	1.53	1.00	0.87	0.63	2.91	4.09	3.23	1.76	0.89	1.32	0.84
IN.	1.10	1.71	1.15	1.01	0.66	3.35	4.57	3.73	1.97	1.03	1.52	0.94

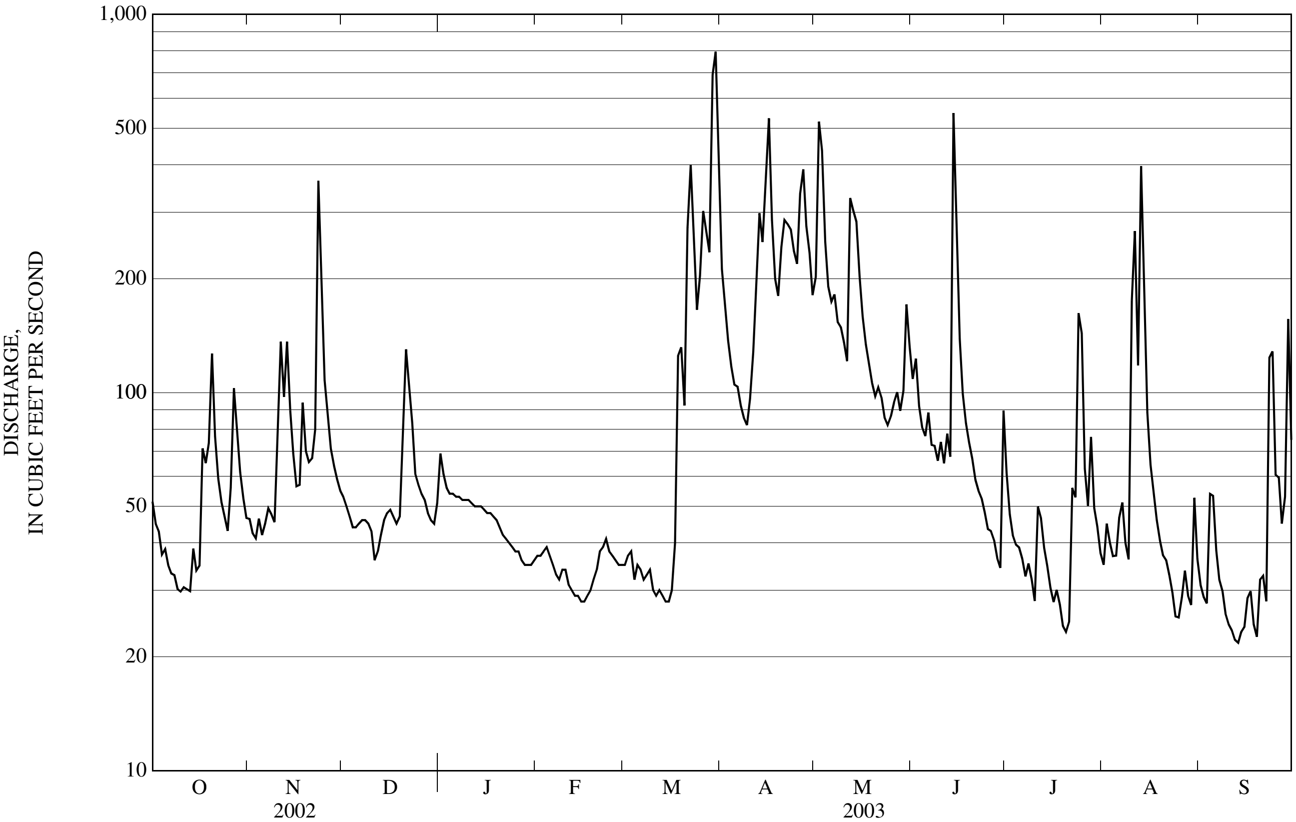
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1979, 1998 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	81.0	99.6	84.5	64.4	54.0	97.0	289	211	111	67.4	55.3	60.7
MAX	218	232	250	148	114	244	469	423	325	241	121	177
(WY)	(1946)	(1960)	(1974)	(1978)	(1976)	(1953)	(1954)	(1972)	(2002)	(1973)	(1962)	(1954)
MIN	24.4	39.3	41.0	21.4	16.9	20.5	154	76.1	48.9	31.7	19.8	28.3
(WY)	(1949)	(1979)	(1956)	(1940)	(1940)	(1940)	(1972)	(1998)	(1953)	(1955)	(1999)	(1978)

01133000 EAST BRANCH PASSUMPSIC RIVER NEAR EAST HAVEN, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 79, 1998 -2003	
ANNUAL TOTAL	45,655		32,876			
ANNUAL MEAN	125		90.1		106	
HIGHEST ANNUAL MEAN					166	1973
LOWEST ANNUAL MEAN					76.0	1941
HIGHEST DAILY MEAN	2,310	Jun 12	796	Mar 30	2,310	Jun 12, 2002
LOWEST DAILY MEAN	a16	Sep 7	b22	Sep 12	c12	Sep 1, 1999
ANNUAL SEVEN-DAY MINIMUM	17	Sep 4	23	Sep 9	12	Aug 31, 1999
MAXIMUM PEAK FLOW			1,530	Mar 29	4,450	Jun 30, 1973
MAXIMUM PEAK STAGE			6.85	Mar 29	11.45	Jun 30, 1973
INSTANTANEOUS LOW FLOW			20	Sep 13	d11	Sep 4, 1999
ANNUAL RUNOFF (CFSM)	2.32		1.67		1.97	
ANNUAL RUNOFF (INCHES)	31.57		22.73		26.78	
10 PERCENT EXCEEDS	250		207		230	
50 PERCENT EXCEEDS	65		50		64	
90 PERCENT EXCEEDS	30		30		30	

a Also occurred on September 8-10, 2002
b Also occurred on September 13
c Also occurred on August 15 and 16, 2001
d Also occurred on August 16, 2001
e Estimated



01134500 MOOSE RIVER AT VICTORY, VT

LOCATION.--Lat 44° 30'42", long 71° 50'13", Essex County, Hydrologic Unit 01080102, on right bank, 0.5 mi northeast of Victory, 0.8 mi downstream from Cold Brook, 1.1 mi upstream from Stanley Brook, 3.1 mi north of North Concord, and 5.1 mi southwest of Burke Road and River Road intersection in Gallup Mills.

DRAINAGE AREA.--75.2 mi^2.

PERIOD OF RECORD.--Discharge records: January 1947 to current year.

REVISED RECORDS.--WSP 1381: Drainage area. WDR NH-VT-96-1: 1973(M), 1995(M).

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0945	*2,230	*9.31	May 3	0845	1,180	7.72

Minimum discharge, 10 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	56	e83	e70	e36	e34	472	257	108	37	32	19
2	43	50	e74	e82	e37	e35	320	404	110	26	40	16
3	43	38	e60	e71	e38	e33	241	1,000	83	22	47	15
4	40	42	e55	e64	e40	e32	193	562	65	19	37	28
5	38	44	e51	e63	e40	e32	159	297	56	17	33	57
6	43	45	e53	e62	e38	e33	147	231	101	16	71	37
7	34	56	e54	e61	e36	e30	131	226	75	14	127	27
8	31	51	e55	e60	e35	e30	122	199	66	25	61	22
9	28	49	e55	e61	e36	e30	111	212	57	26	43	19
10	25	77	e47	e58	e38	e29	117	212	63	18	243	16
11	26	292	e48	e52	e37	e30	194	157	51	25	371	14
12	31	230	e49	e51	e35	e32	223	438	55	44	154	13
13	28	309	e50	e50	e34	e30	458	558	48	29	183	13
14	38	233	e53	e50	e32	e29	409	600	480	23	167	12
15	41	152	e60	e50	e32	e28	427	414	673	18	81	14
16	34	116	e59	e48	e32	e26	750	262	258	16	54	17
17	73	96	e55	e47	e32	e28	645	202	133	19	45	26
18	94	140	e49	e45	e33	e33	323	160	96	18	40	21
19	81	125	e47	e44	e34	e55	240	136	76	14	36	16
20	231	107	e49	e42	e30	e94	292	115	65	13	31	15
21	134	121	e132	e41	e29	e120	407	106	53	13	27	19
22	86	138	e171	e41	e29	e260	386	106	45	24	24	18
23	65	452	e117	e40	e30	e345	373	91	43	37	21	69
24	54	470	e83	e40	e32	e320	347	84	37	188	18	281
25	48	232	e76	e39	e35	e350	277	84	32	569	15	91
26	52	172	e70	e39	e34	e420	379	95	28	180	16	94
27	176	e119	e65	e38	e32	e510	524	133	25	76	17	62
28	134	e104	e61	e38	e33	533	467	107	23	139	16	45
29	93	e93	e59	e38	---	661	390	105	19	81	15	158
30	71	e90	e57	e37	---	1,810	301	187	27	52	27	112
31	59	---	e60	e37	---	917	---	152	---	40	25	---
TOTAL	2,027	4,299	2,057	1,559	959	6,949	9,825	7,892	3,051	1,838	2,117	1,366
MEAN	65.4	143	66.4	50.3	34.2	224	328	255	102	59.3	68.3	45.5
MAX	231	470	171	82	40	1,810	750	1,000	673	569	371	281
MIN	25	38	47	37	29	26	111	84	19	13	15	12
CFSM	0.87	1.91	0.88	0.67	0.46	2.98	4.36	3.39	1.35	0.79	0.91	0.61
IN.	1.00	2.13	1.02	0.77	0.47	3.44	4.86	3.90	1.51	0.91	1.05	0.68

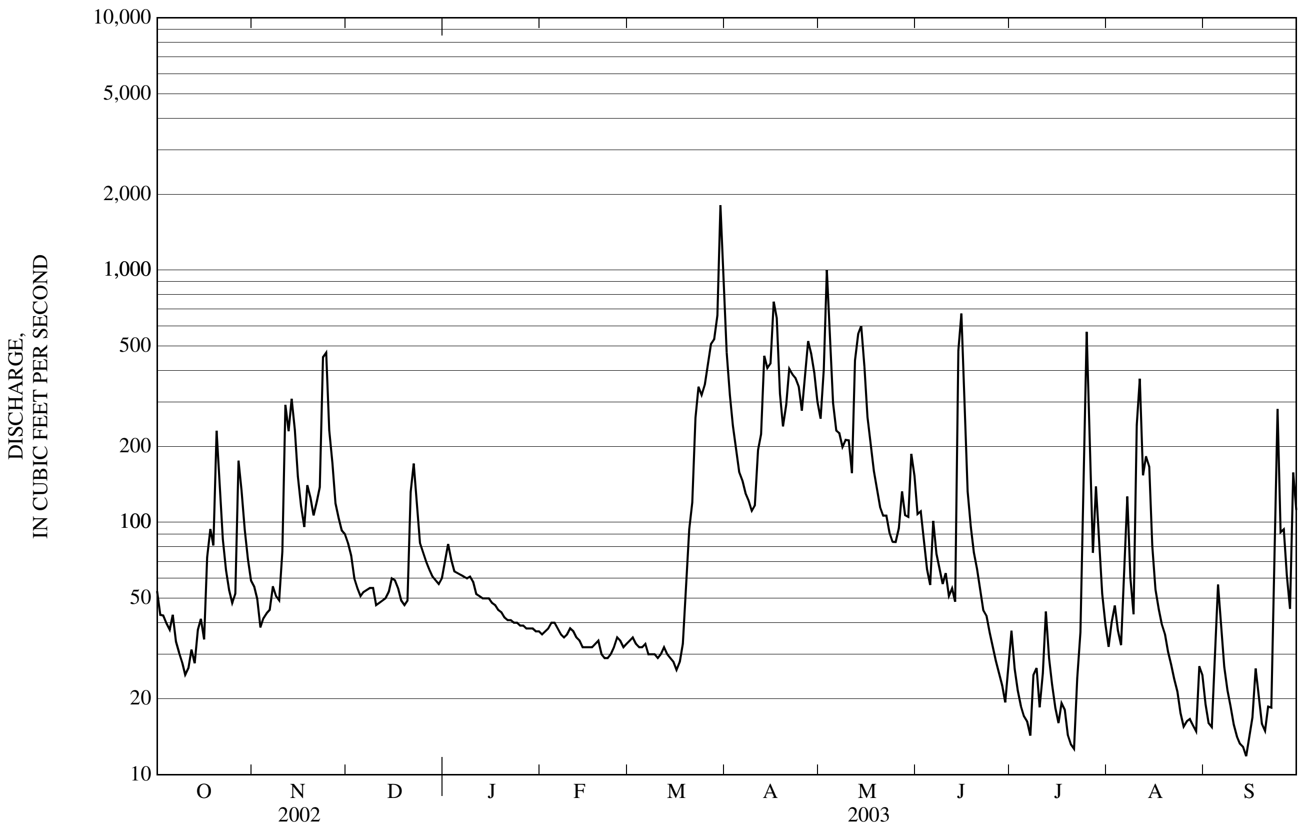
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	107	146	117	80.7	72.4	166	490	270	115	70.5	64.4	64.9
MAX	353	376	386	210	429	468	806	674	299	236	242	323
(WY)	(1991)	(1960)	(1974)	(1998)	(1981)	(1953)	(1954)	(1972)	(1973)	(1973)	(1995)	(1954)
MIN	14.1	35.9	21.8	12.7	15.7	32.9	172	72.3	31.1	10.8	9.00	8.34
(WY)	(1948)	(1948)	(1948)	(1948)	(1980)	(1956)	(1995)	(1999)	(1988)	(1991)	(2001)	(1948)

01134500 MOOSE RIVER AT VICTORY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	58,145.1		43,939			
ANNUAL MEAN	159		120		147	
HIGHEST ANNUAL MEAN					205	1974
LOWEST ANNUAL MEAN					102	1975
HIGHEST DAILY MEAN	2,150	Apr 14	1,810	Mar 30	4,100	Mar 31, 1987
LOWEST DAILY MEAN	3.7	Sep 7	12	Sep 14	2.5	Aug 17, 2001
ANNUAL SEVEN-DAY MINIMUM	5.4	Sep 2	14	Sep 10	3.6	Jul 29, 1991
MAXIMUM PEAK FLOW			2,230	Mar 30	4,940	Jul 1, 1973
MAXIMUM PEAK STAGE			9.31	Mar 30	12.04	Jul 1, 1973
INSTANTANEOUS LOW FLOW			10	Sep 14	a2.2	Aug 4, 1991
ANNUAL RUNOFF (CFSM)	2.12		1.60		1.95	
ANNUAL RUNOFF (INCHES)	28.76		21.74		26.48	
10 PERCENT EXCEEDS	349		321		348	
50 PERCENT EXCEEDS	74		54		72	
90 PERCENT EXCEEDS	25		22		21	

a Also occurred on August 17, 2001
e Estimated



01134500 MOOSE RIVER AT VICTORY, VT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1975 to 1978, 1980 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, (ft^3/s) (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
DEC														
09...	1100	E53	12.4	87	6.8	32	0.0	0.19	0.019	0.147	<0.008	<0.02	0.005	1
JAN														
03...	0900	E71	13.5	90	7.0	20	0.0	0.15	0.019	0.185	<0.008	<0.02	0.005	1
FEB														
06...	0845	E39	--	--	--	42	0.0	0.15	0.048	0.199	<0.008	<0.02	0.005	1
MAR														
19...	1045	E41	12.9	86	6.9	48	0.1	0.27	0.074	0.373	<0.008	<0.02	0.006	1
26...	1100	E403	13.6	98	6.9	24	0.0	0.34	0.018	0.275	<0.008	<0.02	0.021	12
APR														
01...	0930	480	12.7	87	6.2	24	0.5	0.29	E.014	0.265	<0.008	<0.02	0.015	6
14...	0915	430	13.1	95	6.0	23	1.0	0.45	0.023	0.157	<0.008	<0.02	0.041	9
28...	0900	500	11.1	86	6.4	22	5.0	0.25	<0.015	0.134	<0.008	<0.02	0.013	5
MAY														
13...	1115	543	9.0	78	6.4	24	8.8	0.29	<0.015	0.061	<0.008	<0.02	0.029	100
JUN														
16...	1230	233	8.6	82	6.5	25	13.1	0.35	E.013	0.050	<0.008	<0.02	0.013	3
JUL														
14...	1045	23	8.5	95	7.4	43	20.3	0.37	E.013	0.060	<0.008	<0.02	0.016	2
AUG														
18...	1100	40	9.0	100	7.0	38	19.0	0.31	E.010	0.040	<0.008	<0.02	0.015	12
SEP														
10...	0800	16	9.0	87	7.2	46	13.6	0.24	<0.015	E.016	<0.008	<0.02	0.012	1

Remark codes used in this table:
- < -- Less than
- E -- Estimated value

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

LOCATION.--Lat 44° 28'35", long 72° 07'31", Caledonia County, Hydrologic Unit 01080102, on left bank, 200 ft upstream of Morril Flat Road, 0.3 mi north of Pope Cemetery, 1.1 mi upstream of North Brook, 1.7 mi northwest of North Danville, 4.5 mi north of Danville, and 6.4 mi northwest of Court House in St. Johnsbury.

DRAINAGE AREA.--3.25 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 1,141.20 ft above National Geodetic Vertical Datum of 1929.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge, 1960-1990, 380 ft^3/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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	1755	109	2.21	Aug 10	0640	110	2.22
May 2	1230	*120	*2.29				

Minimum discharge, 1.0 ft^3/s, Sep. 12 and 13.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	2.4	4.4	4.6	2.0	e1.9	16	11	4.6	1.8	1.4	1.3
2	3.5	2.2	4.3	3.3	2.1	e1.8	12	42	4.2	1.6	2.0	1.3
3	5.5	2.2	3.6	3.2	2.1	e1.7	11	18	3.4	1.5	1.6	1.2
4	2.3	2.1	e3.2	3.1	2.2	e1.6	9.7	13	3.1	1.4	1.5	2.3
5	3.4	2.2	e3.2	2.9	2.1	e1.7	8.9	11	3.3	1.4	1.4	1.7
6	2.1	2.7	e3.2	3.0	e2.1	e1.6	8.4	10	3.3	1.3	7.3	1.4
7	1.9	2.7	e3.2	2.9	e2.0	e1.6	e8.0	9.7	2.9	1.3	3.0	1.3
8	1.7	2.5	e3.1	3.1	e2.0	e1.6	7.5	8.7	2.8	1.5	2.0	1.2
9	1.6	2.7	e3.1	2.9	e1.9	e1.7	7.2	8.5	2.8	1.3	2.6	1.2
10	1.6	5.9	e3.1	e2.8	e1.8	e1.6	9.3	7.6	3.0	1.2	25	1.1
11	1.8	6.0	3.2	e2.8	e1.8	e1.6	9.6	7.7	2.6	2.6	5.8	1.1
12	1.7	4.5	3.3	e2.6	e1.8	e1.6	16	18	2.7	1.8	8.5	1.1
13	1.6	7.4	3.2	e2.6	e1.8	e1.5	16	15	5.7	1.4	8.4	1.1
14	1.8	4.0	3.8	e2.5	e1.7	e1.5	15	14	25	1.3	3.7	1.3
15	1.5	3.4	4.0	e2.5	e1.7	e1.6	25	9.7	6.8	1.2	2.6	1.3
16	2.3	3.0	3.5	e2.5	e1.6	e1.8	23	8.4	4.3	1.4	2.2	1.6
17	5.1	4.1	3.1	e2.5	e1.6	e2.4	13	7.6	3.4	1.3	2.0	1.3
18	3.1	8.0	e3.2	e2.4	e1.6	e4.2	11	6.9	3.1	1.2	1.9	1.2
19	4.7	4.4	e3.3	e2.4	e1.7	e6.2	11	6.4	3.0	1.1	1.8	1.1
20	5.1	4.5	5.2	e2.4	e1.7	e6.6	15	5.9	2.8	1.1	1.6	1.5
21	2.9	4.9	6.3	e2.3	e1.8	e20	14	6.5	2.4	1.2	1.5	1.2
22	2.4	6.4	4.3	e2.3	e1.9	e24	13	5.6	2.4	2.8	1.4	1.1
23	2.2	20	4.0	e2.3	e2.0	e18	14	5.2	2.2	1.7	1.3	9.5
24	2.1	7.3	3.7	e2.3	e2.6	e18	12	5.1	2.0	6.0	1.2	3.3
25	2.0	6.0	3.5	e2.2	e2.2	e20	15	5.6	1.8	3.1	1.4	2.0
26	3.8	5.6	3.4	e2.2	e2.0	17	24	6.9	2.0	1.7	1.4	1.9
27	6.2	5.1	3.2	e2.2	e2.0	14	23	6.6	1.7	1.7	1.3	1.6
28	4.0	4.4	3.2	e2.2	e1.9	16	14	5.8	1.6	2.1	1.2	8.2
29	2.9	5.2	3.1	2.2	---	44	12	5.6	1.5	1.5	1.5	5.9
30	2.5	5.1	2.9	2.1	---	e33	9.8	4.9	2.9	1.8	1.9	2.6
31	2.3	---	2.9	2.0	---	17	---	4.2	---	1.3	1.4	---
TOTAL	87.2	146.9	110.7	81.3	53.7	286.8	403.4	301.1	113.3	53.6	101.8	63.9
MEAN	2.81	4.90	3.57	2.62	1.92	9.25	13.4	9.71	3.78	1.73	3.28	2.13
MAX	6.2	20	6.3	4.6	2.6	44	25	42	25	6.0	25	9.5
MIN	1.5	2.1	2.9	2.0	1.6	1.5	7.2	4.2	1.5	1.1	1.2	1.1
CFSM	0.87	1.51	1.10	0.81	0.59	2.85	4.14	2.99	1.16	0.53	1.01	0.66
IN.	1.00	1.68	1.27	0.93	0.61	3.28	4.62	3.45	1.30	0.61	1.17	0.73

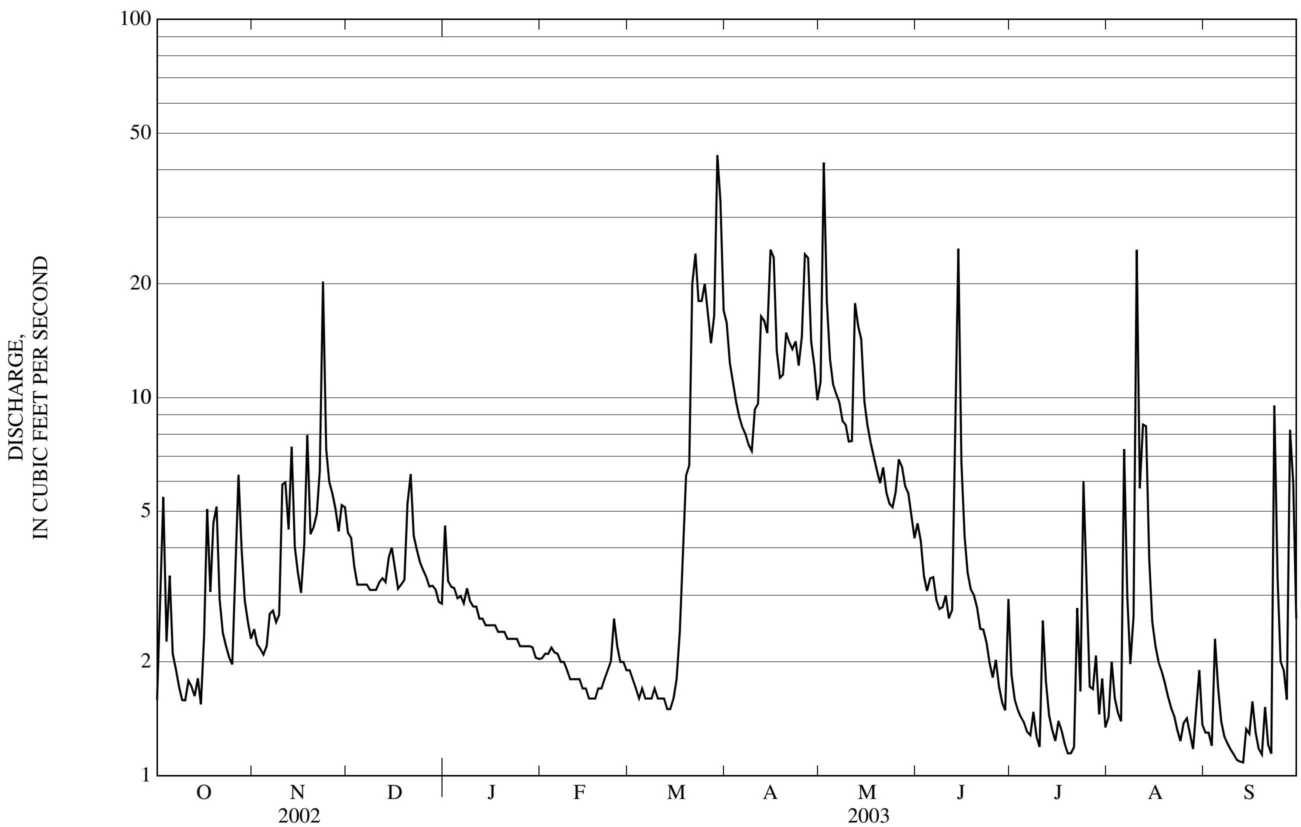
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3.57	5.16	4.79	4.50	3.30	6.28	19.2	9.25	4.80	3.36	2.82	2.50
MAX	6.54	11.4	9.22	9.04	8.16	10.9	25.4	16.5	12.0	7.79	6.00	4.90
(WY)	(1996)	(1996)	(1997)	(1996)	(1996)	(1998)	(1994)	(2000)	(2002)	(1998)	(1997)	(1999)
MIN	1.34	1.65	1.77	1.58	1.70	2.13	6.87	4.51	1.84	1.40	0.85	1.02
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(1995)	(1998)	(1995)	(1991)	(2001)	(2001)

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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	2,384.30		1,803.7			
ANNUAL MEAN	6.53		4.94		5.85	
HIGHEST ANNUAL MEAN					8.44	1996
LOWEST ANNUAL MEAN					3.93	1995
HIGHEST DAILY MEAN	85	Apr 14	44	Mar 29	90	Apr 24, 2001
LOWEST DAILY MEAN	0.94	Sep 10	a1.1	Jul 19	0.71	Aug 25, 2001
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 4	1.2	Sep 7	0.74	Sep 14, 2001
MAXIMUM PEAK FLOW			120	May 2	b249	Jul 15, 1997
MAXIMUM PEAK STAGE			2.29	May 2	2.96	Jul 15, 1997
INSTANTANEOUS LOW FLOW			c1.0	Sep 12	d0.65	Aug 15, 2001
ANNUAL RUNOFF (CFSM)	2.01		1.52		1.80	
ANNUAL RUNOFF (INCHES)	27.29		20.65		24.45	
10 PERCENT EXCEEDS	14		12		12	
50 PERCENT EXCEEDS	3.4		2.8		3.4	
90 PERCENT EXCEEDS	1.4		1.4		1.4	

a Also occurred on July 20 and September 10-13, 19, 22
b From rating curve extended above 84 ft^3/s on basis of theoretical weir formula
c Also occurred on September 13
d Also occurred on August 24-26 and September 9, 2001
e Estimated



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

LOCATION.--Lat 44° 26'07", long 72° 02'20", Caledonia County, Hydrologic Unit 01080102, on left bank, just upstream of Emerson Falls, 0.6 mi upstream of US 2 bridge, 1.5 mi northwest of Post Office in St. Johnsbury, and 2.7 mi above mouth.

DRAINAGE AREA.--42.9 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 641.68 ft above National Geodetic Vertical Datum of 1929.

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2045	909	3.04	Aug 10	0915	675	2.70
May 2	unknown	*1,210	*c3.41				

Minimum discharge, 5.1 ft^3/s, July 21 and Sep. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	23	46	44	e19	18	167	e120	50	18	10	8.4
2	14	22	34	37	e20	19	138	e400	50	13	16	7.6
3	47	14	32	32	e21	e17	124	e180	37	11	15	7.6
4	24	19	28	31	e22	e16	110	e130	32	9.7	13	19
5	28	21	e26	30	25	15	98	e115	31	8.6	11	20
6	23	25	e26	30	22	e15	e94	108	36	7.7	36	12
7	16	35	e26	30	22	e15	e90	106	30	6.7	36	9.6
8	15	29	e25	31	e21	e16	88	95	28	10	19	8.5
9	13	27	e25	29	e20	e17	84	92	26	8.3	18	7.2
10	12	54	e25	e28	e20	e16	104	84	28	6.6	289	6.7
11	13	89	26	e28	e19	e16	126	76	25	19	98	6.3
12	14	56	28	e26	18	15	172	231	25	20	65	5.9
13	12	106	32	e26	17	15	197	187	28	13	112	5.6
14	13	59	35	e25	e17	e15	159	190	330	9.9	49	5.9
15	12	42	45	e25	e17	e16	221	122	107	7.9	28	7.9
16	13	35	40	e25	e16	e21	252	99	55	7.6	21	9.5
17	51	38	35	e24	e16	e25	140	85	39	8.9	19	11
18	39	121	30	e24	e17	e44	115	76	32	7.3	17	8.1
19	38	62	36	e23	e17	e64	110	68	30	6.4	16	6.8
20	68	55	47	e23	17	e68	135	61	29	5.9	14	9.5
21	37	61	97	e23	18	e220	141	67	24	5.6	12	9.4
22	26	77	62	e22	19	e250	139	62	23	17	11	7.8
23	22	291	47	e22	e22	e190	153	54	22	16	9.5	93
24	19	106	43	e22	e28	e190	149	51	18	98	7.7	74
25	17	73	39	e21	e24	e210	144	57	16	64	7.6	28
26	29	64	38	e21	e21	e250	199	68	16	25	8.9	27
27	82	55	e32	e20	e20	e205	276	84	14	17	8.0	19
28	59	43	e30	e20	19	e210	153	66	12	20	6.7	63
29	37	41	e28	19	---	432	128	74	10	14	6.6	140
30	28	54	e26	18	---	e388	e112	62	20	14	13	45
31	23	---	29	e18	---	191	---	50	---	12	10	---
TOTAL	859	1,797	1,118	797	554	3,199	4,318	3,320	1,223	508.1	1,003.0	689.3
MEAN	27.7	59.9	36.1	25.7	19.8	103	144	107	40.8	16.4	32.4	23.0
MAX	82	291	97	44	28	432	276	400	330	98	289	140
MIN	12	14	25	18	16	15	84	50	10	5.6	6.6	5.6
CFSM	0.65	1.40	0.84	0.60	0.46	2.40	3.35	2.50	0.95	0.38	0.75	0.54
IN.	0.74	1.56	0.97	0.69	0.48	2.77	3.74	2.88	1.06	0.44	0.87	0.60

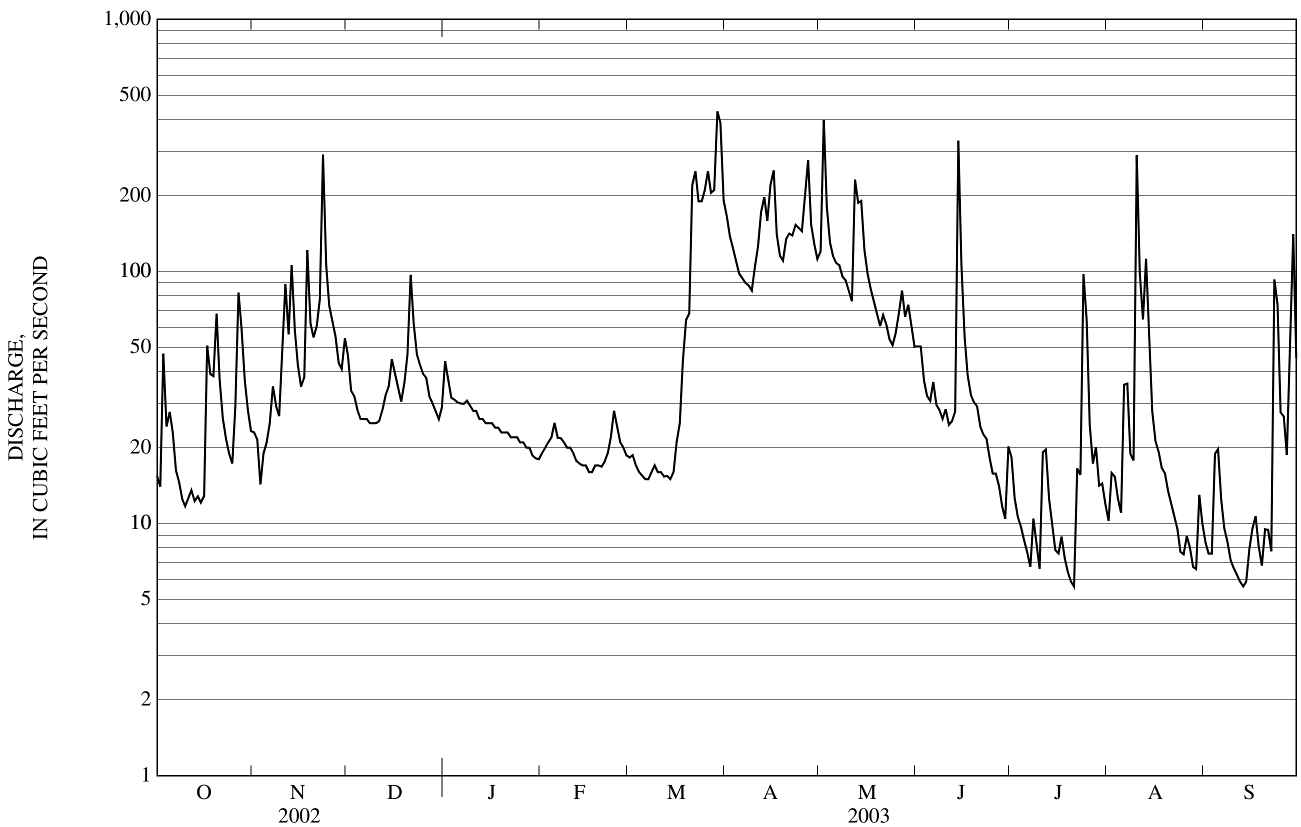
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	47.5	64.0	60.6	52.8	39.3	86.7	212	100	50.0	36.3	31.5	25.4
MAX	128	124	143	108	93.3	142	302	198	128	84.2	97.9	56.9
(WY)	(1991)	(1991)	(1991)	(1996)	(1996)	(1998)	(1994)	(2000)	(2002)	(1998)	(1998)	(1999)
MIN	9.49	14.0	17.9	14.5	18.4	26.2	75.2	48.8	14.9	8.47	2.11	4.52
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(1995)	(1998)	(1995)	(1991)	(2001)	(2001)

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

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1991 - 2003	
ANNUAL TOTAL	25,138.5		19,385.4			
ANNUAL MEAN	68.9		53.1		67.2	
HIGHEST ANNUAL MEAN					93.2	1996
LOWEST ANNUAL MEAN					42.8	1995
HIGHEST DAILY MEAN	1,090	Jun 12	432	Mar 29	1,380	Aug 12, 1998
LOWEST DAILY MEAN	2.7	Sep 10	a5.6	Jul 21	1.1	Aug 16, 2001
ANNUAL SEVEN-DAY MINIMUM	3.2	Sep 5	6.5	Sep 9	1.4	Sep 14, 2001
MAXIMUM PEAK FLOW			b1,210	May 2	b7,570	Aug 12, 1998
MAXIMUM PEAK STAGE			c3.41	May 2	7.11	Aug 12, 1998
INSTANTANEOUS LOW FLOW			d5.1	Jul 21	0.98	Aug 16, 2001
ANNUAL RUNOFF (CFSM)	1.60		1.24		1.57	
ANNUAL RUNOFF (INCHES)	21.79		16.80		21.27	
10 PERCENT EXCEEDS	167		136		151	
50 PERCENT EXCEEDS	36		26		38	
90 PERCENT EXCEEDS	9.6		9.6		10	

a Also occurred on September 13
b From rating curve extended above 560 ft^3/s on basis of theoretical weir formula
c From peak-stage indicator
d Also occurred on September 14
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, l.1 mi downstream from dam, bridge, and village of Passumpsic, 3.8 mi south of Town Hall in St. Johnsbury, 4.0 mi upstream from mouth, and 4.8 mi north of Post Office in Barnet.

DRAINAGE AREA.--436 mi^2.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except for those estimated daily discharges, which are fair. Low flow regulated by power plants 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0715	*6,830	*11.28	No other peak greater than base discharge.			

Minimum daily discharge, 105 ft^3/s, July 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	322	e490	e420	e285	e255	1,790	1,190	686	375	219	183
2	298	317	e465	576	e285	e265	1,490	2,380	688	225	225	170
3	349	262	e433	464	e290	e275	1,250	3,620	590	197	278	163
4	316	248	e410	436	e295	e240	1,080	2,040	483	171	233	191
5	258	284	e365	417	e300	e255	952	1,400	418	175	195	347
6	287	308	e350	406	e285	e250	904	1,180	526	172	255	254
7	249	363	e345	391	e270	e240	757	1,180	486	157	508	190
8	230	317	e355	382	e250	e245	850	1,080	425	167	334	182
9	218	344	e345	396	e245	e260	756	1,010	393	172	361	169
10	207	380	e340	373	e250	e270	756	1,030	410	155	1,350	156
11	204	827	e335	340	e245	e225	1,070	877	383	179	1,550	148
12	208	814	e338	371	e230	e235	1,150	1,910	398	295	939	138
13	219	970	e345	357	e220	e220	1,860	2,030	393	213	1,050	133
14	210	861	e355	357	e220	e210	1,600	2,090	2,210	186	1,210	129
15	237	606	e380	347	e218	e220	1,660	1,580	2,060	165	614	122
16	232	505	e395	348	e215	e245	2,800	1,210	1,100	156	418	146
17	373	454	e385	357	e210	e315	2,010	1,020	698	153	349	166
18	479	855	e350	e350	e218	e490	1,370	883	553	152	312	185
19	415	706	e380	e340	e235	e650	1,130	790	459	147	260	134
20	726	577	416	e335	e250	e735	1,200	711	436	135	258	139
21	592	609	767	e320	e270	e1,400	1,530	700	387	105	216	155
22	424	662	1,000	e310	e285	e2,350	1,520	722	348	182	194	157
23	360	2,170	675	e300	e295	e2,240	1,590	617	296	312	190	349
24	315	1,640	557	e295	e300	e2,070	1,600	572	307	668	174	1,120
25	293	1,030	e460	e295	e275	e2,700	1,410	575	257	1,460	156	522
26	309	809	e435	e285	e265	e3,650	1,790	627	222	713	158	401
27	629	e654	e415	e270	e255	e3,080	2,630	761	191	382	169	328
28	641	e530	e390	e265	e250	2,890	1,940	686	206	444	165	316
29	490	e510	e380	e270	---	3,220	1,570	833	185	376	158	1,170
30	399	e520	e365	e275	---	6,180	1,320	929	240	292	168	706
31	350	---	e360	e280	---	3,200	---	879	---	255	215	---
TOTAL	10,856	19,454	13,381	10,928	7,211	39,080	43,335	37,112	16,434	8,936	12,881	8,669
MEAN	350	648	432	353	258	1,261	1,444	1,197	548	288	416	289
MAX	726	2,170	1,000	576	300	6,180	2,800	3,620	2,210	1,460	1,550	1,170
MIN	204	248	335	265	210	210	756	572	185	105	156	122
CFSM	0.80	1.49	0.99	0.81	0.59	2.89	3.31	2.75	1.26	0.66	0.95	0.66
IN.	0.93	1.66	1.14	0.93	0.62	3.33	3.70	3.17	1.40	0.76	1.10	0.74

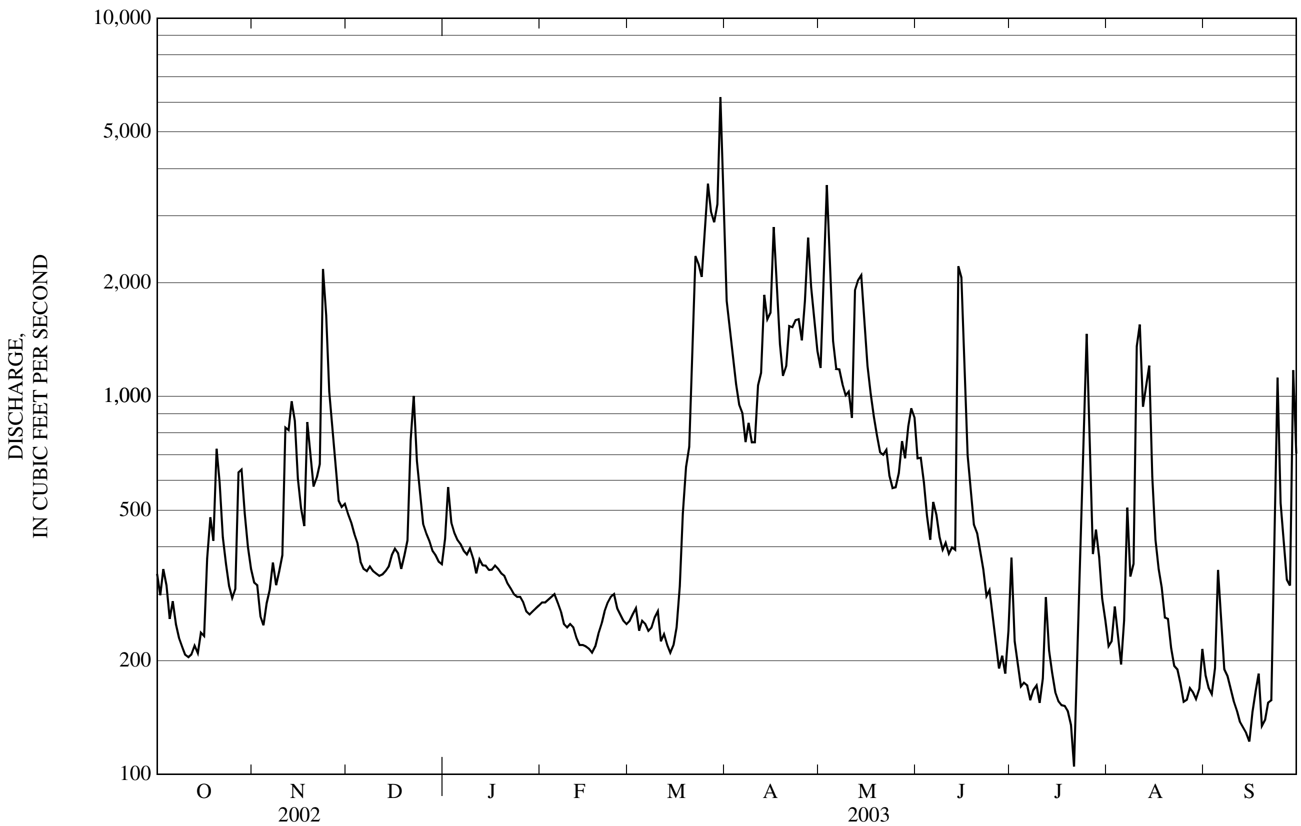
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	520	699	603	494	425	940	2,259	1,339	653	405	338	348
MAX	1,522	1,667	1,919	1,255	2,280	4,013	3,931	3,082	1,846	1,519	963	1,126
(WY)	(1946)	(1960)	(1974)	(1978)	(1981)	(1936)	(1934)	(1972)	(1973)	(1973)	(1990)	(1954)
MIN	132	253	169	128	123	161	806	517	225	138	103	98.8
(WY)	(1948)	(1948)	(1948)	(1948)	(1980)	(1940)	(1995)	(1941)	(1988)	(1955)	(2001)	(1948)

01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	298,886		228,277			
ANNUAL MEAN	819		625		751	
HIGHEST ANNUAL MEAN					1,153	1974
LOWEST ANNUAL MEAN					472	1965
HIGHEST DAILY MEAN	8,510	Jun 13	6,180	Mar 30	15,400	Mar 18, 1936
LOWEST DAILY MEAN	82	Sep 10	105	Jul 21	13	Sep 12, 1948
ANNUAL SEVEN-DAY MINIMUM	88	Sep 5	139	Sep 10	66	Sep 3, 1999
MAXIMUM PEAK FLOW			6,830	Mar 30	18,200	Jul 1, 1973
MAXIMUM PEAK STAGE			11.28	Mar 30	23.49	Jul 1, 1973
ANNUAL RUNOFF (CFSM)	1.88		1.43		1.72	
ANNUAL RUNOFF (INCHES)	25.50		19.48		23.41	
10 PERCENT EXCEEDS	1,700		1,500		1,680	
50 PERCENT EXCEEDS	465		357		430	
90 PERCENT EXCEEDS	184		177		167	

e Estimated



01135500 PASSUMPSIC RIVER AT PASSUMPSIC, VT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1956 to 1958, 1960, 1966 to 1978, 1980 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, (ft^3/s) (00061)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)
DEC														
10...	0900	E348	13.6	94	6.3	205	0.0	0.17	0.04	0.41	<0.008	E.01	0.017	1
JAN														
03...	1115	461	14.5	100	7.6	132	0.0	0.15	E.03	0.38	<0.008	<0.02	0.009	1
FEB														
06...	1100	E284	--	--	--	251	0.1	0.20	0.09	0.47	<0.008	<0.02	0.016	1
MAR														
19...	0845	E625	12.7	87	7.5	302	0.5	0.32	0.14	0.52	E.006	E.02	0.029	4
26...	1430	E3820	13.6	96	7.1	128	0.0	0.64	0.055	0.515	<0.008	<0.02	0.099	84
APR														
01...	1245	1,610	14.1	103	7.6	121	1.5	0.26	0.019	0.434	<0.008	<0.02	0.024	11
14...	1130	1,620	13.2	100	7.6	113	3.7	0.22	0.020	0.329	<0.008	<0.02	0.022	10
28...	1115	1,970	12.1	100	7.6	106	6.8	0.23	E.014	0.255	<0.008	<0.02	0.023	13
MAY														
13...	0930	1,970	10.2	90	7.7	114	9.6	0.25	E.010	0.177	<0.008	<0.02	0.028	16
JUN														
16...	1645	978	9.1	100	8.0	126	19.2	0.28	<0.015	0.136	<0.008	<0.02	0.016	3
JUL														
14...	1630	152	10.0	116	8.5	225	22.4	0.24	E.009	0.212	E.004	<0.02	0.019	2
AUG														
18...	1430	318	8.4	97	8.2	244	22.0	0.23	0.019	0.174	E.006	<0.02	0.021	7
SEP														
10...	1300	155	--	--	9.0	263	18.1	0.19	<0.015	0.064	E.004	<0.02	0.020	1

Remark codes used in this table:
< -- Less than
E -- Estimated value

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH

LOCATION.--Lat 44° 16'08", long 71° 37'52", Grafton County, Hydrologic Unit 01080101, on left bank, 0.2 mi upstream from Pierce Bridge and Bethlehem Junction, 0.8 mi upstream from unnamed tributary entering from left, 3.0 mi east of US 302 and State Highway 142 intersection in Bethlehem, 3.4 mi downstream from Little River, 4.5 mi west of US 3 and 302 intersection in Twin Mountain, and at mile 35.0.

DRAINAGE AREA.--87.6 mi^2.

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

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

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2315	3,700	7.40	Aug 10	0715	*3,730	*7.42

Minimum discharge, 28 ft^3/s, Nov. 3, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	71	120	e125	54	e38	348	389	196	65	54	45
2	41	64	97	114	e58	e37	283	804	341	57	72	43
3	62	51	93	105	e62	e36	240	793	237	54	71	43
4	62	63	81	98	e60	e36	206	435	188	51	63	321
5	67	61	e102	91	e56	e36	176	354	189	48	75	159
6	77	63	e115	84	e54	e40	172	331	434	48	130	93
7	57	72	109	80	52	e38	147	321	275	46	122	72
8	51	58	e100	e78	51	e36	143	301	227	47	86	63
9	48	76	e95	81	49	e36	134	312	193	44	122	56
10	e49	135	e95	78	e49	e35	139	302	184	44	1,690	52
11	e50	351	e93	e77	e48	e34	170	258	159	58	517	49
12	e48	341	e98	e76	e47	e34	200	507	148	68	279	47
13	47	464	e92	e74	e45	e33	282	388	133	48	218	44
14	72	293	e100	e72	e43	e33	224	675	252	43	171	46
15	70	206	128	e70	e43	e33	331	437	238	38	138	53
16	64	168	125	e68	e42	e34	808	327	185	39	117	114
17	219	171	103	e65	e42	e44	395	274	149	43	110	125
18	152	272	90	e63	e41	e78	266	241	132	43	109	74
19	122	184	e110	e62	e43	e100	230	226	123	81	99	58
20	202	160	e160	e62	e44	e77	330	217	112	49	86	110
21	135	176	e455	e60	e43	e210	523	208	101	41	78	110
22	104	247	214	e59	e44	e410	533	191	95	76	71	80
23	91	470	156	e59	e45	e340	484	171	92	120	65	268
24	84	265	123	e58	e45	e260	444	160	85	134	59	380
25	75	196	106	e57	e43	e295	337	167	76	255	57	168
26	96	168	e103	e62	e42	e360	435	192	70	111	63	131
27	176	147	e100	e62	e40	485	1,030	260	66	80	56	110
28	121	109	e105	e60	e39	367	684	206	63	94	51	102
29	95	124	104	58	---	1,330	747	253	58	76	49	190
30	81	137	e100	55	---	1,690	532	259	75	63	50	149
31	72	---	e97	54	---	569	---	218	---	56	47	---
TOTAL	2,738	5,363	3,769	2,267	1,324	7,184	10,973	10,177	4,876	2,120	4,975	3,355
MEAN	88.3	179	122	73.1	47.3	232	366	328	163	68.4	160	112
MAX	219	470	455	125	62	1,690	1,030	804	434	255	1,690	380
MIN	41	51	81	54	39	33	134	160	58	38	47	43
CFSM	1.01	2.04	1.39	0.83	0.54	2.65	4.18	3.75	1.86	0.78	1.83	1.28
IN.	1.16	2.28	1.60	0.96	0.56	3.05	4.66	4.32	2.07	0.90	2.11	1.42

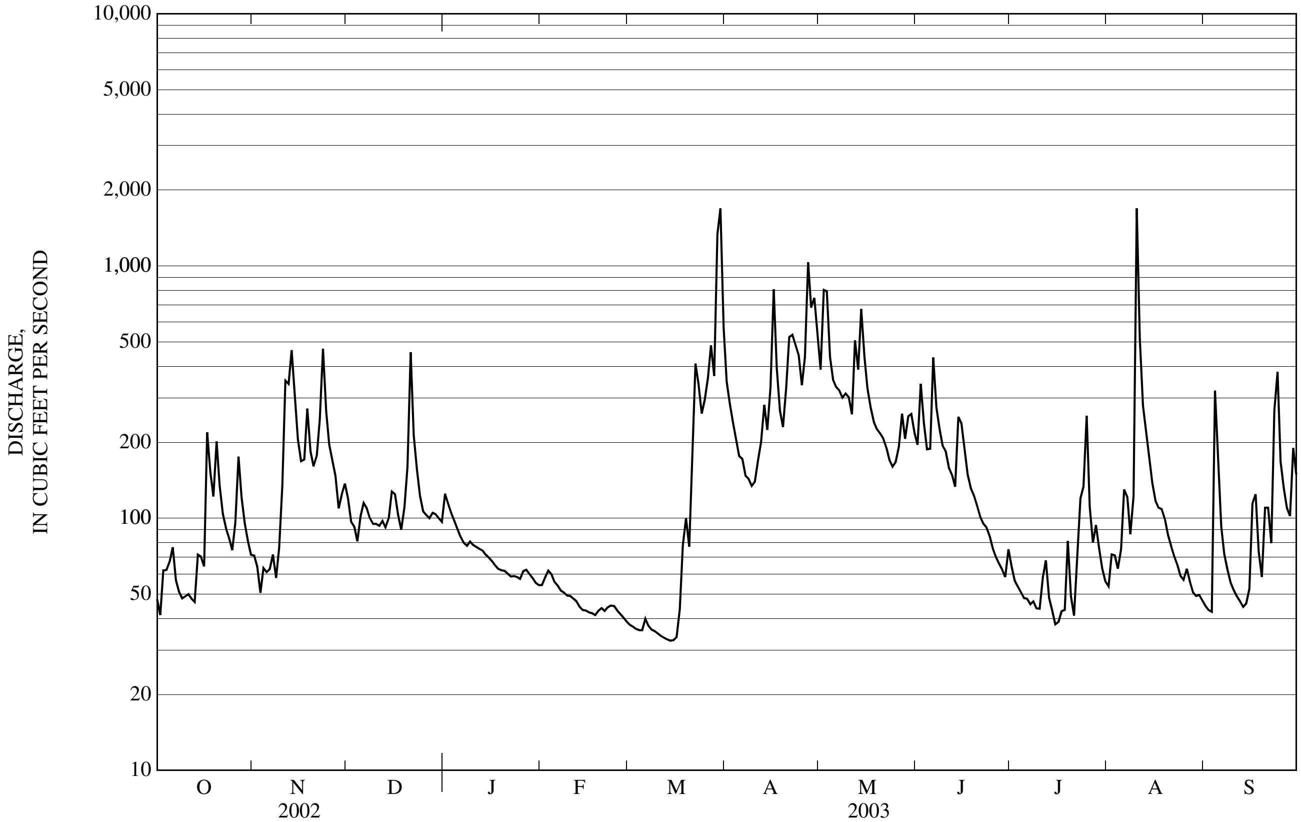
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	154	218	167	119	105	191	513	505	204	105	93.1	99.0
MAX	416	524	590	438	712	691	896	1,054	462	308	273	550
(WY)	(1978)	(1960)	(1974)	(1996)	(1981)	(1953)	(1969)	(1940)	(1973)	(1996)	(1990)	(1954)
MIN	34.1	59.0	44.9	30.9	31.9	47.3	176	221	91.5	39.0	25.6	32.5
(WY)	(1948)	(1979)	(1948)	(1948)	(1980)	(1940)	(1995)	(1993)	(1953)	(1991)	(2001)	(1948)

01137500 AMMONOOSUC RIVER AT BETHLEHEM JUNCTION, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	70,522		59,121			
ANNUAL MEAN	193		162		206	
HIGHEST ANNUAL MEAN					323	1996
LOWEST ANNUAL MEAN					131	1995
HIGHEST DAILY MEAN	3,960	Apr 14	1,690	Mar 30	6,300	Mar 27, 1953
LOWEST DAILY MEAN	a22	Sep 6	be33	Mar 13	19	Aug 26, 2001
ANNUAL SEVEN-DAY MINIMUM	24	Sep 4	34	Mar 10	22	Aug 21, 2001
MAXIMUM PEAK FLOW			3,730	Aug 10	c11,300	Nov 12, 1995
MAXIMUM PEAK STAGE			7.42	Aug 10	d12.34	Nov 12, 1995
INSTANTANEOUS LOW FLOW			f28	Nov 3	16	Nov 14, 1952
ANNUAL RUNOFF (CFSM)	2.21		1.85		2.36	
ANNUAL RUNOFF (INCHES)	29.95		25.11		32.02	
10 PERCENT EXCEEDS	345		344		458	
50 PERCENT EXCEEDS	104		96		107	
90 PERCENT EXCEEDS	40		44		46	

a Also occurred on September 9 and 10, 2002
b Also occurred on March 14 and 15
c From rating curve extended above 4,100 ft^3/s on basis of slope-area measurements of peak flow
d From floodmarks in well
e Estimated
f Result of freezeup



01138500 CONNECTICUT RIVER AT WELLS RIVER, VT

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

DRAINAGE AREA.--2,644 mi^2.

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

PERIOD OF DAILY WATER-QUALITY RECORD.--Water years 1980 to 1982.
WATER TEMPERATURE: Water years 1980 to 1982.
SPECIFIC CONDUCTANCE: Water years 1980 to 1982.

REVISED RECORDS.--WDR NH-VT-93-1: 1992.

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by power plants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, and other reservoirs. These reservoirs have a combined capacity of about l4.8 billion ft^3.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 57,100 ft^3/s, July 1, 1973, gage height, 17.35 ft, from peak-stage indicator; minimum daily discharge 152 ft^3/s, August 28, 1960.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,000 ft^3/s, Mar. 30, gage height, 9.84 ft; minimum daily discharge, 1,230 ft^3/s, July 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,170	2,090	2,770	2,500	2,480	1,420	20,100	9,090	5,150	1,400	1,330	1,930
2	1,930	1,970	3,660	2,790	2,600	1,450	14,700	10,500	5,070	3,120	1,440	1,260
3	1,880	1,890	3,620	2,660	2,420	1,440	9,920	18,300	3,440	2,200	1,620	1,250
4	2,330	1,830	2,900	2,500	2,350	e1,570	6,880	14,500	2,810	1,380	1,300	1,950
5	1,910	1,850	3,470	2,560	2,330	1,580	4,990	12,200	3,010	1,990	1,390	1,980
6	1,890	1,870	2,850	2,850	e2,310	e1,390	4,740	10,400	4,110	2,610	1,630	1,510
7	1,860	1,970	3,220	2,390	2,550	e1,830	4,520	7,560	3,310	1,690	2,380	2,330
8	1,720	1,960	2,960	2,340	2,300	1,350	4,710	6,770	3,300	1,620	1,820	1,660
9	1,770	1,980	3,200	2,610	2,250	1,380	4,470	7,220	3,200	1,350	1,500	1,340
10	1,820	2,130	2,640	3,880	2,230	1,550	4,440	7,600	2,490	1,240	7,630	2,530
11	1,830	3,440	2,480	2,580	2,230	1,310	4,930	6,880	2,910	1,300	6,650	2,280
12	1,850	4,450	2,680	2,260	e2,720	1,270	5,770	9,550	2,350	1,380	7,150	1,870
13	1,850	5,200	2,570	2,970	e2,900	1,360	6,770	12,600	2,090	1,350	6,750	1,340
14	1,840	4,490	2,540	e2,380	e2,850	e1,330	6,750	13,300	4,400	1,430	5,990	1,300
15	1,890	3,750	2,650	e2,550	e2,810	1,270	6,970	12,000	6,940	1,330	4,390	2,200
16	1,900	3,460	2,550	e3,350	e2,490	1,320	9,390	10,900	8,420	2,130	3,360	1,360
17	2,420	3,310	2,940	3,700	e2,550	1,390	12,600	8,190	7,450	1,320	1,680	1,570
18	3,620	4,310	3,010	e2,800	2,340	1,570	10,800	7,010	4,170	1,310	2,060	1,480
19	3,620	4,440	3,080	e3,220	2,260	2,250	5,750	6,790	2,840	1,370	1,980	1,370
20	3,810	3,380	2,570	e3,490	2,260	2,660	4,950	6,230	2,650	1,350	2,370	1,340
21	3,810	3,430	4,130	e3,100	2,490	4,420	6,020	4,750	2,320	1,230	2,330	1,390
22	3,640	3,610	4,290	e3,490	2,360	7,490	8,770	5,260	2,090	1,380	2,270	1,360
23	2,240	6,820	3,460	e3,220	2,330	6,700	10,100	4,220	2,040	2,480	2,440	1,880
24	1,940	5,810	2,920	e3,100	2,460	6,650	9,450	3,980	1,950	2,940	1,320	4,720
25	1,970	5,720	2,990	e3,200	2,460	9,590	10,600	3,810	2,470	4,190	1,410	2,370
26	1,970	6,440	3,130	e2,350	2,320	13,500	12,400	3,700	2,080	2,270	1,600	1,810
27	3,060	5,490	2,890	e2,650	e1,680	12,900	12,100	4,330	1,660	1,810	1,990	1,750
28	3,210	2,950	2,610	e3,490	e1,440	12,700	11,100	4,160	1,360	1,490	1,890	1,740
29	2,920	2,930	2,560	2,910	---	13,600	10,400	4,330	1,320	1,650	1,290	4,250
30	2,770	2,850	3,510	e2,620	---	27,700	9,520	4,640	1,410	1,380	1,330	2,660
31	2,050	---	2,420	e2,450	---	24,500	---	5,410	---	1,350	1,530	---
TOTAL	74,490	105,820	93,270	88,960	66,770	170,440	254,610	246,180	98,810	55,040	83,820	57,780
MEAN	2,403	3,527	3,009	2,870	2,385	5,498	8,487	7,941	3,294	1,775	2,704	1,926
MAX	3,810	6,820	4,290	3,880	2,900	27,700	20,100	18,300	8,420	4,190	7,630	4,720
MIN	1,720	1,830	2,420	2,260	1,440	1,270	4,440	3,700	1,320	1,230	1,290	1,250

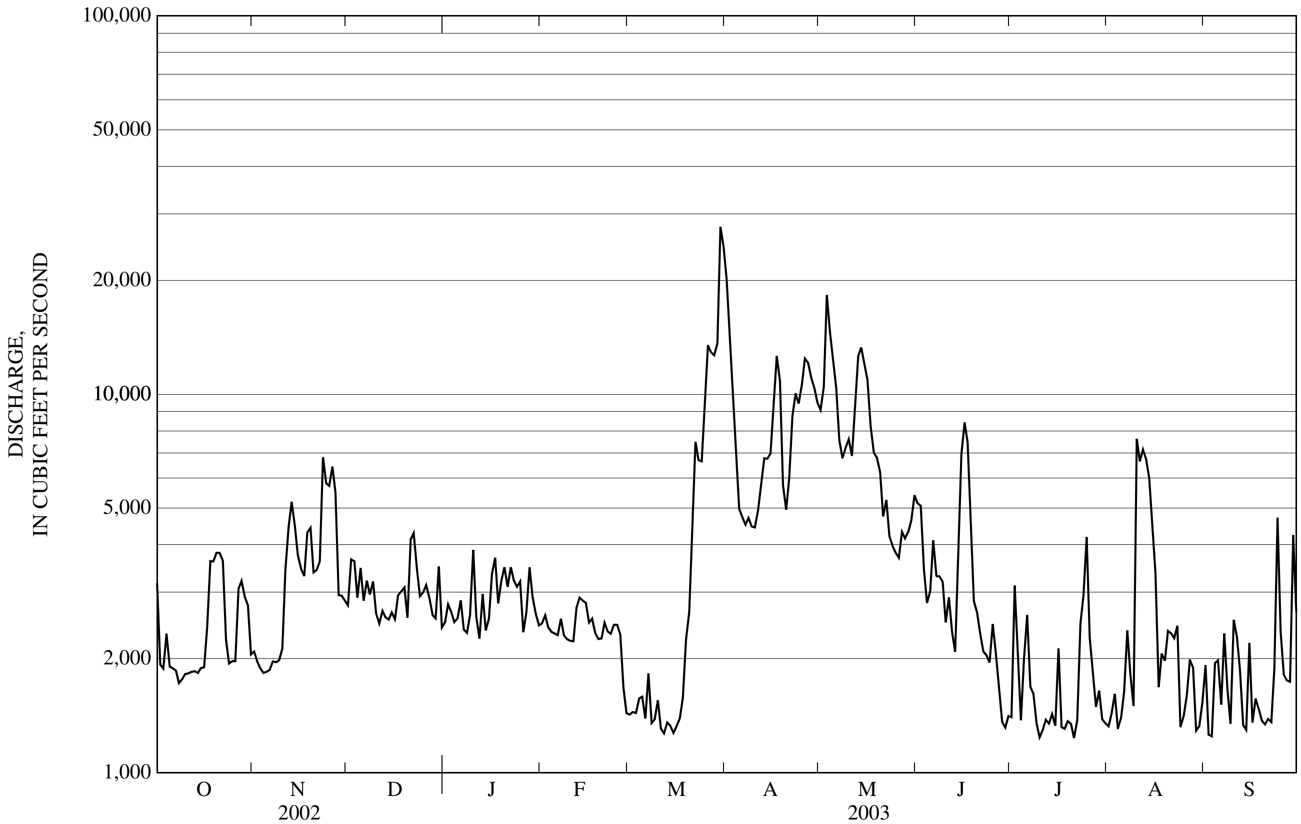
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	3,675	4,746	4,612	3,780	3,797	5,911	12,660	8,398	4,463	2,847	2,498	2,500
MAX	9,801	9,815	11,320	7,717	10,050	13,420	20,110	17,120	10,450	8,566	6,709	10,810
(WY)	(1978)	(1960)	(1974)	(1996)	(1981)	(1979)	(1954)	(1972)	(2002)	(1996)	(1990)	(1954)
MIN	1,226	2,008	1,445	1,632	1,824	2,492	3,634	3,479	1,906	1,206	1,013	883
(WY)	(1964)	(1979)	(1979)	(1981)	(1980)	(1962)	(1995)	(1987)	(1988)	(1991)	(1970)	(1978)

01138500 CONNECTICUT RIVER AT WELLS RIVER, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1950 - 2003	
ANNUAL TOTAL	1,967,389		1,395,990			
ANNUAL MEAN	5,390		3,825		4,995	
HIGHEST ANNUAL MEAN					7,355	1996
LOWEST ANNUAL MEAN					3,211	1965
HIGHEST DAILY MEAN	39,200	Jun 13	27,700	Mar 30	50,600	Mar 27, 1953
LOWEST DAILY MEAN	906	Feb 10	1,230	Jul 21	152	Aug 28, 1960
ANNUAL SEVEN-DAY MINIMUM	1,270	Aug 17	1,320	Mar 11	522	Aug 1, 1955
MAXIMUM PEAK FLOW			29,000	Mar 30	57,100	Jul 1, 1973
MAXIMUM PEAK STAGE			9.84	Mar 30	a17.35	Jul 1, 1973
10 PERCENT EXCEEDS	11,100		7,610		10,400	
50 PERCENT EXCEEDS	3,510		2,600		3,580	
90 PERCENT EXCEEDS	1,440		1,380		1,290	

a From peak stage indicator
e Estimated



01138500 CONNECTICUT RIVER AT WELLS RIVER, VT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1952, 1957, 1960, 1961, 1967, 1968, 1970, 1975, 1979 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan- taneous dis- charge, cfs (00061)	Dis- solved oxygen, mg/L (00300)	Dis- solved oxygen, percent of sat- uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc- tance, wat unf uS/cm 25 degC (00095)	Temper- ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Phos- phorus, water, unfltrd mg/L (00665)	Sus- pended sedi- ment concen- tration mg/L (80154)
DEC														
10...	1230	2,630	--	--	6.4	90	1.0	0.20	<0.04	0.23	<0.008	<0.02	0.010	2
JAN														
03...	1415	2,690	--	--	7.2	103	0.2	0.16	<0.04	0.23	<0.008	<0.02	0.008	1
FEB														
05...	1415	2,340	13.9	97	7.0	93	0.2	0.19	<0.04	0.27	<0.008	<0.02	0.016	5
MAR														
18...	0730	1,520	13.3	95	7.4	118	0.2	0.17	<0.04	0.30	<0.008	<0.02	0.008	1
26...	1730	14,400	--	--	6.9	88	0.0	0.38	0.030	0.359	<0.008	<0.02	0.112	244
APR														
02...	1015	14,200	13.6	98	6.9	72	1.5	0.29	0.032	0.341	<0.008	<0.02	0.025	11
09...	1130	4,620	12.8	90	6.9	99	1.7	0.22	0.032	0.370	<0.008	<0.02	0.019	6
14...	1345	6,830	12.8	98	7.4	79	4.3	0.23	0.024	0.322	<0.008	<0.02	0.023	7
28...	1345	12,100	12.5	102	7.3	68	6.8	0.25	0.017	0.269	<0.008	<0.02	0.020	9
MAY														
13...	0730	12,600	10.7	93	7.2	71	9.8	0.26	E.011	0.209	<0.008	<0.02	0.021	9
JUN														
17...	0730	7,750	9.5	92	7.2	64	13.5	0.28	E.014	0.158	<0.008	<0.02	0.012	3
JUL														
14...	1900	1,310	9.0	101	7.5	101	20.5	0.29	<0.015	0.133	<0.008	<0.02	0.009	1
AUG														
19...	0730	1,460	7.6	87	7.4	105	21.0	0.17	E.009	0.126	<0.008	<0.02	0.008	2
SEP														
10...	1545	2,340	8.5	94	7.4	96	20.2	0.21	E.009	0.119	<0.008	<0.02	0.009	4

Remark codes used in this table:
< -- Less than
E -- Estimated value

01139000 WELLS RIVER AT WELLS RIVER, VT

LOCATION.--Lat 44° 09'03", long 72° 03'55", Orange County, Hydrologic Unit 01080103, on right bank, 0.8 mi west of village of Wells River, 1.3 mi southeast of I-91 and US 302 intersection in Four Corners, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--98.4 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some diurnal fluctuation at low flow prior to 1958 and since June 1984 caused by small power plant upstream. Flow partly regulated by Groton and Ricker Ponds.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 980 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0300	*1,290	*4.82	No other peak greater than base discharge.			

Minimum daily discharge, 22 ft^3/s, Aug. 29.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	50	e91	e90	e46	e39	416	217	154	37	36	23
2	44	50	e80	e81	e47	e42	344	370	146	34	44	23
3	42	39	e76	e74	e48	e41	305	489	121	32	48	23
4	41	42	e68	e65	e49	e38	265	320	107	30	42	77
5	38	43	e63	e64	e50	e40	233	253	98	28	41	84
6	38	49	e59	e64	e46	e39	222	216	124	27	160	58
7	33	73	e60	e63	e44	e38	195	207	107	26	135	44
8	32	59	e62	e62	e42	e38	198	191	98	32	80	37
9	30	58	e61	e62	e39	e40	186	181	89	33	60	32
10	30	78	e59	e62	e42	e36	188	174	98	28	457	30
11	29	149	e56	e61	e40	e34	235	158	85	56	229	28
12	31	129	e57	e59	e38	e37	253	315	84	80	143	25
13	36	209	e59	e60	e36	e38	355	320	79	50	155	24
14	35	161	e62	e62	e35	e35	301	387	173	42	118	23
15	34	117	e69	e59	e34	e37	315	290	172	35	87	43
16	32	96	e65	e57	e33	e40	419	230	126	36	70	42
17	94	88	e61	e57	e32	e62	319	198	102	50	59	54
18	87	190	e57	e56	e33	e100	257	175	84	41	52	40
19	70	149	e66	e56	e35	e142	226	156	77	38	66	34
20	79	123	e105	e55	e37	e115	218	142	73	34	48	35
21	72	122	e170	e55	e40	e320	215	137	62	31	41	42
22	60	128	e130	e53	e44	e410	216	135	57	53	36	35
23	51	359	e112	e51	e47	e350	258	123	56	68	33	183
24	46	260	e88	e50	e45	e375	295	118	52	139	29	288
25	42	191	e73	e48	e42	e460	277	150	46	375	26	142
26	45	155	e69	e47	e41	e580	304	171	49	102	26	124
27	110	131	e65	e45	e40	538	529	222	52	71	26	89
28	95	97	e61	e45	e39	500	387	189	44	63	23	102
29	76	e93	e59	e44	---	683	302	215	37	56	22	440
30	63	e97	e55	e45	---	1,090	243	207	36	46	23	244
31	57	---	e68	e45	---	638	---	175	---	42	24	---
TOTAL	1,625	3,585	2,286	1,797	1,144	6,975	8,476	6,831	2,688	1,815	2,439	2,468
MEAN	52.4	120	73.7	58.0	40.9	225	283	220	89.6	58.5	78.7	82.3
MAX	110	359	170	90	50	1,090	529	489	173	375	457	440
MIN	29	39	55	44	32	34	186	118	36	26	22	23
CFSM	0.53	1.21	0.75	0.59	0.42	2.29	2.87	2.24	0.91	0.60	0.80	0.84
IN.	0.61	1.36	0.86	0.68	0.43	2.64	3.20	2.58	1.02	0.69	0.92	0.93

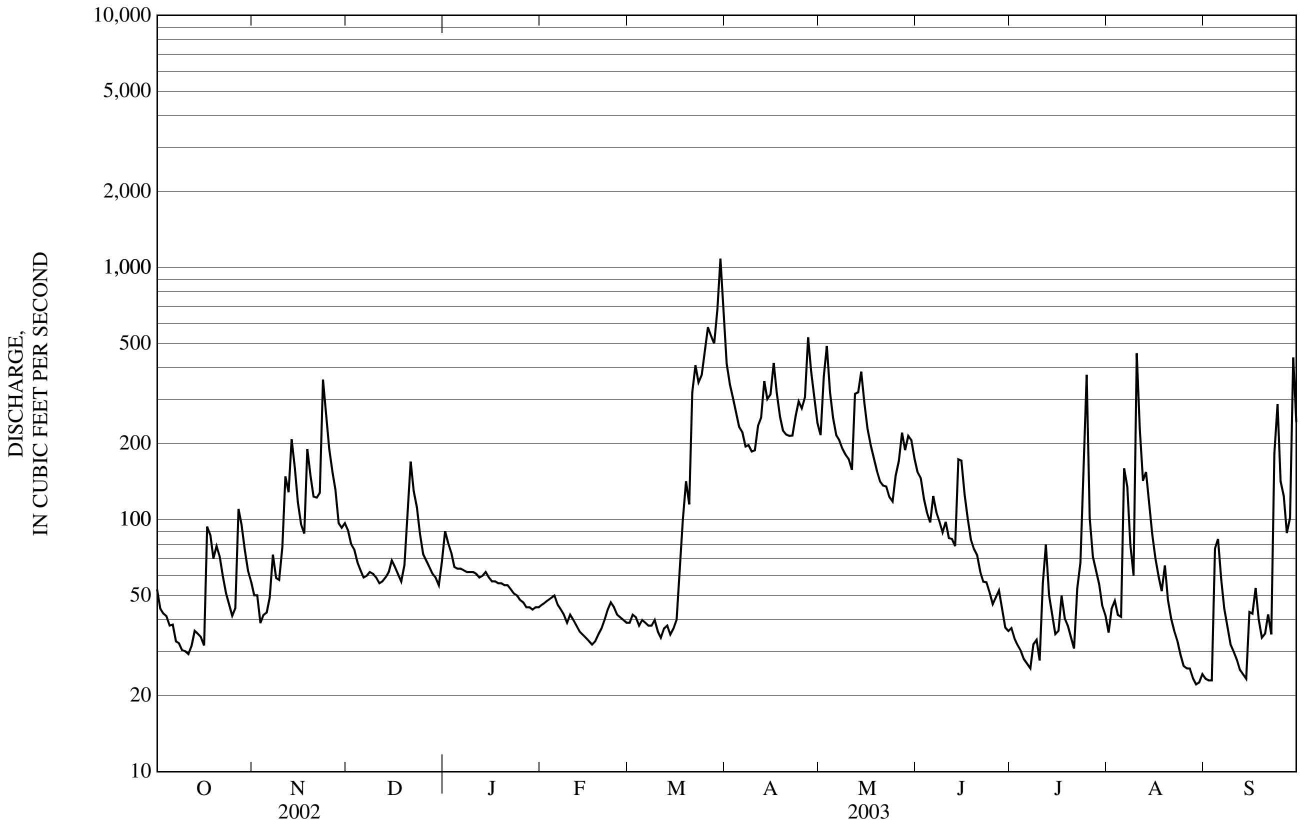
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	94.4	128	119	95.8	93.1	189	451	256	135	77.8	63.5	59.5
MAX	337	279	395	285	349	467	764	589	449	323	305	196
(WY)	(1982)	(1990)	(1984)	(1996)	(1981)	(1953)	(1952)	(1972)	(1973)	(1973)	(1990)	(1981)
MIN	16.3	37.6	36.3	23.2	22.1	49.5	137	82.2	38.9	25.2	12.4	17.7
(WY)	(1964)	(1971)	(1948)	(1948)	(1980)	(1941)	(1995)	(1965)	(1995)	(1965)	(2001)	(2001)

01139000 WELLS RIVER AT WELLS RIVER, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	56,240		42,129			
ANNUAL MEAN	154		115		147	
HIGHEST ANNUAL MEAN					239	1990
LOWEST ANNUAL MEAN					66.5	1965
HIGHEST DAILY MEAN	1,620	Apr 14	1,090	Mar 30	2,960	Jul 1, 1973
LOWEST DAILY MEAN	12	Sep 10	22	Aug 29	7.9	Sep 20, 2001
ANNUAL SEVEN-DAY MINIMUM	14	Sep 5	23	Aug 28	8.4	Sep 14, 2001
MAXIMUM PEAK FLOW			1,290	Mar 30	a5,970	Jun 30, 1973
MAXIMUM PEAK STAGE			4.82	Mar 30	9.82	Jun 30, 1973
ANNUAL RUNOFF (CFSM)	1.57		1.17		1.49	
ANNUAL RUNOFF (INCHES)	21.26		15.93		20.25	
10 PERCENT EXCEEDS	374		281		340	
50 PERCENT EXCEEDS	75		62		82	
90 PERCENT EXCEEDS	27		33		29	

a From rating curve extended above 1,400 ft^3/s on basis of peak flow over dam
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 Road and Fish Pond Road intersection in East Orange, 1.7 mi upstream from mouth, 2.0 mi southwest of West Topsham, 5.0 mi southwest of Orange, and 11.0 mi southeast of Barre.

DRAINAGE AREA.--8.95 mi^2.

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

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

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

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	1345	ice jam	*2.81	Aug 6	0300	*235	2.78
Mar 29	1830	190	2.63	Sep 23	1430	152	2.48
May 2	1500	174	2.57	Sep 28	1900	184	2.61

Minimum discharge, 1.9 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	3.1	e9.5	e6.2	e3.8	e3.2	68	32	21	5.2	3.1	2.9
2	2.1	3.7	e8.0	e5.6	e3.9	e3.5	46	64	19	4.4	6.7	2.9
3	2.2	4.3	e6.6	e5.3	e4.0	e3.3	41	39	16	4.0	5.5	2.9
4	2.0	2.9	e5.0	e5.2	e3.9	e3.0	41	32	15	3.7	5.9	17
5	3.5	3.0	e4.3	e5.2	e3.8	e3.2	40	30	18	3.4	6.2	5.4
6	2.5	3.7	e4.2	e5.2	e3.6	e3.3	38	29	22	3.2	38	4.0
7	2.2	5.1	e4.6	e5.2	e3.4	e3.2	54	28	16	3.0	9.0	3.4
8	2.3	7.6	e4.4	e5.1	e3.4	e3.3	33	27	14	6.1	6.2	3.1
9	2.0	3.8	e4.1	e5.0	e3.5	e3.3	32	29	16	3.7	6.0	2.8
10	2.1	9.8	e4.0	e5.0	e3.4	e3.0	35	25	18	3.2	30	2.7
11	2.1	13	e4.2	e4.9	e3.3	e3.0	33	25	14	16	9.2	2.6
12	2.8	9.0	e4.5	e4.9	e3.1	e3.1	44	45	13	6.8	7.9	2.5
13	2.6	13	e4.8	e4.8	e3.0	e3.0	40	46	13	4.4	6.7	2.4
14	3.0	6.6	e5.0	e4.8	e3.0	e3.1	37	41	25	3.9	5.5	7.4
15	2.4	5.2	e4.9	e4.8	e3.0	e3.1	52	30	15	3.2	4.7	4.9
16	4.5	4.5	e4.8	e4.7	e3.0	e3.5	44	28	12	6.3	5.0	7.5
17	15	5.4	e4.6	e4.6	e3.1	e5.1	35	26	10	5.2	4.9	4.9
18	5.5	12	e4.2	e4.6	e3.1	e12	35	25	9.8	7.3	4.4	3.7
19	4.4	7.3	e4.4	e4.6	e3.1	e14	37	23	9.4	5.1	4.1	3.4
20	6.0	6.5	e8.6	e4.6	e3.2	e8.0	39	22	8.7	3.6	3.6	6.6
21	3.8	7.5	e12	e4.4	e3.3	e42	36	23	7.7	3.1	3.4	4.3
22	3.2	11	e8.4	e4.2	e3.4	33	39	21	8.0	9.1	3.3	3.7
23	3.0	26	e7.6	e4.1	e3.5	25	45	20	7.5	5.9	3.1	33
24	2.8	11	e6.4	e4.0	e3.7	30	39	22	6.6	21	2.8	10
25	2.7	9.7	e5.4	e3.8	e3.6	34	43	26	5.9	10	3.0	6.6
26	5.2	9.2	e5.2	e3.8	e3.4	41	48	27	5.5	5.2	3.1	6.6
27	8.9	e8.8	e5.0	e3.7	e3.3	38	49	24	5.0	4.3	2.8	5.2
28	5.8	e8.6	e4.8	e3.6	e3.2	42	36	26	4.6	5.5	2.6	41
29	3.8	e8.8	e4.6	e3.6	---	88	32	25	4.4	3.7	2.8	18
30	3.3	e9.4	e4.5	e3.6	---	57	31	21	8.2	3.1	4.8	10
31	3.1	---	e4.9	e3.7	---	48	---	18	---	2.6	3.2	---
TOTAL	117.2	239.5	173.5	142.8	95.0	568.2	1,222	899	368.3	175.2	207.5	231.4
MEAN	3.78	7.98	5.60	4.61	3.39	18.3	40.7	29.0	12.3	5.65	6.69	7.71
MAX	15	26	12	6.2	4.0	88	68	64	25	21	38	41
MIN	2.0	2.9	4.0	3.6	3.0	3.0	31	18	4.4	2.6	2.6	2.4
CFSM	0.42	0.89	0.63	0.51	0.38	2.05	4.55	3.24	1.37	0.63	0.75	0.86
IN.	0.49	1.00	0.72	0.59	0.39	2.36	5.08	3.74	1.53	0.73	0.86	0.96

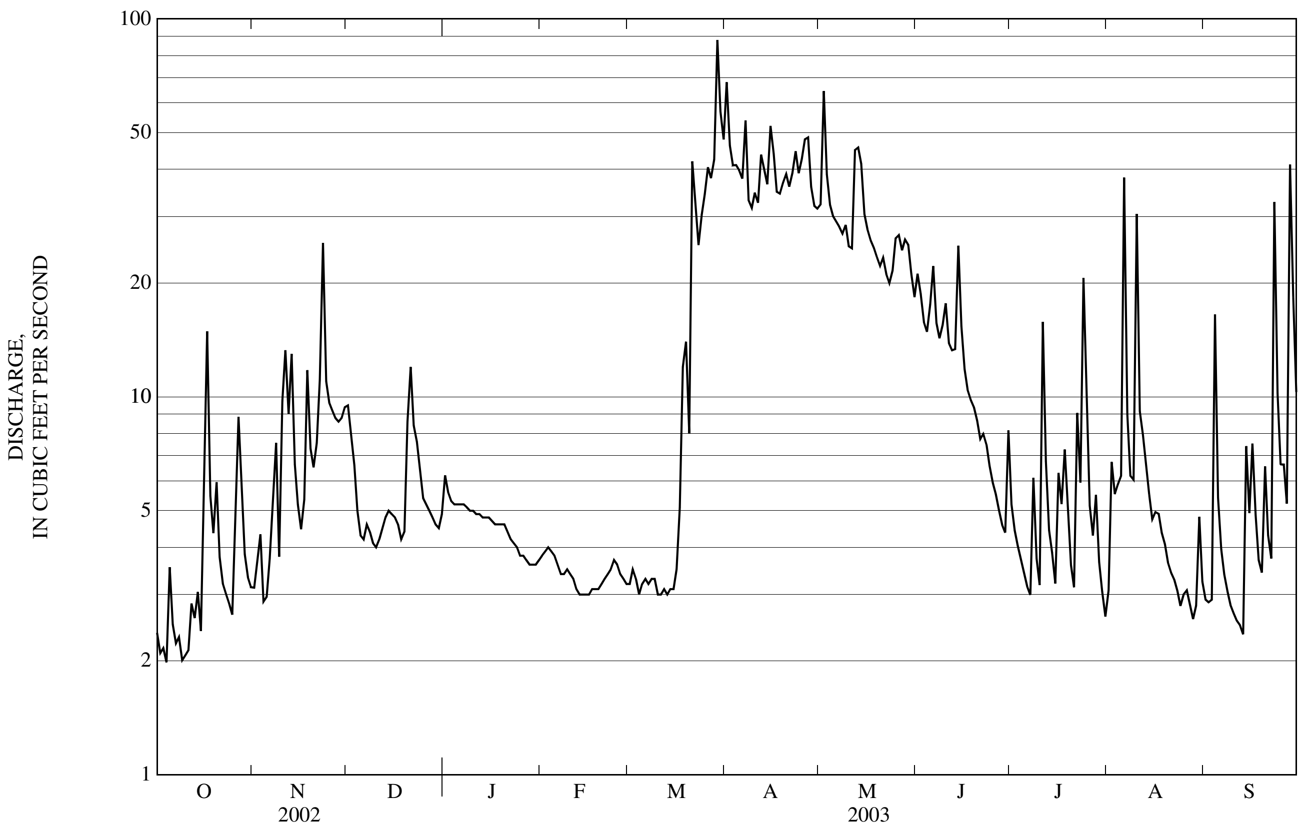
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	9.67	13.4	12.9	9.93	9.18	17.5	49.9	33.8	13.8	7.26	5.53	5.21
MAX	35.5	33.1	41.0	26.6	46.0	47.0	91.2	75.7	41.1	41.0	25.5	14.9
(WY)	(1976)	(1990)	(1984)	(1978)	(1981)	(1976)	(1969)	(1971)	(1973)	(1973)	(1990)	(1976)
MIN	1.14	3.41	2.91	2.53	1.90	3.56	16.3	11.4	4.87	1.63	1.15	0.40
(WY)	(1964)	(1979)	(1964)	(1971)	(1964)	(2001)	(1995)	(1995)	(1995)	(1963)	(1970)	(1963)

01139800 EAST ORANGE BRANCH AT EAST ORANGE, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	4,628.3		4,439.6			
ANNUAL MEAN	12.7		12.2		15.7	
HIGHEST ANNUAL MEAN					29.1	1976
LOWEST ANNUAL MEAN					6.71	1965
HIGHEST DAILY MEAN	155	Apr 14	88	Mar 29	260	May 4, 1971
LOWEST DAILY MEAN	a1.1	Sep 8	b2.0	Oct 4	0.20	Sep 3, 1963
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 5	2.3	Oct 6	0.21	Sep 6, 1963
MAXIMUM PEAK FLOW			235	Aug 6	cd800	Jul 23, 1990
MAXIMUM PEAK STAGE			f2.81	Mar 21	f6.35	Jan 22, 1959
INSTANTANEOUS LOW FLOW			1.9	Oct 9	g0.10	Sep 9, 1963
ANNUAL RUNOFF (CFSM)	1.42		1.36		1.75	
ANNUAL RUNOFF (INCHES)	19.24		18.45		23.82	
10 PERCENT EXCEEDS	30		35		39	
50 PERCENT EXCEEDS	6.4		5.2		8.4	
90 PERCENT EXCEEDS	1.8		3.0		2.3	

a Also occurred on September 9 and 10, 2002
b Also occurred on October 9
c From rating curve extended above 160 ft^3/s on basis of slope-area measurement of peak flow
d From floodmarks
e Estimated
f Ice jam
g Also occurred on September 19, 1963



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, 0.7 mi upstream from mouth, and 0.9 mi northeast of Town Hall in Randolph.

DRAINAGE AREA.--30.5 mi^2.

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

REVISED RECORDS.--WDR MA-NH-RI-VT-72-l: 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2045	*597	*5.66	Apr 27	0045	362	4.80

Minimum discharge, 6.2 ft^3/s, Oct. 4, 9, 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	17	e39	e25	e16	e14	163	85	46	15	16	14
2	8.0	17	e36	e24	e17	e14	142	145	42	14	34	13
3	7.3	15	e30	e24	e17	e13	131	131	36	12	30	12
4	6.5	15	e28	e25	e18	e13	113	99	34	9.9	28	65
5	8.0	16	e30	e26	e17	e13	102	88	33	11	29	32
6	8.2	19	e33	e25	e16	e12	93	78	47	9.8	78	22
7	8.0	23	e32	e24	e15	e12	82	75	34	9.1	48	18
8	7.4	19	e29	e24	e15	e12	77	69	32	10	39	16
9	6.5	23	e24	e23	e15	e11	72	66	29	9.1	31	14
10	6.7	33	e26	e23	e14	e11	82	60	29	8.3	36	13
11	6.7	47	e27	e22	e14	e11	95	55	27	28	33	12
12	8.4	38	e28	e23	e14	e11	107	100	26	25	34	11
13	9.0	59	e29	e20	e13	e10	115	108	25	16	68	11
14	10	43	e31	e19	e14	e10	98	113	70	13	37	11
15	8.2	36	39	e18	e13	e12	114	86	44	11	30	11
16	9.7	31	33	e19	e13	e12	148	73	33	14	31	11
17	45	32	e25	e19	e14	e15	105	65	29	25	35	11
18	27	50	e22	e18	e14	e19	87	60	26	17	29	9.5
19	21	38	e25	e18	e14	e28	79	55	25	17	27	8.9
20	27	36	32	e19	e15	e38	76	51	23	13	23	11
21	20	38	43	e18	e14	156	73	48	21	11	21	9.6
22	16	49	35	e18	e14	175	83	46	21	36	19	8.8
23	15	184	33	e17	e15	144	107	43	19	27	17	94
24	14	87	31	e18	e17	162	92	46	15	82	15	55
25	13	66	e29	e19	e16	211	77	55	15	69	14	28
26	15	59	e28	e18	e16	263	125	53	12	35	14	24
27	28	53	e27	e18	e15	241	219	56	13	27	13	21
28	28	48	e26	e17	e15	228	126	50	11	26	11	71
29	23	44	e25	e17	---	343	105	53	10	22	12	104
30	20	e43	e24	e16	---	312	90	51	24	20	29	52
31	17	---	e24	e15	---	213	---	43	---	17	17	---
TOTAL	457.2	1,278	923	629	420	2,739	3,178	2,206	851	659.2	898	793.8
MEAN	14.7	42.6	29.8	20.3	15.0	88.4	106	71.2	28.4	21.3	29.0	26.5
MAX	45	184	43	26	18	343	219	145	70	82	78	104
MIN	6.5	15	22	15	13	10	72	43	10	8.3	11	8.8
CFSM	0.48	1.40	0.98	0.67	0.49	2.90	3.47	2.33	0.93	0.70	0.95	0.87
IN.	0.56	1.56	1.13	0.77	0.51	3.34	3.88	2.69	1.04	0.80	1.10	0.97

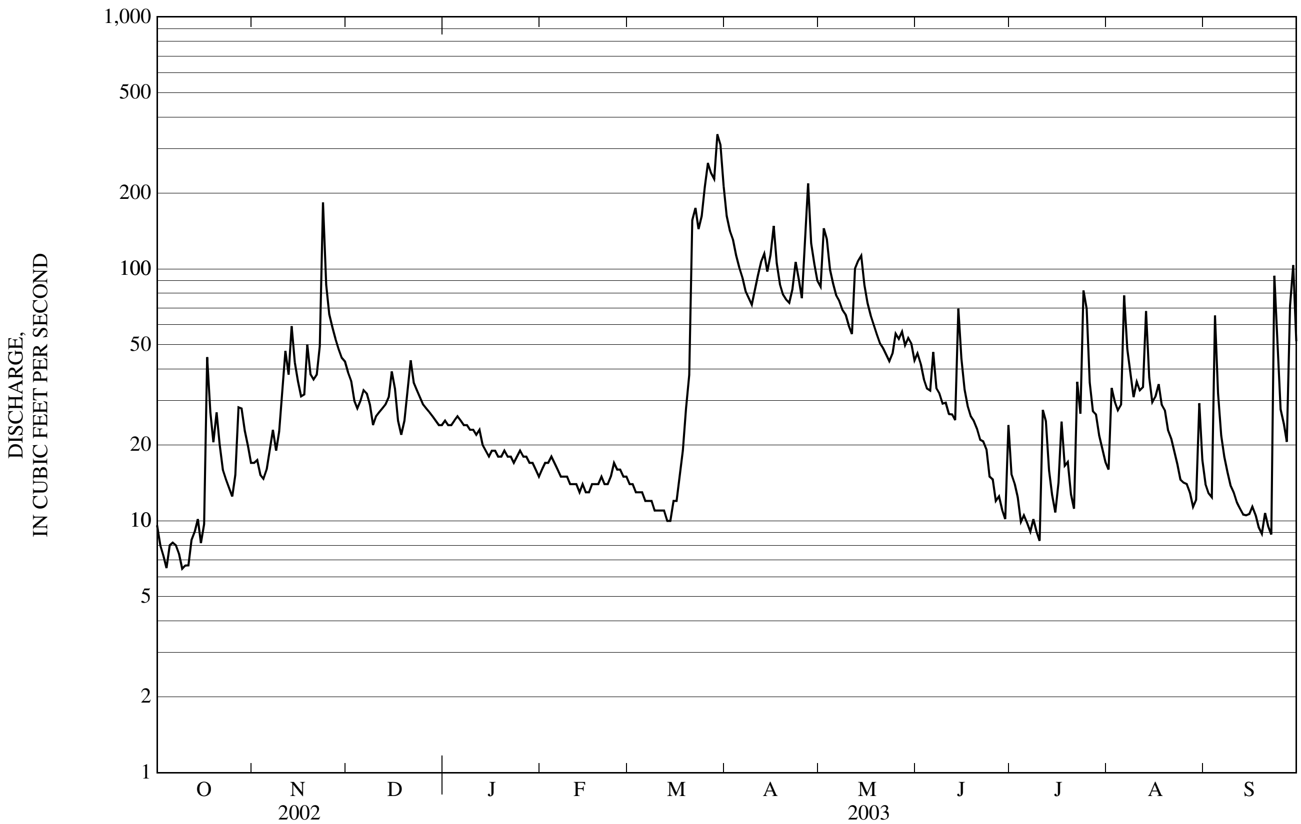
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	26.5	38.9	41.2	34.4	33.0	75.3	163	78.0	38.9	20.7	15.4	15.1
MAX	102	102	151	96.8	136	189	289	173	142	85.5	64.0	48.9
(WY)	(1946)	(1960)	(1984)	(1996)	(1981)	(1979)	(1969)	(1972)	(1947)	(1973)	(1989)	(1981)
MIN	2.29	4.71	8.84	8.54	8.27	14.0	46.7	23.4	7.32	2.05	1.90	1.91
(WY)	(1964)	(2002)	(2002)	(2002)	(1940)	(1940)	(1995)	(1941)	(1965)	(1965)	(1965)	(1963)

01142500 AYERS BROOK AT RANDOLPH, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	16,648.1		15,032.2			
ANNUAL MEAN	45.6		41.2		48.2	
HIGHEST ANNUAL MEAN					78.4	1973
LOWEST ANNUAL MEAN					16.7	1965
HIGHEST DAILY MEAN	721	Apr 14	343	Mar 29	1,550	Jun 27, 1998
LOWEST DAILY MEAN	e2.1	Sep 9	a6.5	Oct 4	0.80	Aug 2, 1965
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 5	7.3	Oct 4	0.97	Jul 27, 1965
MAXIMUM PEAK FLOW			597	Mar 29	b3,480	Jun 27, 1998
MAXIMUM PEAK STAGE			5.66	Mar 29	11.93	Jun 27, 1998
INSTANTANEOUS LOW FLOW			c6.2	Oct 4	0.60	Jul 27, 1965
ANNUAL RUNOFF (CFSM)	1.50		1.35		1.58	
ANNUAL RUNOFF (INCHES)	20.31		18.33		21.47	
10 PERCENT EXCEEDS	100		94		110	
50 PERCENT EXCEEDS	27		25		27	
90 PERCENT EXCEEDS	5.6		11		6.7	

a Also occurred on October 9
b From rating curve extended above 1,500 ft^3/s on basis of contracted-opening measurement at gage height 10.37 ft
c Also occurrd on October 9 and 10
e Estimated



01142500 AYERS BROOK AT RANDOLPH, VT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to 1999 and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instan-taneous dis-charge, cfs (00061)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of sat-uration (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unf uS/cm 25 degC (00095)	Temper-ature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phos-phate, water, fltrd, mg/L as P (00671)	Phos-phorus, water, unfltrd mg/L (00665)	Sus-pended sedi-ment concen-tration mg/L (80154)
DEC														
11...	0800	E25	--	--	7.1	207	0.0	0.11	<0.04	0.54	<0.008	<0.02	0.004	1
JAN														
06...	0930	E25	13.7	94	7.1	149	0.0	E.09	<0.04	0.53	<0.008	<0.02	E.003	1
FEB														
03...	1000	E17	14.1	99	7.1	177	0.0	0.11	E.02	0.58	<0.008	<0.02	<0.004	1
MAR														
17...	1715	E19	15.0	105	--	254	0.0	E.07	<0.04	0.61	<0.008	<0.02	0.007	3
25...	1400	164	12.8	101	6.3	177	4.0	0.29	E.010	0.729	<0.008	<0.02	0.108	112
APR														
01...	1715	164	13.1	100	7.5	176	2.8	0.23	<0.015	0.702	<0.008	<0.02	0.103	121
15...	1730	114	10.7	97	7.8	168	10.4	0.16	<0.015	0.562	<0.008	<0.02	0.051	47
29...	0730	108	10.5	90	7.7	185	8.4	0.19	E.008	0.503	<0.008	<0.02	0.037	33
MAY														
12...	1400	93	10.4	92	7.7	203	9.9	0.13	<0.015	0.380	<0.008	<0.02	0.024	16
JUN														
18...	0845	26	9.8	95	7.9	215	13.8	0.13	<0.015	0.387	<0.008	<0.02	0.006	2
JUL														
15...	0800	11	8.2	86	8.0	285	17.7	0.12	0.020	0.401	<0.008	<0.02	0.006	2
AUG														
19...	1545	28	9.0	104	8.1	256	22.0	E.07	<0.015	0.348	<0.008	<0.02	0.006	2
SEP														
09...	1500	14	10.2	108	8.2	293	17.8	E.08	E.008	0.404	<0.008	<0.02	0.005	1

Remark codes used in this table:
< -- Less than
E -- Estimated value

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 Quechee West Hartford Road bridge at West Hartford, 0.2 mi south of the State Highway 14 and Tigertown Road intersection in West Hartford, 5.1 mi south of State Highways 14 and 132 intersection in Sharon, 5.5 mi west of Post Office in Norwich, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--690 mi^2.

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

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

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 120,000 ft^3/s, November 4, 1927, gage height, 29.3 ft, from floodmarks, from rating curve extended above 29,000 ft^3/s on basis of slope-area measurement of peak flow; minimum observed, about 35 ft^3/s, August 4, 1918; minimum daily discharge, 54 ft^3/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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	2100	ice jam	*14.36	Mar 30	0200	*16,800	12.45

Minimum discharge, 170 ft^3/s, Oct. 9, 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	310	476	1,060	e810	e460	e465	4,130	2,020	1,330	529	432	328
2	256	484	835	e850	e470	e460	3,510	2,590	1,460	367	859	296
3	236	433	e800	e660	e470	e440	3,200	3,760	1,140	317	771	278
4	219	402	e580	e715	e465	e430	2,830	2,570	968	286	740	2,150
5	206	413	650	e735	e515	e445	2,600	2,170	930	264	758	1,270
6	209	457	846	e700	e520	e435	2,450	1,910	1,250	247	2,550	710
7	205	541	777	e680	e460	e430	2,130	1,790	1,070	232	1,840	547
8	192	503	e765	e670	e480	e430	2,080	1,660	968	245	1,140	464
9	186	545	598	e700	e460	e420	1,950	1,580	866	260	866	408
10	177	1,010	e495	e675	e440	e400	1,890	1,450	797	235	1,470	369
11	173	1,560	e650	e620	e430	e400	2,230	1,310	712	300	1,470	344
12	191	1,500	732	e660	e410	e410	2,430	1,880	729	718	2,110	322
13	236	2,050	770	e635	e390	e400	3,490	2,510	662	456	1,720	301
14	245	1,680	746	e600	e380	e390	3,010	2,970	1,730	347	1,200	310
15	264	1,250	952	e565	e370	e380	3,520	2,330	1,770	328	906	333
16	254	1,010	846	e590	e370	e400	5,970	1,910	1,210	304	733	335
17	1,100	945	661	e610	e375	e470	3,890	1,650	934	536	706	330
18	1,040	1,400	496	e580	e400	e1,300	2,900	1,470	781	431	626	292
19	750	1,170	e550	e585	e420	e2,250	2,570	1,330	701	386	594	266
20	901	1,010	e830	e590	e440	e1,900	2,510	1,190	653	332	523	303
21	764	1,140	e1,700	e580	e450	e3,600	2,630	1,110	580	326	456	317
22	587	1,240	1,530	e570	e480	6,090	2,620	1,060	540	749	414	274
23	499	4,180	1,230	e560	e540	5,070	2,860	961	525	1,040	379	848
24	449	2,670	1,070	e550	e640	4,070	2,620	948	475	1,810	342	1,970
25	408	1,940	765	e540	e610	5,050	2,290	1,120	423	3,040	323	874
26	421	1,630	686	e530	e520	7,310	2,150	1,180	387	1,680	310	684
27	654	1,430	e915	e515	e480	6,080	4,910	1,420	362	951	301	590
28	798	1,180	e860	e505	e470	5,400	3,290	1,230	328	758	273	771
29	691	1,120	e820	e485	---	8,410	2,650	1,580	303	633	257	3,790
30	583	1,120	e780	e470	---	11,400	2,300	1,590	551	526	407	1,820
31	515	---	e765	e455	---	5,900	---	1,330	---	439	430	---
TOTAL	13,719	36,489	25,760	18,990	12,915	81,035	87,610	53,579	25,135	19,072	25,906	21,894
MEAN	443	1,216	831	613	461	2,614	2,920	1,728	838	615	836	730
MAX	1,100	4,180	1,700	850	640	11,400	5,970	3,760	1,770	3,040	2,550	3,790
MIN	173	402	495	455	370	380	1,890	948	303	232	257	266
CFSM	0.64	1.76	1.20	0.89	0.67	3.79	4.23	2.50	1.21	0.89	1.21	1.06
IN.	0.74	1.97	1.39	1.02	0.70	4.37	4.72	2.89	1.36	1.03	1.40	1.18

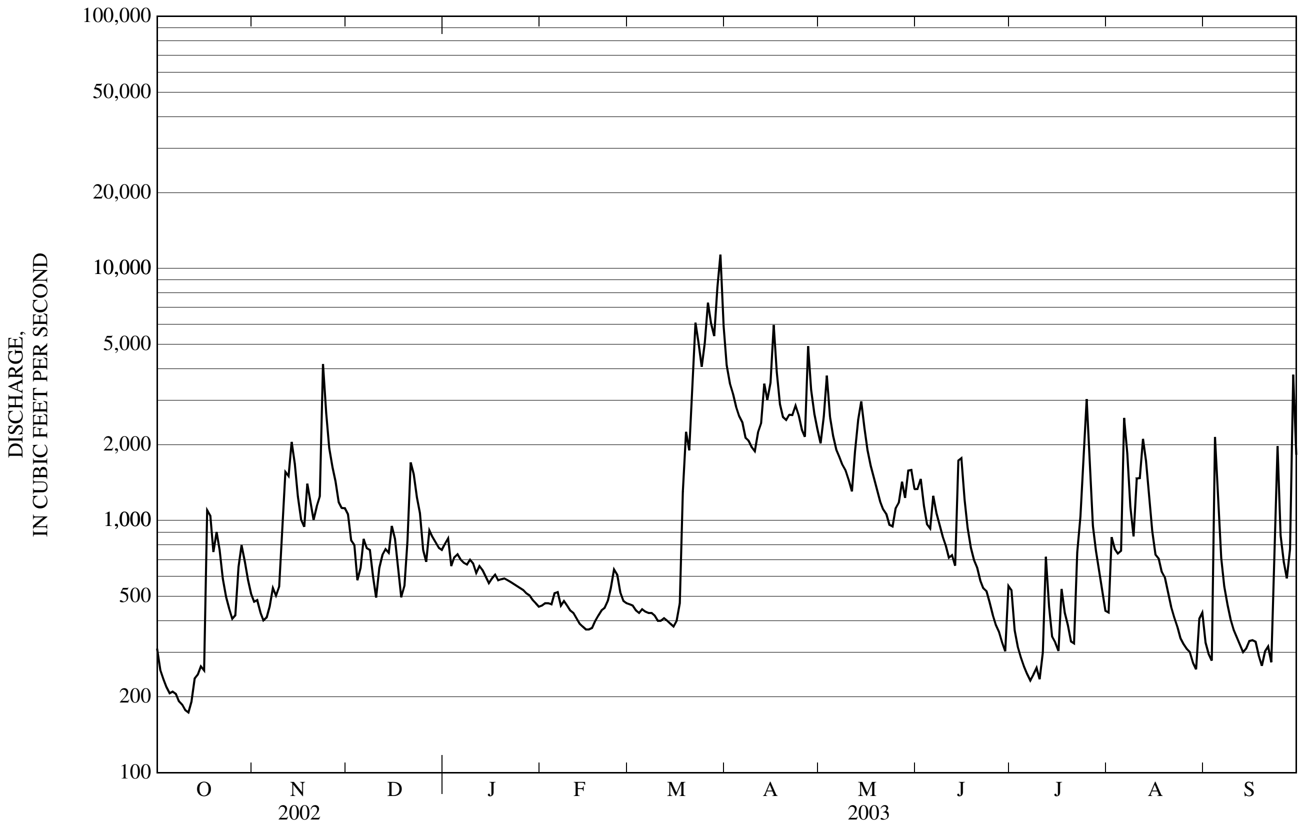
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 2003, BY WATER YEAR (WY)

MEAN	658	1,009	1,002	850	796	1,903	3,894	1,978	901	498	374	402
MAX	2,416	2,391	3,189	2,178	3,503	7,170	7,286	4,734	3,459	2,010	1,822	2,774
(WY)	(1946)	(1960)	(1984)	(1996)	(1981)	(1936)	(1969)	(1940)	(1947)	(1996)	(1976)	(1938)
MIN	80.0	204	237	197	169	222	1,131	634	224	108	90.5	77.5
(WY)	(1964)	(2002)	(1923)	(1925)	(1940)	(1940)	(1995)	(1941)	(1921)	(1965)	(1965)	(1963)

01144000 WHITE RIVER AT WEST HARTFORD, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1915 - 2003	
ANNUAL TOTAL	437,787		422,104			
ANNUAL MEAN	1,199		1,156		1,187	
HIGHEST ANNUAL MEAN					1,910	1976
LOWEST ANNUAL MEAN					494	1965
HIGHEST DAILY MEAN	22,700	Apr 14	11,400	Mar 30	31,300	Mar 18, 1936
LOWEST DAILY MEAN	a79	Sep 10	173	Oct 11	b54	Sep 27, 1963
ANNUAL SEVEN-DAY MINIMUM	84	Sep 6	190	Oct 6	59	Sep 22, 1963
MAXIMUM PEAK FLOW			16,800	Mar 30	c120,000	Nov 4, 1927
MAXIMUM PEAK STAGE			d14.36	Mar 21	f29.30	Nov 4, 1927
INSTANTANEOUS LOW FLOW			g170	Oct 9	h35	Aug 4, 1918
ANNUAL RUNOFF (CFSM)	1.74		1.68		1.72	
ANNUAL RUNOFF (INCHES)	23.60		22.76		23.37	
10 PERCENT EXCEEDS	2,720		2,580		2,700	
50 PERCENT EXCEEDS	706		686		630	
90 PERCENT EXCEEDS	151		310		188	

a Also occurred on September 11, 2002
b Also occurred on September 28, 1963
c From rating curve extended above 29,000 ft^3/s as explained under “Extremes” paragraph
d Ice jam. From peak indicator clip
e Estimated
f From floodmarks
g Also occurred on October 10 and 11
h About



01144000 WHITE RIVER AT WEST HARTFORD, VT—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1956 to 1958, 1961, 1966 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, (ft^3/s) (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
DEC														
11...	1045	622	--	--	7.1	158	0.1	E.08	<0.04	0.41	<0.008	<0.02	0.005	2
JAN														
07...	0915	687	14.3	100	7.2	125	0.0	E.07	<0.04	0.35	<0.008	<0.02	0.004	1
FEB														
05...	1130	518	14.3	103	7.4	150	0.1	E.10	E.02	0.41	<0.008	<0.02	0.005	2
MAR														
17...	0830	428	12.0	82	7.7	192	0.1	0.12	E.04	0.43	<0.008	<0.02	0.004	1
25...	1000	4,670	--	--	6.5	99	0.0	0.31	0.016	0.503	<0.008	<0.02	0.093	95
APR														
02...	0730	3,570	14.0	110	--	123	1.8	0.13	<0.015	0.535	<0.008	<0.02	0.044	66
09...	0845	1,970	13.1	96	7.0	160	2.2	E.10	E.012	0.517	<0.008	<0.02	0.014	10
16...	0800	6,370	11.5	96	7.3	75	7.4	0.34	<0.015	0.346	<0.008	<0.02	0.165	236
28...	1715	3,050	10.9	99	7.8	106	10.0	0.16	E.008	0.357	<0.008	<0.02	0.024	40
MAY														
12...	1700	2,330	10.4	93	8.0	153	10.8	0.12	<0.015	0.287	<0.008	<0.02	0.018	13
JUN														
18...	0645	807	9.1	96	7.8	145	17.6	0.10	<0.015	0.218	<0.008	<0.02	0.006	1
JUL														
16...	0945	290	8.0	92	8.1	201	21.8	E.10	0.017	0.219	<0.008	<0.02	0.008	2
AUG														
20...	0700	541	8.2	92	8.0	195	22.0	E.10	<0.015	0.169	<0.008	<0.02	0.007	2
SEP														
09...	1245	404	9.7	104	8.3	205	18.6	E.08	<0.015	0.174	<0.008	<0.02	0.005	1

Remark codes used in this table:
< -- Less than
E -- Estimated value

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, 0.2 mi northwest of US 4 and State Highway 12A intersection in West Lebanon, and at mile 215.0.

DRAINAGE AREA.--4,092 mi^2.

PERIOD OF RECORD.--Discharge records: November 1911 to December 1911, March 1912 to December 1913, March 1914 to December 1914, February 1915 to December 1915, April 1916 to December 1916, March 1917 to November 1917, April 1918 to December 1919, April 1920 to January 1921, March 1921 to November 1976, November 1978 to current year. Published as "at White River Junction, VT" prior to November 1978. Peak streamflow: Water years 1912 to 1976, 1979 to current year. Water-quality discrete samples: Water years 1954, 1961, 1967, 1968, 1970, 1975, 1976, 1979 to 1999.

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

GAGE.--Water-stage recorder. Datum of gage is 321.52 ft above National Geodetic Vertical Datum of 1929. Prior to June 16, 1918, nonrecording gage on downstream side of pier of railroad bridge 50 ft upstream at same datum. June 16, 1918, to 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 poor. Flow regulated by power plants 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^3.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 136,000 ft^3/s, November 4, 1927, gage height, 35.0 ft, present site; minimum daily discharge 82 ft^3/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, 40,900 ft^3/s, March 30, gage height, 16.91 ft; maximum gage height, 21.6 ft, March 21; minimum daily discharge, 981 ft^3/s, October 8.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,130	3,370	4,120	3,450	2,030	e2,670	32,900	12,100	e7,070	2,750	2,110	3,160
2	3,170	1,770	5,070	e3,300	2,060	2,180	25,400	12,200	e6,750	3,500	2,490	2,380
3	2,640	1,270	4,830	4,050	e4,350	2,350	18,200	23,100	e5,200	3,690	3,520	1,100
4	2,090	2,380	3,350	4,340	e4,000	e3,950	e9,500	20,900	e5,100	1,890	3,020	6,570
5	1,250	2,620	3,910	3,890	e3,700	1,260	e10,400	16,500	5,660	2,790	3,110	4,680
6	2,720	3,450	4,590	3,320	e3,300	e3,070	e8,350	12,700	5,300	2,960	5,230	3,260
7	3,150	3,190	3,050	3,960	e3,480	e2,800	e8,000	11,300	4,690	3,580	5,980	2,290
8	981	1,710	4,280	3,320	e2,220	e1,950	e7,670	e8,150	4,150	2,940	4,430	2,980
9	1,630	1,890	e3,050	3,550	e2,240	1,280	e7,600	e8,750	5,170	996	2,930	2,420
10	2,670	3,790	e4,150	5,720	e3,070	e1,950	e6,950	e9,450	4,150	991	9,890	1,980
11	2,460	5,670	3,020	4,240	e3,350	e1,710	e8,070	e7,950	3,410	1,970	13,000	4,000
12	1,670	5,500	4,060	4,500	e2,950	1,900	9,270	e11,700	4,320	2,270	9,410	3,680
13	1,690	7,710	4,020	e4,300	e3,500	3,260	12,000	16,200	3,430	2,040	10,200	1,390
14	2,380	6,540	2,860	e3,500	e3,020	e2,750	13,400	17,600	6,580	1,920	8,280	1,630
15	2,950	6,530	3,480	e3,400	e3,350	e2,950	12,800	16,300	8,780	1,910	6,230	2,340
16	2,780	4,620	3,980	e4,250	e3,200	1,710	16,000	14,200	9,150	2,410	3,990	2,480
17	4,290	5,010	e4,030	e5,020	e3,360	1,250	17,600	12,000	9,270	2,740	3,260	2,460
18	2,710	5,680	e4,350	e4,250	e3,470	3,150	16,100	e9,170	4,620	2,160	3,370	2,240
19	5,000	6,380	3,790	e4,150	e3,340	5,050	10,700	e9,650	3,050	1,820	3,770	2,260
20	4,700	5,670	4,940	e3,500	e2,490	4,190	8,140	e7,870	5,280	1,100	3,620	2,040
21	5,100	6,950	5,340	e2,900	e2,800	e8,500	9,720	e4,400	3,700	3,230	3,030	1,880
22	4,730	5,990	5,510	e3,230	e2,780	e19,000	11,600	e7,070	2,570	3,780	3,550	1,910
23	3,180	7,620	5,940	e3,730	2,360	e16,500	13,800	e6,250	2,690	5,570	3,290	4,290
24	2,490	11,500	5,530	e3,200	e3,680	13,400	12,800	e5,100	2,620	2,300	1,630	7,900
25	1,950	8,730	3,160	e4,100	e3,520	16,000	14,500	e5,700	3,100	7,270	2,150	5,930
26	1,980	6,970	4,450	e3,200	e3,550	24,800	15,200	e5,500	3,430	4,860	1,780	2,120
27	3,710	7,280	4,480	e2,650	e3,180	24,700	17,900	7,940	3,080	3,560	3,120	2,580
28	4,250	5,520	3,050	e4,880	e3,260	22,600	15,800	e6,000	1,110	3,290	1,740	3,580
29	5,040	4,490	4,110	e2,970	---	25,700	14,200	e6,450	1,110	2,090	1,500	10,000
30	3,690	4,120	5,210	e3,320	---	39,400	12,100	e6,750	1,460	2,150	1,800	6,290
31	3,390	---	3,370	e3,270	---	38,200	---	e7,200	---	1,870	1,410	---
TOTAL	92,571	153,920	129,080	117,460	87,610	300,180	396,670	326,150	136,000	86,397	132,840	101,820
MEAN	2,986	5,131	4,164	3,789	3,129	9,683	13,220	10,520	4,533	2,787	4,285	3,394
MAX	5,100	11,500	5,940	5,720	4,350	39,400	32,900	23,100	9,270	7,270	13,000	10,000
MIN	981	1,270	2,860	2,650	2,030	1,250	6,950	4,400	1,110	991	1,410	1,100

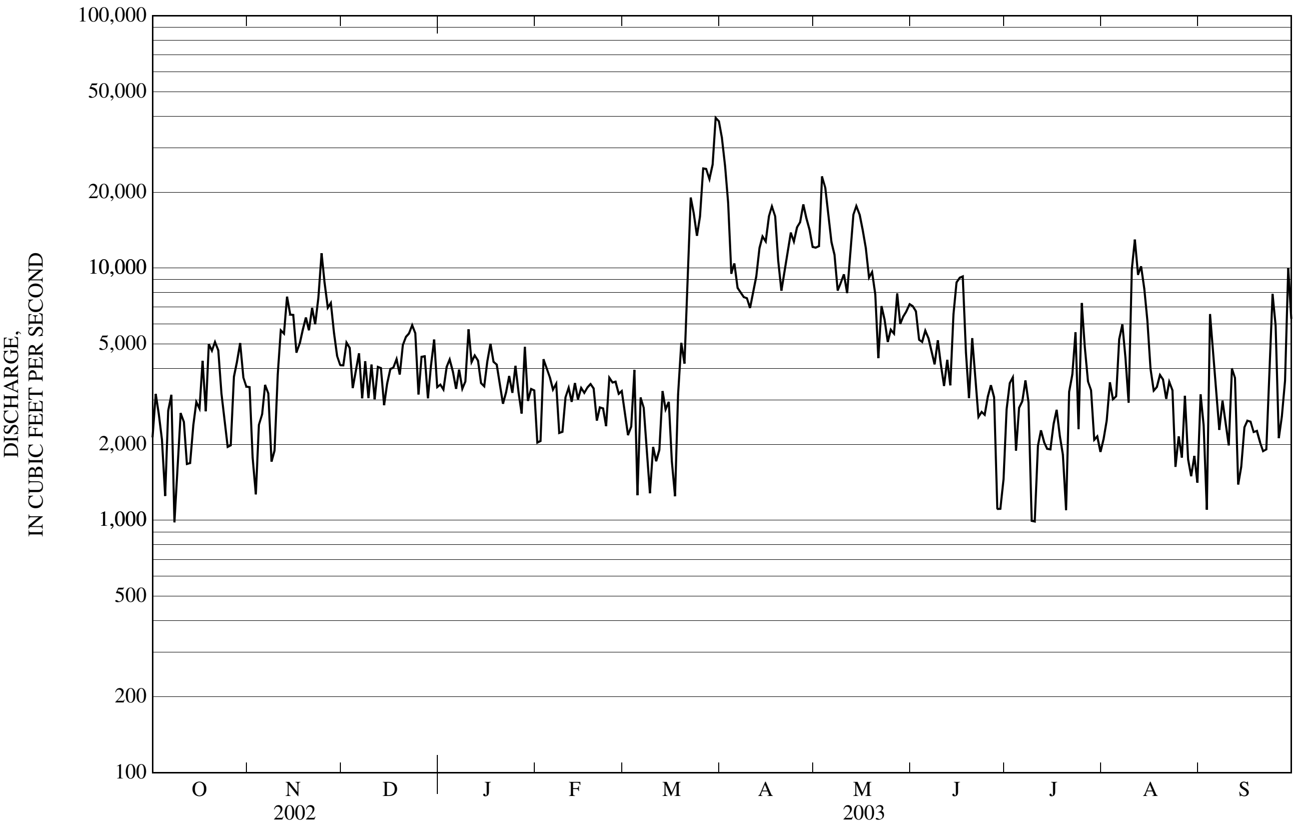
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 77, 1979 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	4,705	6,708	6,223	5,087	4,787	9,213	20,240	12,940	6,258	3,761	3,038	3,197
MAX	12,990	24,860	16,890	11,680	17,650	35,510	32,900	25,890	16,870	14,050	8,904	12,900
(WY)	(1982)	(1928)	(1984)	(1996)	(1981)	(1936)	(1934)	(1972)	(1947)	(1973)	(1990)	(1954)
MIN	1,314	2,313	1,795	1,627	1,419	1,626	5,536	4,556	1,946	1,393	1,072	1,007
(WY)	(1948)	(1948)	(1948)	(1948)	(1940)	(1940)	(1995)	(1987)	(1921)	(1921)	(1942)	(1921)

01144500 CONNECTICUT RIVER AT WEST LEBANON, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1912 - 77, 1979 - 2003	
ANNUAL TOTAL	2,605,623		2,060,698			
ANNUAL MEAN	7,139		5,646		7,123	
HIGHEST ANNUAL MEAN					10,700	1928
LOWEST ANNUAL MEAN					4,101	1965
HIGHEST DAILY MEAN	53,300	Apr 14	39,400	Mar 30	129,000	Nov 4, 1927
LOWEST DAILY MEAN	815	Sep 11	981	Oct 8	82	Aug 8, 1965
ANNUAL SEVEN-DAY MINIMUM	1,330	Aug 15	1,730	Jul 9	731	Aug 27, 1934
MAXIMUM PEAK FLOW			40,900	Mar 30	136,000	Nov 4, 1927
MAXIMUM PEAK STAGE			a21.60	Mar 21	35.00	Nov 4, 1927
10 PERCENT EXCEEDS	15,300		12,100		15,500	
50 PERCENT EXCEEDS	4,520		3,710		4,560	
90 PERCENT EXCEEDS	1,670		1,920		1,650	

a Ice jam. From highwater marks
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, 100 ft upstream of Payne Road bridge, 100 ft downstream from outlet of Mascoma Lake, 0.2 mi south of US 4 and Payne Road intersection in Mascoma, 1.9 mi west of City Hall in Enfield, and 3.5 mi east of City Hall in Lebanon.

DRAINAGE AREA.--153 mi^2.

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

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

GAGE.--Water-stage recorder. Datum of gage is 740.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,840 ft^3/s, March 19, 1936, gage height, 7.50 ft (at different datum), from rating curve extended above 2,500 ft^3/s on basis of computations of flow over dam at gage heights 6.85 ft and 7.50 ft; minimum daily discharge, 2 ft^3/s, February 3, 1929 and September 1, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,480 ft^3/s, Mar. 31, gage height, 7.55 ft; minimum daily discharge, 20 ft^3/s, Oct. 9-14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	175	215	92	46	37	1,760	223	318	31	33	29
2	21	105	148	93	47	38	973	189	296	30	52	29
3	21	105	100	92	e48	67	772	268	216	29	88	28
4	21	104	e96	94	e50	86	789	373	122	29	131	28
5	21	104	e87	95	e52	82	935	405	129	27	143	30
6	21	125	87	110	55	79	905	380	142	26	133	31
7	21	151	87	130	66	76	485	353	166	25	124	35
8	21	120	87	127	72	73	411	293	177	25	120	37
9	20	81	86	126	71	70	417	256	180	24	106	37
10	20	81	85	124	70	69	405	259	155	22	254	37
11	20	81	84	122	69	67	423	258	152	27	406	37
12	20	82	86	121	72	51	468	293	131	28	371	37
13	20	85	85	120	71	31	589	482	100	26	363	34
14	20	89	85	120	69	32	749	680	117	26	348	32
15	21	92	85	119	67	32	780	687	138	25	231	32
16	21	91	87	119	66	32	1,010	547	149	26	90	37
17	21	90	87	119	66	33	1,150	454	131	26	91	65
18	21	164	87	116	64	35	1,000	390	115	25	92	93
19	22	257	87	112	62	39	727	256	102	25	92	83
20	22	252	88	109	62	48	560	172	92	24	97	70
21	99	271	88	106	60	112	546	175	86	24	108	63
22	154	290	90	68	60	158	511	175	80	24	116	62
23	184	290	90	38	60	173	465	172	57	24	106	121
24	209	291	90	40	60	247	237	167	36	24	93	256
25	206	295	91	41	43	458	339	163	36	24	91	309
26	204	296	93	41	32	801	538	167	35	26	90	295
27	203	289	93	42	34	1,300	501	217	34	29	58	286
28	203	273	93	43	36	1,550	487	300	34	29	29	279
29	221	251	93	44	---	1,660	397	372	33	29	29	194
30	306	231	91	44	---	2,120	274	396	32	28	29	108
31	312	---	92	45	---	2,320	---	353	---	27	29	---
TOTAL	2,717	5,211	2,943	2,812	1,630	11,976	19,603	9,875	3,591	814	4,143	2,814
MEAN	87.6	174	94.9	90.7	58.2	386	653	319	120	26.3	134	93.8
MAX	312	296	215	130	72	2,320	1,760	687	318	31	406	309
MIN	20	81	84	38	32	31	237	163	32	22	29	28

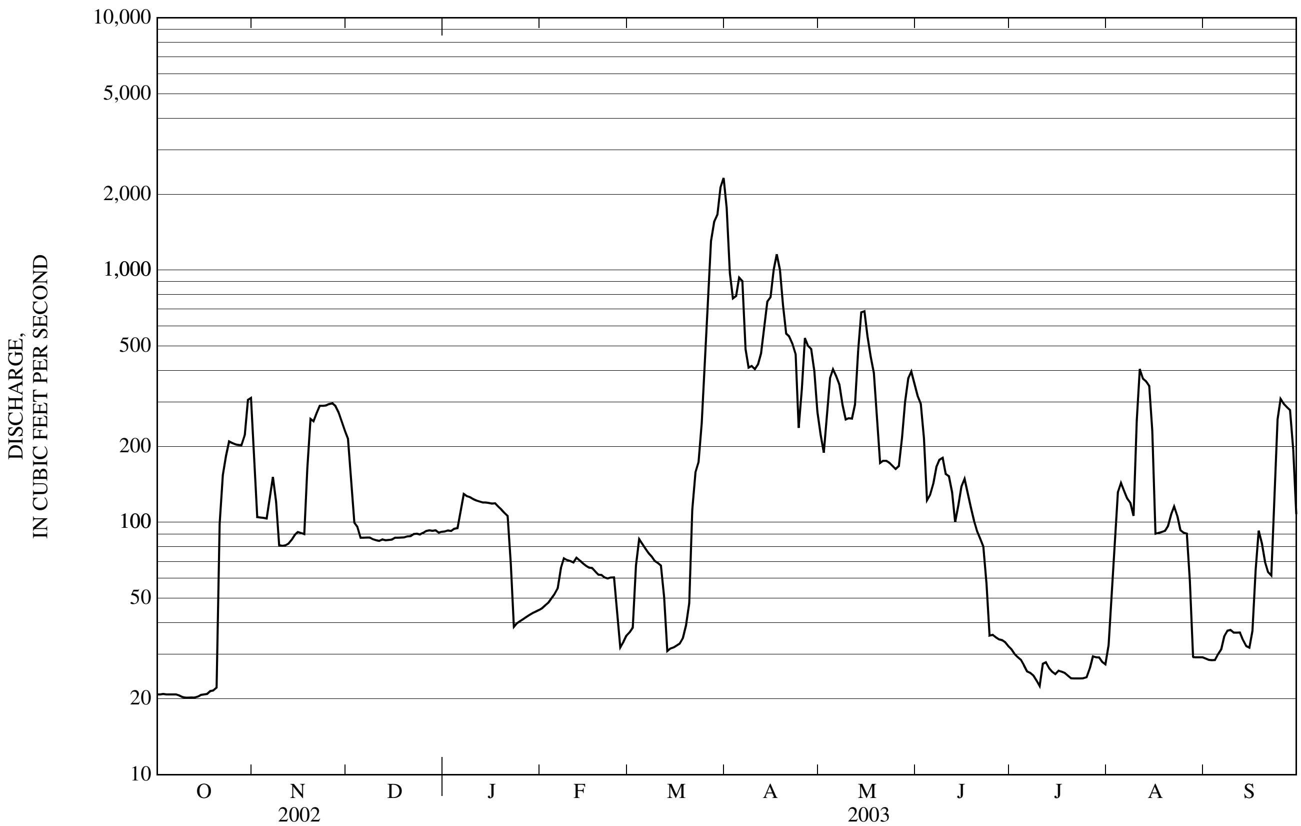
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	141	184	189	155	163	315	642	343	178	113	93.0	90.4
MAX	461	560	607	368	550	1,222	1,338	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	26.3	19.0	22.0
(WY)	(1964)	(1965)	(1979)	(1981)	(1980)	(1931)	(1995)	(1957)	(1999)	(2003)	(1985)	(2002)

01150500 MASCOMA RIVER AT MASCOMA, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1923 - 2003	
ANNUAL TOTAL	52,518		68,129			
ANNUAL MEAN	144		187		217	
HIGHEST ANNUAL MEAN					359	1973
LOWEST ANNUAL MEAN					84.4	1965
HIGHEST DAILY MEAN	921	Apr 2	2,320	Mar 31	5,090	Mar 19, 1936
LOWEST DAILY MEAN	a20	Oct 9	a20	Oct 9	b2.0	Feb 3, 1929
ANNUAL SEVEN-DAY MINIMUM	20	Oct 8	20	Oct 8	16	Aug 24, 1985
MAXIMUM PEAK FLOW			2,480	Mar 31	c5,840	Mar 19, 1936
MAXIMUM PEAK STAGE			7.55	Mar 31	9.08	Apr 20, 1997
10 PERCENT EXCEEDS	342		413		469	
50 PERCENT EXCEEDS	90		92		124	
90 PERCENT EXCEEDS	22		26		45	

a Also occurred on October 10-14
b Also occurred on September 1, 1940
c From rating curve extended above 2,500 ft^3/s on basis of computation 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
e Estimated



01150900 OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT

LOCATION.--Lat 43° 37'20", long 72° 45'34", Rutland County, Hydrologic Unit 02010001, on right bank, 50 ft upstream from Mission Chapel Road bridge, 1.6 mi northwest of State Highway 100S and US 4E intersection in West Bridgewater, and 2.6 mi southeast of River Road and US 4 intersection in Sherburne Center.

DRAINAGE AREA.--23.4 mi^2.

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

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

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

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0115	*1,190	*7.38	No other peak greater than base discharge.			

Minimum discharge, 4.4 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	17	45	e34	e16	e17	142	104	83	15	23	12
2	6.1	16	39	e32	e16	e18	119	169	76	11	107	12
3	8.9	14	e34	e31	e17	e17	105	164	56	9.2	71	11
4	7.5	13	30	e32	e18	e17	91	113	46	8.7	45	83
5	14	15	30	e31	e18	e17	88	94	49	8.2	91	48
6	9.8	19	31	e31	e17	e18	77	84	54	7.6	387	29
7	7.4	21	28	e30	e16	e18	64	83	44	7.0	326	21
8	6.7	19	27	e29	e16	e19	61	78	42	8.1	127	17
9	5.7	38	22	e28	e15	e19	57	76	38	7.5	94	14
10	5.7	69	23	e27	e15	e18	60	66	33	6.8	88	12
11	5.8	115	22	e27	e15	e19	69	61	31	23	68	12
12	18	145	28	e26	e15	e19	97	100	32	23	181	10
13	18	171	27	e25	e15	e19	133	124	30	12	160	9.1
14	14	113	33	e25	e16	e20	120	127	83	10	92	9.5
15	11	79	38	e24	e16	e18	187	102	59	9.2	66	9.7
16	13	59	33	e25	e15	e20	382	83	41	16	52	10
17	64	57	e28	e25	e15	e31	209	69	34	17	43	8.8
18	34	91	e23	e26	e16	e82	124	60	30	16	37	8.0
19	30	67	24	e27	e16	e130	108	54	28	16	32	9.9
20	37	60	59	e25	e15	101	126	48	25	11	28	18
21	26	61	108	e24	e16	204	144	44	21	30	24	13
22	18	81	76	e23	e17	308	149	40	22	80	21	10
23	16	238	60	e22	e18	258	145	37	20	77	19	87
24	13	136	49	e20	e21	171	117	40	17	63	14	97
25	12	93	e50	e19	e19	205	94	43	15	43	14	47
26	18	76	e46	e18	e18	296	107	54	14	29	14	43
27	35	64	e41	e16	e17	237	223	64	12	23	13	35
28	36	50	e38	e16	e17	207	157	57	9.8	22	11	118
29	27	48	e35	e16	---	485	137	71	8.8	16	11	249
30	21	49	e33	e15	---	743	113	67	16	13	23	111
31	17	---	e33	e15	---	246	---	55	---	12	14	---
TOTAL	561.7	2,094	1,193	764	461	3,997	3,805	2,431	1,069.6	650.3	2,296	1,174.0
MEAN	18.1	69.8	38.5	24.6	16.5	129	127	78.4	35.7	21.0	74.1	39.1
MAX	64	238	108	34	21	743	382	169	83	80	387	249
MIN	5.7	13	22	15	15	17	57	37	8.8	6.8	11	8.0
CFSM	0.77	2.98	1.64	1.05	0.70	5.51	5.42	3.35	1.52	0.90	3.17	1.67
IN.	0.89	3.33	1.90	1.21	0.73	6.35	6.05	3.86	1.70	1.03	3.65	1.87

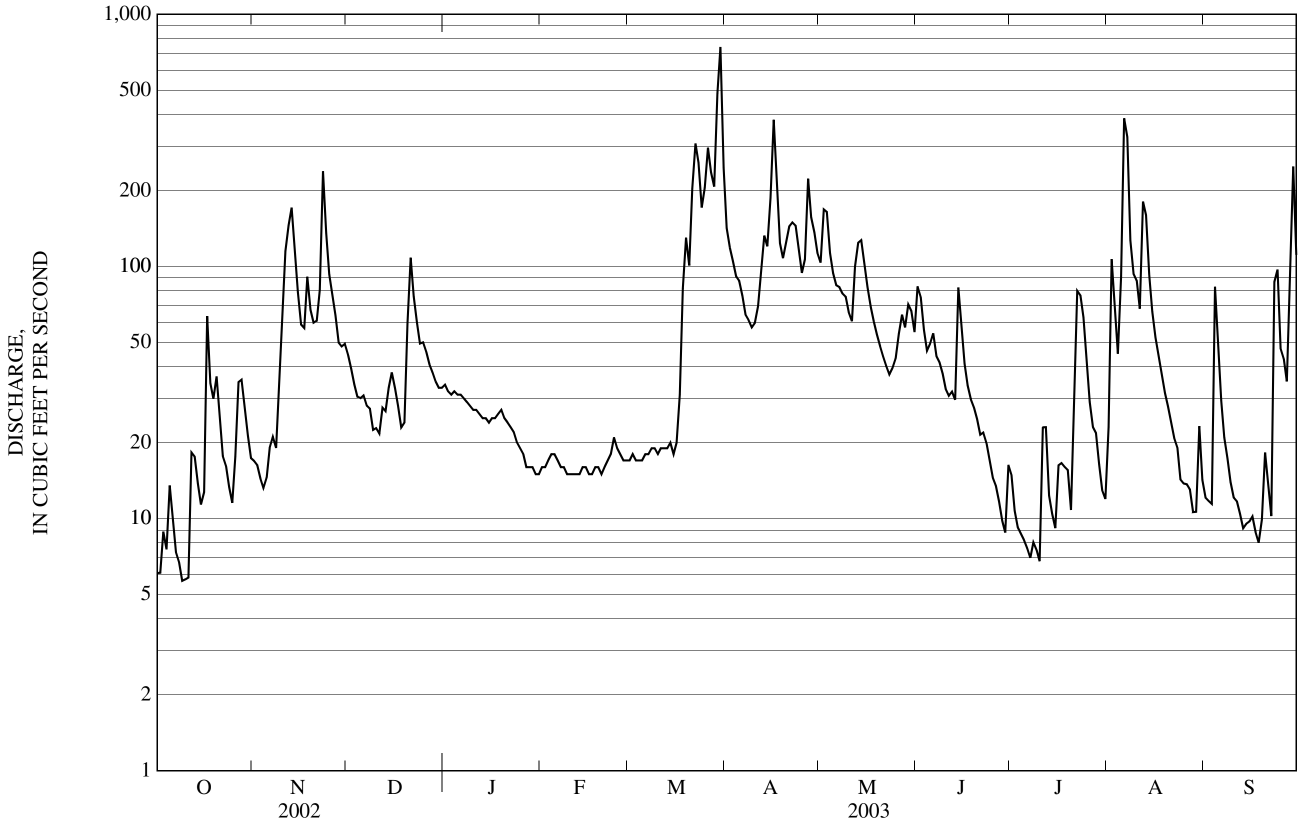
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	44.0	60.9	48.2	46.6	37.4	93.3	164	81.7	43.2	29.6	24.9	25.2
MAX	121	121	94.5	108	76.6	200	272	169	160	125	74.1	97.2
(WY)	(1988)	(1989)	(2001)	(1998)	(1990)	(1998)	(2000)	(1996)	(1998)	(1996)	(2003)	(1987)
MIN	7.26	13.8	21.2	18.9	14.5	20.2	45.7	34.7	13.7	6.77	4.21	6.04
(WY)	(2002)	(2002)	(1998)	(2002)	(1987)	(2001)	(1995)	(1995)	(1988)	(1991)	(2002)	(2002)

01150900 OTTAUQUECHEE RIVER NEAR WEST BRIDGEWATER, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	20,134.7		20,496.6			
ANNUAL MEAN	55.2		56.2		58.3	
HIGHEST ANNUAL MEAN					83.2	2000
LOWEST ANNUAL MEAN					35.6	1995
HIGHEST DAILY MEAN	1,170	Apr 14	743	Mar 30	1,460	Mar 29, 1998
LOWEST DAILY MEAN	a1.6	Sep 8	b5.7	Oct 9	a1.6	Sep 8, 2002
ANNUAL SEVEN-DAY MINIMUM	1.8	Sep 5	7.7	Jul 4	1.8	Sep 5, 2002
MAXIMUM PEAK FLOW			c1,190	Mar 29	1,960	Oct 22, 1995
MAXIMUM PEAK STAGE			7.38	Mar 30	8.94	Apr 14, 2002
INSTANTANEOUS LOW FLOW			4.4	Oct 9	d1.2	Sep 8, 2002
ANNUAL RUNOFF (CFSM)	2.36		2.40		2.49	
ANNUAL RUNOFF (INCHES)	32.01		32.58		33.83	
10 PERCENT EXCEEDS	113		126		124	
50 PERCENT EXCEEDS	33		30		31	
90 PERCENT EXCEEDS	4.2		11		9.8	

a Also occurred on September 9 and 10, 2002
b Also occurred on October 10
c Also occurred on March 30
d Also occurred on September 11, 2002
e Estimated



01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT

LOCATION.--Lat 43° 36'09", long 72° 21'17", Windsor County, Hydrologic Unit 01080106, on left bank, 100 ft upstream from US 5 bridge, 0.3 mi downstream from North Hartland Dam, 0.7 mi north of Depot Road and US 5 intersection in North Hartland, 1.2 mi upstream from mouth, and 3.7 mi southwest of Courthouse in White River Junction.

DRAINAGE AREA.--221 mi^2.

PERIOD OF RECORD.--Discharge records: October 1930 to current year.

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

REMARKS.-- Records good except those for estimated daily discharges, which are fair. Flow regulated by power plants upstream and by North Hartland Reservoir since March 1961; greater regulation by power plants at North Hartland Reservoir since July 1985. Small seasonal storage in reservoir at Plymouth.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1760, 21.5 ft in November 1927, from floodmarks, discharge 30,400 ft^3/s, by computation of peak flow over dam.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,470 ft^3/s, Apr. 16, gage height, 6.91 ft; minimum daily discharge, 22 ft^3/s, Oct. 12.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	83	321	244	122	127	2,810	646	453	96	115	104
2	35	69	280	283	123	128	2,930	855	452	96	490	104
3	35	69	224	276	171	166	2,630	1,000	350	79	521	104
4	35	117	183	235	167	143	1,860	911	328	71	400	376
5	35	132	167	233	166	135	1,230	670	305	69	412	329
6	35	110	192	279	183	151	925	586	322	51	1,410	153
7	49	110	193	317	166	138	677	548	303	50	1,580	118
8	57	124	193	270	144	124	645	548	278	67	807	102
9	56	147	193	e205	144	125	673	493	277	48	462	87
10	43	184	192	e200	143	143	638	449	212	48	553	85
11	32	498	191	189	144	153	725	433	197	71	530	112
12	22	584	192	190	154	133	846	694	220	109	1,250	116
13	34	847	208	230	163	126	1,440	787	206	120	1,250	102
14	36	639	218	248	112	126	1,540	720	384	120	641	102
15	50	349	219	e228	74	126	1,490	648	460	67	427	102
16	63	253	246	197	74	127	2,830	545	390	85	393	112
17	63	255	267	192	124	168	2,610	438	272	127	336	128
18	100	535	195	e180	168	483	1,260	438	190	87	278	101
19	155	522	151	e175	165	897	1,060	416	208	103	298	84
20	155	381	247	e167	161	760	1,050	358	190	100	233	73
21	258	380	483	184	122	1,070	1,290	309	156	58	189	72
22	269	397	504	187	98	2,140	1,280	350	156	589	183	107
23	108	1,120	312	175	99	2,330	1,220	333	166	363	186	251
24	79	952	288	155	153	1,680	916	295	193	371	138	606
25	64	643	298	e125	194	1,860	751	364	122	288	119	386
26	47	564	185	122	195	2,430	753	388	96	144	142	216
27	102	425	208	156	153	2,420	1,260	576	97	135	126	179
28	244	346	255	177	127	2,100	1,230	541	97	105	119	225
29	226	318	258	176	---	979	877	541	96	91	101	964
30	143	320	298	168	---	977	675	456	96	101	136	915
31	120	---	289	133	---	1,990	---	396	---	89	159	---
TOTAL	2,801	11,473	7,650	6,296	4,009	24,455	40,121	16,732	7,272	3,998	13,984	6,515
MEAN	90.4	382	247	203	143	789	1,337	540	242	129	451	217
MAX	269	1,120	504	317	195	2,430	2,930	1,000	460	589	1,580	964
MIN	22	69	151	122	74	124	638	295	96	48	101	72

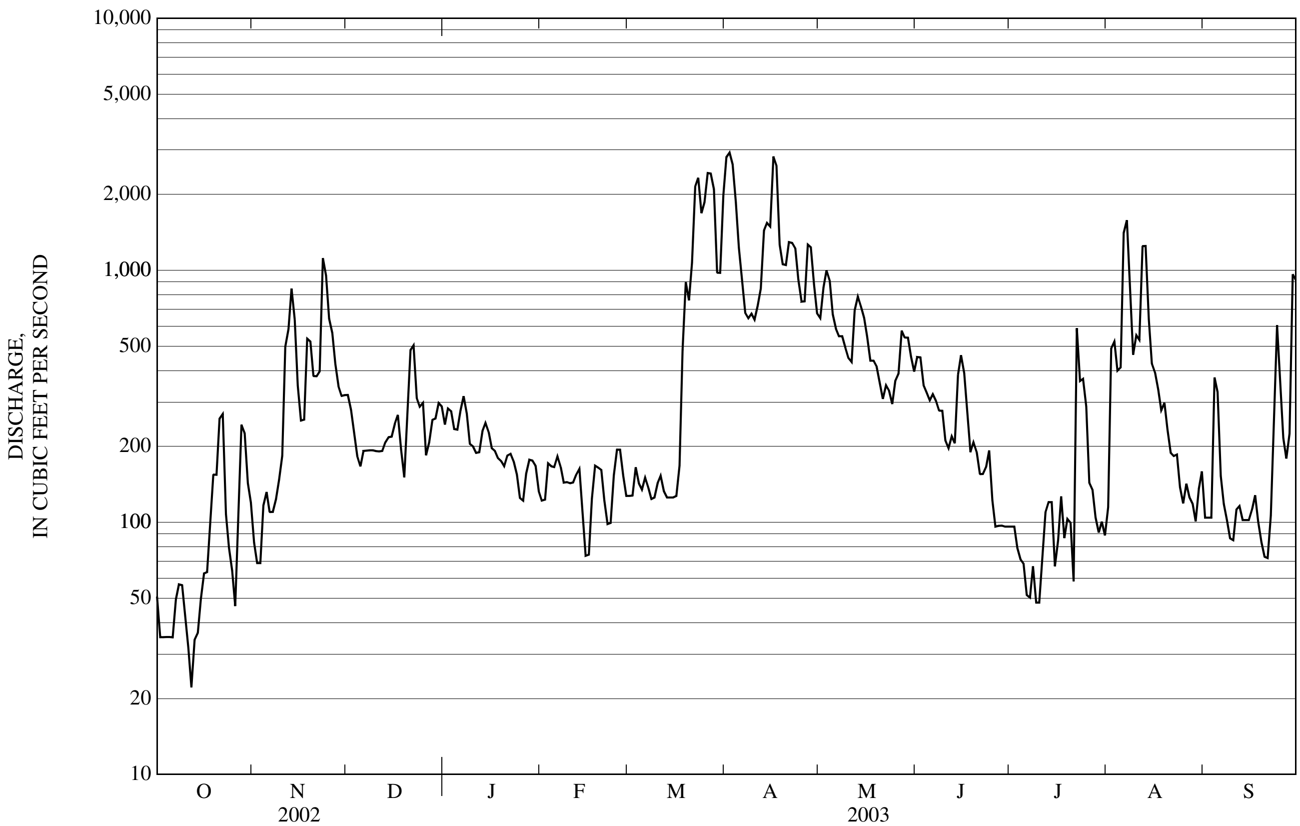
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	214	336	339	297	281	631	1,375	663	294	165	125	132
MAX	1,060	816	1,028	900	1,157	2,570	2,587	1,676	990	1,131	759	1,030
(WY)	(1988)	(1976)	(1984)	(1996)	(1981)	(1936)	(1969)	(1940)	(1998)	(1973)	(1976)	(1938)
MIN	33.3	70.5	72.2	56.2	55.4	84.0	346	201	70.3	34.8	28.5	29.7
(WY)	(1965)	(1965)	(1948)	(1948)	(1940)	(1940)	(1995)	(1941)	(1965)	(1965)	(1965)	(1967)

01151500 OTTAUQUECHEE RIVER AT NORTH HARTLAND, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	136,401		145,306			
ANNUAL MEAN	374		398		404	
HIGHEST ANNUAL MEAN					691	1976
LOWEST ANNUAL MEAN					173	1965
HIGHEST DAILY MEAN	3,410	Apr 16	2,930	Apr 2	13,300	Mar 18, 1936
LOWEST DAILY MEAN	a14	Sep 14	22	Oct 12	3.8	Jul 3, 1933
ANNUAL SEVEN-DAY MINIMUM	18	Sep 9	39	Oct 9	14	Sep 25, 1967
MAXIMUM PEAK FLOW			3,470	Apr 16	b24,400	Sep 21, 1938
MAXIMUM PEAK STAGE			6.91	Apr 16	17.68	Sep 21, 1938
10 PERCENT EXCEEDS	888		957		930	
50 PERCENT EXCEEDS	211		195		206	
90 PERCENT EXCEEDS	30		79		55	

a Also occurred on September 15, 2002
b From rating curve extended above 6,200 ft^3/s as explained above
e Estimated



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, 0.7 mi southeast of Clay Hill Road and Paddy Hollow Road intersection in West Claremont, 1.6 mi northwest of City Hall in Claremont, and 2.4 mi upstream from mouth.

DRAINAGE AREA.--269 mi^2.

PERIOD OF RECORD.--Discharge records: May 1928 to current year. Published as "at Claremont" prior to October 1928. Peak streamflow: Water years 1929 to current year. Water-quality discrete samples: Water years 1954, 1956 to 1959, 1966 to 1968, 1970, 1975 to 1978, 1980 to 1999.

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

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

REMARKS.--Records good except 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^3/s, March 19, 1936, gage height, 10.92 ft, from rating curve extended above 6,700 ft^3/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^3/s, August 26, 1965.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1930	ice jam	*7.08	Mar 30	0800	*4,740	6.10

Minimum daily discharge, 48 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	110	255	263	e150	e170	1,730	705	464	78	120	94
2	61	108	240	260	e155	e170	1,270	948	501	74	424	101
3	60	104	e158	e255	e160	e175	1,050	1,490	408	72	322	105
4	59	99	e132	e250	e170	e170	941	1,100	348	69	249	192
5	61	97	153	e265	e215	e160	826	899	308	68	229	244
6	59	112	178	e255	e215	e175	756	713	308	66	265	179
7	58	145	e145	e250	e205	e180	666	630	288	62	353	145
8	53	137	e160	e245	e195	e175	627	604	289	54	236	126
9	48	129	131	e240	e190	e175	577	591	277	54	187	112
10	49	140	e130	e235	e185	e170	568	549	238	54	1,650	100
11	51	160	e135	e230	e180	e165	729	507	197	109	1,190	94
12	67	161	e140	e220	e175	e165	1,280	1,000	192	116	1,770	92
13	66	376	e145	e215	e167	e165	1,820	962	186	96	1,560	87
14	69	370	e210	e210	e163	e160	1,600	876	367	83	1,030	91
15	69	271	e390	e205	e160	e160	1,730	788	364	75	681	96
16	70	220	386	e200	e155	e165	2,570	652	268	79	536	230
17	105	225	294	e200	e155	e180	2,140	547	218	86	479	291
18	120	360	228	e197	e160	e300	1,520	485	193	86	845	196
19	98	340	e225	e195	e160	e520	1,200	436	180	87	577	157
20	83	277	e280	e195	e158	e510	1,080	351	172	78	460	156
21	77	275	e540	e193	e160	e900	1,040	300	164	72	384	157
22	70	350	508	e188	e170	e1,450	1,020	284	170	79	272	136
23	70	773	400	e190	e210	e1,600	1,020	269	169	79	203	383
24	70	614	331	e190	e235	1,650	1,000	270	154	81	177	829
25	87	467	e275	e185	e215	2,060	958	287	119	92	163	438
26	114	397	e230	e180	e185	2,440	913	346	108	85	148	349
27	159	369	e285	e170	e175	2,430	1,140	613	99	75	125	302
28	164	316	e270	e165	e175	2,250	1,130	491	92	71	112	331
29	141	290	e260	e160	---	2,660	912	514	87	67	103	770
30	127	270	e250	e155	---	4,240	783	486	85	64	100	547
31	116	---	e255	e150	---	2,760	---	432	---	61	95	---
TOTAL	2,568	8,062	7,719	6,511	4,998	28,650	34,596	19,125	7,013	2,372	15,045	7,130
MEAN	82.8	269	249	210	178	924	1,153	617	234	76.5	485	238
MAX	164	773	540	265	235	4,240	2,570	1,490	501	116	1,770	829
MIN	48	97	130	150	150	160	568	269	85	54	95	87

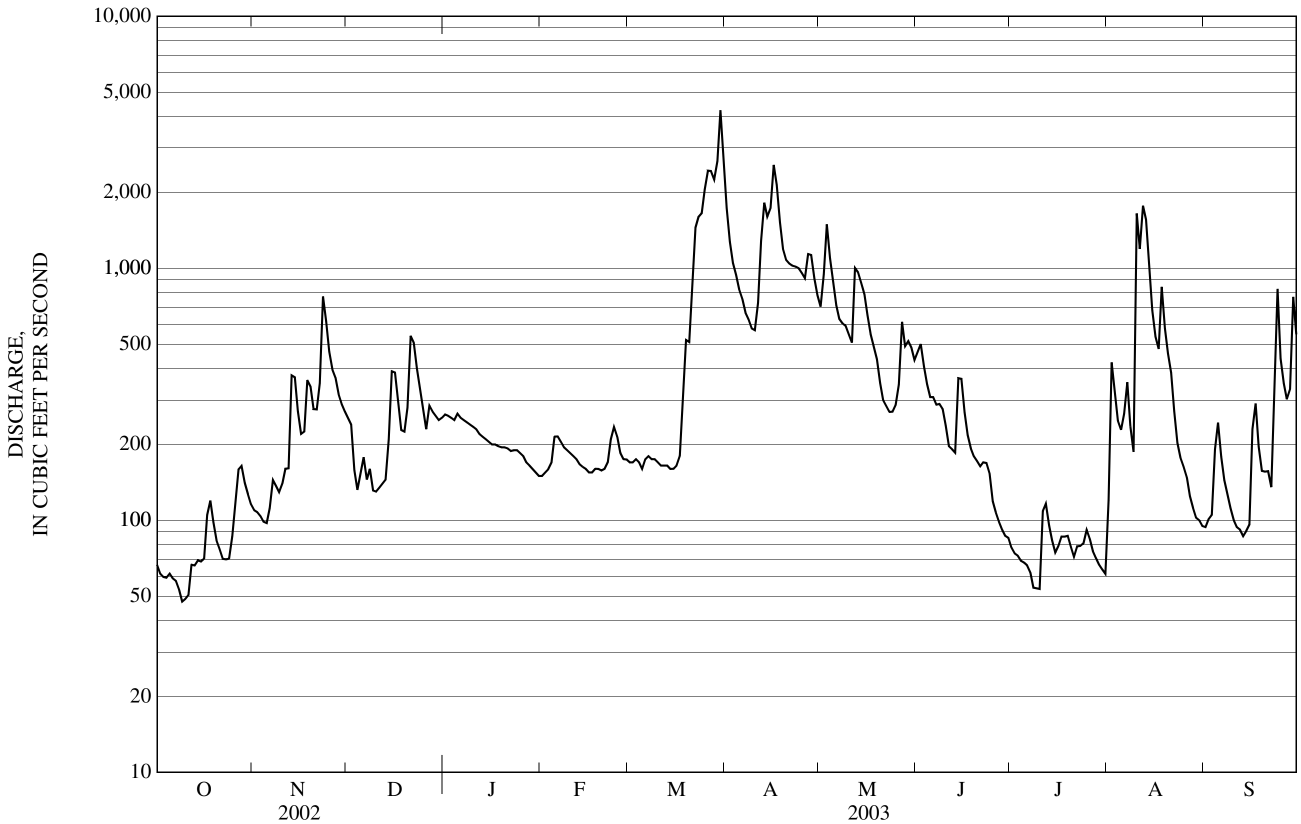
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	213	343	358	319	327	680	1,279	637	318	171	140	133
MAX	895	917	1,146	1,090	1,343	2,490	2,746	1,657	818	711	952	1,269
(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)

01152500 SUGAR RIVER AT WEST CLAREMONT, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	103,370		143,789			
ANNUAL MEAN	283		394		409	
HIGHEST ANNUAL MEAN					660	1976
LOWEST ANNUAL MEAN					139	1965
HIGHEST DAILY MEAN	2,100	Apr 1	4,240	Mar 30	11,200	Mar 19, 1936
LOWEST DAILY MEAN	34	Sep 13	48	Oct 9	14	Aug 26, 1965
ANNUAL SEVEN-DAY MINIMUM	40	Sep 4	54	Oct 5	21	Aug 22, 1965
MAXIMUM PEAK FLOW			4,740	Mar 30	a14,000	Mar 19, 1936
MAXIMUM PEAK STAGE			b7.08	Mar 22	b11.80	Mar 12, 1936
10 PERCENT EXCEEDS	617		977		982	
50 PERCENT EXCEEDS	177		197		210	
90 PERCENT EXCEEDS	47		78		68	

a From rating curve extended above 6,700 ft^3/s as explained above
b Ice jam
e Estimated



01152500 SUGAR RIVER AT WEST CLAREMONT, NH—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1956 to 1959, 1966 to 1968, 1970, 1975 to 1978, 1980 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, (ft^3/s) (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
DEC														
11...	1545	143	--	--	6.6	142	0.4	0.26	0.09	0.26	<0.008	<0.02	0.020	1
JAN														
07...	1130	251	15.2	107	--	95	0.0	0.26	0.09	0.15	<0.008	<0.02	0.016	1
FEB														
05...	0830	212	14.9	103	6.7	140	0.1	0.33	0.15	0.22	<0.008	E.01	0.039	2
MAR														
17...	1130	178	13.2	93	7.2	191	0.2	0.34	0.16	0.27	<0.008	E.01	0.023	1
25...	1730	2,040	14.8	111	7.0	101	2.5	0.49	0.056	0.218	<0.008	<0.02	0.074	54
APR														
02...	1545	1,200	13.6	100	6.6	100	2.0	0.23	0.042	0.183	<0.008	<0.02	0.018	6
15...	1230	1,580	12.5	103	6.7	87	6.8	0.18	E.014	0.124	<0.008	<0.02	0.017	6
29...	1215	910	10.9	101	7.1	99	11.5	0.21	<0.015	0.091	<0.008	<0.02	0.013	3
MAY														
12...	0830	1,000	10.8	98	6.8	112	10.7	0.28	E.013	0.096	<0.008	<0.02	0.031	16
JUN														
17...	1630	218	8.8	100	7.4	135	21.0	0.33	0.030	0.229	<0.008	<0.02	0.030	4
JUL														
15...	1615	73	9.4	116	8.7	183	26.0	0.28	E.011	0.194	<0.008	<0.02	0.018	2
AUG														
19...	1330	567	8.2	97	7.2	110	23.0	0.23	<0.015	0.059	<0.008	<0.02	0.028	6
SEP														
08...	1530	125	9.8	109	8.4	161	20.2	0.23	<0.015	0.070	<0.008	<0.02	0.016	1

Remark codes used in this table:
< -- Less than
E -- Estimated value

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 Parker Hill Road bridge, 0.2 mi downstream from Divoll Brook, 0.35 mi northeast of Rockingham, 2.2 mi upstream from mouth, 2.2 mi downstream of Station 01153500, "Williams River at Brockways Mills", and 4.5 mi northwest of Bellows Falls.

DRAINAGE AREA.--112 mi^2.

PERIOD OF RECORD.--Discharge records: October 1986 to current year. Peak streamflow: Water years 1987 to current year. Water-quality discrete samples: Water years 1988 to 1999.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 303.70 ft (revised) above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Low flow regulated by power plant upstream October 1986 to September 1992 and August 2002 to present.

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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	1115	ice jam	*8.35	Aug 3	1915	4,560	7.78
Mar 29	2015	*4,900	7.97	Aug 18	0015	2,960	6.74

Minimum daily discharge, 17 ft^3/s, Oct. 9 and 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	54	145	e130	e66	e86	642	242	249	43	173	57
2	20	51	127	e135	e69	e88	521	430	206	38	565	88
3	19	46	108	e120	e67	e96	496	446	158	34	811	85
4	20	44	e95	e140	e80	e84	450	306	136	32	557	239
5	25	48	e100	e130	e125	e86	401	257	124	29	369	150
6	27	58	e108	e120	e105	e100	362	223	125	26	497	99
7	21	82	e103	e115	e100	e93	313	211	110	24	436	79
8	19	67	e97	e115	e98	e91	294	202	119	24	236	69
9	17	75	e94	e115	e94	e94	272	204	107	24	166	60
10	17	130	e90	e110	e91	e90	297	179	97	24	332	55
11	18	175	e89	e100	e90	e87	398	162	85	134	308	53
12	52	144	e93	e98	e88	e87	678	426	87	101	504	50
13	51	401	e90	e95	e85	e89	853	346	87	55	568	46
14	38	231	e140	e90	e82	e86	726	269	287	43	252	61
15	30	156	e240	e91	e80	e84	1,250	223	169	37	172	80
16	37	129	e160	e89	e79	e89	1,800	193	115	43	136	126
17	262	143	e125	e87	e82	e140	919	171	96	51	311	83
18	99	334	e108	e84	e84	e330	584	154	85	46	1,130	64
19	67	211	e105	e84	e81	e400	520	139	82	51	321	78
20	58	180	e110	e84	e80	e315	566	126	76	39	205	129
21	48	197	e290	e80	e82	e940	554	119	72	34	153	82
22	41	242	e210	e78	e90	e1,400	563	117	105	93	127	68
23	41	767	e175	e78	e150	1,110	516	109	96	78	106	380
24	44	374	e155	e78	e160	1,020	396	131	77	57	87	305
25	40	286	e145	e76	e115	1,250	329	157	64	47	79	150
26	55	246	e140	e73	e100	1,330	435	278	55	38	77	136
27	142	214	e135	e71	e91	1,240	589	365	50	33	83	112
28	132	167	e130	e69	e89	1,150	399	310	44	30	67	619
29	89	175	e125	e68	---	2,120	327	316	40	28	60	695
30	69	159	e120	e66	---	1,980	270	233	54	25	65	319
31	58	---	e118	e65	---	962	---	199	---	23	60	---
TOTAL	1,678	5,586	4,070	2,934	2,603	17,117	16,720	7,243	3,257	1,384	9,013	4,617
MEAN	54.1	186	131	94.6	93.0	552	557	234	109	44.6	291	154
MAX	262	767	290	140	160	2,120	1,800	446	287	134	1,130	695
MIN	17	44	89	65	66	84	270	109	40	23	60	46
CFSM	0.48	1.66	1.17	0.85	0.83	4.93	4.98	2.09	0.97	0.40	2.60	1.37
IN.	0.56	1.86	1.35	0.97	0.86	5.69	5.55	2.41	1.08	0.46	2.99	1.53

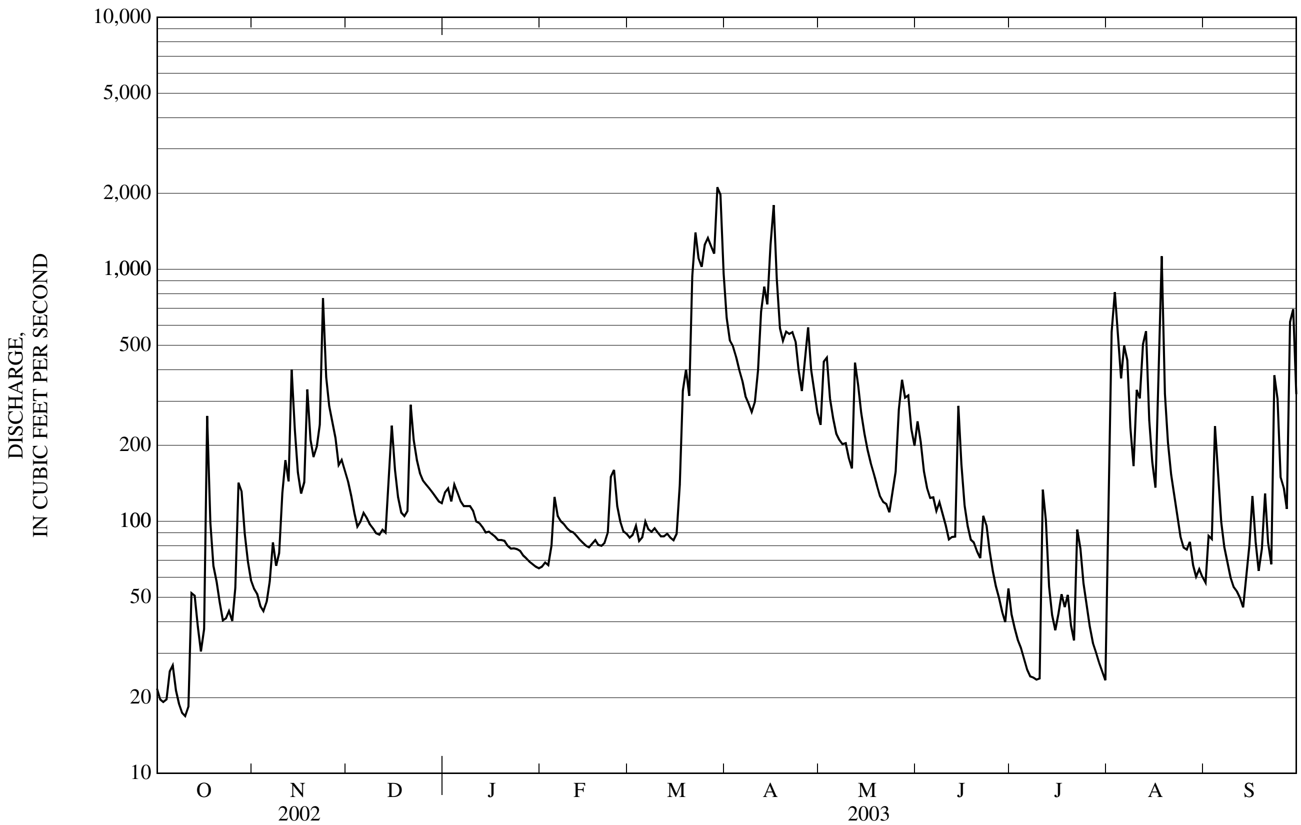
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	118	184	174	158	146	406	639	286	153	67.1	66.4	66.2
MAX	461	382	443	441	306	850	1,199	544	440	227	291	282
(WY)	(1988)	(1996)	(1997)	(1996)	(1997)	(1990)	(1994)	(1996)	(1998)	(1996)	(2003)	(1987)
MIN	29.4	35.1	69.5	58.7	51.0	108	156	90.4	34.9	16.6	13.8	13.4
(WY)	(1994)	(2002)	(2002)	(1989)	(1993)	(2001)	(1995)	(1995)	(1995)	(1999)	(2002)	(1995)

01153550 WILLIAMS RIVER NEAR ROCKINGHAM, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1987 - 2003	
ANNUAL TOTAL	58,443.3		76,222			
ANNUAL MEAN	160		209		205	
HIGHEST ANNUAL MEAN					283	1996
LOWEST ANNUAL MEAN					111	1995
HIGHEST DAILY MEAN	1,670	May 14	2,120	Mar 29	6,670	Mar 31, 1987
LOWEST DAILY MEAN	8.3	Sep 12	a17	Oct 9	6.9	Sep 7, 1995
ANNUAL SEVEN-DAY MINIMUM	8.9	Sep 8	21	Oct 5	7.5	Sep 2, 1995
MAXIMUM PEAK FLOW			4,900	Mar 29	b11,500	Mar 31, 1987
MAXIMUM PEAK STAGE			c8.35	Mar 21	10.59	Mar 31, 1987
ANNUAL RUNOFF (CFSM)	1.43		1.86		1.83	
ANNUAL RUNOFF (INCHES)	19.41		25.32		24.89	
10 PERCENT EXCEEDS	347		496		450	
50 PERCENT EXCEEDS	105		106		102	
90 PERCENT EXCEEDS	15		42		24	

a Also occurred on October 10
b From rating curve extended above 3,800 ft^3/s
c Ice jam
e Estimated



01154000 SAXTONS RIVER AT SAXTONS RIVER, VT

LOCATION.--Lat 43° 08'15", long 72° 29'19", Windham County, Hydrologic Unit 01080107, on right bank 130 ft upstream from highway bridge, 0.8 mi east of Saxtons River, 1.4 mi upstream from Bundy Brook, and 3.9 mi upstream from mouth.

DRAINAGE AREA.--72.2 mi^2.

PERIOD OF RECORD.--Discharge records: June 1940 to September 1982, June 2001 to current year. Water-quality record: Water year 1957.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 395.51 ft above National Vertical Datum of 1929 (levels by private engineer).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional diurnal fluctuation at low flow prior to 1962; fluctuation more frequent prior to 1946.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,460 ft^3/s, August 10, 1976, gage height, 14.06 ft, from rating curve extended above 2,000 ft^3/s on basis of slope-area measurements at gage heights 10.51 ft, 11.37 ft, and 13.26 ft; minimum, 1.9 ft^3/s, July 25, 1949; minimum daily, 2.4 ft^3/s, August 6, 1955.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1869, 17.9 ft in September 1938, from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,750 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2045	*2,980	*8.57	Aug 3	1845	2,590	8.08

Minimum discharge, 12 ft^3/s, Oct. 9, 10, 11, July 31, and Aug. 1.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	42	108	92	e55	e62	446	159	179	24	184	37
2	15	40	93	e94	e57	e63	353	370	147	21	505	62
3	18	37	77	e85	e56	e68	331	327	116	20	623	58
4	15	35	e65	e95	e71	e60	296	216	103	19	409	141
5	19	36	e73	e87	e96	e62	260	178	95	17	236	93
6	21	48	e79	e80	e80	e73	233	156	92	16	404	64
7	16	72	e74	e78	e75	e67	201	147	83	14	318	50
8	14	57	e71	e76	e73	e66	188	144	89	14	176	43
9	13	59	e68	e76	e70	e68	175	136	81	14	129	37
10	12	116	e65	e75	e67	e65	196	120	71	14	334	34
11	13	158	e64	e74	e67	e63	252	111	62	64	416	32
12	50	123	e67	e73	e64	e63	452	279	60	53	453	29
13	41	384	e65	e73	e62	e65	567	216	71	33	272	27
14	31	205	e100	e72	e60	e62	487	177	241	25	173	39
15	24	138	e165	e73	e58	e61	776	149	134	21	128	52
16	38	114	e115	e73	e57	e64	1,160	130	91	39	102	102
17	201	128	e90	e71	e58	e96	644	117	75	44	182	62
18	81	242	e78	e68	e60	e220	389	106	66	33	583	44
19	52	156	e76	e70	e58	e275	336	97	64	39	220	59
20	44	141	e80	e70	e58	230	368	88	58	27	142	101
21	36	155	e190	e69	e59	e650	367	87	53	23	109	61
22	31	208	155	e68	e65	1,050	384	84	70	58	90	47
23	33	602	e130	e67	e110	834	350	78	66	42	75	305
24	34	277	114	e67	e115	746	254	98	52	35	61	225
25	31	208	e94	e65	e80	886	209	117	43	29	53	121
26	51	179	e90	e64	e70	935	293	225	37	23	51	102
27	114	158	e105	e61	e65	860	402	270	33	19	59	87
28	105	132	e97	e58	e64	796	260	225	28	18	44	515
29	74	132	e90	e57	---	1,370	212	199	25	16	39	576
30	57	119	e88	e56	---	1,350	176	150	26	15	39	247
31	47	---	e86	e55	---	694	---	139	---	13	36	---
TOTAL	1,347	4,501	2,912	2,242	1,930	12,024	11,017	5,095	2,411	842	6,645	3,452
MEAN	43.5	150	93.9	72.3	68.9	388	367	164	80.4	27.2	214	115
MAX	201	602	190	95	115	1,370	1,160	370	241	64	623	576
MIN	12	35	64	55	55	60	175	78	25	13	36	27
CFSM	0.60	2.08	1.30	1.00	0.95	5.37	5.09	2.28	1.11	0.38	2.97	1.59
IN.	0.69	2.32	1.50	1.16	0.99	6.20	5.68	2.63	1.24	0.43	3.42	1.78

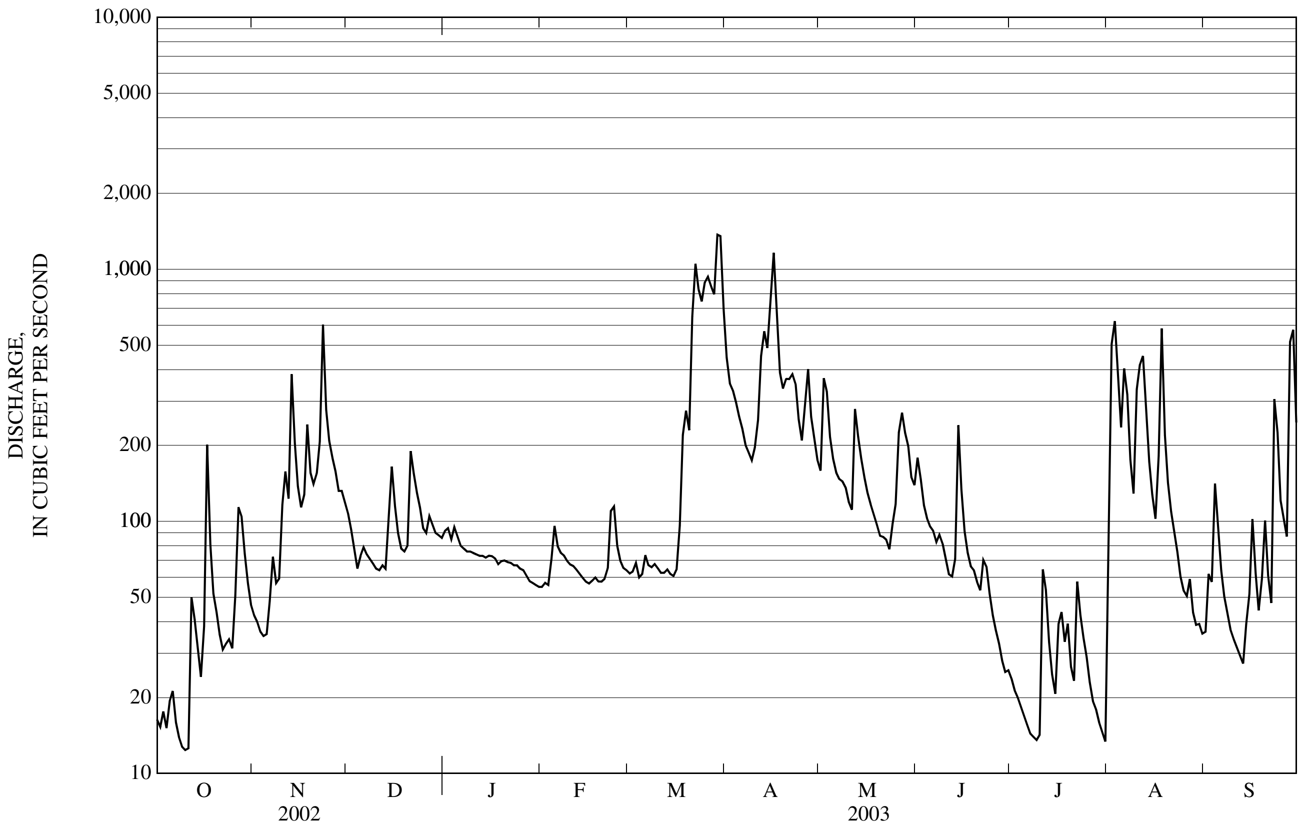
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1982, 2001 -2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	55.8	102	106	86.5	96.7	226	409	182	79.0	35.1	31.3	30.9
MAX	315	317	227	269	376	535	804	402	222	145	214	163
(WY)	(1976)	(1956)	(1978)	(1978)	(1981)	(1953)	(1969)	(1972)	(1952)	(1973)	(2003)	(1960)
MIN	6.22	12.9	22.3	12.9	24.0	46.2	107	56.3	12.1	6.75	6.55	4.57
(WY)	(1965)	(1965)	(1965)	(1965)	(1980)	(1956)	(1946)	(1941)	(1964)	(1965)	(1957)	(1964)

01154000 SAXTONS RIVER AT SAXTONS RIVER, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 82, 2001 - 03	
ANNUAL TOTAL	40,604.3		54,418			
ANNUAL MEAN	111		149		120	
HIGHEST ANNUAL MEAN					198	1973
LOWEST ANNUAL MEAN					43.1	1965
HIGHEST DAILY MEAN	994	May 14	1,370	Mar 29	3,350	Jun 30, 1973
LOWEST DAILY MEAN	5.5	Sep 13	12	Oct 10	2.4	Aug 6, 1955
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 9	15	Oct 5	3.0	Aug 1, 1955
MAXIMUM PEAK FLOW			2,980	Mar 29	a8,460	Aug 10, 1976
MAXIMUM PEAK STAGE			8.57	Mar 29	14.06	Aug 10, 1976
INSTANTANEOUS LOW FLOW			b12	Oct 9	1.9	Jul 25, 1949
ANNUAL RUNOFF (CFSM)	1.54		2.06		1.66	
ANNUAL RUNOFF (INCHES)	20.92		28.04		22.54	
10 PERCENT EXCEEDS	234		351		292	
50 PERCENT EXCEEDS	82		76		56	
90 PERCENT EXCEEDS	11		29		11	

a From rating curve extended above 2,000 ft^3/s as explained above
b Also occurred on October 10, 11, July 31, and August 1
e Estimated



01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH

LOCATION.--Lat 43° 07'34", long 72° 26'14", Cheshire County, Hydrologic Unit 01080104, on left bank, 100 ft upstream from Saxtons River, 0.7 mi downstream from Vilas Bridge between Bellows Falls, VT, and North Walpole, 1.0 mi south of Main Street and New Hampshire State Highway 12 intersection in North Walpole, and at mile 172.5.

DRAINAGE AREA.--5,493 mi^2, includes that of Saxtons River.

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

PERIOD OF DAILY WATER-QUALITY RECORD.--Water years 1975 to 1982.
SPECIFIC CONDUCTANCE: October 1980 to November 1981. Record at site 01155050, Connecticut River at Walpole, NH, are considered equivalent, Water years 1975 to 1980.
WATER TEMPERATURES: October 1980 to September 1981. Record at site 01155050, Connecticut River at Walpole, NH, are considered equivalent, Water years 1975 to 1980.

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

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by power plants 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^3.

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, 58,500 ft^3/s, Mar. 30, gage height, 22.07 ft; minimum daily discharge, 1,270 ft^3/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,730	3,940	6,170	4,730	e3,870	e3,270	46,800	15,600	9,840	2,640	3,340	3,780
2	3,340	2,630	6,030	e4,650	2,270	3,280	40,000	17,000	10,700	3,120	5,390	2,990
3	3,300	1,410	6,240	e5,350	e5,600	2,830	28,500	27,200	9,350	3,540	6,910	1,460
4	1,700	2,720	4,560	e4,470	e5,000	5,180	18,400	29,200	6,060	2,330	4,340	6,220
5	1,270	3,140	4,370	e4,800	4,950	2,510	17,400	22,200	6,520	2,790	5,590	7,580
6	2,280	4,150	4,980	4,360	4,720	4,850	15,100	17,100	6,630	2,820	6,670	5,030
7	3,030	4,010	3,480	4,850	4,840	3,800	13,300	16,300	5,770	3,740	12,000	2,890
8	1,890	2,720	5,010	4,750	3,630	2,010	12,200	13,600	6,250	3,360	6,460	3,100
9	1,530	2,800	e4,600	4,270	3,070	1,930	10,800	10,600	6,870	1,500	6,440	3,590
10	2,730	3,630	4,240	6,200	3,980	2,630	10,700	11,200	5,870	1,390	10,200	2,450
11	2,780	6,510	3,840	e5,950	3,850	3,160	11,900	12,200	4,200	2,840	18,600	3,970
12	2,140	6,880	4,430	5,290	4,000	2,940	15,000	14,100	5,010	2,700	16,600	3,350
13	1,790	9,510	4,340	5,270	e4,080	3,500	21,400	20,900	4,850	2,720	19,800	1,970
14	2,580	11,600	4,460	e4,920	e3,700	3,050	22,300	22,600	6,330	2,520	14,600	3,370
15	3,470	8,660	5,380	e4,470	e4,380	2,100	23,800	21,800	11,000	2,540	11,800	3,420
16	4,210	6,420	5,360	3,620	e3,430	3,770	28,600	18,300	10,400	2,390	5,130	4,040
17	3,050	6,390	5,790	5,880	e4,350	2,850	31,900	15,400	11,400	2,840	6,090	3,220
18	4,570	7,680	5,600	e4,880	e3,730	4,560	25,900	13,800	7,650	2,430	8,470	2,900
19	5,080	9,070	4,520	e5,630	e3,600	7,660	18,800	12,500	3,660	2,310	7,340	2,240
20	4,870	7,510	5,240	e4,630	e4,020	8,110	15,600	11,000	5,990	1,500	4,630	2,030
21	5,390	9,420	8,190	e4,100	e3,740	12,600	14,800	6,920	4,450	3,090	4,270	1,770
22	5,330	7,780	8,950	e4,200	e3,050	30,100	17,400	8,240	4,070	4,370	4,600	2,380
23	3,620	10,900	7,620	e3,430	e2,970	34,900	20,800	8,070	3,360	6,930	5,350	5,570
24	2,840	16,900	7,230	e4,300	e4,580	27,900	19,800	5,940	3,310	3,610	2,350	11,800
25	2,740	13,300	4,800	e3,800	e4,280	28,500	18,800	7,840	3,710	6,190	2,810	9,470
26	2,350	11,200	5,000	e3,170	e4,500	38,600	21,000	7,950	4,280	6,160	2,220	4,880
27	3,740	8,830	4,890	e3,550	e4,630	43,800	24,600	11,300	3,980	4,350	3,350	3,190
28	6,150	8,490	4,920	e5,860	e4,350	35,900	22,600	10,600	1,440	3,700	2,570	5,960
29	5,300	6,800	5,380	e4,360	---	39,000	20,000	8,490	1,430	2,380	2,040	14,700
30	5,400	5,290	6,270	e3,900	---	55,100	17,500	8,970	2,150	2,580	2,690	12,300
31	3,520	---	4,940	e4,070	---	52,000	---	9,550	---	2,070	1,680	---
TOTAL	103,720	210,290	166,830	143,710	113,170	472,390	625,700	436,470	176,530	97,450	214,330	141,620
MEAN	3,346	7,010	5,382	4,636	4,042	15,240	20,860	14,080	5,884	3,144	6,914	4,721
MAX	6,150	16,900	8,950	6,200	5,600	55,100	46,800	29,200	11,400	6,930	19,800	14,700
MIN	1,270	1,410	3,480	3,170	2,270	1,930	10,700	5,940	1,430	1,390	1,680	1,460

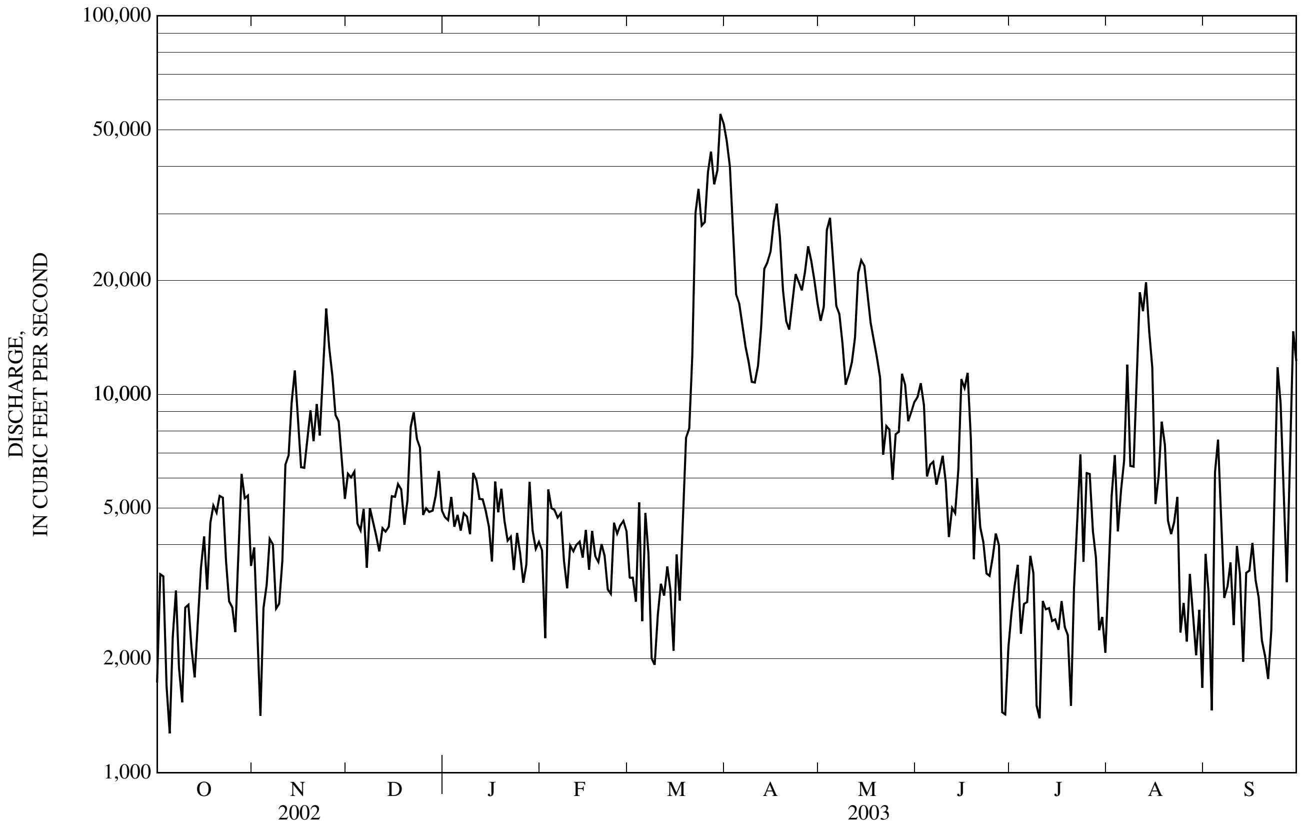
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	6,121	8,505	8,382	7,038	7,047	13,580	27,260	16,380	8,156	4,606	3,941	3,789
MAX	18,300	18,420	22,550	17,930	21,810	34,150	45,630	33,380	20,600	18,930	12,990	14,820
(WY)	(1978)	(1960)	(1984)	(1996)	(1981)	(1979)	(1969)	(1972)	(1947)	(1973)	(1990)	(1954)
MIN	1,424	2,811	2,124	1,866	2,736	4,532	7,803	6,477	3,082	1,845	1,461	1,555
(WY)	(1949)	(2002)	(1948)	(1948)	(1980)	(1956)	(1995)	(1965)	(1999)	(1965)	(1942)	(1995)

01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	3,303,460		2,902,210			
ANNUAL MEAN	9,051		7,951		9,566	
HIGHEST ANNUAL MEAN					14,630	1996
LOWEST ANNUAL MEAN					4,991	1965
HIGHEST DAILY MEAN	57,400	Apr 16	55,100	Mar 30	88,300	Mar 28, 1953
LOWEST DAILY MEAN	1,240	Sep 8	1,270	Oct 5	a115	Aug 31, 1952
ANNUAL SEVEN-DAY MINIMUM	1,510	Aug 17	2,060	Oct 4	777	Aug 7, 1970
MAXIMUM PEAK FLOW			58,500	Mar 30	97,000	Mar 27, 1953
MAXIMUM PEAK STAGE			22.07	Mar 30	30.37	Mar 27, 1953
10 PERCENT EXCEEDS	20,300		18,300		21,200	
50 PERCENT EXCEEDS	5,390		4,870		6,180	
90 PERCENT EXCEEDS	1,790		2,440		2,010	

a Also occurred on September 2, 1957
e Estimated



01154500 CONNECTICUT RIVER AT NORTH WALPOLE, NH—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954 to 1958, 1963 to 1968, 1970, 1975 to 1977, 1981 to 1999, and current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, (ft^3/s) (00061)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Phosphorus, water, unfltrd mg/L (00665)	Suspended sediment concentration mg/L (80154)
DEC														
11...	1330	1,290	--	--	6.2	126	1.1	0.15	<0.04	0.30	<0.008	<0.02	0.011	1
JAN														
06...	1430	4,200	13.1	90	7.0	105	0.2	0.17	E.02	0.30	<0.008	<0.02	0.011	1
FEB														
03...	1230	E5350	14.0	97	7.4	106	0.1	0.25	E.04	0.34	E.005	<0.02	0.013	1
MAR														
17...	1415	1,560	13.9	96	7.5	172	0.5	0.21	0.06	0.39	<0.008	E.01	0.014	1
27...	1000	41,600	--	--	6.8	106	0.0	0.46	0.031	0.371	<0.008	<0.02	0.155	169
APR														
02...	1345	40,000	13.5	98	7.3	88	2.0	0.28	0.028	0.348	<0.008	<0.02	0.050	47
09...	1500	10,300	12.9	94	7.0	129	2.0	0.17	0.024	0.394	<0.008	<0.02	0.012	3
15...	0900	23,200	12.3	99	7.3	113	6.2	0.17	0.015	0.310	<0.008	<0.02	0.025	13
29...	1015	19,800	10.9	102	7.5	91	9.0	0.19	E.014	0.274	<0.008	<0.02	0.014	5
MAY														
12...	1115	12,800	9.9	92	7.5	104	11.5	0.20	E.014	0.238	<0.008	<0.02	0.011	2
JUN														
17...	1200	11,500	9.1	98	7.6	114	18.5	0.22	E.014	0.175	<0.008	<0.02	0.020	3
JUL														
15...	1300	5,360	7.3	87	7.6	145	23.9	0.27	<0.015	0.160	<0.008	<0.02	0.010	1
AUG														
19...	1100	6,520	7.7	86	7.5	133	25.0	0.19	E.012	0.142	<0.008	<0.02	0.019	4
SEP														
08...	0945	1,800	8.5	95	7.7	143	20.4	0.21	<0.015	0.163	<0.008	<0.02	0.012	2

Remark codes used in this table:
< -- Less than
E -- Estimated value

01155500 WEST RIVER AT JAMAICA, VT

LOCATION.--Lat 43° 06'32", long 72° 46'33", Windham County, Hydrologic Unit 01080107, on left bank, 0.3 mi upstream from Depot Street bridge, 0.4 mi upstream from Ball Mountain Brook, 0.7 mi north of Depot Street and State Highway 30/100 intersection in Jamaica, 2.5 mi downstream from Ball Mountain Dam, and 7.0 mi northwest of State Highways 30 and 35 intersection in Townshend.

DRAINAGE AREA.--179 mi^2.

PERIOD OF RECORD.--Discharge records: October 1946 to September 1989, October 1995 to current year. Maximum discharge only: Water years 1990-1995. Measured discharge only: Water years 1990-1995.

REVISED RECORDS.--WDR NH-VT-97-1: 1994 (M), 1996 (M).

GAGE.--Water-stage recorder. Elevation of gage is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1961 by Ball Mountain Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,500 ft^3/s, December 31, 1948, gage height, 14.87 ft, from rating curve extended above 9,800 ft^3/s on basis of slope-area measurement of peak flow; minimum daily, 0.94 ft^3/s, September 23, 24, 1968. Maximum discharge since construction of Ball Mountain Dam in 1961, 5,840 ft^3/s, April 23, 1996, gage height, 9.47 ft; maximum gage height, 13.49 ft, March 22, 2003 (Ice Jam).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,860 ft^3/s, Apr. 16, gage height, 9.08 ft; maximum gage height, 13.49 ft, Mar. 22 (ice jam); minimum daily discharge, 26 ft^3/s, July 8-10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	146	273	281	e75	e110	e2,500	482	429	44	139	54
2	45	184	180	e250	e75	e60	e2,050	767	385	44	975	58
3	45	77	221	e225	e82	e145	1,200	903	265	43	916	90
4	42	146	e115	e225	e90	e66	681	553	220	39	933	378
5	37	e121	e170	e225	e120	e93	462	436	199	38	1,240	652
6	68	e113	e180	e220	e145	e100	420	363	197	38	2,040	308
7	78	220	e180	e195	e135	e100	419	334	146	32	2,160	172
8	34	215	e180	e165	e90	e100	344	298	187	26	1,000	125
9	34	219	e110	e220	e130	e100	293	329	158	26	384	86
10	34	386	e96	e220	e105	e100	299	259	147	26	617	78
11	35	705	e110	e130	e90	e56	399	233	102	124	889	71
12	115	743	e180	e130	e90	e85	551	847	139	248	766	67
13	196	1,090	e155	e130	e90	e100	1,000	1,040	107	167	813	59
14	107	788	e155	e175	e90	e74	1,440	835	390	47	506	55
15	105	475	e380	e160	e90	e66	1,650	610	338	46	265	61
16	92	390	e335	e200	e90	e100	3,560	454	210	48	175	67
17	631	358	e210	e125	e90	e100	3,730	368	153	63	186	72
18	396	728	e180	e90	e90	e450	1,540	304	130	76	820	71
19	228	489	e210	e90	e90	e820	971	254	118	95	784	67
20	224	375	e360	e90	e110	e600	1,050	238	113	63	329	991
21	204	515	e780	e90	e60	e920	1,300	179	99	56	199	197
22	132	416	e550	e135	e65	e1,800	1,560	218	101	144	159	162
23	91	1,220	415	e66	e110	e2,500	1,390	154	116	231	134	271
24	133	1,300	329	e96	e135	1,840	1,030	188	101	118	94	889
25	131	966	e250	e110	e160	1,730	729	230	90	96	66	656
26	123	497	e190	e85	e160	2,080	1,240	292	76	91	66	359
27	440	434	e240	e60	e125	2,030	1,440	755	67	70	68	260
28	472	256	e260	e110	e110	1,780	1,200	497	61	56	66	360
29	276	330	e215	e72	---	e1,060	966	529	61	48	66	1,630
30	225	325	e245	e78	---	e850	716	414	52	44	59	1,820
31	131	---	e190	e96	---	e1,750	---	343	---	42	54	---
TOTAL	4,949	14,227	7,644	4,544	2,892	21,765	36,130	13,706	4,957	2,329	16,968	10,186
MEAN	160	474	247	147	103	702	1,204	442	165	75.1	547	340
MAX	631	1,300	780	281	160	2,500	3,730	1,040	429	248	2,160	1,820
MIN	34	77	96	60	60	56	293	154	52	26	54	54

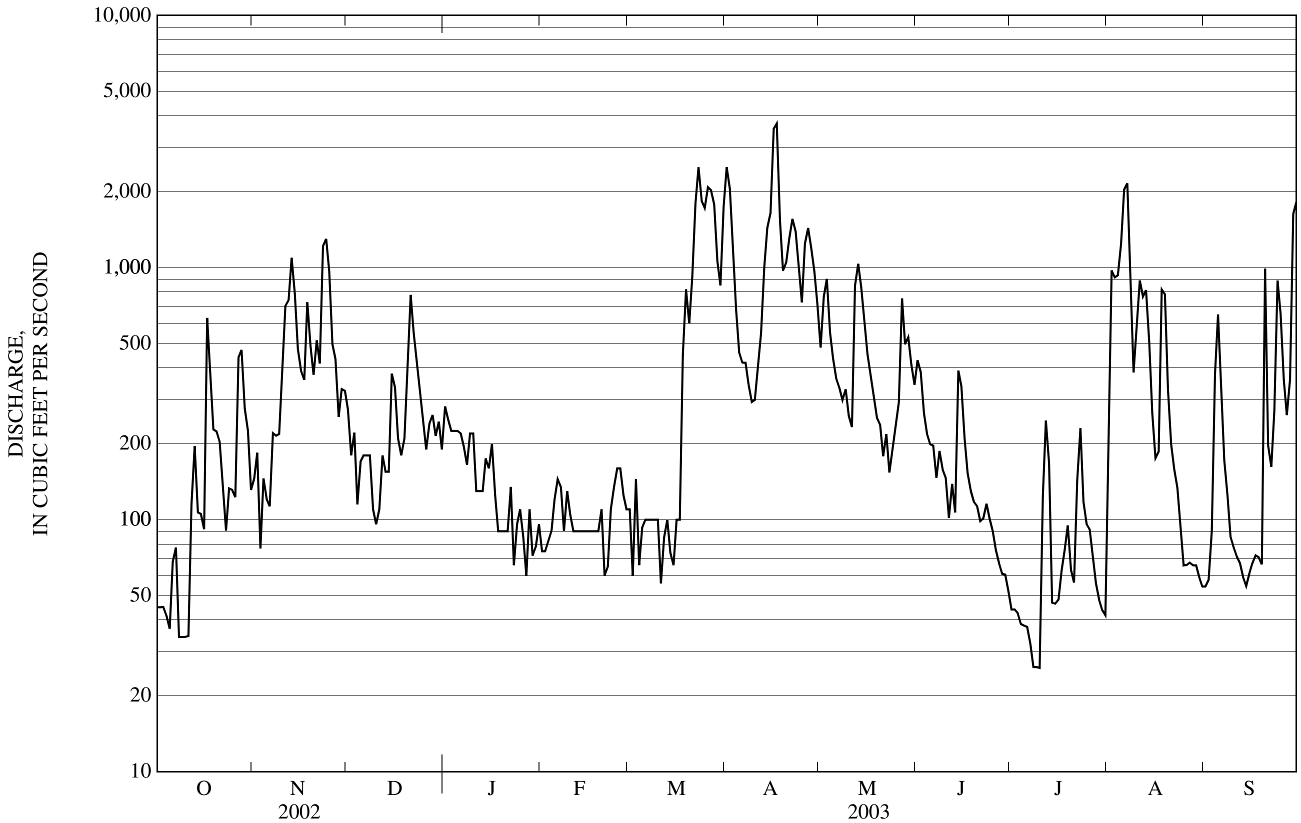
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1989, 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	236	347	345	272	275	567	1,266	588	257	132	112	125
MAX	916	787	862	749	1,009	1,486	2,290	1,499	831	822	909	606
(WY)	(1988)	(1989)	(1984)	(1998)	(1981)	(1953)	(1969)	(1972)	(1984)	(1973)	(1976)	(1987)
MIN	16.9	65.0	78.7	65.3	42.0	107	499	192	35.8	14.2	11.3	12.5
(WY)	(1948)	(1965)	(1948)	(1981)	(1980)	(1956)	(1985)	(1964)	(1964)	(1965)	(1999)	(1948)

01155500 WEST RIVER AT JAMAICA, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 89, 1996 - 2003	
ANNUAL TOTAL	129,576.0		140,297			
ANNUAL MEAN	355		384		376	
HIGHEST ANNUAL MEAN					611	1976
LOWEST ANNUAL MEAN					161	1965
HIGHEST DAILY MEAN	3,370	May 14	3,730	Apr 17	15,500	Dec 31, 1948
LOWEST DAILY MEAN	6.8	Sep 14	a26	Jul 8	0.94	Sep 23, 1968
ANNUAL SEVEN-DAY MINIMUM	9.1	Sep 9	32	Jul 4	1.1	Sep 18, 1968
MAXIMUM PEAK FLOW			4,860	Apr 16	b29,500	Dec 31, 1948
MAXIMUM PEAK STAGE			c13.49	Mar 22	14.87	Dec 31, 1948
10 PERCENT EXCEEDS	892		995		952	
50 PERCENT EXCEEDS	211		180		168	
90 PERCENT EXCEEDS	25		60		33	

a Also occurred July 9 and 10
b From rating curve extended above 9,800 ft^3/s on basis of slope-area measurement of peak flow
c Ice jam
e Estimated



01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, NH

LOCATION.--Lat 42° 59'41", long 72° 18'42", Cheshire County, Hydrologic Unit 01080201, on right bank, 1000 ft south of Surry Mountain Dam, 2.7 mi upstream from Sturtevant Brook, 4.4 mi southwest of Post Office in Gilsum, 4.5 mi north of Courthouse in Keene, and at mile 34.0.

DRAINAGE AREA.--101 mi^2.

PERIOD OF RECORD.--Discharge records: September 1945 to September 1989, October 1995 to current year. Peak streamflow: Water years 1946 to current year. Miscellaneous discharge measurements only: Water years 1990 to 1995. Water-quality discrete samples: Water years 1956 to 1959, 1965 to 1970, 1975 to 1999.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Surry Mountain Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft^3/s, Apr. 2, gage height, 8.71 ft; minimum daily discharge, 7.4 ft^3/s, July 31.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	53	157	164	55	70	1,000	240	222	22	13	33
2	18	51	135	161	55	70	1,090	251	232	20	39	34
3	16	50	123	143	55	70	1,080	299	219	18	58	37
4	15	48	100	136	56	70	1,040	389	193	15	67	57
5	14	47	91	136	57	61	989	433	170	14	89	95
6	12	55	95	136	58	58	937	518	156	12	141	97
7	12	70	89	120	58	58	984	541	142	11	499	85
8	12	73	84	112	58	58	1,030	364	139	9.9	515	72
9	12	70	79	111	58	58	911	259	132	9.1	330	59
10	12	72	68	111	58	58	538	219	121	8.7	484	50
11	14	76	57	111	58	58	331	193	105	11	660	46
12	22	82	52	111	58	58	350	213	96	13	759	42
13	25	136	53	83	58	58	385	260	90	14	817	40
14	29	191	54	71	58	58	566	250	102	12	827	42
15	29	190	56	71	58	58	724	223	110	11	806	49
16	40	171	103	71	58	58	760	205	105	13	740	80
17	56	168	159	81	58	58	782	186	93	20	590	123
18	67	210	166	85	58	76	783	164	82	20	444	120
19	66	217	164	85	57	107	746	143	73	19	408	105
20	62	189	164	85	48	166	641	127	69	16	329	93
21	57	174	165	84	45	384	419	114	62	14	248	91
22	51	209	169	84	46	547	332	109	61	17	189	85
23	51	396	207	83	46	595	323	103	60	18	149	137
24	51	445	222	e75	46	813	326	101	56	18	114	366
25	48	434	220	e71	64	965	325	100	50	17	90	360
26	50	364	218	e71	71	944	319	111	43	15	75	294
27	70	285	216	e60	70	874	322	189	37	13	63	232
28	75	230	213	e55	70	896	329	230	32	11	53	207
29	69	190	211	e55	---	915	332	269	27	9.5	45	354
30	60	170	178	55	---	751	284	270	24	8.3	40	374
31	54	---	164	55	---	822	---	230	---	7.4	36	---
TOTAL	1,190	5,116	4,232	2,932	1,595	9,892	18,978	7,303	3,103	436.9	9,717	3,859
MEAN	38.4	171	137	94.6	57.0	319	633	236	103	14.1	313	129
MAX	75	445	222	164	71	965	1,090	541	232	22	827	374
MIN	12	47	52	55	45	58	284	100	24	7.4	13	33

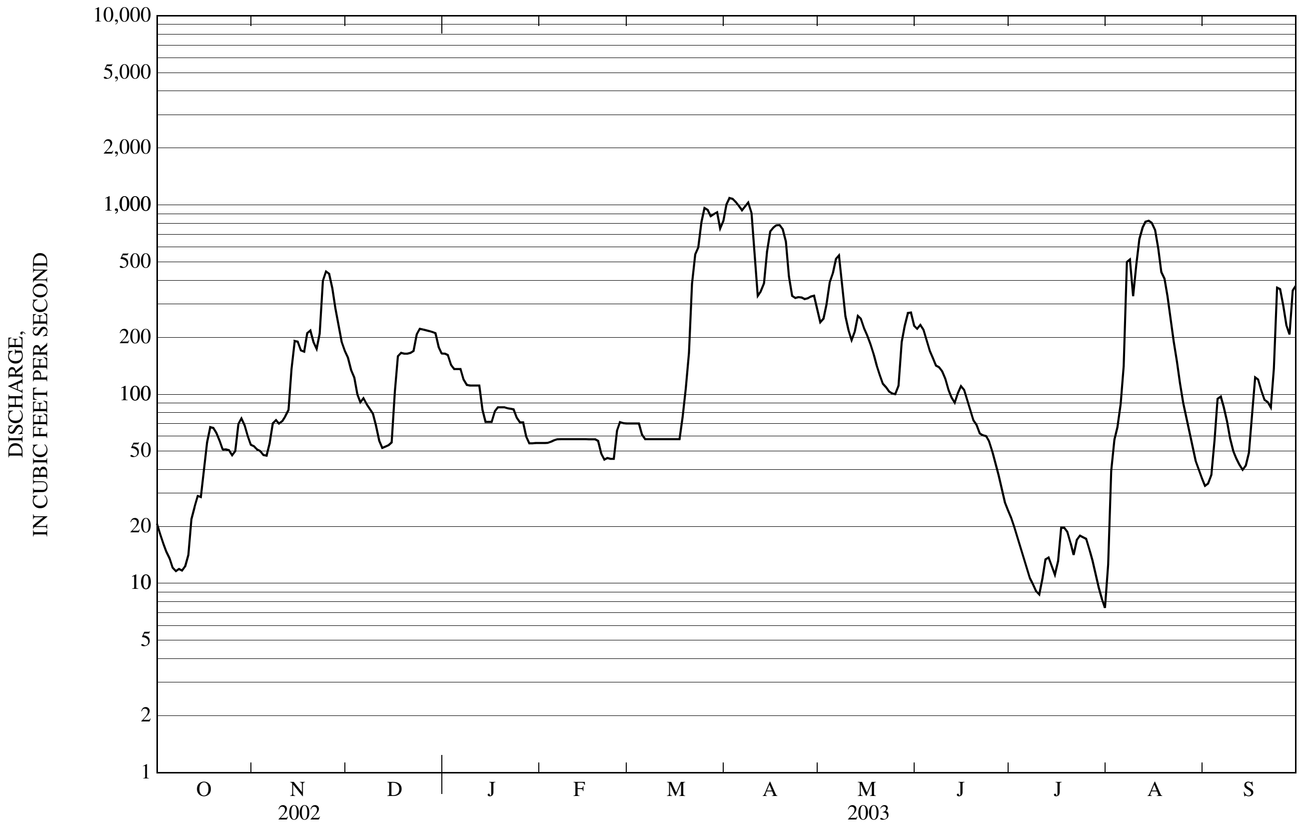
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1989, 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	99.0	159	175	147	152	281	550	283	136	53.5	44.8	52.8
MAX	453	577	512	383	423	661	1,022	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	8.68
(WY)	(1965)	(1965)	(1965)	(1981)	(1980)	(1956)	(1946)	(1986)	(1964)	(1965)	(1965)	(2002)

01158000 ASHUELOT RIVER BELOW SURRY MOUNTAIN DAM, NEAR KEENE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 89, 1996 - 2003	
ANNUAL TOTAL	49,057.8		68,353.9			
ANNUAL MEAN	134		187		177	
HIGHEST ANNUAL MEAN					279	1960
LOWEST ANNUAL MEAN					57.3	1965
HIGHEST DAILY MEAN	812	Apr 3	1,090	Apr 2	2,150	Apr 7, 1987
LOWEST DAILY MEAN	1.6	Aug 22	7.4	Jul 31	0.40	Sep 17, 1964
ANNUAL SEVEN-DAY MINIMUM	3.0	Aug 18	11	Jul 6	0.67	Aug 1, 1965
MAXIMUM PEAK FLOW			1,110	Apr 2	2,260	Apr 7, 1987
MAXIMUM PEAK STAGE			8.71	Apr 2	a11.78	Apr 7, 1987
10 PERCENT EXCEEDS	332		516		515	
50 PERCENT EXCEEDS	86		85		89	
90 PERCENT EXCEEDS	6.6		18		14	

a From floodmarks
e Estimated



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, 1.5 mi downstream of station 01158500, "Otter Brook near Keene", 2.2 mi northeast of City Hall in Keene, and 2.3 mi upstream from confluence with Minnewawa Brook to form "The Branch."

DRAINAGE AREA.--47.2 mi^2.

PERIOD OF RECORD.--Discharge records: May 1958 to September 1989, October 1995 to current year. Peak streamflow: Water years 1959 to current year. Miscellaneous discharge measurements only: Water years 1990 to 1995. Water-quality discrete samples: Water years 1958, 1965 to 1970, 1975 to 1999.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft above National Geodetic Vertical Datum of 1929 (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 poor. Flow regulated by Otter Brook Lake.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 629 ft^3/s, Apr. 2, gage height, 8.48 ft; minimum daily discharge, 4.1 ft^3/s, Oct. 10 and 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	17	81	65	24	24	464	86	139	12	8.0	7.3
2	8.8	15	58	65	24	25	544	125	152	10	24	7.7
3	7.5	14	46	65	24	25	e550	282	116	9.3	28	9.2
4	6.4	13	36	65	24	25	e535	326	84	8.6	26	19
5	6.1	13	35	65	24	25	519	235	72	7.9	57	41
6	6.0	18	39	65	24	25	498	171	73	7.3	72	33
7	5.5	34	35	65	34	e32	517	124	66	6.2	e82	25
8	4.9	32	35	65	40	42	505	114	74	5.1	e69	19
9	4.4	30	28	64	40	42	455	108	e67	5.3	53	16
10	4.1	30	23	50	39	41	e245	93	e55	5.5	98	13
11	4.1	32	23	39	39	41	e125	82	49	6.3	319	12
12	6.0	40	23	39	39	41	215	e140	51	7.4	179	10
13	13	128	24	39	38	41	266	e160	50	7.2	112	9.2
14	15	125	24	39	38	41	359	132	68	6.5	e82	9.3
15	15	90	25	39	37	40	403	e115	76	6.0	e60	e13
16	19	68	101	40	37	40	392	e97	56	7.4	47	e33
17	26	82	142	39	37	40	387	83	44	14	43	e45
18	29	132	114	40	e30	41	316	69	38	15	e62	e32
19	24	104	75	39	23	91	241	61	35	14	e72	e26
20	20	86	83	38	23	164	230	55	34	11	e55	e20
21	24	95	98	33	23	294	146	52	32	9.2	42	e17
22	26	152	102	23	23	391	83	55	35	9.1	33	e17
23	23	195	128	e23	23	423	77	51	35	9.4	29	e50
24	20	204	145	23	24	484	e78	51	33	10	23	e145
25	19	205	142	23	24	399	80	54	28	14	19	e100
26	24	201	124	23	24	328	81	77	e23	14	16	70
27	42	194	89	24	24	340	83	160	e20	12	e13	57
28	36	186	78	23	24	435	85	143	16	9.8	e12	65
29	30	121	78	24	---	407	86	141	13	8.1	10	182
30	24	86	77	24	---	241	86	117	13	6.8	9.2	135
31	20	---	69	24	---	338	---	96	---	5.9	8.1	---
TOTAL	522.8	2,742	2,180	1,292	827	4,966	8,651	3,655	1,647	280.3	1,762.3	1,237.7
MEAN	16.9	91.4	70.3	41.7	29.5	160	288	118	54.9	9.04	56.8	41.3
MAX	42	205	145	65	40	484	550	326	152	15	319	182
MIN	4.1	13	23	23	23	24	77	51	13	5.1	8.0	7.3

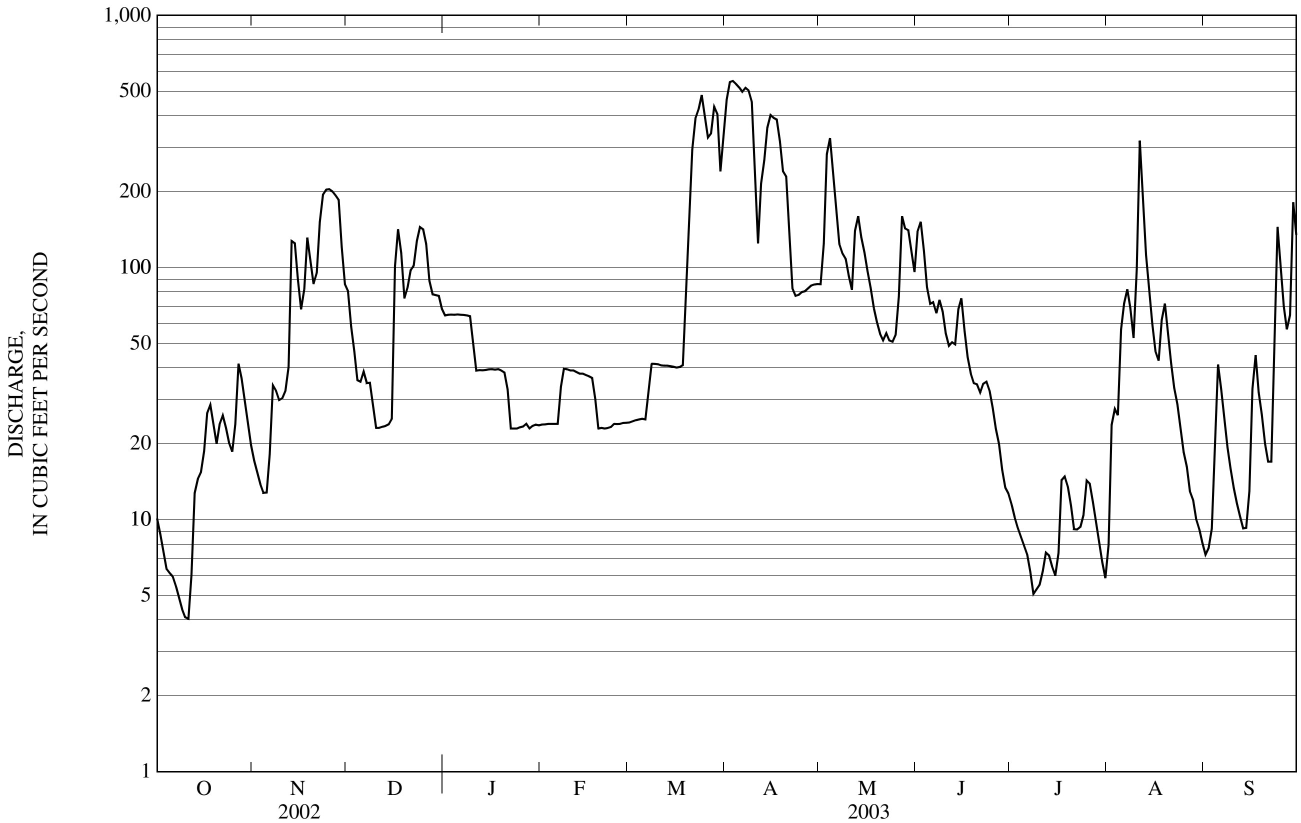
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1989, 1996 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	45.4	72.4	76.7	62.5	69.4	135	250	118	61.3	27.2	21.6	23.6
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	0.86	3.20	12.8	8.97	14.3	29.8	88.6	34.4	3.78	2.65	2.21	0.77
(WY)	(1965)	(1965)	(1965)	(1981)	(1965)	(1965)	(1985)	(1999)	(1964)	(1965)	(1963)	(1964)

01158600 OTTER BROOK BELOW OTTER BROOK DAM NEAR KEENE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 89, 1996 - 2003	
ANNUAL TOTAL	22,384.3		29,763.1			
ANNUAL MEAN	61.3		81.5		80.2	
HIGHEST ANNUAL MEAN					126	1960
LOWEST ANNUAL MEAN					23.2	1965
HIGHEST DAILY MEAN	398	Apr 2	e550	Apr 3	685	Apr 10, 1987
LOWEST DAILY MEAN	a1.8	Sep 14	b4.1	Oct 10	0.30	Sep 27, 1964
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 18	5.0	Oct 6	0.30	Oct 12, 1964
MAXIMUM PEAK FLOW			629	Apr 2	c752	Apr 9, 1987
MAXIMUM PEAK STAGE			8.48	Apr 2	8.62	Apr 9, 1987
10 PERCENT EXCEEDS	155		202		207	
50 PERCENT EXCEEDS	35		39		40	
90 PERCENT EXCEEDS	4.1		9.3		5.9	

a Also occurred on September 15, 2002
b Also occurred on October 11
c Includes bypass flow 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, 5.0 mi southwest of City Hall in Keene, and 18.3 mi upstream from mouth.

DRAINAGE AREA.--316 mi^2.

PERIOD OF RECORD.--Discharge records: April 1994 to current year. Peak streamflow: Water years 1994 to current year. Miscellaneous discharge measurements only: Water year 1990. Water-quality discrete samples: Water years 1994 to 1999.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 452 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those below 400 ft^3/s and those for estimated daily discharges, which are fair. 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, 3,270 ft^3/s, Mar. 30, gage height, 4.37 ft; minimum daily discharge, 40 ft^3/s, Oct. 10 and 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	176	351	e390	173	211	2,750	657	876	138	70	94
2	70	161	290	e385	179	224	2,540	730	1,020	115	174	106
3	77	166	249	e370	181	259	2,570	1,200	828	98	223	114
4	59	155	202	376	189	260	2,600	1,300	621	80	214	166
5	48	196	174	449	197	270	2,470	1,170	532	73	267	226
6	46	250	185	402	201	255	2,280	1,080	512	69	413	218
7	44	311	187	379	199	246	2,140	1,090	455	65	688	190
8	44	299	177	349	200	256	2,110	954	488	63	805	175
9	42	284	163	352	193	248	2,020	731	467	62	653	155
10	40	262	142	331	187	230	1,730	584	410	62	849	135
11	40	253	142	289	180	217	1,280	534	362	69	1,530	116
12	78	273	154	290	173	221	1,480	729	347	80	1,420	104
13	113	476	157	267	174	218	1,760	884	349	76	1,360	96
14	124	550	216	232	174	211	1,780	841	456	70	1,400	98
15	116	470	483	216	177	211	1,900	704	476	66	1,190	111
16	185	369	563	223	174	227	1,930	606	394	81	1,030	185
17	236	408	557	235	181	279	1,930	528	334	118	893	261
18	240	741	e500	220	187	415	1,820	462	300	115	709	251
19	214	689	e430	215	174	589	1,620	407	283	104	661	222
20	187	510	369	220	165	738	1,500	366	263	109	542	209
21	170	491	725	222	149	1,260	1,230	329	241	117	407	211
22	167	737	906	211	153	2,250	940	341	260	125	319	196
23	165	1,370	794	210	212	2,890	894	343	304	118	263	315
24	186	1,480	769	208	235	2,770	867	342	326	127	217	867
25	149	1,310	699	202	251	2,780	830	332	273	134	182	762
26	158	1,130	e630	198	259	2,820	813	407	233	107	158	581
27	226	889	e620	183	243	2,840	962	882	211	79	140	478
28	257	684	e570	184	224	2,760	952	982	191	66	127	461
29	231	508	512	187	---	2,690	883	1,160	169	57	107	949
30	241	391	469	170	---	3,030	799	1,100	160	47	98	947
31	207	---	409	170	---	3,110	---	828	---	43	96	---
TOTAL	4,230	15,989	12,794	8,335	5,384	34,985	49,380	22,603	12,141	2,733	17,205	8,999
MEAN	136	533	413	269	192	1,129	1,646	729	405	88.2	555	300
MAX	257	1,480	906	449	259	3,110	2,750	1,300	1,020	138	1,530	949
MIN	40	155	142	170	149	211	799	329	160	43	70	94

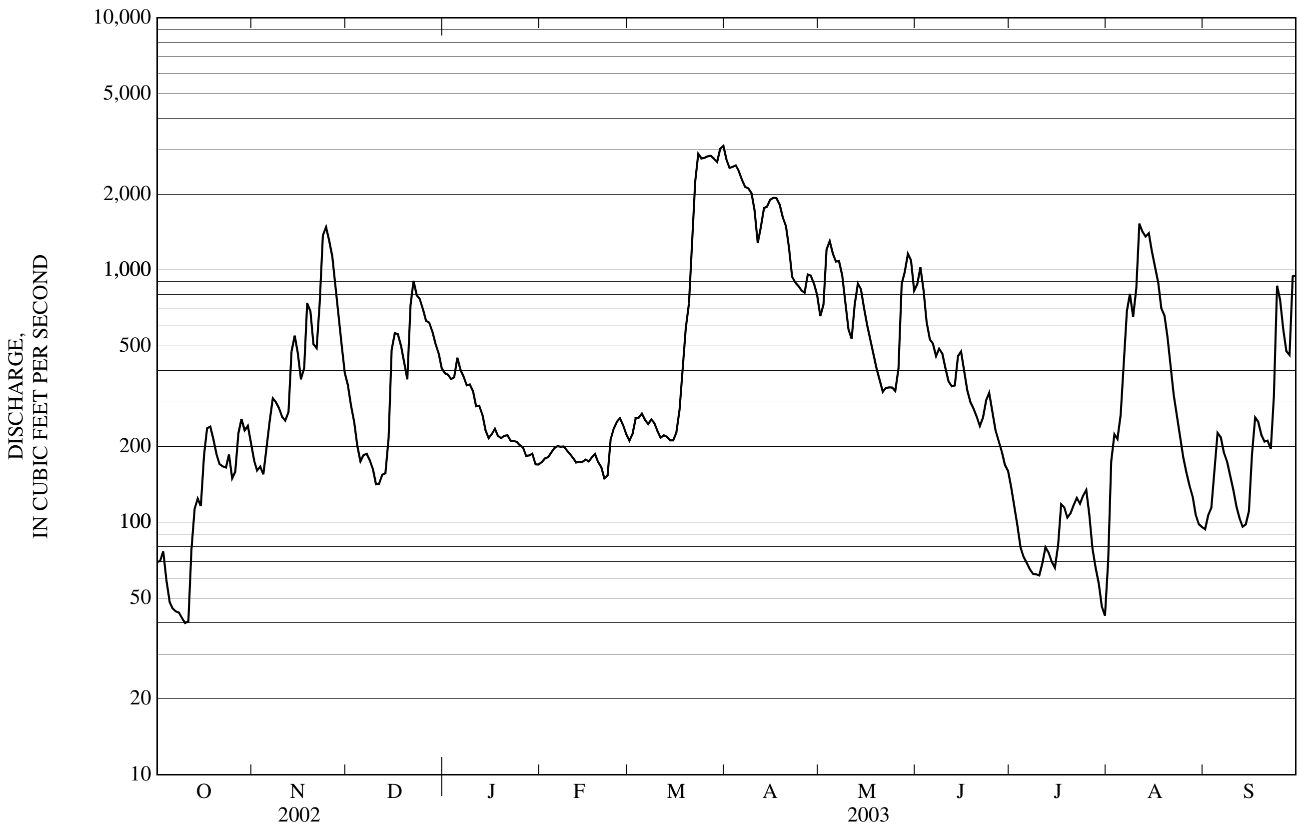
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	309	494	535	528	460	919	1,389	730	402	177	171	157
MAX	761	1,539	1,723	1,076	1,007	1,264	2,353	1,511	1,067	362	555	514
(WY)	(1996)	(1996)	(1997)	(1996)	(1996)	(1998)	(1994)	(1996)	(1998)	(1996)	(2003)	(1999)
MIN	108	73.4	129	85.2	192	439	518	316	89.1	88.2	42.6	47.8
(WY)	(1998)	(2002)	(2002)	(2002)	(2003)	(2001)	(1995)	(1995)	(1999)	(2003)	(2002)	(1995)

01160350 ASHUELOT RIVER AT WEST SWANZEY, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1994 - 2003	
ANNUAL TOTAL	142,626		194,778			
ANNUAL MEAN	391		534		513	
HIGHEST ANNUAL MEAN					781	1996
LOWEST ANNUAL MEAN					327	2002
HIGHEST DAILY MEAN	2,170	Apr 2	3,110	Mar 31	a3,370	Apr 12, 2001
LOWEST DAILY MEAN	b24	Aug 20	c40	Oct 10	20	Aug 13, 1999
ANNUAL SEVEN-DAY MINIMUM	27	Aug 18	43	Oct 5	21	Aug 7, 1999
MAXIMUM PEAK FLOW			3,270	Mar 30	3,620	Apr 17, 1996
MAXIMUM PEAK STAGE			4.37	Mar 30	d6.30	Mar 7, 1999
10 PERCENT EXCEEDS	929		1,300		1,330	
50 PERCENT EXCEEDS	237		261		287	
90 PERCENT EXCEEDS	41		98		62	

a Also occurred on April 13, 2001
b Also occurred on August 22, 2002
c Also occurred on October 11
d Ice jam
e Estimated



01161000 ASHUELOT RIVER AT HINSDALE, NH

LOCATION.--Lat 42° 47'09", long 72° 29'12", Cheshire County, Hydrologic Unit 01080201, on left bank, 40 ft upstream from State Highway 63S bridge in Hinsdale, 200 ft south of State Highway 63S and 119W intersection in Hinsdale, 0.2 mi downstream from dam, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--420 mi^2.

PERIOD OF RECORD.--Discharge records: March 1907 to December 1911, July 1914 to current year.

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

GAGE.--Water-stage recorder. Datum of gage is 201.32 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to September 29, 1933, nonrecording gage on State Highway 63S bridge at same datum.

REMARKS.--Records good except 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^3/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^3/s, September 15, 1929. Maximum discharge since at least 1859, that of March 19, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,440 ft^3/s, Mar. 30, gage height, 7.30 ft; maximum gage height, 7.90 ft, Jan. 25 (ice jam); minimum daily discharge, 64 ft^3/s, Oct. 10 and 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	209	647	e560	e240	e295	3,490	886	1,070	178	96	128
2	95	191	572	e550	e250	e310	3,050	902	1,250	156	230	136
3	99	183	495	e530	e255	e355	3,050	1,390	1,100	140	293	150
4	102	179	e450	e530	e265	e360	3,110	1,540	890	127	293	201
5	88	185	e425	e615	e275	e370	2,950	1,400	775	114	320	291
6	79	250	e415	e570	e280	e355	2,700	1,260	753	105	566	293
7	74	337	e440	e530	e280	e340	2,460	1,240	682	99	726	256
8	68	355	e420	e490	e275	e355	2,360	1,180	711	91	912	227
9	66	332	e400	e480	e270	e345	2,280	990	707	88	823	201
10	64	311	e370	e460	e260	e320	2,100	828	623	88	1,110	178
11	64	298	e340	e405	e250	e300	1,680	752	534	94	1,770	157
12	94	304	e365	e400	e245	e307	1,960	950	508	111	1,820	139
13	154	569	358	e375	e240	e305	2,340	1,150	538	110	1,590	127
14	177	813	451	e330	e243	e295	2,260	1,110	718	101	1,720	139
15	189	742	897	e305	e245	e295	2,250	976	765	95	1,480	152
16	192	614	987	e310	e245	e315	2,280	862	631	101	1,260	245
17	246	660	e850	e325	e250	e380	2,240	758	493	133	1,140	332
18	266	1,100	e755	e310	e260	e675	2,110	681	412	140	1,040	322
19	251	1,110	e700	e300	e245	e910	1,910	597	383	131	939	288
20	224	890	e665	e305	e235	e1,150	1,730	522	363	121	804	290
21	201	812	918	e305	e210	e1,880	1,520	455	327	121	644	276
22	192	1,000	1,080	e295	e215	3,280	1,190	450	361	141	482	251
23	188	1,610	e980	e295	e285	3,870	1,110	448	447	142	383	545
24	191	1,670	e920	e290	e325	3,650	1,070	454	473	149	320	1,360
25	199	1,460	e840	e280	e345	3,560	1,010	468	387	163	265	1,150
26	194	1,310	e795	e275	e355	3,650	994	572	314	152	232	899
27	241	1,150	e755	e260	e340	3,640	1,200	1,090	264	127	207	745
28	272	987	e715	e255	e315	3,490	1,210	1,230	232	107	185	813
29	259	838	e675	e260	---	3,430	1,100	1,350	206	94	160	1,560
30	245	724	e635	e240	---	4,110	1,000	1,350	187	83	144	1,450
31	240	---	e590	e235	---	4,150	---	1,110	---	70	134	---
TOTAL	5,120	21,193	19,905	11,670	7,498	47,047	59,714	28,951	17,104	3,672	22,088	13,301
MEAN	165	706	642	376	268	1,518	1,990	934	570	118	713	443
MAX	272	1,670	1,080	615	355	4,150	3,490	1,540	1,250	178	1,820	1,560
MIN	64	179	340	235	210	295	994	448	187	70	96	127

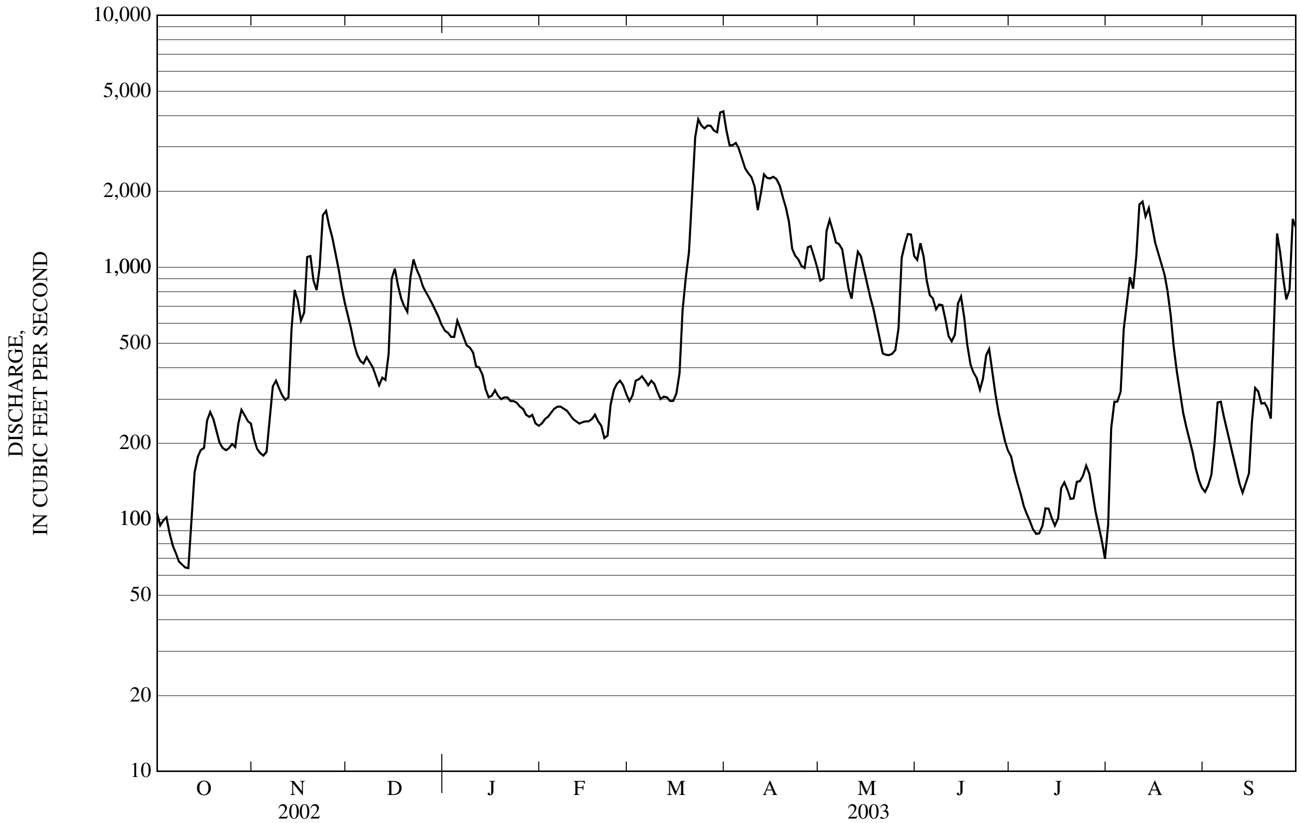
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1907 - 1912, 1914 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	343	586	657	601	600	1,241	1,880	989	524	274	229	244
MAX	1,474	2,248	2,209	1,539	2,016	4,392	3,723	2,175	2,075	1,182	1,098	2,394
(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)

01161000 ASHUELOT RIVER AT HINSDALE, NH—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1907 - 12, 1914 - 2003	
ANNUAL TOTAL	186,853		257,263			
ANNUAL MEAN	512		705		680	
HIGHEST ANNUAL MEAN					1,093	1960
LOWEST ANNUAL MEAN					216	1965
HIGHEST DAILY MEAN	2,260	Apr 3	4,150	Mar 31	16,500	Mar 19, 1936
LOWEST DAILY MEAN	a35	Sep 13	b64	Oct 10	12	Sep 15, 1929
ANNUAL SEVEN-DAY MINIMUM	41	Sep 9	72	Oct 5	32	Aug 16, 1966
MAXIMUM PEAK FLOW			4,440	Mar 30	c16,600	Mar 19, 1936
MAXIMUM PEAK STAGE			d7.90	Jan 25	f20.20	Mar 19, 1936
10 PERCENT EXCEEDS	1,100		1,600		1,710	
50 PERCENT EXCEEDS	354		370		375	
90 PERCENT EXCEEDS	61		132		97	

a Also occurred on September 14, 2002
b Also occurred on October 11
c By computation of peak flow over dam as explained above
d Ice jam
e Estimated
f From floodmarks as explained above



01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT

LOCATION.--Lat 42° 54'47", long 73° 15'25", Bennington County, Hydrologic Unit 02020003, on left bank, 500 ft downstream of River Road Covered bridge, 700 ft downstream of Old Mill Dam, 0.6 mi downstream from Paran Creek, 1.4 mi south of State Highway 67 and 67A intersection in North Bennington, and 3.9 mi northwest of Town Hall in Bennington.

DRAINAGE AREA.--111 mi^2.

PERIOD OF RECORD.--Discharge records: June 1931 to current year.

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

GAGE.--Water-stage recorder. Elevation of gage is 525 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2320	*4,230	*8.19	No other peak greater than base discharge.			

Minimum discharge, 50 ft^3/s, July 7, 8, 9, 31, Aug. 1.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	138	234	283	e110	104	562	237	271	78	285	79
2	92	124	205	294	e110	155	518	705	227	69	690	108
3	109	112	174	237	109	e160	659	529	189	62	268	104
4	90	106	e150	226	125	e130	537	360	169	60	170	165
5	95	107	155	215	142	135	449	300	164	59	235	154
6	90	149	163	202	e125	159	397	270	166	56	539	111
7	79	172	e145	190	113	e135	345	254	161	53	342	93
8	74	143	150	193	e105	124	317	242	177	53	225	81
9	68	140	132	191	e100	129	300	226	155	56	196	77
10	64	185	e135	178	e98	e114	325	204	137	62	254	71
11	67	201	134	168	e95	e112	375	198	131	180	252	72
12	256	222	162	165	e95	109	441	547	137	137	396	64
13	224	461	156	155	e93	107	481	1,090	135	90	432	59
14	171	303	283	e150	e91	106	427	792	250	76	331	68
15	131	229	338	e150	e91	104	566	514	191	65	234	78
16	123	206	239	e145	e91	136	1,020	411	141	93	190	79
17	311	273	184	e143	e95	253	728	338	128	116	208	79
18	269	450	e145	e141	e93	384	482	296	117	82	302	65
19	195	311	e160	e139	e90	375	432	265	115	79	193	74
20	163	307	488	e137	e90	324	471	241	106	66	154	122
21	139	301	640	e133	89	790	462	225	114	66	130	94
22	124	331	368	e127	100	936	452	214	176	189	122	77
23	128	801	296	e125	195	788	433	198	148	138	121	349
24	124	457	256	e120	191	586	363	190	115	119	103	334
25	116	369	230	e117	146	681	320	186	102	119	97	170
26	217	327	e220	e115	e115	859	336	267	93	84	93	163
27	275	294	220	e115	e112	788	356	322	82	72	116	131
28	205	253	208	e113	e110	695	308	284	75	67	94	514
29	165	237	202	e113	---	1,620	281	270	71	60	83	557
30	144	232	185	e113	---	1,860	252	226	80	56	87	296
31	130	---	206	e110	---	810	---	201	---	52	81	---
TOTAL	4,526	7,941	6,963	5,003	3,119	13,768	13,395	10,602	4,323	2,614	7,023	4,488
MEAN	146	265	225	161	111	444	446	342	144	84.3	227	150
MAX	311	801	640	294	195	1,860	1,020	1,090	271	189	690	557
MIN	64	106	132	110	89	104	252	186	71	52	81	59

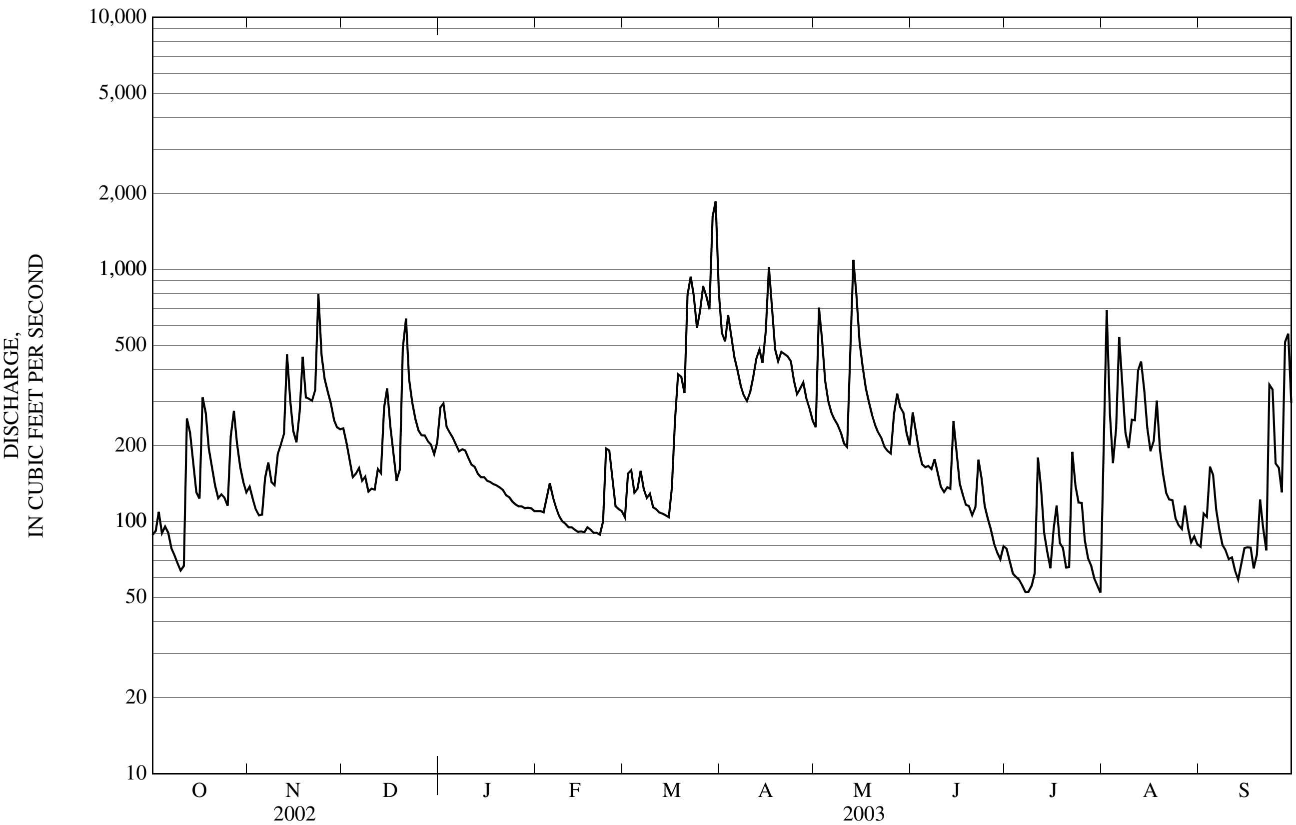
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	149	208	212	195	181	322	533	322	183	123	106	116
MAX	418	412	471	425	575	958	1,008	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)

01334000 WALLOOMSAC RIVER NEAR NORTH BENNINGTON, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	81,088		83,765			
ANNUAL MEAN	222		229		221	
HIGHEST ANNUAL MEAN					362	1976
LOWEST ANNUAL MEAN					98.9	1965
HIGHEST DAILY MEAN	1,990	Jun 6	1,860	Mar 30	6,350	Dec 31, 1948
LOWEST DAILY MEAN	a 37	Sep 10	52	Jul 31	b 21	Sep 22, 1964
ANNUAL SEVEN-DAY MINIMUM	39	Sep 8	57	Jul 3	22	Sep 20, 1964
MAXIMUM PEAK FLOW			4,280	Mar 29	c 8,450	Sep 21, 1938
MAXIMUM PEAK STAGE			d 8.24	Mar 29	12.04	Sep 21, 1938
INSTANTANEOUS LOW FLOW			f 50	Jul 7	4.0	Sep 27, 1932
10 PERCENT EXCEEDS	433		459		456	
50 PERCENT EXCEEDS	185		162		143	
90 PERCENT EXCEEDS	61		79		57	

a Also occurred on September 14, 2002
b Also occurred on September 23, 1964, and July 12, 1965
c From rating curve extended above 2,800 ft^3/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
d From peak indicator clip
e Estimated
f Also occurred on July 8, 9, 31, and August 1



04279490 LAKE BOMOSEEN AT OUTLET, NEAR FAIR HAVEN, VT

LOCATION.--Lat 43° 36'18", long 73° 14'01", Rutland County, Hydrologic Unit 02010001, on left bank upstream face of Dam at outlet, 100 ft upstream of State Highway 4A, 100 ft west of State Highway 4A and School Street intersection in Hydeville, 0.6 mi upstream of mouth on Castelton River, and 1.8 mi northeast of State Highways 4A and 22A intersection in Fair Haven.

DRAINAGE AREA.--37.5 mi^2.

PERIOD OF RECORD.--Elevation: October 2002 to current year.

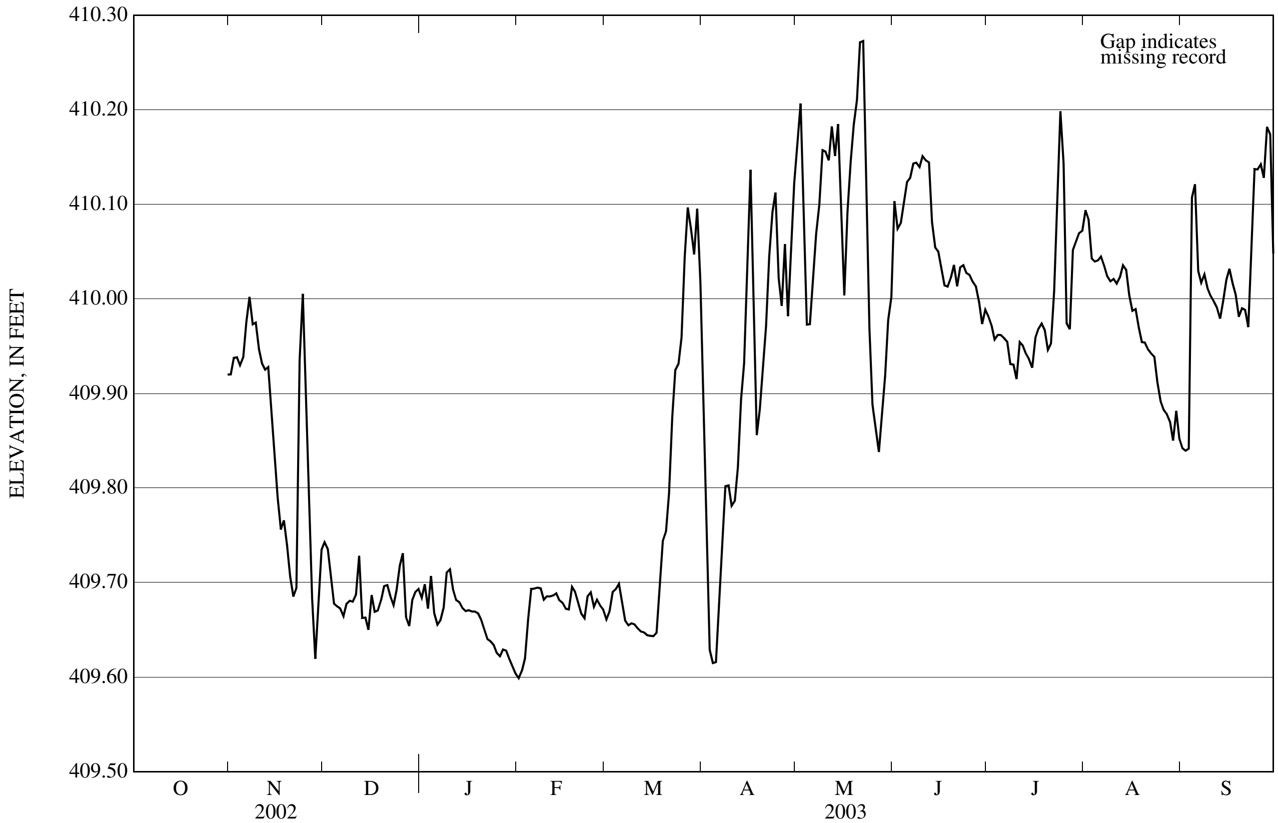
GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 410.35 ft, May 21; minimum elevation, 409.53 ft, Nov. 28.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	409.92	409.74	409.68	409.60	409.66	409.88	410.16	410.10	409.98	410.09	409.84
2	---	409.94	409.74	409.70	409.61	409.67	409.74	410.21	410.07	409.97	410.08	409.84
3	---	409.94	409.71	409.67	409.62	409.69	409.63	410.09	410.08	409.96	410.04	409.84
4	---	409.93	409.68	409.71	409.66	409.69	409.61	409.97	410.10	409.96	410.04	410.11
5	---	409.94	409.67	409.67	409.69	409.70	409.62	409.97	410.12	409.96	410.04	410.12
6	---	409.98	409.67	409.66	409.69	409.68	409.70	410.02	410.13	409.96	410.04	410.03
7	---	410.00	409.66	409.66	409.69	409.66	409.76	410.07	410.14	409.95	410.03	410.02
8	---	409.97	409.68	409.67	409.69	409.65	409.80	410.10	410.14	409.93	410.02	410.03
9	---	409.98	409.68	409.71	409.68	409.66	409.80	410.16	410.14	409.93	410.02	410.01
10	---	409.95	409.68	409.71	409.69	409.66	409.78	410.16	410.15	409.92	410.02	410.00
11	---	409.93	409.69	409.69	409.69	409.65	409.79	410.15	410.15	409.95	410.02	410.00
12	---	409.93	409.73	409.68	409.69	409.65	409.82	410.18	410.14	409.95	410.02	409.99
13	---	409.93	409.66	409.68	409.69	409.65	409.89	410.15	410.08	409.94	410.04	409.98
14	---	409.88	409.66	409.67	409.68	409.64	409.93	410.18	410.05	409.94	410.03	410.00
15	---	409.83	409.65	409.67	409.68	409.64	410.03	410.10	410.05	409.93	410.00	410.02
16	---	409.79	409.69	409.67	409.67	409.64	410.14	410.00	410.03	409.96	409.99	410.03
17	---	409.76	409.67	409.67	409.67	409.65	409.97	410.09	410.01	409.97	409.99	410.02
18	---	409.77	409.67	409.67	409.70	409.70	409.86	410.15	410.01	409.97	409.97	410.00
19	---	409.74	409.68	409.67	409.69	409.74	409.88	410.18	410.02	409.97	409.95	409.98
20	---	409.71	409.70	409.66	409.68	409.75	409.93	410.21	410.04	409.95	409.95	409.99
21	---	409.69	409.70	409.65	409.67	409.79	409.97	410.27	410.01	409.95	409.95	409.99
22	---	409.69	409.69	409.64	409.66	409.87	410.05	410.27	410.03	410.01	409.94	409.97
23	---	409.94	409.68	409.64	409.69	409.92	410.09	410.13	410.04	410.10	409.94	410.07
24	---	410.01	409.69	409.63	409.69	409.93	410.11	409.97	410.03	410.20	409.91	410.14
25	---	409.92	409.72	409.63	409.67	409.96	410.02	409.89	410.03	410.14	409.89	410.14
26	---	409.80	409.73	409.62	409.68	410.04	409.99	409.86	410.02	409.97	409.88	410.14
27	---	409.68	409.66	409.63	409.68	410.10	410.06	409.84	410.01	409.97	409.88	410.13
28	---	409.62	409.65	409.63	409.67	410.07	409.98	409.88	410.00	410.05	409.87	410.18
29	---	409.68	409.68	409.62	---	410.05	410.05	409.92	409.97	410.06	409.85	410.17
30	---	409.73	409.69	409.61	---	410.10	410.12	409.98	409.99	410.07	409.88	410.05
31	409.92	---	409.69	409.60	---	410.02	---	410.00	---	410.07	409.85	---
MEAN	---	409.85	409.69	409.66	409.67	409.78	409.90	410.07	410.06	409.99	409.97	410.03
MAX	---	410.01	409.74	409.71	409.70	410.10	410.14	410.27	410.15	410.20	410.09	410.18
MIN	---	409.62	409.65	409.60	409.60	409.64	409.61	409.84	409.97	409.92	409.85	409.84

04279490 LAKE BOMOSEEN AT OUTLET, NEAR FAIR HAVEN, VT—Continued



04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT

LOCATION.--Lat 43° 37'27", long 73° 18'43", Rutland County, Hydrologic Unit 02010001, on right bank, 0.4 mi downstream from Carver Falls and Dam, 2.0 mi upstream from Hubbardton River, 3.0 mi northwest of Town Hall in Fair Haven, and 6.6 mi northeast of Whitehall, NY.

DRAINAGE AREA.--187 mi^2.

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

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

GAGE.--Water-stage recorder. Elevation of gage is 110 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by power plant upstream and Lake Bomoseen.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,800 ft^3/s, July 20, 1945, gage height, 24.36 ft, from high-water mark in well, from rating curve extended above 2,600 ft^3/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^3/s, August 8, 1965, September 13, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0230	* 2,420	*11.54	No peak greater than base discharge.			

Minimum daily discharge, 6.2 ft^3/s, Oct. 8.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	53	324	277	e205	e250	964	347	265	48	121	38
2	18	53	298	290	e200	e272	861	516	262	42	350	37
3	17	52	290	278	e193	e253	838	793	207	30	335	38
4	18	50	237	298	e218	e240	717	651	185	41	229	583
5	19	49	211	314	e271	e278	637	490	175	36	193	436
6	18	53	194	251	e275	e253	457	360	173	33	210	318
7	15	88	186	214	e268	e238	396	338	151	32	216	235
8	6.2	100	162	200	e284	e221	393	313	155	30	184	140
9	6.5	110	135	e195	e205	e224	400	314	140	29	428	110
10	6.6	118	135	e192	e173	e211	420	307	134	28	377	95
11	8.1	129	133	e190	e170	e205	561	303	120	30	275	78
12	11	140	158	e182	e167	e222	776	576	121	39	307	64
13	15	190	247	e178	e170	e203	1,120	823	179	38	377	61
14	17	230	269	e180	e177	e188	878	1,070	201	35	282	58
15	16	224	491	e183	e193	e201	706	942	178	32	224	62
16	38	210	387	e202	e198	e228	650	803	108	29	186	59
17	117	228	316	e190	e213	389	709	525	93	30	e150	52
18	84	369	255	e195	e212	1,030	660	394	81	36	e125	45
19	63	345	254	e212	e208	1,180	485	342	80	37	108	45
20	73	348	263	e195	e202	900	348	297	79	32	70	42
21	51	404	643	e201	e207	1,610	313	266	74	31	74	41
22	45	436	512	e210	e203	2,080	304	248	81	79	70	38
23	46	1,460	426	e218	e221	1,620	378	356	98	242	64	120
24	46	1,100	352	e232	e285	1,400	389	419	72	594	63	199
25	49	841	335	e245	e375	1,470	483	394	63	846	49	120
26	45	788	321	e203	e260	1,670	513	325	59	581	51	77
27	92	715	e350	e220	e253	1,380	907	316	55	425	48	77
28	86	603	e290	e228	e248	1,180	746	202	51	159	43	114
29	76	365	242	e220	---	1,180	561	248	41	125	41	383
30	63	327	216	e212	---	1,340	381	271	40	107	43	436
31	62	---	227	e208	---	1,130	---	225	---	80	41	---
TOTAL	1,247.4	10,178	8,859	6,813	6,254	23,246	17,951	13,774	3,721	3,956	5,334	4,201
MEAN	40.2	339	286	220	223	750	598	444	124	128	172	140
MAX	117	1,460	643	314	375	2,080	1,120	1,070	265	846	428	583
MIN	6.2	49	133	178	167	188	304	202	40	28	41	37
CFSM	0.22	1.81	1.53	1.18	1.19	4.01	3.20	2.38	0.66	0.68	0.92	0.75
IN.	0.25	2.02	1.76	1.36	1.24	4.62	3.57	2.74	0.74	0.79	1.06	0.84

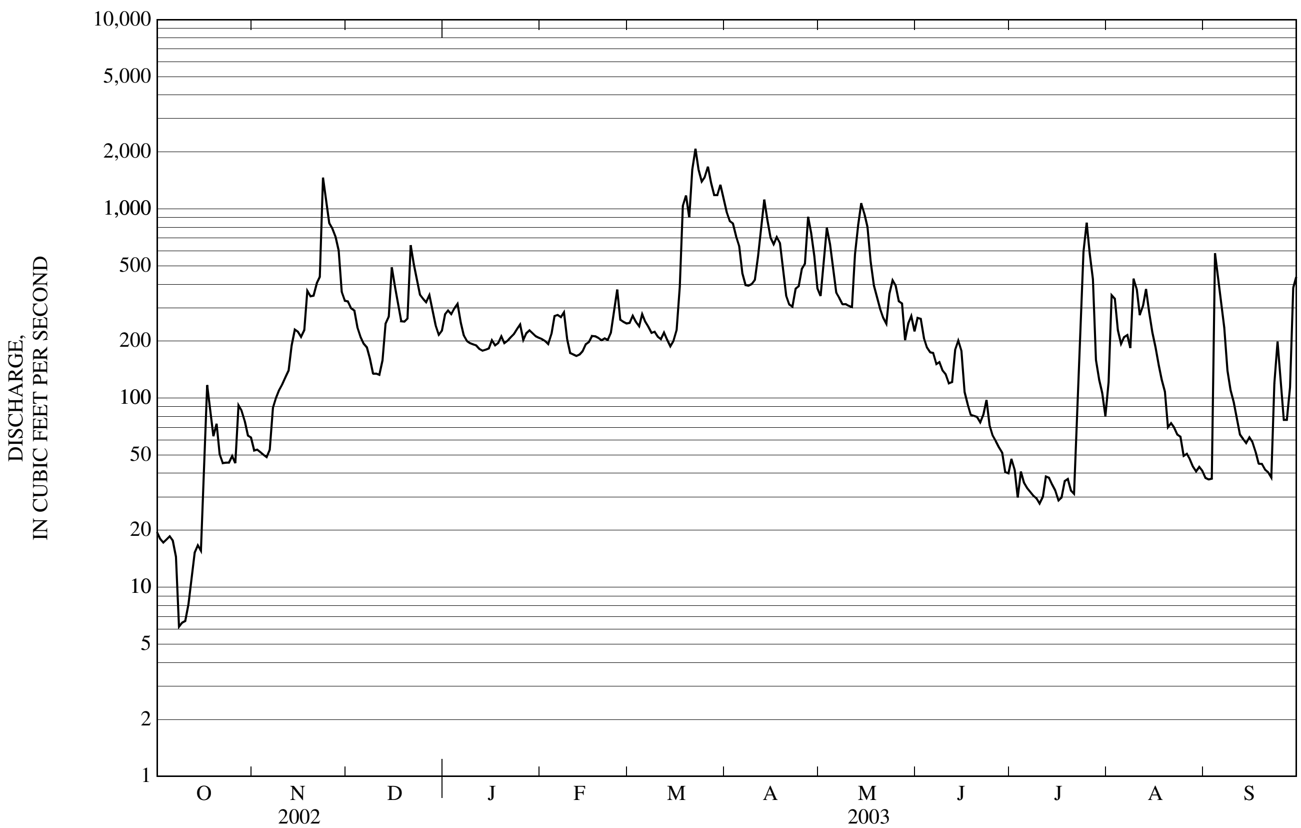
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	136	221	260	257	262	523	674	321	164	104	83.3	90.1
MAX	721	760	1,018	897	800	1,627	1,441	902	776	639	629	666
(WY)	(1978)	(1973)	(1984)	(1996)	(1984)	(1986)	(1977)	(1983)	(1947)	(1976)	(1976)	(1938)
MIN	13.8	19.5	38.4	42.0	26.8	113	231	71.5	19.4	7.08	3.94	8.19
(WY)	(2002)	(2002)	(1965)	(1931)	(1980)	(1940)	(1966)	(1941)	(1965)	(1965)	(1965)	(1995)

04280000 POULTNEY RIVER BELOW FAIR HAVEN, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	84,857.0		105,534.4			
ANNUAL MEAN	232		289		258	
HIGHEST ANNUAL MEAN					527	1976
LOWEST ANNUAL MEAN					66.9	1965
HIGHEST DAILY MEAN	2,400	Apr 14	2,080	Mar 22	7,010	Jan 20, 1996
LOWEST DAILY MEAN	3.3	Sep 14	6.2	Oct 8	a 2.1	Aug 8, 1965
ANNUAL SEVEN-DAY MINIMUM	4.5	Sep 13	9.8	Oct 7	3.0	Aug 13, 1965
MAXIMUM PEAK FLOW			2,420	Mar 22	b 14,800	Jul 20, 1945
MAXIMUM PEAK STAGE			11.54	Mar 22	c 24.36	Jul 20, 1945
ANNUAL RUNOFF (CFSM)	1.24		1.55		1.38	
ANNUAL RUNOFF (INCHES)	16.88		20.99		18.73	
10 PERCENT EXCEEDS	556		678		612	
50 PERCENT EXCEEDS	135		208		137	
90 PERCENT EXCEEDS	7.4		38		27	

a Also occurred on September 13, 1977
b From rating curve extended above 2,600 ft3/s as explained above
c 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 Betts Bridge Road bridge, 20 ft southwest of Betts Bridge Road and Offesend Road intersection, 0.8 mi upstream of State Highway 153 bridge, 1.0 mi southwest of Offesend Road and State Highway 30 intersection at Butternut Bend, and 2.5 mi northwest of State Highways 30 and 133 intersection in Pawlet.

DRAINAGE AREA.--70.2 mi^2.

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 National Geodetic Vertical Datum of 1929, 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov 23	0400	1,120	4.20	Mar 25	2115	975	4.03
Dec 20	1845	1,230	4.31	Mar 29	2000	1,290	4.37
Mar 21	1815	*1,370	*4.45				

Minimum discharge, 8.9 ft^3/s, Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	20	133	217	e75	e73	493	176	148	28	37	25
2	12	19	116	192	e76	e107	432	260	135	26	68	29
3	12	18	101	169	e76	e108	421	254	120	24	43	28
4	12	17	99	165	e86	e92	371	202	108	22	37	56
5	13	18	99	146	e130	e96	322	177	102	21	36	42
6	11	24	87	139	e85	e105	281	164	98	20	77	33
7	11	31	80	132	e77	e91	247	155	92	20	80	30
8	10	26	78	132	e72	e86	229	148	90	20	58	27
9	10	26	69	128	e69	e88	213	145	82	19	53	25
10	9.7	29	81	e118	e66	e78	233	132	77	19	65	23
11	10	36	85	e113	e65	e76	294	127	71	29	66	22
12	13	57	75	e108	e64	e74	486	257	70	25	227	21
13	13	126	69	e102	e63	e70	549	356	68	21	154	19
14	12	97	138	e96	e62	e72	471	528	88	19	99	20
15	12	75	171	e98	e62	e66	484	407	76	17	79	21
16	14	64	132	e99	e63	e80	523	328	65	23	67	20
17	36	88	112	e94	e65	245	451	279	59	26	60	19
18	30	179	107	e98	e64	416	380	241	55	23	55	17
19	25	116	121	e103	e62	379	323	206	52	25	49	17
20	28	133	462	e99	e62	337	287	179	50	20	44	18
21	23	142	546	e93	e63	1,070	269	162	47	24	40	17
22	20	188	347	e86	e84	1,080	272	148	56	48	37	16
23	20	654	286	e84	e134	880	290	134	49	43	35	53
24	19	327	238	e81	e120	697	261	127	43	47	31	51
25	16	259	210	e77	e95	738	230	122	39	49	29	34
26	28	221	e190	e76	e79	839	233	162	36	36	29	30
27	36	189	e167	e78	e78	693	275	148	33	30	29	27
28	29	154	e152	e74	e76	583	229	154	31	27	26	127
29	25	142	e144	e78	---	791	208	158	28	24	25	157
30	22	137	139	e78	---	911	184	145	35	22	30	90
31	20	---	145	e76	---	642	---	133	---	20	26	---
TOTAL	564.7	3,612	4,979	3,429	2,173	11,663	9,941	6,314	2,103	817	1,791	1,114
MEAN	18.2	120	161	111	77.6	376	331	204	70.1	26.4	57.8	37.1
MAX	36	654	546	217	134	1,080	549	528	148	49	227	157
MIN	9.7	17	69	74	62	66	184	122	28	17	25	16
CFSM	0.26	1.72	2.29	1.58	1.11	5.36	4.72	2.90	1.00	0.38	0.82	0.53
IN.	0.30	1.91	2.64	1.82	1.15	6.18	5.27	3.35	1.11	0.43	0.95	0.59

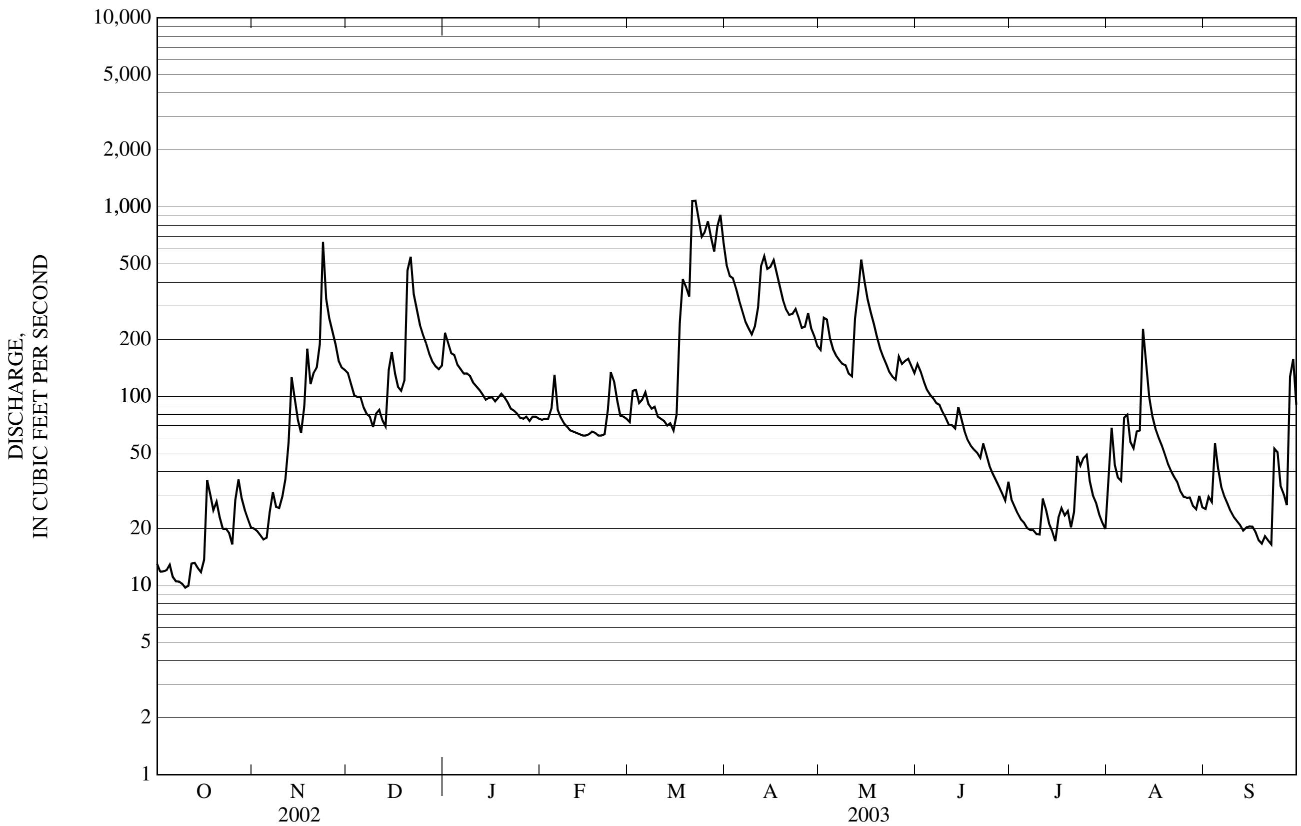
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	66.7	117	131	133	111	204	285	157	85.8	56.2	46.1	38.4
MAX	286	233	317	344	194	376	559	371	167	169	128	99.3
(WY)	(1988)	(1989)	(1997)	(1998)	(2000)	(2003)	(1994)	(1996)	(2001)	(1996)	(2000)	(1987)
MIN	14.3	21.8	40.5	42.9	45.5	73.7	115	55.4	32.8	13.8	11.1	10.6
(WY)	(2002)	(2002)	(2002)	(2002)	(1987)	(2001)	(1995)	(1987)	(1999)	(1995)	(2002)	(1995)

04280350 METTAWEE RIVER NEAR PAWLET, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1985 - 2003	
ANNUAL TOTAL	45,848.5		48,500.7			
ANNUAL MEAN	126		133		119	
HIGHEST ANNUAL MEAN					159	2000
LOWEST ANNUAL MEAN					75.9	1995
HIGHEST DAILY MEAN	955	Apr 15	1,080	Mar 22	2,860	Dec 17, 2000
LOWEST DAILY MEAN	5.7	Sep 10	9.7	Oct 10	5.7	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 8	11	Oct 5	6.3	Sep 8, 2002
MAXIMUM PEAK FLOW			1,370	Mar 21	7,080	Dec 17, 2000
MAXIMUM PEAK STAGE			4.45	Mar 21	7.31	Dec 17, 2000
INSTANTANEOUS LOW FLOW			8.9	Oct 6	a 5.0	Sep 10, 2002
ANNUAL RUNOFF (CFSM)	1.79		1.89		1.70	
ANNUAL RUNOFF (INCHES)	24.30		25.70		23.05	
10 PERCENT EXCEEDS	307		305		250	
50 PERCENT EXCEEDS	94		78		78	
90 PERCENT EXCEEDS	10		20		21	

a Also occurred on September 11, 2002
e Estimated



04282000 OTTER CREEK AT CENTER RUTLAND, VT

LOCATION.--Lat 43° 36'13", long 73° 00'49", Rutland County, Hydrologic Unit 02010002, on right bank, 200 ft downstream from dam, 500 ft upstream from bridge on US Highway 4 (Business) in Center Rutland, 0.3 mi upstream of Clarendon River, 1.2 mi downstream from East Creek, and 2.1 mi west of US 7N and 4E intersection in Rutland.

DRAINAGE AREA.--307 mi^2.

PERIOD OF RECORD.--Discharge records: May 1928 to current year.

REVISED RECORDS.--WSP 1084: 1929.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 474.80 ft above National Geodetic Vertical Datum of 1929; 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 power plants and Chittenden Reservoir 14 mi upstream on East Creek. These reservoirs have a combined usable capacity of about 819.8 million ft^3. Prior to June 3, 1947, regulation by East Pittsford Reservoir, usable capacity, 150 million ft^3.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2300	*4,300	*8.57	No other peak greater than base discharge.			

Minimum daily discharge, 82 ft^3/s, Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	190	461	653	232	e280	e1,810	845	666	169	204	131
2	135	179	431	e620	212	e265	1,410	1,150	704	150	735	186
3	135	147	e340	e490	e240	e270	1,230	1,310	573	131	432	159
4	127	180	e285	e450	e300	e250	1,070	954	480	131	361	595
5	102	172	e330	e440	e415	e245	1,020	781	486	114	752	432
6	98	211	406	e460	e420	e243	960	687	495	97	1,670	260
7	125	272	339	e450	e350	e235	865	644	385	105	1,410	194
8	102	240	e290	e465	e290	e230	827	611	389	114	793	208
9	82	249	e270	e440	e280	e240	797	653	379	111	622	190
10	94	323	e280	e415	e310	e243	802	590	350	98	675	167
11	109	546	e300	e370	e300	e230	1,030	526	343	159	623	156
12	114	761	e313	e360	e290	e225	1,280	895	343	181	827	168
13	138	960	323	e365	e300	e215	1,740	1,310	306	138	1,150	129
14	163	797	402	e350	e293	e202	1,500	1,650	466	125	672	109
15	142	559	578	e340	e298	e210	1,610	1,300	488	107	500	148
16	174	425	539	e340	e278	e220	2,310	1,020	364	134	361	177
17	437	431	417	e315	e270	403	2,390	895	284	154	302	173
18	427	700	313	e290	e250	795	1,750	735	255	146	353	164
19	260	597	359	e255	e260	706	1,240	662	226	164	349	150
20	217	535	580	e300	e248	650	1,320	614	240	128	280	137
21	235	607	1,240	e330	e235	1,340	1,480	564	198	133	239	126
22	194	679	1,070	e310	e200	976	1,510	534	229	394	230	170
23	182	1,690	801	e295	e250	766	1,470	499	271	475	221	377
24	173	1,310	708	e285	e380	1,270	1,260	438	236	392	166	761
25	166	918	568	e285	e350	1,520	1,060	430	197	329	152	421
26	189	778	437	e270	e328	1,850	1,070	477	207	216	145	333
27	316	680	545	e290	e290	1,360	1,550	725	193	158	148	256
28	365	509	494	e275	e273	1,500	1,310	690	141	182	142	519
29	287	480	479	e263	---	2,750	1,140	946	120	164	135	1,550
30	234	473	473	e255	---	e2,830	996	903	173	141	176	1,090
31	207	---	485	e260	---	e2,090	---	673	---	126	148	---
TOTAL	5,881	16,598	14,856	11,286	8,142	24,609	39,807	24,711	10,187	5,366	14,973	9,636
MEAN	190	553	479	364	291	794	1,327	797	340	173	483	321
MAX	437	1,690	1,240	653	420	2,830	2,390	1,650	704	475	1,670	1,550
MIN	82	147	270	255	200	202	797	430	120	97	135	109
CFSM	0.62	1.80	1.56	1.19	0.95	2.59	4.32	2.60	1.11	0.56	1.57	1.05
IN.	0.71	2.01	1.80	1.37	0.99	2.98	4.82	2.99	1.23	0.65	1.81	1.17

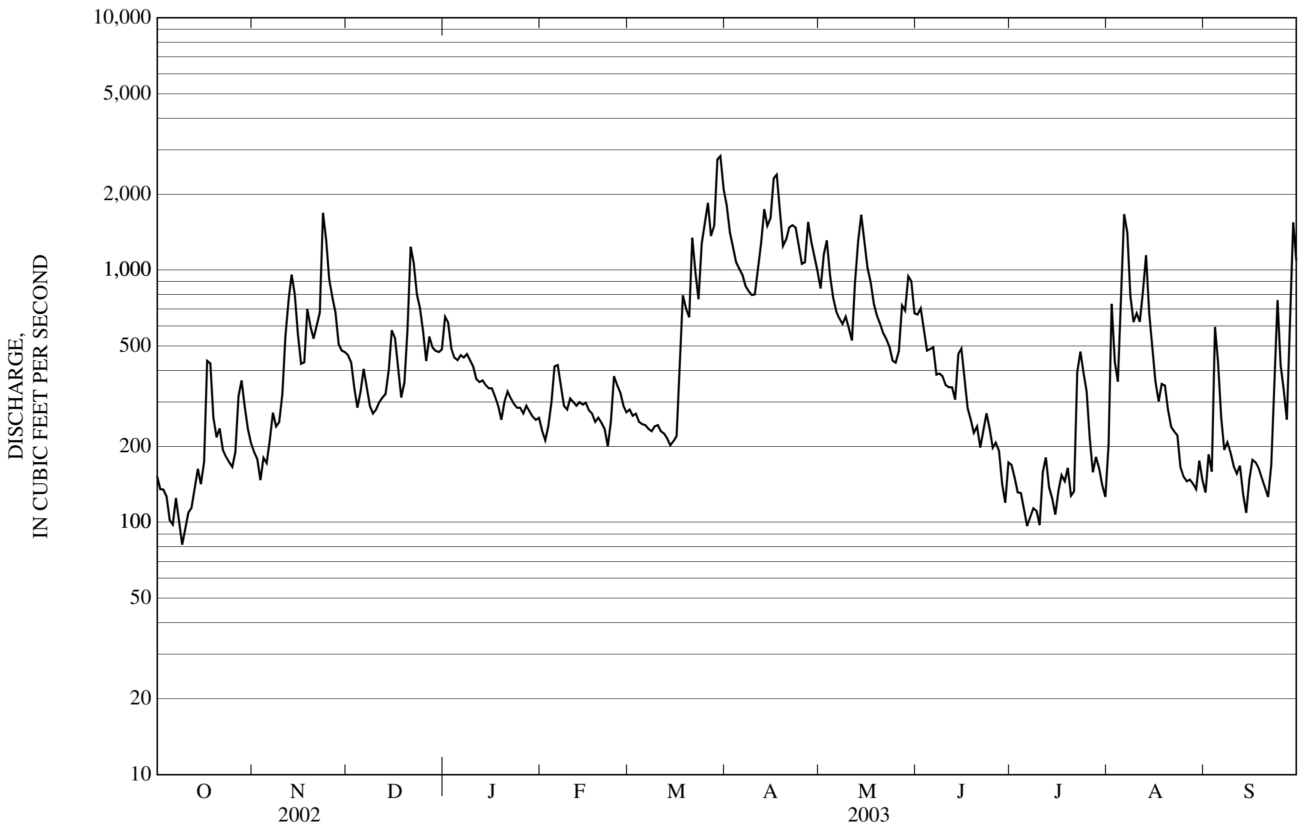
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	347	499	507	474	459	824	1,468	825	440	285	244	254
MAX	1,227	1,025	1,291	1,094	1,564	2,376	3,078	2,120	1,565	1,047	1,591	1,385
(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)

04282000 OTTER CREEK AT CENTER RUTLAND, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	180,280		186,052			
ANNUAL MEAN	494		510		551	
HIGHEST ANNUAL MEAN					1,049	1976
LOWEST ANNUAL MEAN					239	1965
HIGHEST DAILY MEAN	4,180	Apr 14	e 2,830	Mar 30	10,100	Sep 22, 1938
LOWEST DAILY MEAN	39	Aug 18	82	Oct 9	38	Aug 3, 1999
ANNUAL SEVEN-DAY MINIMUM	50	Sep 2	102	Oct 5	48	Aug 1, 1999
MAXIMUM PEAK FLOW			4,300	Mar 29	13,700	Sep 22, 1938
MAXIMUM PEAK STAGE			8.57	Mar 29	a 12.45	Sep 22, 1938
ANNUAL RUNOFF (CFSM)	1.61		1.66		1.79	
ANNUAL RUNOFF (INCHES)	21.85		22.54		24.38	
10 PERCENT EXCEEDS	1,080		1,230		1,200	
50 PERCENT EXCEEDS	390		340		338	
90 PERCENT EXCEEDS	73		142		132	

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 State Highway 125 bridge in Middlebury, 0.1 mi southwest of US 7 and State Highway 125 intersection, and 3.6 mi downstream from Middlebury River.

DRAINAGE AREA.--628 mi^2.

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

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 National Geodetic Vertical Datum of 1929. 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^3 on East Creek.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 13,600 ft^3/s, November 4, 1927, gage height, 13.3 ft, present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,040 ft^3/s, Apr. 3, gage height, 5.57 ft; minimum daily discharge, 168 ft^3/s, Oct. 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	398	1,070	e880	e450	e485	3,800	2,550	1,550	512	439	356
2	263	360	927	e980	e465	e520	3,930	2,700	1,490	434	575	318
3	271	330	852	e920	e480	e495	4,010	2,820	1,360	357	994	334
4	280	307	780	e850	e495	e500	3,980	2,630	1,170	317	890	546
5	237	329	e720	e800	e540	e505	3,840	2,520	985	285	846	1,120
6	200	361	e715	e770	e555	e500	3,620	2,390	1,130	268	1,210	829
7	179	410	e723	e760	e540	e490	3,370	2,230	1,040	244	1,600	580
8	208	486	e640	e740	e500	e495	3,110	2,040	886	249	1,680	439
9	204	487	e550	e720	e490	e490	2,900	1,850	797	266	1,620	424
10	177	480	e490	e690	e480	e480	2,710	1,670	779	250	1,800	402
11	168	568	e500	e660	e470	e465	2,570	1,470	717	276	1,520	344
12	188	771	e530	e640	e460	e450	2,450	1,490	695	372	1,330	316
13	204	1,080	e570	e630	e465	e430	2,430	1,790	689	378	1,490	307
14	229	1,130	602	e625	e455	e415	2,360	2,210	826	332	1,660	293
15	278	1,080	787	e620	e460	e405	2,370	2,240	940	281	1,530	262
16	305	883	933	e610	e465	e390	2,420	2,280	880	267	1,240	260
17	533	696	e860	e600	e470	625	2,400	2,300	748	331	921	321
18	766	716	e730	e580	e490	1,050	2,420	2,270	640	393	724	350
19	766	916	e640	e550	e485	1,340	2,440	2,160	581	364	704	344
20	616	955	752	e520	e490	1,410	2,490	1,970	518	336	646	312
21	457	974	1,290	e525	e490	1,930	2,520	1,780	466	272	575	279
22	435	1,030	1,450	e530	e485	2,050	2,530	1,580	447	405	533	249
23	396	1,620	1,510	e510	e480	2,070	2,570	1,360	438	752	479	308
24	356	1,770	1,510	e500	e510	2,260	2,560	1,120	477	1,350	457	734
25	318	1,870	1,330	e490	e530	2,790	2,530	970	458	2,030	398	1,000
26	309	1,940	1,170	e485	e540	3,260	2,570	896	412	1,810	358	781
27	411	1,860	993	e470	e520	3,370	2,880	974	430	1,520	342	600
28	525	1,710	e870	e460	e490	3,400	2,750	1,130	361	1,210	328	523
29	577	1,490	e840	e450	---	3,570	2,670	1,410	322	952	323	1,210
30	569	1,250	e820	e455	---	3,790	2,620	1,570	391	750	433	1,660
31	465	---	e800	e460	---	3,740	---	1,580	---	556	405	---
TOTAL	11,172	28,257	26,954	19,480	13,750	44,170	85,820	57,950	22,623	18,119	28,050	15,801
MEAN	360	942	869	628	491	1,425	2,861	1,869	754	584	905	527
MAX	766	1,940	1,510	980	555	3,790	4,010	2,820	1,550	2,030	1,800	1,660
MIN	168	307	490	450	450	390	2,360	896	322	244	323	249
CFSM	0.57	1.50	1.38	1.00	0.78	2.27	4.56	2.98	1.20	0.93	1.44	0.84
IN.	0.66	1.67	1.60	1.15	0.81	2.62	5.08	3.43	1.34	1.07	1.66	0.94

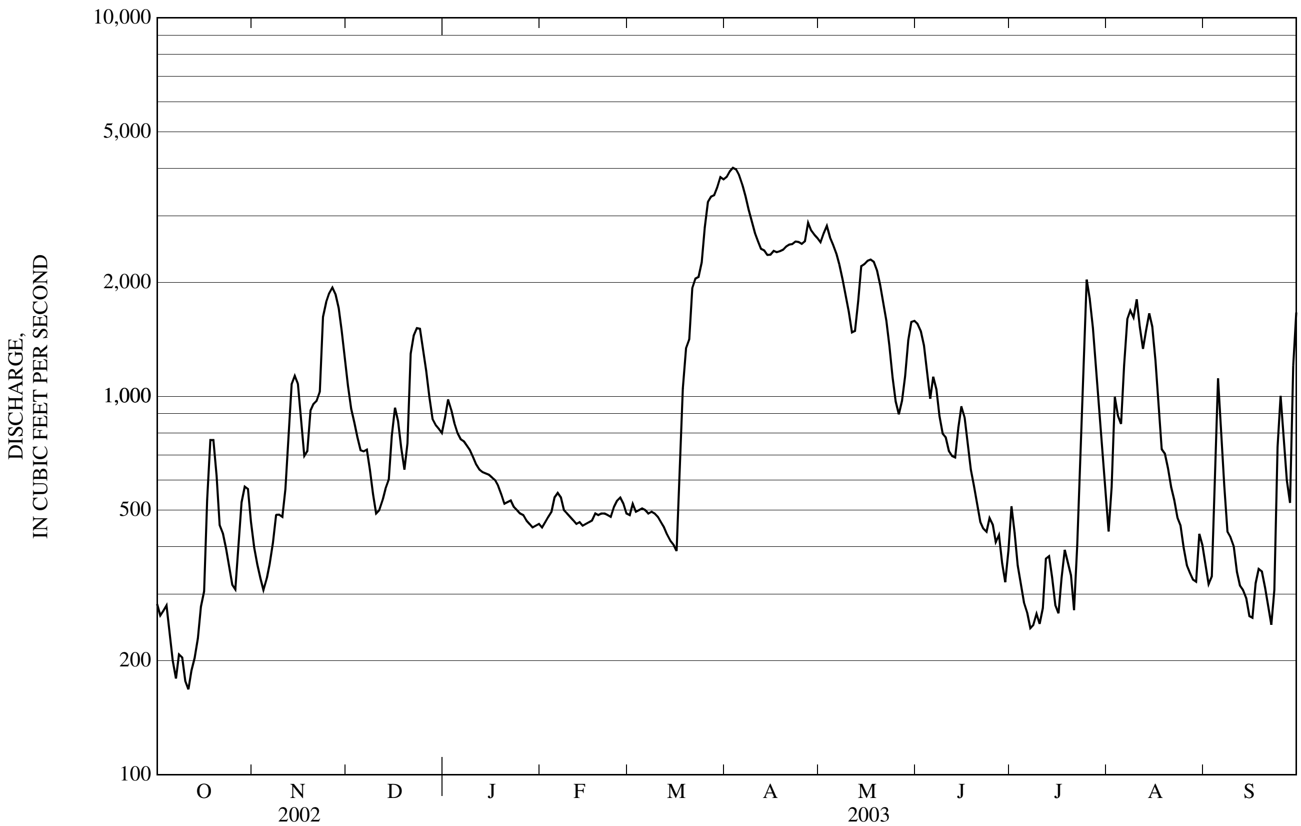
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 07, 11 - 20, 29 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	630	860	911	875	855	1,516	2,563	1,532	827	544	463	475
MAX	2,021	1,897	2,610	2,509	2,414	4,538	4,500	3,717	3,025	1,833	2,624	2,411
(WY)	(1988)	(1976)	(1984)	(1949)	(1981)	(1936)	(1960)	(1996)	(1947)	(1996)	(1976)	(1938)
MIN	166	241	246	205	229	384	885	370	208	126	129	168
(WY)	(2002)	(2002)	(1948)	(1948)	(1980)	(1940)	(1995)	(1903)	(1965)	(1965)	(1965)	(1982)

04282500 OTTER CREEK AT MIDDLEBURY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1903-07, 11-20, 29-2003	
ANNUAL TOTAL	329,729		372,146			
ANNUAL MEAN	903		1,020		1,003	
HIGHEST ANNUAL MEAN					1,878	1976
LOWEST ANNUAL MEAN					397	1965
HIGHEST DAILY MEAN	3,480	Apr 20	4,010	Apr 3	11,000	Mar 21, 1936
LOWEST DAILY MEAN	86	Sep 9	168	Oct 11	86	Sep 9, 2002
ANNUAL SEVEN-DAY MINIMUM	102	Sep 3	189	Oct 6	102	Sep 3, 2002
MAXIMUM PEAK FLOW			4,040	Apr 3	11,000	Mar 20, 1936
MAXIMUM PEAK STAGE			5.57	Apr 3	10.30	Mar 20, 1936
INSTANTANEOUS LOW FLOW			166	Oct 11	86	Sep 9, 2002
ANNUAL RUNOFF (CFSM)	1.44		1.62		1.60	
ANNUAL RUNOFF (INCHES)	19.53		22.04		21.69	
10 PERCENT EXCEEDS	2,050		2,430		2,330	
50 PERCENT EXCEEDS	696		640		631	
90 PERCENT EXCEEDS	150		314		256	

e Estimated



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, 1.5 mi downstream of Muddy Branch, 3.3 mi north of US 7 and State Highway 125 intersection in Middlebury.

DRAINAGE AREA.-- 115 mi^2.

PERIOD OF RECORD.--Discharge records: March 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 235 ft above National Geodetic Vertical Datum of 1929, 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2130	*3,030	*7.72	May 2	1800	2,630	7.42
Apr 26	2345	1,730	6.60	Aug 10	0829	2,310	7.16

Minimum discharge, 27 ft^3/s. Sept 19.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	68	137	e105	e58	e55	408	267	423	59	68	51
2	49	68	124	e96	e59	e59	350	1,030	424	53	71	46
3	45	59	106	e91	e59	e56	332	778	278	49	66	45
4	43	61	85	e97	e62	e58	277	417	217	47	70	73
5	56	62	e82	e103	e63	e56	242	319	197	44	126	74
6	48	68	e98	e97	e60	e58	227	269	414	43	121	55
7	37	86	e92	e94	e59	e59	201	243	262	41	98	47
8	34	71	e85	e96	e56	e57	194	220	221	48	76	43
9	37	76	e76	e94	e56	e58	183	219	186	44	100	39
10	38	103	e83	e88	e58	e57	222	200	289	39	977	37
11	35	139	89	e90	e57	e54	324	178	177	56	298	36
12	37	113	100	e92	e56	e53	385	589	183	77	187	35
13	36	168	103	e92	e55	e50	410	715	155	56	201	38
14	41	136	123	e86	e56	e49	284	992	429	48	134	34
15	42	110	225	e80	e57	e53	278	510	295	41	104	33
16	45	93	e165	e79	e56	e59	417	353	197	43	90	34
17	306	93	e120	e81	e54	e100	274	279	156	61	94	36
18	204	137	e84	e84	e54	e355	219	237	135	47	78	32
19	139	115	e120	e88	e55	e320	197	208	124	40	72	29
20	208	147	372	e83	e57	e280	209	193	121	36	64	31
21	125	177	574	e78	e58	e1,060	244	219	120	35	59	33
22	96	194	284	e75	e61	961	272	199	106	139	54	30
23	84	657	216	e72	e63	648	479	169	98	100	51	73
24	76	311	180	e68	e66	515	397	155	86	267	46	130
25	69	226	161	e66	e60	682	313	179	77	499	44	66
26	78	203	144	e64	e61	1,120	546	157	72	154	56	62
27	116	180	e122	e61	e57	736	988	187	66	99	46	47
28	97	144	e113	e59	e54	560	474	162	68	171	41	123
29	86	138	e104	e57	---	1,330	385	700	61	124	41	291
30	76	137	e98	e56	---	1,340	311	714	60	95	113	178
31	70	---	e103	e57	---	598	---	371	---	83	69	---
TOTAL	2,514	4,340	4,568	2,529	1,627	11,496	10,042	11,428	5,697	2,738	3,715	1,881
MEAN	81.1	145	147	81.6	58.1	371	335	369	190	88.3	120	62.7
MAX	306	657	574	105	66	1,340	988	1,030	429	499	977	291
MIN	34	59	76	56	54	49	183	155	60	35	41	29
CFSM	0.71	1.26	1.28	0.71	0.51	3.22	2.91	3.21	1.65	0.77	1.04	0.55
IN.	0.81	1.40	1.48	0.82	0.53	3.72	3.25	3.70	1.84	0.89	1.20	0.61

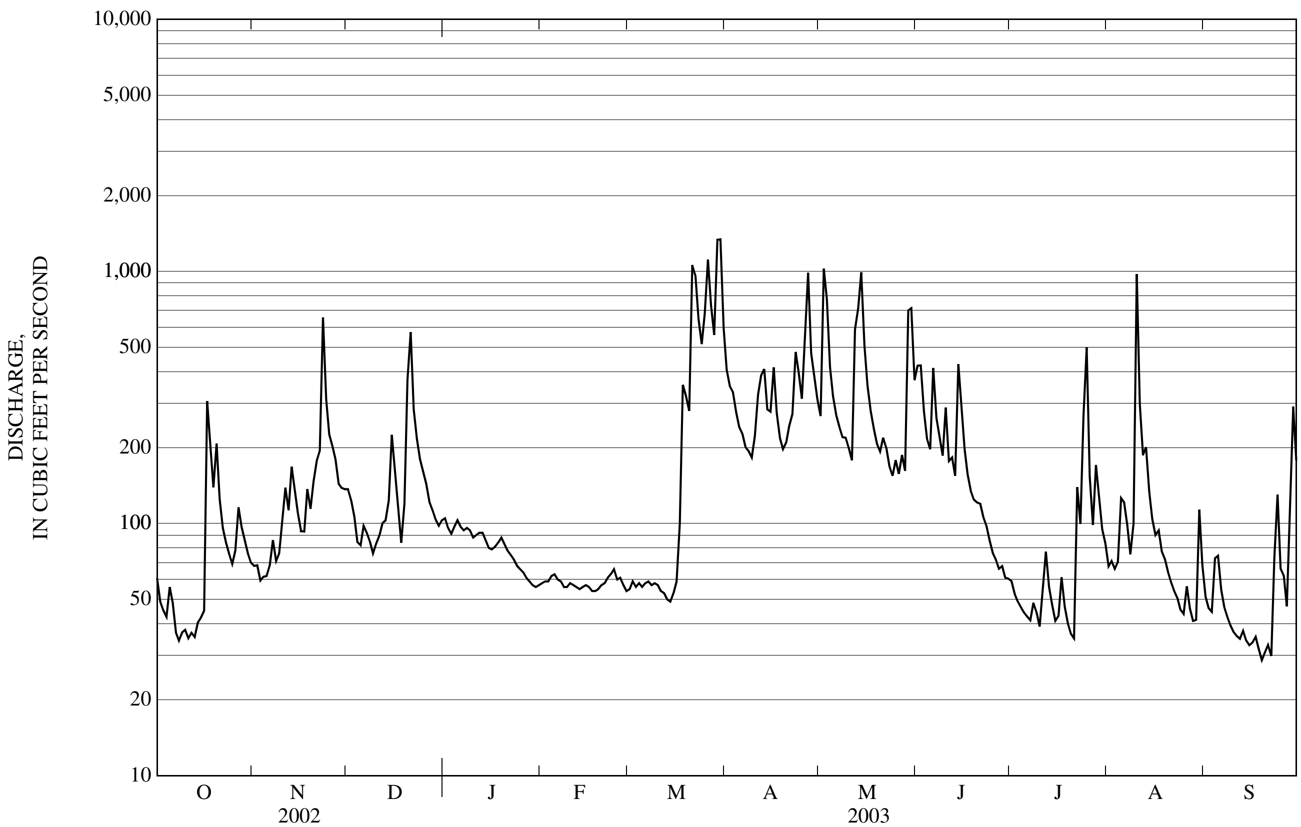
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	160	195	188	177	134	286	452	277	155	111	103	95.3
MAX	409	369	409	450	283	554	763	592	448	344	257	263
(WY)	(1991)	(1991)	(1997)	(1998)	(2000)	(1998)	(1994)	(1996)	(1998)	(1998)	(1998)	(1998)
MIN	37.5	73.1	92.4	68.3	46.5	110	182	126	51.0	44.7	24.6	43.3
(WY)	(2002)	(2002)	(2002)	(2002)	(1992)	(2001)	(1995)	(1995)	(1995)	(1993)	(2002)	(2001)

04282525 NEW HAVEN RIVER AT BROOKSVILLE NEAR MIDDLEBURY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	56,830		62,575			
ANNUAL MEAN	156		171		191	
HIGHEST ANNUAL MEAN					292	1998
LOWEST ANNUAL MEAN					128	1995
HIGHEST DAILY MEAN	2,730	Apr 14	1,340	Mar 30	6,880	Jun 27, 1998
LOWEST DAILY MEAN	12	Sep 10	29	Sep 19	12	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	14	Sep 4	32	Sep 16	14	Sep 1, 1999
MAXIMUM PEAK FLOW			3,030	Mar 29	a 21,700	Jun 27, 1998
MAXIMUM PEAK STAGE			7.72	Mar 29	b 14.18	Jun 27, 1998
INSTANTANEOUS LOW FLOW			27	Sep 19	c 11	Sep 10, 2002
ANNUAL RUNOFF (CFSM)	1.35		1.49		1.66	
ANNUAL RUNOFF (INCHES)	18.38		20.24		22.61	
10 PERCENT EXCEEDS	317		390		388	
50 PERCENT EXCEEDS	108		93		119	
90 PERCENT EXCEEDS	26		44		44	

a From rating curve extended above 5,300 ft^3/s
b From floodmarks
c Also occurred on September 11, 2002
e Estimated



04282650 LITTLE OTTER CREEK AT FERRISBURG, VT

LOCATION.--Lat 44° 11'53", long 73° 14'58", Addison County, Hydrologic Unit 02010002, on left bank, downstream side of US 7 Highway bridge, 0.5 mi south of Middle Brook Road and US 7 intersection in Ferrisburg, 2.2 mi north of Town Hall in Vergennes, 2.4 mi downstream of Mud Creek.

DRAINAGE AREA.-- 57.1 mi^2.

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 National Geodetic Vertical Datum of 1929, 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	1830	*670	*3.76	No other peak greater than base discharge.			

Minimum discharge, 2.9 ft^3/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	e43	e25	e9.4	e11	151	75	104	6.3	10	7.5
2	11	11	e46	e23	e9.4	e12	133	118	112	5.7	9.6	6.5
3	8.5	10	e40	e22	e9.5	e12	137	182	88	5.2	9.1	5.7
4	7.1	9.3	e35	e20	e13	e11	121	152	63	e5.1	8.4	6.4
5	6.0	9.3	e29	e19	e19	e9.7	105	104	48	e4.8	8.4	7.2
6	5.2	11	e21	e18	e17	e9.5	99	78	52	e4.6	11	7.3
7	4.8	17	e17	e18	e16	e9.0	99	67	48	e4.7	11	7.0
8	4.5	15	e15	e17	e15	e9.2	93	58	41	e4.6	8.5	6.7
9	3.8	14	e13	e16	e14	e9.4	91	51	34	e4.4	7.5	5.3
10	3.5	14	e12	e15	e14	e9.0	110	45	30	e4.2	32	4.7
11	3.6	14	e12	e14	e13	e8.6	151	42	24	e5.3	17	4.5
12	3.9	14	e12	e14	e11	e8.6	150	141	25	e6.0	14	4.5
13	4.0	23	e13	e13	e10	e8.8	134	177	25	e5.1	12	4.3
14	4.2	25	e17	e14	e9.7	e8.2	111	230	91	e4.7	13	3.9
15	4.2	20	e33	e13	e8.4	e10	91	236	73	4.3	12	3.9
16	5.1	17	e30	e12	e7.8	e20	82	184	50	4.7	10	4.9
17	60	17	e27	e11	e7.3	e60	69	114	40	6.4	10	4.5
18	45	34	e24	e11	e9.0	e40	61	81	32	5.9	10	4.3
19	30	39	e23	e12	e10	e80	55	64	27	4.7	10	3.7
20	25	69	e28	e11	e12	e210	37	50	25	4.0	9.8	3.9
21	22	122	e60	e12	e13	544	49	48	22	3.9	9.1	3.7
22	18	126	e50	e11	e14	614	52	44	19	23	8.8	3.4
23	16	342	e46	e12	e15	450	111	36	18	27	8.0	6.0
24	13	313	e45	e11	e16	286	135	33	15	61	7.5	10
25	14	261	e38	e11	e18	238	132	37	12	59	6.9	7.5
26	14	213	e31	e10	e16	261	133	34	11	42	6.7	5.9
27	22	164	e28	e10	e14	259	245	35	9.4	27	6.9	4.9
28	18	119	e22	e10	e13	206	222	33	8.0	22	6.7	23
29	15	91	e20	e9.8	---	167	155	102	7.2	20	6.4	73
30	13	63	e17	e9.7	---	186	99	122	7.1	16	6.7	89
31	12	---	e16	e9.6	---	176	---	107	---	12	7.6	---
TOTAL	431.4	2,208.6	863	434.1	353.5	3,943.0	3,413	2,880	1,160.7	413.6	314.6	333.1
MEAN	13.9	73.6	27.8	14.0	12.6	127	114	92.9	38.7	13.3	10.1	11.1
MAX	60	342	60	25	19	614	245	236	112	61	32	89
MIN	3.5	9.3	12	9.6	7.3	8.2	37	33	7.1	3.9	6.4	3.4
CFSM	0.24	1.29	0.49	0.25	0.22	2.23	1.99	1.63	0.68	0.23	0.18	0.19
IN.	0.28	1.44	0.56	0.28	0.23	2.57	2.22	1.88	0.76	0.27	0.20	0.22

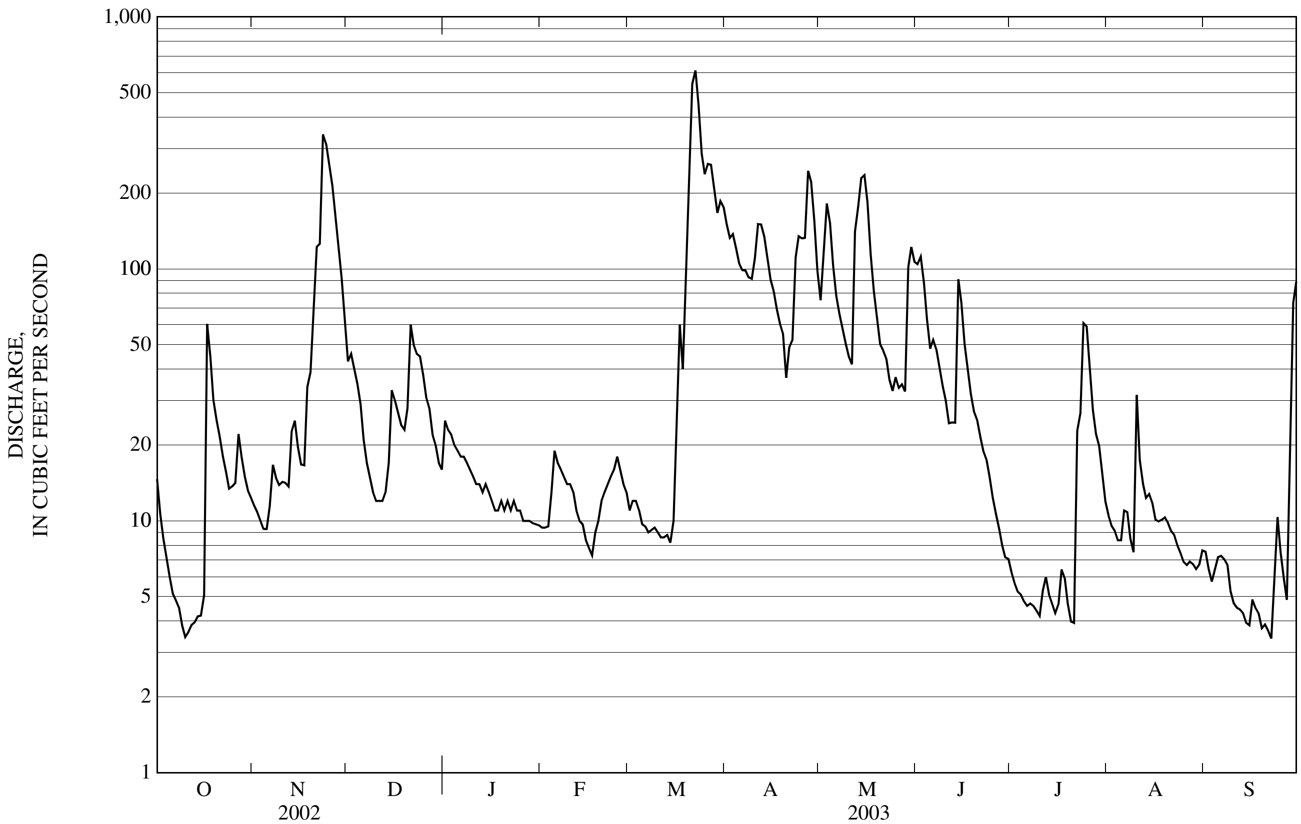
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	43.8	65.5	63.0	70.6	44.3	105	160	64.6	32.0	20.7	21.9	16.9
MAX	178	174	226	259	153	193	377	203	127	123	107	58.7
(WY)	(1991)	(1991)	(1997)	(1996)	(2000)	(1990)	(2001)	(1996)	(1998)	(1998)	(1990)	(1998)
MIN	2.36	4.96	9.39	10.3	12.6	26.7	34.8	15.2	4.16	2.83	1.61	3.02
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2001)	(1995)	(2001)	(1995)	(1999)	(1999)	(2001)

04282650 LITTLE OTTER CREEK AT FERRISBURG, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	12,786.51		16,748.6			
ANNUAL MEAN	35.0		45.9		57.8	
HIGHEST ANNUAL MEAN					103	1996
LOWEST ANNUAL MEAN					26.8	2002
HIGHEST DAILY MEAN	342	Nov 23	614	Mar 22	1,620	Jan 9, 1998
LOWEST DAILY MEAN	0.64	Sep 10	3.4	Sep 22	0.64	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	0.77	Sep 5	3.9	Oct 9	0.77	Sep 5, 2002
MAXIMUM PEAK FLOW			670	Mar 21	a 2,210	Jan 20, 1996
MAXIMUM PEAK STAGE			3.76	Mar 21	b 5.77	Feb 27, 2000
INSTANTANEOUS LOW FLOW			2.9	Sep 19	c 0.56	Sep 9, 2002
ANNUAL RUNOFF (CFSM)	0.61		0.80		1.01	
ANNUAL RUNOFF (INCHES)	8.33		10.91		13.76	
10 PERCENT EXCEEDS	78		128		137	
50 PERCENT EXCEEDS	19		15		22	
90 PERCENT EXCEEDS	2.0		5.1		4.3	

a From rating curve extended above 920 ft^3/s
b Ice Jam
c Also occurred on September 10, 2002
e Estimated



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 upstream of US 7 Highway bridge, 1.1 mi southwest of Four Winds Road and Hollow Road intersection in North Ferrisburg, 1.2 mi south of Mount Philo Peak, and 5.7 mi north of Town Hall in Vergennes.

DRAINAGE AREA.--77.2 mi^2.

PERIOD OF RECORD.--Discharge records: March 1990 to current year. Published as "at North Ferrisburg" prior to October 1996.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, 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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	0945	Ice Jam	*5.88	No peak greater than base discharge.			
Mar 26	1345	700	3.85				

Minimum discharge, 8.4 ft^3/s, Sept. 22.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	28	e74	e60	e31	e29	232	136	141	23	28	15
2	33	27	e70	e52	e32	e30	211	263	170	22	28	13
3	31	29	e60	e54	e33	e29	198	302	125	20	31	13
4	28	25	e57	e55	e34	e30	166	198	100	19	26	14
5	24	25	e56	e54	e33	e29	149	164	89	19	40	18
6	21	29	e59	e53	e31	e30	141	146	116	18	40	16
7	19	33	e54	e52	e30	e31	128	136	92	18	36	14
8	18	31	e49	e54	e29	e30	125	120	82	18	31	13
9	16	29	e45	e51	e29	e30	119	112	75	16	39	12
10	15	31	e45	e49	e30	e31	138	103	67	16	93	11
11	15	32	e46	e50	e29	e29	169	97	59	19	75	11
12	15	32	e47	e51	e29	e28	168	334	62	23	62	11
13	14	46	e49	e50	e30	e27	190	515	63	20	118	10
14	16	50	e66	e45	e30	e26	143	525	282	18	63	10
15	16	42	e96	e42	e31	e27	133	308	160	17	45	11
16	18	37	e71	e43	e29	e30	125	224	104	18	37	11
17	121	37	e58	e44	e26	e43	107	176	80	22	33	13
18	106	63	e49	e45	e27	e190	96	147	67	19	30	11
19	76	58	e53	e47	e28	e210	90	128	59	16	27	9.4
20	68	87	e77	e44	e28	e160	85	110	58	15	25	9.6
21	54	111	e190	e43	e29	e440	80	115	50	15	22	9.2
22	45	121	e115	e41	e30	e560	84	109	45	51	20	9.0
23	38	356	e94	e39	e31	e520	170	93	42	42	19	20
24	34	203	e82	e37	e32	362	171	87	38	63	17	33
25	31	160	e70	e36	e31	403	144	105	34	92	17	21
26	35	140	e62	e35	e32	628	212	99	31	50	17	16
27	48	121	e61	e34	e30	393	472	99	29	40	16	14
28	42	e100	e59	e33	e29	270	254	89	26	67	14	43
29	37	e88	e57	e31	---	357	189	137	25	45	14	93
30	33	e80	e54	e30	---	525	152	149	24	36	16	75
31	30	---	e58	e31	---	274	---	129	---	31	16	---
TOTAL	1,134	2,251	2,083	1,385	843	5,801	4,841	5,455	2,395	908	1,095	579.2
MEAN	36.6	75.0	67.2	44.7	30.1	187	161	176	79.8	29.3	35.3	19.3
MAX	121	356	190	60	34	628	472	525	282	92	118	93
MIN	14	25	45	30	26	26	80	87	24	15	14	9.0
CFSM	0.47	0.97	0.87	0.58	0.39	2.42	2.09	2.28	1.03	0.38	0.46	0.25
IN.	0.55	1.08	1.00	0.67	0.41	2.80	2.33	2.63	1.15	0.44	0.53	0.28

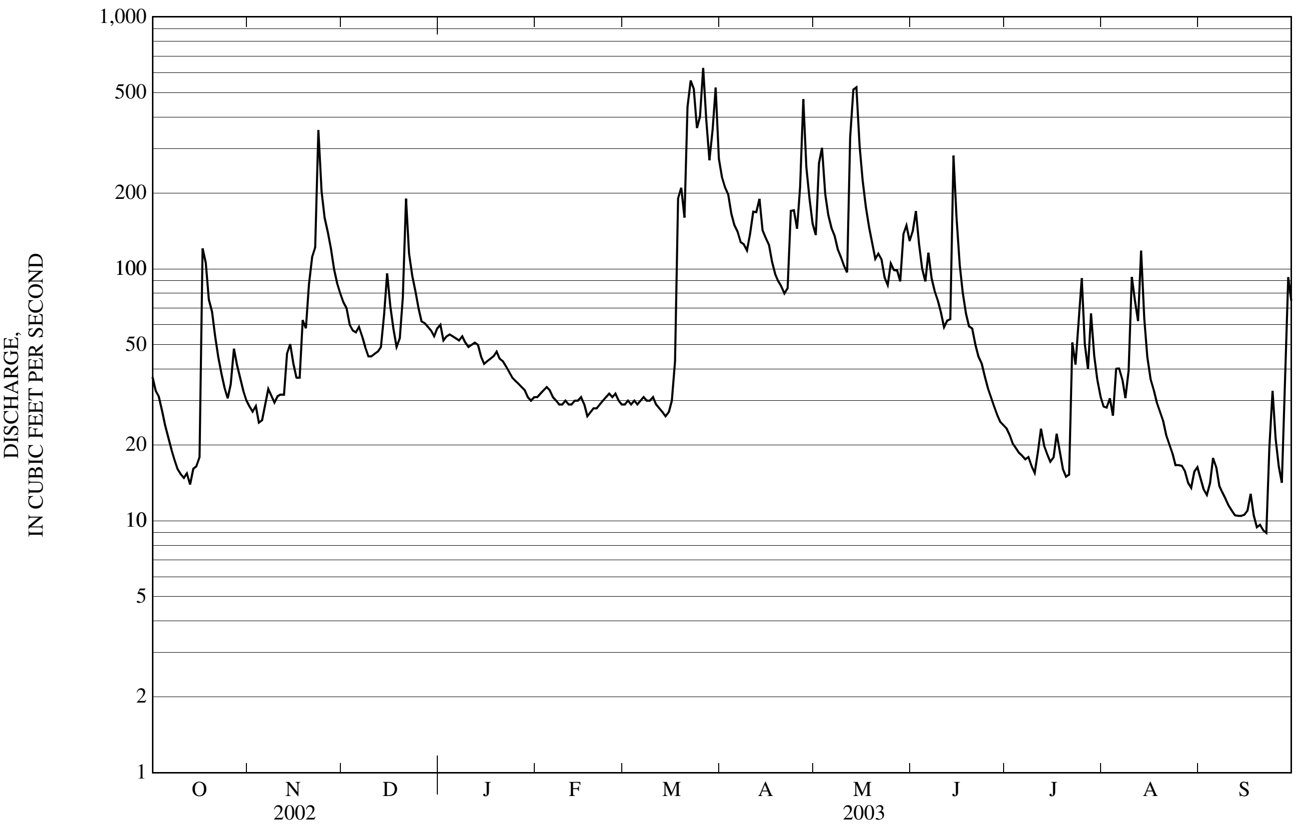
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	74.2	97.3	104	101	88.3	171	249	125	62.5	43.5	37.7	35.0
MAX	247	238	300	259	251	299	485	349	151	182	139	92.0
(WY)	(1991)	(1991)	(1997)	(1996)	(2000)	(1999)	(2001)	(1996)	(1996)	(1998)	(1990)	(1998)
MIN	9.18	16.1	22.1	22.6	30.1	47.3	77.1	40.4	15.7	9.98	7.44	10.5
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2001)	(1995)	(2001)	(1995)	(1999)	(1999)	(2001)

04282780 LEWIS CREEK NEAR NORTH FERRISBURG, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	24,936.6		28,770.2			
ANNUAL MEAN	68.3		78.8		97.7	
HIGHEST ANNUAL MEAN					152	1996
LOWEST ANNUAL MEAN					54.2	1995
HIGHEST DAILY MEAN	472	Apr 14	628	Mar 26	e 2,500	Feb 28, 2000
LOWEST DAILY MEAN	5.0	Sep 10	9.0	Sep 22	4.2	Sep 4, 1999
ANNUAL SEVEN-DAY MINIMUM	5.6	Sep 4	10	Sep 16	4.5	Aug 31, 1999
MAXIMUM PEAK FLOW			700	Mar 26	a 3,380	Feb 28, 2000
MAXIMUM PEAK STAGE			b 5.88	Mar 21	b 6.20	Feb 22, 1997
INSTANTANEOUS LOW FLOW			8.4	Sep 22	c 4.0	Sep 3, 1999
ANNUAL RUNOFF (CFSM)	0.88		1.02		1.27	
ANNUAL RUNOFF (INCHES)	12.02		13.86		17.19	
10 PERCENT EXCEEDS	149		170		208	
50 PERCENT EXCEEDS	49		43		54	
90 PERCENT EXCEEDS	13		16		16	

a From rating curve extended above 550 ft^3/s
b Ice Jam
c Also occurred on September 4, 5, 1999
e Estimated



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 Falls Road bridge, 500 ft southwest of Falls Road and Thomas Road intersection in Shelburne Falls, 0.8 mi southeast of Town Hall in Shelburne, 3.4 mi above mouth.

DRAINAGE AREA.--44.6 mi^2.

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

GAGE.--Water-stage recorder. Elevation of gage is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to October 23, 1990, nonrecording gage at site 100 ft downstream.

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

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 17	1645	Ice jam	*5.64	Mar 21	1500	*994	4.91

Minimum discharge, 0.98 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	15	e52	127	e13	e12	127	58	54	11	5.5	3.1
2	19	15	e44	e39	e12	e13	108	180	76	9.2	5.5	2.7
3	18	13	e37	e24	e11	e14	119	246	43	7.7	6.3	2.4
4	16	12	e28	e21	e11	e11	90	107	28	6.6	6.9	2.6
5	14	13	e24	e22	e14	e10	75	77	24	5.8	9.5	2.5
6	12	16	e22	e21	e28	e10	71	63	34	5.0	15	2.7
7	10	27	e21	e20	e24	e9.8	67	58	25	5.0	13	2.4
8	9.1	20	e20	e19	e20	e9.7	64	49	21	5.7	9.8	2.1
9	7.7	17	e21	e19	e17	e9.6	64	42	18	e4.0	14	1.8
10	7.0	16	e20	e18	e15	e9.8	98	38	17	2.9	28	1.9
11	6.6	15	e21	e18	e13	e9.4	153	35	15	4.5	21	1.9
12	6.1	15	e23	e18	e11	e9.2	111	306	18	5.9	14	1.7
13	6.1	35	e26	e17	e10	e8.7	89	407	20	5.4	68	1.5
14	6.9	34	47	e17	e9.2	e8.6	63	362	237	4.8	23	1.1
15	7.7	25	146	e17	e8.4	e8.8	51	219	132	4.3	14	1.3
16	9.7	21	81	e16	e8.0	e12	46	121	57	4.2	10	1.7
17	176	20	e42	e16	e7.7	e68	38	82	34	5.3	8.6	1.9
18	210	61	e33	e15	e7.0	e150	32	63	24	4.5	7.6	1.7
19	97	56	e28	e15	e6.8	e112	29	50	21	3.7	6.7	1.9
20	63	100	62	e15	e9.6	e96	28	40	22	2.9	5.7	1.9
21	41	167	202	e14	e12	723	26	48	18	3.0	4.7	1.5
22	29	138	98	e14	e13	531	31	45	15	6.9	4.3	1.5
23	23	404	72	e13	e14	307	114	34	14	8.8	3.8	3.7
24	19	257	e47	e13	e16	231	124	30	13	13	3.2	15
25	16	158	e38	e13	e18	232	85	37	11	21	3.0	7.1
26	20	119	e32	e13	e16	298	124	32	9.9	12	3.1	4.5
27	36	90	e28	e12	e14	257	369	32	9.2	8.0	3.3	3.6
28	28	73	e26	e12	e12	156	156	27	8.4	11	2.8	16
29	22	52	e24	e12	---	148	88	46	8.2	8.9	2.7	62
30	19	49	e23	e12	---	236	65	51	12	7.7	3.3	23
31	16	---	e27	e12	---	172	---	41	---	7.0	3.4	---
TOTAL	997.9	2,053	1,415	634	370.7	3,882.6	2,705	3,026	1,038.7	215.7	329.7	178.7
MEAN	32.2	68.4	45.6	20.5	13.2	125	90.2	97.6	34.6	6.96	10.6	5.96
MAX	210	404	202	127	28	723	369	407	237	21	68	62
MIN	6.1	12	20	12	6.8	8.6	26	27	8.2	2.9	2.7	1.1
CFSM	0.72	1.53	1.02	0.46	0.30	2.81	2.02	2.19	0.78	0.16	0.24	0.13
IN.	0.83	1.71	1.18	0.53	0.31	3.24	2.26	2.52	0.87	0.18	0.27	0.15

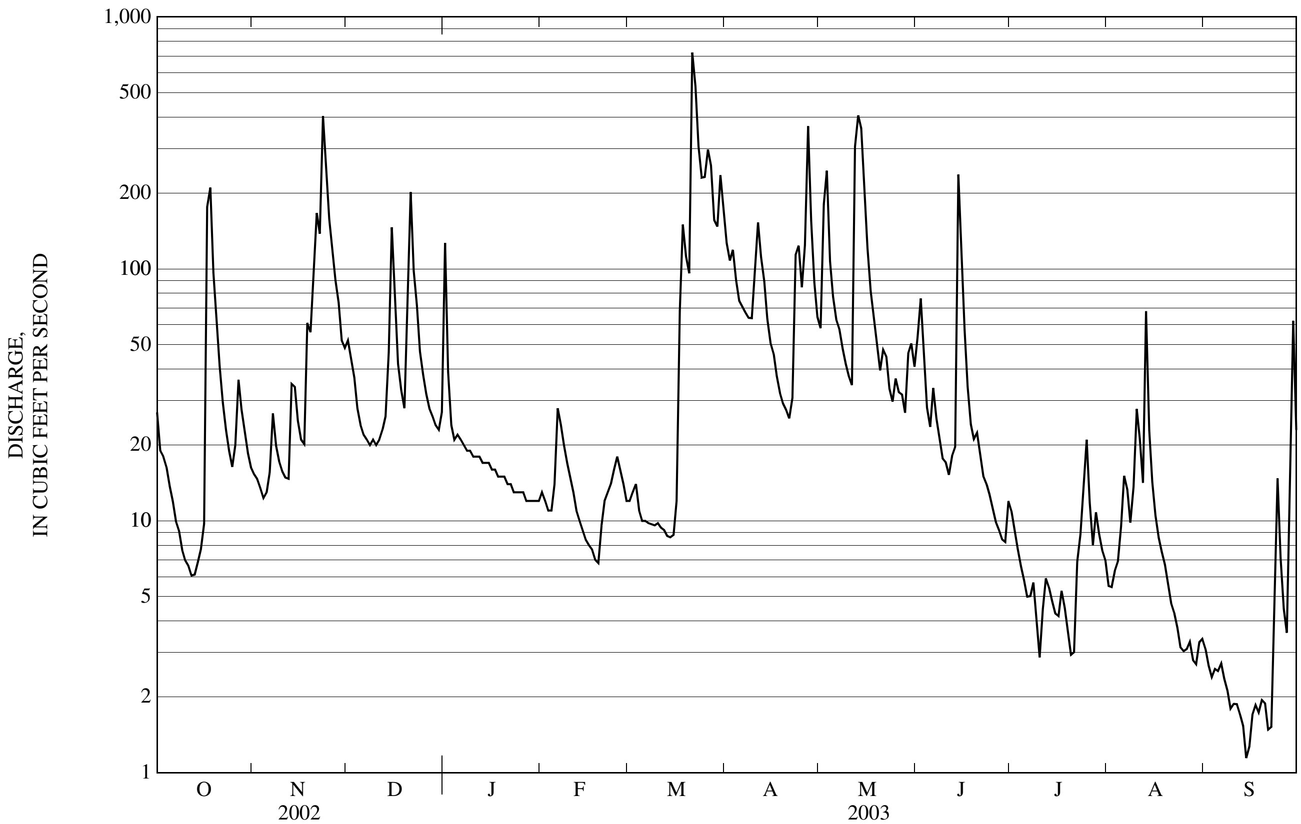
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	32.0	50.7	44.9	44.9	32.5	74.9	127	58.2	26.2	21.6	18.5	13.2
MAX	113	135	150	159	106	125	295	181	79.4	146	99.7	60.4
(WY)	(1991)	(1991)	(1997)	(1996)	(2000)	(2003)	(2001)	(1996)	(1996)	(1998)	(1990)	(1998)
MIN	2.69	4.03	5.05	6.17	8.61	26.7	28.8	15.0	4.86	1.69	1.58	2.62
(WY)	(2002)	(2002)	(2002)	(2002)	(1993)	(2001)	(1995)	(1998)	(1999)	(1995)	(2001)	(1995)

04282795 LAPLATTE RIVER AT SHELBURNE FALLS, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	13,556.19		16,847.0			
ANNUAL MEAN	37.1		46.2		44.7	
HIGHEST ANNUAL MEAN					70.7	1996
LOWEST ANNUAL MEAN					21.8	1995
HIGHEST DAILY MEAN	404	Nov 23	723	Mar 21	1,410	Dec 2, 1996
LOWEST DAILY MEAN	0.89	Sep 8	1.1	Sep 14	0.23	Sep 4, 1995
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 4	1.6	Sep 12	0.33	Aug 31, 1995
MAXIMUM PEAK FLOW			994	Mar 21	a 2,640	Jan 19, 1996
MAXIMUM PEAK STAGE			b 5.64	Mar 17	b 9.50	Feb 20, 1994
INSTANTANEOUS LOW FLOW			0.98	Sep 14	c 0.18	Sep 3, 1995
ANNUAL RUNOFF (CFSM)	0.83		1.03		1.00	
ANNUAL RUNOFF (INCHES)	11.31		14.05		13.63	
10 PERCENT EXCEEDS	95		122		105	
50 PERCENT EXCEEDS	20		18		18	
90 PERCENT EXCEEDS	3.6		3.8		3.3	

a From rating curve extended above 750 ft^3/s
b Ice Jam
c Also occurred September 4, 1995
e Estimated



04282815 ENGLESBY BROOK AT BURLINGTON, VT

LOCATION.--Lat 44° 27'28", long 73° 13'11", Chittenden County, Hydrologic Unit 02010003, on right bank, 125 ft downstream from Vermont Railroad culvert, 0.25 mi upstream from mouth, 0.35 mi downstream from Pine Street culvert, 0.8 mi northwest from junction of US 7 and Interstate 189, 1.3 mi south of City Hall in Burlington.

DRAINAGE AREA.-- About 0.9 mi^2. Drainage area affected by stormwater diversions.

PERIOD OF RECORD.--Discharge records: October 1999 to current year. Water-quality records: October 1999 to September 2001.

GAGE.--Concrete control with v-notch weir, water-stage recorder, and crest-stage gage. Elevation of gage is 105 ft above National Geodetic Vertical Datum of 1929, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 158 ft^3/s, July 18, 2000, gage-height 4.84 ft; no flow for many days in water years 2000-2002.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 46 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Sept 28	1100	*27	*3.17	No peak greater than base discharge.			

Minimum discharge, no flow for many days in July, August, and September.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.16	0.03	0.52	0.66	0.05	e0.01	0.87	0.78	1.5	0.01	0.02	0.00
2	0.13	0.03	0.42	e0.25	0.08	e0.02	0.90	2.2	0.50	0.01	0.01	0.00
3	0.25	0.02	0.30	0.18	e0.10	e0.02	0.90	0.98	0.21	0.01	0.01	0.00
4	0.13	0.03	0.24	0.18	e0.12	e0.02	0.77	0.50	0.13	0.01	0.02	0.00
5	0.10	0.02	0.24	0.21	e0.08	e0.03	0.74	0.39	0.45	0.00	0.63	0.00
6	0.02	0.21	0.43	0.18	e0.04	e0.01	0.90	0.32	0.33	0.00	0.52	0.00
7	0.02	0.24	0.29	0.17	e0.04	e0.01	0.77	0.31	0.15	0.00	0.03	0.00
8	0.01	0.98	0.25	0.17	e0.04	e0.01	0.76	0.27	0.13	0.00	0.01	0.00
9	0.01	0.82	0.17	e0.14	e0.04	e0.01	0.70	0.24	0.12	0.00	0.03	0.00
10	0.01	0.10	0.15	e0.11	e0.04	e0.01	0.62	0.19	0.08	0.00	0.57	0.00
11	0.01	0.12	0.15	e0.10	e0.05	e0.01	0.59	1.9	0.08	0.48	0.02	0.00
12	0.01	0.23	1.0	e0.10	e0.03	e0.01	0.50	3.5	0.07	0.03	0.01	0.00
13	0.23	0.50	0.42	e0.10	e0.04	e0.01	0.41	2.2	2.1	0.01	0.01	0.00
14	0.06	0.15	0.97	e0.11	e0.03	e0.02	0.37	2.2	1.5	0.01	0.00	0.00
15	0.01	0.11	0.89	e0.09	e0.01	e0.02	0.35	0.80	0.41	0.00	0.00	0.00
16	2.6	0.08	0.50	e0.10	e0.01	e0.21	0.37	0.56	0.17	0.01	0.00	0.00
17	1.8	0.55	0.33	e0.09	e0.01	e2.5	0.25	0.44	0.09	0.00	0.00	0.00
18	1.7	0.70	0.26	e0.09	e0.01	e1.4	0.24	0.33	0.07	0.00	0.00	0.00
19	0.87	0.41	0.23	e0.08	e0.01	e0.81	0.23	0.24	0.39	0.00	0.00	0.00
20	0.11	1.4	0.82	e0.08	e0.03	e1.8	0.20	0.17	0.31	0.00	0.00	0.13
21	0.04	3.0	0.64	e0.04	e0.02	9.2	0.26	0.45	0.09	0.03	0.00	0.00
22	0.03	2.2	0.43	e0.04	e0.02	2.7	0.73	0.18	0.06	0.20	0.00	0.00
23	0.02	6.5	0.36	e0.04	e0.31	1.9	1.4	0.13	0.05	0.30	0.00	0.45
24	0.01	2.8	0.30	e0.04	e0.08	1.5	0.87	0.40	0.04	0.30	0.00	0.02
25	0.02	1.8	0.21	e0.02	e0.02	1.4	0.88	0.45	0.03	0.06	0.00	0.00
26	0.76	1.3	0.19	e0.04	e0.01	1.8	2.8	0.44	0.02	0.01	0.00	0.00
27	0.11	1.0	0.17	e0.04	e0.01	1.3	1.9	0.20	0.02	0.37	0.00	0.00
28	0.03	0.75	0.16	e0.03	e0.01	0.94	0.71	0.21	0.01	0.18	0.00	3.5
29	0.03	0.61	0.15	e0.02	---	1.3	0.49	0.34	0.01	0.06	0.03	0.50
30	0.02	0.58	0.14	e0.02	---	1.2	0.37	0.22	0.13	0.12	0.01	0.09
31	0.02	---	0.65	0.03	---	1.1	---	0.29	---	0.01	0.00	---
TOTAL	9.33	27.27	11.98	3.55	1.34	31.28	21.85	21.83	9.25	2.22	1.93	4.69
MEAN	0.30	0.91	0.39	0.11	0.048	1.01	0.73	0.70	0.31	0.072	0.062	0.16
MAX	2.6	6.5	1.0	0.66	0.31	9.2	2.8	3.5	2.1	0.48	0.63	3.5
MIN	0.01	0.02	0.14	0.02	0.01	0.01	0.20	0.13	0.01	0.00	0.00	0.00

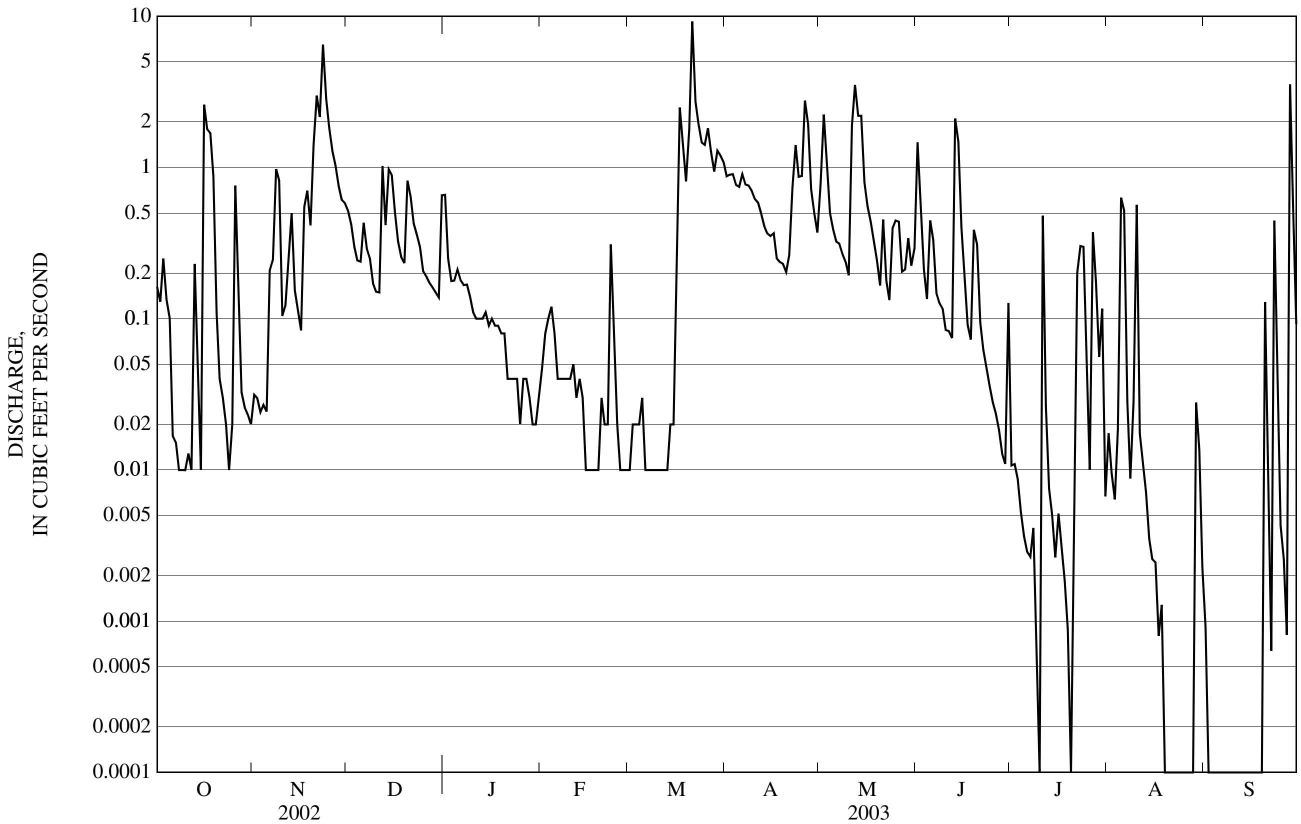
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	0.25	0.45	0.38	0.17	0.68	0.72	1.61	0.98	0.61	0.22	0.17	0.28
MAX	0.60	0.91	0.70	0.31	1.59	1.01	2.99	2.13	1.49	0.48	0.36	0.63
(WY)	(2000)	(2003)	(2001)	(2000)	(2000)	(2003)	(2001)	(2000)	(2002)	(2000)	(2000)	(2002)
MIN	0.017	0.17	0.12	0.095	0.048	0.54	0.59	0.21	0.22	0.018	0.026	0.13
(WY)	(2002)	(2002)	(2002)	(2001)	(2003)	(2002)	(2002)	(2001)	(2001)	(2001)	(2002)	(2001)

04282815 ENGLESBY BROOK AT BURLINGTON, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2000 - 2003	
ANNUAL TOTAL	208.89		146.52			
ANNUAL MEAN	0.57		0.40		0.54	
HIGHEST ANNUAL MEAN					0.80	2000
LOWEST ANNUAL MEAN					0.40	2003
HIGHEST DAILY MEAN	8.9	Jun 12	9.2	Mar 21	16	May 9, 2000
LOWEST DAILY MEAN	a 0.00	Aug 3	a 0.00	Jul 5	a 0.00	Oct 2, 1999
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 15	0.00	Aug 14	0.00	Jan 17, 2000
MAXIMUM PEAK FLOW			b 27	Sep 28	b 158	Jul 18, 2000
MAXIMUM PEAK STAGE			3.17	Sep 28	4.84	Jul 18, 2000
10 PERCENT EXCEEDS	1.4		1.0		1.3	
50 PERCENT EXCEEDS	0.25		0.11		0.14	
90 PERCENT EXCEEDS	0.01		0.00		0.00	

a Also occurred on many days as noted in the Extremes paragraphs above
b From rating curve extended above 10 ft^3/s on basis of culvert computation at gage-height 4.84 ft.
e Estimated



04283500 EAST BARRE DETENTION RESERVOIR AT EAST BARRE, VT

LOCATION.--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^2.

PERIOD OF RECORD.--Gage heights and contents: Monthend readings only, 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 at National Geodetic Vertical Datum of 1929 (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 National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earthfill dam completed by U.S. Army Corps of Engineers in 1935 for flood control. Usable capacity, 525 million ft^3 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 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, 1,147.48 ft, March 30; minimum, not determined.

MONTHEND ELEVATION AND CONTENTS AT 2400
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (millions of cubic feet)	Change in Contents (millions of cubic feet)	Change in Contents (Equivalent cubic feet per second)
Sep. 30	1,130.29	5.9	--	--
Oct. 31	1,130.29	5.9	0.0	0.00
Nov. 30	1,130.27	5.9	0.0	0.00
Dec. 31	1,130.23	5.8	-0.1	-0.04
CAL YR 2002	--	--	-0.3	-0.01
Jan. 31	1,130.15	5.7	-0.1	-0.04
Feb. 28	1,133.54	10.6	+4.9	+2.02
Mar. 31	1,132.66	9.2	-1.4	-0.52
Apr. 30	1,130.46	6.1	-3.1	-1.20
May 31	1,130.11	5.7	-0.4	-0.15
Jun. 30	1,129.96	5.5	-0.2	-0.08
Jul. 31	1,130.03	5.6	+0.1	+0.04
Aug. 31	1,130.01	5.6	0.0	0.00
Sep. 30	1,131.19	7.1	+1.5	+0.58
WTR YR 2003	--	--	+1.2	+0.04

04285000 WRIGHTSVILLE DETENTION RESERVOIR AT WRIGHTSVILLE, VT

LOCATION.--Lat 44° 18'38", long 72° 34'31", Washington County, Hydrologic Unit 02010003, at Wrightsville Detention Reservoir Dam on North Branch Winooski River, 0.2 mi east of Wrightsville Dam Road and State Highway 12 intersection in Wrightsville, 0.3 mi downstream from Long Meadow Brook, 2.4 mi north of the State Capital Building in Montpelier, and 4.4 mi upstream from mouth.

DRAINAGE AREA.--66.5 mi^2.

PERIOD OF RECORD.--Gage heights and contents: Monthend reading only, November 1935 to February 1936 (in WSP 1307), March to May 1936 in WSP 798), June 1936 to August 1938 (in WSP 1307), September 1938 (in WSP 867), October 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 28, 1960, nonrecording gage at present site at datum 612.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--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^3 between elevations 612.75 ft (bottom of outlet opening) and 620.00 ft; for flood control, 851.5 million ft^3 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^3 between elevation 631.00 ft (sill of gate) and 685.00 ft (crest of spillway). Total usable capacity 873.5 million ft^3. 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, 647.47 ft, March 30; minimum, 632.16 ft, from indicator clip, occurred between January 21-30.

MONTHEND ELEVATION AND CONTENTS AT 2400
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (millions of cubic feet)	Change in Contents (millions of cubic feet)	Change in Contents (Equivalent cubic feet per second)
Sep. 30	633.25	95.7	--	--
Oct. 31	633.47	97.4	+1.7	+0.63
Nov. 30	633.70	99.2	+1.8	+0.69
Dec. 31	633.41	97.0	-2.2	-0.82
CAL YR 2002	--	--	+1.3	+0.04
Jan. 31	632.97	93.6	-3.4	-1.27
Feb. 28	633.53	97.9	+4.3	+1.78
Mar. 31	*643.67	188.6	+90.7	+33.90
Apr. 30	635.15	110.8	-77.8	-30.00
May 31	634.34	104.2	-6.6	-2.46
Jun. 30	*634.47	105.3	+1.1	+0.42
Jul. 31	634.06	102.0	-3.3	-1.23
Aug. 31	*633.99	101.4	-0.6	-0.22
Sep. 30	*634.28	103.8	+2.4	+0.92
WTR YR 2003	--	--	+8.1	+0.26

* Elevations furnished by Washington Electric Coop

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, 0.8 mi south of Wrightsville Dam Road and State Highway 12 intersection in Wrightsville, 0.9 mi downstream from Wrightsville Detention Reservoir, 2.6 mi north of the Vermont State Capitol Building in Montpelier, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--69.2 mi^2.

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 549.53 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to November 21, 1934, nonrecording gage at same site, datum then in use. Prior to April 24, 2001, at datum 1.00 ft higher.

REMARKS.--Records fair. Discharge affected since 1935 by Wrightsville Detention Reservoir (Reservoirs in Winooski River Basin above Montpelier). Flow regulated by power plant 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^3/s, July 5 and October 24, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 17,200 ft^3/s, November 3, 1927, by computation of peak flow over dam 0.8 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 892 ft^3/s, Mar. 30, gage height, 4.02 ft; minimum discharge, 8.4 ft^3/s, Sept. 19.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	70	91	68	35	25	823	239	114	42	30	15
2	29	61	75	82	33	25	602	343	114	26	28	13
3	29	43	74	82	30	e25	279	537	87	26	40	34
4	29	36	69	80	27	e25	233	330	72	25	36	59
5	26	51	63	69	24	25	228	254	46	19	28	36
6	27	45	66	66	27	25	177	231	66	14	115	28
7	23	63	56	e34	26	e23	128	209	57	12	202	28
8	21	52	58	e92	26	24	126	175	50	12	121	28
9	21	53	e46	66	26	e25	87	152	30	11	73	22
10	16	112	e75	e69	25	e82	106	95	48	10	458	15
11	16	231	e44	e84	25	e24	209	85	36	12	627	12
12	16	227	53	e44	25	23	210	216	52	21	540	10
13	16	209	43	e46	24	e26	287	320	42	27	337	9.6
14	19	192	55	e53	24	e105	334	367	563	21	248	9.2
15	24	173	76	e42	23	22	424	301	476	17	167	9.5
16	27	122	77	e72	23	21	772	239	263	15	71	9.4
17	140	92	65	e80	34	24	507	206	168	16	57	9.7
18	132	147	e60	e177	32	33	285	123	84	15	57	8.9
19	89	124	e87	e66	21	e108	236	91	64	12	34	8.4
20	172	105	49	e97	20	153	230	85	59	10	28	8.7
21	135	113	134	e102	19	409	252	85	27	9.7	27	9.2
22	84	133	125	e108	19	685	285	85	29	86	27	9.6
23	69	562	117	e62	20	620	362	67	60	115	27	34
24	59	481	e63	e34	21	390	343	65	26	135	27	193
25	42	235	e67	e27	e22	503	268	82	26	248	27	37
26	54	182	77	e44	e40	677	303	85	26	119	20	30
27	105	174	e72	e35	e25	700	826	141	27	57	17	28
28	135	120	67	e29	26	683	805	114	20	63	14	76
29	104	97	67	e34	---	689	540	156	16	47	13	345
30	83	97	e82	e33	---	846	293	167	22	66	16	253
31	70	---	56	e35	---	870	---	135	---	80	17	---
TOTAL	1,843	4,402	2,209	2,012	722	7,915	10,560	5,780	2,770	1,388.7	3,529	1,388.2
MEAN	59.5	147	71.3	64.9	25.8	255	352	186	92.3	44.8	114	46.3
MAX	172	562	134	177	40	870	826	537	563	248	627	345
MIN	16	36	43	27	19	21	87	65	16	9.7	13	8.4
MEAN (†)	60.1	147	70.4	63.6	27.6	289	322	184	92.8	43.6	114	47.2
CFSM (†)	0.87	2.12	1.02	0.92	0.40	4.18	4.65	2.66	1.34	0.63	1.65	0.68
IN (†)	1.00	2.38	1.17	1.06	0.41	4.82	5.19	3.06	1.50	0.72	1.89	0.76

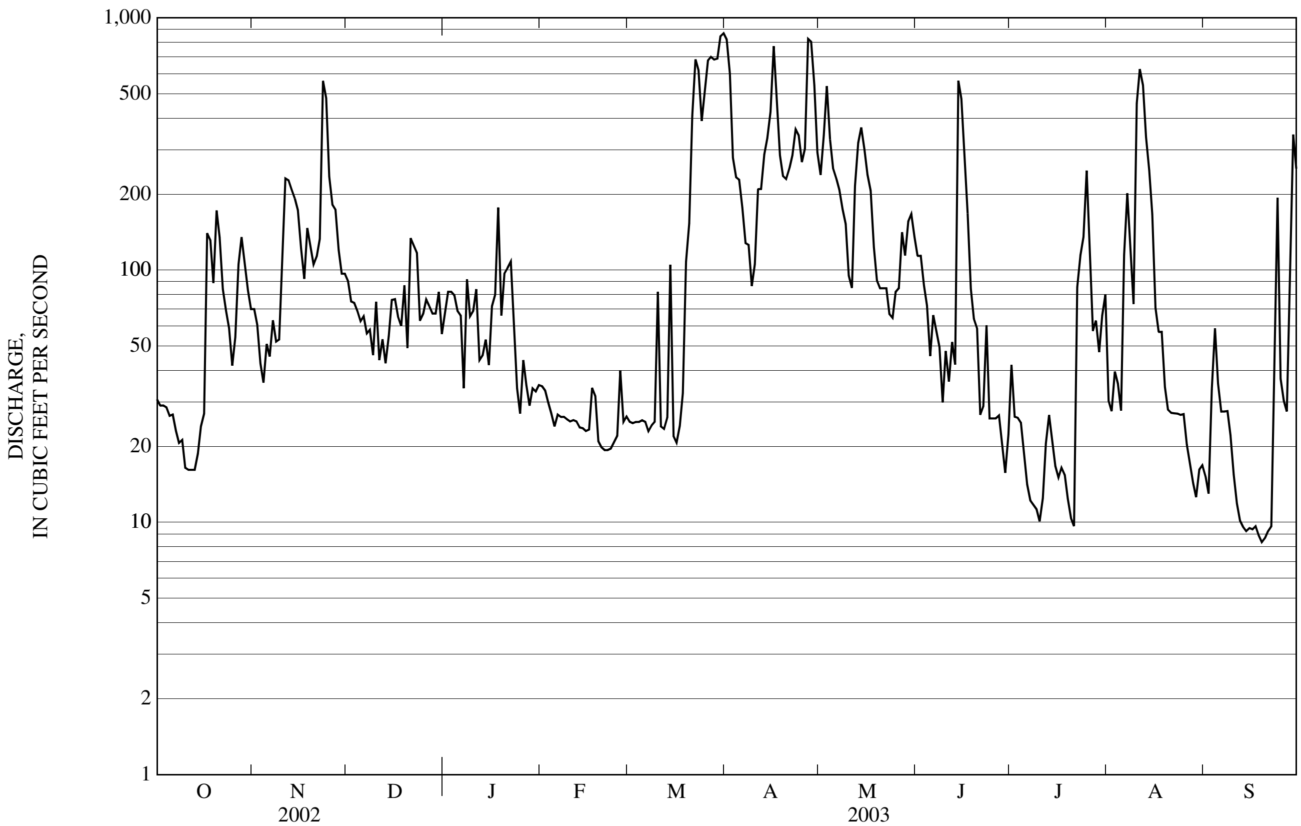
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 2003, BY WATER YEAR (WY)

MEAN	105	137	112	84.1	70.1	175	454	243	91.1	49.9	49.0	52.4
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	7.95	5.10
(WY)	(1964)	(1954)	(1948)	(1940)	(1980)	(1940)	(1995)	(1941)	(1949)	(1953)	(2001)	(1963)

04285500 NORTH BRANCH WINOOSKI RIVER AT WRIGHTSVILLE, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1934 - 2003	
ANNUAL TOTAL	48,471.5		44,518.9			
ANNUAL MEAN	133		122		135	
HIGHEST ANNUAL MEAN					226	1973
LOWEST ANNUAL MEAN					71.4	1965
HIGHEST DAILY MEAN	954	Apr 15	870	Mar 31	1,620	Apr 17, 1934
LOWEST DAILY MEAN	8.4	Aug 13	8.4	Sep 19	0.20	Aug 13, 1941
ANNUAL SEVEN-DAY MINIMUM	9.0	Aug 12	9.1	Sep 14	2.8	Aug 14, 1970
MAXIMUM PEAK FLOW			892	Mar 30	a 2,170	Apr 12, 1934
MAXIMUM PEAK STAGE			4.02	Mar 30	b 6.53	Apr 12, 1934
10 PERCENT EXCEEDS	275		310		395	
50 PERCENT EXCEEDS	74		63		61	
90 PERCENT EXCEEDS	11		17		13	

a From rating curve extended above 1,030 ft^3/s
b Datum then in use
e Estimated
(†) Adjusted for change in contents in Wrightsville Detention Reservoir.
NOTE: All statistics are based on unadjusted daily and monthly mean data.



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, 0.6 mi downstream of Bailey Road bridge, 0.8 mi southwest of the Vermont State Capitol Building in Montpelier, and 1.0 mi downstream of the North Branch Winooski River.

DRAINAGE AREA.--397 mi^2.

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 National Geodetic Vertical Datum of 1929. Prior to June 16, 1914, nonrecording gage at site 0.9 mi upstream at different datum. June 16 to July 3, 1914, nonrecording gage at present site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by several small power plants upstream, by Peacham Pond and, since 1926, by Mollys Falls Reservoir, combined usable capacity, 492 million ft^3, which regulated runoff from 24 mi^2, and by East Barre and Wrightsville Detention Reservoirs since 1935 (Reservoirs in Winooski River Basin above Montpelier, VT).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 57,000 ft^3/s, November 3, 1927, gage height, 27.1 ft, from rating curve extended above 9,090 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,430 ft^3/s, March 30, gage height 8.66 ft; maximum gage height 10.02 ft, March 21, (ice jam); minimum daily discharge, 79 ft^3/s, September 14,22.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	217	422	e335	e195	e185	2,180	986	583	185	164	111
2	140	209	e330	e305	e200	e190	1,840	1,990	615	146	179	106
3	144	164	e325	e305	e205	e200	1,360	2,580	480	133	239	116
4	137	160	e310	e325	e202	e200	1,150	1,480	397	123	368	234
5	183	189	e300	e330	e200	e180	1,040	1,170	347	111	212	235
6	167	191	e285	e315	e195	e185	947	1,080	425	100	670	170
7	116	251	e275	e320	e185	e180	799	967	377	94	546	146
8	108	243	e265	e310	e180	e175	812	833	341	107	355	131
9	109	299	e250	e295	e182	e180	719	744	305	100	303	123
10	95	346	e265	e295	e185	e180	728	745	327	92	1,590	106
11	97	572	e280	e300	e180	e175	1,010	671	277	148	1,600	97
12	107	576	e300	e310	e175	e175	1,030	1,060	291	203	1,350	88
13	102	777	e320	e325	e168	e170	1,320	1,260	279	156	1,520	83
14	107	667	e360	e315	e165	e175	1,160	1,570	1,260	128	784	79
15	123	577	e340	e300	e163	e185	1,230	1,160	1,190	118	564	85
16	115	435	e300	e305	e161	e280	1,850	881	690	122	387	91
17	e249	369	e275	e310	e160	e415	1,410	726	498	131	333	110
18	437	617	e240	e320	e166	e620	964	595	374	116	292	93
19	344	609	e310	e300	e170	e950	852	524	320	103	257	84
20	422	446	e440	e285	e175	e1,400	823	479	300	94	211	87
21	374	548	e670	e260	e185	e2,450	827	502	243	82	192	92
22	255	676	e540	e245	e200	3,160	896	518	227	246	175	79
23	212	2,300	e455	e235	e210	2,130	1,350	450	250	306	162	245
24	195	1,650	e385	e225	e220	1,800	1,430	447	197	534	141	695
25	163	929	e345	e215	e200	2,370	1,100	536	178	835	130	293
26	216	747	e365	e205	e195	3,030	1,300	540	168	417	128	231
27	418	710	e350	e195	e188	2,710	2,710	640	180	278	112	190
28	423	555	e340	e190	e183	2,420	2,010	621	154	288	107	494
29	370	407	e325	e190	---	3,060	1,510	838	133	235	101	1,740
30	307	435	e330	e190	---	3,860	1,120	878	138	205	128	883
31	257	---	e345	e193	---	2,850	---	665	---	234	130	---
TOTAL	6,662	16,871	10,642	8,548	5,193	36,240	37,477	28,136	11,544	6,170	13,430	7,317
MEAN	215	562	343	276	185	1,169	1,249	908	385	199	433	244
MAX	437	2,300	670	335	220	3,860	2,710	2,580	1,260	835	1,600	1,740
MIN	95	160	240	190	160	170	719	447	133	82	101	79

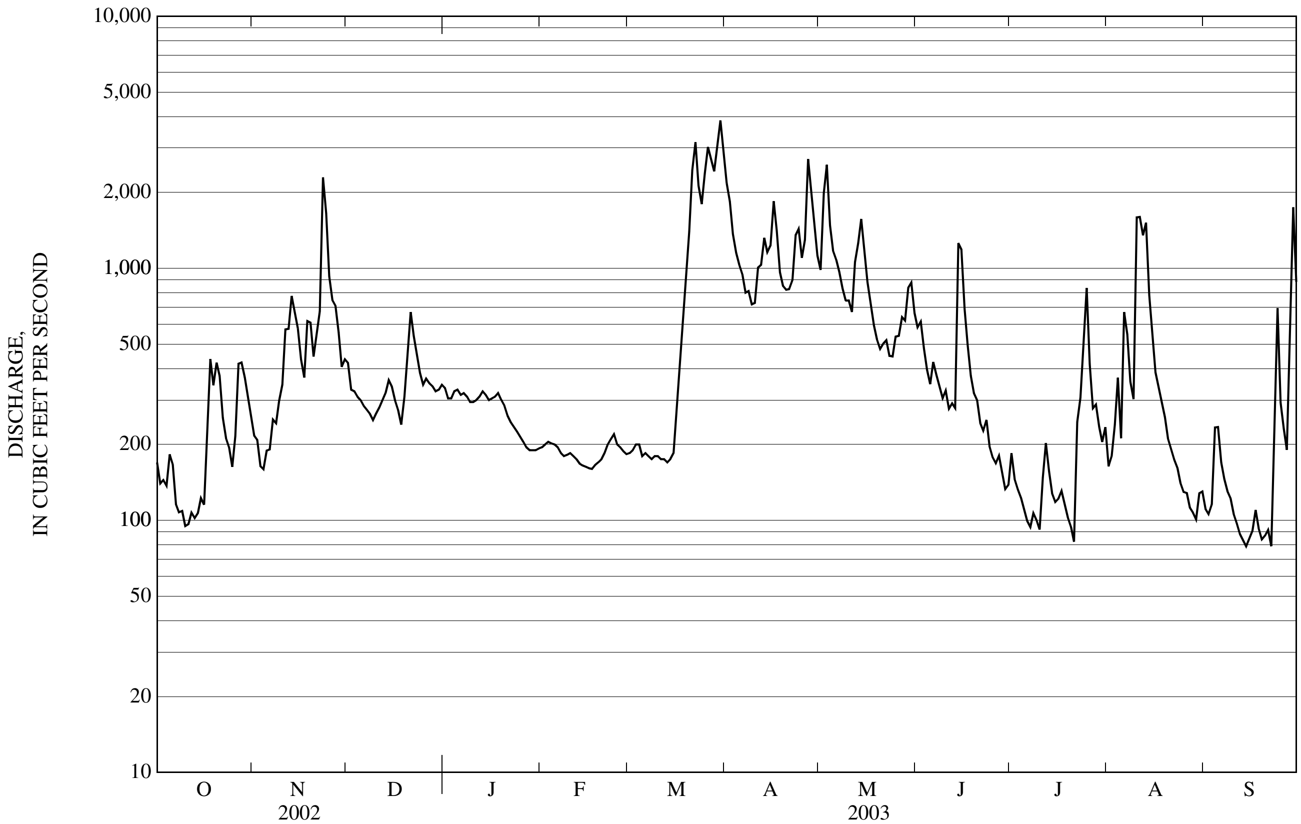
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 23, 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	380	514	489	425	387	900	1,866	951	479	274	241	234
MAX	1,432	1,164	1,504	1,226	1,475	3,442	3,275	2,374	1,785	1,245	1,008	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	50.5	60.1
(WY)	(1964)	(1979)	(1915)	(1940)	(1940)	(1940)	(1995)	(1921)	(1995)	(1991)	(2001)	(1921)

04286000 WINOOSKI RIVER AT MONTPELIER, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1914 - 23, 1928 - 2003	
ANNUAL TOTAL	214,572		188,230			
ANNUAL MEAN	588		516		595	
HIGHEST ANNUAL MEAN					967	1976
LOWEST ANNUAL MEAN					270	1965
HIGHEST DAILY MEAN	5,000	Apr 14	3,860	Mar 30	12,200	Mar 18, 1936
LOWEST DAILY MEAN	44	Sep 10	a 79	Sep 14	17	Sep 3, 1933
ANNUAL SEVEN-DAY MINIMUM	46	Sep 5	89	Sep 13	41	Aug 22, 2001
MAXIMUM PEAK FLOW			4,430	Mar 30	17,200	Apr 7, 1912
MAXIMUM PEAK STAGE			b 10.02	Mar 21	17.55	Jun 30, 1973
10 PERCENT EXCEEDS	1,380		1,260		1,420	
50 PERCENT EXCEEDS	351		300		330	
90 PERCENT EXCEEDS	97		116		118	

a Also occurred on Sept. 22
b Ice jam
e Estimated



04287000 DOG RIVER AT NORTHFIELD FALLS, VT

LOCATION.--Lat 44° 10'58", long 72° 38'27", Washington County, Hydrologic Unit 02010003, on right bank, just downstream of New England Central Railroad bridge, 0.9 mi northeast of Cox Brook Road and State Highway 12 intersection in Northfield Falls, 1.1 mi downstream from Cox Branch, and 4.2 mi downstream of Station 04286500, Dog River at Northfield.

DRAINAGE AREA.--76.1 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Infrequent diurnal fluctuation at low flow by power plant upstream; regulation much greater prior to 1955.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2000	*1,640	*4.59	No other peak greater than base discharge.			

Minimum discharge, 12 ft^3/s, Oct. 10, Mar. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	45	e96	e71	e37	e35	353	193	100	24	29	24
2	17	44	e78	e62	e38	e36	300	611	98	22	43	22
3	16	36	e71	e64	e39	e35	269	480	83	20	131	20
4	16	37	e68	e66	e40	e36	234	295	74	19	132	49
5	15	36	e67	e65	e39	e35	210	236	71	18	88	42
6	15	46	e70	e64	e37	e35	192	203	93	17	167	29
7	14	52	e63	e62	e36	e36	168	186	74	16	127	25
8	14	48	e57	e65	e34	e35	163	169	73	20	85	22
9	14	69	e52	e60	e35	e35	151	161	67	18	68	20
10	14	133	e54	e58	e36	e36	161	144	81	26	389	19
11	14	158	e54	e60	e35	e34	192	130	65	e44	159	18
12	16	107	e56	e61	e34	e33	243	185	66	37	176	17
13	19	172	e60	e60	e34	e32	320	205	60	24	281	16
14	22	125	e62	e53	e35	e31	255	269	224	19	129	16
15	20	99	e66	e50	e36	e32	324	202	152	16	89	17
16	24	84	e61	e51	e34	e35	420	169	101	18	85	16
17	121	83	e57	e52	e31	e50	253	145	80	21	85	16
18	75	124	e59	e53	e32	e230	203	131	71	17	67	15
19	56	99	e64	e56	e33	245	184	117	65	16	56	14
20	64	93	e72	e52	e33	182	177	107	62	15	47	16
21	52	102	124	e50	e34	595	171	104	53	14	41	15
22	42	139	102	e48	e35	676	184	98	51	56	36	14
23	36	681	e88	e46	e37	500	275	90	48	36	31	80
24	34	285	e77	e44	e38	475	242	90	41	139	27	75
25	31	190	e67	e43	e37	642	195	106	37	116	25	36
26	42	160	e74	e42	e38	911	322	103	37	59	26	29
27	70	137	e72	e41	e36	661	661	122	30	43	25	25
28	80	114	e70	e39	e34	558	331	109	27	55	22	114
29	65	111	e68	e37	---	915	253	115	25	39	22	232
30	54	110	e64	e36	---	884	209	105	26	36	37	138
31	47	---	e68	e37	---	492	---	91	---	29	28	---
TOTAL	1,139	3,719	2,161	1,648	997	8,567	7,615	5,471	2,135	1,049	2,753	1,191
MEAN	36.7	124	69.7	53.2	35.6	276	254	176	71.2	33.8	88.8	39.7
MAX	121	681	124	71	40	915	661	611	224	139	389	232
MIN	14	36	52	36	31	31	151	90	25	14	22	14
CFSM	0.48	1.63	0.92	0.70	0.47	3.63	3.34	2.32	0.94	0.44	1.17	0.52
IN.	0.56	1.82	1.06	0.81	0.49	4.19	3.72	2.67	1.04	0.51	1.35	0.58

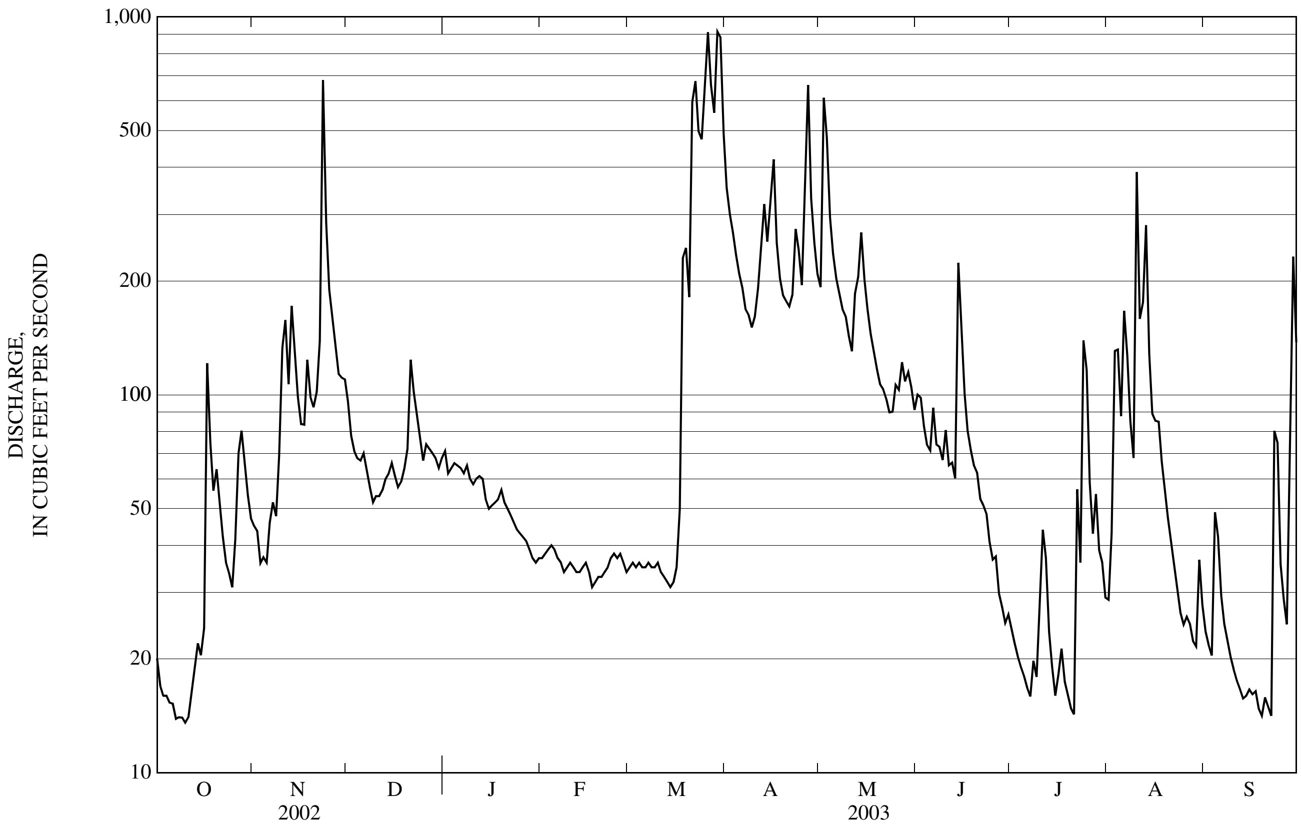
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	71.2	106	111	90.1	86.9	210	421	193	81.4	42.9	38.4	38.9
MAX	301	245	349	264	439	831	785	463	357	176	219	259
(WY)	(1978)	(1996)	(1984)	(1996)	(1981)	(1936)	(1969)	(1972)	(1947)	(1973)	(1976)	(1938)
MIN	8.19	14.8	24.7	21.5	18.6	37.0	115	57.5	19.7	8.96	8.48	9.19
(WY)	(1964)	(2002)	(2002)	(1940)	(1940)	(1940)	(1995)	(1941)	(1965)	(1965)	(2001)	(1963)

04287000 DOG RIVER AT NORTHFIELD FALLS, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1935 - 2003	
ANNUAL TOTAL	44,033.7		38,445			
ANNUAL MEAN	121		105		124	
HIGHEST ANNUAL MEAN					205	1976
LOWEST ANNUAL MEAN					51.6	1965
HIGHEST DAILY MEAN	2,290	Apr 14	915	Mar 29	4,390	Mar 18, 1936
LOWEST DAILY MEAN	8.7	Sep 10	a 14	Oct 7	4.3	Sep 7, 1942
ANNUAL SEVEN-DAY MINIMUM	9.4	Sep 5	14	Oct 5	5.3	Sep 14, 2001
MAXIMUM PEAK FLOW			1,640	Mar 29	b 10,600	Jun 30, 1973
MAXIMUM PEAK STAGE			4.59	Mar 29	11.57	Jun 30, 1973
INSTANTANEOUS LOW FLOW			c 12	Oct 10	4.3	Aug 31, 1942
ANNUAL RUNOFF (CFSM)	1.59		1.38		1.63	
ANNUAL RUNOFF (INCHES)	21.53		18.79		22.17	
10 PERCENT EXCEEDS	284		235		273	
50 PERCENT EXCEEDS	66		59		63	
90 PERCENT EXCEEDS	14		19		16	

a Also occurred on Oct. 8-11, Jul. 21, Sept. 19,22
b From rating curve extended above 1,500 ft^3/s on basis of flow over dam at gage height 8.49 ft
c Also occurred on Mar. 14
e Estimated



04288000 MAD RIVER NEAR MORETOWN, VT

LOCATION.--Lat 44° 16'38", long 72° 44'35", Washington County, Hydrologic Unit 02010003, on left bank, at downstream side of Munns Road bridge, 0.4 mi downstream of Welder Brook, 2.0 mi northeast of Moretown Mountain Road and State Highway 100B intersection in Moretown, 3.2 mi west of State Highway 100B bridge across Winooski River in Middlesex, and 3.8 mi upstream from mouth.

DRAINAGE AREA.--139 mi^2.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation at low flow; much greater regulation prior to 1958.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 23,000 ft^3/s, November 3, 1927, gage height, 19.4 ft, from floodmarks, by computation of peak flow over dam at gage heights 9.98 ft, 11.51 ft, 16.34 ft, 19.4 ft.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 21	0915	Ice Jam	*8.36
Mar 30	0015	3,780	7.13
Aug 10	0930	*4,150	7.44

Minimum discharge, 29 ft^3/s, on July 10, 11, 21, Sept. 19,20,22,23.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	96	e190	e140	e77	e75	602	407	364	53	67	48
2	48	94	e172	e127	e78	e76	506	1,350	367	45	88	44
3	45	76	e145	e120	e78	e75	455	950	254	41	146	43
4	40	80	e125	e128	e81	e76	393	571	202	39	175	116
5	45	80	e107	e136	e83	e74	e320	455	180	37	187	118
6	44	96	e130	e130	e79	e77	e300	393	258	34	211	71
7	37	134	e128	e125	e77	e78	e280	351	205	32	149	57
8	34	103	e115	e129	e75	e76	274	318	218	42	109	50
9	31	199	e100	e123	e74	e76	256	297	174	37	99	44
10	31	307	e110	e117	e76	e78	282	266	210	31	1,610	42
11	34	361	e126	e118	e75	e72	354	240	160	105	487	39
12	34	261	e138	e121	e74	e70	437	528	169	97	443	36
13	34	387	e148	e123	e73	e68	540	627	166	59	467	34
14	51	275	e155	e115	e74	e65	427	665	1,080	46	279	34
15	49	213	e160	e107	e76	e70	599	474	556	38	206	34
16	58	173	e148	e105	e74	e77	948	379	341	47	194	35
17	476	164	e118	e107	e72	e130	516	323	255	62	183	35
18	275	254	e110	e111	e71	e470	394	286	204	42	138	31
19	211	187	e117	e116	e72	e450	346	259	181	36	117	30
20	291	191	e150	e112	e75	e350	384	235	175	32	96	33
21	181	224	e250	e104	e77	e820	459	222	142	30	83	33
22	137	277	e215	e100	e80	e1,250	503	224	131	171	72	29
23	113	1,070	e190	e96	e84	1,010	651	213	121	102	64	179
24	96	452	e165	e91	e88	848	501	198	98	245	54	195
25	85	331	e150	e88	e80	1,160	401	215	84	559	51	84
26	106	286	e148	e85	e82	1,830	752	227	76	172	54	67
27	186	244	e145	e82	e77	1,180	1,350	278	66	113	50	56
28	180	215	e140	e79	e72	901	683	223	60	202	43	187
29	139	204	e136	e76	---	1,730	574	289	53	123	44	505
30	117	201	e130	e74	---	2,010	464	359	56	104	101	304
31	101	---	e135	e76	---	858	---	270	---	78	60	---
TOTAL	3,369	7,235	4,496	3,361	2,154	16,180	14,951	12,092	6,606	2,854	6,127	2,613
MEAN	109	241	145	108	76.9	522	498	390	220	92.1	198	87.1
MAX	476	1,070	250	140	88	2,010	1,350	1,350	1,080	559	1,610	505
MIN	31	76	100	74	71	65	256	198	53	30	43	29
CFSM	0.78	1.74	1.04	0.78	0.55	3.75	3.59	2.81	1.58	0.66	1.42	0.63
IN.	0.90	1.94	1.20	0.90	0.58	4.33	4.00	3.24	1.77	0.76	1.64	0.70

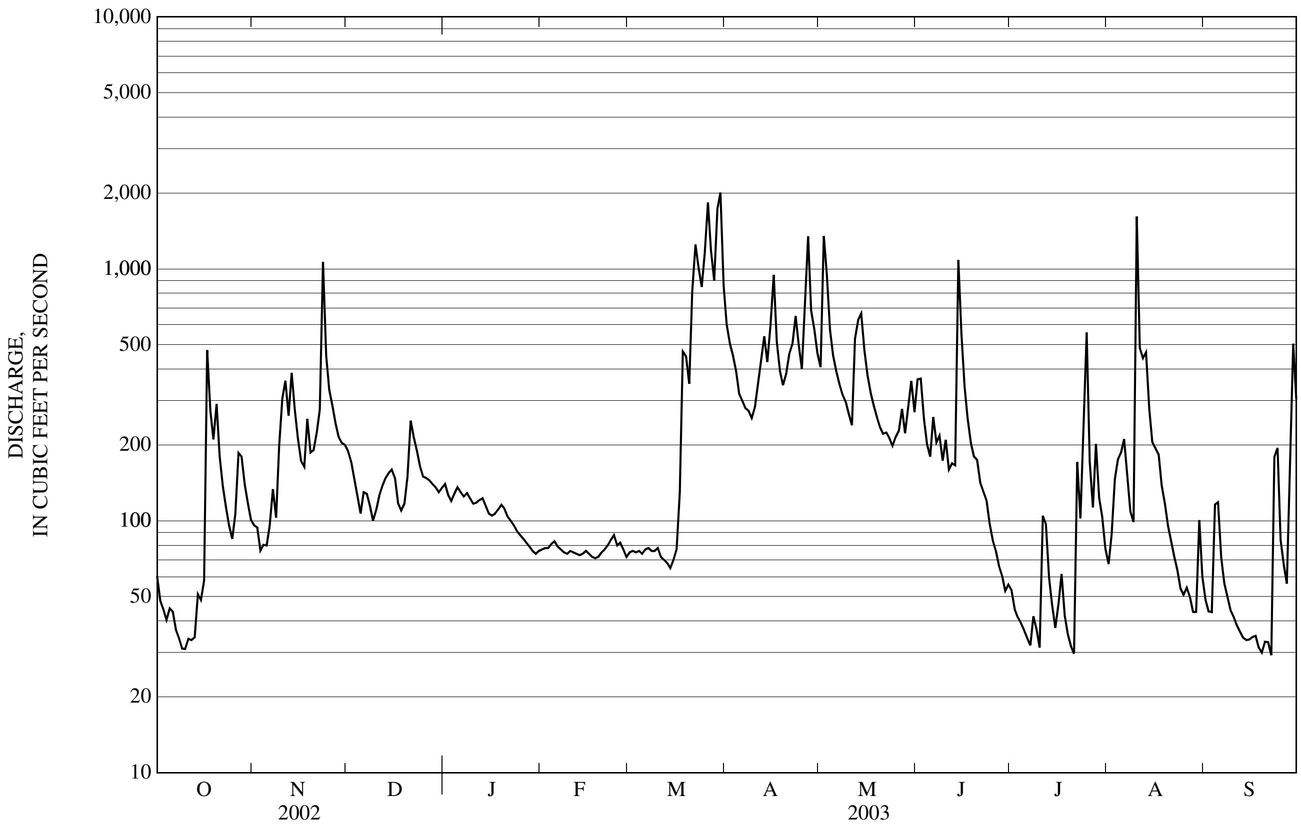
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	178	258	233	191	175	387	797	434	182	103	100	103
MAX	675	582	705	608	956	1,324	1,415	1,114	840	367	734	588
(WY)	(1978)	(1984)	(1974)	(1998)	(1981)	(1936)	(1969)	(1940)	(1947)	(1998)	(1976)	(1938)
MIN	22.1	65.5	73.0	35.9	40.8	76.9	258	142	46.2	22.8	20.6	22.5
(WY)	(1964)	(1954)	(1948)	(1981)	(1931)	(1956)	(1995)	(1941)	(1965)	(1933)	(2001)	(1963)

04288000 MAD RIVER NEAR MORETOWN, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	91,526		82,038			
ANNUAL MEAN	251		225		262	
HIGHEST ANNUAL MEAN					430	1976
LOWEST ANNUAL MEAN					133	1965
HIGHEST DAILY MEAN	4,000	Apr 14	2,010	Mar 30	6,410	Jun 3, 1947
LOWEST DAILY MEAN	13	Sep 10	29	Sep 22	2.9	Aug 18, 1929
ANNUAL SEVEN-DAY MINIMUM	15	Sep 5	32	Sep 16	4.6	Aug 17, 1929
MAXIMUM PEAK FLOW			4,150	Aug 10	a 18,400	Sep 22, 1938
MAXIMUM PEAK STAGE			b 8.36	Mar 21	16.34	Sep 22, 1938
INSTANTANEOUS LOW FLOW			c 29	Jul 10	1.4	Oct 1, 1930
ANNUAL RUNOFF (CFSM)	1.80		1.62		1.88	
ANNUAL RUNOFF (INCHES)	24.49		21.96		25.57	
10 PERCENT EXCEEDS	526		493		588	
50 PERCENT EXCEEDS	150		126		136	
90 PERCENT EXCEEDS	26		44		38	

a From rating curve extended above 6,300 ft3/s on basis of computation of flow over dam at gage heights 9.98 ft, 11.51 ft, 16.34 ft, and 19.4 ft
b Ice jam
c Also occurred on July11, 21, Sept.19,20,22,23
e Estimated



04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT

LOCATION.--Lat 44° 31'29", long 72° 46'31", Lamoille County, Hydrologic Unit 02010003, 0.6 mi upstream from Bingham Falls, 0.8 mi southeast of Barnes Camp, 1.9 mi northwest of State Highway 108 crossing of West Branch Little River in Stowe Fork, and 6.0 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--4.57 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Winter records at times affected by water withdrawals for snowmaking.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec 17	1800	236	3.38	May 3	1620	219	3.30
Apr 22	1355	240	3.40	Aug 31	2105	*370	*3.96
Apr 24	1245	296	3.66				

Minimum daily discharge, 1.0 ft^3/s, Dec. 14, 15, Jan.18.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	6.9	7.2	7.2	2.3	3.6	3.2	124	50	7.7	3.1	103
2	5.7	6.9	5.5	6.9	3.3	3.6	3.2	147	70	5.8	3.1	21
3	5.5	7.4	e3.1	6.8	e4.0	3.5	3.2	158	54	4.7	3.3	12
4	5.5	8.1	5.3	e1.5	3.7	3.5	3.9	132	56	4.3	3.0	9.3
5	6.0	18	4.6	e1.1	3.4	3.4	5.1	73	56	4.1	2.9	e7.3
6	29	13	e2.7	e4.6	4.1	3.4	5.0	48	31	3.8	2.8	5.3
7	19	15	e1.7	4.2	2.6	3.3	5.9	48	21	3.7	2.8	4.3
8	17	23	e1.1	3.2	3.4	3.3	6.8	53	16	4.1	2.8	3.7
9	13	22	e1.1	4.3	5.6	3.2	9.5	56	13	3.7	2.7	3.4
10	e10	52	e2.2	e4.1	e40	3.2	14	54	11	4.8	3.8	3.4
11	17	33	e4.5	4.0	e14	3.0	15	55	10	9.4	2.9	3.4
12	26	26	6.1	4.6	e8.2	3.1	23	75	10	9.7	2.7	3.1
13	31	17	5.0	e5.2	e5.2	3.1	40	60	8.9	19	2.9	3.1
14	28	23	e1.0	5.2	e5.8	3.1	30	28	8.0	54	2.6	3.0
15	18	23	e1.0	4.3	e6.0	3.1	24	22	7.2	32	2.6	2.9
16	13	14	e2.3	3.9	e4.9	3.2	24	21	6.9	13	2.5	2.9
17	11	12	92	e2.1	4.8	3.3	24	21	9.8	11	4.1	2.8
18	28	7.3	45	e1.0	e4.8	3.3	22	19	7.2	7.8	3.3	2.8
19	24	8.1	17	e4.0	4.5	3.4	19	25	6.3	6.3	2.8	2.9
20	e16	6.7	11	e4.5	4.3	3.7	21	20	5.9	5.4	2.8	4.9
21	e13	5.6	e9.6	e4.1	4.2	3.7	47	18	5.5	4.8	16	29
22	e10	4.0	6.4	e1.3	4.4	3.7	179	16	5.6	4.4	e6.0	11
23	e9.0	3.7	6.2	e2.7	4.2	3.4	155	15	9.5	4.1	3.2	6.4
24	7.5	3.1	e6.2	3.1	3.9	3.6	230	13	9.5	4.6	2.8	5.0
25	6.9	3.6	e6.8	3.0	3.9	3.3	97	11	6.0	4.3	2.6	80
26	6.4	7.3	e6.2	e4.2	4.0	3.2	66	10	4.7	3.9	2.5	28
27	6.1	19	4.9	4.0	3.8	3.2	66	16	4.3	3.6	14	14
28	6.3	13	5.0	3.9	3.7	3.2	59	20	3.9	3.5	25	11
29	6.2	12	4.6	2.6	---	3.2	48	19	4.1	3.4	20	8.6
30	6.4	8.5	4.6	4.0	---	3.3	56	23	9.0	3.3	6.4	e6.8
31	7.6	---	6.7	4.1	---	3.3	---	52	---	3.2	57	---
TOTAL	414.0	422.2	286.6	119.7	167.0	103.4	1,304.8	1,452	520.3	257.4	215.0	404.3
MEAN	13.4	14.1	9.25	3.86	5.96	3.34	43.5	46.8	17.3	8.30	6.94	13.5
MAX	31	52	92	7.2	40	3.7	230	158	70	54	57	103
MIN	5.5	3.1	1.0	1.0	2.3	3.0	3.2	10	3.9	3.2	2.5	2.8
CFSM	2.92	3.08	2.02	0.84	1.31	0.73	9.52	10.2	3.80	1.82	1.52	2.95
IN.	3.37	3.44	2.33	0.97	1.36	0.84	10.62	11.82	4.24	2.10	1.75	3.29

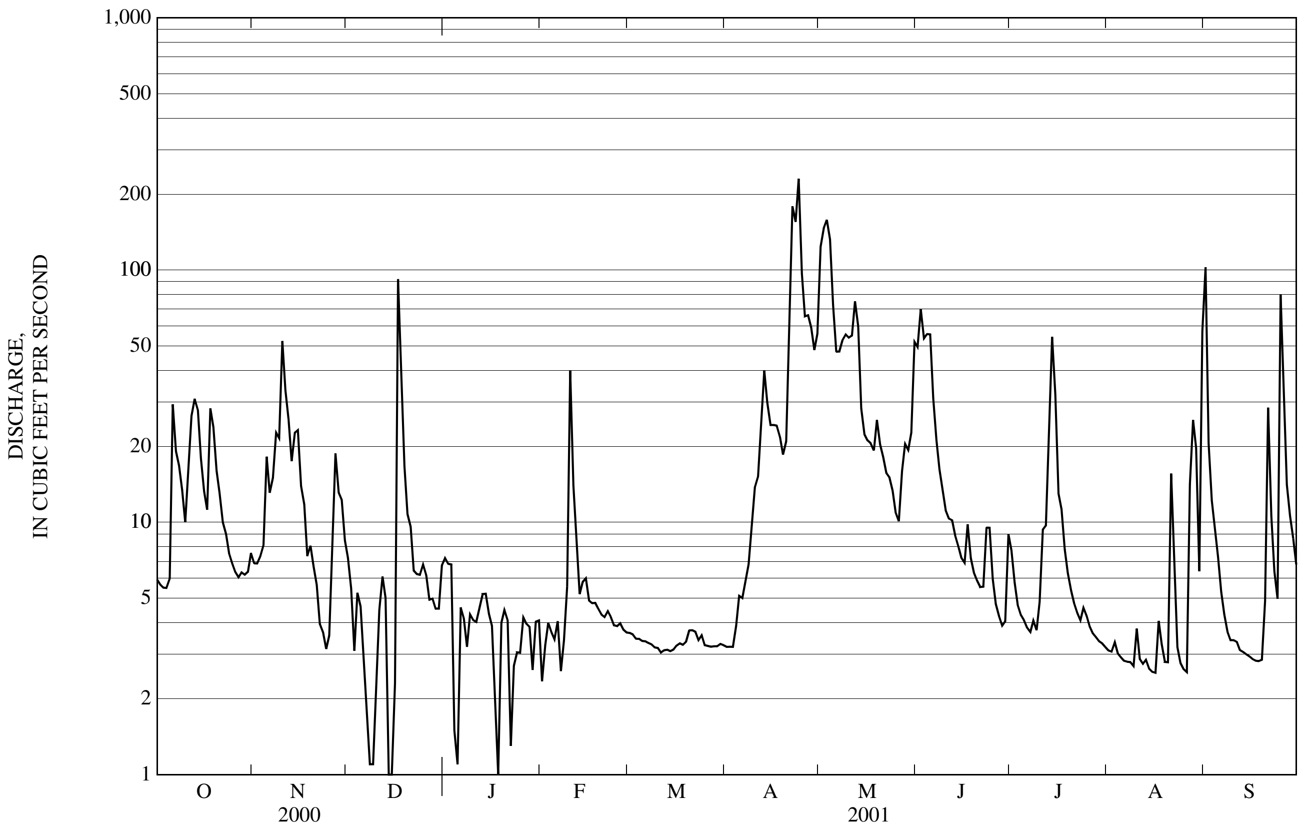
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	13.4	14.1	9.25	3.86	5.96	3.34	43.5	46.8	17.3	8.30	6.94	13.5
MAX	13.4	14.1	9.25	3.86	5.96	3.34	43.5	46.8	17.3	8.30	6.94	13.5
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	13.4	14.1	9.25	3.86	5.96	3.34	43.5	46.8	17.3	8.30	6.94	13.5
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)

04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT—Continued

SUMMARY STATISTICS	WATER YEAR 2001	
ANNUAL TOTAL	5,666.7	
ANNUAL MEAN	15.5	
HIGHEST ANNUAL MEAN	15.5	2001
LOWEST ANNUAL MEAN	15.5	2001
HIGHEST DAILY MEAN	230	Apr 24, 2001
LOWEST DAILY MEAN	ae 1.0	Dec 14, 2000
ANNUAL SEVEN-DAY MINIMUM	2.6	Dec 5, 2000
MAXIMUM PEAK FLOW	b 370	Aug 31, 2001
MAXIMUM PEAK STAGE	3.96	Aug 31, 2001
ANNUAL RUNOFF (CFSM)	3.40	
ANNUAL RUNOFF (INCHES)	46.16	
10 PERCENT EXCEEDS	42	
50 PERCENT EXCEEDS	5.9	
90 PERCENT EXCEEDS	2.9	

a Also occurred on Dec. 14, 15, Jan.18
b From rating curve extended above 150 ft^3/s
e Estimated



04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT

LOCATION.--Lat 44° 31'29", long 72° 46'31", Lamoille County, Hydrologic Unit 02010003, 0.6 mi upstream from Bingham Falls, 0.8 mi southeast of Barnes Camp, 1.9 mi northwest of State Highway 108 crossing of West Branch Little River in Stowe Fork, and 6.0 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--4.57 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Winter records at times affected by water withdrawals for snowmaking.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 14	0335	310	3.72	Jun 27	1845	210	3.25
May 17	0345	*392	*4.03	Jul 9	0220	313	3.73
Jun 12	0615	362	3.93	Sep 15	0935	303	3.69
Jun 23	2025	252	3.46	Sep 27	2315	299	3.67

Minimum daily discharge, 0.75 ft^3/s, Jan. 31, Feb. 1,5.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.4	19	40	0.90	0.75	5.4	29	27	28	13	4.2	2.4
2	5.0	22	20	0.91	0.77	4.8	21	23	17	11	4.0	2.4
3	4.7	37	16	e0.80	0.78	9.0	28	34	14	9.8	3.8	2.3
4	4.3	19	16	e0.80	0.81	e9.0	22	28	12	11	3.6	2.4
5	4.2	27	24	e0.80	0.75	e6.8	16	37	25	14	3.5	2.3
6	6.7	20	19	0.81	0.76	5.8	14	58	45	28	7.8	2.3
7	8.3	19	10	0.80	0.78	5.3	13	73	18	13	6.7	2.2
8	8.4	17	7.6	e0.80	0.86	5.0	12	58	14	15	4.6	2.2
9	9.0	16	6.5	0.81	0.81	11	36	30	12	89	3.8	2.1
10	14	11	5.9	e0.80	0.79	52	67	40	10	21	3.5	2.1
11	11	9.7	7.2	e0.80	8.8	18	39	23	58	15	3.2	41
12	7.6	4.5	6.9	e0.80	1.4	13	61	19	181	12	3.1	12
13	6.4	4.6	11	e0.80	0.90	11	172	59	47	10	3.0	4.4
14	5.7	12	11	e0.80	0.85	12	211	69	24	8.9	3.0	3.5
15	22	23	6.2	e0.80	0.84	12	177	55	48	8.1	2.9	65
16	11	56	2.1	e0.80	0.85	18	185	66	47	7.5	2.9	20
17	9.2	18	2.9	0.79	0.83	15	186	176	44	7.2	2.8	9.9
18	8.3	13	3.6	0.80	0.79	11	172	54	37	7.9	2.7	6.3
19	7.4	13	3.5	0.80	0.78	10	116	33	24	6.6	2.7	e4.6
20	7.1	28	3.9	0.78	2.7	9.3	73	26	18	5.9	2.8	e3.5
21	32	13	3.1	2.3	5.5	8.8	38	25	15	5.4	2.6	8.0
22	34	11	e2.0	3.9	6.2	8.5	25	22	16	5.1	3.2	25
23	16	12	e3.3	e3.9	4.8	7.9	21	29	41	7.2	3.2	42
24	13	12	3.0	4.9	4.5	7.4	19	33	44	5.4	2.7	12
25	24	21	1.7	0.97	4.4	7.1	20	25	20	4.9	2.6	7.3
26	18	23	e1.3	3.6	5.5	9.3	19	28	23	4.6	2.5	5.6
27	16	16	0.98	4.9	6.6	13	16	25	50	5.5	2.5	53
28	13	16	e0.90	5.1	5.0	7.2	15	23	e38	4.7	2.5	80
29	11	18	0.91	e1.0	---	7.3	22	23	19	4.6	2.6	21
30	e11	56	e0.90	e0.80	---	14	22	25	15	9.4	2.6	14
31	e10	---	e0.90	0.75	---	19	---	44	---	4.9	2.5	---
TOTAL	363.7	586.8	242.29	48.32	69.10	352.9	1,867	1,290	1,004	375.6	104.1	460.8
MEAN	11.7	19.6	7.82	1.56	2.47	11.4	62.2	41.6	33.5	12.1	3.36	15.4
MAX	34	56	40	5.1	8.8	52	211	176	181	89	7.8	80
MIN	4.2	4.5	0.90	0.75	0.75	4.8	12	19	10	4.6	2.5	2.1
CFSM	2.57	4.28	1.71	0.34	0.54	2.49	13.6	9.11	7.32	2.65	0.73	3.36
IN.	2.96	4.78	1.97	0.39	0.56	2.87	15.20	10.50	8.17	3.06	0.85	3.75

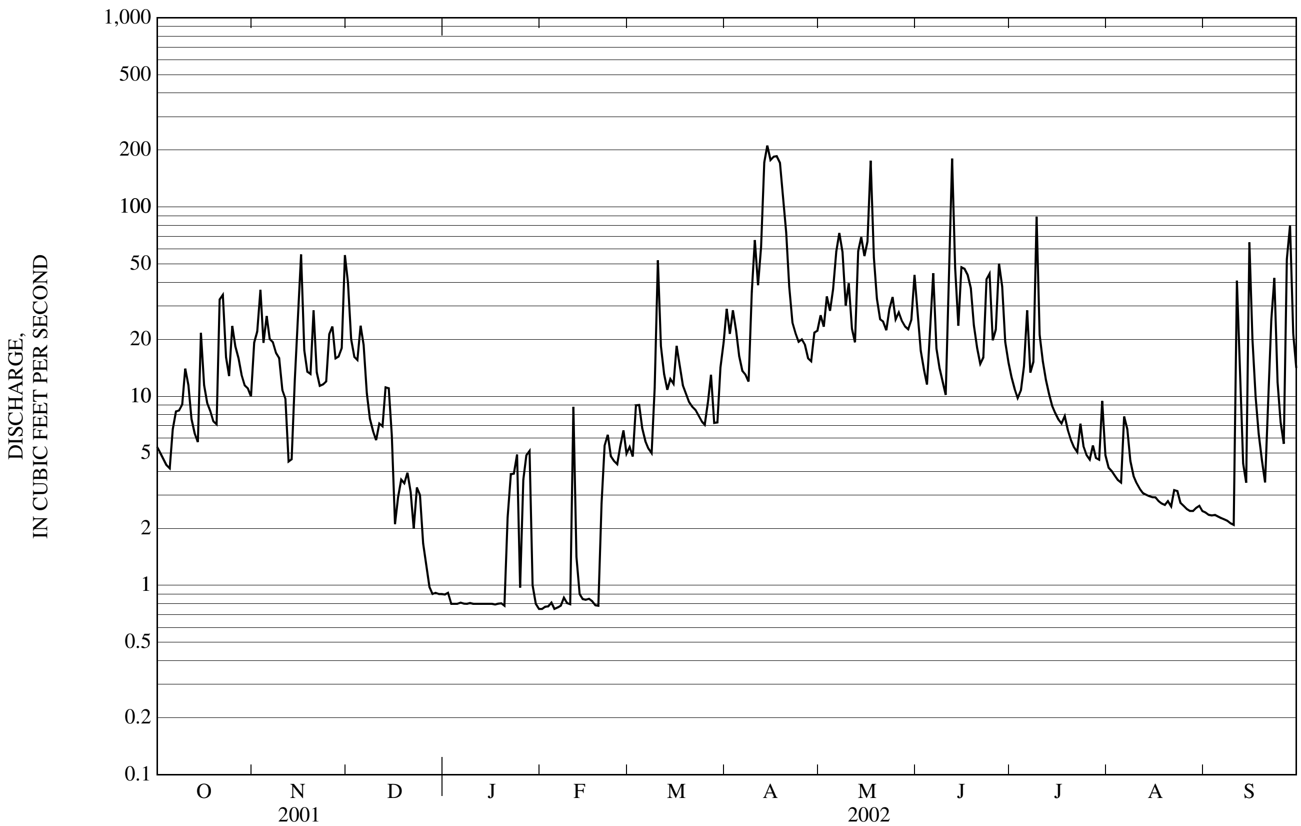
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.5	16.8	8.53	2.71	4.22	7.36	52.9	44.2	25.4	10.2	5.15	14.4
MAX	13.4	19.6	9.25	3.86	5.96	11.4	62.2	46.8	33.5	12.1	6.94	15.4
(WY)	(2001)	(2002)	(2001)	(2001)	(2001)	(2002)	(2002)	(2001)	(2002)	(2002)	(2001)	(2002)
MIN	11.7	14.1	7.82	1.56	2.47	3.34	43.5	41.6	17.3	8.30	3.36	13.5
(WY)	(2002)	(2001)	(2002)	(2002)	(2002)	(2001)	(2001)	(2002)	(2001)	(2001)	(2002)	(2001)

04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL TOTAL	5,736.69		6,764.61			
ANNUAL MEAN	15.7		18.5		17.0	
HIGHEST ANNUAL MEAN					18.5	2002
LOWEST ANNUAL MEAN					15.5	2001
HIGHEST DAILY MEAN	230	Apr 24	211	Apr 14	230	Apr 24, 2001
LOWEST DAILY MEAN	0.90	Dec 28	a 0.75	Jan 31	a 0.75	Jan 31, 2002
ANNUAL SEVEN-DAY MINIMUM	1.1	Dec 25	0.77	Jan 31	0.77	Jan 31, 2002
MAXIMUM PEAK FLOW			b 392	May 17	b 392	May 17, 2002
MAXIMUM PEAK STAGE			4.03	May 17	4.03	May 17, 2002
ANNUAL RUNOFF (CFSM)	3.44		4.06		3.73	
ANNUAL RUNOFF (INCHES)	46.70		55.06		50.63	
10 PERCENT EXCEEDS	40		43		42	
50 PERCENT EXCEEDS	5.9		9.4		7.0	
90 PERCENT EXCEEDS	2.9		0.88		2.4	

a Also occurred on Feb.1, 5
b From rating curve extended above 150 ft^3/s
e Estimated



04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT

LOCATION.--Lat 44° 31'29", long 72° 46'31", Lamoille County, Hydrologic Unit 02010003, 0.6 mi upstream from Bingham Falls, 0.8 mi southeast of Barnes Camp, 1.9 mi northwest of State Highway 108 crossing of West Branch Little River in Stowe Fork, and 6.0 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--4.57 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1400 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Winter records at times affected by water withdrawals for snowmaking.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	1835	261	3.50	Jun 14	0120	*276	*3.57

Minimum discharge, 0.56 ft^3/s, Feb. 28.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	4.8	e3.2	30	3.6	2.7	21	56	e23	e4.8	5.4	3.8
2	10	2.6	e2.2	e8.0	3.7	2.9	17	93	e23	4.5	5.4	3.7
3	12	2.2	e1.5	e6.0	3.6	2.9	14	52	e14	4.2	5.0	3.8
4	9.5	2.6	e1.5	e7.0	3.6	2.9	12	39	e12	4.0	5.0	4.8
5	9.7	3.9	1.6	9.0	e3.6	e3.0	11	42	e14	3.9	14	3.7
6	7.9	3.1	1.2	8.1	e3.5	3.0	10	35	12	3.8	19	3.2
7	7.1	2.0	2.1	7.4	3.5	2.9	9.6	33	11	3.7	11	3.0
8	6.5	4.5	2.5	7.2	3.3	2.9	8.6	32	10	4.0	22	3.0
9	6.0	17	1.7	6.5	3.4	2.9	8.1	30	9.6	3.5	26	2.9
10	e5.4	42	1.2	6.1	3.1	2.9	9.8	25	13	3.3	46	2.9
11	e5.0	76	1.6	6.1	2.6	2.8	11	30	14	6.7	25	2.8
12	4.7	34	2.6	6.3	3.4	2.9	19	69	22	6.6	30	2.7
13	7.3	32	3.5	5.9	3.2	2.7	23	52	46	6.9	23	2.7
14	13	19	3.2	5.3	e3.3	e2.7	23	51	160	6.6	14	2.8
15	7.9	15	2.4	5.6	e3.3	2.7	81	30	65	4.2	9.9	2.8
16	17	5.4	1.2	5.1	e3.2	3.6	96	25	28	4.3	9.9	2.7
17	39	5.5	e0.90	4.8	e3.2	12	37	21	20	3.9	8.5	2.6
18	23	7.3	e0.90	e4.5	3.2	22	24	19	16	3.4	7.1	2.6
19	41	7.6	3.3	e4.4	3.0	13	24	18	14	3.2	6.2	2.6
20	41	11	34	e4.4	3.0	9.5	70	17	12	3.1	5.5	3.4
21	19	12	18	4.3	3.0	48	79	18	11	3.8	5.1	2.8
22	14	16	6.7	e4.3	3.0	47	76	14	9.7	9.1	4.8	2.7
23	12	42	5.0	e4.3	e3.0	30	58	12	8.7	e8.0	4.5	21
24	9.7	16	3.4	e4.3	e2.6	22	33	12	7.7	e37	4.3	11
25	8.6	11	1.4	e4.2	0.61	29	27	15	7.2	e26	4.5	5.1
26	9.2	9.2	1.3	4.0	e0.70	66	65	16	6.8	6.5	4.5	4.5
27	13	2.6	1.3	3.8	e0.62	42	87	19	6.8	16	4.1	3.7
28	11	e2.0	1.9	3.7	0.63	36	78	15	6.3	20	3.8	55
29	9.3	2.3	2.4	3.7	---	119	92	20	6.3	8.2	5.4	25
30	8.2	4.2	e2.8	3.6	---	87	51	e27	e6.6	8.1	5.2	12
31	4.8	---	15	3.5	---	33	---	e20	---	5.5	4.1	---
TOTAL	401.8	414.8	131.50	191.4	80.46	661.9	1,175.1	957	615.7	236.8	348.2	205.3
MEAN	13.0	13.8	4.24	6.17	2.87	21.4	39.2	30.9	20.5	7.64	11.2	6.84
MAX	41	76	34	30	3.7	119	96	93	160	37	46	55
MIN	4.7	2.0	0.90	3.5	0.61	2.7	8.1	12	6.3	3.1	3.8	2.6
CFSM	2.84	3.03	0.93	1.35	0.63	4.67	8.57	6.76	4.49	1.67	2.46	1.50
IN.	3.27	3.38	1.07	1.56	0.65	5.39	9.57	7.79	5.01	1.93	2.83	1.67

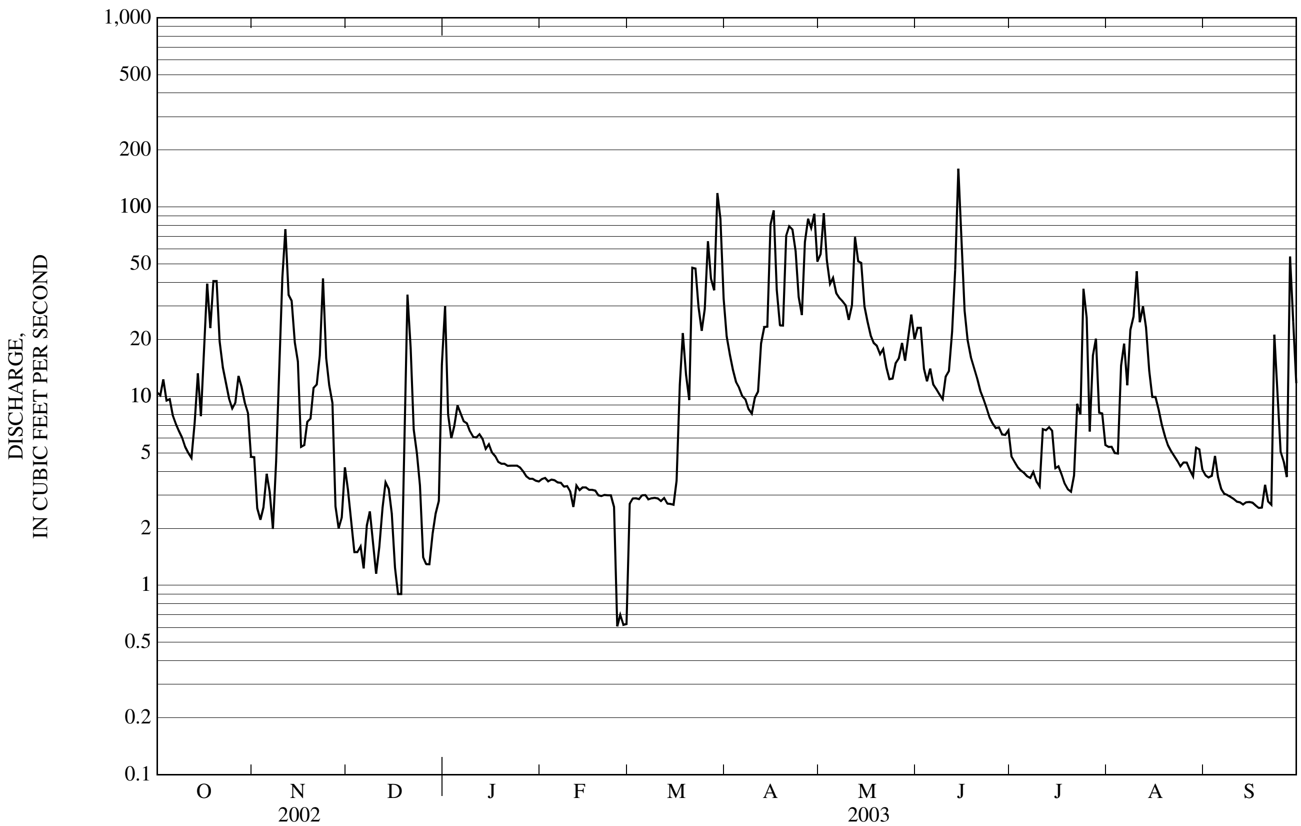
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	12.7	15.8	7.10	3.86	3.77	12.0	48.3	39.8	23.8	9.35	7.18	11.9
MAX	13.4	19.6	9.25	6.17	5.96	21.4	62.2	46.8	33.5	12.1	11.2	15.4
(WY)	(2001)	(2002)	(2001)	(2003)	(2001)	(2003)	(2002)	(2001)	(2002)	(2002)	(2003)	(2002)
MIN	11.7	13.8	4.24	1.56	2.47	3.34	39.2	30.9	17.3	7.64	3.36	6.84
(WY)	(2002)	(2003)	(2003)	(2002)	(2002)	(2001)	(2003)	(2003)	(2001)	(2003)	(2002)	(2003)

04288225 WEST BRANCH LITTLE RIVER ABOVE BINGHAM FALLS NEAR STOWE, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	6,519.92		5,419.96			
ANNUAL MEAN	17.9		14.8		16.3	
HIGHEST ANNUAL MEAN					18.5	2002
LOWEST ANNUAL MEAN					14.8	2003
HIGHEST DAILY MEAN	211	Apr 14	160	Jun 14	230	Apr 24, 2001
LOWEST DAILY MEAN	a 0.75	Jan 31	0.61	Feb 25	0.61	Feb 25, 2003
ANNUAL SEVEN-DAY MINIMUM	0.77	Jan 31	1.5	Feb 24	0.77	Jan 31, 2002
MAXIMUM PEAK FLOW			276	Jun 14	b 392	May 17, 2002
MAXIMUM PEAK STAGE			3.57	Jun 14	4.03	May 17, 2002
ANNUAL RUNOFF (CFSM)	3.91		3.25		3.57	
ANNUAL RUNOFF (INCHES)	53.07		44.12		48.47	
10 PERCENT EXCEEDS	42		38		40	
50 PERCENT EXCEEDS	7.9		6.7		6.9	
90 PERCENT EXCEEDS	0.88		2.7		2.6	

a Also occurred on Feb. 1, 5
b From rating curve extended above 150 ft^3/s
e Estimated



04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT

LOCATION.--Lat 44° 30'14", long 72° 46'56", Lamoille County, Hydrologic Unit 02010003, 300 ft east of Ranch Camp, 1.3 mi upstream of mouth, 1.3 mi west of State Highway 108 crossing of West Branch Little River at Stowe Fork, and 5.4 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--3.80 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1240 ft above National Geodetic Vertical Datum of 1929, 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 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 24	1100	*303	*2.93	Sep 25	1650	164	2.46
Aug 31	2110	227	2.70				

Minimum discharge, 0.88 ft^3/s, Aug. 15, 16, 26.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	4.1	e5.2	4.0	2.8	2.6	2.3	93	23	6.0	1.4	49
2	2.5	3.6	e4.5	3.9	2.7	e2.7	2.3	105	32	4.1	1.3	7.5
3	2.3	3.6	e4.0	3.8	2.8	e2.6	2.3	102	24	3.1	1.9	3.7
4	2.5	3.7	e3.7	3.8	3.1	e2.5	2.8	74	28	2.6	1.4	2.7
5	2.8	7.3	e3.4	3.7	2.9	e2.4	3.7	34	34	2.5	1.3	2.4
6	18	5.6	e3.3	3.7	3.0	e2.3	3.7	18	15	2.2	1.2	1.9
7	11	6.5	e3.2	3.6	2.7	2.2	4.2	17	11	2.1	1.2	1.6
8	11	11	e3.1	3.5	2.6	2.2	5.0	18	7.8	2.2	1.3	1.4
9	7.4	8.9	e3.0	3.5	e8.6	2.2	6.6	17	6.2	2.1	1.2	1.3
10	6.3	24	e3.0	3.5	e52	2.2	9.3	16	5.2	2.5	1.8	1.4
11	11	17	e2.9	3.5	e16	2.2	10	15	5.4	3.1	1.3	1.4
12	19	14	e2.8	3.3	e8.6	2.1	16	27	5.6	3.5	1.2	1.2
13	19	8.3	e2.8	3.5	e5.2	2.1	31	24	4.6	8.7	1.2	1.2
14	12	10	e2.7	3.2	e4.2	2.1	19	12	4.0	21	1.1	1.2
15	7.7	14	e2.6	3.2	e3.5	2.1	14	9.3	3.5	12	1.0	1.2
16	6.2	8.6	e2.5	3.2	e3.4	2.1	14	8.1	3.2	5.8	1.0	1.2
17	5.3	6.9	e70	3.2	e3.3	2.2	14	7.5	5.3	4.8	1.9	1.2
18	15	5.9	e33	3.3	e3.2	2.2	13	7.0	3.6	3.7	1.4	1.2
19	14	5.2	e13	3.2	e3.2	2.2	10	9.3	3.0	3.0	1.2	1.2
20	8.2	4.7	e9.0	3.0	e3.2	2.5	11	7.2	2.7	2.5	1.2	2.0
21	6.2	4.7	e7.6	3.1	e3.1	e2.4	32	5.9	2.6	2.2	5.2	13
22	5.5	4.8	e7.2	3.0	e3.0	e2.3	162	5.3	2.7	2.0	2.1	6.5
23	4.8	e4.5	e7.0	3.0	e2.9	e2.3	126	5.1	4.6	1.9	1.4	3.9
24	4.6	e4.4	e6.4	2.9	2.9	e2.3	205	4.7	5.5	1.8	1.2	2.7
25	4.1	e4.3	e5.8	2.9	2.9	2.3	71	4.0	3.5	1.8	1.1	57
26	3.9	e8.8	e5.2	3.0	2.8	2.3	47	3.7	2.7	1.7	1.0	16
27	3.8	e20	e5.0	2.9	2.7	2.3	50	6.1	2.3	1.6	4.9	6.7
28	3.7	e11	4.7	2.8	2.6	2.3	43	9.3	2.1	1.6	7.3	4.7
29	3.7	e7.4	4.3	2.8	---	2.3	28	9.4	2.3	1.5	6.4	3.8
30	3.7	e6.0	4.2	2.9	---	2.3	34	9.3	8.6	1.5	2.1	3.2
31	4.7	---	4.1	2.9	---	2.3	---	27	---	1.5	30	---
TOTAL	232.5	248.8	239.2	101.8	159.9	71.1	992.2	710.2	264.0	116.6	89.2	203.4
MEAN	7.50	8.29	7.72	3.28	5.71	2.29	33.1	22.9	8.80	3.76	2.88	6.78
MAX	19	24	70	4.0	52	2.7	205	105	34	21	30	57
MIN	2.3	3.6	2.5	2.8	2.6	2.1	2.3	3.7	2.1	1.5	1.0	1.2
CFSM	1.97	2.18	2.03	0.86	1.50	0.60	8.70	6.03	2.32	0.99	0.76	1.78
IN.	2.28	2.44	2.34	1.00	1.57	0.70	9.71	6.95	2.58	1.14	0.87	1.99

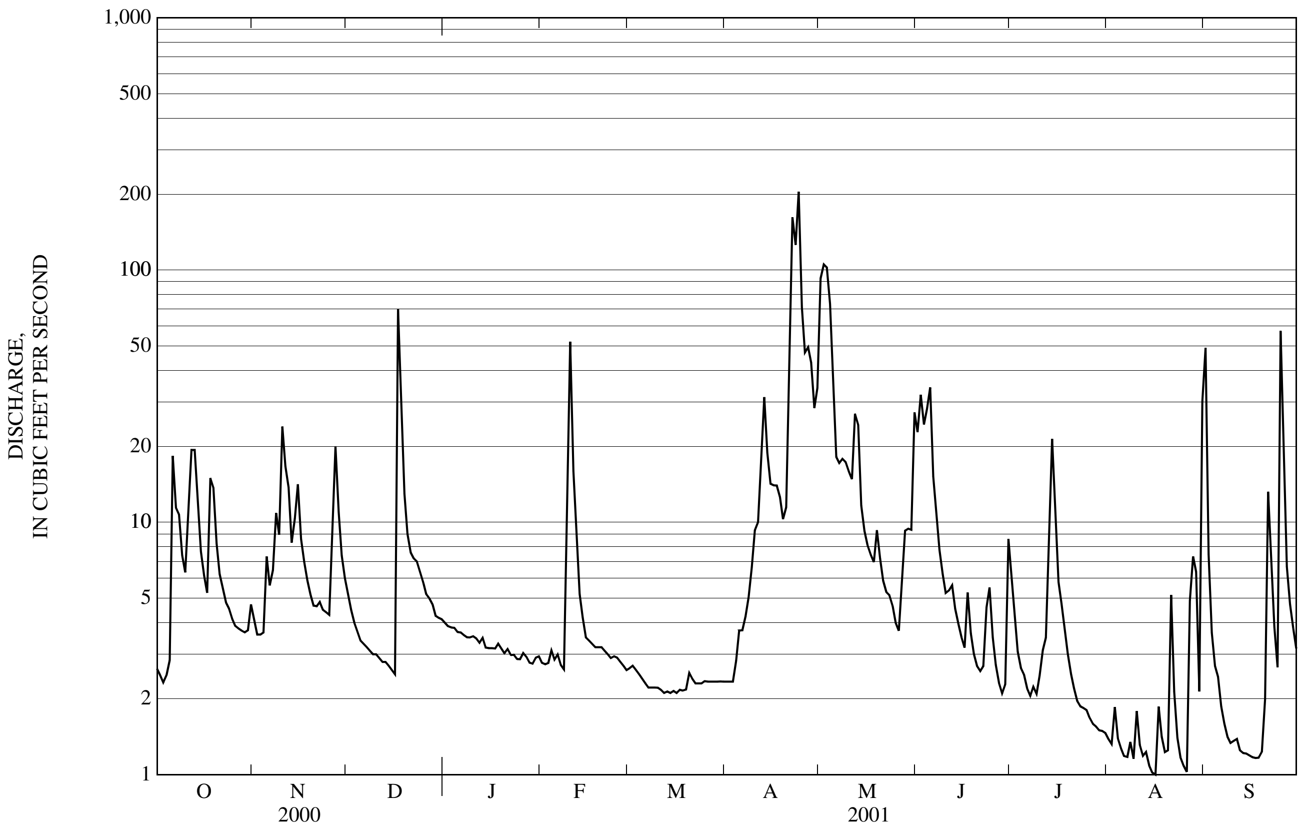
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEAR 2001, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.50	8.29	7.72	3.28	5.71	2.29	33.1	22.9	8.80	3.76	2.88	6.78
MAX	7.50	8.29	7.72	3.28	5.71	2.29	33.1	22.9	8.80	3.76	2.88	6.78
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)
MIN	7.50	8.29	7.72	3.28	5.71	2.29	33.1	22.9	8.80	3.76	2.88	6.78
(WY)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)	(2001)

04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT—Continued

SUMMARY STATISTICS	2001 WATER YEAR	
ANNUAL TOTAL	3,428.9	
ANNUAL MEAN	9.39	
HIGHEST ANNUAL MEAN		
LOWEST ANNUAL MEAN		
HIGHEST DAILY MEAN	205	Apr 24
LOWEST DAILY MEAN	1.0	Aug 15
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 12
MAXIMUM PEAK FLOW	a 303	Apr 24
MAXIMUM PEAK STAGE	2.93	Apr 24
INSTANTANEOUS LOW FLOW	0.88	Aug 15
ANNUAL RUNOFF (CFSM)	2.47	
ANNUAL RUNOFF (INCHES)	33.57	
10 PERCENT EXCEEDS	18	
50 PERCENT EXCEEDS	3.7	
90 PERCENT EXCEEDS	1.6	

a From rating curve extended above 120 ft^3/s.
e Estimated



04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT

LOCATION.--Lat 44° 30'14", long 72° 46'56", Lamoille County, Hydrologic Unit 02010003, 300 ft east of Ranch Camp, 1.3 mi upstream of mouth, 1.3 mi west of State Highway 108 crossing of West Branch Little River at Stowe Fork, and 5.4 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--3.80 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,240 ft above National Geodetic Vertical Datum of 1929, 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 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr 14	0050	*337	*3.02	Jun 27	1900	165	2.42
May 17	0400	306	2.93	Sep 15	0945	224	2.66
Jun 12	0550	302	2.92	Sep 27	2210	195	2.55
Jun 23	2125	161	2.40				

Minimum discharge, 0.70 ft^3/s, Sept. 9, 10, 11.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	14	25	3.5	e3.4	e4.4	19	22	13	7.4	2.9	1.2
2	2.5	14	12	3.5	e3.4	e4.1	14	19	8.1	6.4	2.5	1.1
3	2.4	18	9.0	3.4	e3.3	e7.6	18	30	6.8	5.5	2.3	1.1
4	2.3	10	7.9	3.4	e3.3	9.4	14	24	6.0	5.0	2.0	1.1
5	2.3	16	12	3.3	e3.3	6.6	11	29	13	7.0	1.9	1.0
6	3.9	11	10	3.3	e3.2	5.7	8.5	35	25	17	5.0	0.94
7	6.2	11	8.0	3.4	e3.2	5.0	7.1	30	9.9	8.8	5.6	0.91
8	5.8	9.7	6.7	3.3	e3.1	4.7	7.0	22	7.5	8.4	3.1	0.87
9	6.0	10	6.2	3.3	e3.0	7.8	26	14	6.4	51	2.2	0.81
10	9.5	8.7	5.7	e3.5	e3.0	34	48	14	5.5	12	1.9	0.79
11	7.2	8.4	5.4	e3.6	e10	12	21	11	34	7.7	1.7	34
12	4.8	6.9	5.1	e3.4	e5.0	8.8	43	11	150	6.2	1.6	8.9
13	4.1	6.2	6.6	e3.2	3.8	7.3	146	48	35	5.2	1.6	3.4
14	3.8	6.7	7.4	e3.2	3.5	8.1	182	61	16	4.6	1.6	2.5
15	10	12	e6.2	e3.2	3.3	7.7	144	41	40	4.2	1.8	50
16	6.6	31	e5.4	e3.2	3.4	12	144	53	40	4.1	1.8	15
17	5.3	12	e5.2	e3.1	3.5	8.5	126	126	22	4.1	1.4	6.8
18	4.8	8.4	e5.0	e3.0	3.4	7.0	87	31	20	5.7	1.3	4.1
19	4.3	7.7	5.0	3.0	3.3	e6.4	49	19	14	4.2	1.3	2.9
20	4.1	13	4.8	3.0	3.3	e5.8	27	15	10	3.7	1.5	2.3
21	15	8.2	4.6	3.0	e5.2	e5.4	16	16	7.9	3.2	1.3	3.9
22	17	6.8	e4.2	3.0	e6.6	e5.2	13	14	9.4	2.8	2.0	16
23	8.0	6.1	e4.3	e3.1	4.6	e5.0	12	14	25	4.6	2.2	27
24	6.3	5.7	4.4	e4.3	4.1	e4.8	11	13	27	3.4	1.5	8.0
25	16	7.6	4.1	e4.2	3.9	4.4	12	10	11	2.8	1.4	5.0
26	11	10	e3.9	e3.8	4.7	6.4	12	11	14	2.6	1.3	3.8
27	8.8	7.3	e3.8	3.8	6.0	8.0	9.5	8.7	37	3.6	1.2	33
28	7.1	7.5	3.8	4.0	e4.8	4.6	9.2	7.5	31	3.0	1.2	68
29	6.3	8.0	3.7	4.1	---	4.7	15	6.8	13	2.9	1.3	15
30	6.7	33	3.6	e3.8	---	10	16	8.0	9.1	10	1.5	8.4
31	6.1	---	3.6	e3.4	---	13	---	17	---	4.2	1.2	---
TOTAL	207.0	334.9	202.6	106.3	114.6	244.4	1,267.3	781.0	666.6	221.3	61.1	327.82
MEAN	6.68	11.2	6.54	3.43	4.09	7.88	42.2	25.2	22.2	7.14	1.97	10.9
MAX	17	33	25	4.3	10	34	182	126	150	51	5.6	68
MIN	2.3	5.7	3.6	3.0	3.0	4.1	7.0	6.8	5.5	2.6	1.2	0.79
CFSM	1.76	2.94	1.72	0.90	1.08	2.07	11.1	6.63	5.85	1.88	0.52	2.88
IN.	2.03	3.28	1.98	1.04	1.12	2.39	12.41	7.65	6.53	2.17	0.60	3.21

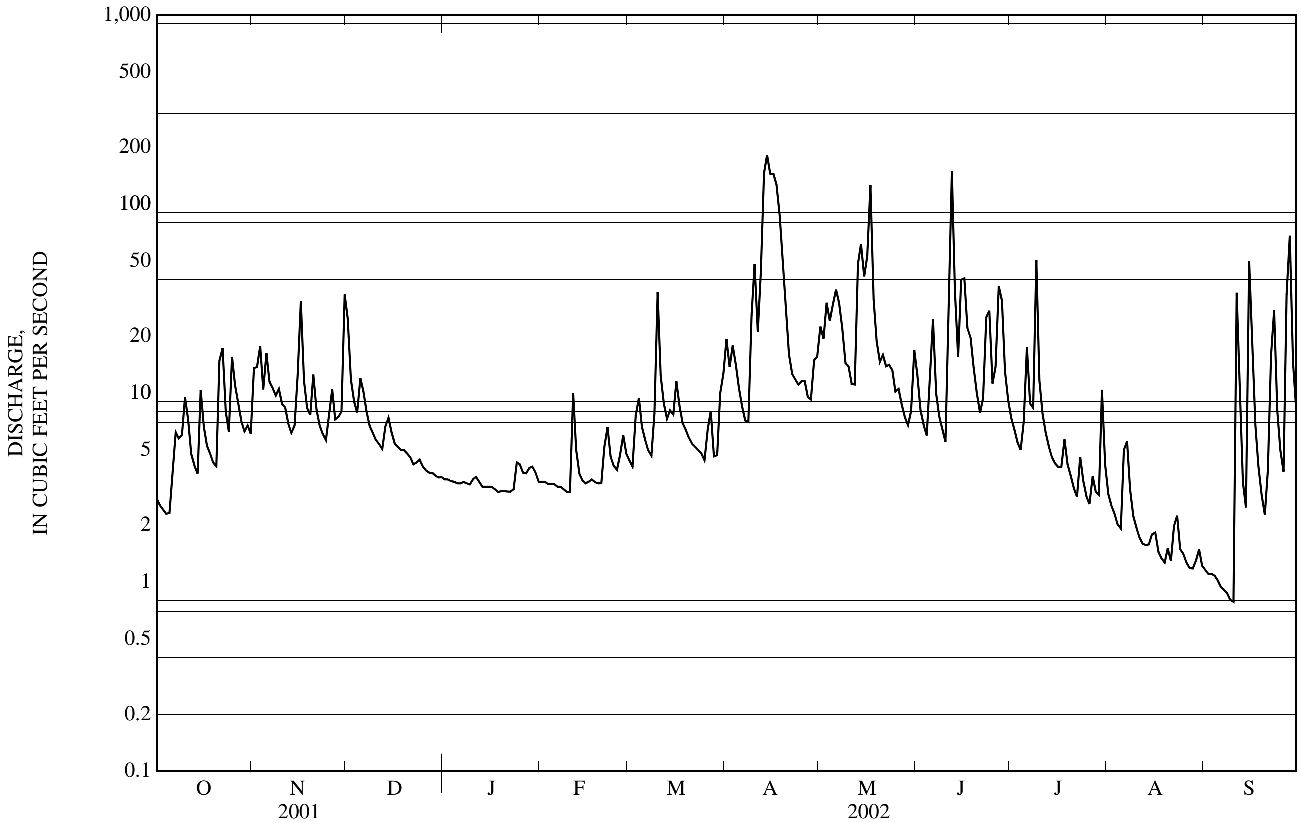
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	7.09	9.73	7.13	3.36	4.90	5.09	37.7	24.1	15.5	5.45	2.42	8.85
MAX	7.50	11.2	7.72	3.43	5.71	7.88	42.2	25.2	22.2	7.14	2.88	10.9
(WY)	(2001)	(2002)	(2001)	(2002)	(2001)	(2002)	(2002)	(2002)	(2002)	(2002)	(2001)	(2002)
MIN	6.68	8.29	6.54	3.28	4.09	2.29	33.1	22.9	8.80	3.76	1.97	6.78
(WY)	(2002)	(2001)	(2002)	(2001)	(2002)	(2001)	(2001)	(2001)	(2001)	(2001)	(2002)	(2001)

04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT—Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL TOTAL	3,452.9		4,534.92			
ANNUAL MEAN	9.46		12.4		10.9	
HIGHEST ANNUAL MEAN					12.4	2002
LOWEST ANNUAL MEAN					9.39	2001
HIGHEST DAILY MEAN	205	Apr 24	182	Apr 14	205	Apr 24, 2001
LOWEST DAILY MEAN	1.0	Aug 15	0.79	Sep 10	0.79	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 12	0.92	Sep 4	0.92	Sep 4, 2002
MAXIMUM PEAK FLOW			a 337	Apr 14	a 337	Apr 14, 2002
MAXIMUM PEAK STAGE			3.02	Apr 14	3.02	Apr 14, 2002
INSTANTANEOUS LOW FLOW			b 0.70	Sep 9	b 0.70	Sep 9, 2002
ANNUAL RUNOFF (CFSM)	2.49		3.27		2.87	
ANNUAL RUNOFF (INCHES)	33.80		44.39		39.01	
10 PERCENT EXCEEDS	17		27		23	
50 PERCENT EXCEEDS	3.8		6.2		4.7	
90 PERCENT EXCEEDS	1.6		2.3		1.9	

a From rating curve extended above 120 ft^3/s
b Also occurred on September 10 and 11
e Estimated



04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT

LOCATION.--Lat 44° 30'14", long 72° 46'56", Lamoille County, Hydrologic Unit 02010003, 300 ft east of Ranch Camp, 1.3 mi upstream of mouth, 1.3 mi west of State Highway 108 crossing of West Branch Little River at Stowe Fork, and 5.4 mi northwest of State Highways 100 and 108 intersection in Stowe.

DRAINAGE AREA.--3.80 mi^2.

PERIOD OF RECORD.--Discharge records: October 2000 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 1,240 ft above National Geodetic Vertical Datum of 1929, 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 160 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	1805	*198	*2.56	Jun 14	0445	174	2.46
Apr 26	1925	165	2.42				

Minimum discharge, 1.0 ft^3/s, Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.2	e7.2	25	3.2	e2.3	e16	30	12	3.1	3.1	1.6
2	6.6	e5.8	e7.0	e11	3.2	e2.3	11	59	12	2.6	3.5	1.6
3	7.1	e5.6	e6.8	e10	3.1	e2.3	9.4	29	7.7	2.2	3.2	1.6
4	5.9	e5.6	e6.4	e9.4	3.2	e2.3	8.8	19	6.2	2.1	3.2	2.6
5	5.9	5.5	e6.2	e8.6	3.2	e2.3	e8.0	18	6.9	2.0	16	1.8
6	4.9	5.9	e5.8	e7.6	e3.2	e2.3	e7.4	16	7.1	1.9	15	1.6
7	4.4	e5.6	5.5	e6.6	3.2	e2.3	e6.8	15	6.6	1.9	7.2	1.5
8	4.0	e5.8	5.4	e5.8	3.0	e2.2	6.2	13	6.4	2.2	5.1	1.4
9	3.9	14	e5.2	5.1	3.0	e2.2	5.9	13	5.7	1.8	5.6	1.3
10	3.8	37	e5.2	4.9	2.8	e2.2	7.2	10	7.2	1.7	26	1.3
11	3.8	48	e5.0	e4.8	e2.7	e2.2	7.6	11	6.3	3.8	27	1.2
12	3.7	20	5.0	4.7	e2.7	e2.2	12	34	7.7	3.7	11	1.2
13	5.6	21	4.8	4.6	e2.7	2.2	15	26	19	3.3	7.8	1.2
14	9.7	13	5.7	4.6	e2.7	e2.2	15	25	101	3.2	5.4	1.3
15	5.7	10	6.0	e4.6	e2.7	e2.1	69	15	36	2.2	4.2	1.3
16	16	8.3	5.2	e4.4	e2.6	3.4	88	12	15	2.5	3.9	1.3
17	39	8.2	e4.8	e4.2	e2.6	e11	27	9.8	10	2.1	3.5	1.2
18	27	e9.0	e4.4	e4.2	e2.6	e20	16	8.5	8.1	1.8	3.1	1.2
19	36	7.6	e3.8	e4.2	e2.6	11	16	7.7	7.2	1.6	2.6	1.2
20	35	7.6	e32	e4.1	2.5	e6.3	47	6.9	6.3	1.6	2.2	2.2
21	15	7.9	16	e4.1	2.4	e38	53	7.4	5.4	1.9	2.0	1.4
22	10	11	8.7	e4.0	2.4	39	50	6.5	4.9	7.7	1.8	1.3
23	8.4	40	7.1	e4.0	e2.5	22	40	5.9	4.4	5.3	1.7	9.8
24	7.3	15	e6.6	e4.0	e2.5	17	21	6.0	3.9	21	1.6	5.4
25	6.6	11	e6.2	e3.9	e2.4	22	18	7.3	3.7	13	1.8	2.7
26	7.5	9.8	e5.8	e3.9	e2.4	54	57	7.9	3.6	4.5	1.9	2.5
27	10	e8.8	e5.6	e3.9	e2.4	30	68	10	3.3	6.2	1.6	1.9
28	9.4	e8.0	e5.2	e3.8	e2.4	25	52	8.0	3.0	9.9	1.5	30
29	7.5	e7.8	5.0	e3.8	---	93	58	11	3.1	4.6	2.5	13
30	6.7	e7.4	e4.8	3.7	---	66	27	15	4.4	4.3	2.9	6.7
31	6.2	---	e9.0	3.4	---	e20	---	9.8	---	3.0	1.8	---
TOTAL	328.8	376.4	217.4	180.9	76.9	511.3	843.3	472.7	334.1	128.7	179.7	104.3
MEAN	10.6	12.5	7.01	5.84	2.75	16.5	28.1	15.2	11.1	4.15	5.80	3.48
MAX	39	48	32	25	3.2	93	88	59	101	21	27	30
MIN	3.7	5.5	3.8	3.4	2.4	2.1	5.9	5.9	3.0	1.6	1.5	1.2
CFSM	2.79	3.30	1.85	1.54	0.72	4.34	7.40	4.01	2.93	1.09	1.53	0.91
IN.	3.22	3.68	2.13	1.77	0.75	5.01	8.26	4.63	3.27	1.26	1.76	1.02

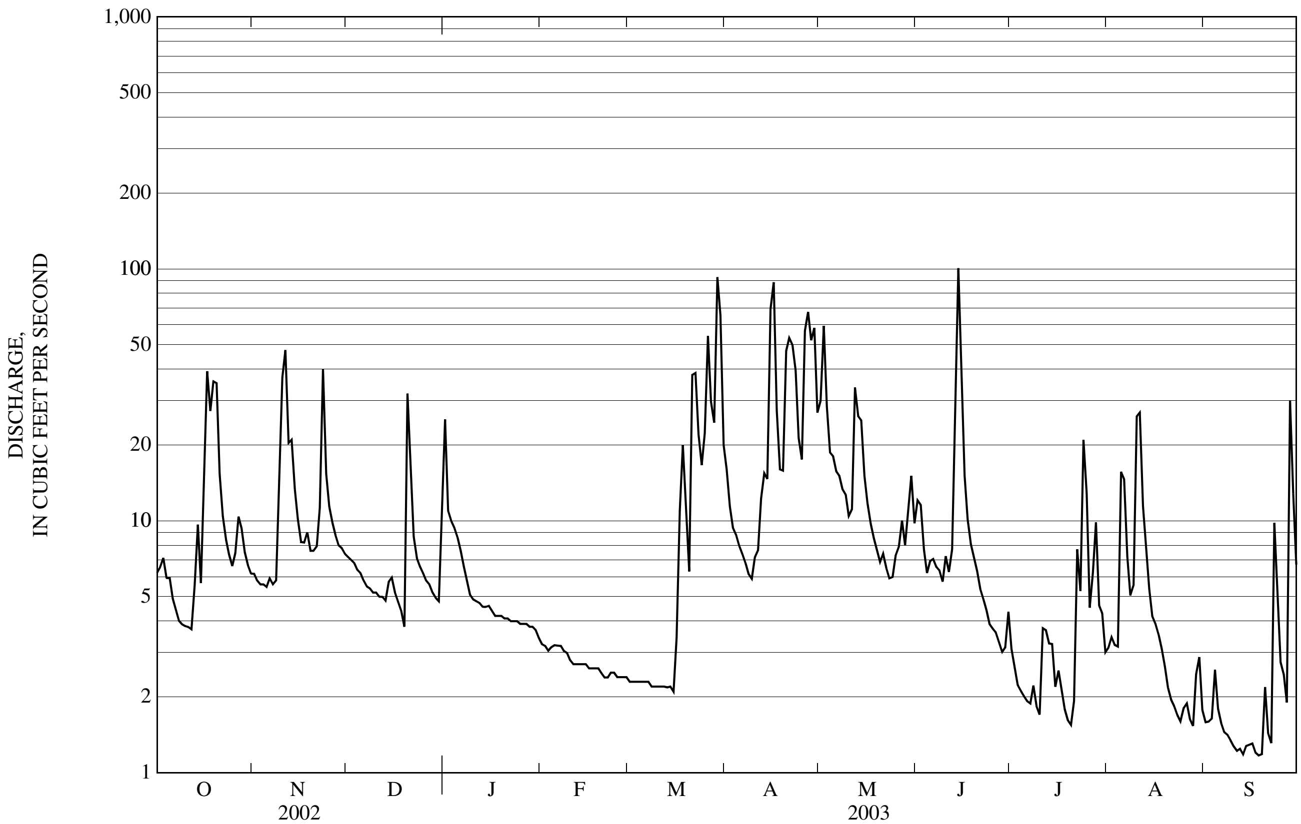
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	8.26	10.7	7.09	4.18	4.18	8.89	34.5	21.1	14.1	5.02	3.55	7.06
MAX	10.6	12.5	7.72	5.84	5.71	16.5	42.2	25.2	22.2	7.14	5.80	10.9
(WY)	(2003)	(2003)	(2001)	(2003)	(2001)	(2003)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)
MIN	6.68	8.29	6.54	3.28	2.75	2.29	28.1	15.2	8.80	3.76	1.97	3.48
(WY)	(2002)	(2001)	(2002)	(2001)	(2003)	(2001)	(2003)	(2003)	(2001)	(2001)	(2002)	(2003)

04288230 RANCH BROOK AT RANCH CAMP, NEAR STOWE, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	4,713.02		3,754.5			
ANNUAL MEAN	12.9		10.3		10.7	
HIGHEST ANNUAL MEAN					12.4	2002
LOWEST ANNUAL MEAN					9.39	2001
HIGHEST DAILY MEAN	182	Apr 14	101	Jun 14	205	Apr 24, 2001
LOWEST DAILY MEAN	0.79	Sep 10	a 1.2	Sep 11	0.79	Sep 10, 2002
ANNUAL SEVEN-DAY MINIMUM	0.92	Sep 4	1.2	Sep 11	0.92	Sep 4, 2002
MAXIMUM PEAK FLOW			198	Mar 29	b 337	Apr 14, 2002
MAXIMUM PEAK STAGE			2.56	Mar 29	3.02	Apr 14, 2002
INSTANTANEOUS LOW FLOW			1.0	Sep 18	c 0.70	Sep 9, 2002
ANNUAL RUNOFF (CFSM)	3.40		2.71		2.82	
ANNUAL RUNOFF (INCHES)	46.14		36.75		38.26	
10 PERCENT EXCEEDS	30		25		24	
50 PERCENT EXCEEDS	6.2		5.7		5.1	
90 PERCENT EXCEEDS	2.3		1.9		1.9	

a Also occurred on September 12, 13, 17, 18, and 19
b From rating curve extended above 120 ft^3/s
c Also occurred on September 10 and 11, 2002
e Estimated



04288500 WATERBURY RESERVOIR NEAR WATERBURY, VT

LOCATION.--Lat 44° 22'54", long 72° 46'13", Washington County, Hydrologic Unit 02010003, at dam on Little River, 0.3 mi east of Recreational Highway and Waterbury Dam Road intersection, 2.5 mi upstream of mouth, 2.8 mi north of US Highway 2 and State Highway 100 intersection in Waterbury.

DRAINAGE AREA.--109 mi^2.

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

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

REMARKS.--Reservoir is formed by earthfill dam completed by U.S. Army Corps of Engineers during summer of 1937 for flood control and storage of water for power. Usable capacity for storage of water for power, 1.58 billion ft^3 between elevations 500.0 ft and 592.0 ft, sill of taintor gate; for flood control, 1.23 billion ft^3, between elevations 592.0 ft and 617.5 ft, crest of spillway; total usable capacity, 2.81 billion ft^3.

Capacity table

Elevation, in feet	Contents, in millions of cubic feet
500.0	0
510.0	34.8
520.0	92.6
530.0	180.8
540.0	302.7
550.0	461.7
560.0	658.8
570.0	891.9
580.0	1,168.5
590.0	1,505.0
600.0	1,913.4

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

EXTREMES FOR CURRENT YEAR.--Maximum daily elevation at 2400 hours, , 562.17 ft, Mar. 30; minimum daily elevation at 2400 hours, 526.25 ft, Oct. 1.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526.25	550.25	551.03	551.53	549.90	549.60	556.95	552.23	550.20	550.90	550.04	549.91
2	527.10	550.64	550.61	550.30	550.20	550.00	553.84	554.24	550.40	550.40	550.44	550.05
3	527.84	550.94	550.21	549.90	550.50	550.30	551.83	554.95	550.10	550.20	550.69	550.21
4	528.45	550.31	549.96	549.90	550.90	550.10	550.73	554.55	550.00	550.10	550.10	550.15
5	529.01	550.18	550.14	550.70	550.50	550.00	549.40	553.94	550.20	550.10	550.40	550.32
6	529.45	550.72	550.40	550.30	550.80	549.80	550.00	553.54	550.30	550.40	550.28	550.46
7	529.82	550.60	550.53	550.20	550.40	549.80	550.60	552.63	550.40	550.10	550.58	550.58
8	530.13	550.24	550.66	550.20	550.40	549.80	550.90	551.53	550.30	550.10	550.69	550.50
9	530.39	551.26	550.25	550.30	550.50	550.00	550.40	550.53	550.00	550.00	550.52	550.30
10	530.65	551.71	550.24	550.10	549.90	549.90	550.20	550.10	550.30	549.70	552.60	550.10
11	530.89	552.14	550.22	550.10	550.20	550.20	550.50	550.20	550.10	549.41	552.38	549.90
12	531.12	551.60	550.07	550.10	550.10	550.10	551.23	551.73	550.20	549.72	551.83	549.70
13	531.39	551.31	549.95	550.20	550.00	550.00	551.33	552.13	550.63	549.05	550.83	549.82
14	531.96	550.39	550.22	550.70	549.80	550.00	550.93	552.53	556.05	549.28	550.09	549.92
15	532.43	550.37	550.47	550.30	550.20	549.90	553.20	552.03	554.45	549.45	549.81	549.73
16	534.15	550.37	549.98	550.30	550.20	550.20	557.35	551.13	552.93	549.72	550.25	549.83
17	537.75	550.31	550.20	550.20	550.40	550.30	555.15	550.03	551.73	549.91	550.63	549.93
18	539.77	550.20	550.30	550.60	550.10	551.33	552.63	549.90	550.20	550.07	550.15	550.01
19	542.31	550.48	550.60	551.00	549.70	550.73	551.33	549.80	550.20	550.19	550.08	550.12
20	544.66	550.48	551.43	550.70	550.00	549.73	551.43	549.90	550.40	550.31	549.96	550.25
21	545.82	550.37	551.43	550.10	549.70	551.83	552.33	550.00	550.43	550.86	550.19	550.36
22	546.64	551.80	550.30	549.70	550.00	554.95	553.03	550.13	550.30	550.76	549.82	549.76
23	547.30	551.69	550.30	550.00	550.40	555.95	553.64	549.00	550.00	550.11	549.86	550.48
24	547.81	549.50	550.30	549.60	550.20	556.35	553.44	549.70	550.00	551.38	550.00	550.14
25	548.24	550.44	550.80	548.90	550.10	557.55	552.73	550.50	550.00	550.61	550.16	550.02
26	549.12	550.73	550.40	548.43	550.10	559.26	554.04	550.20	550.10	549.85	550.34	550.21
27	550.18	550.43	550.00	548.30	549.90	558.26	556.55	550.10	550.00	549.83	550.04	550.01
28	550.96	550.65	550.10	548.60	549.80	557.15	555.75	550.10	550.20	550.16	550.16	550.82
29	550.62	551.07	550.70	549.00	---	560.47	555.25	550.53	550.40	550.42	550.12	551.34
30	550.32	551.68	550.10	549.20	---	562.17	553.64	550.30	550.00	550.19	550.16	550.10
31	550.74	---	550.00	549.60	---	560.07	---	550.10	---	549.95	550.32	---

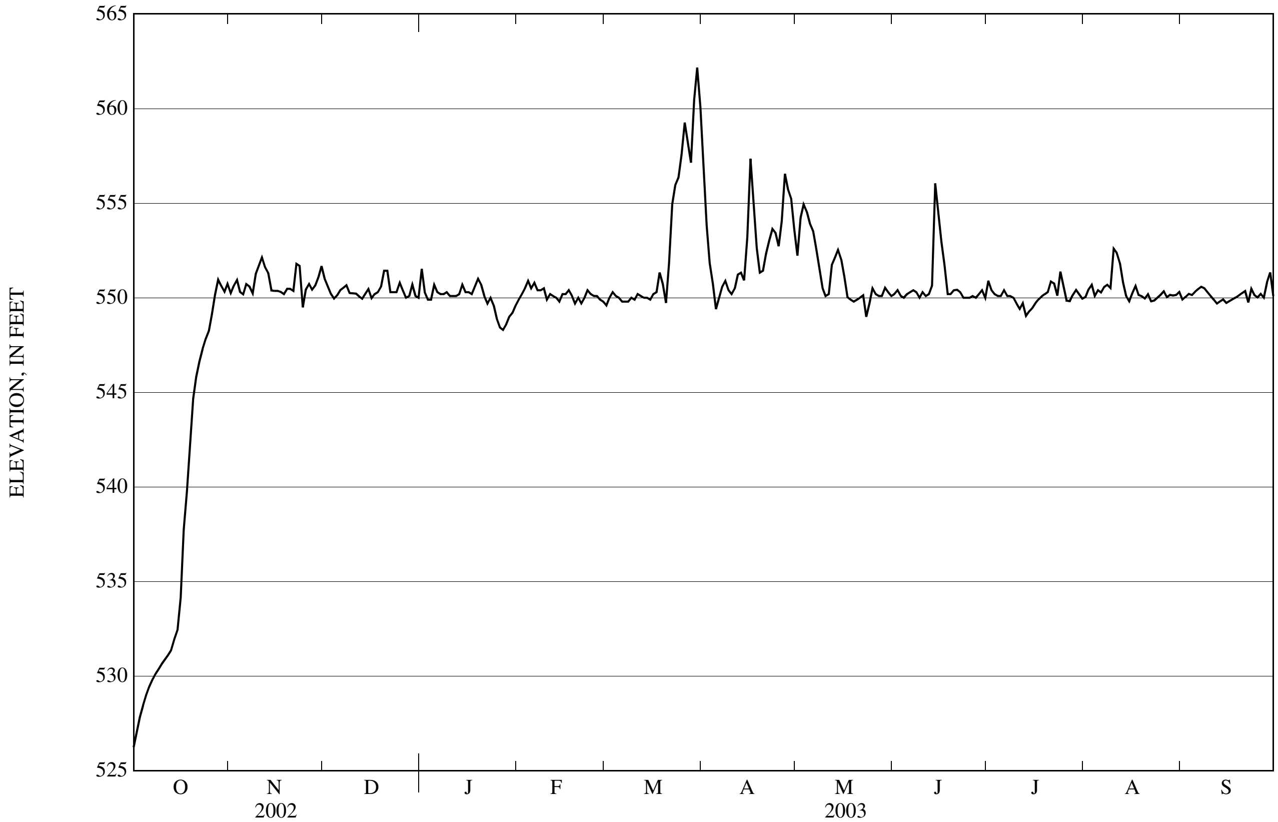
04288500 WATERBURY RESERVOIR NEAR WATERBURY, VT—Continued

ELEVATION ABOVE NGVD 1929, FEET—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	538.17	550.76	550.38	549.97	550.17	552.77	552.68	551.23	550.68	550.10	550.44	550.17
MAX	550.96	552.14	551.43	551.53	550.90	562.17	557.35	554.95	556.05	551.38	552.60	551.34
MIN	526.25	549.50	549.95	548.30	549.70	549.60	549.40	549.00	550.00	549.05	549.81	549.70
(†)	475.6	493.2	461.7	454.9	458.3	660.3	530.1	463.5	461.7	460.8	467.7	463.5
(‡)	+126.8	+6.79	-11.8	-2.54	+1.40	+75.4	-50.2	-24.9	-0.69	-0.34	+2.58	-1.62

CAL YR 2002 MEAN 543.03 MAX e571.32 MIN 517.33 (‡) -0.14
WTR YR 2003 MEAN 549.78 MAX 562.17 MIN 526.25 (‡) +10.4

(†) Contents, in millions of cubic feet, at end of month.
(‡) Change in contents, equivalent in cubic feet per second.
e Estimated. Observations at 2400 hours provided by Green Mountain Power Company.



04289000 LITTLE RIVER NEAR WATERBURY, VT

LOCATION.--Lat 44° 22'12", long 72° 46'11", Washington County, Hydrologic Unit 02010003, on right bank, 0.8 mi downstream from spillway on Waterbury Reservoir, 1.7 mi upstream from mouth, and 2.0 mi north of US Highway 2 and State Highway 100 intersection in Waterbury.

DRAINAGE AREA.--111 mi^2.

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. Monthly discharges only for July, August, and September 1937. 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 National Geodetic Vertical Datum of 1929 (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^3/s, March 18, 1936, gage height, 19.38 ft; minimum daily discharge, 0.6 ft^3/s several times during summers of 1938-39, 1941, and 1944. Maximum discharge since construction of Waterbury Reservoir in 1937, 4,080 ft^3/s, December 9, 1937, gage height, 14.88 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft^3/s, Mar. 30, gage height, 8.79 ft; minimum daily discharge, 9.1 ft^3/s, Sept. 19, 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	198	220	243	13	87	1,170	713	198	72	68	121
2	22	15	231	360	13	10	1,110	493	235	166	12	9.9
3	23	15	199	245	13	9.9	785	495	213	83	68	9.8
4	23	196	163	164	13	79	481	492	200	78	228	69
5	23	117	98	22	156	89	424	491	50	11	114	9.8
6	23	15	94	233	e10	92	104	449	132	11	221	9.8
7	23	129	108	153	159	e75	93	476	132	113	145	9.8
8	23	162	106	156	e100	80	232	469	173	83	178	66
9	23	15	174	119	10	10	252	474	164	92	135	67
10	23	285	116	136	178	69	211	212	71	72	346	66
11	23	400	122	144	10	e10	230	181	162	126	477	59
12	23	402	154	119	66	73	278	400	120	11	477	61
13	23	405	146	57	e70	72	456	475	156	191	476	9.8
14	23	404	111	11	e75	e70	455	480	761	11	431	9.8
15	15	253	128	163	e10	73	283	482	1,020	11	139	68
16	9.3	143	212	107	e50	10	460	482	713	11	12	9.5
17	12	184	80	104	e9.8	123	987	479	480	11	12	9.4
18	10	267	75	e10	121	303	829	120	367	10	174	9.3
19	10	98	73	e10	119	463	564	180	158	9.8	82	9.1
20	10	165	161	138	9.9	403	481	173	93	9.7	83	9.2
21	9.8	213	386	199	110	477	423	146	208	103	11	9.1
22	9.8	232	342	e145	10	482	481	227	18	262	126	147
23	10	748	200	e10	e10	482	485	251	154	336	40	12
24	15	868	199	e145	134	487	486	13	74	248	9.9	174
25	16	495	34	e160	e88	597	486	13	69	467	9.8	81
26	13	239	233	247	e75	982	491	220	66	397	9.8	9.8
27	14	236	205	e15	e88	1,160	667	234	77	162	96	81
28	15	222	130	e12	e85	994	863	206	11	129	9.9	99
29	183	31	26	e12	---	998	862	269	11	65	62	378
30	165	152	218	e12	---	1,190	856	221	106	156	55	376
31	15	---	173	e12	---	1,190	---	255	---	125	9.8	---
TOTAL	851.9	7,304	4,917	3,663	1,805.7	11,239.9	15,985	10,271	6,392	3,632.5	4,317.2	2,059.1
MEAN	27.5	243	159	118	64.5	363	533	331	213	117	139	68.6
MAX	183	868	386	360	178	1,190	1,170	713	1,020	467	477	378
MIN	9.3	15	26	10	9.8	9.9	93	13	11	9.7	9.8	9.1

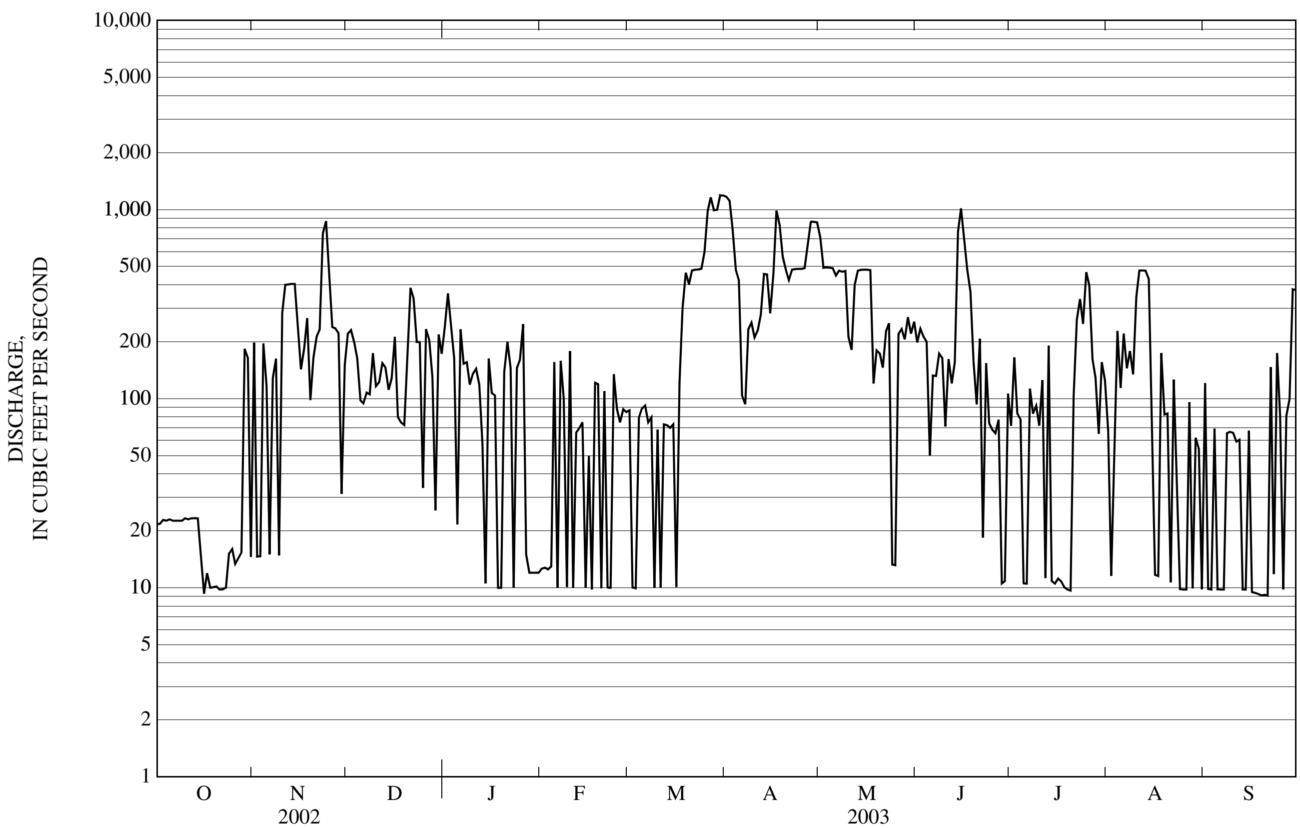
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	182	222	231	218	256	305	469	402	217	144	149	141
MAX	749	494	477	476	527	1,121	1,111	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)

04289000 LITTLE RIVER NEAR WATERBURY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1936 - 2003	
ANNUAL TOTAL	96,141.5		72,438.3			
ANNUAL MEAN	263		198		243	
HIGHEST ANNUAL MEAN					456	1976
LOWEST ANNUAL MEAN					146	1965
HIGHEST DAILY MEAN	1,250	Apr 15	a 1,190	Mar 30	4,830	Mar 18, 1936
LOWEST DAILY MEAN	8.6	Jul 20	b 9.1	Sep 19	c 0.60	Jul 10, 1938
ANNUAL SEVEN-DAY MINIMUM	10	Oct 16	10	Oct 16	c 0.70	Jul 13, 1938
MAXIMUM PEAK FLOW			1,200	Mar 30	6,520	Mar 18, 1936
MAXIMUM PEAK STAGE			8.79	Mar 30	19.38	Mar 18, 1936
10 PERCENT EXCEEDS	637		482		557	
50 PERCENT EXCEEDS	174		122		190	
90 PERCENT EXCEEDS	19		10		9.0	

a Also occurred on Mar. 31
b Also occurred on Sept. 21
c See Extremes for Period of Record
e Estimated



04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT

LOCATION.--Lat 44° 28'44", long 73° 08'21", Chittenden County, Hydrologic Unit 02010003, on right bank, 0.3 mi downstream from Muddy Brook, 1.5 mi downstream of State Highway 2A bridge, 1.6 mi southwest of Town Hall in Essex Junction, and 1.8 mi northeast of US 2 and State Highway 116 intersection in South Burlington.

DRAINAGE AREA.--1,044 mi^2.

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

REVISED RECORDS.--WSP 714: 1930(M). WSP 894: Drainage area. WSP 1307: 1929(M).

GAGE.--Water-stage recorder. Elevation of gage is 185 ft above National Geodetic Vertical Datum of 1929, from topographic map; prior to October 1, 1964, datum was 1.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by power plants upstream, by Peacham Pond and Mollys Falls Reservoir, combined usable capacity, 492 million ft^3, by Waterbury Reservoir (station 04288500) since 1937, and by East Barre and Wrightsville Detention Reservoirs (Reservoirs in Winooski River Basin above Montpelier) since 1935.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1830, 113,000 ft^3/s, November 4, 1927, gage height, 50.4 ft, present datum, from floodmarks, from rating curve extended above 25,000 ft^3/s on basis of computations of flow over dam at gage heights 19.72, 24.54, and 51.4 ft, and slope-area measurements at gage height 51.4 ft, all at present datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,800 ft^3/s, Mar. 30, gage height 12.15 ft; minimum daily discharge, 231 ft^3/s, Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	616	728	1,460	1,580	e415	e495	5,950	3,180	1,780	546	603	367
2	483	667	1,120	1,560	e420	e485	5,100	4,070	2,210	503	490	385
3	452	540	1,010	1,140	e430	e385	4,110	7,680	1,750	521	548	301
4	433	612	e960	1,100	e460	e400	3,150	4,310	1,380	370	1,090	360
5	400	717	e1,030	1,120	e510	e460	2,830	3,300	1,120	396	1,070	653
6	392	595	1,100	999	e645	e480	2,370	2,910	1,230	308	1,360	462
7	384	765	1,040	1,040	e465	e470	2,040	2,670	1,300	306	1,680	383
8	340	767	978	e890	e760	e460	2,070	2,460	1,190	389	1,020	359
9	316	802	e560	e880	e600	e470	1,990	2,210	1,110	391	950	356
10	307	1,190	e645	e800	e440	e380	1,930	1,960	1,020	360	4,370	354
11	306	1,900	e890	e840	e570	e425	2,400	1,740	973	392	4,330	323
12	292	1,810	936	e860	e360	e340	2,570	3,120	949	647	2,760	303
13	302	2,020	980	e900	e430	e415	3,510	4,390	984	532	3,720	295
14	323	2,090	1,010	e680	e530	e460	3,180	4,980	4,160	479	2,420	234
15	334	1,640	1,230	e560	e460	e575	3,080	3,820	4,600	333	1,650	251
16	345	1,140	1,150	e760	e425	e620	4,680	2,940	2,930	320	1,090	267
17	1,520	1,110	e980	e710	e465	e770	4,330	2,490	1,940	361	954	244
18	1,900	1,410	e700	e640	e485	e1,800	3,230	1,920	1,590	346	850	250
19	1,220	1,600	e680	e620	e560	e2,250	2,620	1,680	1,130	304	820	232
20	1,230	1,260	1,140	e560	e503	e2,100	2,480	1,490	1,090	278	669	231
21	1,100	1,530	2,520	e690	e450	5,240	2,660	1,420	872	283	582	235
22	819	1,740	2,270	e685	e500	10,200	2,650	1,450	857	856	475	282
23	668	6,660	1,650	e780	e405	8,800	3,380	1,460	767	1,180	521	406
24	576	5,210	1,440	e720	e470	6,330	3,770	1,160	709	1,120	420	1,180
25	563	3,350	1,020	e860	e530	7,350	3,080	1,230	644	2,860	366	921
26	576	2,190	1,030	e900	e515	10,500	3,250	1,390	564	1,760	352	529
27	884	2,010	1,140	e780	e490	9,060	8,180	1,630	565	959	363	457
28	1,050	1,610	1,010	e720	e430	7,080	5,860	1,610	467	1,090	377	646
29	988	1,340	992	e695	---	7,970	4,610	1,830	410	829	323	2,950
30	936	1,210	e780	e480	---	14,100	3,630	2,340	544	714	395	2,310
31	751	---	988	e410	---	8,540	---	2,000	---	744	419	---
TOTAL	20,806	50,213	34,439	25,959	13,723	109,410	104,690	80,840	40,835	20,477	37,037	16,526
MEAN	671	1,674	1,111	837	490	3,529	3,490	2,608	1,361	661	1,195	551
MAX	1,900	6,660	2,520	1,580	760	14,100	8,180	7,680	4,600	2,860	4,370	2,950
MIN	292	540	560	410	360	340	1,930	1,160	410	278	323	231

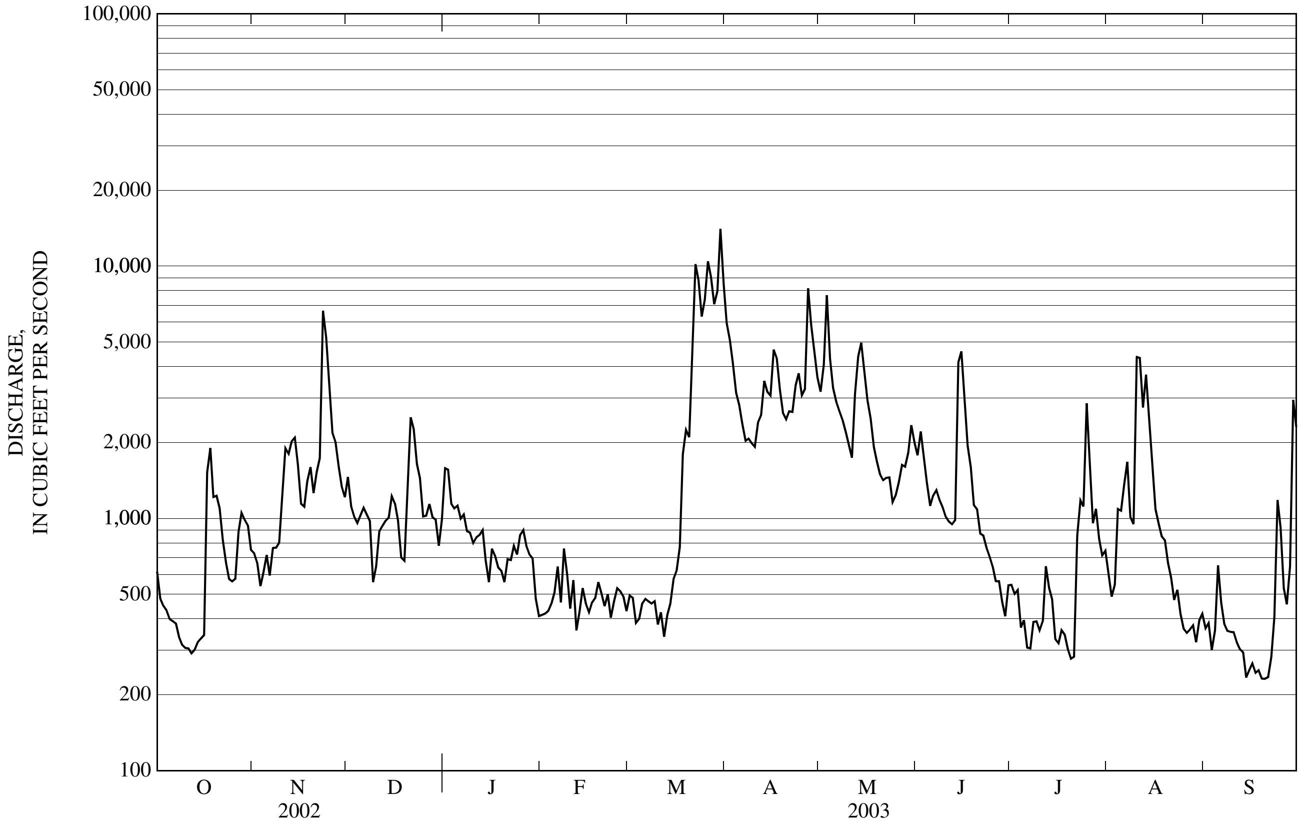
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1,132	1,588	1,498	1,324	1,238	2,598	5,148	2,809	1,317	788	728	707
MAX	4,587	3,525	4,549	3,704	4,266	9,642	9,256	6,826	5,027	3,368	3,284	3,096
(WY)	(1946)	(1984)	(1974)	(1998)	(1981)	(1936)	(1933)	(1972)	(1947)	(1973)	(1976)	(1938)
MIN	245	389	378	350	337	554	1,477	846	364	297	171	231
(WY)	(1964)	(1954)	(1930)	(1931)	(1940)	(1940)	(1995)	(1965)	(1938)	(1965)	(2001)	(1963)

04290500 WINOOSKI RIVER NEAR ESSEX JUNCTION, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	617,528		554,955			
ANNUAL MEAN	1,692		1,520		1,738	
HIGHEST ANNUAL MEAN					2,751	1973
LOWEST ANNUAL MEAN					832	1965
HIGHEST DAILY MEAN	16,000	Apr 14	14,100	Mar 30	41,600	Mar 19, 1936
LOWEST DAILY MEAN	200	Sep 8	231	Sep 20	24	Sep 7, 1968
ANNUAL SEVEN-DAY MINIMUM	216	Sep 2	244	Sep 14	54	Aug 5, 1964
MAXIMUM PEAK FLOW			17,800	Mar 30	45,300	Mar 19, 1936
MAXIMUM PEAK STAGE			12.15	Mar 30	24.54	Mar 19, 1936
10 PERCENT EXCEEDS	3,680		3,360		3,990	
50 PERCENT EXCEEDS	1,070		890		1,000	
90 PERCENT EXCEEDS	315		360		354	

e Estimated



04292000 LAMOILLE RIVER AT JOHNSON, VT

LOCATION.--Lat 44° 37'22", long 72° 40'36", Lamoille County, Hydrologic Unit 02010005, on right bank, above falls, 0.8 mi south of State Highways 15 and 100C intersection in Johnson, 0.8 mi upstream from Railroad Street bridge in Johnson, 0.9 mi upstream from Gihon River, and 1.0 mi downstream of Waterman Brook.

DRAINAGE AREA.--310 mi^2.

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.

REVISED RECORDS.--WSP 894: Drainage area. WSP 1114: 1933, 1934(M). WSP 1237: 1912(M), 1930, 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 506.7 ft above National Geodetic Vertical Datum of 1929, 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 power plant upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0400	*7,270	*12.55	No other peak greater than base discharge.			

Minimum discharge, 59 ft^3/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	282	e361	e342	e210	e155	e1,240	762	417	330	150	101
2	182	275	e318	e396	e224	161	1,030	1,380	474	175	142	93
3	250	213	e308	e374	e236	198	878	2,160	396	110	165	93
4	246	201	e328	e345	e233	e204	732	1,040	308	81	151	104
5	200	185	e321	e283	e236	e204	640	850	259	80	185	96
6	182	294	e301	e288	e226	e156	580	807	315	94	298	96
7	153	350	e293	e310	e220	e207	541	773	293	102	442	96
8	200	248	e244	e274	e218	e211	613	625	268	101	245	96
9	112	263	e230	e272	e216	e213	488	578	256	96	206	95
10	181	559	e286	e283	e208	e150	508	579	240	95	1,710	98
11	206	689	e283	e273	e204	e199	688	516	242	106	1,320	104
12	230	556	296	e249	e198	e200	841	959	244	202	799	109
13	136	762	313	e250	e189	e216	1,290	1,130	247	134	903	96
14	149	649	e312	e232	e188	176	1,030	1,400	2,170	88	569	75
15	166	471	e329	e230	e187	136	1,180	1,060	1,420	80	411	75
16	162	405	e305	e241	e214	145	2,000	730	775	80	388	75
17	570	359	e292	e230	e136	191	1,140	577	553	81	236	75
18	556	729	e265	e286	e207	e579	813	486	385	83	226	75
19	557	650	e342	e252	e185	e818	703	419	266	84	191	76
20	973	531	e310	e247	e230	e660	722	317	265	80	228	77
21	656	664	e565	e253	e276	e1,010	825	311	248	84	170	76
22	444	778	e507	e285	e250	e2,100	811	390	196	444	218	75
23	339	2,670	e453	e310	e220	e1,700	1,060	349	182	337	80	101
24	288	1,520	e350	e299	e205	e1,450	1,090	320	176	453	77	470
25	254	959	e341	e298	e190	e1,950	863	361	144	704	78	261
26	301	795	e328	e230	e180	e3,050	1,240	398	105	396	80	154
27	648	e685	e300	e275	e150	e2,650	3,260	434	110	233	78	96
28	582	e460	e293	e296	e150	e1,930	1,590	516	139	249	78	259
29	436	e430	e271	e231	---	e3,200	1,100	604	118	231	81	1,210
30	388	e400	e259	e211	---	5,740	842	586	191	181	94	528
31	429	---	e264	e207	---	e2,010	---	546	---	197	114	---
TOTAL	10,392	18,032	9,968	8,552	5,786	31,969	30,338	21,963	11,402	5,791	10,113	5,035
MEAN	335	601	322	276	207	1,031	1,011	708	380	187	326	168
MAX	973	2,670	565	396	276	5,740	3,260	2,160	2,170	704	1,710	1,210
MIN	112	185	230	207	136	136	488	311	105	80	77	75
CFSM	1.08	1.94	1.04	0.89	0.67	3.33	3.26	2.29	1.23	0.60	1.05	0.54
IN.	1.25	2.16	1.20	1.03	0.69	3.84	3.64	2.64	1.37	0.69	1.21	0.60

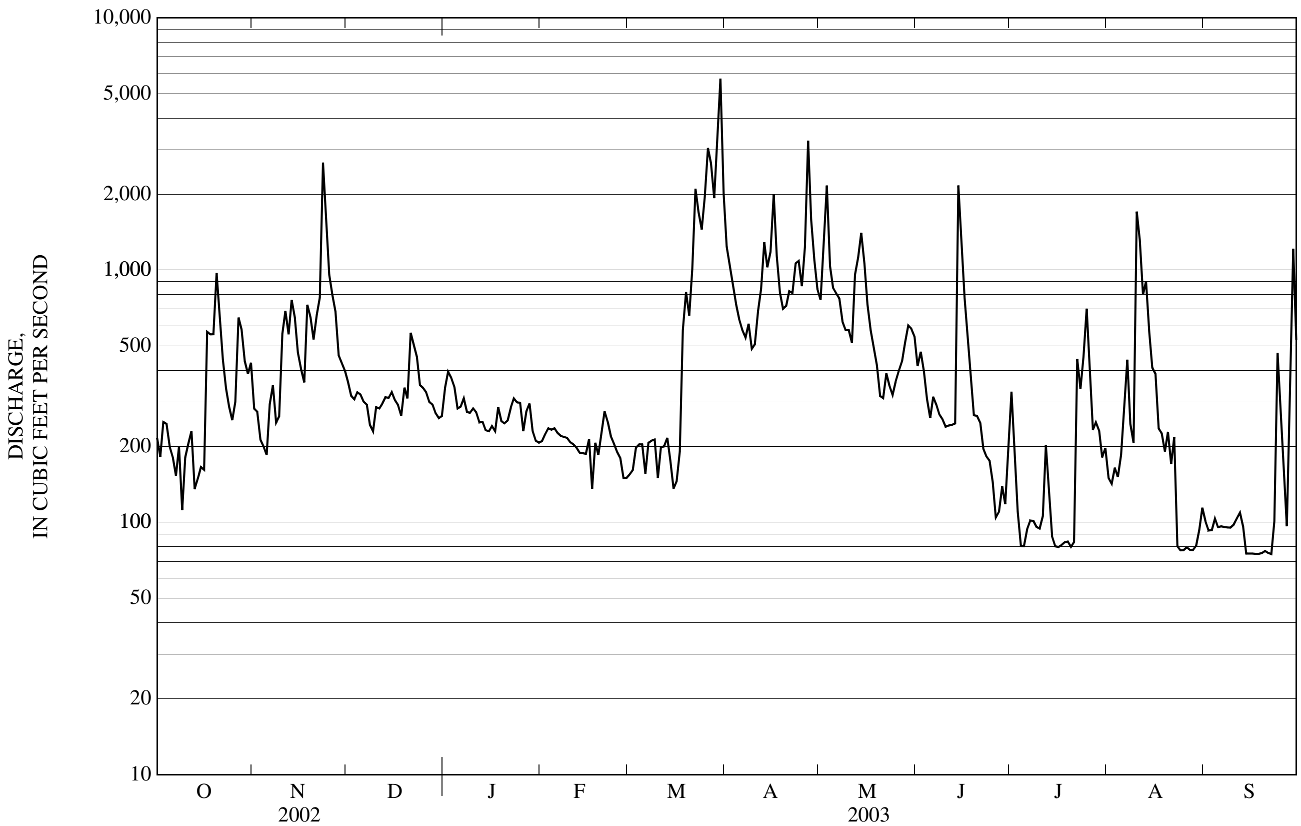
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1910 - 14, 1928 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	393	510	456	374	338	724	1,634	800	420	275	249	253
MAX	1,481	1,173	1,390	959	1,624	2,711	2,868	1,903	1,344	1,028	843	655
(WY)	(1991)	(1991)	(1991)	(1996)	(1981)	(1936)	(1933)	(1972)	(1973)	(1973)	(1990)	(1938)
MIN	84.1	140	162	93.0	114	157	556	245	123	88.5	59.1	93.6
(WY)	(1964)	(1954)	(1948)	(1948)	(1934)	(1940)	(1995)	(1965)	(1988)	(1911)	(2001)	(1978)

04292000 LAMOILLE RIVER AT JOHNSON, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1910 - 14, 1928 - 2003	
ANNUAL TOTAL	235,237		169,341			
ANNUAL MEAN	644		464		537	
HIGHEST ANNUAL MEAN					819	1973
LOWEST ANNUAL MEAN					305	1965
HIGHEST DAILY MEAN	7,230	Jun 12	5,740	Mar 30	13,400	Aug 6, 1995
LOWEST DAILY MEAN	69	Sep 10	a 75	Sep 14	16	Oct 26, 1947
ANNUAL SEVEN-DAY MINIMUM	72	Sep 4	75	Sep 14	44	Aug 11, 2001
MAXIMUM PEAK FLOW			7,270	Mar 30	19,000	Aug 6, 1995
MAXIMUM PEAK STAGE			12.55	Mar 30	19.98	Aug 6, 1995
INSTANTANEOUS LOW FLOW			59	Oct 10	11	Sep 2, 1935
ANNUAL RUNOFF (CFSM)	2.08		1.50		1.73	
ANNUAL RUNOFF (INCHES)	28.23		20.32		23.53	
10 PERCENT EXCEEDS	1,300		1,020		1,180	
50 PERCENT EXCEEDS	390		275		295	
90 PERCENT EXCEEDS	133		96		133	

a Also occurred on Sept. 15-18, 22
e Estimated



04292500 LAMOILLE RIVER AT EAST GEORGIA, VT

LOCATION.--Lat 44° 40'45", long 73° 04'23", Franklin County, Hydrologic Unit 02010005, on right bank, 0.5 mi upstream from New England Central Railroad bridge at East Georgia, 0.9 mi downstream from Beaver Meadow Brook and 3.3 mi northeast of Main Street and US 7 intersection in Milton.

DRAINAGE AREA.--686 mi^2.

PERIOD OF RECORD.--Discharge records: August 1929 to current year. Prior to October 1937, published as "near Milton."

REVISED RECORDS.--WSP 894: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 285 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 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 power plants upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	1430	Ice Jam	*14.10	Mar 30	1745	*12,200	9.57

Minimum daily discharge, 120 ft^3/s, Sept. 20.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	836	865	e956	e1,330	e677	e640	3,100	1,610	1,130	487	361	289
2	709	751	e945	e1,450	e725	e642	2,400	2,510	1,460	386	314	255
3	791	684	e968	e1,250	e767	e720	1,970	4,490	1,110	321	370	237
4	831	588	e984	e1,160	e769	e711	1,610	2,620	844	258	448	251
5	612	661	e963	e1,020	e810	e709	1,370	1,750	713	227	1,070	253
6	578	647	e900	e964	e780	e630	1,250	1,540	748	219	1,280	236
7	465	800	e1,100	e985	e869	e712	1,140	1,440	682	238	1,250	243
8	437	759	e1,050	e883	e830	e727	1,180	1,280	678	232	849	221
9	455	692	e914	e981	e733	e745	1,090	1,150	594	237	994	212
10	374	934	e915	e906	e707	e638	1,040	1,100	557	224	1,470	212
11	419	1,510	e960	e860	e699	e713	1,360	1,030	546	238	4,090	219
12	446	1,390	e1,030	e802	e684	e709	1,560	2,130	610	311	2,520	217
13	441	1,360	972	e795	e658	e670	2,220	3,170	578	378	2,600	217
14	426	1,560	990	e789	e630	e728	2,060	3,310	2,860	327	1,420	211
15	460	1,170	1,310	e736	e610	e666	1,950	2,560	4,060	208	1,010	164
16	499	987	e1,090	e766	e540	e655	3,970	1,790	1,840	214	825	184
17	2,070	913	e955	e755	e495	e773	2,870	1,350	1,170	230	687	230
18	2,390	1,220	e802	e883	e530	e1,520	1,720	1,130	905	185	527	253
19	1,850	1,500	e931	e766	e560	e2,260	1,390	923	710	208	350	204
20	3,250	1,270	e955	e762	e580	e2,140	1,390	846	624	188	419	120
21	2,250	1,390	e1,870	e784	e825	e3,500	1,720	768	581	203	438	134
22	1,440	1,790	e1,660	e879	e777	e6,180	1,730	802	508	257	371	145
23	1,090	5,280	e1,400	e955	e776	e5,240	2,200	762	473	710	360	192
24	927	4,420	e1,140	e926	e841	e4,200	2,600	711	412	694	250	459
25	763	2,600	e1,090	e920	e815	e4,400	2,050	782	418	961	238	592
26	803	1,990	e1,030	e810	e767	e8,600	2,400	843	378	833	231	356
27	1,340	e1,560	e926	e900	e666	e7,100	6,420	836	246	512	255	331
28	1,390	e1,110	e905	e932	e647	4,710	4,330	938	326	492	219	298
29	1,130	e1,010	e861	e737	---	5,600	2,760	1,130	294	500	228	1,410
30	942	e1,010	e787	e676	---	10,700	2,000	1,220	310	419	342	1,140
31	896	---	e814	e667	---	6,980	---	1,210	---	388	308	---
TOTAL	31,310	42,421	32,173	28,029	19,767	84,918	64,850	47,731	26,365	11,285	26,094	9,485
MEAN	1,010	1,414	1,038	904	706	2,739	2,162	1,540	879	364	842	316
MAX	3,250	5,280	1,870	1,450	869	10,700	6,420	4,490	4,060	961	4,090	1,410
MIN	374	588	787	667	495	630	1,040	711	246	185	219	120
CFSM	1.47	2.06	1.51	1.32	1.03	3.99	3.15	2.24	1.28	0.53	1.23	0.46
IN.	1.70	2.30	1.74	1.52	1.07	4.60	3.52	2.59	1.43	0.61	1.42	0.51

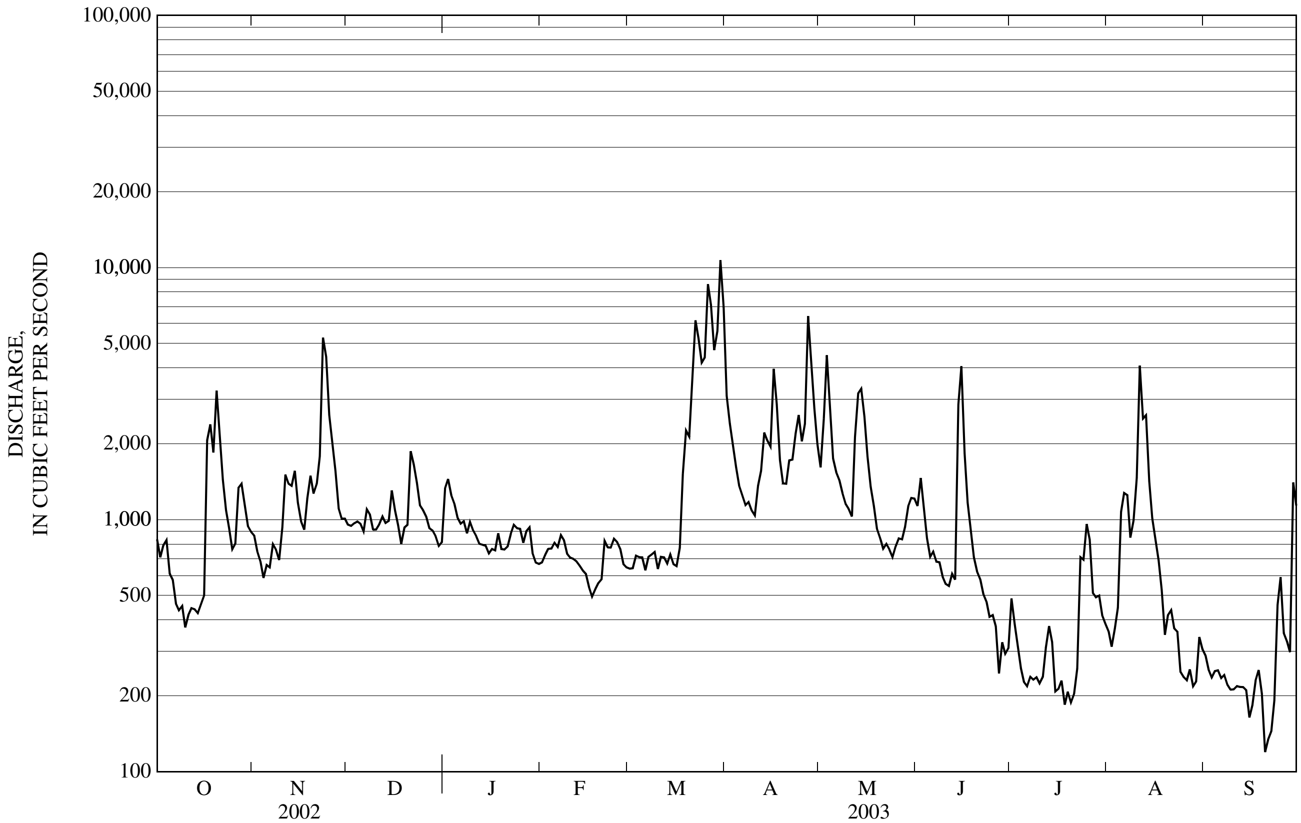
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	982	1,294	1,106	900	806	1,662	3,637	1,844	987	645	598	626
MAX	3,330	2,695	3,076	2,197	4,101	5,622	6,211	4,022	3,246	2,609	1,885	1,987
(WY)	(1946)	(1984)	(1974)	(1998)	(1981)	(1936)	(1933)	(1940)	(2002)	(1998)	(1976)	(1938)
MIN	237	306	405	224	293	399	1,253	638	293	223	171	218
(WY)	(1954)	(1954)	(1948)	(1948)	(1962)	(1940)	(1995)	(1987)	(1988)	(1991)	(2001)	(1978)

04292500 LAMOILLE RIVER AT EAST GEORGIA, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	575,616		424,428			
ANNUAL MEAN	1,577		1,163		1,257	
HIGHEST ANNUAL MEAN					1,776	1976
LOWEST ANNUAL MEAN					791	1965
HIGHEST DAILY MEAN	17,300	Jun 13	10,700	Mar 30	21,700	Mar 19, 1936
LOWEST DAILY MEAN	124	Sep 9	120	Sep 20	74	Sep 26, 1964
ANNUAL SEVEN-DAY MINIMUM	158	Sep 4	181	Sep 16	122	Aug 30, 1934
MAXIMUM PEAK FLOW			12,200	Mar 30	23,700	Apr 18, 1982
MAXIMUM PEAK STAGE			a 14.10	Mar 22	a 21.64	Mar 6, 1979
ANNUAL RUNOFF (CFSM)	2.30		1.70		1.83	
ANNUAL RUNOFF (INCHES)	31.21		23.02		24.89	
10 PERCENT EXCEEDS	3,300		2,310		2,800	
50 PERCENT EXCEEDS	1,090		815		720	
90 PERCENT EXCEEDS	377		245		296	

a Ice jam
e Estimated



04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT

LOCATION.--Lat 44° 58'22", long 72° 23'09", Orleans County, Hydrologic Unit 02010007, on right bank, 200 ft upstream from Big Falls, 1.5 mi downstream from Jay Branch, 1.8 mi southeast of Town Hall in North Troy, 2.2 mi upstream from State Highway 105 bridge in North Troy, and 8.8 mi west of State Highway 105 and US 5 intersection in Newport.

DRAINAGE AREA.--131 mi^2.

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 National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation at low flow caused by small power plant upstream; greater regulation prior to 1967.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,5000 ft^3/s, June 12, 2002, gage height, 14.55 ft; minimum, 9.4 ft^3/s, August 28, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0615	*4,350	*8.85	Aug 13	0900	3,510	7.96

Minimum discharge, 32 ft^3/s, Sept. 18, 19, 20.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	132	e146	e237	e63	e50	501	337	215	88	61	61
2	84	126	e132	e248	e62	e48	412	1,120	324	65	57	55
3	76	97	e118	e161	e63	e47	341	1,090	201	55	62	53
4	69	107	e119	e115	e65	e47	271	437	147	49	128	52
5	69	108	e117	e104	e61	e46	222	312	126	49	579	53
6	71	115	e106	e97	e59	e45	219	266	151	46	1,290	50
7	61	142	e104	e92	e60	e45	191	290	122	42	607	46
8	57	122	e92	e86	e58	e45	193	249	106	55	329	44
9	53	200	e94	e80	e54	e44	179	246	95	79	501	42
10	51	403	e97	e77	e51	e44	210	227	101	49	664	41
11	50	464	e93	e74	e49	e44	353	192	96	99	1,470	39
12	49	337	e100	e71	e47	e44	440	676	156	104	749	38
13	47	347	e109	e70	e45	e43	664	680	115	81	1,620	36
14	58	286	e122	e69	e43	e42	457	720	1,850	65	503	35
15	59	223	e170	e69	e42	e43	827	422	762	51	246	35
16	62	192	e118	e68	e40	e47	1,620	299	314	45	175	34
17	416	173	e105	e68	e39	e77	636	239	197	53	153	34
18	326	334	e88	e68	e41	e270	370	196	151	52	127	33
19	574	282	e124	e67	e43	e375	309	171	126	43	113	32
20	1,400	243	e145	e66	e46	e320	424	150	116	41	93	36
21	487	309	e418	e66	e49	e450	583	145	98	40	82	37
22	263	441	e270	e65	e52	e650	513	140	86	73	72	35
23	188	1,510	e192	e65	e54	e735	488	125	79	107	65	53
24	152	688	e145	e65	e61	e780	429	117	72	304	57	111
25	131	409	e138	e64	e63	e915	346	146	66	249	56	63
26	155	320	e127	e65	e60	e1,390	556	151	142	120	62	60
27	444	e263	e115	e63	e55	1,490	1,480	215	79	106	98	48
28	327	e185	e111	e61	e51	1,020	678	205	61	212	86	74
29	222	e169	e91	e60	---	2,360	502	240	54	119	65	318
30	170	e163	e87	e59	---	3,100	348	259	97	91	87	136
31	143	---	e97	e58	---	872	---	237	---	76	76	---
TOTAL	6,422	8,890	4,090	2,678	1,476	15,528	14,762	10,299	6,305	2,708	10,333	1,784
MEAN	207	296	132	86.4	52.7	501	492	332	210	87.4	333	59.5
MAX	1,400	1,510	418	248	65	3,100	1,620	1,120	1,850	304	1,620	318
MIN	47	97	87	58	39	42	179	117	54	40	56	32
CFSM	1.58	2.26	1.01	0.66	0.40	3.82	3.76	2.54	1.60	0.67	2.54	0.45
IN.	1.82	2.52	1.16	0.76	0.42	4.41	4.19	2.92	1.79	0.77	2.93	0.51

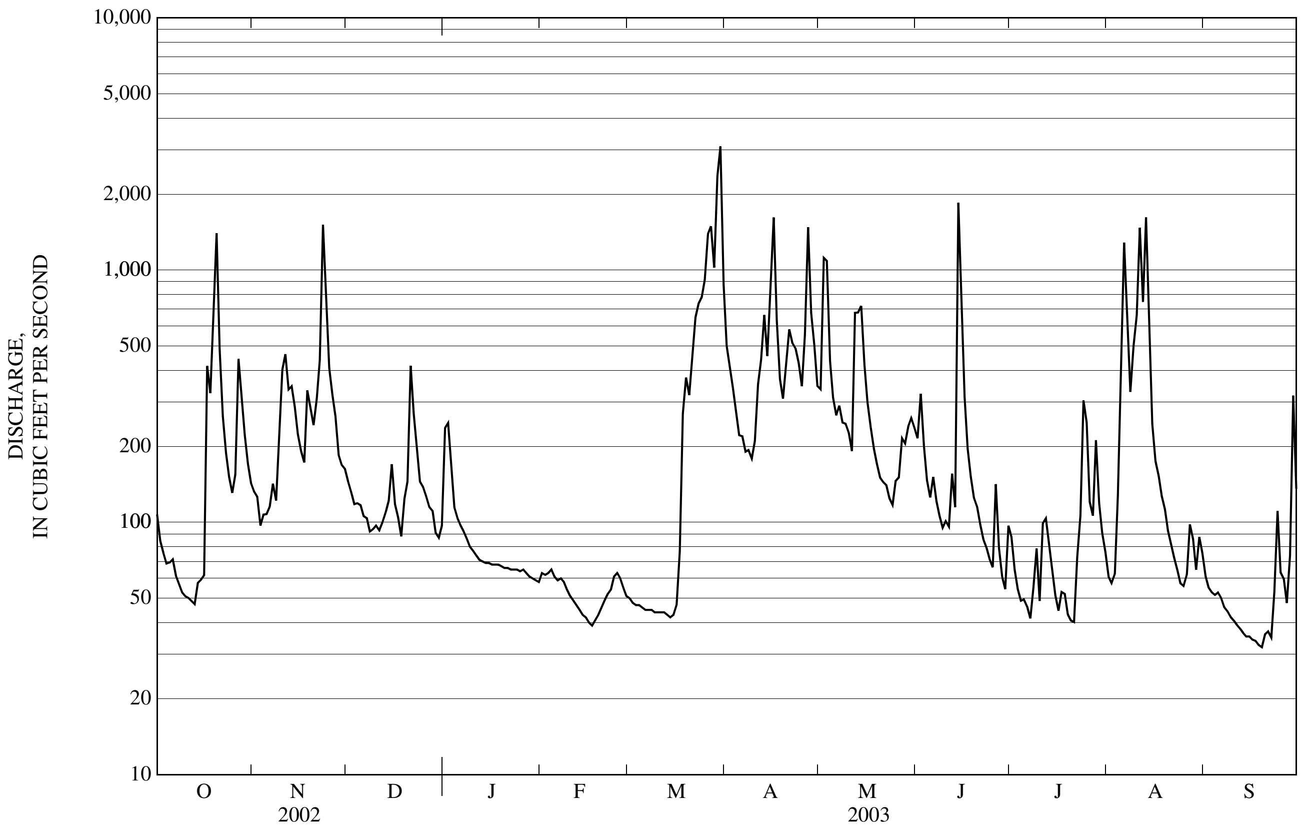
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	217	285	226	166	140	376	878	418	197	120	112	132
MAX	653	630	585	661	796	1,225	1,522	991	932	412	454	421
(WY)	(1946)	(1960)	(1974)	(1998)	(1981)	(1936)	(1933)	(1940)	(2002)	(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)

04293000 MISSISQUOI RIVER NEAR NORTH TROY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	128,935		85,275			
ANNUAL MEAN	353		234		272	
HIGHEST ANNUAL MEAN					385	1974
LOWEST ANNUAL MEAN					168	1965
HIGHEST DAILY MEAN	8,330	Jun 12	3,100	Mar 30	8,330	Jun 12, 2002
LOWEST DAILY MEAN	22	Sep 10	32	Sep 19	11	Aug 28, 1949
ANNUAL SEVEN-DAY MINIMUM	26	Sep 4	34	Sep 13	15	Aug 22, 1934
MAXIMUM PEAK FLOW			4,350	Mar 30	11,500	Jun 12, 2002
MAXIMUM PEAK STAGE			8.85	Mar 30	14.55	Jun 12, 2002
INSTANTANEOUS LOW FLOW			a 32	Sep 18	9.4	Aug 28, 1949
ANNUAL RUNOFF (CFSM)	2.70		1.78		2.08	
ANNUAL RUNOFF (INCHES)	36.61		24.22		28.22	
10 PERCENT EXCEEDS	826		530		631	
50 PERCENT EXCEEDS	163		108		127	
90 PERCENT EXCEEDS	50		45		46	

a Also occurred on Sept. 19, 20
e Estimated



04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT

LOCATION.--Lat 44° 57'36", long 72° 41'49", Franklin County, Hydrologic Unit 02010007, on left bank, 0.4 mi upstream of State Highway 105 bridge, 1.9 mi north of intersection of State Highways 105 and 118 in East Berkshire, 1.9 mi upstream from Trout River, 2.6 mi southwest of Town Hall in Richford, and 3.6 mi downstream from North Branch.

DRAINAGE AREA.--479 mi^2.

PERIOD OF RECORD.--Discharge records: July 1911 to September 1923, October 1928 to current year. Monthly discharge only for July 1911 to July 1915, September 1916, March 1920 to July 1920, March 1921 to July 1921, published in WSP 1307. Prior to October 1977, published as "near Richford."

REVISED RECORDS.--WSP 784: Drainage area. WSP 1237: 1913-14(M), 1922(M), 1923, 1929-30. WSP 1307: 1916(M). WSP 1437: 1912.

GAGE.--Water-stage recorder. Elevation of gage is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map. Prior to 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^3/s during flood of November 1927, gage height, 23.1 ft, from floodmarks, from rating curve extended above 14,100 ft^3/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^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 29	2300	*9,940	*11.28	No other peaks greater than base discharge.			

Minimum daily discharge, e 80 ft^3/s, Sept. 17-22.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	592	546	e700	e1,200	e275	e250	3,140	1,290	797	286	152	160
2	421	539	e670	e1,120	e290	e245	2,090	2,280	1,030	231	130	137
3	320	466	e630	e940	e290	e235	1,490	3,440	824	196	192	123
4	263	410	e550	e740	e315	e235	1,170	2,120	595	172	221	121
5	238	419	e520	e585	e290	e230	944	1,350	486	154	944	119
6	230	466	e500	e510	e280	e225	819	1,080	487	144	2,790	112
7	210	562	e475	e445	e275	e225	795	1,190	457	135	2,650	106
8	182	520	e445	e415	e265	e220	781	1,070	391	134	1,140	101
9	164	637	e415	e395	e255	e225	700	1,000	367	145	1,470	96
10	155	1,010	e425	e375	e250	e225	752	997	369	153	1,270	89
11	148	1,270	e430	e350	e250	e225	1,170	878	376	186	3,210	86
12	149	1,120	e425	e340	e255	e220	1,420	2,230	512	351	2,910	83
13	142	1,000	e475	e330	e250	e215	1,850	3,040	466	242	2,260	e82
14	171	997	e520	e325	e245	e210	1,700	2,970	4,600	192	2,220	e82
15	162	859	e840	e320	e235	e210	1,890	2,440	4,280	155	919	e81
16	173	848	e790	e320	e230	e245	3,700	1,590	1,920	133	600	e81
17	944	767	e530	e325	e230	e360	3,410	1,160	1,040	178	483	e80
18	1,330	1,030	e440	e325	e225	e820	2,030	939	731	152	399	e80
19	1,830	1,080	e460	e330	e225	e1,260	1,400	788	574	125	326	e80
20	3,790	956	e625	e330	e240	e975	1,310	676	493	110	277	e80
21	2,520	1,100	e1,840	e310	e250	e2,570	1,510	603	416	101	235	e80
22	1,360	1,500	e1,570	e305	e255	e3,700	1,460	573	347	120	206	e80
23	947	3,320	e1,190	e300	e265	e3,230	1,660	500	304	178	180	e81
24	710	3,410	e850	e295	e280	e3,600	1,760	451	267	284	160	130
25	572	1,840	e700	e290	e290	e4,000	1,620	540	231	490	148	184
26	588	1,340	e640	e280	e280	e5,180	1,990	553	403	367	146	149
27	1,030	1,110	e590	e280	e260	5,920	3,700	564	357	238	159	124
28	1,070	e865	e540	e280	e255	4,590	3,380	601	232	368	177	130
29	855	e775	e495	e285	---	6,260	2,350	617	190	349	166	451
30	704	e740	e435	e285	---	7,950	1,660	1,070	250	226	166	484
31	602	---	e480	e275	---	6,100	---	933	---	180	181	---
TOTAL	22,572	31,502	20,195	13,205	7,305	60,155	53,651	39,533	23,792	6,475	26,487	3,872
MEAN	728	1,050	651	426	261	1,940	1,788	1,275	793	209	854	129
MAX	3,790	3,410	1,840	1,200	315	7,950	3,700	3,440	4,600	490	3,210	484
MIN	142	410	415	275	225	210	700	451	190	101	130	80
CFSM	1.52	2.19	1.36	0.89	0.54	4.05	3.73	2.66	1.66	0.44	1.78	0.27
IN.	1.75	2.45	1.57	1.03	0.57	4.67	4.17	3.07	1.85	0.50	2.06	0.30

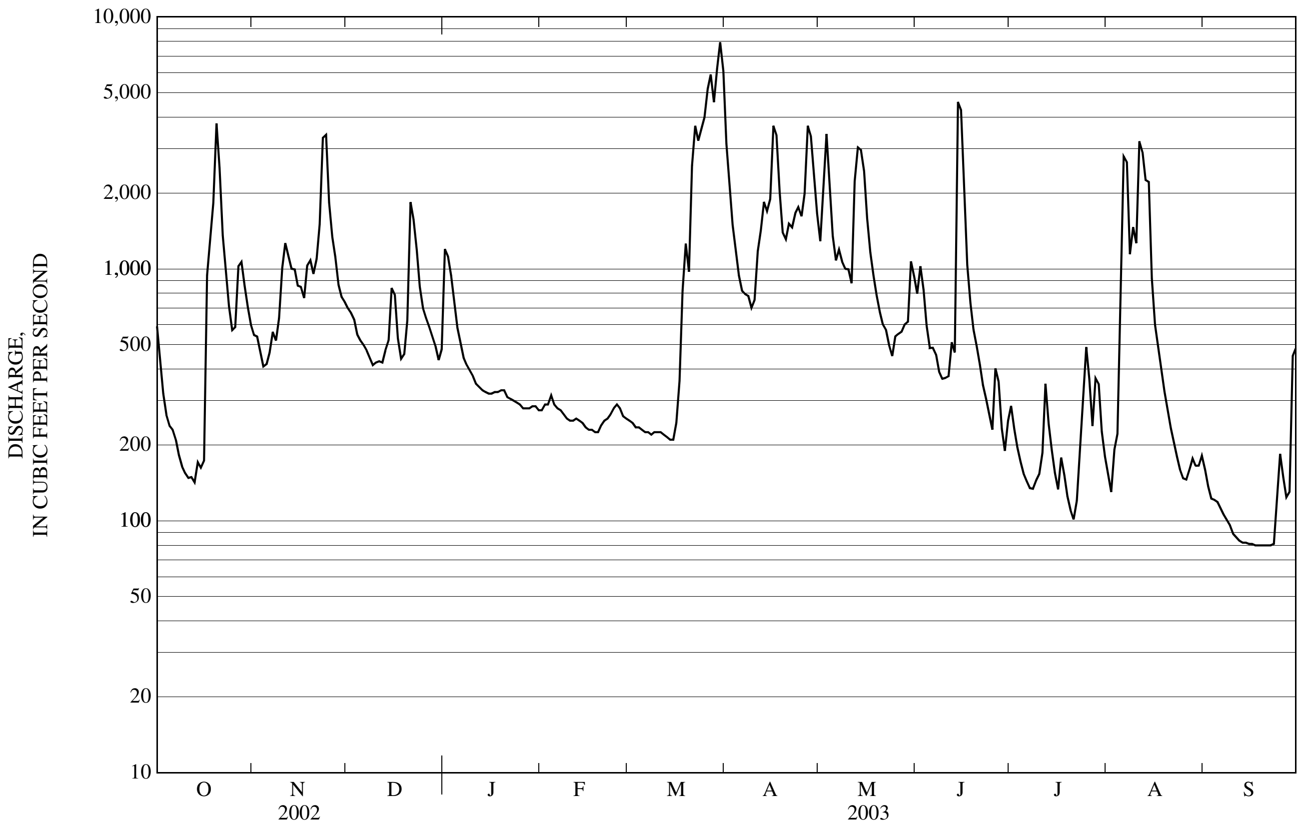
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1915 - 23, 1929 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	766	1,024	844	649	518	1,367	2,968	1,310	690	412	351	409
MAX	2,295	2,385	2,330	2,284	2,439	4,013	4,882	3,187	2,509	1,671	1,528	1,365
(WY)	(1978)	(1984)	(1984)	(1998)	(1981)	(1936)	(1969)	(1940)	(2002)	(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)

04293500 MISSISQUOI RIVER NEAR EAST BERKSHIRE, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1915 - 23, 1929 - 2003	
ANNUAL TOTAL	396,041		308,744			
ANNUAL MEAN	1,085		846		941	
HIGHEST ANNUAL MEAN					1,415	1974
LOWEST ANNUAL MEAN					580	1965
HIGHEST DAILY MEAN	12,700	Jun 13	7,950	Mar 30	18,200	Mar 31, 1998
LOWEST DAILY MEAN	e 55	Sep 10	ae 80	Sep 17	28	Aug 20, 1919
ANNUAL SEVEN-DAY MINIMUM	59	Sep 4	80	Sep 16	39	Aug 22, 1934
MAXIMUM PEAK FLOW			9,940	Mar 29	21,200	Apr 18, 1982
MAXIMUM PEAK STAGE			11.28	Mar 29	b 18.92	Mar 15, 1946
INSTANTANEOUS LOW FLOW			c		8.0	Jul 14, 1911
ANNUAL RUNOFF (CFSM)	2.27		1.77		1.96	
ANNUAL RUNOFF (INCHES)	30.76		23.98		26.68	
10 PERCENT EXCEEDS	2,800		2,100		2,240	
50 PERCENT EXCEEDS	674		445		468	
90 PERCENT EXCEEDS	146		146		145	

a Also occurred on Sept. 18-22
b Ice jam
c Not determined
e Estimated



04294000 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 Highway 78 and Interstate 89 interchange, and 7.9 mi upstream of mouth.

DRAINAGE AREA.--850 mi^2.

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 National Geodetic Vertical Datum of 1929, 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 power plants upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 26	0830	Ice Jam	*6.13	Mar 30	0630	*16,100	5.67

Minimum daily discharge, 118 ft^3/s, Sept. 14.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	983	941	e1,130	e1,700	346	e378	4,490	2,320	1,540	571	310	258
2	726	747	e1,080	e1,910	390	e370	3,960	3,410	2,370	463	290	236
3	610	753	835	e1,580	297	e383	2,990	6,020	1,770	312	222	213
4	602	777	648	e1,260	447	353	2,350	4,260	1,210	308	307	182
5	261	636	818	e960	399	e370	1,940	2,650	1,070	376	686	169
6	364	762	e818	e760	452	e339	1,520	2,050	797	250	2,970	167
7	443	1,000	e850	e690	450	e362	1,430	2,120	821	270	3,960	190
8	399	854	e785	e610	395	e363	1,510	2,060	701	279	2,300	181
9	272	772	e710	576	294	327	1,470	1,780	695	302	1,620	315
10	274	1,340	e715	508	399	e340	1,440	1,730	700	285	1,980	123
11	306	1,830	657	479	353	e362	1,950	1,550	516	306	3,980	129
12	248	1,870	e758	e558	373	e356	2,400	3,660	773	466	4,960	173
13	247	1,600	757	e542	361	e258	2,950	6,020	883	547	3,350	139
14	251	1,650	841	e531	e364	e285	2,960	5,690	5,940	465	2,990	118
15	246	1,470	e1,340	e513	e347	e332	2,690	4,770	7,400	368	1,820	120
16	526	1,130	e1,250	e538	e317	329	5,220	3,150	4,100	312	898	129
17	1,560	1,200	e945	e546	e299	e541	5,430	2,200	2,000	262	608	136
18	3,080	1,710	676	e594	291	e1,390	3,560	1,800	1,590	225	646	133
19	2,620	1,940	734	460	261	e1,900	2,390	1,570	949	240	414	125
20	6,980	1,890	e1,060	470	276	e2,230	2,180	1,270	849	245	390	122
21	5,000	2,180	e2,680	e538	264	e4,160	2,610	1,110	770	290	344	140
22	2,840	3,120	e2,610	e535	282	e6,590	2,550	1,050	636	228	373	144
23	1,950	6,220	e2,010	e547	362	e5,400	3,170	937	554	267	280	149
24	1,240	6,560	e1,460	e532	461	e4,700	3,640	708	467	474	241	153
25	1,230	4,350	e1,200	e521	e485	e5,800	3,320	971	532	860	220	155
26	846	2,760	e1,070	e479	e461	e9,080	3,540	1,250	394	475	223	229
27	1,810	e1,970	891	e502	e407	10,400	7,120	1,110	619	456	286	230
28	1,790	e1,470	e889	e512	e387	8,140	6,300	1,130	417	626	300	228
29	1,600	e1,270	e797	446	---	8,700	4,340	1,360	393	503	301	693
30	1,150	e1,210	e708	360	---	13,700	3,140	1,700	379	577	360	634
31	920	---	e811	370	---	9,690	---	1,900	---	457	234	---
TOTAL	41,374	55,982	32,533	21,127	10,220	97,928	94,560	73,306	41,835	12,065	37,863	6,113
MEAN	1,335	1,866	1,049	682	365	3,159	3,152	2,365	1,394	389	1,221	204
MAX	6,980	6,560	2,680	1,910	485	13,700	7,120	6,020	7,400	860	4,960	693
MIN	246	636	648	360	261	258	1,430	708	379	225	220	118

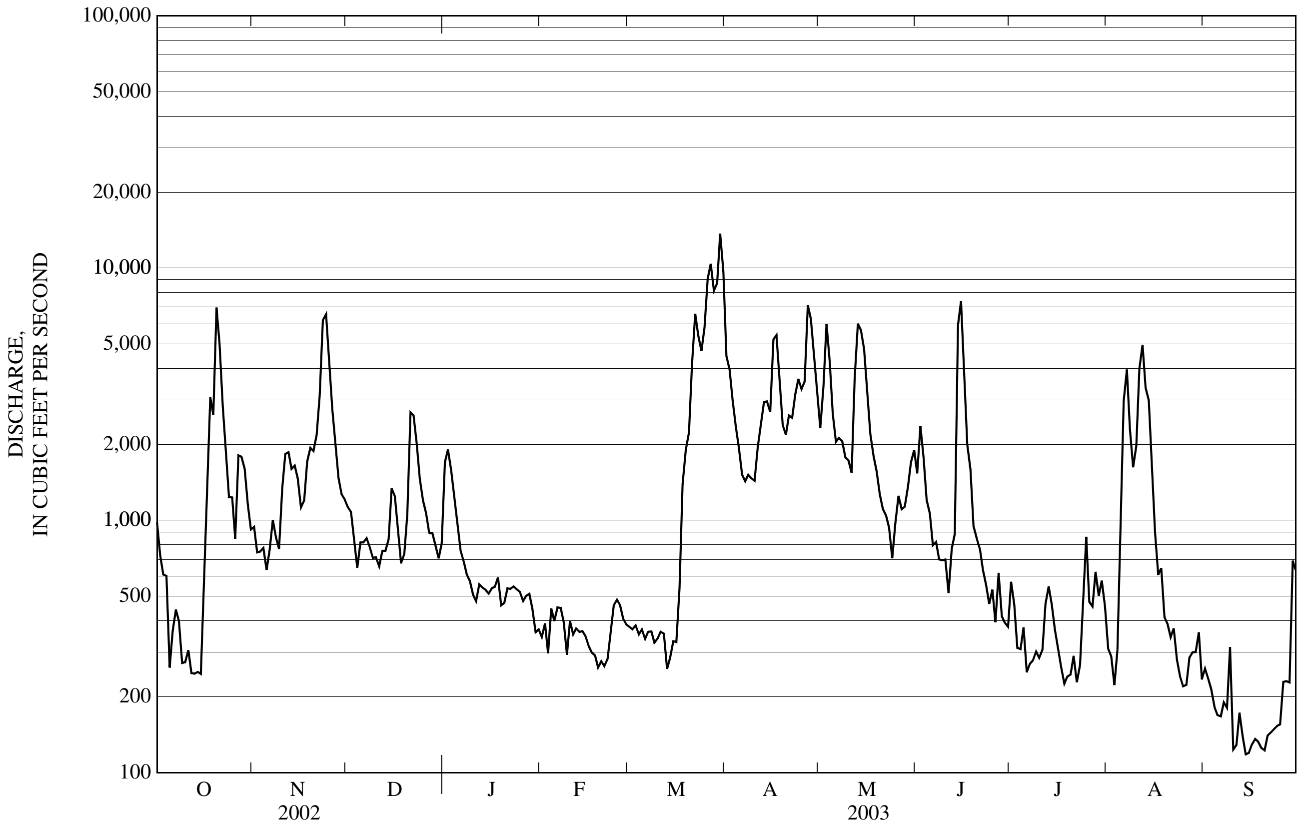
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1,350	1,801	1,447	1,457	907	2,715	4,774	2,027	1,228	881	582	576
MAX	2,507	3,082	3,894	4,324	1,670	5,220	7,078	3,920	5,243	2,042	1,221	1,512
(WY)	(1991)	(1996)	(1997)	(1998)	(1996)	(2000)	(1993)	(2000)	(2002)	(1997)	(2003)	(1999)
MIN	295	745	596	429	317	676	1,527	629	363	148	185	165
(WY)	(1995)	(2002)	(1993)	(1994)	(1993)	(2001)	(1995)	(1998)	(1999)	(1991)	(2001)	(1995)

04294000 MISSISQUOI RIVER AT SWANTON, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1990 - 2003	
ANNUAL TOTAL	745,710		524,906			
ANNUAL MEAN	2,043		1,438		1,635	
HIGHEST ANNUAL MEAN					2,258	2000
LOWEST ANNUAL MEAN					1,137	1999
HIGHEST DAILY MEAN	23,100	Jun 13	13,700	Mar 30	29,500	Jan 9, 1998
LOWEST DAILY MEAN	82	Sep 10	118	Sep 14	33	Sep 7, 1999
ANNUAL SEVEN-DAY MINIMUM	98	Sep 1	126	Sep 14	70	Sep 2, 1999
MAXIMUM PEAK FLOW			16,100	Mar 30	37,700	Jan 20, 1996
MAXIMUM PEAK STAGE			a 6.13	Mar 26	9.50	Jan 20, 1996
10 PERCENT EXCEEDS	5,610		3,590		4,040	
50 PERCENT EXCEEDS	1,200		708		785	
90 PERCENT EXCEEDS	244		247		225	

a Ice jam
e Estimated



04294300 PIKE RIVER AT EAST FRANKLIN, NEAR ENOSBURG FALLS, VT

LOCATION.--Lat 45° 00'10", long 72° 50'08", Franklin County, Hydrologic Unit 02010007, on left bank, 200 ft downstream from unnamed left bank tributary from Lake Carmi, 0.5 mi north of Scott Road and State Highway 120 intersection in East Franklin, 1.0 mi upstream from the US and Canada Border, 1.4 mi northwest of State Highway 108 and Berkshire Road intersection in West Berkshire, 1.6 mi northeast of Lake Carmi outlet, and 6.8 mi north of Town Hall in Enosburg Falls.

DRAINAGE AREA.--34.5 mi^2.

PERIOD OF RECORD.--Discharge records: August 2001 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 400 ft above National Geodetic Vertical Datum of 1929, 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 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 22	0345	ice jam	*3.94	Mar 30	0645	602	3.74
Mar 26	1715	501	3.54	Jun 14	1845	*688	3.90

Minimum discharge, 0.86 ft^3/s, Sept. 19, 21, 22, 23.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	37	e33	e67	e13	e10	135	71	59	12	3.2	3.2
2	24	37	e33	e50	e13	e10	120	137	70	11	3.3	2.9
3	21	32	e29	e40	e14	e10	112	143	45	9.4	3.7	2.6
4	18	30	e25	e31	e14	e9.0	100	87	35	8.4	4.4	2.5
5	19	33	e24	e27	e13	e9.0	87	72	30	7.6	10	2.5
6	17	39	e22	e24	e12	e9.0	87	66	30	7.0	18	2.6
7	17	48	e21	e21	e12	e9.0	79	100	25	6.2	18	2.5
8	14	36	e21	e20	e11	e9.0	81	82	22	6.2	13	2.3
9	12	41	e20	e19	e11	e9.0	78	82	20	6.0	16	1.9
10	12	42	e20	e18	e11	e9.0	91	72	18	5.5	45	1.5
11	12	39	e19	e17	e11	e9.0	105	62	e20	10	111	1.6
12	11	33	e20	e17	e11	e8.0	97	151	e35	11	38	1.5
13	11	42	e22	e16	e10	e8.0	86	195	27	8.2	24	1.4
14	13	41	e30	e16	e10	e8.0	69	133	454	7.2	17	1.4
15	12	41	e44	e16	e9.0	e9.0	67	102	267	6.3	14	1.2
16	17	46	e31	e17	e9.0	e12	99	80	e90	5.9	12	1.6
17	108	43	e22	e18	e9.0	e20	81	68	e60	6.1	10	1.4
18	101	e52	e20	e18	e9.0	e40	64	59	e54	5.7	8.8	1.1
19	141	62	e23	e18	e9.0	e51	59	52	46	4.7	7.2	0.99
20	312	70	e49	e18	e10	e60	57	45	42	4.3	6.5	1.1
21	118	93	e99	e15	e10	e185	53	44	37	4.1	5.8	0.96
22	71	139	e59	e15	e10	e234	61	41	32	7.3	5.6	0.93
23	56	252	e48	e15	e11	e171	100	36	29	8.3	5.1	1.6
24	48	158	e35	e14	e12	e203	135	33	26	9.3	4.2	2.3
25	43	101	e32	e14	e12	e261	124	47	23	7.1	4.2	2.2
26	54	88	e30	e13	e13	e334	163	43	21	5.4	4.2	2.0
27	74	78	e28	e13	e11	318	229	45	19	6.3	4.8	1.9
28	58	e42	e26	e14	e10	197	116	49	16	13	4.3	4.5
29	47	e39	e23	e15	---	288	85	50	14	8.1	3.9	11
30	41	e36	e22	e14	---	463	70	76	14	7.4	4.3	6.1
31	37	---	e35	e13	---	180	---	56	---	6.4	3.6	---
TOTAL	1,568	1,870	965	643	310.0	3,152.0	2,890	2,379	1,680	231.4	433.1	71.28
MEAN	50.6	62.3	31.1	20.7	11.1	102	96.3	76.7	56.0	7.46	14.0	2.38
MAX	312	252	99	67	14	463	229	195	454	13	111	11
MIN	11	30	19	13	9.0	8.0	53	33	14	4.1	3.2	0.93
CFSM	1.47	1.81	0.90	0.60	0.32	2.95	2.79	2.22	1.62	0.22	0.40	0.07
IN.	1.69	2.02	1.04	0.69	0.33	3.40	3.12	2.57	1.81	0.25	0.47	0.08

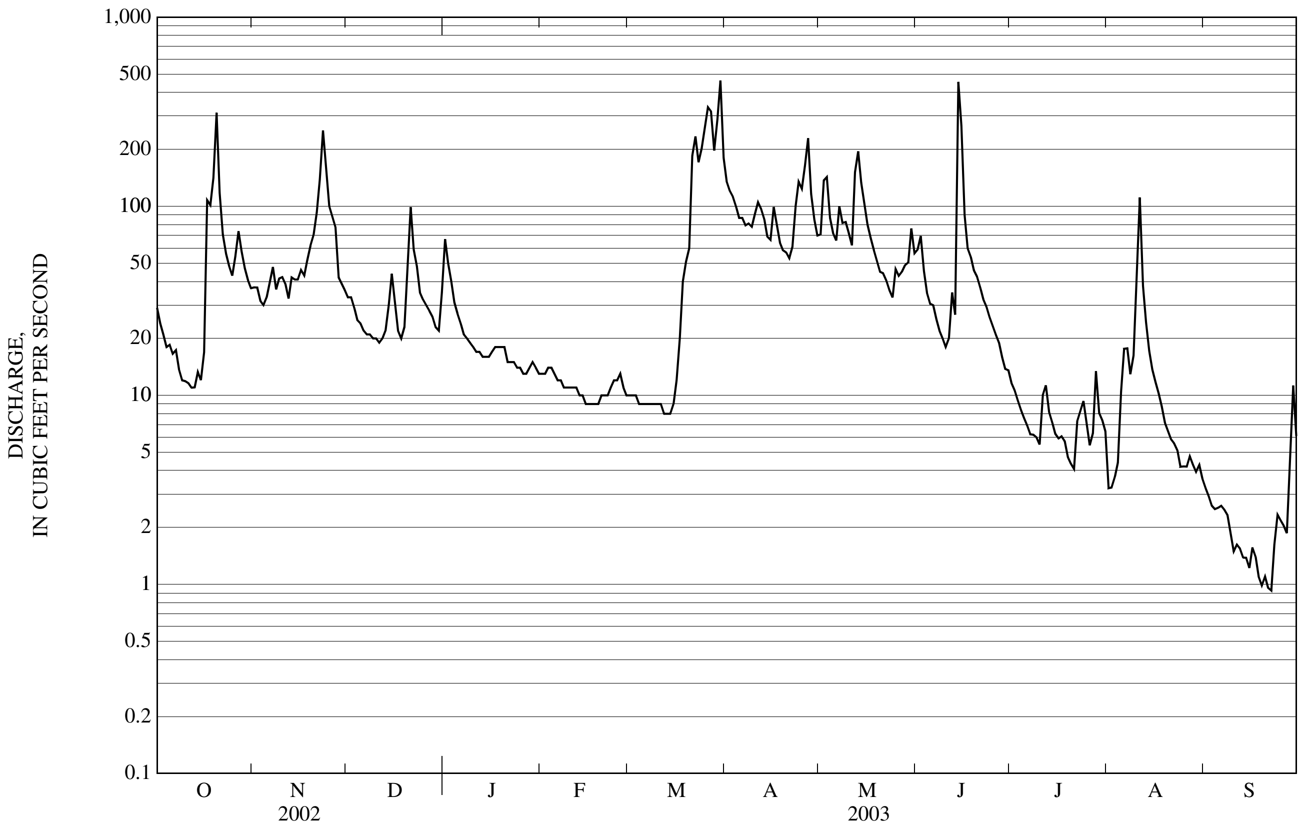
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.9	39.5	26.3	18.3	16.3	92.0	96.7	78.2	113	22.0	11.5	10.7
MAX	50.6	62.3	31.1	20.7	21.6	102	97.0	79.6	170	36.5	14.0	25.8
(WY)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)
MIN	5.21	16.6	21.5	15.8	11.1	82.4	96.3	76.7	56.0	7.46	9.08	2.38
(WY)	(2002)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2002)	(2003)

04294300 PIKE RIVER AT EAST FRANKLIN, NEAR ENOSBURG FALLS, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	20,710.1		16,192.78			
ANNUAL MEAN	56.7		44.4		46.3	
HIGHEST ANNUAL MEAN					48.3	2002
LOWEST ANNUAL MEAN					44.4	2003
HIGHEST DAILY MEAN	1,300	Jun 12	463	Mar 30	1,300	Jun 12, 2002
LOWEST DAILY MEAN	1.0	Sep 10	0.93	Sep 22	0.52	Aug 16, 2001
ANNUAL SEVEN-DAY MINIMUM	1.4	Sep 4	1.2	Sep 16	0.69	Aug 13, 2001
MAXIMUM PEAK FLOW			688	Jun 14	2,120	Jun 12, 2002
MAXIMUM PEAK STAGE			a 3.94	Mar 22	5.91	Jun 12, 2002
INSTANTANEOUS LOW FLOW			b 0.86	Sep 19	0.42	Aug 16, 2001
ANNUAL RUNOFF (CFSM)	1.64		1.29		1.34	
ANNUAL RUNOFF (INCHES)	22.33		17.46		18.25	
10 PERCENT EXCEEDS	117		101		108	
50 PERCENT EXCEEDS	36		21		22	
90 PERCENT EXCEEDS	8.7		4.3		5.4	

a Ice jam
b Also occurred on Sept. 21-23
e Estimated



04294500 LAKE CHAMPLAIN AT BURLINGTON, VT

LOCATION.--Lat 44° 29'02", long 73° 13'32" (revised), Chittenden County, Hydrologic Unit 02010003, 50 ft south of Gulf Oil Co. dock, 0.1 mi north of Burlington Water Department pumping station, 0.5 mi north of railroad station, and 0.6 mi northwest of City Hall in Burlington.

PERIOD OF RECORD.--May 1907 to current year (daily gage heights prior to October 2000, elevations thereafter).

REVISED RECORDS.--WSP 684: 1912-29 (datum correction). WSP 1207: 1938 (datum correction).

GAGE.--Water-stage recorder. Datum of gage is at National Geodetic Vertical Datum of 1929. 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. Prior to October 2000, datum 92.86 ft higher.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 101.86 ft, April 27, 1993; minimum observed, 92.61 ft, December 4, 1908.

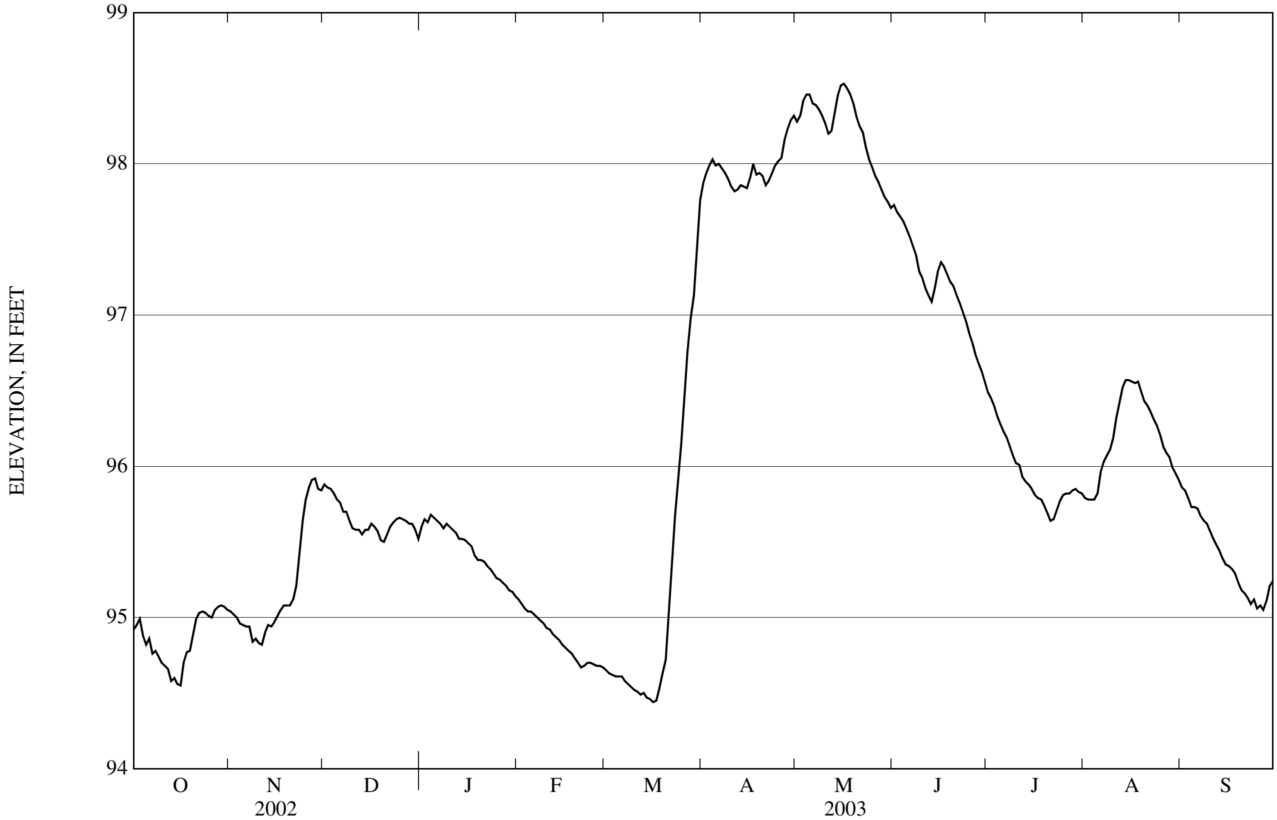
EXTREMES FOR CURRENT YEAR.--Maximum elevation, 98.55 ft, May 15, 16; minimum elevation, 94.41 ft, Mar. 15, 16, 17.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94.92	95.04	95.88	95.60	95.12	94.65	97.87	98.28	97.73	96.49	95.79	95.86
2	94.95	95.02	95.86	95.65	95.09	94.63	97.94	98.32	97.68	96.45	95.78	95.84
3	94.99	95.00	95.85	95.63	95.06	94.62	97.99	98.42	97.65	96.40	95.78	95.79
4	94.88	94.96	95.82	95.68	95.04	94.61	98.03	98.46	97.62	96.33	95.78	95.73
5	94.82	94.95	95.78	95.66	95.04	94.61	97.99	98.46	97.57	96.28	95.82	95.73
6	94.86	94.94	95.76	95.64	95.02	94.61	98.00	98.40	97.52	96.23	95.96	95.72
7	94.76	94.94	95.70	95.62	95.00	94.58	97.97	98.39	97.46	96.19	96.03	95.67
8	94.78	94.84	95.70	95.59	94.98	94.56	97.94	98.36	97.40	96.13	96.07	95.64
9	94.74	94.86	95.64	95.62	94.96	94.54	97.90	98.32	97.29	96.07	96.11	95.62
10	94.70	94.83	95.59	95.60	94.93	94.52	97.85	98.27	97.25	96.02	96.19	95.57
11	94.68	94.82	95.58	95.58	94.92	94.51	97.82	98.20	97.18	96.01	96.32	95.52
12	94.66	94.90	95.58	95.56	94.89	94.49	97.83	98.22	97.13	95.93	96.42	95.48
13	94.58	94.95	95.55	95.52	94.87	94.50	97.86	98.34	97.09	95.90	96.52	95.44
14	94.60	94.94	95.58	95.52	94.85	94.47	97.85	98.45	97.18	95.88	96.57	95.39
15	94.56	94.97	95.58	95.51	94.82	94.46	97.84	98.52	97.29	95.85	96.57	95.35
16	94.55	95.01	95.62	95.49	94.80	94.44	97.91	98.53	97.35	95.81	96.56	95.34
17	94.70	95.05	95.60	95.47	94.78	94.45	98.00	98.50	97.32	95.79	96.55	95.32
18	94.77	95.08	95.57	95.41	94.76	94.53	97.93	98.46	97.27	95.78	96.56	95.29
19	94.78	95.08	95.51	95.38	94.73	94.63	97.94	98.40	97.22	95.74	96.49	95.23
20	94.89	95.08	95.50	95.38	94.70	94.72	97.92	98.31	97.19	95.69	96.43	95.18
21	94.99	95.12	95.55	95.37	94.67	95.00	97.86	98.25	97.13	95.64	96.40	95.16
22	95.03	95.21	95.60	95.34	94.68	95.34	97.89	98.21	97.08	95.65	96.36	95.13
23	95.04	95.41	95.63	95.32	94.70	95.67	97.94	98.11	97.02	95.71	96.31	95.09
24	95.03	95.64	95.65	95.29	94.70	95.93	97.99	98.03	96.96	95.77	96.27	95.12
25	95.01	95.78	95.66	95.26	94.69	96.15	98.02	97.98	96.88	95.81	96.21	95.06
26	95.00	95.86	95.65	95.25	94.68	96.44	98.04	97.92	96.82	95.82	96.13	95.08
27	95.05	95.91	95.64	95.23	94.68	96.76	98.16	97.88	96.74	95.82	96.09	95.05
28	95.07	95.92	95.62	95.21	94.67	96.98	98.23	97.83	96.68	95.84	96.06	95.11
29	95.08	95.85	95.62	95.18	---	97.13	98.29	97.78	96.63	95.85	95.99	95.21
30	95.07	95.84	95.58	95.17	---	97.45	98.32	97.75	96.56	95.83	95.95	95.24
31	95.05	---	95.52	95.14	---	97.76	---	97.71	---	95.82	95.91	---
MEAN	94.86	95.19	95.64	95.45	94.85	95.22	97.97	98.23	97.20	95.95	96.19	95.40
MAX	95.08	95.92	95.88	95.68	95.12	97.76	98.32	98.53	97.73	96.49	96.57	95.86
MIN	94.55	94.82	95.50	95.14	94.67	94.44	97.82	97.71	96.56	95.64	95.78	95.05

CAL YR 2002 MEAN 95.90 MAX 98.81 MIN 93.70
WTR YR 2003 MEAN 96.02 MAX 98.53 MIN 94.44

04294500 LAKE CHAMPLAIN AT BURLINGTON, VT—Continued



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

LOCATION.--Lat 44° 59'46", long 73° 21'37", Clinton County, Hydrologic Unit 02010006, on left bank at outlet of Lake Champlain in Rouses Point, and 1.0 mi south of Fort Montgomery ruins.

DRAINAGE AREA.--8,277 mi^2.

PERIOD OF RECORD.--October 1863 to December 1870 (maximum and minimum monthly gage heights at St. Johns, Quebec, published in WSP 97) and March 1871 to current year (daily gage heights prior to October 1970, elevations thereafter: those for 1871-1907 published in WSP 894). Gage heights prior to October 1, 1925, published as "Richelieu River at Fort Montgomery, Rouses Point". Discharge records for January 1875 to September 1916 at "Chambly, Quebec," published in WSP 65, 82, 97, 129, 170, 206, 424, and 1307 have been found to be unreliable and should not be used. Daily discharge record for "Richelieu River at Fryers Rapids, Quebec," published in Water Survey of Canada annual reports.

GAGE.--Water-stage recorder. Datum of gage is NGVD of 1929. March 1871 to May 1923, nonrecording gage located in Fort Montgomery and May 1923 to October 1938, nonrecording gage at present site. Prior to October 1970, at datum 93.00 ft higher.

REMARKS.--Area of lake surface about 490 mi^2. Total volume below 92.5 ft elevation, reported by Lake Champlain Studies Center, 902.2 bil ft^3. Telephone gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation observed, 101.88 ft, Apr. 25, 1993; minimum observed, 92.17 ft, Oct. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since at least 1827, 102.1 ft, May 4, 1869, from marks at railroad bridge near present gage, according to data published on p. 428 of the Report of the Board of Engineers on Deep Waterways, 1900: U.S. 56th Cong., 2d sess. H. Doc. 149.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 98.62 ft, May 6, affected by seiche; minimum, 94.22 ft, Oct. 16, affected by seiche.

ELEVATION ABOVE NGVD 1929, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95.10	94.98	95.83	95.45	95.08	94.63	97.85	98.29	97.54	96.51	95.84	95.92
2	94.99	94.97	95.86	95.41	95.04	94.62	97.89	98.18	97.62	96.45	95.78	95.79
3	94.88	94.97	95.75	95.59	95.03	94.58	97.91	98.32	97.61	96.43	95.77	95.89
4	95.37	95.00	95.81	95.54	95.05	94.61	97.91	98.43	97.56	96.38	95.83	95.82
5	94.97	94.91	95.82	95.65	95.01	94.57	98.02	98.43	97.52	96.31	95.83	95.70
6	94.89	94.96	95.78	95.62	95.01	94.57	97.92	98.49	97.48	96.21	95.98	95.70
7	95.05	94.83	95.89	95.62	94.97	94.58	97.90	98.32	97.43	96.16	96.04	95.65
8	94.73	95.15	95.66	95.62	94.99	94.55	97.89	98.30	97.40	96.16	96.06	95.58
9	94.81	94.92	95.79	95.55	94.95	94.51	97.85	98.21	97.44	96.03	96.06	95.53
10	94.76	95.03	95.75	95.57	94.93	94.52	97.82	98.20	97.20	95.99	96.18	95.54
11	94.72	94.94	95.60	95.55	94.87	94.51	97.81	98.19	97.22	96.17	96.33	95.51
12	94.72	94.87	95.56	95.54	94.87	94.48	97.75	98.23	97.09	96.10	96.38	95.50
13	94.83	94.90	95.58	95.57	94.83	94.45	97.79	98.26	97.08	95.97	96.47	95.47
14	94.55	95.05	95.46	95.49	94.82	94.45	97.88	98.39	97.18	95.93	96.53	95.47
15	94.63	94.88	95.55	95.49	94.79	94.43	97.84	98.47	97.25	95.90	96.61	95.46
16	94.53	94.89	95.45	95.48	94.77	94.42	97.74	98.50	97.31	95.93	96.54	95.34
17	94.69	94.88	95.53	95.40	94.74	94.42	97.85	98.46	97.34	95.83	96.48	95.28
18	94.77	95.04	95.57	95.46	94.72	94.48	98.10	98.41	97.34	95.73	96.45	95.26
19	95.01	95.21	95.61	95.43	94.71	94.60	97.92	98.35	97.23	95.72	96.49	95.36
20	94.87	95.20	95.55	95.37	94.69	94.75	97.94	98.33	97.15	95.73	96.48	95.21
21	94.95	95.26	95.59	95.32	94.66	94.98	97.96	98.15	97.11	95.75	96.44	95.13
22	95.00	95.16	95.63	95.31	94.63	95.32	97.88	98.08	97.04	95.71	96.38	95.18
23	94.99	95.30	95.66	95.28	94.66	95.66	97.88	98.06	96.99	95.67	96.22	95.25
24	94.99	95.61	95.60	95.26	94.67	95.93	97.86	97.97	96.94	95.71	96.13	95.21
25	95.00	95.75	95.54	95.27	94.67	96.17	97.94	97.94	96.90	95.83	96.17	95.33
26	95.12	95.80	95.55	95.23	94.67	96.42	97.99	97.89	96.84	95.91	96.19	95.09
27	95.02	95.82	95.64	95.19	94.65	96.73	98.09	97.84	96.75	95.90	96.05	95.24
28	95.01	95.89	95.65	95.20	94.64	96.98	98.28	97.80	96.70	95.82	95.97	95.12
29	94.98	96.18	95.56	95.17	---	97.15	98.19	97.77	96.67	95.82	96.13	95.23
30	95.00	95.96	95.59	95.14	---	97.38	98.24	97.69	96.58	95.85	95.92	95.27
31	95.03	---	95.74	95.12	---	97.67	---	97.68	---	95.83	95.94	---
MEAN	94.90	95.21	95.65	95.42	94.83	95.20	97.93	98.18	97.18	95.98	96.18	95.43
MAX	95.37	96.18	95.89	95.65	95.08	97.67	98.28	98.50	97.62	96.51	96.61	95.92
MIN	94.53	94.83	95.45	95.12	94.63	94.42	97.74	97.68	96.58	95.67	95.77	95.09

CAL YR 2002 MEAN 95.90 MAX 98.80 MIN 93.64
WTR YR 2003 MEAN 96.01 MAX 98.50 MIN 94.42

04295500 LAKE MEMPHREMAGOG AT NEWPORT, VT

LOCATION.--Lat 44° 56'15", long 72° 12'21", Orleans County, Hydrologic Unit 01110000, 20 ft west of Canadian Pacific Railroad bridge, 200 ft west of US 5 Bridge, 0.3 mi south of US 5 and State Highway 191 intersection, and 0.3 mi northeast of Police Station in Newport.

PERIOD OF RECORD.--Gage heights: May 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 21, 1934, nonrecording gage on Mount Vernon Street bridge, 0.l mi southeast at same datum. July 21, 1934 to August 22, 1961, nonrecording gage on east side of US 5 bridge, and August 23, 1961 to October 18, 1966, on west side of US 5 bridge at same datum.

REMARKS.--Elevation of lake regulated by power plant 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; but may have been lower during period of use of nonrecording gage.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.07 ft, Nov. 27, May 5; minimum gage height, 6.71 ft, Mar. 15, 16, 17.

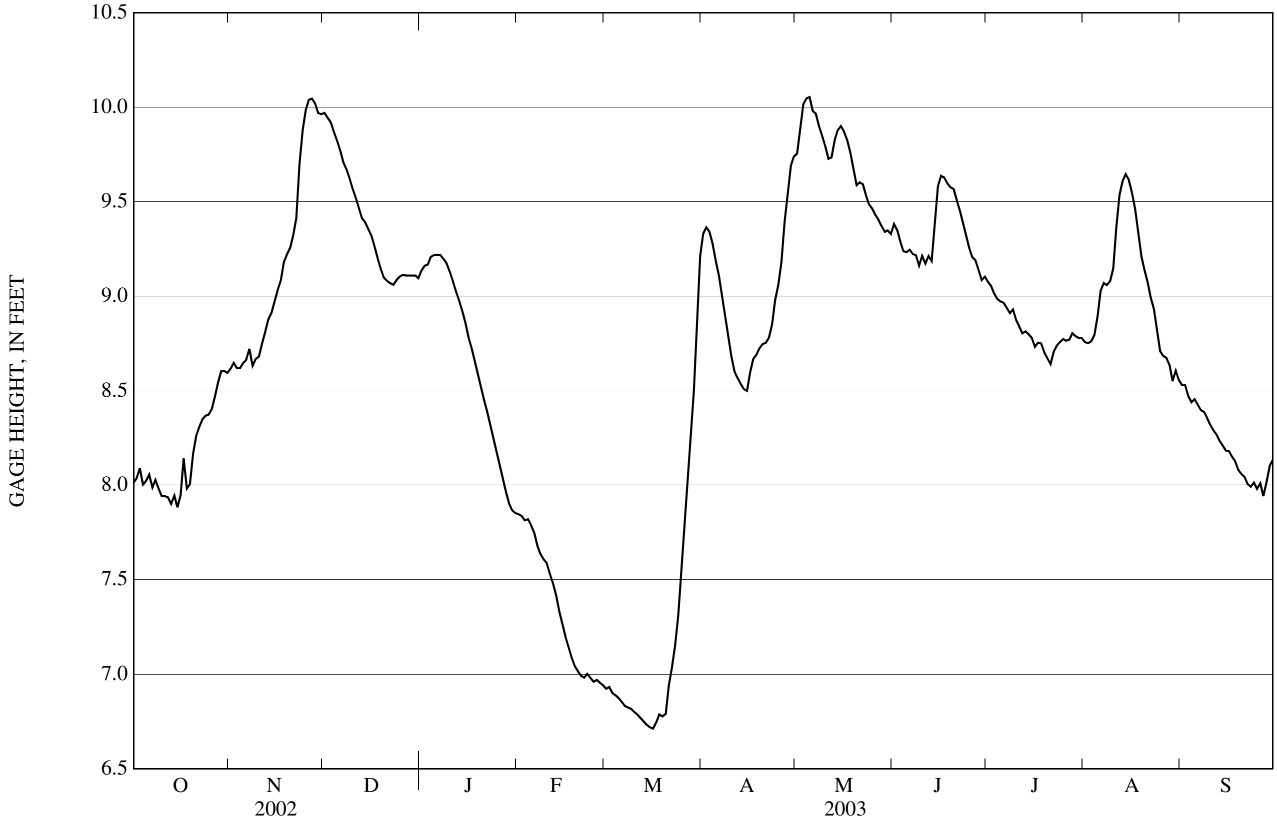
GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.01	8.62	9.97	9.14	7.85	6.92	9.33	9.75	9.38	9.08	8.76	8.53
2	8.04	8.65	9.94	9.16	7.84	6.93	9.36	9.88	9.35	9.05	8.75	8.53
3	8.09	8.62	9.92	9.17	7.81	6.90	9.34	10.02	9.29	9.01	8.76	8.47
4	8.00	8.62	9.87	9.21	7.82	6.89	9.28	10.05	9.24	8.98	8.79	8.44
5	8.02	8.65	9.82	9.22	e7.79	6.87	9.19	10.05	9.23	8.97	8.89	8.46
6	8.06	8.66	9.77	9.22	e7.75	6.85	9.11	9.98	9.25	8.96	9.03	8.43
7	7.99	8.72	9.71	9.22	7.68	6.83	9.00	9.97	9.22	8.94	9.07	8.40
8	8.03	8.63	9.67	9.20	7.64	6.82	8.90	9.90	9.22	8.91	9.06	8.39
9	7.98	8.67	9.63	9.18	7.61	6.82	8.78	9.85	9.16	8.93	9.08	8.36
10	7.94	8.68	9.57	9.13	7.59	6.80	8.68	9.80	9.21	8.88	9.15	8.32
11	7.94	8.75	9.52	9.08	7.53	6.79	8.60	9.73	9.17	8.84	9.36	8.29
12	7.94	8.81	9.47	9.03	7.48	6.77	8.57	9.73	9.21	8.80	9.54	8.27
13	7.90	8.87	9.41	8.98	7.42	6.75	8.54	9.83	9.19	8.81	9.61	8.23
14	7.94	8.91	9.39	8.92	7.34	6.73	8.51	9.88	9.37	8.80	9.65	8.21
15	7.88	8.97	9.36	8.86	7.27	6.72	8.50	9.90	9.58	8.78	9.62	8.18
16	7.95	9.03	9.32	8.78	7.20	6.71	8.60	9.87	9.64	8.73	9.55	8.18
17	8.14	9.08	9.26	8.73	7.14	6.74	8.67	9.83	9.63	8.75	9.46	8.15
18	7.98	9.18	9.20	8.66	7.09	6.79	8.69	9.76	9.60	8.75	9.34	8.13
19	8.01	9.22	9.14	8.58	7.04	6.78	8.72	9.68	9.58	8.70	9.21	8.08
20	8.17	9.25	9.10	8.52	7.01	6.79	8.75	9.59	9.57	8.67	9.14	8.06
21	8.26	9.32	9.08	8.45	6.99	6.94	8.75	9.60	9.51	8.64	9.07	8.04
22	8.31	9.41	9.07	8.39	6.98	7.04	8.78	9.59	9.45	8.71	8.99	8.01
23	8.35	9.70	9.06	8.31	7.00	7.15	8.85	9.54	9.39	8.74	8.93	7.99
24	8.37	9.88	9.09	8.23	6.98	7.31	8.98	9.49	9.33	8.76	8.83	8.01
25	8.37	9.98	9.10	8.17	e6.96	7.49	9.06	9.47	9.26	8.77	8.71	7.98
26	8.40	10.04	9.11	8.09	6.97	7.73	9.18	9.43	9.21	8.76	8.68	8.01
27	8.47	10.05	9.11	8.03	6.95	7.99	9.39	9.40	9.19	8.77	8.67	7.94
28	8.54	10.02	9.11	7.96	6.94	8.24	9.54	9.37	9.14	8.80	8.64	8.02
29	8.60	9.97	9.11	7.90	---	8.50	9.69	9.34	9.09	8.79	8.55	8.10
30	8.60	9.96	9.11	7.87	---	8.89	9.74	9.35	9.10	8.78	8.61	8.13
31	8.59	---	9.10	7.85	---	9.21	---	9.33	---	8.78	8.56	---
MEAN	8.16	9.16	9.39	8.69	7.35	7.18	8.97	9.71	9.33	8.83	9.03	8.21
MAX	8.60	10.05	9.97	9.22	7.85	9.21	9.74	10.05	9.64	9.08	9.65	8.53
MIN	7.88	8.62	9.06	7.85	6.94	6.71	8.50	9.33	9.09	8.64	8.55	7.94

CAL YR	2002	MEAN 8.92	MAX 11.06	MIN 7.33
WTR YR	2003	MEAN 8.67	MAX 10.05	MIN 6.71

e Estimated

04295500 LAKE MEMPHREMAGOG AT NEWPORT, VT—Continued



04296000 BLACK RIVER AT COVENTRY, VT

LOCATION.--Lat 44° 52'08", long 72° 16'14", Orleans County, Hydrologic Unit 01110000, on right bank, 15 ft downstream from Loop Road bridge, 800 ft upstream from Stony Brook, 0.3 mi northwest of Loop Road and Main Street intersection in Coventry, and 4.6 mi north of State Highways 14 and 58 interaction in Irasburg.

DRAINAGE AREA.--122 mi^2.

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

PERIOD OF DAILY WATER-QUALITY RECORD.--Water years 1978 to 1981.
SPECIFIC CONDUCTANCE: November 1977 to March 1979, May and June 1979, and December 1980 to July 1981.
WATER TEMPERATURE: November and December 1977, June to August 1978, May and June 1979, October 1979 to March 1980, May to September 1980, and December 1980 to July 1981.

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation at low flow by mill upstream prior to 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar 30	0900	*1,900	*6.25	No other peak greater than base discharge.			

Minimum discharge, 28 ft^3/s, July 21.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91	90	e143	e160	e72	e56	931	299	170	73	51	54
2	70	87	e135	e195	e70	e55	670	634	197	68	48	47
3	69	86	e125	e170	e70	e55	478	727	163	54	59	44
4	65	70	e117	e125	e68	e53	375	523	124	47	67	44
5	58	70	e111	e115	e68	e52	302	394	105	45	114	44
6	54	77	e105	e108	e68	e52	262	294	113	42	157	44
7	51	91	e102	e105	e66	e52	254	268	113	40	120	41
8	49	87	e103	e98	e65	e52	232	247	99	40	130	39
9	47	94	e98	e95	e64	e53	212	266	92	37	343	37
10	45	141	e97	e93	e61	e52	233	249	90	34	454	35
11	43	223	e94	e88	e59	e50	312	209	85	38	987	33
12	41	208	e94	e86	e57	e50	356	426	85	45	546	32
13	40	247	e95	e85	e53	e49	468	531	86	47	579	31
14	39	213	e102	e84	e51	e49	431	547	512	41	482	31
15	41	170	e130	e84	e47	e48	432	430	545	37	301	30
16	44	138	e122	e83	e46	e48	610	320	402	36	176	31
17	115	126	e113	e83	e46	e55	491	245	226	35	127	31
18	158	237	e103	e83	e47	e100	364	202	140	33	106	31
19	185	241	e98	e82	e48	e230	281	174	109	32	90	30
20	494	207	e105	e82	e50	e195	261	155	97	30	79	30
21	318	207	e220	e81	e52	e400	277	143	86	29	71	34
22	182	255	225	e80	e53	e720	276	139	77	84	64	33
23	124	788	194	e80	e56	605	318	126	71	129	58	41
24	99	644	e150	e79	e61	687	377	117	66	140	52	95
25	85	481	e138	e79	e66	934	401	133	61	156	49	86
26	89	340	e127	e78	e74	1,230	479	147	76	125	47	61
27	175	257	e120	e79	e64	1,070	778	163	76	92	53	50
28	203	219	e115	e78	e58	974	588	160	66	94	50	61
29	159	e180	e105	e80	---	1,290	469	185	59	79	43	228
30	123	e158	e98	e78	---	1,730	339	223	67	63	77	230
31	100	---	e96	e74	---	1,250	---	205	---	58	66	---
TOTAL	3,456	6,432	3,780	2,970	1,660	12,296	12,257	8,881	4,258	1,903	5,646	1,658
MEAN	111	214	122	95.8	59.3	397	409	286	142	61.4	182	55.3
MAX	494	788	225	195	74	1,730	931	727	545	156	987	230
MIN	39	70	94	74	46	48	212	117	59	29	43	30
CFSM	0.91	1.76	1.00	0.79	0.49	3.25	3.35	2.35	1.16	0.50	1.49	0.45
IN.	1.05	1.96	1.15	0.91	0.51	3.75	3.74	2.71	1.30	0.58	1.72	0.51

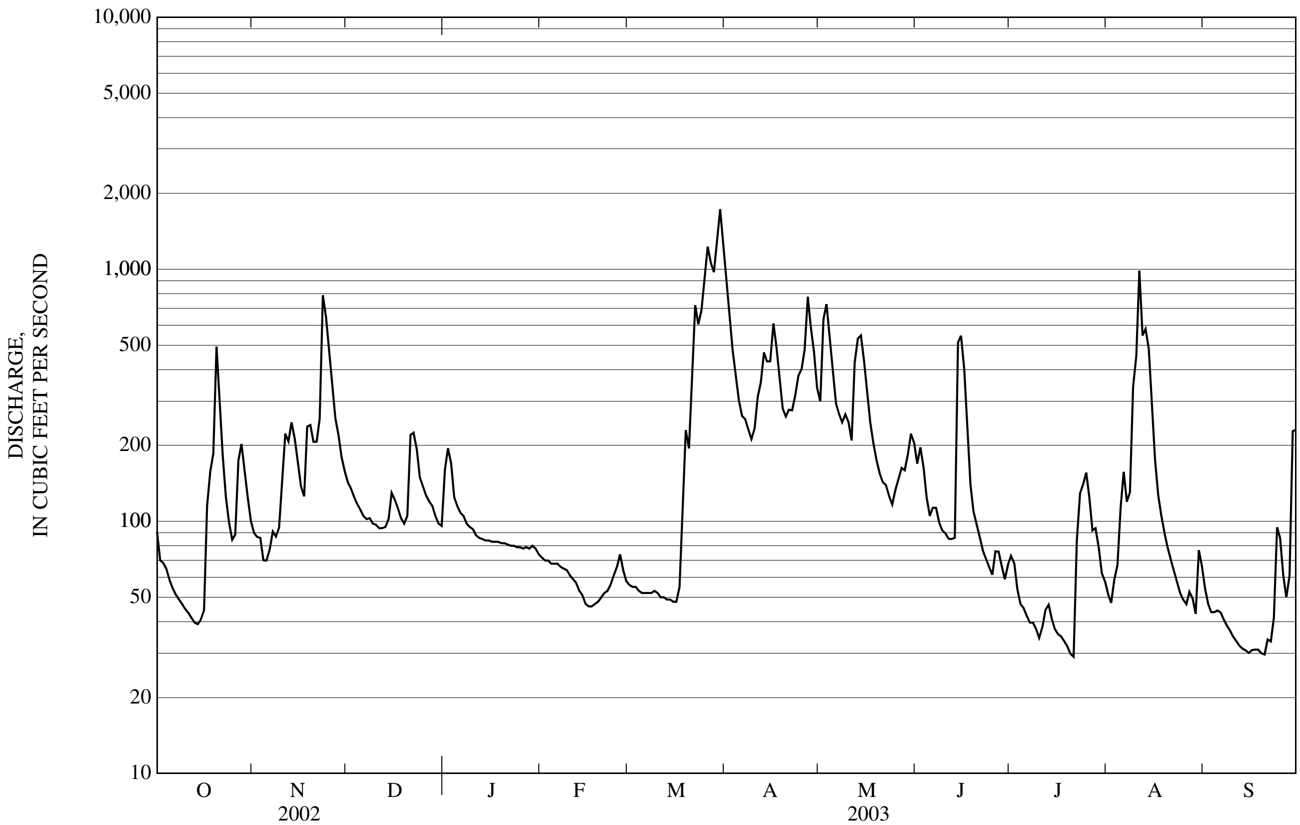
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	147	194	175	127	121	278	654	282	154	101	89.6	89.8
MAX	512	421	473	426	534	611	1,164	709	654	405	334	280
(WY)	(1991)	(1960)	(1984)	(1998)	(1981)	(1976)	(1969)	(1972)	(2002)	(1973)	(1976)	(1977)
MIN	28.4	54.6	58.1	43.4	29.1	63.1	196	90.5	43.9	29.1	23.9	19.9
(WY)	(1954)	(1979)	(1979)	(1954)	(1980)	(1956)	(1995)	(1987)	(1988)	(1991)	(2001)	(1953)

04296000 BLACK RIVER AT COVENTRY, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1952 - 2003	
ANNUAL TOTAL	91,890		65,197			
ANNUAL MEAN	252		179		201	
HIGHEST ANNUAL MEAN					301	1973
LOWEST ANNUAL MEAN					113	1965
HIGHEST DAILY MEAN	3,190	Jun 12	1,730	Mar 30	3,300	Apr 2, 1976
LOWEST DAILY MEAN	a 23	Sep 9	29	Jul 21	b 11	Aug 29, 1953
ANNUAL SEVEN-DAY MINIMUM	25	Sep 4	31	Sep 14	11	Aug 28, 1953
MAXIMUM PEAK FLOW			1,900	Mar 30	3,740	Apr 2, 1976
MAXIMUM PEAK STAGE			6.25	Mar 30	7.91	Apr 2, 1976
INSTANTANEOUS LOW FLOW			28	Jul 21	b 11	Aug 29, 1953
ANNUAL RUNOFF (CFSM)	2.06		1.46		1.65	
ANNUAL RUNOFF (INCHES)	28.02		19.88		22.37	
10 PERCENT EXCEEDS	590		441		470	
50 PERCENT EXCEEDS	135		95		105	
90 PERCENT EXCEEDS	44		43		41	

a Also occurred on September 10, 2002
b Also occurred on August 30 to September 1, 1953
e Estimated



04296500 CLYDE RIVER AT NEWPORT, VT

LOCATION.--Lat 44° 56'25", long 72°11'23", Orleans County, Hydrologic Unit 01110000, on right bank, 100 ft upstream of small right-bank tributary, 600 ft upstream of Clyde Street bridge, 0.8 mi east of US 5 and Main Street intersection in Newport, 0.9 mi downstream of Clyde Pond Dam, and 0.9 mi upstream of mouth.

DRAINAGE AREA.--142 mi^2.

PERIOD OF RECORD.--Discharge records: May 1909 to December 1911, April 1912 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."

PERIOD OF DAILY WATER-QUALITY RECORD.--Water years 1975 to 1978.
SPECIFIC CONDUSTANCE: October 1974 to October 1977.
WATER TEMPERATURE: October 1974 to October 1977.

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 National Geodetic Vertical Datum of 1929. 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. No instantaneous peak stage 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 power plant.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by power plant and reservoirs upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,900 ft^3/s, March 20, 1936, gage height, 5.76 ft, site and datum then in use; maximum daily, 3,610 ft^3/s, March 20, 1936; minimum daily discharge, 2.6 ft^3/s, June 18, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,240 ft^3/s, Mar. 31, gage height, 6.39; maximum gage height, 7.51 ft, Feb. 19, (ice jam); minimum daily discharge, 34 ft^3/s, Sept. 16.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	128	e300	e148	e90	83	1,160	617	205	98	148	80
2	192	121	e260	e135	e90	83	1,010	663	206	98	117	80
3	193	114	e230	e140	e81	e84	880	723	205	98	140	80
4	194	107	e215	e150	e75	e65	750	698	205	98	113	80
5	195	102	204	e150	e91	64	641	672	205	98	96	81
6	136	101	194	e145	e100	e65	556	634	205	71	93	80
7	98	101	187	e140	e100	e65	487	584	204	48	90	83
8	98	116	e175	e135	e100	65	448	535	202	44	82	83
9	98	114	e164	e132	e100	65	436	509	179	40	98	82
10	83	123	e155	e125	e100	65	434	491	153	39	153	63
11	70	134	155	e120	e100	65	427	461	140	40	405	53
12	62	144	149	e120	e82	65	415	456	142	39	417	54
13	62	161	142	e120	e70	65	407	497	143	39	408	53
14	61	181	136	e185	e84	e65	406	526	185	64	406	53
15	61	197	129	e410	e84	65	410	535	215	78	409	44
16	62	201	120	e625	e84	65	427	531	312	78	439	34
17	62	207	e103	e740	e84	66	451	513	319	78	432	35
18	54	236	e92	e810	87	79	528	485	364	78	414	35
19	51	231	e94	e880	e168	84	550	448	392	78	365	35
20	62	223	e100	e930	66	84	542	432	331	77	250	35
21	170	220	e115	e975	66	127	521	420	311	45	175	35
22	167	232	150	e1,020	66	161	503	392	309	49	174	35
23	166	364	174	e1,100	66	186	503	335	215	62	172	39
24	170	383	197	e1,180	66	333	520	311	171	86	142	37
25	158	381	195	e1,200	77	356	516	272	128	153	81	65
26	121	390	185	e1,120	e85	388	583	167	105	202	80	86
27	142	374	171	e1,000	83	656	711	166	98	159	81	86
28	154	360	159	e835	84	751	713	166	99	105	80	113
29	137	349	152	e470	---	900	686	194	98	105	80	198
30	115	331	e138	e250	---	1,110	642	205	100	139	80	211
31	130	---	e140	e90	---	1,210	---	205	---	157	80	---
TOTAL	3,716	6,426	5,080	15,580	2,429	7,585	17,263	13,843	6,146	2,643	6,300	2,128
MEAN	120	214	164	503	86.8	245	575	447	205	85.3	203	70.9
MAX	195	390	300	1,200	168	1,210	1,160	723	392	202	439	211
MIN	51	101	92	90	66	64	406	166	98	39	80	34
CFSM	0.84	1.51	1.15	3.54	0.61	1.72	4.05	3.14	1.44	0.60	1.43	0.50
IN.	0.97	1.68	1.33	4.08	0.64	1.99	4.52	3.63	1.61	0.69	1.65	0.56

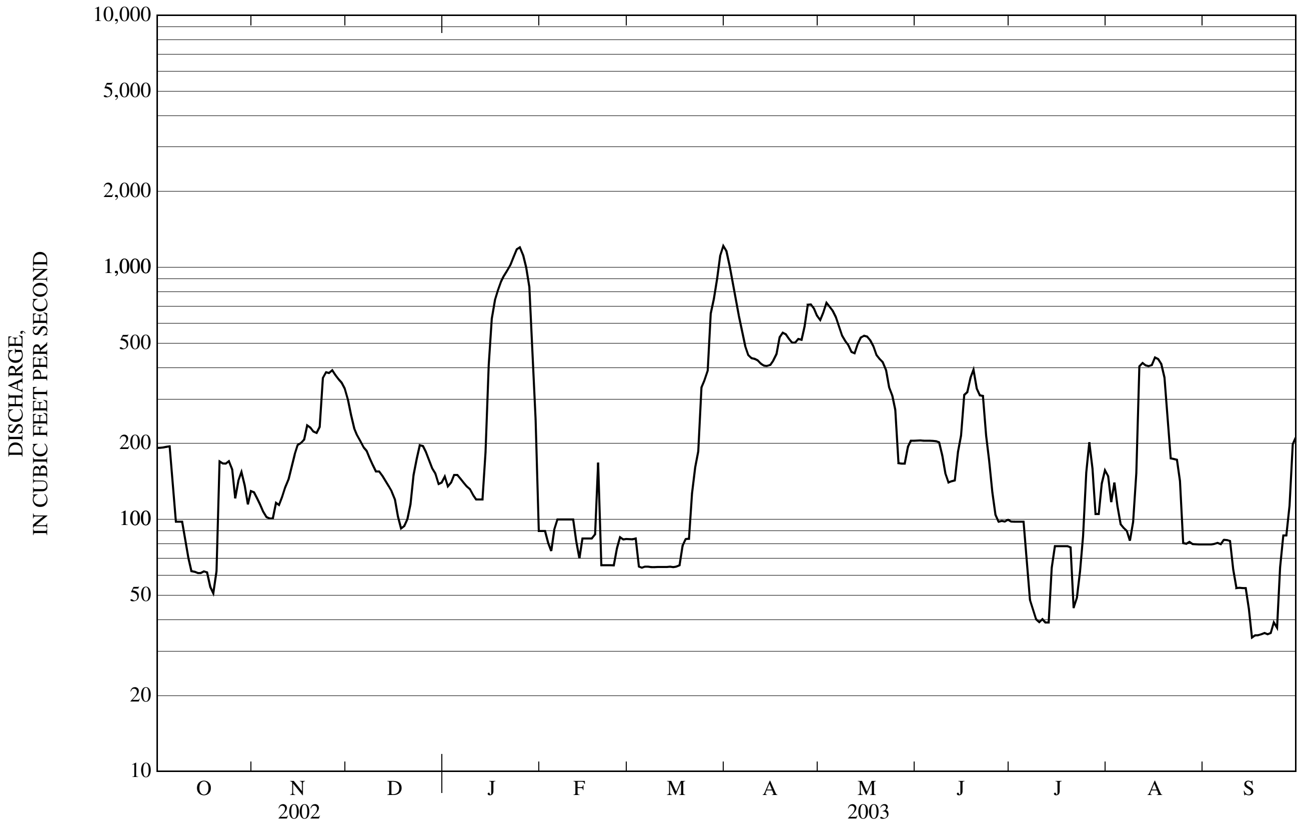
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 24, 29 - 36, 38 - 2003, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	177	232	223	188	157	280	695	493	244	148	128	128
MAX	576	560	599	503	477	1,136	1,192	1,042	785	464	369	523
(WY)	(1946)	(1919)	(1984)	(2003)	(1981)	(1936)	(1933)	(1972)	(2002)	(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)

04296500 CLYDE RIVER AT NEWPORT, VT—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1909 - 24, 29 - 36, 38 - 2003	
ANNUAL TOTAL	106,469		89,139			
ANNUAL MEAN	292		244		257	
HIGHEST ANNUAL MEAN					394	1974
LOWEST ANNUAL MEAN					153	1979
HIGHEST DAILY MEAN	1,930	Jun 14	1,210	Mar 31	3,610	Mar 20, 1936
LOWEST DAILY MEAN	31	Sep 10	34	Sep 16	2.6	Jun 18, 1956
ANNUAL SEVEN-DAY MINIMUM	34	Sep 9	35	Sep 16	14	Oct 9, 1961
MAXIMUM PEAK FLOW			1,240	Mar 31	ab 3,900	Mar 20, 1936
MAXIMUM PEAK STAGE			c 7.51	Feb 19	ab 5.76	Mar 20, 1936
ANNUAL RUNOFF (CFSM)	2.05		1.72		1.81	
ANNUAL RUNOFF (INCHES)	27.89		23.35		24.55	
10 PERCENT EXCEEDS	630		552		525	
50 PERCENT EXCEEDS	149		148		180	
90 PERCENT EXCEEDS	56		65		62	

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
c ice jam
e Estimated



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 2003 maximum: Date	Water year 2003 maximum: Gage height (ft)	Water year 2003 maximum: Discharge (ft^3/s)	Period of record maximum: Date	Period of record maximum: Gage height (ft)	Period of record maximum: Discharge (ft^3/s)
MERRIMACK RIVER BASIN								
Nubanusit Brook below Edward MacDowell Dam near Peterborough, NH (01083000)	Lat 42°53′34″, Long 71°59′13″ (revised), Hillsborough County, Hydrologic Unit 01070003, on left bank, 300 ft downstream from Edward MacDowell Reservoir, 2.2 mi northwest of Peterborough, and 2.7 mi upstream from mouth. Drainage area is 44.0 mi^2.	1921-31‡a, 1945-89‡a, 1990-97a, 1998-2003	04-01-03	5.67	624	04-11-31	5.59	1,130
Contoocook River near Henniker, NH (01085000)	Lat 43°09′10″, Long 71°51′24″, Merrimack County, Hydrologic Unit 01070003, on right bank, 1.6 mi downstream from Sand Brook, 2.6 mi southwest of Post Office in Henniker, and 3.3 mi northeast of State Highway 149 and US 202 intersection in Hillsborough. Drainage area is 368 mi^2.	1938, 1940-77‡, 1978-82, 1988-2003	03-31-03	11.44	6,060	09-21-38	21.30	22,200
Blackwater River near Webster, NH (01087000)	Lat 43°17′49″, Long 71°41′41″, Merrimack County, Hydrologic Unit 01070003, on left bank 0.2 mi west of Dingit corner, 0.4 mi downstream of Clothspin Bridge Road, 2.4 mi downstream from Blackwater Dam, 2.5 mi southeast of Webster, 4.4 mi east of US Highways 3 and 4 intersection in Boscawen, and 6.6 mi upstream from mouth. Drainage area is 129 mi^2.	1918-20‡, 1927-89‡, 1990-2003	04-01-03	6.57	1,860	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, Hydrologic Unit 01070002, on right bank, 500 ft downstream from Everett Dam, 1.4 mi southeast of East Weare, 2.3 mi west of Dunbarton Center, 3.6 mi east of Weare, and 5.9 mi northwest of Goffstown. Drainage area is 63.1 mi^2.	1963-89‡, 1990-2003	04-07-03	8.06	1,090	06-12-84	9.09	1,770

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum Date	Gage height (ft)	Dis-charge (ft^3/s)	Period of record maximum Date	Gage height (ft)	Dis-charge (ft^3/s)
MERRIMACK RIVER BASIN--Continued								
Piscataquog River near Goffstown, NH (01091500)	Lat 43°01′00″, Long 71°33′04″, Hillsborough County, Hydrologic Unit 01070002, on left bank, 300 ft upstream from Henry Bridge Road bridge, 0.3 mi upstream from Harry Brook, 0.4 mi southwest of Grasmere, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Goffstown Town Hall. Drainage area is 202 mi^2.	1936, 1938, 1940-78‡, 1983-2003	03-27-03	7.77	2,770	04-06-87	11.28	7,600
Spicket River near Methuen, MA (01100561)	Lat 42°44′35″, Long 71°12′32″, Rockingham County, Hydrologic Unit 01070002, on left bank, at bridge on Hampshire Road, on Massachu-setts-New Hampshire border, 800 ft downstream from Policy Brook, 0.5 mi west of Hampshire Road, 1.5 mi northwest of Massachusetts State Highways 113 and 213 inter-section in Methuen, MA, and 2.6 mi south of Town Hall in Salem, NH. Drainage area is 62.1 mi^2.	2001-2003	03-23-03	6.53	514	03-24-01	9.07	1,140
CONNECTICUT RIVER BASIN								
Paul Stream Tributary near Brunswick Springs, VT (01129700)	Lat 44°41′06″, Long 71°37′18″, Essex County, Hydrologic Unit 01080101, at culvert on Maidstone Lake Road, 400 ft upstream of mouth at Paul Stream, 1.7 mi west of Mason, NH, 1.9 mi northeast of Maidstone Lake outlet, 3.5 mi south of Brunswick Springs, and 4.6 mi south of North Stratford, NH. Drainage area is 1.29 mi^2.	1966-78, 1999-2003	03-29-03	12.58	120	06-12-02	12.70	126
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. Drainage area is 2.32 mi^2.	1964-74, 1999-00, 2003	11-23-02	10.85	65	06-12-02	16.12	290
Kirby Brook at Concord, VT (01134800)	Lat 44°26′31″, Long 71°52′43″, Essex County, Hydrologic Unit 01080102, at culvert on U.S. Highway 2, 600 ft southwest of Kirby Road and US 2 intersec-tion, 700 ft upstream from mouth, 1.1 mi northeast of High Street and US 2 intersection in Concord, 2.1 mi southwest of Victory Road and US 2 intersection in North Concord, and 7.2 west of Town Hall in St. Johnsbury. Drainage area is 8.05 mi^2.	1964-74‡b, 1999-2003	03-29-03	7.17	340	06-30-73	6.35	1,600
Joes Brook Tributary near East Barnet, VT (01135700)	Lat 44°20′40″, Long 72°03′52″, Caledonia County, Hydrologic Unit 01080102, at culvert on Joes Brook Road, 100 ft upstream of mouth, 1.8 mi northwest of East Barnet, 3.4 mi north of Barnet, 5.3 mi east of Peacham. Drainage area is 0.76 mi^2.	1964-74, 1999, 2001-2003	03-29-03	11.86	58	12-17-00	13.60	103

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum Date	Water year 2003 maximum Gage height (ft)	Water year 2003 maximum Discharge (ft^3/s)	Period of record maximum Date	Period of record maximum Gage height (ft)	Period of record maximum Discharge (ft^3/s)
	CONNECTICUT RIVER BASIN--Continued							
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. Drainage area is 1.09 mi^2.	1964-74, 1999-2000, 2003	03-21-03	10.19	61	12-21-73	10.91	94
Ompompanoosuc River at Union Village, VT (01141500)	Lat 43°47′24″, Long 72°15′19″, Orange County, Hydrologic Unit 01080103, on right bank, 400 ft downstream from Avery Brook, 600 ft upstream from covered bridge at Union Village, 0.2 mi downstream from Union Village Reservoir, 3.5 mi upstream from mouth, and 3.7 mi southwest of State Highway 113 and US 5 intersection in East Theford. Drainage area is 130 mi^2.	1940-89‡a, 1990-2003	03-31-03	9.23	1,390	06-03-47	9.65	4,800
Third Branch White River Tributary at Randolph, 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 junctions of State Highways 12 and 12A in Randolph, and 0.8 mi northwest of Town Hall in Randolph. Drainage area is 0.77 mi^2.	1964-74b, 1998-2003	11-23-02	11.28	70	06-27-98	16.61	327
Mascoma River at West Canaan, NH (01145000)	Lat 43°39′04″, Long 72°05′07″, Grafton County, Hydrologic Unit 01080104, on right bank, 45 ft downstream from Boston and Maine Railroad bridge, 0.6 mi east of US 4 and South Road intersection in West Canaan, 1.4 mi downstream from Indian River, 3.0 mi east of City Hall in Enfield, 3.7 mi west of Post Office in Canaan, and 19.3 mi upstream of mouth. Drainage area is 80.5 mi^2.	1938, 1939-78‡, 1985-2003	03-30-03	6.07	1,650	09-22-38	9.60	4,310
Kent Brook near Killington, VT (01150800)	Lat 43°40′24″, Long 72°48′33″, Rutland County, Hydrologic Unit 01080105, at culvert on State Highway 100, 0.4 mi north of junction of State Highway 100N and US 4W, 1.6 mi upstream from mouth, 2.0 mi northwest of River Road and US 4 intersection in Sherburne Center, 2.7 mi northwest of Killington, 9.3 mi east of US 4E and 7N intersection in Rutland. Drainage area is 3.31 mi^2.	1964-74‡, 1999-2003	03-29-03	9.42	334	04-14-02	14.50	792

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
CONNECTICUT RIVER BASIN--Continued								
Ottauquechee River Tributary near Quechee, VT (01151200)	Lat 43°39′37″, Long 72°25′55″, Windsor County, Hydrologic Unit 01080106, at culvert on West Hartford-Quechee Road, 0.2 mi upstream of mouth, and 1.2 mi northwest of Quechee Main Street, Deweys Mills Road and Waterman Hill Road intersection in Quechee, and 2.8 mi northeast of Happy Valley Road and US 4 intersection in Taftsville. Drainage area is 0.82 mi^2.	1964-74, 1999-2003	03-29-03	10.08	21	06-30-73	13.35	93
Black River at North Springfield, VT (01153000)	Lat 43°20′00″, Long 72°30′55″, Windsor County, Hydrologic Unit 01080106, on right bank, 600 ft upstream of State Highway 106, 0.3 mi upstream from Great Brook, 0.6 mi downstream from North Springfield Dam, 0.9 mi east of State Highway 10 and 106 intersection in North Springfield, 2.9 mi northwest of State Highway 11 and 143 intersection in Springfield, and 7.8 mi upstream of mouth. Drainage area is 158 mi^2.	1929-89‡, 1990-2003	04-16-03	6.82	2,680	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 Road, 0.2 mi from Lovers Lane Road and State Highway 11 intersection, 0.8 mi northeast of junction of State Highways 11 and 35 in Chester, 1.5 mi upstream of mouth, and 6.7 mi west of Springfield. Drainage area is 3.16 mi^2.	1964-78, 1999-2003	03-29-03	20.03	70	08-10-76	Unknown	e 367
Tributary to West River Tributary at Rte 30, near Jamaica, VT (01155350)	Lat 43°07′33″, Long 72°48′46″, Windham County, Hydrologic Unit 01080107, at culvert on State Highway 30/100, 800 ft north of Stratton Gate Road and State Highway 100 intersection, 0.5 mi upstream of mouth, 1.9 mi west of Ball Mountain Dam, 2.0 mi southeast of State Highway 30W and 100N intersection in Rawsonville, and 2.5 mi northwest of Depot Street and State Highway 30/100 intersection in Jamaica. Drainage area is 0.90 mi^2.	1964-78b, 1999-2003	03-29-03	9.50	66	06-30-73	15.14	320
West River below Townshend Dam near Townshend, VT (01155910)	Lat 43°03′04″, Long 72°42′02″, Windham County, Hydrologic Unit 01080107, on left bank opposite mouth of Fair Brook, 150 ft below Townshend Dam, 1.7 mi west of State Highway 30 and 35 intersection in Townshend, 2.4 mi south of Windham Hill Road and State Highway 30 intersection in West Townshend, 2.7 mi upstream from Mills Brook, and 18.9 mi upstream from mouth. Drainage area is 282 mi^3.	1995-2000‡, 2001-03	c 04-17-03	9.21 ----	Ice Jam e6,400	04-24-96	8.89	8,050

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
CONNECTICUT RIVER BASIN--Continued								
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 Highway 142 intersection, 0.6 mi upstream of mouth, 1.3 mi northwest of Vernon Dam, and 1.8 mi northwest of West Road and State Highway 142 intersection in Vernon . Drainage area is 1.12 mi^2.	1964-74, 1999-2003	08-03-03	7.73	57	04-25-70	10.91	128
HUDSON RIVER BASIN								
Tanner Brook near Sunderland, VT (01328900)	Lat 43°07′48″, Long 73°05′44″, Bennington County, Hydrologic Unit 02020003, at culvert on State Highway 7A, 400 ft south of State Highway 7A and Muddy Lane intersection, 1.3 mi northeast of Sunderland Borough Road and North Road intersection in Sunderland, 2.5 mi southwest of Courthouse in Manchester. Drainage area is 2.60 mi^2.	1964-74, 1999-2003	03-29-03	<9.98	<18	02-05-70	11.84	84
Paran Creek near South Shaftsbury, VT (01333900)	Lat 42°58′13″, Long 73°11′19″, Bennington County, Hydrologic Unit 02020003, at culvert on Hallow Road, 400 ft upstream of right bank tributary, 400 ft north of Hallow Road and Airport Road intersection, 1.3 mi southeast of State Highway 7A and West Mount Road intersection in Shaftsbury Center, and 1.8 mi northeast of State Highways 7A-N and 67N intersection in South Shaftsbury. Drainage area is 2.38 mi^2.	1964-78, 1999-2003	08-01-03	7.38	58	06-30-73	11.52	193
ST. LAWRENCE RIVER BASIN								
Poultney River Tributary at East Poultney, VT (04279400)	Lat 43°32′13″, Long 73°12′33″, Rutland County, Hydrologic Unit 02010001, at culvert on Lewis Road, 0.5 mi west of Town Hill, 0.5 mi northwest of Lewis, Thrall and Hillside Roads intersection, 0.8 mi north of State Highway 140 and Thrall Road intersection in East Poultney, and 1.8 mi northeast of Town Hall in Poultney. Drainage area is 1.13 mi^2.	1964-78b, 1999-2003	03-21-03	8.41	55	04-14-64	12.36	98

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
ST. LAWRENCE RIVER BASIN--Continued								
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, 300 ft southeast of Kirby Road and State Highway 125 intersection, 0.2 mi west of Bread Loaf, 0.3 mi upstream of South Branch Middlebury River, 2.3 mi southeast of National Turnpike and State Highway 125 in Ripton, and 9.5 mi southeast of Town Hall in Middlebury. Drainage area is 2.24 mi^2.	1963-78, 2000-2003	04-14-02 03-21-03	11.03 10.72	d 136 109	07-16-00	17.98	546
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, 300 ft east of East Road and Plank Road intersection, 2.0 mi northwest of Town Hall in Bristol, 2.2 mi northeast of North Street, South Street, and State Highway 17 intersection in New Haven, and 9.1 mi northeast of State Highway 125 and US 7 intersection in Middlebury. Drainage area is 1.48 mi^2.	1964-78, 1999-2003	03-21-03	10.33	24	06-30-73	13.16	64
Lewis Creek Tributary at Starksboro, VT (04282700)	Lat 44°13′00″, Long 72°03′21″, Addison County, Hydrologic Unit 02010002, at culvert on State Highway 116, 0.4 mi upstream of mouth, 0.7 mi south of Big Hollow Road and State Highway 116 intersection in Starksboro, 0.9 mi west of East Mountain, and 5.9 mi north of Town Hall in Bristol. Drainage area is 5.31 mi^2.	1963-74‡b, 1999-2003	03-21-03	14.60	110	12-21-73	5.25	1,350
Sunny Brook near Montpelier, VT (04287300)	Lat 44°16′05″, Long 72°37′28″, Washington County, Hydrologic Unit 02010003, at culvert on U.S. Highway 2, 600 ft northeast of Interstate 89 overpass over US Highway 2, 0.3 mi upstream from mouth, 0.7 mi east of the mouth of Jones Brook, and 2.2 mi west of Vermont State Capitol Building in Montpelier. Drainage area is 2.31 mi^2.	1964-74‡b, 1999-2003	03-29-03	4.62	94	06-13-73	7.40	342
Bryant Brook at Waterbury 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^2.	1964-78, 1999-2003	11-23-02	11.27	98	06-30-73	13.94	302

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
ST. LAWRENCE RIVER BASIN--Continued								
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, 1400 ft north of Jerico-Richmond Town Line, 0.3 mi south of Browns Trace Road and Governor Peck Road intersection, 2.2 mi north of Jerico Road and US 2 intersection in Richmond, and 2.3 mi south of Browns Trace Road and Bolger Hill Road intersection in Jerico Center. Drainage area is 0.71 mi^2.	1964-74b, 1999-2003	03-21-03	10.81	13	06-15-72	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 0.5 mi northeast of Brochu Road and Church Street intersection in East Hardwick, and 3.6 mi northeast of Town Hall in Hardwick. Drainage area is 2.52 mi^2.	1964-78, 1999-2003	03-29-03	11.70	86	06-30-73	15.92	285
Stony Brook near Eden, VT (04292100)	Lat 44°41′37″, Long 72°34′58″, Lamoille County, Hydrologic Unit 02010005, at culvert on State Highway 100, 500 ft upstream of mouth, 2.0 mi southwest of State Highways 100 and 118 intersection in Eden, 2.2 mi northeast of State Highways 100 and 100C intersection in North Hyde Park, and 6.2 mi northeast of State Highways 15 and 100C intersection in Johnson. Drainage area is 4.21 mi^2.	1964-74‡b, 1999-2003	03-29-03	4.93	143	06-30-73	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, 0.3 mi east of a Canadian Pacific Railroad bridge over State Highway 105, and 1.0 mi southeast of the junction of State Highways 105 and 139 in Richford. Drainage area is 0.64 mi^2.	1963-78, 1999-2003	03-29-03	8.53	28	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) intersection, 0.5 mi upstream of mouth, 0.8 mi west of State Highways 78 and 105 intersection in Sheldon Junction, and 0.9 mi east of Catholic Church Road and Mill Road intersection in Sheldon Springs. Drainage area is 1.69 mi^2.	1963-78, 1999-2003	11-23-02	11.71	33	06-12-02	15.23	122

Maximum discharge at crest-stage partial-record stations--Continued

Station name and number	Location and drainage area	Period of record	Water year 2003 maximum Date	Gage height (ft)	Discharge (ft^3/s)	Period of record maximum Date	Gage height (ft)	Discharge (ft^3/s)
			ST. LAWRENCE RIVER BASIN--Continued					
Lord Brook near Evansville, 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, 1.2 mi upstream of mouth, 1.5 mi south of Chase Road and State Highway 58 intersection in Evansville, and 3.6 mi northeast of US 5 and State Highway 58 intersection in Barton. Drainage area is 4.76 mi^2.	1964-78, 1999-2003	03-29-03	12.52	188	06-12-02	15.63	425
Brownington Branch near Evansville, VT (04296200)	Lat 44°50′02″, Long 72°04′00″, Orleans County, Hydrologic Unit 01110000, at culvert on State Highway 5A, 0.5 mi upstream of mouth of Moody Brook, 2.8 mi north of State Highways 5A and 58 intersection, 3.8 mi northeast of Chase Road and State Highway 58 intersection in Evansville, and 10.0 mi east of Loop Road and Main Street intersection in Coventry. Drainage area is 2.15 mi^2.	1964-74‡b, 1999-2003	08-13-03	9.01	446	08-13-03	9.01	446
Pherrins River Tributary near Island Pond, VT (04296300)	Lat 44°50′34″, Long 71°54′31″, 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, 2.3 mi northwest of State Highways 105 and 114 intersection in Island Pond, and 4.0 mi east of Echo Pond Road and State Highway 105 intersection in East Charleston. Drainage area is 1.05 mi^2.	1964-78, 1999-2003	05-02-03	10.89	64	05-20-69	12.53	140

‡ Operated as a continuous-record gaging station
a At different site and datum
b Prior to 1998 at different datum
c Sometime during the period March 21, 22, 2003
d Revised
e Estimated

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^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		SACO RIVER BASIN				
01065000 Ossipee River at Effingham Falls, NH	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‡, 1998-2002	10-24-02 05-06-03 08-29-03	192 1410 126
		MERRIMACK RIVER BASIN				
01077510 Newfound River, at Newfound Lake outlet, near Bristol, NH	Pemigewasset River	Lat 43°37′05″, Long 71°44′25″, Grafton County, Hydrologic Unit 01070001, at outlet of Newfound Lake, 500 ft south of West Shore Road, 800 ft west of West Shore Road and State Highway 3A intersection, and 1.8 mi north of Post Office in Bristol.	98	1974-76, 1991-2002	10-09-02 05-21-03 08-21-03	13.1 114 105
01083000 Nubanusit Brook near Peterborough, NH	Contoocook River	Lat 42°53′34″, Long 71°59′13″, (revised) Hillsborough County, Hydrologic Unit 01070003, on left bank 300 ft downstream from Edward MacDowell Reservoir, 2.2 mi northwest of Town Hall in Peterborough, and 2.7 mi upstream from mouth.	44.0	1920-31‡a, 1945-89‡a, 1990-97a, 1999-2002	12-23-02 03-21-03 03-28-03 04-30-03	135 198 502 123
01085000 Contoocook River near Henniker, NH	Merrimack River	Lat 43°09′10″, Long 71°51′24″, Merrimack County, Hydrologic Unit 01070003, 1.6 mi downstream from Sand Brook, 2.6 mi southwest of Post Office in Henniker, and 3.3 mi northeast of State Highway 149 and US 202 intersection in Hillsborough.	368	1939-77‡, 1978-2003	10-22-02 04-14-03 07-09-03	91.2 2,610 54.1
01087000 Blackwater River near Webster, NH	Merrimack River	Lat 43°17′49″, Long 71°41′41″, Merrimack County, Hydrologic Unit 01070003, 0.2 mi west of Dingit Corner, 0.4 mi downstream of Clothspin Bridge Road, 2.4 mi downstream from Blackwater Dam, 2.5 mi southeast of Webster, 4.4 mi east of US 3 and 4 intersection in Boscawan, and 6.6 mi upstream from mouth.	129	1927-89‡, 1990-2002	10-24-02 04-03-03 06-26-03	25.3 1,570 78.1
01090800 Piscataquog River below Everett Dam, near East Weare, NH	Merrimack River	Lat 43°05′29″, Long 71°39′36″, Hillsborough County, Hydrologic Unit 01070002, 500 ft downstream from Everett Dam, 1.4 mi southeast of East Weare, 2.3 mi west of Dunbarton Center, 3.6 mi east of Weare, and 5.9 mi northwest of Goffstown.	63.1	1963-89‡, 1990-2002	10-24-02 04-09-03 06-24-03	32.5 1,030 47.2
01091500 Piscataquog River near Goffstown, NH	Merrimack River	Lat 43°01′00″, Long 71°33′04″, Hillsborough County, Hydrologic Unit 01070002, 300 ft upstream of Henry Road bridge, 0.3 mi upstream from Harry Brook, 0.4 mi southwest of Grasmere, 0.9 mi downstream from Glen Lake, and 2.5 mi east of Town Hall in Goffstown.	202	1939-78‡, 1979-2002	10-23-02 04-10-03 07-03-03	118 1,440 46.3
01100561 Spicket River near Methuen, MA	Merrimack River	Lat 42°44′35″, Long 71°12′32″, Rockingham County, Hydrologic Unit 01070002, at bridge on Hampshire Road, 800 ft downstream from Policy Brook, 0.5 mi west of Hampshire Road, 1.5 mi northwest of Massachusetts State Highways 113 and 213 in Methuen MA, and 2.6 mi south of Town Hall in Salem NH.	62.1	1973, 1974, 1998, 2001, 2002	10-17-02 03-28-03	133 398

Discharge measurements made at miscellaneous sites--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		CONNECTICUT RIVER BASIN				
01141500 Ompompa-noosuc River at Union Village, VT	Connecticut River	Lat 44°47′24″, Long 71°15′19″, Orange County, Hydrologic Unit 01080103, 400 ft downstream from Avery Brook, 600 ft upstream from covered bridge at Union Village, 0.2 mi downstream from Union Village Reservoir, 3.5 mi upstream from mouth, and 3.7 mi southwest of State Highway 113 and US 5 intersection in East Theford.	130	1940-89‡, 1990-2002	11-19-02 03-26-03 05-13-03 09-18-03	171 1,090 371 80.4
01145000 Mascoma River at West Canaan, NH	Connecticut River	Lat 43°39′04″, Long 72°05′07″, Grafton County, Hydrologic Unit 01080104, 45 ft downstream from Boston and Maine Railroad bridge, 0.6 east of US 4 and South Road intersection in West Cannaan, 1.4 mi downstream from Indian River, 3.0 mi east of City Hall in Enfield, 3.7 mi west of Post Office in Canaan, and 19.3 mi upstream of mouth.	80.5	1939-78‡, 1979-2002	10-01-02 04-03-03 08-08-03	11.9 306 49.6
01152010 Sugar River at Sunapee, NH	Connecticut River	Lat 43°23′10″, Long 72°05′30″, Sullivan County, Hydrologic Unit 01080104, behind Crutch Factory at Sunapee, and 0.2 mi downstream from State Highway 11, and 0.6 mi downstream of outlet of Lake Sunapee.	46	1976, 1979, 1983-87, 1991-2002	05-14-03 07-02-03	187 35.2
01153000 Black River at North Springfield, VT	Connecticut River	Lat 43°20′00″, Long 72°30′55″, Windsor County, Hydrologic Unit 01080106, at North Springfield, 600 ft upstream of State Highway 106, 0.3 mi upstream from Great Brook, 0.6 mi downstream from North Springfield Dam, 0.9 mi east of State Highway 10 and 106 intersection in North Springfield, 2.9 mi northeast of State Highway 11 and 143 intersection in Springfield, and 7.8 mi upstream from mouth.	158	1929-89‡, 1990-2002	03-27-03 05-14-03 07-02-03 09-17-03	1,760 510 51.5 73.0
01155910 West River below Townsh-end Dam near Townshend, VT	Connecticut River	Lat 43°03′04″, Long 72°42′02″, Windham County, Hydrologic Unit 01080107, on left bank opposite mouth of Fair Brook, 150 ft below Townshend Dam, 1.7 mi west of State Highway 30 and 35 intersection in Townshend, 2.4 mi south of Windham Hill Road and State Highway 30 intersection in West Townshend, 2.7 mi upstream from Mills Brook, and 18.9 mi upstream from mouth.	282	1995-2000‡ 2001, 2002	10-15-02 04-22-03 07-30-03	180 2,330 63.5

‡ Operated as a continuous-record gaging station

a At different site and datum

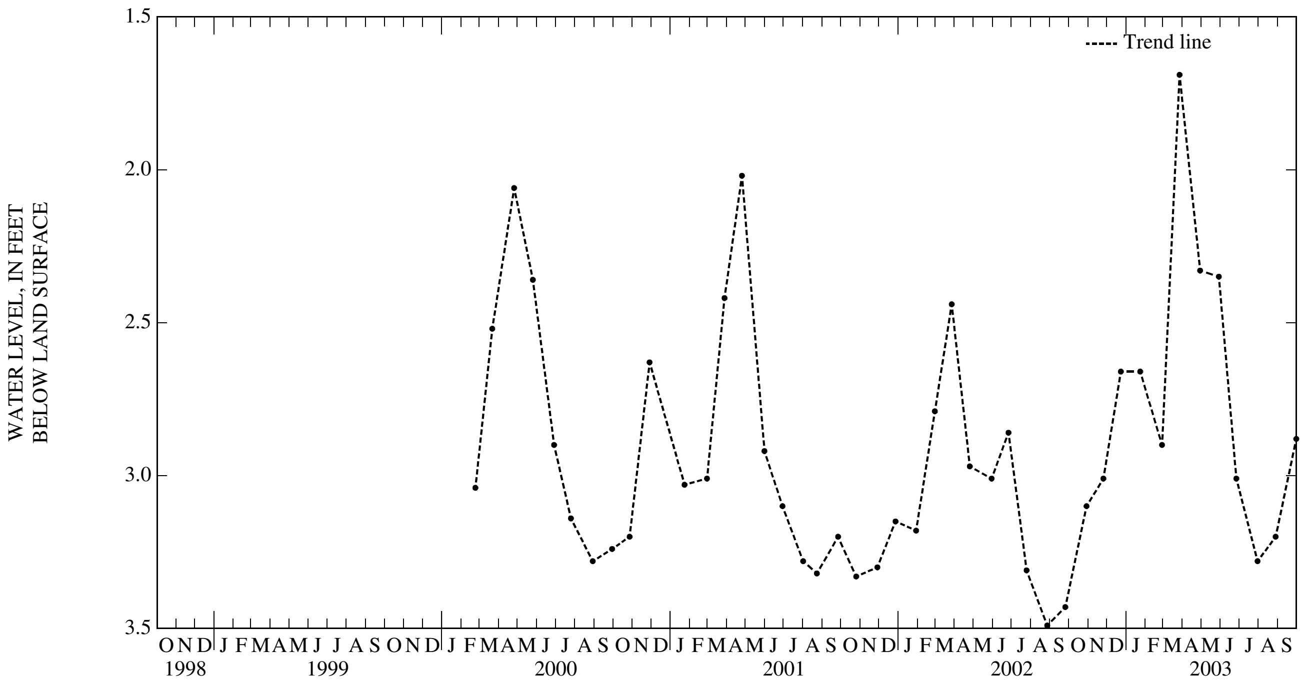
BELKNAP COUNTY

431916071125901. Local number, BAW 10, Town of Barnstead.
LOCATION.--Lat 43° 19'16", long 71° 12'59", Hydrologic Unit 01070002. Barnstead: about 0.8 mi north-northeast from junction of Rt. 126 and French Road and 1.6 mi west-southwest from Strafford, N.H. 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 above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.0 ft above land-surface datum.
PERIOD OF RECORD.--June 1995 to October 1997, February 2000 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.69 ft below land-surface datum, March 27, 2003; lowest measured, 3.41 ft below land-surface datum, August 28, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	3.10	DEC 23	2.66	FEB 27	2.90	APR 29	2.33	JUN 26	3.01	AUG 28	3.20
NOV 25	3.01	JAN 23	2.66	MAR 27	1.69	MAY 29	2.35	JUL 30	3.28	SEP 30	2.88

WATER YEAR 2003 HIGHEST 1.69 MAR 27, 2003 LOWEST 3.28 JUL 30, 2003



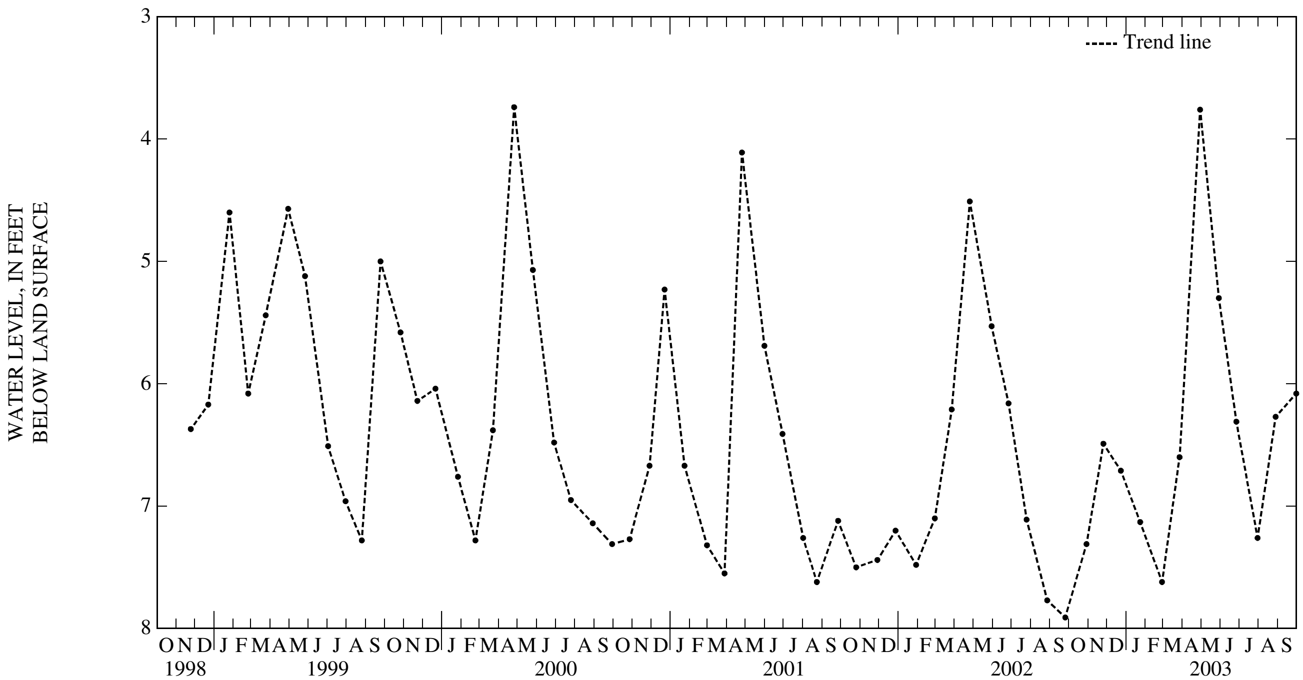
CARROLL COUNTY

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 National Geodetic Vertical Datum 1929 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, 7.91 ft below land-surface datum, September 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	7.31	DEC 23	6.71	FEB 27	7.62	APR 29	3.76	JUN 26	6.31	AUG 28	6.27
NOV 25	6.49	JAN 23	7.13	MAR 27	6.60	MAY 29	5.30	JUL 30	7.26	SEP 30	6.08

WATER YEAR 2003 HIGHEST 3.76 APR 29, 2003 LOWEST 7.62 FEB 27, 2003



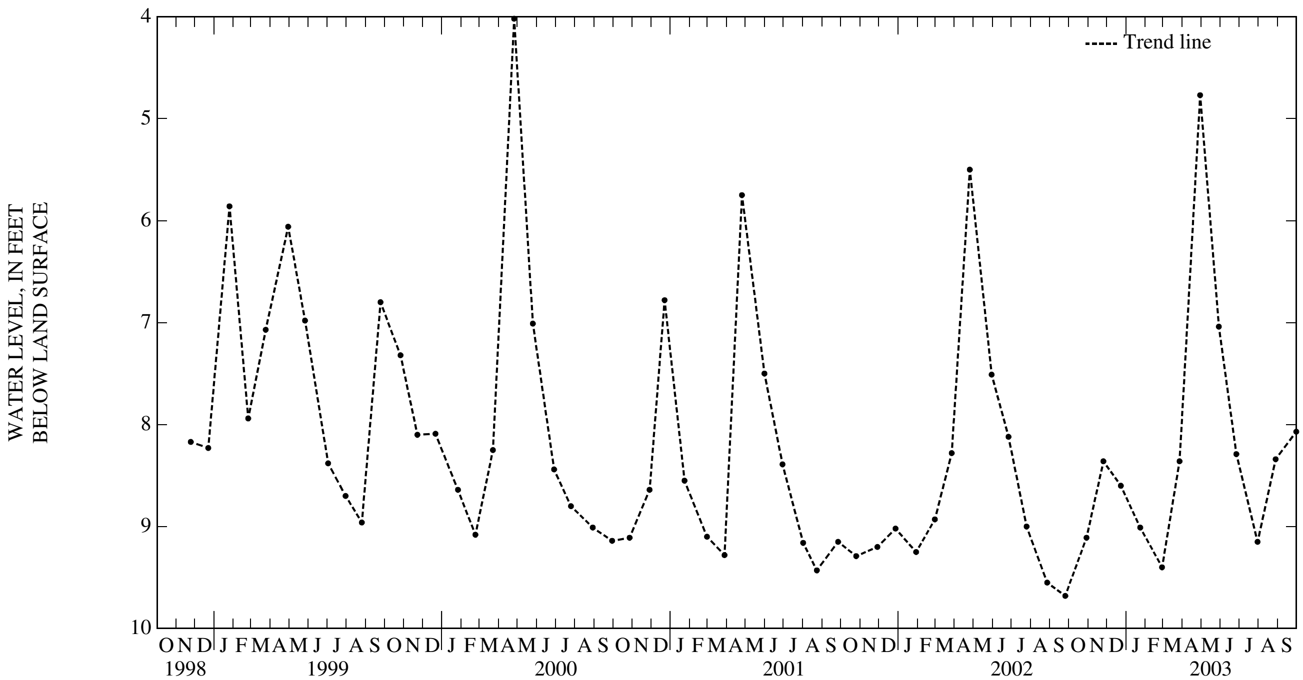
CARROLL COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--August 1992, 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, 9.68 ft below land-surface datum, September 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	9.11	DEC 23	8.60	FEB 27	9.40	APR 29	4.77	JUN 26	8.29	AUG 28	8.34
NOV 25	8.36	JAN 23	9.01	MAR 27	8.36	MAY 29	7.04	JUL 30	9.15	SEP 30	8.07

WATER YEAR 2003 HIGHEST 4.77 APR 29, 2003 LOWEST 9.40 FEB 27, 2003



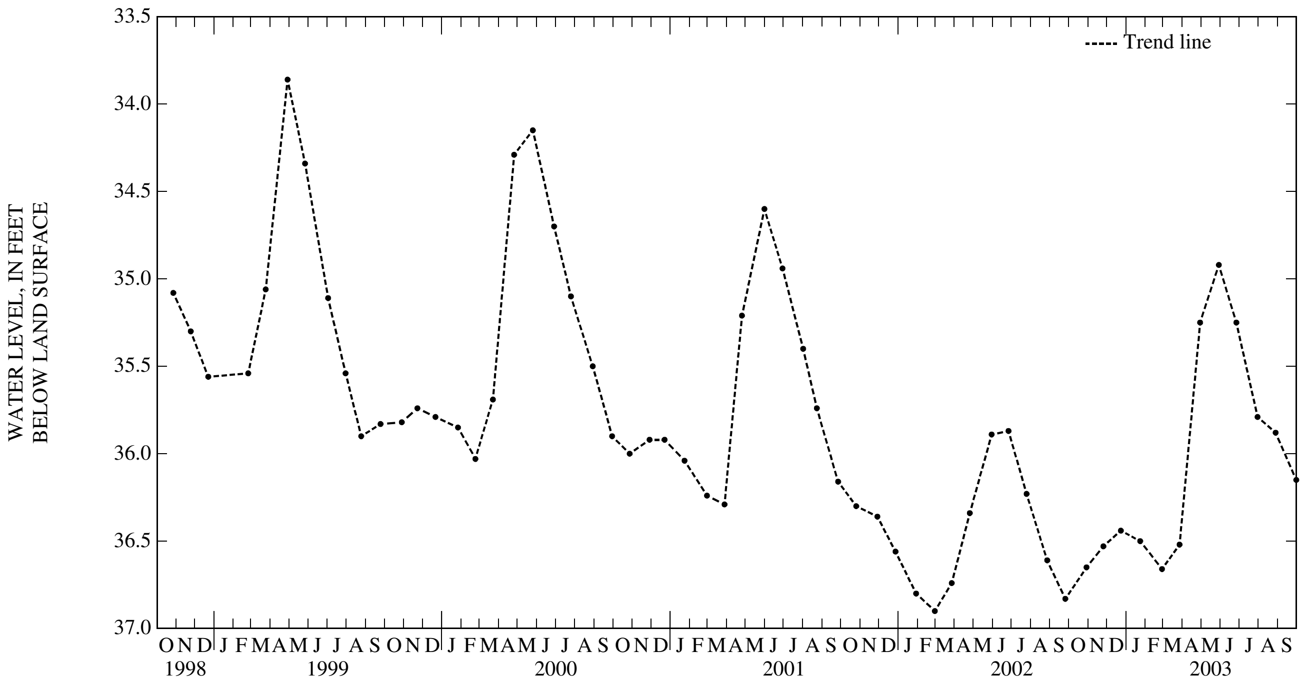
CARROLL COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.4 ft above land-surface datum.
PERIOD OF RECORD.--September 1991, 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	36.65	DEC 23	36.44	FEB 27	36.66	APR 29	35.25	JUN 26	35.25	AUG 28	35.88
NOV 25	36.53	JAN 23	36.50	MAR 27	36.52	MAY 29	34.92	JUL 30	35.79	SEP 30	36.15

WATER YEAR 2003 HIGHEST 34.92 MAY 29, 2003 LOWEST 36.66 FEB 27, 2003



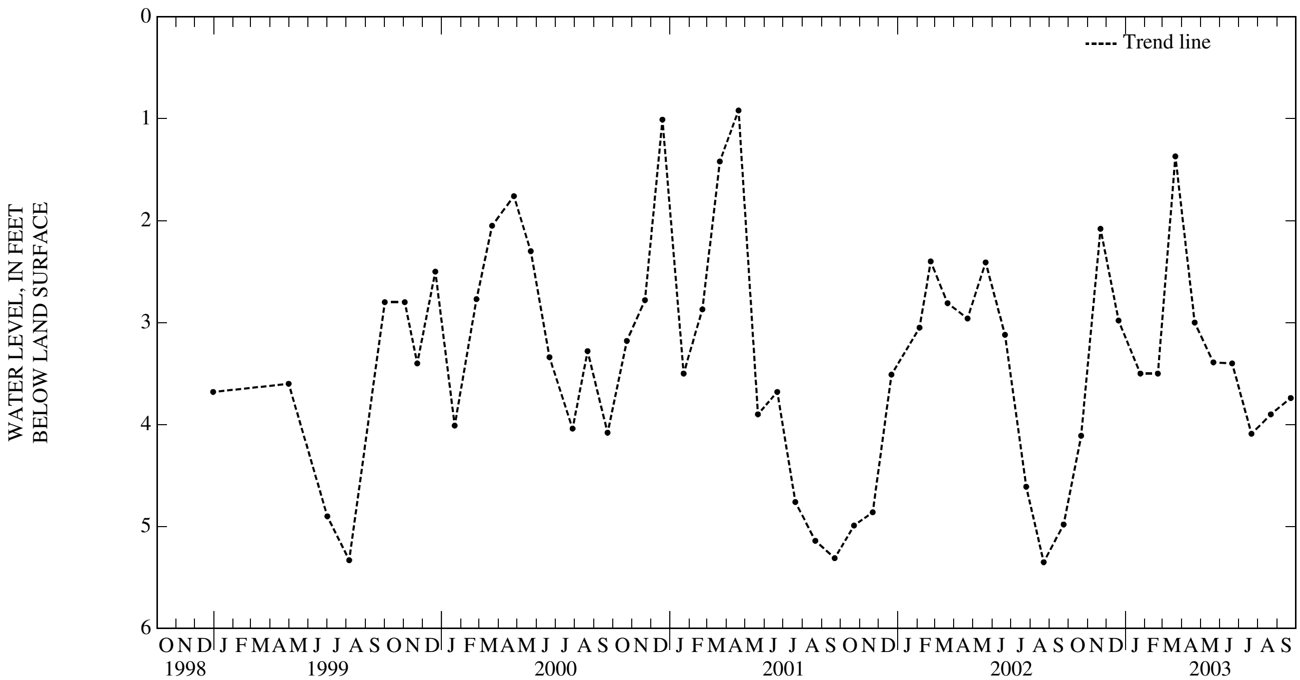
CHESHIRE COUNTY

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 National Geodetic Vertical Datum 1929 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	4.11	DEC 20	2.98	FEB 21	3.50	APR 21	3.00	JUN 20	3.40	AUG 21	3.90
NOV 21	2.08	JAN 24	3.50	MAR 21	1.37	MAY 21	3.39	JUL 21	4.09	SEP 22	3.74

WATER YEAR 2003 HIGHEST 1.37 MAR 21, 2003 LOWEST 4.11 OCT 21, 2002



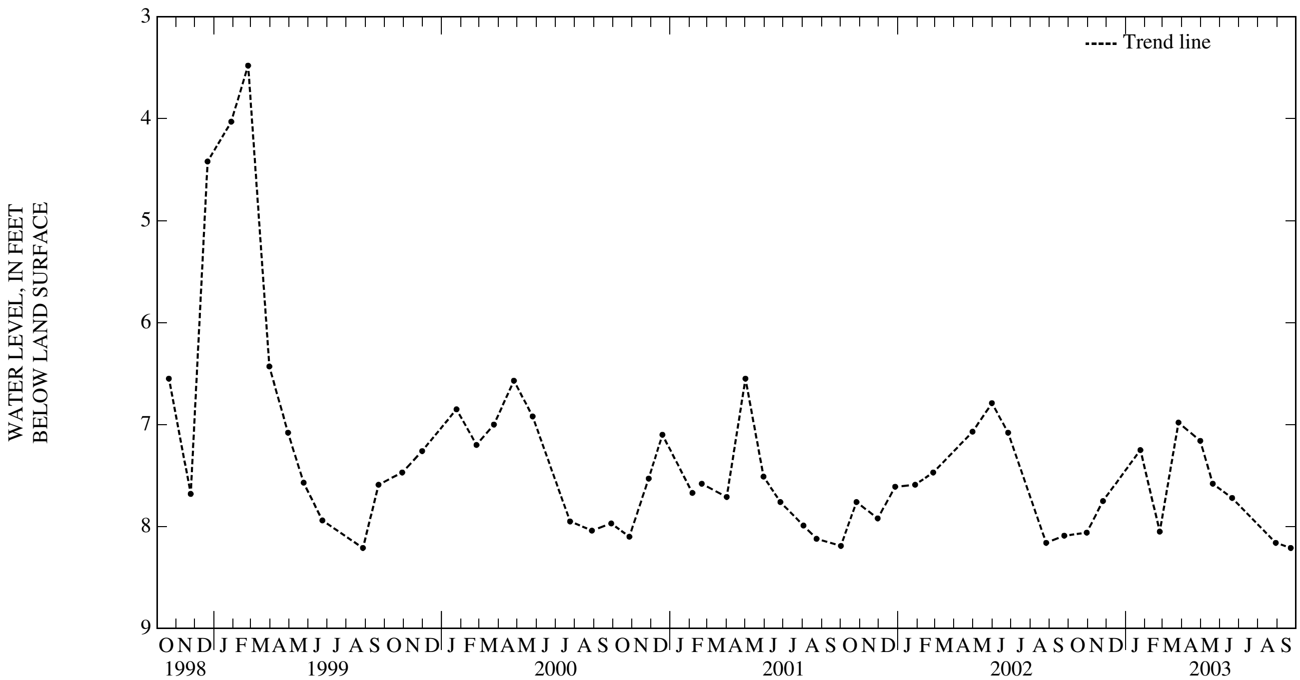
COOS COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.2 ft above land-surface datum.
PERIOD OF RECORD.--June 1992, April 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.48 ft below land-surface datum, February 24, 1999; lowest measured, 8.21 ft below land-surface datum, August 27, 1999, September 22, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	8.06	JAN 24	7.25	MAR 26	6.98	MAY 20	7.58	AUG 29	8.16		
NOV 25	7.75	FEB 24	8.05	APR 30	7.16	JUN 20	7.72	SEP 22	8.21		

WATER YEAR 2003 HIGHEST 6.98 MAR 26, 2003 LOWEST 8.21 SEP 22, 2003



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, 48 ft from the edge of pavement, 1.45 mi northwest from the intersection of Rte 26 and Rte 16, 1.8 mi northwest of Rte 26 overpass of the Androscoggin River, and 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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

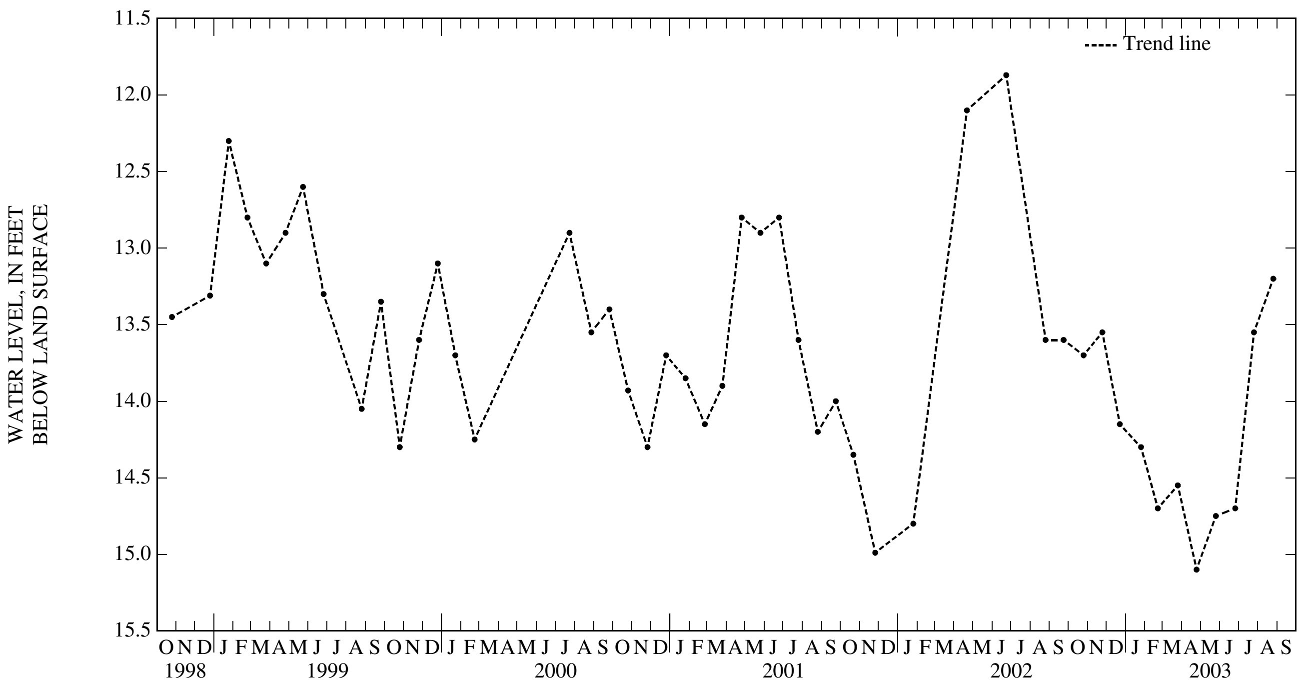
PERIOD OF RECORD.--November 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.4 ft below land-surface datum, May 22, 1969; lowest measured, 15.10 ft below land-surface datum, April 24, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	13.70	DEC 22	14.15	FEB 21	14.70	APR 24	15.10	JUN 25	14.70	AUG 25	13.20
NOV 24	13.55	JAN 25	14.30	MAR 25	14.55	MAY 25	14.75	JUL 25	13.55		

WATER YEAR 2003 HIGHEST 13.20 AUG 25, 2003 LOWEST 15.10 APR 24, 2003



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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

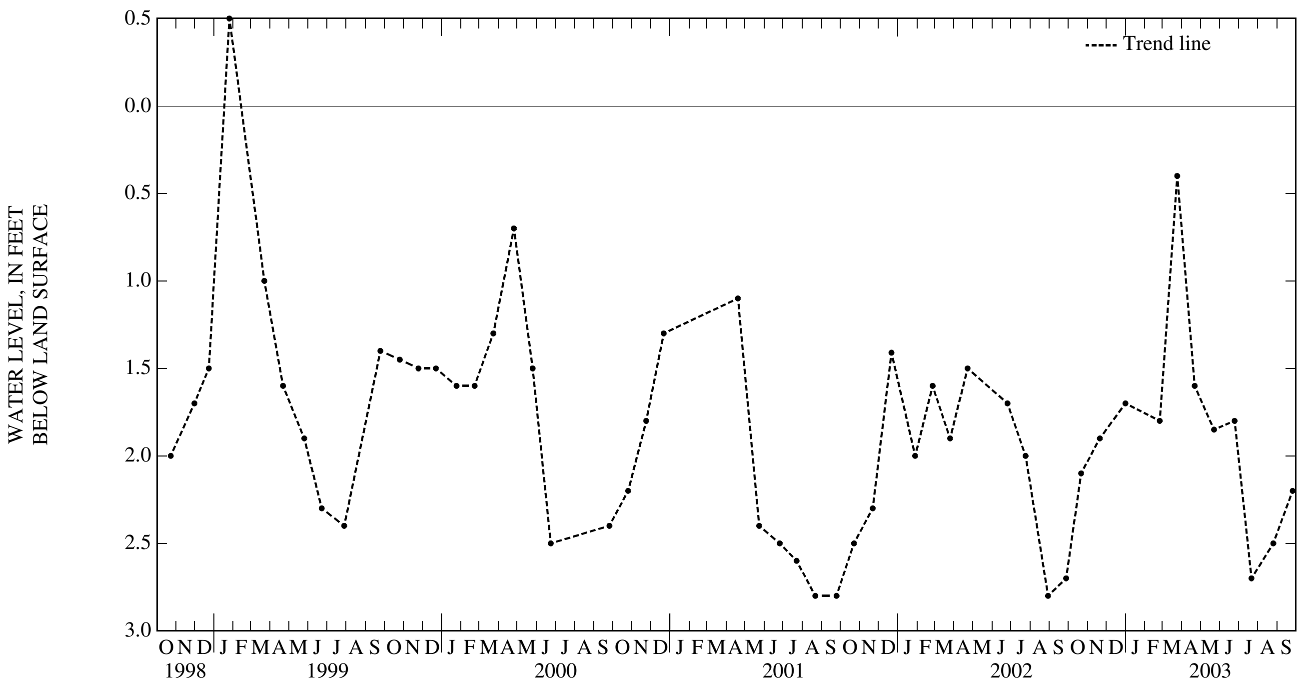
PERIOD OF RECORD.--November 1966 to May 1980, April 1981 to current year.

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, 2.80 ft below land-surface datum, August 21, 2001, September 24, 2001, August 29, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	2.10	DEC 31	1.70	MAR 24	.40	MAY 22	1.85	JUL 21	2.70	SEP 25	2.20
NOV 20	1.90	FEB 24	1.80	APR 21	1.60	JUN 24	1.80	AUG 25	2.50		

WATER YEAR 2003 HIGHEST .40 MAR 24, 2003 LOWEST 2.70 JUL 21, 2003



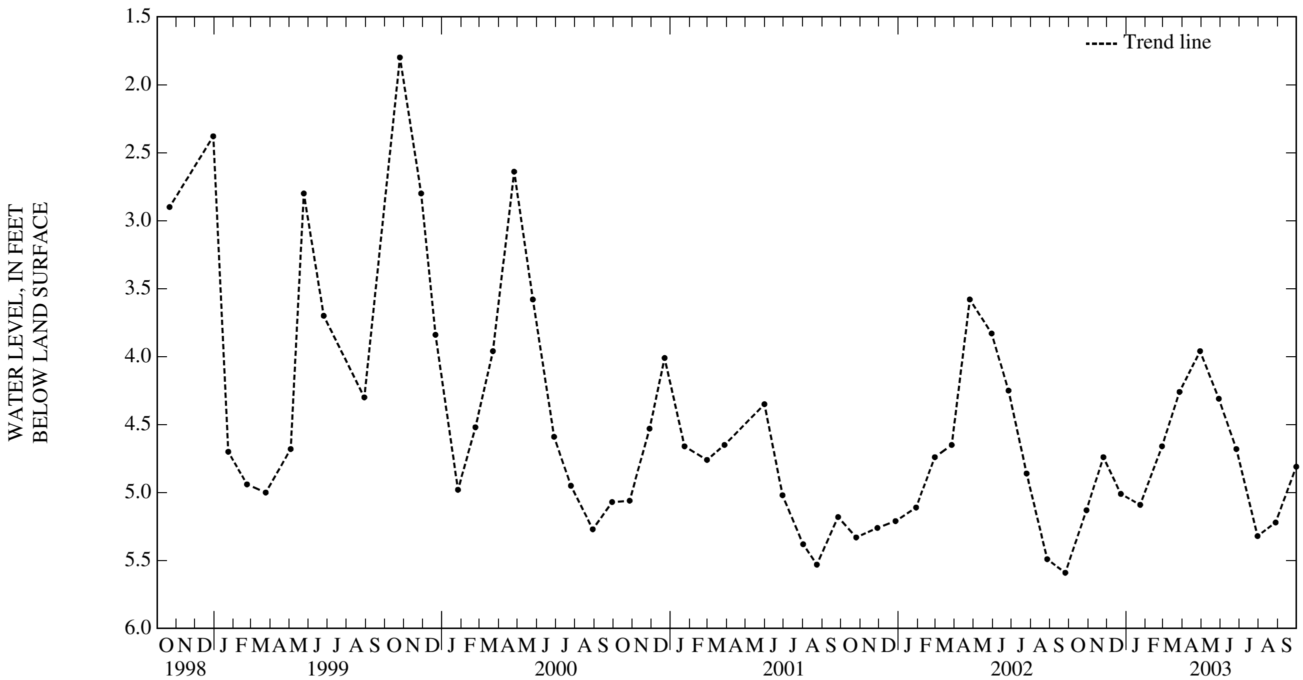
COOS COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.
PERIOD OF RECORD.--September 1991, 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, 5.59 ft below land-surface datum, September 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	5.13	DEC 23	5.01	FEB 27	4.66	APR 29	3.96	JUN 26	4.68	AUG 28	5.22
NOV 25	4.74	JAN 23	5.09	MAR 27	4.26	MAY 29	4.31	JUL 30	5.32	SEP 30	4.81

WATER YEAR 2003 HIGHEST 3.96 APR 29, 2003 LOWEST 5.32 JUL 30, 2003



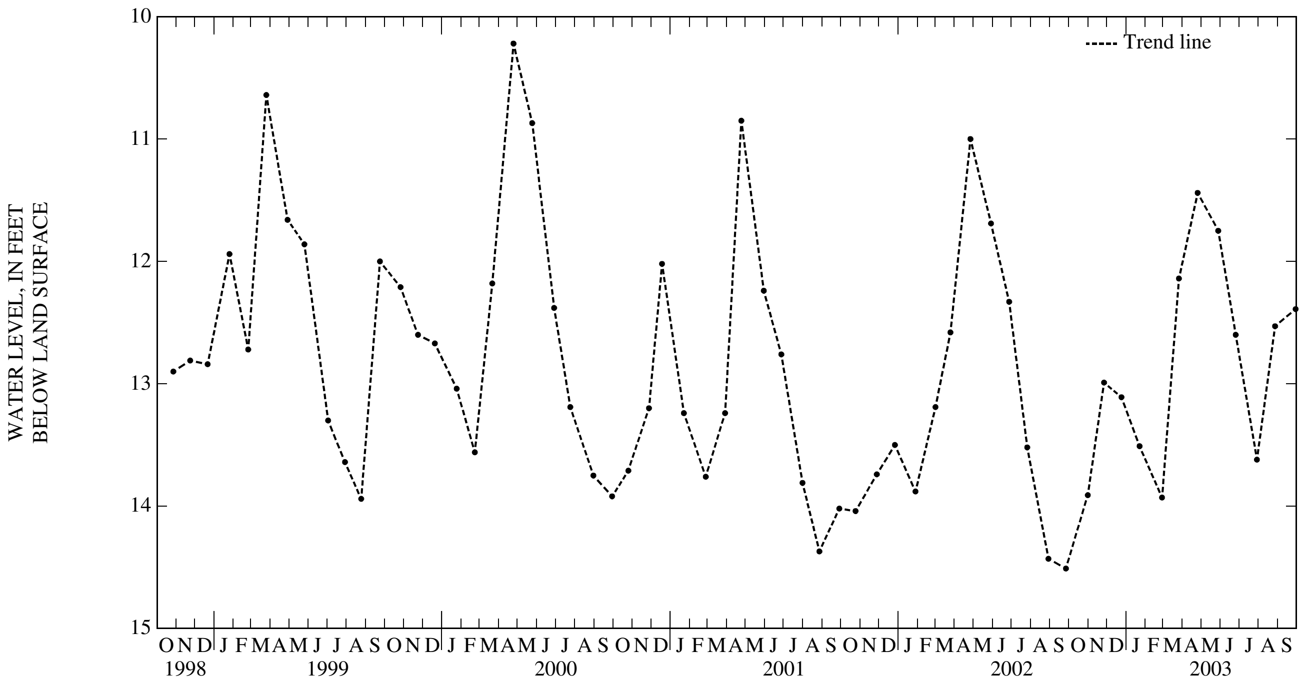
GRAFTON COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.6 ft above land-surface datum.
PERIOD OF RECORD.--June 1988, to August 1989, 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, 14.51 ft below land-surface datum, September 26, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	13.91	DEC 24	13.11	FEB 27	13.93	APR 25	11.44	JUN 25	12.60	AUG 27	12.53
NOV 26	12.99	JAN 22	13.51	MAR 26	12.14	MAY 28	11.75	JUL 29	13.62	SEP 29	12.39

WATER YEAR 2003 HIGHEST 11.44 APR 25, 2003 LOWEST 13.93 FEB 27, 2003



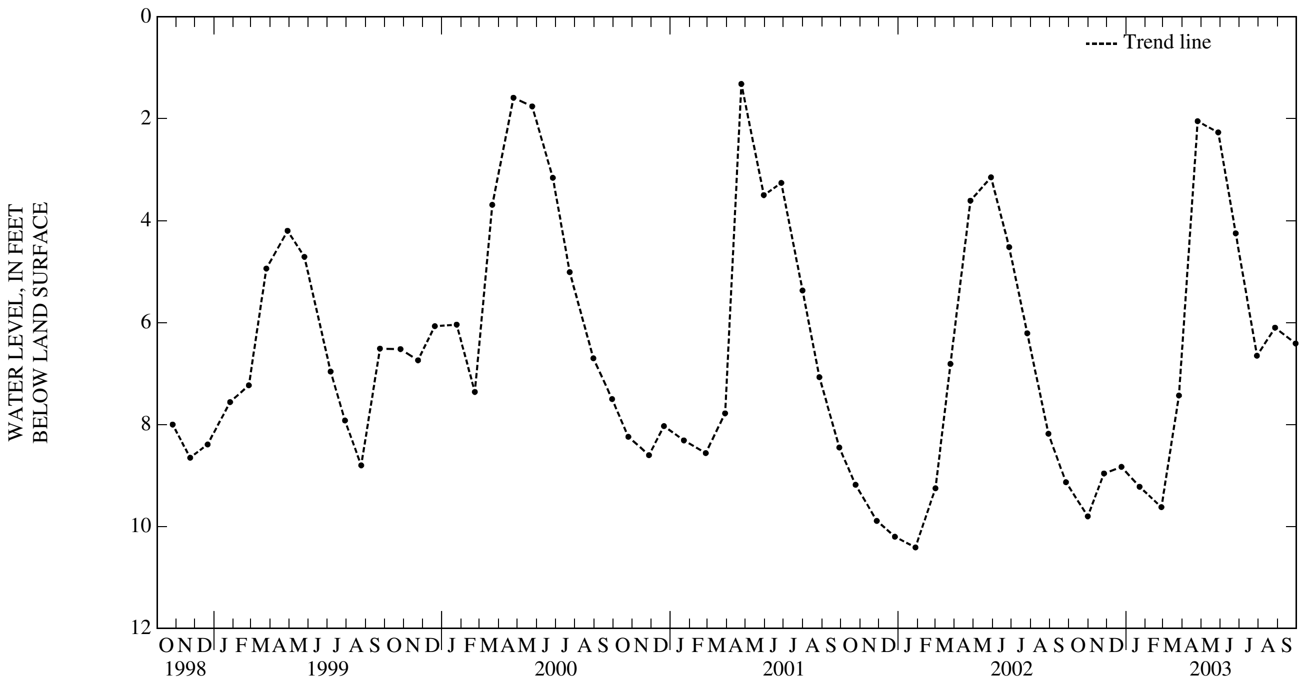
GRAFTON COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.
PERIOD OF RECORD.--May 1990 to October 1991, April 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.32 ft below land-surface datum, April 24, 2001; lowest measured, 10.41 ft below land-surface datum, January 28, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.80	DEC 24	8.83	FEB 26	9.62	APR 25	2.05	JUN 25	4.25	AUG 27	6.10
NOV 26	8.96	JAN 22	9.22	MAR 26	7.43	MAY 28	2.27	JUL 29	6.65	SEP 29	6.41

WATER YEAR 2003 HIGHEST 2.05 APR 25, 2003 LOWEST 9.80 OCT 31, 2002



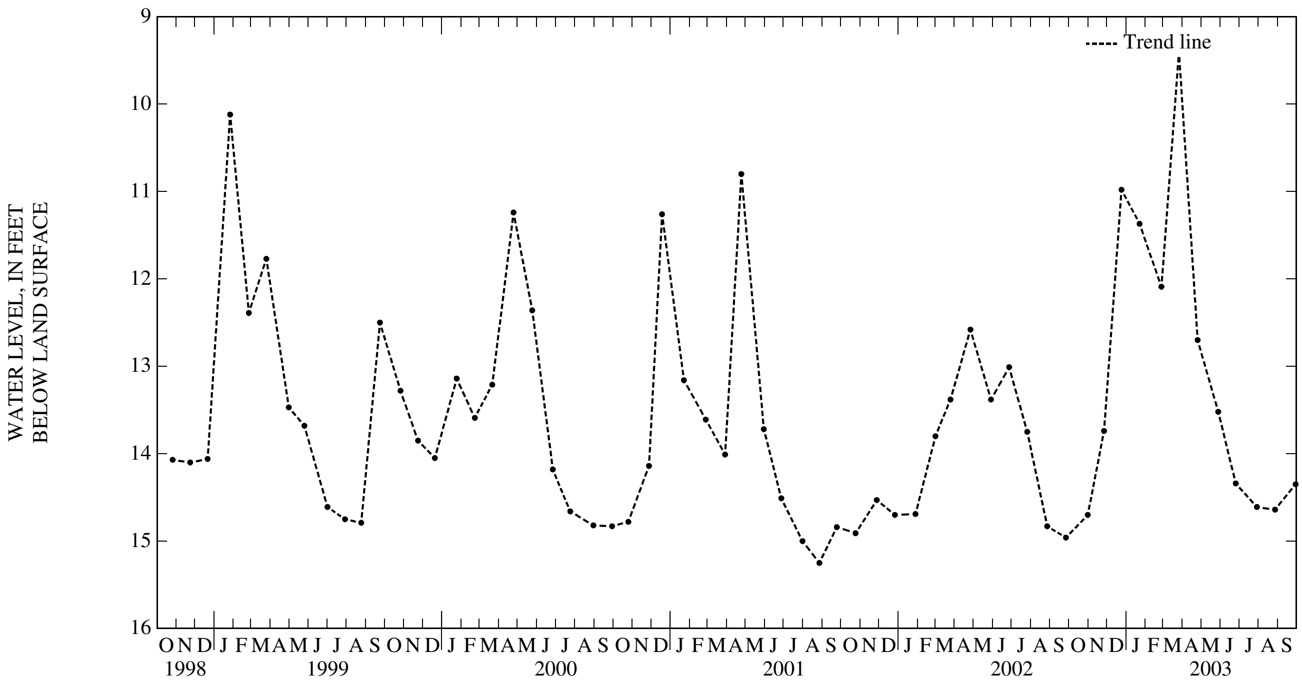
GRAFTON COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.7 ft above land-surface datum.
PERIOD OF RECORD.--December 1990 to October 1991, May 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.40 ft below land-surface datum, March 26, 2003; lowest measured, 15.25 ft below land-surface datum, August 27, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.70	DEC 24	10.98	FEB 26	12.09	APR 25	12.70	JUN 25	14.34	AUG 27	14.64
NOV 26	13.74	JAN 22	11.37	MAR 26	9.40	MAY 28	13.52	JUL 29	14.61	SEP 29	14.35

WATER YEAR 2003 HIGHEST 9.40 MAR 26, 2003 LOWEST 14.70 OCT 31, 2002



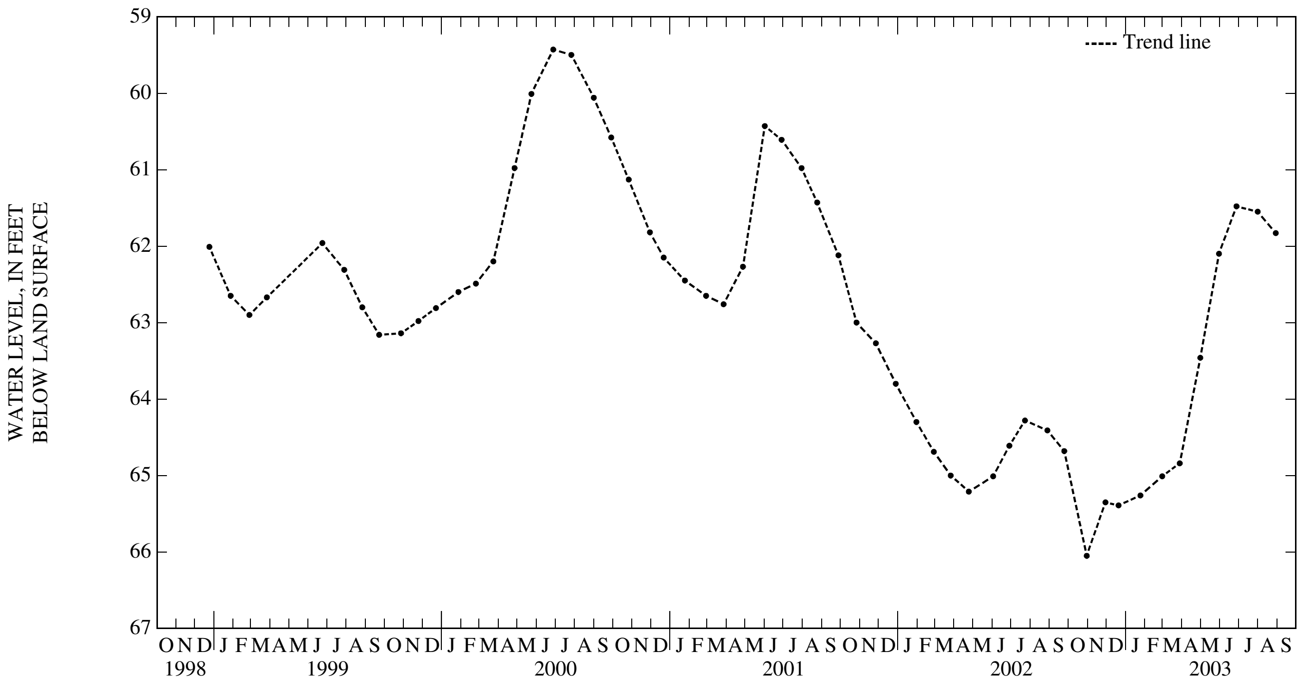
HILLSBOROUGH COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.
PERIOD OF RECORD.--July 1989, 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, 66.05 ft below land-surface datum, October 30, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	66.05	DEC 20	65.39	FEB 28	65.01	APR 30	63.46	JUN 27	61.48	AUG 29	61.83
NOV 29	65.35	JAN 24	65.26	MAR 28	64.84	MAY 30	62.10	JUL 31	61.55		

WATER YEAR 2003 HIGHEST 61.48 JUN 27, 2003 LOWEST 66.05 OCT 30, 2002



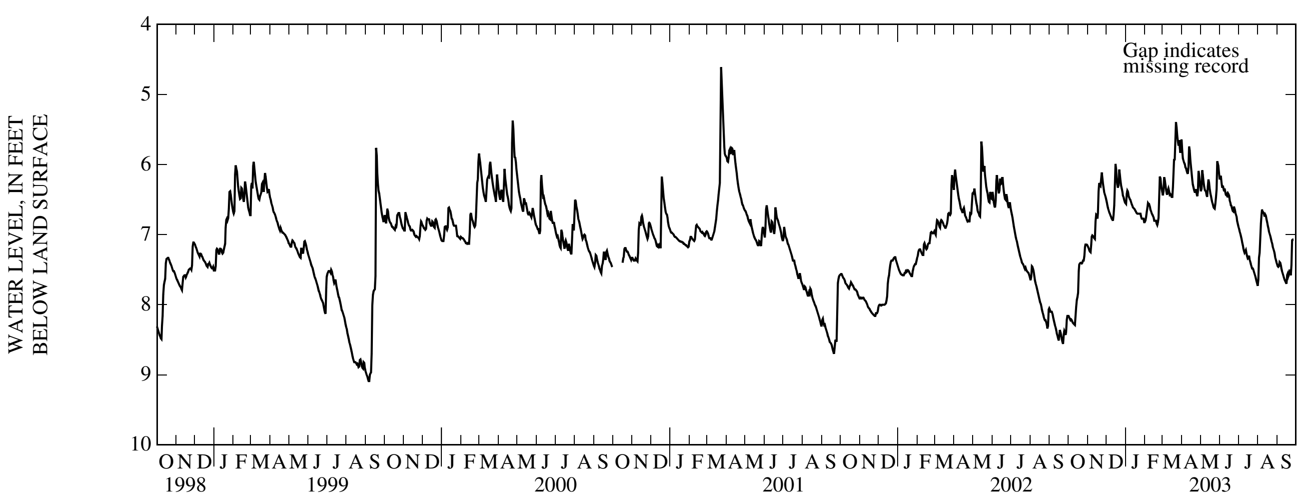
HILLSBOROUGH COUNTY

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 National Geodetic Vertical Datum 1929 (levels by U.S. Geological Survey). Previously published as about 265 ft above National Geodetic Vertical Datum 1929. Measuring point: Top of concrete casing on south side of well, 1.60 ft above land-surface datum, elevation 264.34 ft above National Geodetic Vertical Datum 1929 (levels by U.S. Geological Survey).
REMARKS.--Record complete except for September 27-30.
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 TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.16	7.17	6.53	6.56	6.80	6.44	5.80	6.38	6.17	6.91	7.64	7.45
2	8.18	7.19	6.58	6.42	6.75	6.38	5.91	6.35	6.17	6.95	7.33	7.46
3	8.20	7.22	6.62	6.37	6.68	6.18	5.94	6.08	6.26	6.98	7.26	7.45
4	8.22	7.24	6.65	6.39	6.62	6.22	5.97	6.15	6.33	7.02	7.05	7.39
5	8.21	7.25	6.68	6.45	6.55	6.29	5.99	6.24	6.30	7.06	6.84	7.40
6	8.22	7.14	6.70	6.47	6.56	6.36	6.04	6.31	6.34	7.11	6.71	7.44
7	8.24	7.03	6.72	6.49	6.56	6.41	6.05	6.36	6.38	7.15	6.64	7.48
8	8.26	7.01	6.74	6.50	6.59	6.43	6.08	6.37	6.34	7.19	6.67	7.52
9	8.27	7.02	6.77	6.53	6.64	6.37	6.11	6.38	6.39	7.23	6.68	7.55
10	8.28	7.03	6.78	6.56	6.66	6.34	6.13	6.43	6.43	7.26	6.70	7.58
11	8.29	7.05	6.80	6.58	6.69	6.38	6.04	6.46	6.44	7.24	6.74	7.61
12	8.16	7.06	6.71	6.61	6.71	6.43	5.74	6.31	6.42	7.22	6.71	7.64
13	8.03	6.81	6.58	6.62	6.73	6.42	5.80	6.21	6.47	7.27	6.73	7.66
14	7.93	6.71	6.34	6.63	6.75	6.44	5.94	6.26	6.42	7.31	6.78	7.68
15	7.89	6.72	5.99	6.64	6.80	6.46	6.03	6.35	6.44	7.34	6.82	7.70
16	7.83	6.77	6.07	6.66	6.80	6.46	6.12	6.41	6.51	7.33	6.87	7.58
17	7.52	6.69	6.19	6.67	6.80	6.32	6.22	6.45	6.54	7.30	6.91	7.56
18	7.43	6.38	6.28	6.69	6.80	6.08	6.28	6.49	6.58	7.35	6.95	7.60
19	7.41	6.26	6.33	6.70	6.84	5.92	6.32	6.53	6.59	7.38	6.98	7.57
20	7.40	6.30	6.30	6.70	6.86	5.94	6.36	6.56	6.63	7.42	7.01	7.50
21	7.40	6.31	6.07	6.70	6.82	5.62	6.39	6.60	6.66	7.45	7.05	7.54
22	7.41	6.21	6.14	6.70	6.76	5.39	6.39	6.62	6.67	7.48	7.09	7.58
23	7.40	6.11	6.23	6.70	6.42	5.47	6.35	6.63	6.60	7.48	7.12	7.43
24	7.37	6.19	6.30	6.70	6.17	5.59	6.41	6.56	6.63	7.50	7.17	7.08
25	7.37	6.28	6.34	6.74	6.19	5.67	6.45	6.47	6.68	7.53	7.20	7.07
26	7.31	6.34	6.39	6.77	6.27	5.73	6.39	6.35	6.71	7.56	7.23	7.07
27	7.18	6.39	6.44	6.77	6.34	5.65	6.09	5.95	6.74	7.59	7.27	---
28	7.14	6.42	6.46	6.77	6.39	5.76	6.13	5.98	6.80	7.62	7.32	---
29	7.14	6.45	6.50	6.77	---	5.83	6.23	6.02	6.84	7.66	7.35	---
30	7.14	6.49	6.53	6.82	---	5.68	6.32	6.12	6.88	7.69	7.39	---
31	7.15	---	6.55	6.82	---	5.64	---	6.21	---	7.73	7.42	---
MEAN	7.75	6.71	6.46	6.63	6.63	6.07	6.13	6.34	6.51	7.33	7.02	---
MAX	8.29	7.25	6.80	6.82	6.86	6.46	6.45	6.63	6.88	7.73	7.64	---
MIN	7.14	6.11	5.99	6.37	6.17	5.39	5.74	5.95	6.17	6.91	6.64	---

CAL YR 2002 MEAN 7.10 HIGH 5.67 LOW 8.56



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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.1 ft above land-surface datum.

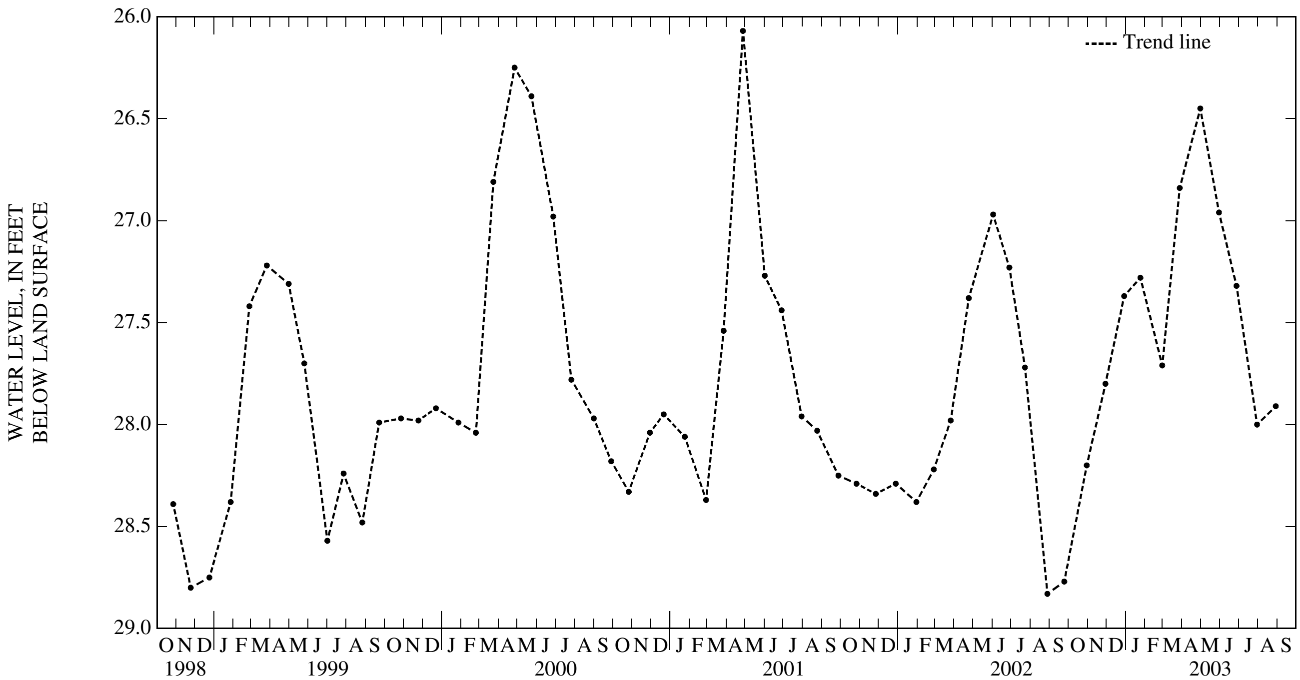
PERIOD OF RECORD.--October 1964 to current year. Prior to June 1966, published in New Hampshire Basic-Data Report No. 2, Ground-Water Series.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.07 ft below land-surface datum, April 27, 2001; lowest measured, 33.10 ft below land-surface datum, November 25, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	28.20	DEC 29	27.37	FEB 28	27.71	APR 30	26.45	JUN 27	27.32	AUG 29	27.91
NOV 29	27.80	JAN 24	27.28	MAR 28	26.84	MAY 30	26.96	JUL 30	28.00		

WATER YEAR 2003 HIGHEST 26.45 APR 30, 2003 LOWEST 28.20 OCT 30, 2002



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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.00 ft above land-surface datum.

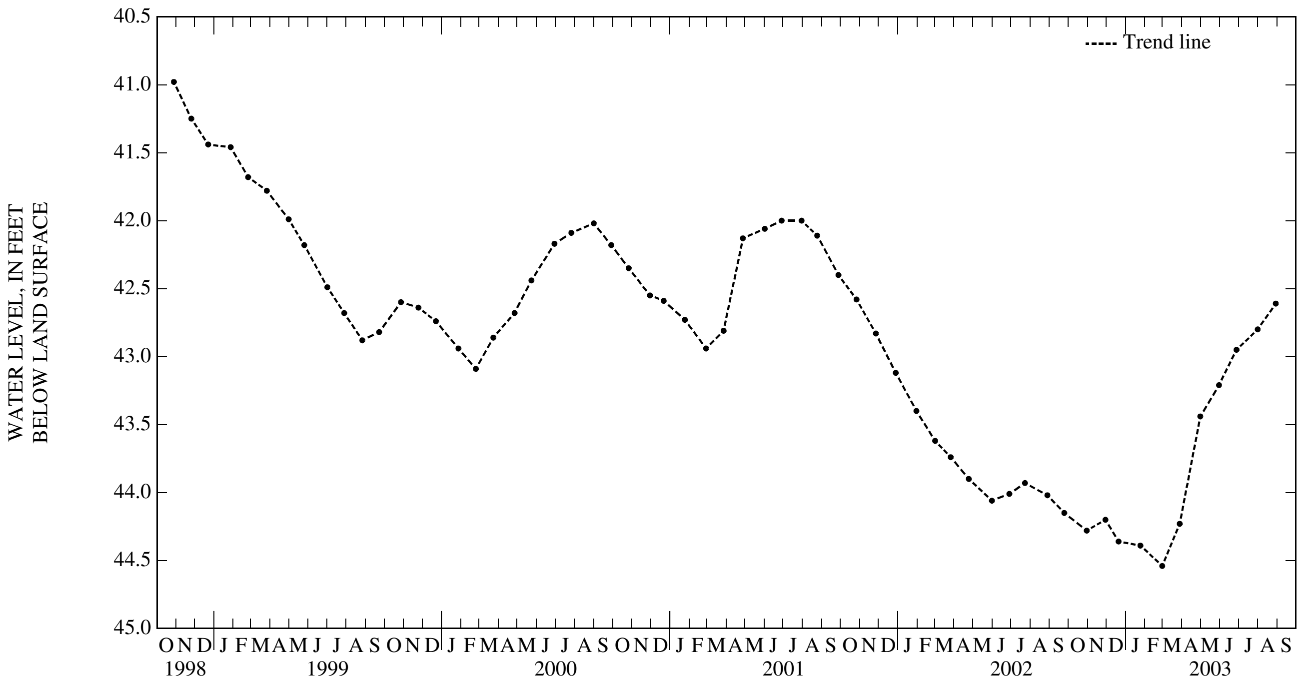
PERIOD OF RECORD.--August 1963 to May 1965, August 1967 to current year.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	44.28	DEC 20	44.36	FEB 28	44.54	APR 30	43.44	JUN 27	42.95	AUG 29	42.61
NOV 29	44.20	JAN 24	44.39	MAR 28	44.23	MAY 30	43.21	JUL 31	42.80		

WATER YEAR 2003 HIGHEST 42.61 AUG 29, 2003 LOWEST 44.54 FEB 28, 2003



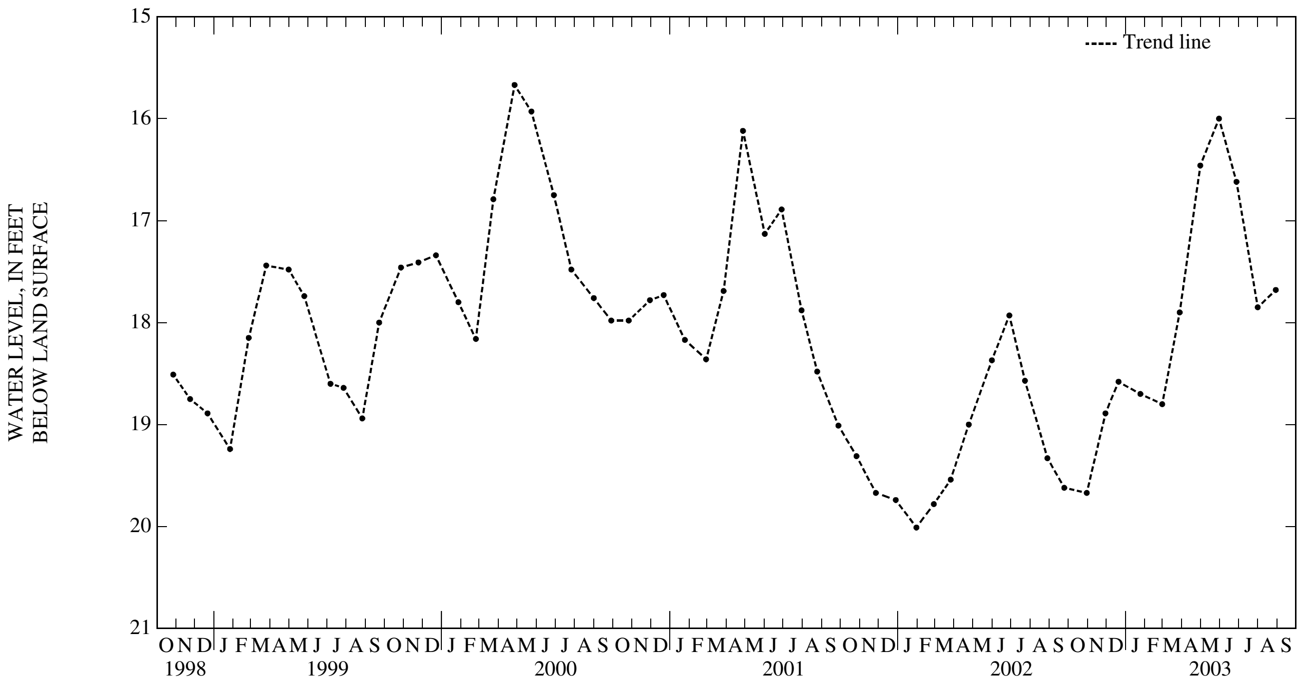
MERRIMACK COUNTY

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 l.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 National Geodetic Vertical Datum 1929 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	19.67	DEC 20	18.58	FEB 28	18.80	APR 30	16.46	JUN 27	16.62	AUG 29	17.68
NOV 29	18.89	JAN 24	18.70	MAR 28	17.90	MAY 30	16.00	JUL 31	17.85		

WATER YEAR 2003 HIGHEST 16.00 MAY 30, 2003 LOWEST 19.67 OCT 30, 2002



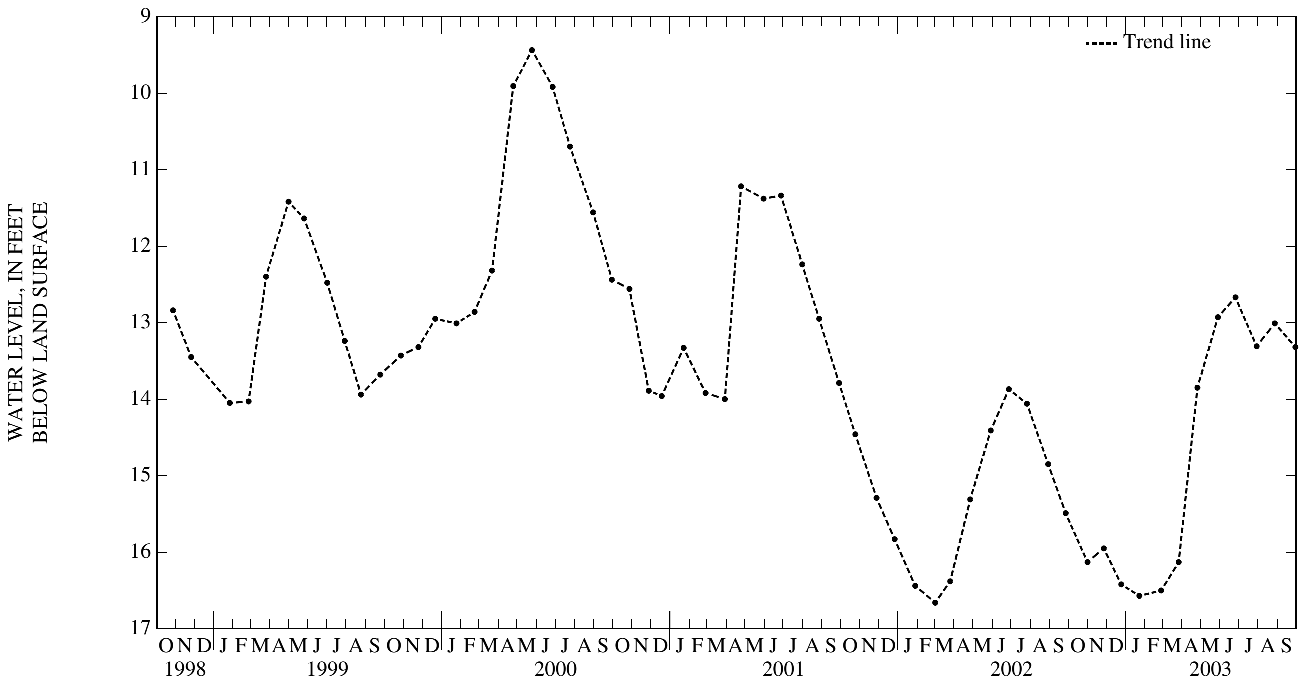
MERRIMACK COUNTY

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 National Geodetic Vertical Datum 1929 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, 16.66 ft below land-surface datum, March 1, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	16.13	DEC 24	16.42	FEB 26	16.50	APR 25	13.85	JUN 25	12.67	AUG 27	13.01
NOV 26	15.95	JAN 22	16.57	MAR 26	16.13	MAY 28	12.93	JUL 29	13.31	SEP 29	13.32

WATER YEAR 2003 HIGHEST 12.67 JUN 25, 2003 LOWEST 16.57 JAN 22, 2003



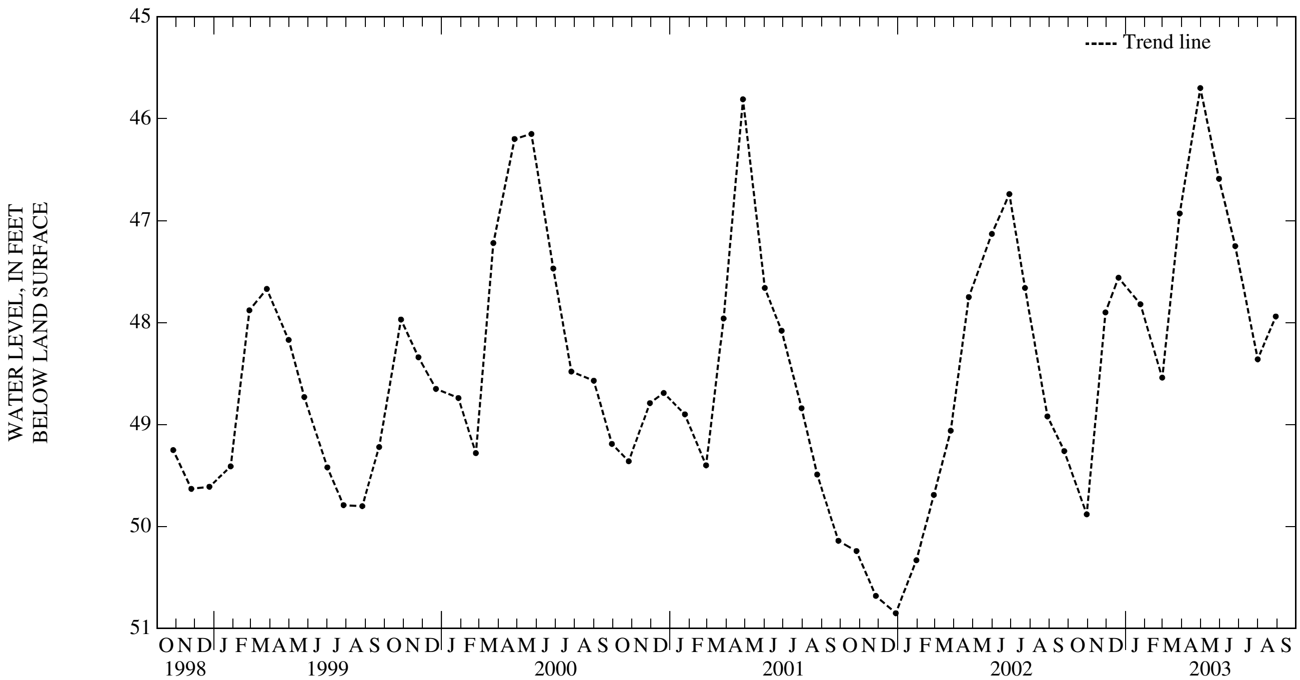
MERRIMACK COUNTY

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 National Geodetic Vertical Datum 1929 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	49.88	DEC 20	47.56	FEB 28	48.54	APR 30	45.70	JUN 25	47.25	AUG 29	47.94
NOV 29	47.90	JAN 24	47.82	MAR 28	46.93	MAY 30	46.59	JUL 31	48.36		

WATER YEAR 2003 HIGHEST 45.70 APR 30, 2003 LOWEST 49.88 OCT 30, 2002



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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Edge of 0.75-in. hole in wooden cover, 2.9 ft above land-surface datum.

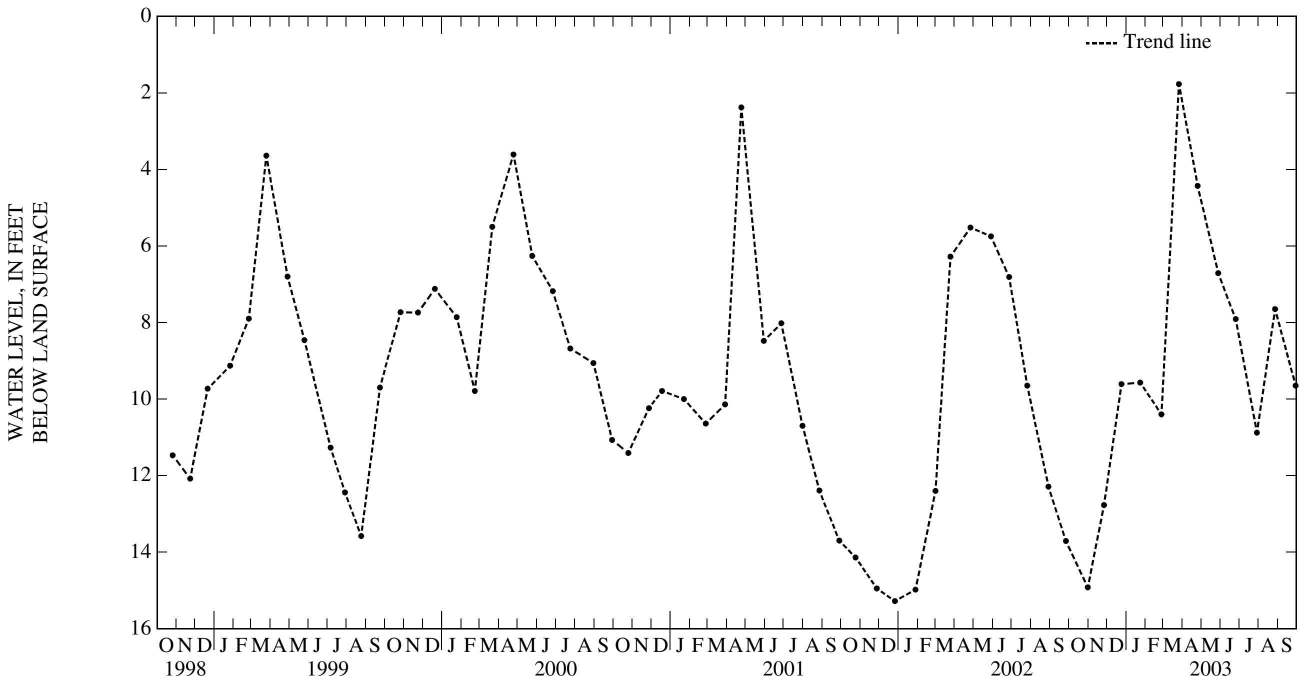
PERIOD OF RECORD.--October 1947 to current year. Prior to January 1956, published in Water Levels and Artesian Pressures in Observation Wells in the United States: Part 1. Northeastern States; U.S. Geological Survey Water-Supply Paper Series. January 1956 to November 1972, published in Ground-Water Levels 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.92	DEC 24	9.61	FEB 26	10.40	APR 25	4.43	JUN 25	7.91	AUG 27	7.65
NOV 26	12.77	JAN 23	9.57	MAR 26	1.77	MAY 28	6.71	JUL 29	10.88	SEP 29	9.65

WATER YEAR 2003 HIGHEST 1.77 MAR 26, 2003 LOWEST 14.92 OCT 31, 2002



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 l03 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.

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

DATUM.--Elevation of land-surface datum is 424 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, presently 3.5 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 to current year.

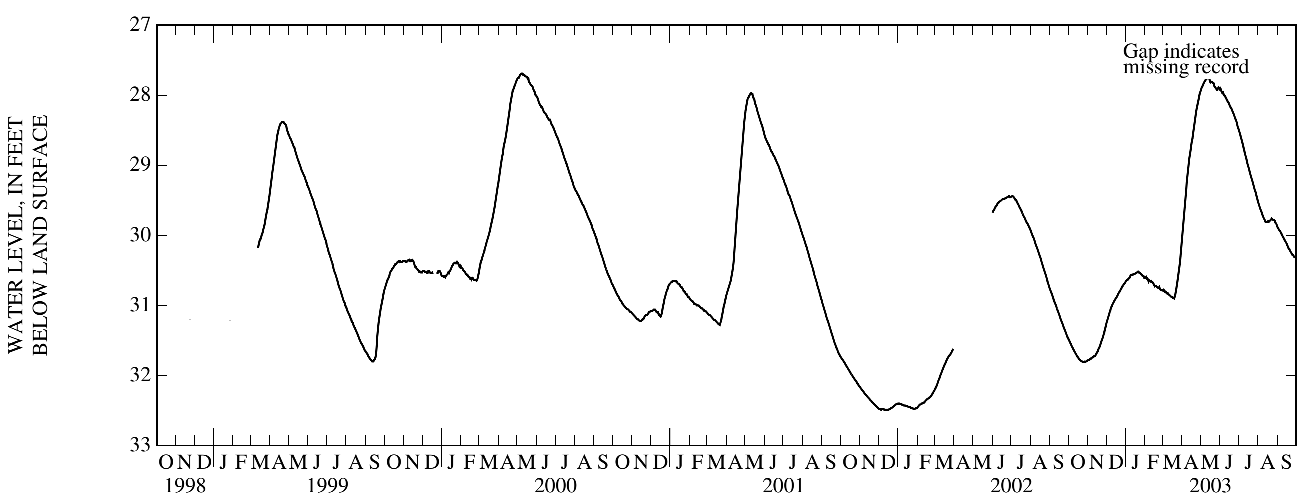
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.94 ft below land-surface datum, May 5, 1969; lowest measured, 33.82 ft below land-surface datum, December 17, 1965.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31.49	31.78	31.24	30.65	30.60	30.79	30.01	27.92	27.90	28.51	29.54	29.90
2	31.51	31.78	31.21	30.64	30.59	30.78	29.90	27.89	27.93	28.54	29.57	29.91
3	31.53	31.78	31.17	30.64	30.62	30.80	29.78	27.87	27.95	28.58	29.60	29.93
4	31.55	31.77	31.14	30.62	30.62	30.81	29.66	27.85	27.97	28.61	29.63	29.94
5	e31.57	31.77	31.11	30.62	30.64	30.81	29.54	27.83	27.96	28.64	29.65	29.95
6	31.59	31.75	31.08	30.61	30.66	30.82	29.44	27.81	27.98	28.68	29.67	29.97
7	31.60	31.75	31.06	30.60	30.65	30.83	29.34	27.80	28.00	28.72	29.70	29.98
8	31.62	31.74	31.03	30.57	30.66	30.83	29.24	27.79	28.01	28.75	29.72	30.00
9	31.64	31.74	31.01	30.57	30.66	30.83	29.14	27.78	28.02	28.78	29.75	30.02
10	31.66	31.73	30.99	30.56	30.65	30.84	29.06	27.77	28.05	28.83	29.77	30.04
11	31.68	31.72	30.97	30.56	30.66	30.85	28.98	27.75	28.06	28.86	29.78	30.05
12	31.69	31.72	30.95	30.56	30.67	30.86	28.90	27.74	28.08	28.89	29.81	30.07
13	31.71	31.71	30.94	30.55	30.68	30.87	28.85	27.74	28.10	28.93	29.81	30.09
14	31.72	31.69	30.92	30.55	30.70	30.88	28.79	27.76	28.11	28.97	29.81	30.11
15	31.74	31.67	30.90	30.55	30.71	30.88	28.72	27.80	28.13	29.00	29.81	30.12
16	31.75	31.66	30.89	30.54	30.73	30.89	28.66	27.82	28.16	29.03	29.80	30.14
17	31.76	31.64	30.88	30.54	30.73	30.89	28.61	27.82	28.17	29.07	29.81	30.16
18	31.77	31.62	30.86	30.53	30.72	30.90	28.56	27.81	28.18	29.10	29.81	30.18
19	31.78	31.60	30.84	30.52	30.74	30.90	28.49	27.82	28.20	29.13	29.80	30.19
20	31.79	31.58	30.82	30.52	30.75	30.87	28.43	27.82	28.22	29.16	29.78	30.21
21	31.80	31.55	30.81	e30.53	30.75	30.82	28.36	27.83	28.24	29.19	29.77	30.23
22	31.80	31.52	30.79	30.53	30.75	30.78	28.29	27.86	28.26	29.22	29.76	30.25
23	31.81	31.50	30.78	30.54	30.74	30.71	28.23	27.88	28.29	29.25	29.77	30.26
24	31.81	31.47	30.76	30.55	30.77	30.65	28.18	27.89	28.32	29.29	29.78	30.28
25	31.81	31.44	30.74	30.56	30.78	30.58	28.14	27.91	28.34	29.32	29.78	30.28
26	31.80	31.41	30.73	30.56	30.78	30.51	28.09	27.93	28.36	29.36	29.79	30.30
27	31.81	31.38	30.72	30.58	30.78	30.45	28.05	27.93	28.39	29.38	29.80	30.31
28	31.81	31.34	30.70	30.58	30.79	30.38	28.01	27.90	28.43	29.41	29.82	30.31
29	31.80	31.31	30.69	30.59	---	30.30	27.97	27.89	28.46	29.45	29.83	30.32
30	31.79	31.27	30.68	30.61	---	30.21	27.95	27.90	28.48	29.48	29.85	30.33
31	31.79	---	30.66	30.61	---	30.11	---	27.92	---	29.52	29.88	---
MEAN	31.71	31.61	30.91	30.57	30.70	30.72	28.78	27.84	28.16	29.02	29.76	30.13
MAX	31.81	31.78	31.24	30.65	30.79	30.90	30.01	27.93	28.48	29.52	29.88	30.33
MIN	31.49	31.27	30.66	30.52	30.59	30.11	27.95	27.74	27.90	28.51	29.54	29.90

WTR YR 2003 MEAN 29.99 HIGH 27.74 LOW 31.81

e Estimated



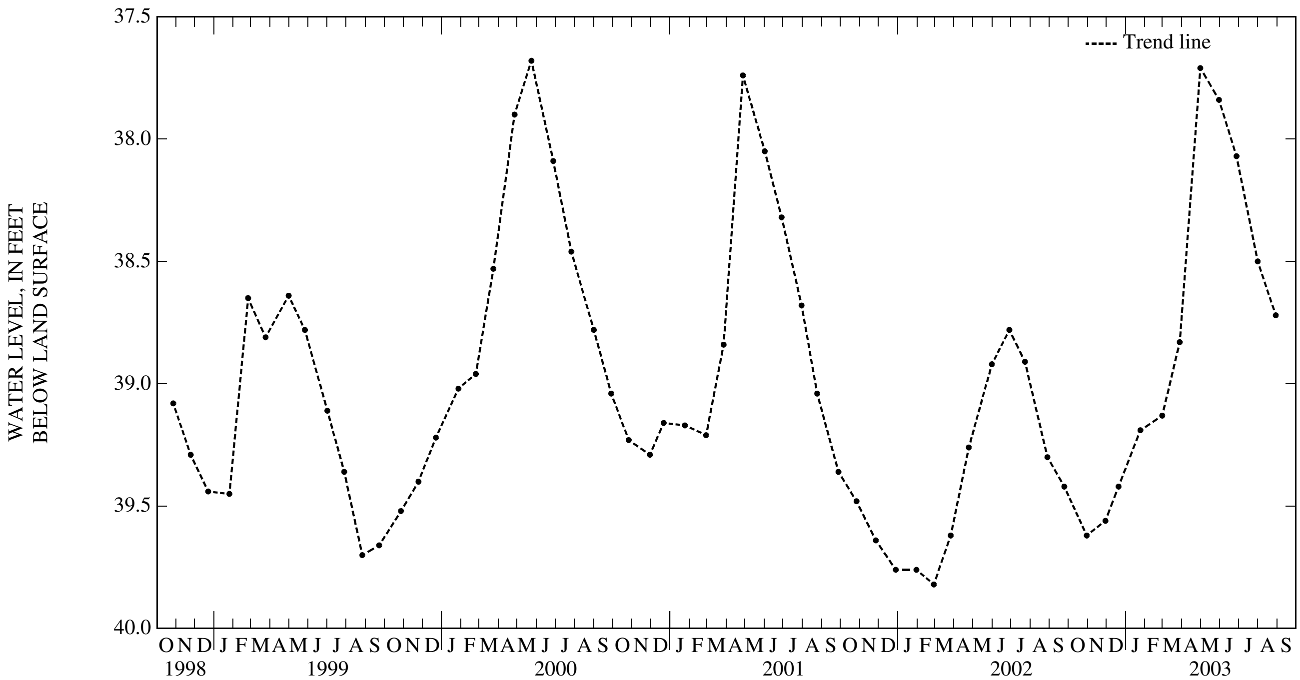
ROCKINGHAM COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.
PERIOD OF RECORD.--November 1984 to May 1986, April 1989, 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	39.62	DEC 20	39.42	FEB 28	39.13	APR 30	37.71	JUN 27	38.07	AUG 29	38.72
NOV 29	39.56	JAN 24	39.19	MAR 28	38.83	MAY 30	37.84	JUL 31	38.50		

WATER YEAR 2003 HIGHEST 37.71 APR 30, 2003 LOWEST 39.62 OCT 30, 2002



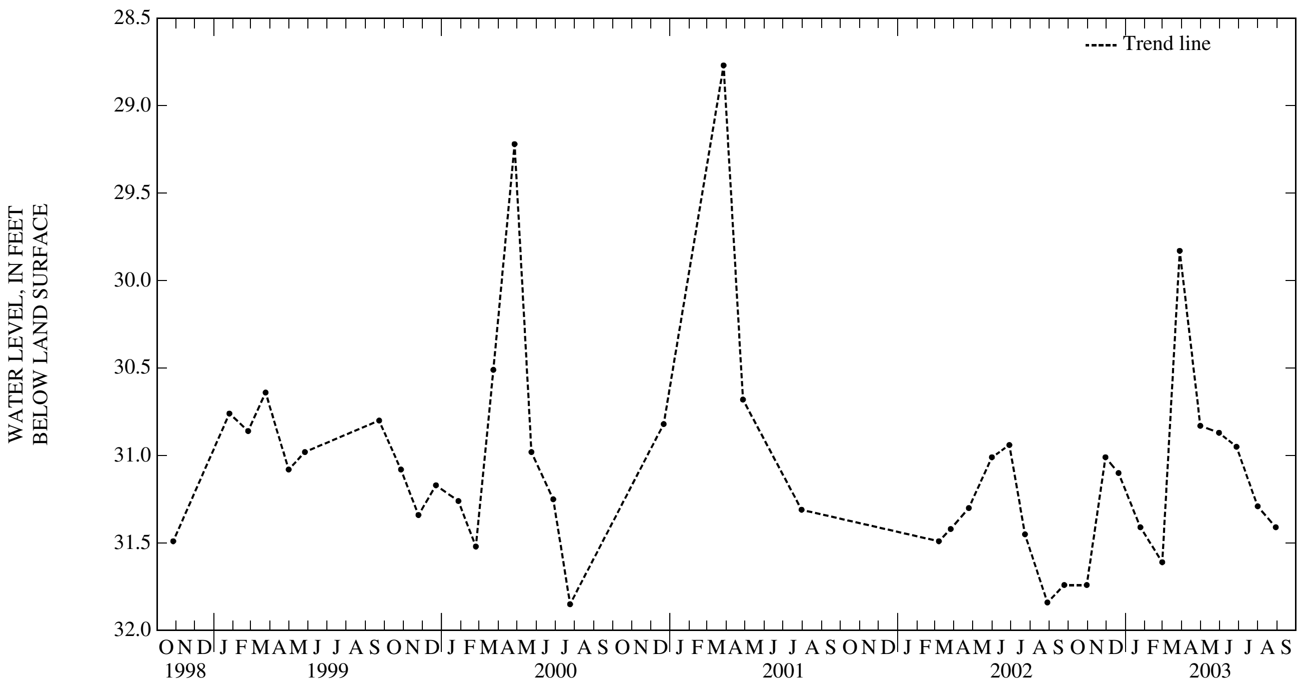
STRAFFORD COUNTY

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 National Geodetic Vertical Datum 1929 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	31.74	DEC 20	31.10	FEB 28	31.61	APR 30	30.83	JUN 27	30.95	AUG 29	31.41
NOV 29	31.01	JAN 24	31.41	MAR 28	29.83	MAY 30	30.87	JUL 31	31.29		

WATER YEAR 2003 HIGHEST 29.83 MAR 28, 2003 LOWEST 31.74 OCT 30, 2002



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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

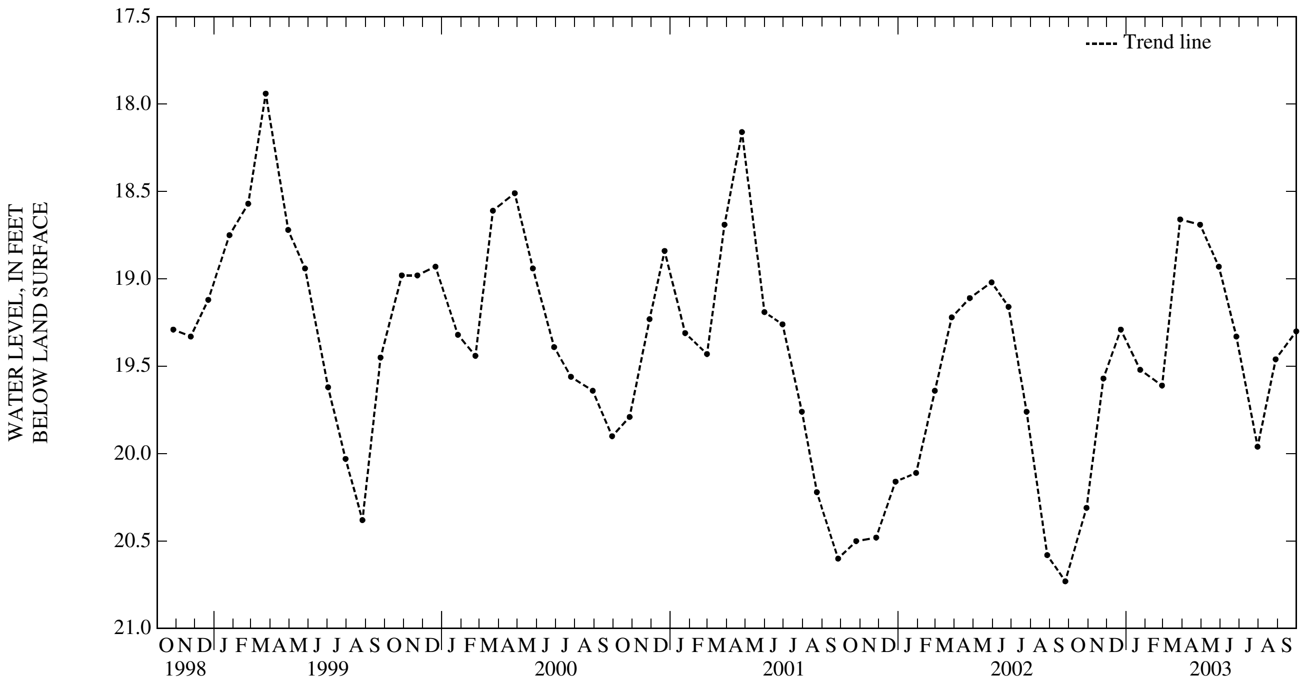
PERIOD OF RECORD.--December 1986 to May 1988, March, April 1991, April 1995 to current year.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	20.31	DEC 23	19.29	FEB 27	19.61	APR 29	18.69	JUN 26	19.33	AUG 28	19.46
NOV 25	19.57	JAN 23	19.52	MAR 28	18.66	MAY 29	18.93	JUL 30	19.96	SEP 30	19.30

WATER YEAR 2003 HIGHEST 18.66 MAR 28, 2003 LOWEST 20.31 OCT 29, 2002



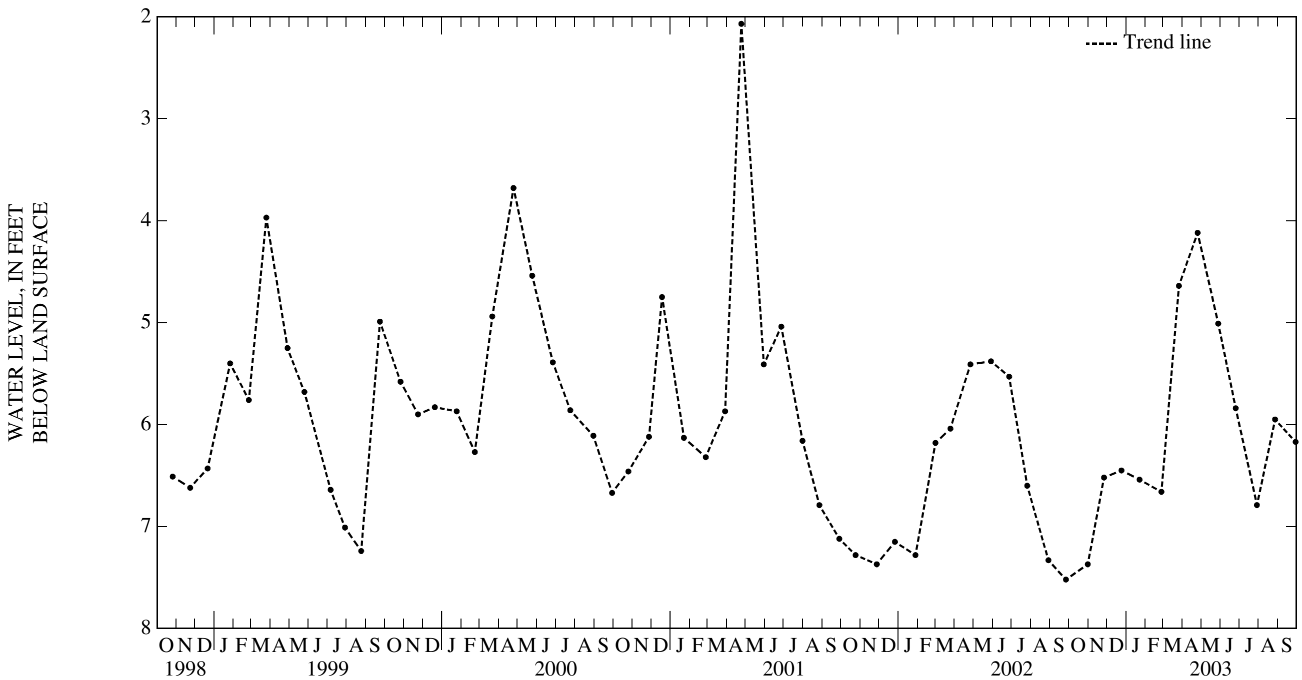
SULLIVAN COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.5 ft above land-surface datum.
PERIOD OF RECORD.--April 1988, April 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.07 ft below land-surface datum, April 24, 2001; lowest measured, 7.52 ft below land-surface datum, September 26, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	7.37	DEC 24	6.45	FEB 26	6.66	APR 25	4.12	JUN 25	5.84	AUG 27	5.95
NOV 26	6.52	JAN 22	6.54	MAR 26	4.64	MAY 28	5.01	JUL 29	6.79	SEP 29	6.17

WATER YEAR 2003 HIGHEST 4.12 APR 25, 2003 LOWEST 7.37 OCT 31, 2002



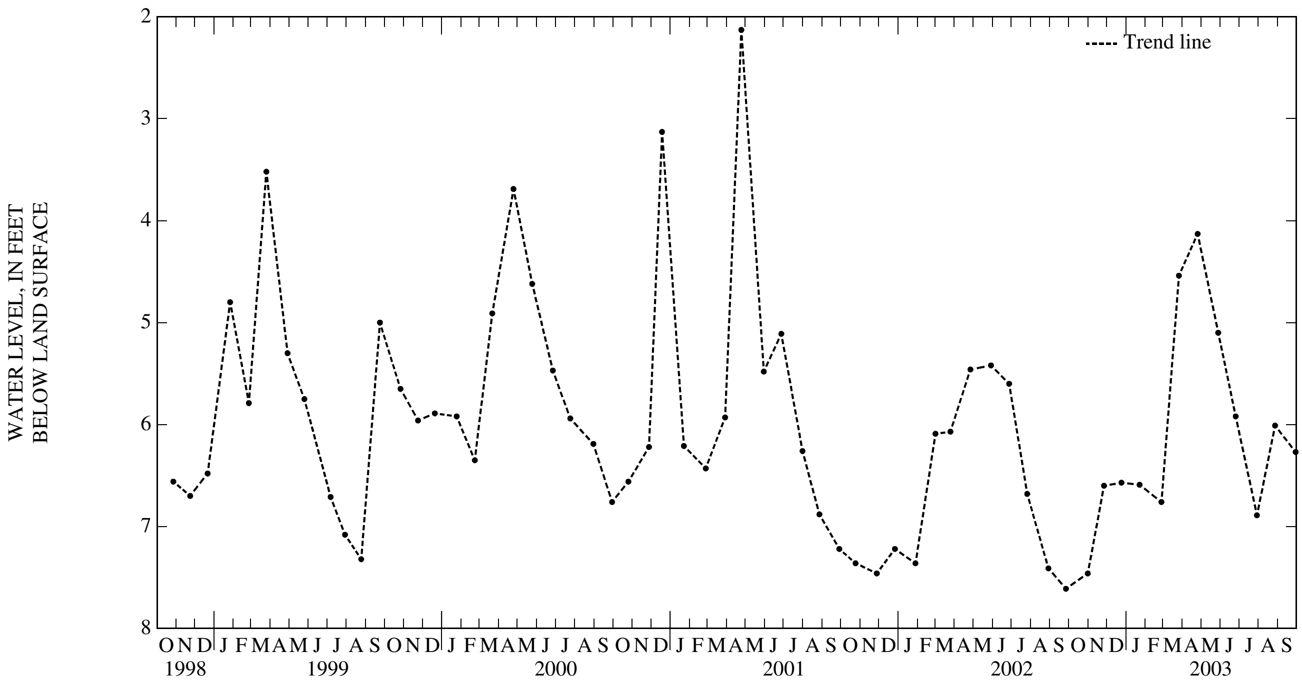
SULLIVAN COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 3.4 ft above land-surface datum.
PERIOD OF RECORD.--April 1988, April 1995 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.13 ft below land-surface datum, April 24, 2001; lowest measured, 7.61 ft below land-surface datum, September 26, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	7.46	DEC 24	6.57	FEB 26	6.76	APR 25	4.13	JUN 25	5.92	AUG 27	6.01
NOV 26	6.60	JAN 22	6.59	MAR 26	4.54	MAY 28	5.10	JUL 29	6.89	SEP 29	6.27

WATER YEAR 2003 HIGHEST 4.13 APR 25, 2003 LOWEST 7.46 OCT 31, 2002



BENNINGTON COUNTY

424810073160401. Local number, PQW 1, Town of North Pownal.

LOCATION.--Lat 42° 48'10", long 73° 16'04", Hydrologic Unit 02020003, in front of residence on west side of State Highway 346 and 0.15 mi south of post office at North Pownal. Owner: James Burden

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 18 ft, cased with stone to 18 ft, open end.

DATUM.--Elevation of land-surface datum is 515 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of 0.75-in diameter hole drilled in center of 0.38-in thick steel cover at land-surface datum.

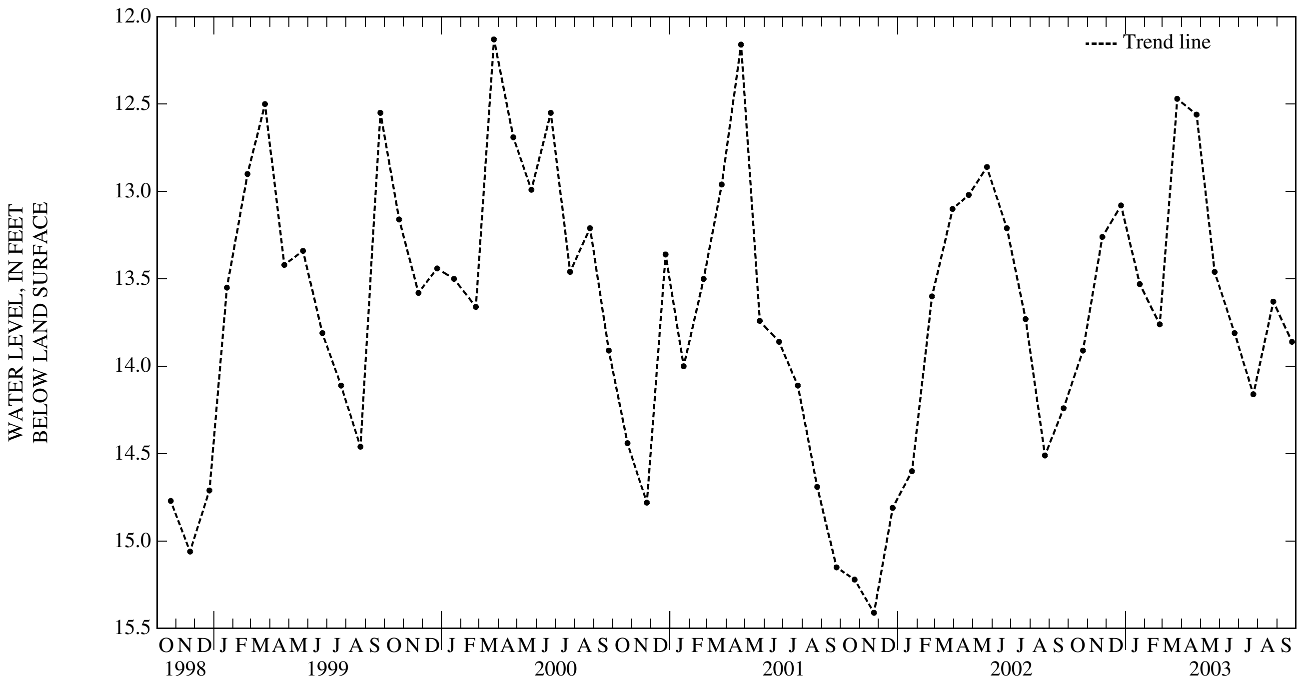
PERIOD OF RECORD.--October 1964 to current year. Prior to October 1977, published as Pownal 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.98 ft below land-surface datum, June 1, 1984; lowest measured, 16.59 ft below land-surface datum, October 19, 1964.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	13.91	DEC 24	13.08	FEB 24	13.76	APR 24	12.56	JUN 24	13.81	AUG 25	13.63
NOV 24	13.26	JAN 23	13.53	MAR 24	12.47	MAY 23	13.46	JUL 24	14.16	SEP 24	13.86

WATER YEAR 2003 HIGHEST 12.47 MAR 24, 2003 LOWEST 14.16 JUL 24, 2003



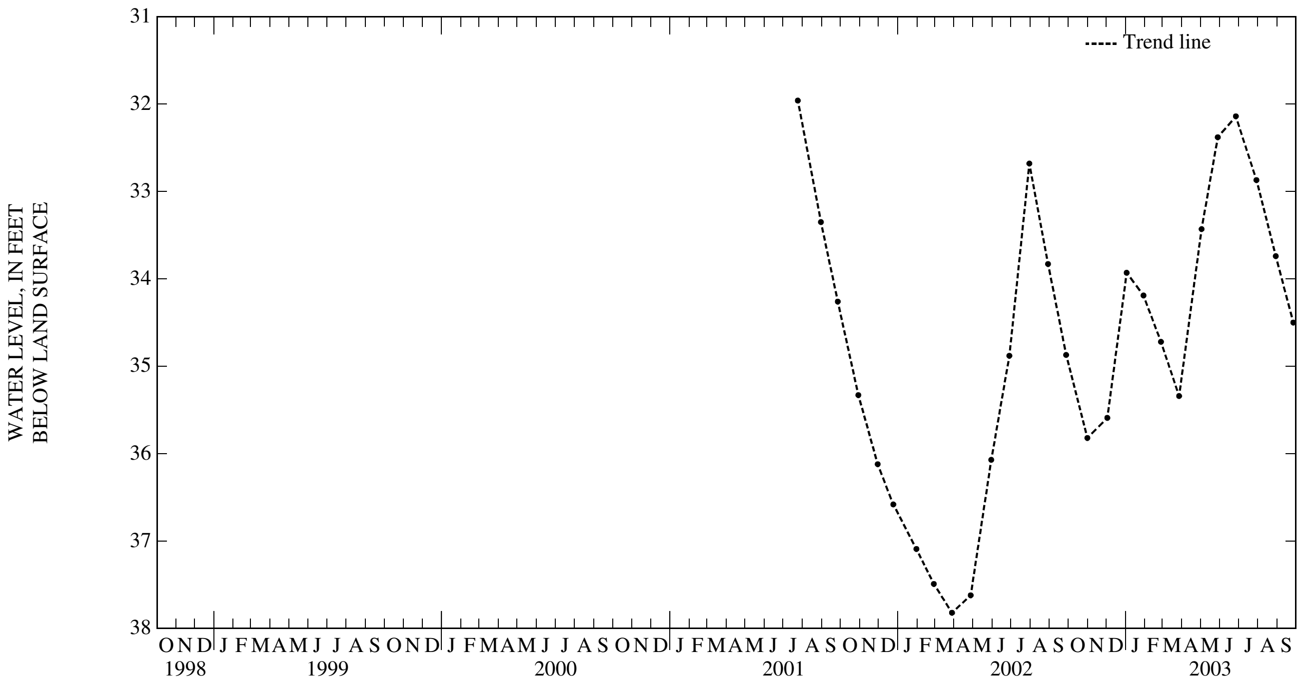
CHITTENDEN COUNTY

443646073124901. Local number, MJW 3, Town of Milton.
LOCATION.--Lat 44° 36'46", long 73° 12'49", Hydrologic Unit 02010005, about 600 ft south of manager's residence at Vermont Sandbar Waterfowl Development Area, about 400 ft west of former U.S. Highway 2, and 0.9 mi northwest of Lamoille River bridge at Milton. Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 40 ft, screened 38 to 40 ft.
DATUM.--Elevation of land-surface datum is 160 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--November 1956 to September 1995, July 2001 to current year. Prior to October 1977, published as Milton 3.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.97 ft below land-surface datum, May 29, 1974; lowest measured, 39.10 ft below land-surface datum, March 23, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	35.82	JAN 02	33.93	FEB 26	34.72	MAY 02	33.43	JUN 26	32.14	AUG 29	33.74
DEC 02	35.59	29	34.19	MAR 27	35.34	28	32.38	JUL 29	32.87	SEP 26	34.50

WATER YEAR 2003 HIGHEST 32.14 JUN 26, 2003 LOWEST 35.82 OCT 31, 2002



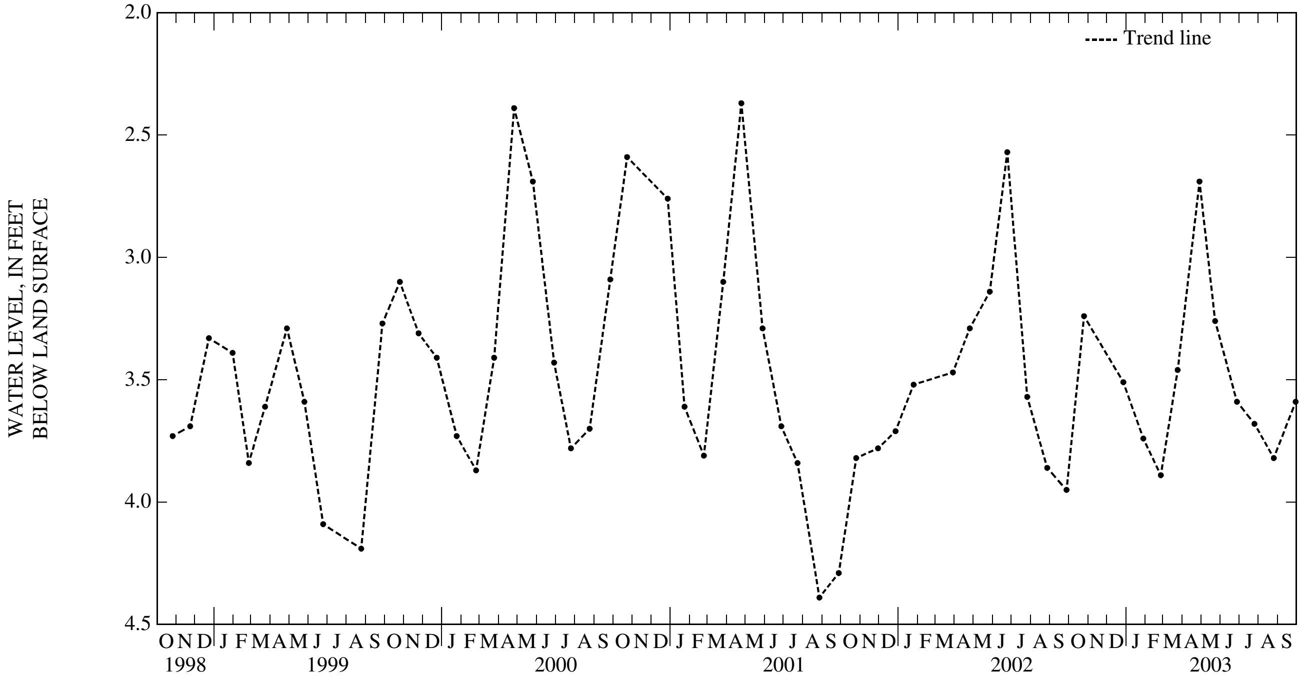
ESSEX COUNTY

444731071514701. Local number, BIW 1, Town of Brighton.
LOCATION.--Lat 44° 47'31", long 71° 51'47", Hydrologic Unit 01110000, south of road and just west of parking lot for Brighton State Park Beach at Brighton. Owner: U.S. Geological Survey.
AQUIFER.--Medium and coarse sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 35 ft, screened 33 to 35 ft.
DATUM.--Elevation of land-surface datum is 1,180 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Brighton 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.68 ft below land-surface datum, April 21, 2000; lowest measured, 4.95 ft below land-surface datum, August 21, 1984.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.24	JAN 28	3.74	MAR 24	3.46	MAY 23	3.26	JUL 25	3.68	SEP 29	3.59
DEC 27	3.51	FEB 25	3.89	APR 28	2.69	JUN 27	3.59	AUG 25	3.82		

WATER YEAR 2003 HIGHEST 2.69 APR 28, 2003 LOWEST 3.89 FEB 25, 2003



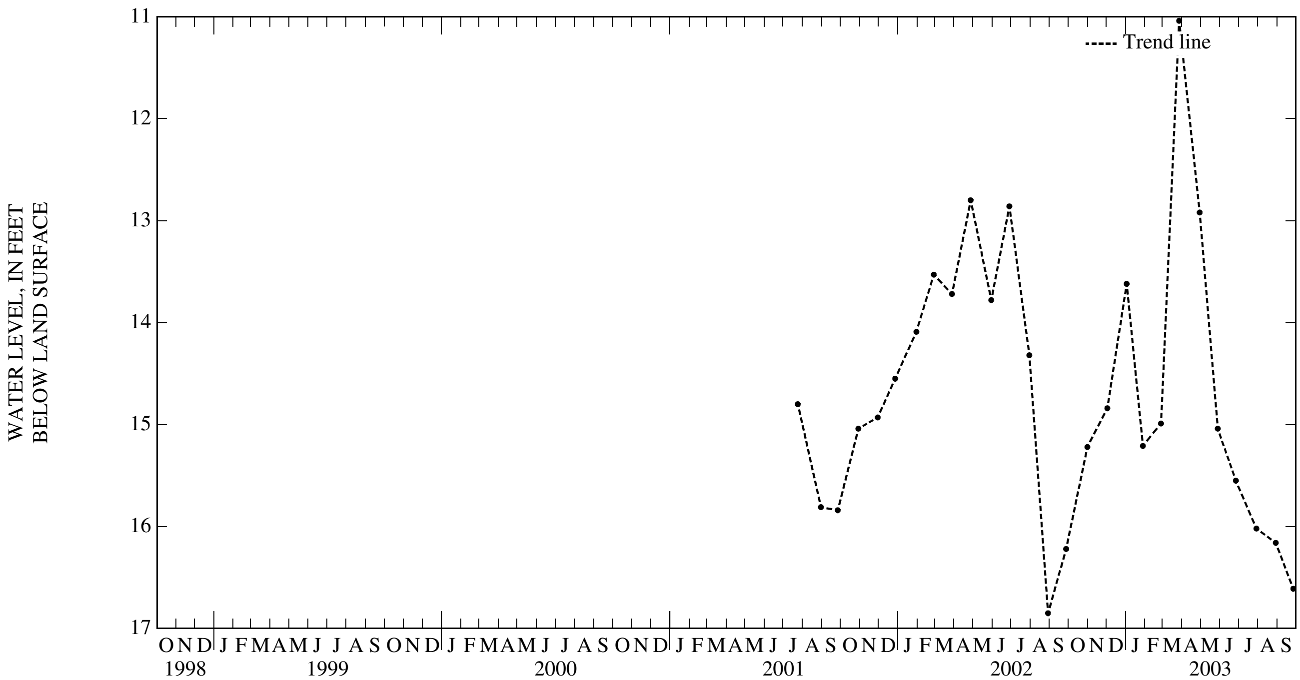
FRANKLIN COUNTY

445603072422901. Local number, BKW 1, Town of East Berkshire.
LOCATION.--Lat 44° 56'03", long 72° 42'29", Hydrologic Unit 02010007, at southeast end of State Highway 118 bridge on Missisquoi River at East Berkshire. Owner: U.S. Geological Survey.
AQUIFER.--Fine sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 51 ft, screened 49 to 51 ft.
DATUM.--Elevation of land-surface datum is 425 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--November 1966 to September 1995, July 2001 to current year.Prior to October 1977, published as Berkshire 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.55 ft below land-surface datum, April 23,1992; lowest measured, 16.85 ft below land-surface datum, August 29, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	15.22	JAN 02	13.62	FEB 26	14.99	APR 29	12.92	JUN 26	15.55	AUG 29	16.16
DEC 02	14.84	28	15.21	MAR 27	11.04	MAY 28	15.04	JUL 29	16.02	SEP 26	16.61

WATER YEAR 2003 HIGHEST 11.04 MAR 27, 2003 LOWEST 16.61 SEP 26, 2003



LAMOILLE COUNTY

443405072323501. Local number, MPW 1, Town of Morrisville.

LOCATION.--Lat 44° 34'05", long 72° 32'35", Hydrologic Unit 02010005, Vermont Highway Department right-of-way off State Highway 15 and 3 mi east of Morrisville. Owner: U.S. Geological Survey.

AQUIFER.--Silty, fine to medium sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 48 to 50 ft.

DATUM.--Elevation of land-surface datum is 660 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.

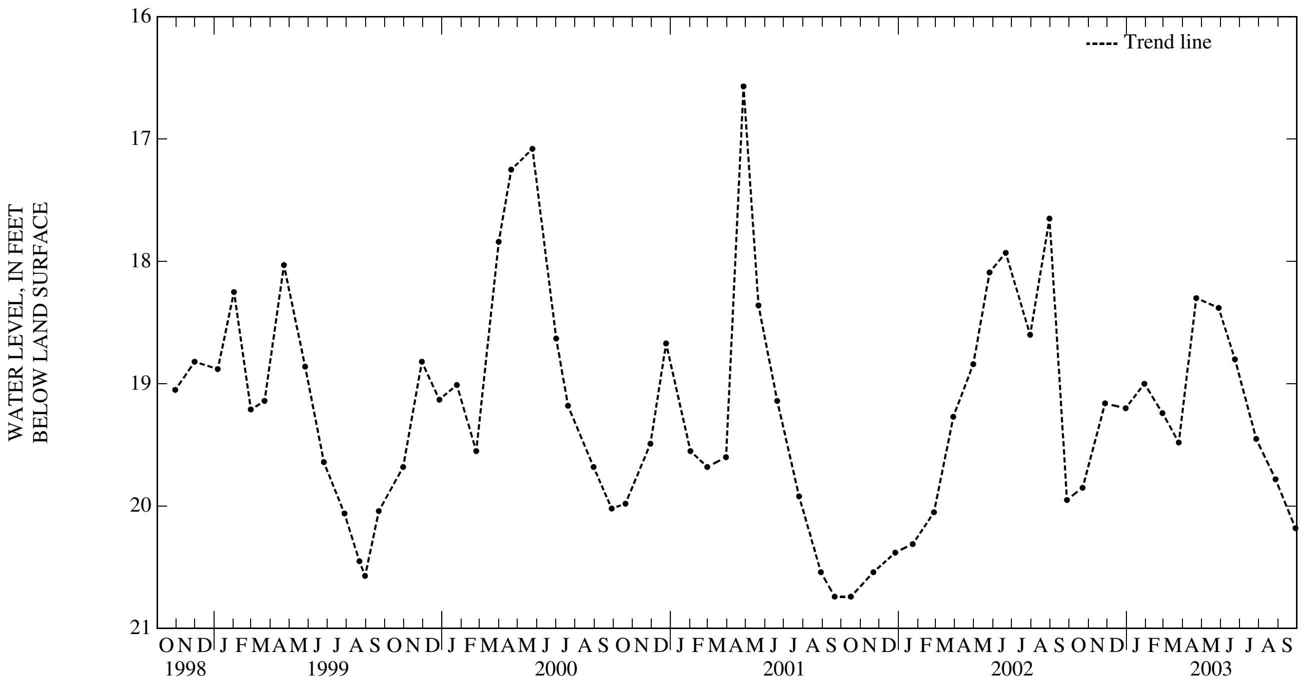
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Morristown 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.87 ft below land-surface datum, January 27, 1978; lowest measured, 20.74 ft below land-surface datum, September 20, 2001, October 16, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	19.85	DEC 30	19.20	FEB 27	19.24	APR 22	18.30	JUN 23	18.80	AUG 27	19.78
NOV 27	19.16	JAN 29	19.00	MAR 25	19.48	MAY 28	18.38	JUL 27	19.45	SEP 28	20.18

WATER YEAR 2003 HIGHEST 18.30 APR 22, 2003 LOWEST 20.18 SEP 28, 2003



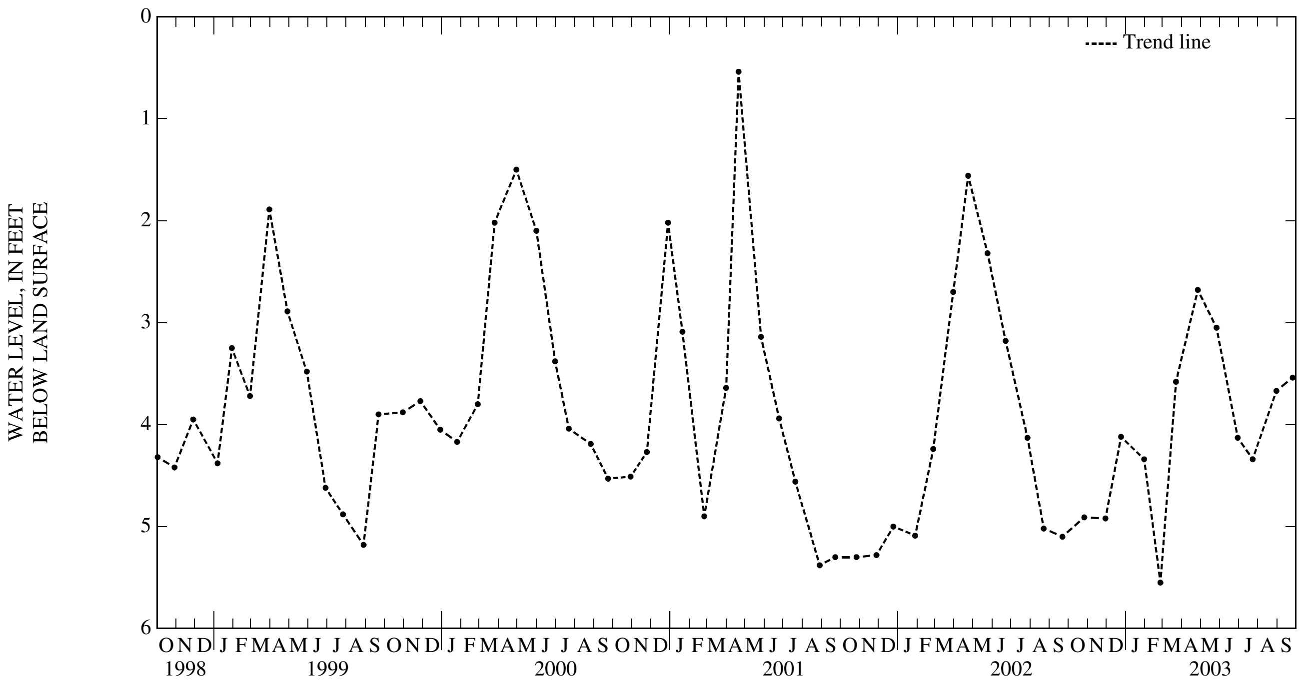
ORANGE COUNTY

435343072151801. Local number, WOW 1, Town of West Fairlee.
LOCATION.--Lat 43° 53'43", long 72° 15'18", Hydrologic Unit 01080103, 60 ft west of salt shed and 1.3 mi south southeast of West Fairlee Village. Owner: U.S. Geological Survey.
AQUIFER.--Sand of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 54 ft, screened 52 to 54 ft.
DATUM.--Elevation of land-surface datum is 700 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as West Fairlee 1.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.53 ft below land-surface datum, April 23, 1993; lowest measured, 5.56 ft below land-surface datum, September 26, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	4.91	DEC 24	4.12	FEB 25	5.55	APR 26	2.68	JUN 29	4.13	AUG 30	3.67
NOV 29	4.92	JAN 30	4.34	MAR 22	3.58	MAY 26	3.05	JUL 23	4.34	SEP 25	3.54

WATER YEAR 2003 HIGHEST 2.68 APR 26, 2003 LOWEST 5.55 FEB 25, 2003



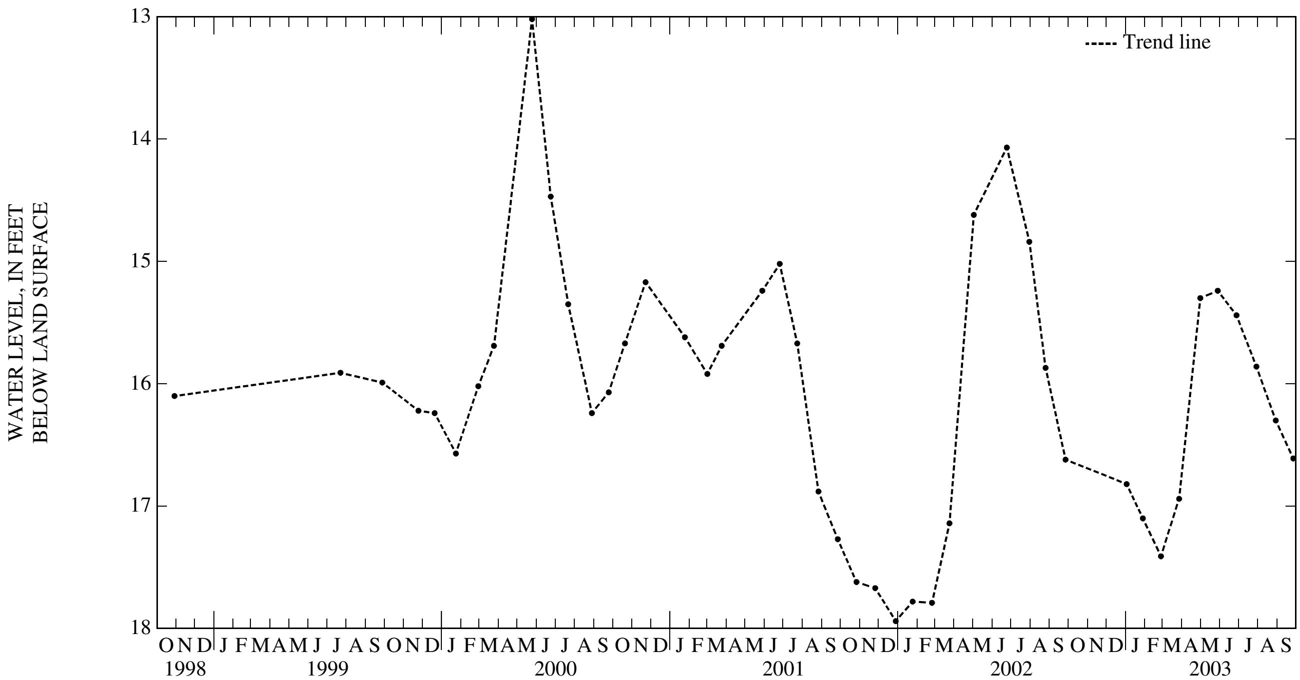
ORLEANS COUNTY

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 National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, .00 ft above land-surface datum.
PERIOD OF RECORD.--November 1966 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 02	16.82	FEB 26	17.41	APR 30	15.30	JUN 27	15.44	AUG 29	16.30		
28	17.10	MAR 27	16.94	MAY 28	15.24	JUL 29	15.86	SEP 26	16.61		

WATER YEAR 2003 HIGHEST 15.24 MAY 28, 2003 LOWEST 17.41 FEB 26, 2003



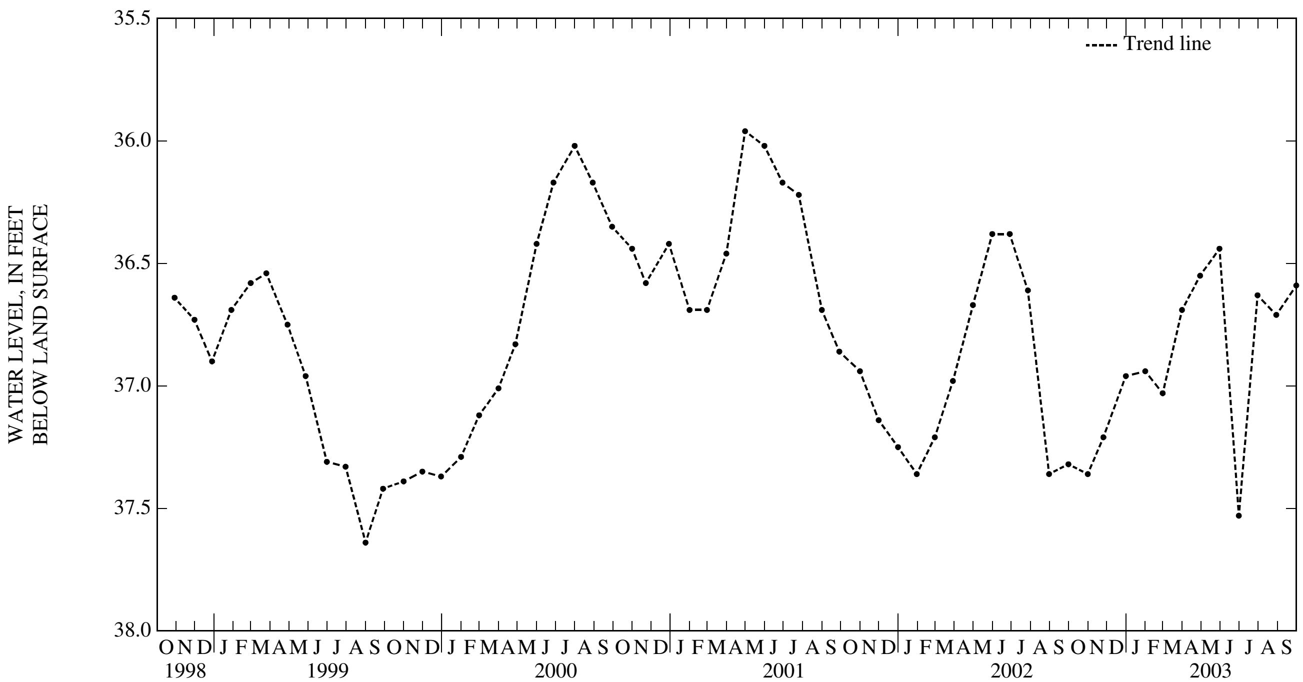
RUTLAND COUNTY

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 National Geodetic Vertical Datum 1929 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	37.36	DEC 31	36.96	FEB 28	37.03	APR 29	36.55	JUN 30	37.53	AUG 29	36.71
NOV 25	37.21	JAN 31	36.94	MAR 31	36.69	MAY 30	36.44	JUL 30	36.63	SEP 30	36.59

WATER YEAR 2003 HIGHEST 36.44 MAY 30, 2003 LOWEST 37.53 JUN 30, 2003



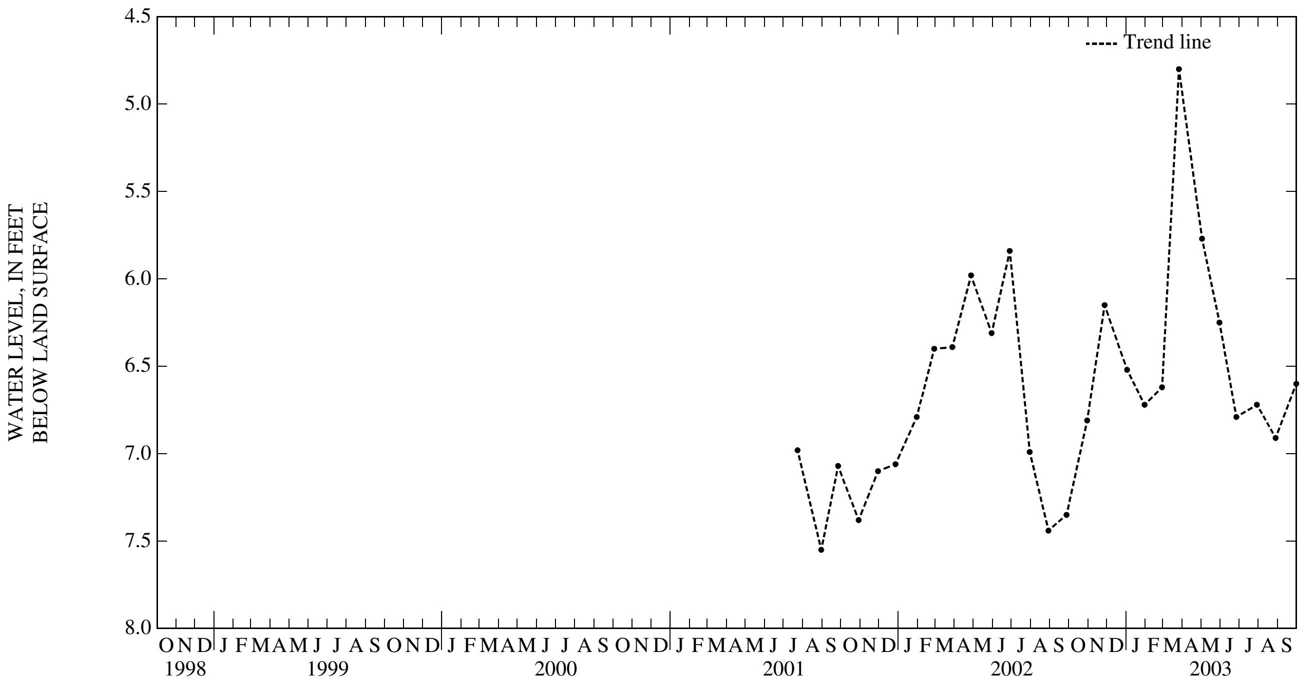
WASHINGTON COUNTY

441215072483101. Local number, WAW 2, Town of Waitsfield.
LOCATION.--Lat 44° 12'15", long 72° 48'31", Hydrologic Unit 02010003, at rest area on east side of State Highway 100 and 1.3 mi northeast of Waitsfield Village. Owner: U.S. Geological Survey.
AQUIFER.--Silty gravel of Pleistocene age.
WELL CHARACTERISTICS.--Drive and wash observation water-table well, diameter 1.25 in, depth 45.5 ft, screened 43.5 to 45.5 ft.
DATUM.--Elevation of land-surface datum is 685 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.
PERIOD OF RECORD.--June 1975 to September 1995, July 2001 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.25 ft below land-surface datum, December 14, 1983; lowest measured, 7.99 ft below land-surface datum, June 27, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	6.81	JAN 02	6.52	FEB 27	6.62	MAY 02	5.77	JUN 26	6.79	AUG 28	6.91
NOV 27	6.15	30	6.72	MAR 26	4.80	30	6.25	JUL 29	6.72	SEP 30	6.60

WATER YEAR 2003 HIGHEST 4.80 MAR 26, 2003 LOWEST 6.91 AUG 28, 2003



WINDSOR COUNTY

431551072350601. Local number, CKW 1, Town of Chester.

LOCATION.--Lat 43° 15'51", long 72° 35'06", Hydrologic Unit 01080107, at Vermont Highway Department salt shed on Elm Street in Chester. Owner: U.S. Geological Survey.

AQUIFER.--Boulders, coarse gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 22 ft, screened 20 to 22 ft.

DATUM.--Elevation of land-surface datum is 580 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 2.00 ft above land-surface datum.

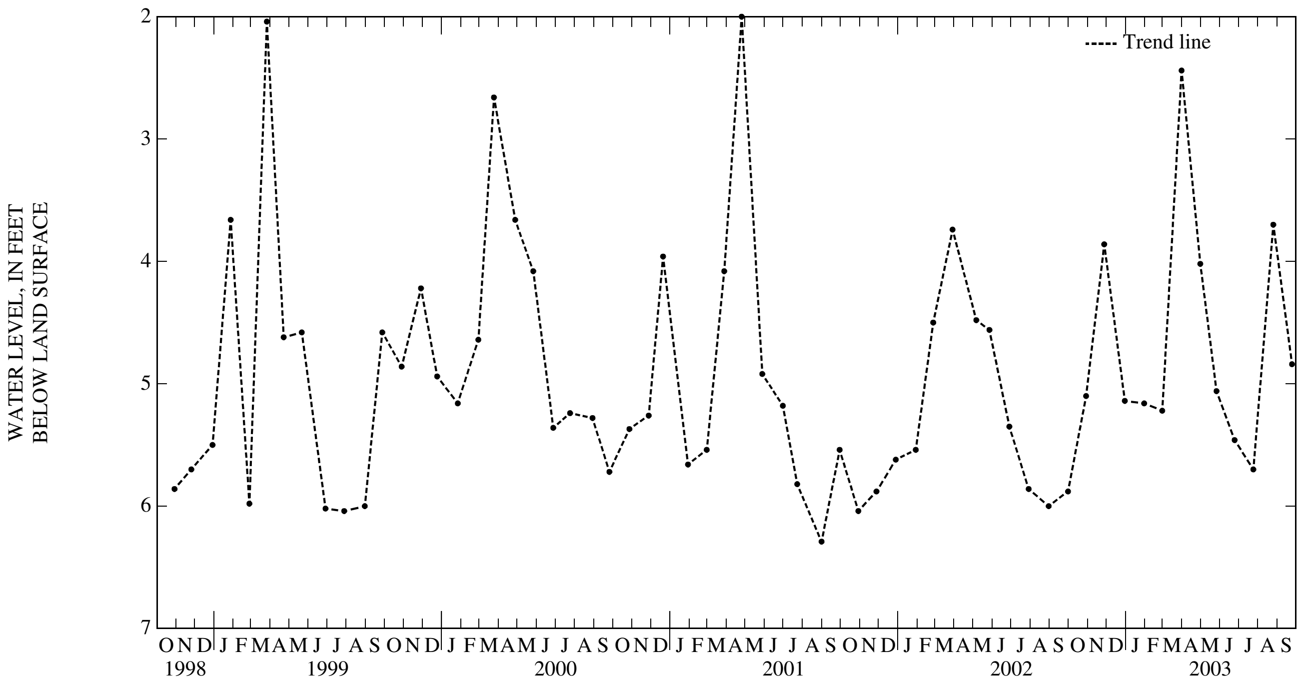
PERIOD OF RECORD.--November 1966 to current year. Prior to October 1977, published as Chester 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.56 ft below land-surface datum, March 20, 1986; lowest measured, 6.31 ft below land-surface datum, September 28, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	5.10	DEC 30	5.14	FEB 28	5.22	APR 30	4.02	JUN 24	5.46	AUG 25	3.70
NOV 27	3.86	JAN 30	5.16	MAR 31	2.44	MAY 26	5.06	JUL 24	5.70	SEP 24	4.84

WATER YEAR 2003 HIGHEST 2.44 MAR 31, 2003 LOWEST 5.70 JUL 24, 2003



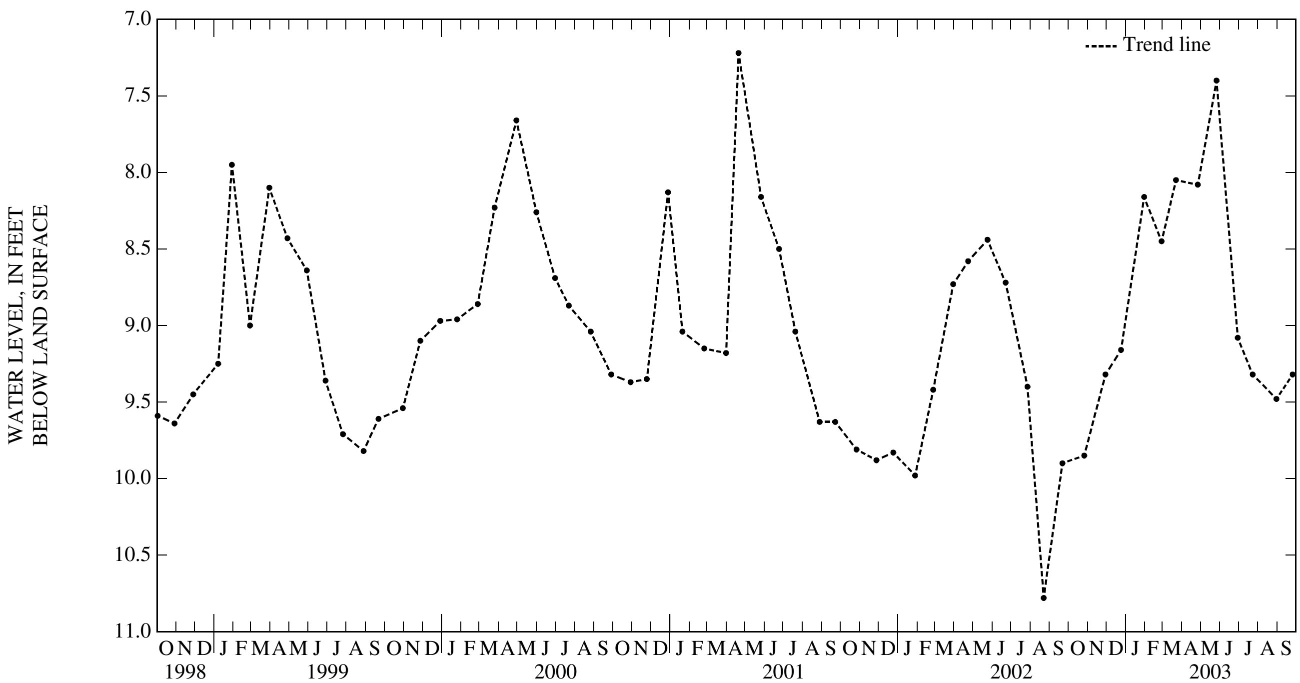
WINDSOR COUNTY

433240072242901. Local number, HLW 54, Town of Hartland.
LOCATION.--Lat 43° 32'40", long 72° 24'29", Hydrologic Unit 01080104, at northeast corner of fire station in Hartland. Owner: U.S. Geological Survey.
AQUIFER.--Sand and gravel of Pleistocene age.
WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 51 ft, screened 49 to 51 ft.
DATUM.--Elevation of land-surface datum is 575 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.
PERIOD OF RECORD.--August 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft below land-surface datum, June 1, 1984; lowest measured, 10.78 ft below land-surface datum, August 22, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.85	DEC 24	9.16	FEB 27	8.45	APR 26	8.08	JUN 29	9.08	AUG 30	9.48
NOV 29	9.32	JAN 30	8.16	MAR 22	8.05	MAY 26	7.40	JUL 23	9.32	SEP 25	9.32

WATER YEAR 2003 HIGHEST 7.40 MAY 26, 2003 LOWEST 9.85 OCT 26, 2002



GROUND-WATER LEVELS IN VERMONT

WINDSOR COUNTY

435129072483301. Local number, RJW 1, Town of Rochester.

LOCATION.--Lat 43° 51'29", long 72° 48'33", Hydrologic Unit 01080105, adjacent to salt shed at Vermont Highway Department garage 1.3 mi south of Rochester Village. Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 73 ft, screened 71 to 73 ft.

DATUM.--Elevation of land-surface datum is 800 ft above National Geodetic Vertical Datum 1929 from topographic map. Measuring point: Top of casing, 4.00 ft above land-surface datum.

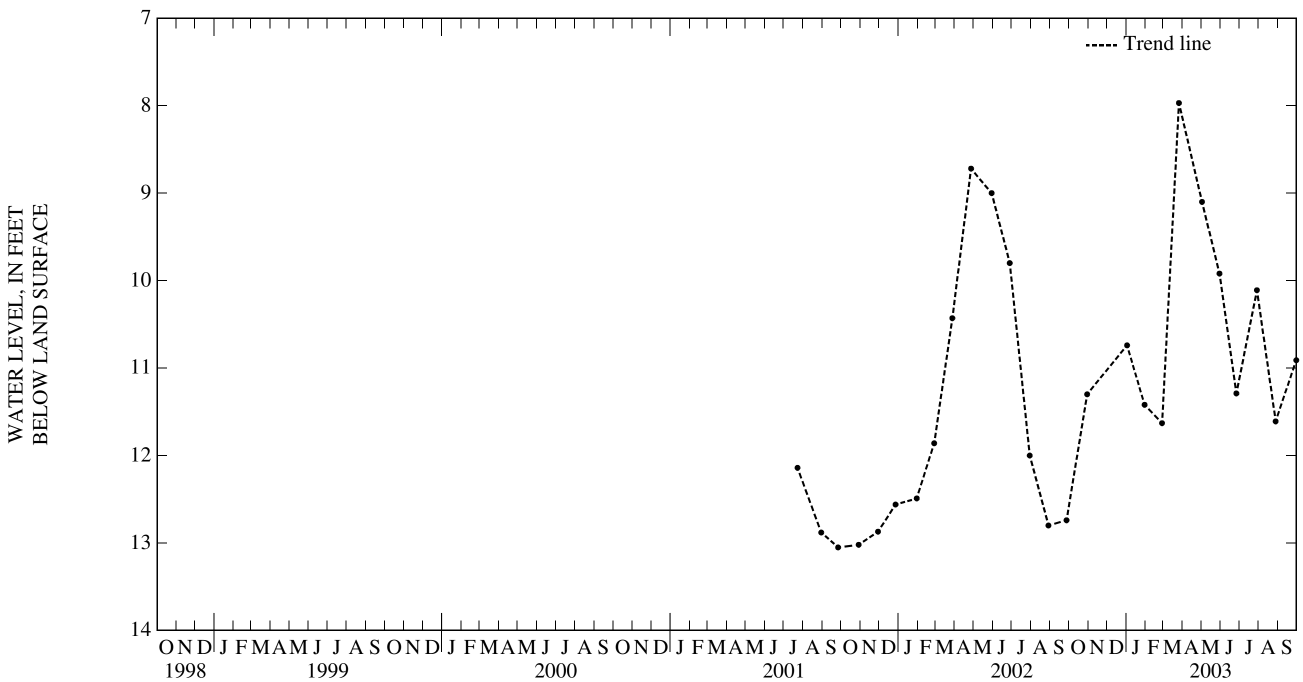
PERIOD OF RECORD.--November 1966 to September 1995, July 2001 to current year.Prior to 1977, published as Rochester 1.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft below land-surface datum, March 26, 1968; lowest measured, 13.05 ft below land-surface datum, August 25, 1975, September 26, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	11.30	JAN 30	11.42	MAR 26	7.97	MAY 30	9.92	JUL 29	10.11	SEP 30	10.91
JAN 02	10.74	FEB 27	11.63	MAY 02	9.10	JUN 26	11.29	AUG 28	11.61		

WATER YEAR 2003 HIGHEST 7.97 MAR 26, 2003 LOWEST 11.63 FEB 27, 2003



FOR GROUND-WATER STATIONS IN NEW HAMPSHIRE

WATER QUALITY AT MISCELLANEOUS GROUND-WATER WELLS
(WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003)

Remarks: PS, public-supply (gravel-packed) well; BEDROCK, crystalline-rock aquifer; 112SRFD, surficial aquifer; LSD, land-surface datum; gal/min, gallons per minute; NTU, nephelometric turbidity unit; mm Hg, millimeters mercury; mg/L, milligrams per liter; uS/cm, microsiemens per centimeter; deg C, degrees celcius; ug/L, micrograms per liter; "E", estimated concentrations; "<", less than; "M", presence verified, not quantified. Organic pesticide compounds, analyzed by NWQL Schedule 2001, and volatile organic compounds (VOCs), analyzed by NWQL Schedule 2020, are listed with laboratory reporting levels in the section "SPECIAL NETWORKS AND PROGRAMS". Only pesticides and VOCs identified by the analyses (either as estimated values or values measured at or above the laboratory reporting level) for one or more samples are listed in the water-quality tables. 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 National Ground Water Network to determine long-term trends in ground-water quality. Location of wells are shown in figure 2. Accurate latitude and longitudal data are available for the wells, but are omitted from this table. Anyone interested in obtaining this locational data should contact the USGS Information Officer, NH/VT District, at dc_nh@usgs.gov.

MULTIPLE STATION ANALYSES

Local identifier	Well type	Geologic unit	Date	Time	Depth of well, feet below LSD (72008)	Depth to water level, feet below LSD (72019)	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Turbidity, water, unfltrd field, NTU (61028)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	Dissolved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)
MERRIMACK COUNTY													
NH-WCW 5	domestic	BEDROCK	07-14-03	1000	38	8.27	410	6.0	0.1	757	2.4	24	5.6
STRAFFORD COUNTY													
NH-LIW 28	domestic	BEDROCK	07-24-03	1000	175	45.06	054	2.0	0.1	755	5.8	70	6.5
HILLSBOROUGH COUNTY													
NH-LMW 83	PS	112SRFD	07-23-03	1000	303.0	24.99	157	1.0	0.2	753	8.3	76	6.7

Local identifier	Date	Specif. conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Bromide water, fltrd, mg/L (71870)
MERRIMACK COUNTY											
NH-WCW 5	07-14-03	127	25.0	15.4	5.49	0.922	1.27	16.6	11	13	<0.02
STRAFFORD COUNTY											
NH-LIW 28	07-24-03	570	25.0	10.5	68.9	14.4	1.31	24.6	157	191	0.02
HILLSBOROUGH COUNTY											
NH-LMW 83	07-23-03	303	28.0	11.3	51.2	2.44	1.57	8.67	100	121	E.02

Local identifier	Date	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
MERRIMACK COUNTY											
NH-WCW 5	07-14-03	27.0	<0.2	7.59	4.2	76	<0.10	<0.04	0.08	<0.008	<0.02
STRAFFORD COUNTY											
NH-LIW 28	07-24-03	60.0	<0.2	10.1	21.7	330	E.05	<0.04	5.62	<0.008	<0.02
HILLSBOROUGH COUNTY											
NH-LMW 83	07-23-03	15.3	<0.2	10.9	23.8	186	<0.10	<0.04	0.90	<0.008	<0.02

MULTIPLE STATION ANALYSES

Local identifier	Date	Aluminum, water, fltrd, ug/L (01106)	Antimony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryllium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chromium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)
MERRIMACK COUNTY											
NH-WCW 5	07-14-03	9	<0.30	<0.3	5	<0.06	E5	<0.04	<0.8	0.052	1.2
STRAFFORD COUNTY											
NH-LIW 28	07-24-03	<2	<0.30	2.0	2	<0.06	27	E.02	<0.8	0.269	3.2
HILLSBOROUGH COUNTY											
NH-LMW 83	07-23-03	M	<0.30	2.9	3	<0.06	25	<0.04	<0.8	0.290	2.9

Local identifier	Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)
MERRIMACK COUNTY											
NH-WCW 5	07-14-03	11	0.18	<0.5	6.9	<0.3	0.20	<0.5	<0.2	39.4	<0.04
STRAFFORD COUNTY											
NH-LIW 28	07-24-03	<8	0.35	1.1	<0.2	<0.3	2.04	<0.5	<0.2	243	<0.04
HILLSBOROUGH COUNTY											
NH-LMW 83	07-23-03	<8	0.16	E.4	E.1	<0.3	2.57	<0.5	<0.2	124	<0.04

Local identifier	Date	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	Prometon, water, fltrd, ug/L (04037)	Dichloromethane water unfltrd ug/L (34423)	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	Trichloromethane water unfltrd ug/L (32106)	Vinyl chloride, water, unfltrd ug/L (39175)	Rn-222, water, unfltrd pCi/L (82303)	Uranium natural water, fltrd, ug/L (22703)
MERRIMACK COUNTY											
NH-WCW 5	07-14-03	E.1	M	<0.01	<0.2	<0.08	<0.2	E.04	<0.1	400	0.02
STRAFFORD COUNTY											
NH-LIW 28	07-24-03	0.5	4	<0.01	M	0.19	0.4	<0.02	<0.1	1,200	0.53
HILLSBOROUGH COUNTY											
NH-LMW 83	07-23-03	0.4	5	0.02	<0.2	<0.08	E.2	E.07	<0.1	2,280	0.82

Remark codes used in this table:
< -- Less than
E -- Estimated value
M -- Presence verified, not quantified

A
Acid neutralizing capacity, definition of 29
Acre-foot, definition of 29
Adenosine triphosphate, definition of 29
Adjusted discharge, definition of 29
Albany, NH, ground-water levels in 277, 278
Algae,
Blue-green, definition of 30
Fire, definition of 34
Green, definition of 34
Algal growth potential, definition of 29
Alkalinity, definition of 29
Ammonoosuc River at Bethlehem Junction, NH . . 146–147
Analyses of pesticides in surface-water and ground-water samples (schedule 2001), explanation of 11
Analyses of volatile organic compounds in ground-water samples (schedule 2020/2021), explanation of 12
Androscoggin River,
at Errol, NH 52
near Gorham, NH 54
Annual runoff, definition of 29
Annual 7-day minimum, definition of 29
Aquifer,
Confined, definition of 31
Unconfined, definition of 44
Water-table, definition of 44
Aroclor, definition of 29
Artificial substrate, definition of 29
Ash mass, definition of 29
Ashuelot River,
at Hinsdale, NH 192–193
at West Swanzey, NH 190–191
below Surry Mountain Dam, near Keene, NH 186–187
Aspect, definition of 29
Ayers Brook at Randolph, VT 156–157
B
Bacteria,
definition of 30
Enterococcus, definition of 33
Escherichia coli, definition of 33
Fecal coliform, definition of 33
Fecal streptococcal, definition of 33
Total coliform, definition of 43
Bailey Brook at East Hardwick, VT 272
Baker River near Rumney, NH 80–81
Bankfull stage, definition of 30
Barnstead, NH, ground-water levels in 276
Base discharge, definition of 30
Base flow, definition of 30
Bearcamp River at South Tamworth, NH 60–61
Beaver Brook at North Pelham, NH 114–115
Bed material, definition of 30
Bedload, definition of 30
Bedload discharge, definition of 30
Benthic organisms, definition of 30
Bethlehem Junction, NH, Ammonoosuc River at . 146–147
Biochemical oxygen demand, definition of 30
Biomass, definition of 30
Biomass pigment ratio, definition of 30
Black River,
at Coventry, VT 262–263
at North Springfield, VT 269, 275
Blackwater River near Webster, NH 266, 274
Blue-green algae, definition of 30
Bottom material, definition of 30
Bradford, NH, West Branch Warner River near . . 102–103
Brandy Brook at Bread Loaf, VT 271
Bread Loaf, VT, Brandy Brook at 271
Brentwood, NH, Exeter River at Haigh Road near . . 70–71
Brighton, VT, ground-water levels in 304
Bristol, NH,
Newfound River, at Newfound Lake outlet, near . . 274
Smith River near 84–85
Bristol, VT, Little Otter Creek Tributary near 271
Brownington Branch near Evansville, VT 273
Brunswick Springs, VT, Paul Stream Tributary near . . 267
Bryant Brook at Waterbury Center, VT 271
Bulk electrical conductivity, definition of 30
Burlington, VT,
Englesby Brook at 214–215
Lake Champlain at 256–257
C
Campton, NH, ground-water levels in 285
Canadian Geodetic Vertical Datum 1928, definition of . 30
Cell volume, definition of 30
Cells/volume, definition of 31
Center Rutland, VT, Otter Creek at 202–203
Cfs-day, definition of 31
Channel bars, definition of 31
Chemical oxygen demand, definition of 31
Chester, VT,
ground-water levels in 311
Middle Branch Williams River Tributary at 269
Clostridium perfringens, definition of 31
Clyde River at Newport, VT 264–265
Cocheco River near Rochester, NH 64–65
Colebrook, NH,
ground-water levels in 281
Mohawk River near 122–123
Coliphages, definition of 31
Color unit, definition of 31
Common name, explanation of 11, 13
Compound name, explanation of 11, 13
Concord, NH,
ground-water levels in 291, 292
Soucook River at Pembroke Road near 106–107
Concord, VT, Kirby Brook at 267
Conductivity, definition of 41
Confined aquifer, definition of 31
Connecticut River,
at North Stratford, NH 124–125
at North Walpole, NH 180–181

at Wells River, VT 148–149
at West Lebanon, NH 164–165
Connecticut River Basin,
discharge measurements at miscellaneous sites 275
Black River at North Springfield, VT 275
Mascoma River at West Canaan, NH 275
Ompompanoosuc River at Union Village, VT . . . 275
Sugar River at Sunapee, NH 275
West River below Townshend Dam near
Townshend, VT 275
maximum discharge at crest-stage partial-record
stations 267–270
Black River at North Springfield, VT 269
Joes Brook Tributary near East Barnet, VT 267
Kent Brook near Killington, VT 268
Kirby Brook at Concord, VT 267
Mascoma River at West Canaan, NH 268
Middle Branch Williams River Tributary
at Chester, VT 269
Ompompanoosuc River at Union Village, VT 268
Ottauquechee River Tributary near Quechee, VT . 269
Paul Stream Tributary near Brunswick
Springs, VT 267
Quimby Brook near Lyndonville, VT 267
Third Branch White River Tributary at
Randolph, VT 268
Waits River Tributary near West Topsham, VT . . . 268
West River below Townshend Dam near
Townshend, VT 269
West River Tributary near Jamaica, VT 269
Connecticut River,
below Indian Stream, near Pittsburg, NH 118–119
near Dalton, NH 130–131
Connecticut River Tributary near Vernon, VT 270
Container requirements, explanation of 11, 13
Contents, definition of 31
Continuous-record station, definition of 31
Contoocook River,
at Peterborough, NH 98–99
below Hopkinton Dam, at West Hopkinton,
NH 100–101
near Henniker, NH 266, 274
Control, definition of 31
Control structure, definition of 31
Cooperation, explanation of 4
Coventry, VT, Black River at 262–263
Crest-stage partial-record stations, explanation of 266
Cubic foot per second, definition of 31
Cubic foot per second-day, definition of 31
Cubic foot per second per square mile, definition of 31
D
Daily mean suspended-sediment concentration,
definition of 32
Daily record station, definition of 32
Dalton, NH, Connecticut River near 130–131
Data collection platform, definition of 32
Data logger, definition of 32
Datum, definition of 32
Davisville, NH, Warner River at 104–105
Deerfield, NH, ground-water levels in 297
Definition of terms 7
Diamond River near Wentworth Location, NH 50
Diatoms, definition of 32
Diel, definition of 32
Discharge measurements at miscellaneous sites,
Connecticut River Basin 275
Merrimack River Basin 274
Saco River Basin 274
Discharge measurements made at miscellaneous sites . 274
Discharge, definition of 32
Dissolved, definition of 32
Dissolved oxygen, definition of 32
Dissolved solids concentration, definition of 32
Diversity index, definition of 32
Dog River at Northfield Falls, VT 222–223
Drainage area, definition of 33
Drainage basin, definition of 33
Droughts, floods and 6
Dry mass, definition of 33
Dry weight, definition of 33
Durham, NH, Oyster River near 66–67
E
East Barnet, VT, Joes Brook Tributary near 267
East Barre Detention Reservoir at East Barre, VT 216
East Berkshire, VT,
ground-water levels in 305
Missisquoi River near 250–251
East Branch Passumpsic River near
East Haven, VT 132–133
East Branch Pemigewasset River at Lincoln, NH . . . 76–77
East Georgia, VT, Lamoille River at 246–247
East Hardwick, VT, Bailey Brook at 272
East Haven, VT, East Branch Passumpsic River
near 132–133
East Orange Branch at East Orange, VT 154–155
East Orange, VT, East Orange Branch at 154–155
East Poultney, VT, Poultney River Tributary at 270
East Weare, NH, Piscataquog River below
Everett Dam near 266, 274
Eden, VT, Stony Brook near 272
Effingham Falls, NH, Ossipee River at 274
Ellis River near Jackson, NH 56–57
Embeddedness, definition of 33
Enfield, NH, ground-water levels in 286
Englesby Brook at Burlington, VT 214–215
Enosburg Falls, VT, Pike River at
East Franklin, near 254–255
Enterococcus bacteria, definition of 33
EPT Index, definition of 33
Errol, NH, ground-water levels in 282
Escherichia coli (*E. coli*), definition of 33
Essex Junction, VT, Winooski River near 242–243
Estimated (E) value, definition of 33
Euglenoids, definition of 33

Evansville, VT,
Browningon Branch near 273
Lord Brook near 273
Exeter River at Haigh Road near Brentwood, NH . . . 70–71
Extractable organic halides, definition of 33
F
Fair Haven, VT,
Lake Bomoseen at Outlet, near 196–197
Poultney River below 198–199
Fecal coliform bacteria, definition of 33
Fecal streptococcal bacteria, definition of 33
Ferrisburg, VT, Little Otter Creek at 208–209
Fire algae, definition of 34
Floods and droughts, explanation of 6
Flow, definition of 32
Flow-duration percentiles, definition of 34
Franklin Junction, NH, Merrimack River at 96–97
Franklin, NH, ground-water levels in 293
G
Gage datum, definition of 34
Gage height, definition of 34
Gage values, definition of 34
Gaging station, definition of 34
Gas chromatography/flame ionization detector,
definition of 34
Geomorphic channel units, definition of 34
Gilford, NH, Poorfarm Brook at Ellacoya State Park
near 86–87
Glover, VT, ground-water levels in 308
Goffstown, NH, Piscataquog River near 267, 274
Green algae, definition of 34
Greenfield, NH, ground-water levels in 288
Ground-water levels, explanation of 7
Groveton, NH, Upper Ammonoosuc River near . . 128–129
H
Habitat, definition of 34
Habitat quality index, definition of 34
Hardness, definition of 34
Hartland, VT, ground-water levels in 312
Henniker, NH, Contoocook River near 266, 274
High tide, definition of 34
Hilsenhoff's Biotic Index, definition of 35
Hinsdale, NH, Ashuelot River at 192–193
Hooksett, NH, ground-water levels in 294
Horizontal datum, definition of 35
Hudson River Basin,
maximum discharge at crest-stage partial-record
stations 270
Paran Creek near South Shaftsbury, VT 270
Tanner Brook near Sunderland, VT 270
Hydrologic conditions, summary of 4
Hydrologic index stations, definition of 35
Hydrologic unit, definition of 35
I
Inch, definition of 35
Instantaneous discharge, definition of 35
International Boundary Commission Survey Datum,
definition of 35
Introduction, explanation of 1
Island Pond, VT, Pherrins River Tributary near 273
Island, definition of 35
J
Jackson, NH, Ellis River near 56–57
Jamaica, VT,
West River at 184–185
West River Tributary near 269
Joes Brook Tributary near East Barnet, VT 267
Johnson, VT, Lamoille River at 244–245
K
Keene, NH,
Ashuelot River below Surry Mountain Dam,
near 186–187
ground-water levels in 280
Otter Brook below Otter Brook Dam near . . . 188–189
Kent Brook near Killington, VT 268
Killington, VT, Kent Brook near 268
Kirby Brook at Concord, VT 267
L
Laboratory reporting level, definition of 35
Lake Bomoseen at Outlet, near Fair Haven, VT . . 196–197
Lake Champlain at Burlington, VT 256–257
Lake Champlain, Richelieu River at Rouses Point 258
Lake Memphremagog (head of Magog River)
at Newport, VT 260–261
Lake Winnipesaukee at Weirs Beach, NH 90–91
Lake Winnipesaukee Outlet at Lakeport, NH 92–93
Lakeport, NH, Lake Winnipesaukee Outlet at 92–93
Lamoille River,
at East Georgia, VT 246–247
at Johnson, VT 244–245
Lamprey River near Newmarket, NH 68–69
Lancaster, NH, ground-water levels in 283
Land-surface datum, definition of 35
LaPlatte River at Shelburne Falls, VT 212–213
Latent heat flux, definition of 35
Lee, NH, ground-water levels in 298
Lewis Creek near North Ferrisburg, VT 210–211
Lewis Creek Tributary at Starksboro, VT 271
Light-attenuation coefficient, definition of 35
Lincoln, NH, East Branch Pemigewasset River at . . 76–77
Lipid, definition of 35
Lisbon, NH, ground-water levels in 287
Little Otter Creek at Ferrisburg, VT 208–209
Little Otter Creek Tributary near Bristol, VT 271
Little River near Waterbury, VT 240–241
Long-term method detection level, definition of 35
Lord Brook near Evansville, VT 273
Low flow, 7-day, 10-year, definition of 40
Low tide, definition of 36
LRL, explanation of 11, 13
Lyndonville, VT, Quimby Brook near 267
M
Macrophytes, definition of 36

Mad River near Moretown, VT 224–225
Manchester, NH, Merrimack River near Goffs Falls, below 108–109
Mascoma River,
at Mascoma, NH 166–167
at West Canaan, NH 268, 275
Mascoma, NH, Mascoma River at 166–167
Maximum discharge at crest-stage partial-record stations 266
Connecticut River Basin 267–270
Connecticut River Tributary near Vernon, VT 270
Hudson River Basin 270
Merrimack River Basin 266, 267
St. Lawrence River Basin 270–273
Mean concentration of suspended sediment, definition of 36
Mean discharge, definition of 36
Mean high tide, definition of 36
Mean low tide, definition of 36
Mean sea level, definition of 36
Measuring point, definition of 36
Megahertz, definition of 36
Membrane filter, definition of 36
Merrimack River at Franklin Junction, NH 96–97
Merrimack River Basin,
discharge measurements at miscellaneous sites 274
Contoocook River near Henniker, NH 274
Newfound River, at Newfound Lake outlet, near Bristol, NH 274
Nubanusit Brook near Peterborough, NH 274
Piscataquog River below Everett Dam, near East Weare, NH 274
Piscataquog River near Goffstown, NH 274
Spicket River near Methuen, MA 274
Blackwater River near Webster, NH 274
maximum discharge at crest-stage partial-record stations 266, 267
Blackwater River near Webster, NH 266
Contoocook River near Henniker, NH 266
Nubanusit Brook below Edward MacDowell Dam near Peterborough, NH 266
Piscataquog River below Everett Dam near East Weare, NH 266
Piscataquog River near Goffstown, NH 267
Spicket River near Methuen, MA 267
Merrimack River near Goffs Falls, below Manchester, NH 108–109
Merrimack, NH, Souhegan River at 112–113
Metamorphic stage, definition of 36
Method detection limit, definition of 36
Method of Cubatures, definition of 36
Methuen, MA, Spicket River near 267, 274
Methylene blue active substances, definition of 36
Mettawee River near Pawlet, VT 200–201
Micrograms per gram, definition of 36
Micrograms per kilogram, definition of 36
Micrograms per liter, definition of 36
Microsiemens per centimeter, definition of 36
Middle Branch Williams River Tributary at Chester, VT 269
Middlebury, VT,
New Haven River at Brooksville near 206–207
Otter Creek at 204–205
Milford, NH, ground-water levels in 289
Milligrams per liter, definition of 36
Milton, NH, Salmon Falls River at 62–63
Milton, VT, ground-water levels in 303
Minimum reporting level, definition of 37
Miscellaneous site, definition of 37
Missisquoi River,
at Swanton, VT 252–253
near East Berkshire, VT 250–251
near North Troy, VT 248–249
Missisquoi River Tributary at Sheldon Junction, VT . . 272
Mohawk River near Colebrook, NH 122–123
Montpelier, VT,
Sunny Brook near 271
Winooski River at 220–221
Moose River at Victory, VT 134–135
Moretown, VT, Mad River near 224–225
Morrisville, VT, ground-water levels in 306
Most probable number, definition of 37
Moultonborough, NH, Shannon Brook near 88–89
Multiple-plate samplers, definition of 37
N
Nanograms per liter, definition of 37
Nashua, NH, ground-water levels in 290
National Geodetic Vertical Datum of 1929, definition of 37
Natural substrate, definition of 37
Nekton, definition of 37
Nephelometric turbidity unit, definition of 37
New Durham, NH, ground-water levels in 299
New Haven River at Brooksville near Middlebury, VT 206–207
New London, NH, ground-water levels in 295
Newfound River, at Newfound Lake outlet, near Bristol, NH 274
Newmarket, NH, Lamprey River near 68–69
Newport, NH, ground-water levels in 300, 301
Newport, VT,
Clyde River at 264–265
Lake Memphremagog (head of Magog River) at 260–261
North American Datum,
of 1927, definition of 37
of 1983, definition of 37
North American Vertical Datum of 1988, definition of . 37
North Bennington, VT, Walloomsac River near . . 194–195
North Branch Winooski River at Wrightsville, VT 218–219
North Danville, VT, Pope Brook (site W-3) near . 138–139
North Ferrisburg, VT, Lewis Creek near 210–211
North Hartland, VT, Ottauquechee River at 170–171
North Pelham, NH, Beaver Brook at 114–115

North Pownal, VT, ground-water levels in 302
North Salem, NH, Spicket River at 116–117
North Springfield, VT, Black River at 269, 275
North Stratford, NH, Connecticut River at 124–125
North Troy, VT, Missisquoi River near 248–249
North Walpole, NH, Connecticut River at 180–181
Northfield Falls, VT, Dog River at 222–223
Nubanusit Brook below Edward MacDowell Dam
near Peterborough, NH 266
Nubanusit Brook near Peterborough, NH 274
Numbering system for wells, description of 9
O
Ompompanoosuc River at Union Village, VT 268, 275
Open interval, definition of 37
Organic carbon, definition of 37
Organic mass, definition of 37
Organism count,
Area, definition of 37
Total, definition of 43
Volume, definition of 37
Organochlorine compounds, definition of 38
Ossipee River at Effingham Falls, NH 274
Ossipee, NH, ground-water levels in 279
Ottauquechee River,
at North Hartland, VT 170–171
near West Bridgewater, VT 168–169
Ottauquechee River Tributary near Quechee, VT 269
Otter Brook below Otter Brook Dam near
Keene, NH 188–189
Otter Creek,
at Center Rutland, VT 202–203
at Middlebury, VT 204–205
Oyster River near Durham, NH 66–67
P
Parameter code, definition of 38
Paran Creek near South Shaftsbury, VT 270
Partial-record station, definition of 38
Particle size, definition of 38
Particle-size classification, definition of 38
Passumpsic River at Passumpsic, VT 142–143
Passumpsic, VT, Passumpsic River at 142–143
Paul Stream Tributary near Brunswick Springs, VT . . . 267
Pawlet, VT, Mettawee River near 200–201
PCODE, explanation of 11, 13
Peak flow, definition of 38
Peak stage, definition of 38
Pemigewasset River,
at Plymouth, NH 82–83
at Woodstock, NH 78–79
Percent composition, definition of 38
Percent of total, definition of 38
Percent shading, definition of 38
Periodic-record station, definition of 38
Periphyton, definition of 38
Pesticides,
definition of 38
in surface-water and ground-water samples
(schedule 2001), analyses of 11
Peterborough, NH,
Contoocook River at 98–99
Nubanusit Brook below Edward MacDowell
dam near 266
Nubanusit Brook near 274
pH, definition of 38
Pherrins River Tributary near Island Pond, VT 273
Phytoplankton, definition of 39
Picocurie, definition of 39
Pike River at East Franklin, near
Enosburg Falls, VT 254–255
Piscataquog River,
below Everett Dam near East Weare, NH . . . 266, 274
near Goffstown, NH 267, 274
Pittsburg, NH, Connecticut River below
Indian Stream, near 118–119
Pittsford, VT, ground-water levels in 309
Plankton, definition of 39
Plymouth, NH, Pemigewasset River at 82–83
Polychlorinated biphenyls, definition of 39
Polychlorinated naphthalenes, definition of 39
Pool, definition of 39
Poorfarm Brook at Ellacoya State Park near
Gilford, NH 86–87
Pope Brook (site W-3) near North Danville, VT . . 138–139
Portsmouth, NH, Winnicut River at Greenland, near 72–75
Poultney River below Fair Haven, VT 198–199
Poultney River Tributary at East Poultney, VT 270
Primary productivity,
definition of 39
Carbon method, definition of 39
Oxygen method, definition of 39
Q
Quechee, VT, Ottauquechee River Tributary near 269
Quimby Brook near Lyndonville, VT 267
R
Radioisotopes, definition of 39
Ranch Brook at Ranch Camp, near Stowe, VT . . . 232–237
Randolph, VT,
Ayers Brook at 156–157
Third Branch White River Tributary at 268
Reach, definition of 39
Recoverable from bed (bottom) material, definition of . . 39
Recurrence interval, definition of 40
Replicate samples, definition of 40
Reservoir storage, explanation of 6
Reservoirs in Winooski River Basin above
Montpelier, VT 216
Return period, definition of 40
Richford, VT, Whittaker Brook at 272
Richmond, VT, Winooski River Tributary near 272
Riffle, definition of 40
River mileage, definition of 40
Rochester, NH, Cocheco River near 64–65
Rochester, VT, ground-water levels in 313

Rockingham, VT, Williams River near 176–177
Rouses Point, Richelieu River (Lake Champlain) at . . . 258
Rumney, NH, Baker River near 80–81
Run, definition of 40
Runoff, definition of 40
S
Saco River Basin,
discharge measurements at miscellaneous sites 274
Ossipee River at Effingham Falls, NH 274
Saco River near Conway, NH 58
Salmon Falls River at Milton, NH 62–63
Sample requirements, explanation of 11, 12
Saxtons River at Saxtons River, VT 178–179
Saxtons River, VT, Saxtons River at 178–179
Schedule description, explanation of 11, 12
Screened interval, definition of 37
Sea level, definition of 40
Sediment, definition of 40
Sensible heat flux, definition of 40
Seven-day, 10-year low flow, definition of 40
Shannon Brook near Moultonborough, NH 88–89
Shelburne Falls, VT, LaPlatte River at 212–213
Shelburne, NH, ground-water levels in 284
Sheldon Junction, VT, Missisquoi River Tributary at . . 272
Shelves, definition of 40
Sleepers River (site W-5) near St. Johnsbury, VT . 140–141
Smith River near Bristol, NH 84–85
Sodium adsorption ratio, definition of 40
Soil heat flux, definition of 41
Soil-water content, definition of 41
Soucook River at Pembroke Road near
Concord, NH 106–107
Souhegan River at Merrimack, NH 112–113
South Shaftsbury, VT, Paran Creek near 270
South Tamworth, NH, Bearcamp River at 60–61
Specific electrical conductance (conductivity),
definition of 41
Spicket River,
at North Salem, NH 116–117
near Methuen, MA 267, 274
St. Johnsbury, VT, Sleepers River (site W-5) near 140–141
St. Lawrence River Basin,
maximum discharge at crest-stage partial-record
stations 270–273
Bailey Brook at East Hardwick, VT 272
Brandy Brook at Bread Loaf, VT 271
Brownington Branch near Evansville, VT 273
Bryant Brook at Waterbury Center, VT 271
Lewis Creek Tributary at Starksboro, VT 271
Little Otter Creek Tributary near Bristol, VT 271
Lord Brook near Evansville, VT 273
Missisquoi River Tributary at Sheldon
Junction, VT 272
Pherrins River Tributary near Island Pond, VT . . . 273
Poultney River Tributary at East Poultney, VT . . . 270
Stony Brook near Eden, VT 272
Sunny Brook near Montpelier, VT 271
Whittaker Brook at Richford, VT 272
Winooski River Tributary near Richmond, VT . . . 272
Stable isotope ratio, definition of 41
Stage, definition of 41
Stage-discharge relation, definition of 41
Starksboro, VT, Lewis Creek Tributary at 271
Stony Brook near Eden, VT 272
Stony Brook Tributary near Temple, NH 110–111
Stowe, VT,
Ranch Brook at Ranch Camp, near 232–237
West Branch Little River above Bingham Falls
near 226–231
Streamflow,
definition of 41
explanation of 4
Substrate,
definition of 41
Artificial, definition of 29
Natural, definition of 37
Substrate embeddedness class, definition of 41
Sugar River,
at Sunapee, NH 275
at West Claremont, NH 172–173
Summary of hydrologic conditions, explanation of 4
Sunapee, NH, Sugar River at 275
Sunderland, VT, Tanner Brook near 270
Sunny Brook near Montpelier, VT 271
Surface area of a lake, definition of 41
Surficial bed material, definition of 41
Surrogate, definition of 41
Suspended,
definition of 41
Recoverable, definition of 41
Total, definition of 42
Suspended sediment, definition of 42
Suspended-sediment concentration, definition of 42
Suspended-sediment discharge, definition of 42
Suspended-sediment load, definition of 42
Suspended solids, total residue at 105 °C
concentration, definition of 42
Swanton, VT, Missisquoi River at 252–253
Synoptic studies, definition of 42
T
Tanner Brook near Sunderland, VT 270
Taxa (Species) richness, definition of 42
Taxonomy, definition of 42
Temple, NH, Stony Brook Tributary near 110–111
Thalweg, definition of 42
Thermograph, definition of 42
Third Branch White River Tributary at Randolph, VT . 268
Tilton, NH, Winnipesaukee River at 94–95
Time-weighted average, definition of 42
Tons per acre-foot, definition of 43
Tons per day, definition of 43
Total,
definition of 43
coliform bacteria, definition of 43

discharge, definition of 43
in bottom material, definition of 43
length, definition of 43
load, definition of 43
organism count, definition of 43
recoverable, definition of 43
sediment discharge, definition of 43
sediment load, definition of 43
Townshend, VT, West River below Townshend
Dam near 269, 275
Transect, definition of 43
Turbidity, definition of 44
U
Ultraviolet (UV) absorbance (absorption), definition of . 44
Unconfined aquifer, definition of 44
Union Village, VT, Ompompanoosuc River at . . . 268, 275
Upper Ammonoosuc River near Groveton, NH . . . 128–129
V
Vernon, VT, Connecticut River Tributary near 270
Vertical datum, definition of 44
Victory, VT, Moose River at 134–135
Volatile mass, definition of 37
Volatile organic compounds,
in ground-water samples (schedule 2020/2021),
analyses of 12
definition of 44
W
Waits River Tributary near West Topsham, VT 268
Waitsfield, VT, ground-water levels in 310
Walloomsac River near North Bennington, VT . . . 194–195
Warner River at Davisville, NH 104–105
Warner, NH, ground-water levels in 296
Water table, definition of 44
Water-table aquifer, definition of 44
Water year, definition of 44
Waterbury Center, VT, Bryant Brook at 271
Waterbury Reservoir (head of Little River) near
Waterbury, VT 238–239
Waterbury, VT,
Little River near 240–241
Waterbury Reservoir (head of Little River)
near 238–239
Watershed, definition of 44
WDR, definition of 44
Webster, NH, Blackwater River near 266, 274
Weighted average, definition of 44
Weirs Beach, NH, Lake Winnipesaukee at 90–91
Wells River, VT,
Wells River at Wells River, VT 152–153
Connecticut River at 148–149
Wells River at 152–153
West Branch Little River above Bingham Falls
near Stowe, VT 226–231
West Branch Warner River near Bradford, NH . . . 102–103
West Bridgewater, VT, Ottauquechee River near . 168–169
West Canaan, NH, Mascoma River at 268, 275
West Claremont, NH, Sugar River at 172–173
West Fairlee, VT, ground-water levels in 307
West Hartford, VT, White River at 160–161
West Hopkinton, NH, Contoocook River below
Hopkinton Dam, at 100–101
West Lebanon, NH, Connecticut River at 164–165
West River,
at Jamaica, VT 184–185
below Townshend Dam near Townshend, VT .269, 275
West River Tributary near Jamaica, VT 269
West Swanzey, NH, Ashuelot River at 190–191
West Topsham, VT, Waits River Tributary near 268
Wet mass, definition of 44
Wet weight, definition of 44
White River at West Hartford, VT 160–161
Whittaker Brook at Richford, VT 272
Williams River near Rockingham, VT 176–177
Winnicut River at Greenland, near Portsmouth, NH . 72–75
Winnipesaukee River at Tilton, NH 94–95
Winooski River,
at Montpelier, VT 220–221
near Essex Junction, VT 242–243
Winooski River Basin above Montpelier, VT,
reservoirs in 216
Winooski River Tributary near Richmond, VT 272
Woodstock, NH, Pemigewasset River at 78–79
Wrightsville Detention Reservoir at Wrightsville, VT . 216
Wrightsville, VT, North Branch Winooski River
at 218–219
WSP, definition of 44
Z
Zooplankton, definition of 44

Conversion Factors

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^{1}	millimeter (mm)
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter (m)
mile (mi)	1.609×10^{0}	kilometer (km)
Area		
acre	4.047×10^{3}	square meter (m^2)
	4.047×10^{-1}	square hectometer (hm^2)
	4.047×10^{-3}	square kilometer (km^2)
square mile (mi^2)	2.590×10^{0}	square kilometer (km^2)
Volume		
gallon (gal)	3.785×10^{0}	liter (L)
	3.785×10^{-3}	cubic meter (m^3)
	3.785×10^{0}	cubic decimeter (dm^3)
million gallons (Mgal)	3.785×10^{3}	cubic meter (m^3)
	3.785×10^{-3}	cubic hectometer (hm^3)
cubic foot (ft^3)	2.832×10^{-2}	cubic meter (m^3)
	2.832×10^{1}	cubic decimeter (dm^3)
cubic-foot-per-second-per-day [(ft^3/s/d]	2.447×10^{3}	cubic meter (m^3)
	2.447×10^{-3}	cubic hectometer (hm^3)
acre-foot (acre-ft)	1.223×10^{3}	cubic meter (m^3)
	1.223×10^{-3}	cubic hectometer (hm^3)
	1.223×10^{-6}	cubic kilometer (km^3)
Flow rate		
cubic foot per second (ft^3/s)	2.832×10^{1}	liter (L/s)
	2.832×10^{-2}	cubic meter per second (m^3/s)
	2.832×10^{1}	cubic decimeter per second (dm^3/s)
gallon per minute (gal/min)	6.309×10^{-2}	liter per second (L/s)
	6.309×10^{-5}	cubic meter per second (m^3/s)
	6.309×10^{-2}	cubic decimeter per second (dm^3/s)
million gallons per day (Mgal/d)	4.381×10^{-2}	cubic meter per second
	4.381×10^{1}	cubic decimeter per second (dm^3/s)
Mass		
ton, short (2,000 lb)	9.072×10^{-1}	megagram (Mg) or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

$$°F = (1.8 \times °C) + 32$$

USGS

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