

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

Remark Codes

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

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

Dissolved Trace-Element Concentrations

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

Change in National Trends Network Procedures

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

ANDROSCOGGIN RIVER BASIN

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 mi².

PERIOD OF RECORD.--Discharge records: 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. Water-quality records: Water years 1955, 1958.

REVISED RECORDS.--WRD 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 sea level. Prior to December 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, 28 billion ft³, with final regulation at Errol Dam, 0.4 mi upstream. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/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, 5,490 ft³/s, September 18, gage height, 5.04 ft; minimum daily discharge, 912 ft³/s, April 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1470	1320	1090	1590	1840	2270	912	1520	1270	1230	1610	1410
2	1450	1320	1030	1600	1830	2270	929	1510	1380	1320	1610	1420
3	1480	1220	1000	1600	1800	2270	930	1510	1420	1390	1610	1420
4	1450	1170	988	1610	1780	1900	933	1500	1360	1410	1590	1420
5	1460	1170	1010	1610	1770	1690	1380	1500	1330	1390	1600	1420
6	1440	1180	1010	1540	1770	1690	2440	1510	1330	1400	1610	1420
7	1460	1170	1130	1500	1770	1830	2440	1510	1280	1400	1610	1420
8	1410	1180	1250	1500	1760	2030	2700	1510	1220	1640	1610	1420
9	1400	1180	1360	1450	1760	2030	3860	1510	1340	1840	1500	1420
10	1400	1180	1410	1500	1760	2030	4330	1510	1420	1800	1420	1420
11	1400	1180	1410	1500	1820	2030	3950	1510	1420	1800	1400	1170
12	1400	1180	1420	1500	1920	2030	3060	1500	1420	1800	1400	1150
13	1270	1180	1410	1500	1920	2020	2300	1520	1420	1800	1400	1360
14	1100	1180	1420	1500	1920	2020	2160	1510	1420	1680	1390	1420
15	1330	1110	1410	1540	1920	2010	1830	1510	1420	1610	1400	1410
16	1330	1280	1420	1560	1920	2010	1490	1480	1420	1610	1360	1410
17	1330	1210	1420	1560	1920	2010	1500	1350	1420	1610	1370	2100
18	1330	1120	1380	1560	1920	2010	1500	1220	1420	1610	1410	5430
19	1330	1090	1500	1570	1920	2010	1500	1220	1420	1610	1410	5400
20	1430	1090	1480	1570	1920	2010	1500	1060	1420	1610	1410	4720
21	1470	1090	1480	1570	1920	2010	1510	1100	1420	1610	1410	3150
22	1470	1090	1370	1580	2020	2000	1830	1220	1420	1590	1410	2450
23	1470	1090	1450	1570	2270	1400	2260	1220	1420	1610	1410	2420
24	1460	1030	1480	1570	2270	1360	2420	1220	1420	1610	1410	2210
25	1460	1090	1480	1570	2270	1350	2420	1380	1420	1610	1410	2060
26	1390	1090	1480	1580	2270	1400	2420	1530	1420	1590	1410	2070
27	1340	1090	1480	1580	2270	1470	2050	1530	1420	1600	1410	1870
28	1320	1090	1480	1760	2270	1470	1800	1540	1420	1600	1420	1720
29	1320	1090	1480	1850	---	1370	1620	1530	1420	1610	1420	1780
30	1310	1090	1480	1850	---	1160	1510	1530	1300	1610	1410	1820
31	1320	---	1540	1840	---	919	---	1340	---	1630	1410	---
TOTAL	43000	34550	41748	49180	54500	56079	61484	44110	41630	49230	45250	61310
MEAN	1387	1152	1347	1586	1946	1809	2049	1423	1388	1588	1460	2044
MAX	1480	1320	1540	1850	2270	2270	4330	1540	1420	1840	1610	5430
MIN	1100	1030	988	1450	1760	919	912	1060	1220	1230	1360	1150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1906 - 1999, BY WATER YEAR (WY)

MEAN	1586	1544	1698	1786	1853	1857	2138	3077	2270	1786	1688	1693
MAX	3949	3745	4722	3589	3644	5454	4736	8192	7129	4621	2265	4738
(WY)	1955	1908	1974	1970	1996	1936	1913	1974	1917	1996	1990	1954
MIN	921	759	844	760	718	592	770	1027	763	808	840	902
(WY)	1922	1922	1909	1909	1911	1948	1940	1941	1911	1915	1915	1911

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1905 - 1999

ANNUAL TOTAL	777568	582071										
ANNUAL MEAN	2130	1595								1913		
HIGHEST ANNUAL MEAN										3117		1996
LOWEST ANNUAL MEAN										1046		1911
HIGHEST DAILY MEAN	12000	Apr 1	5430	Sep 18	16100	May 22	1969					
LOWEST DAILY MEAN	988	Dec 4	912	Apr 1	a .00	Oct 31	1917					
ANNUAL SEVEN-DAY MINIMUM	1030	Nov 30	1020	Mar 29	152	Mar 21	1948					
INSTANTANEOUS PEAK FLOW			5490	Sep 18	16500	May 22	1969					
INSTANTANEOUS PEAK STAGE			5.04	Sep 18	9.40	May 22	1969					
10 PERCENT EXCEEDS	3140		2030		2620							
50 PERCENT EXCEEDS	1950		1480		1700							
90 PERCENT EXCEEDS	1200		1180		1130							

a As explained under Extremes for Period of Record.

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 mi².

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

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

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

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Rangeley, Mooselookmeguntic, Richardson, Aziscohos, and Umbagog Lakes. These reservoirs have a combined usable capacity of about 28.1 billion ft³ with final regulation at Errol Dam 35 mi upstream. Diurnal fluctuations caused by powerplant 0.8 mi upstream. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 21,900 ft³/s, estimated, April 30, 1923; minimum daily discharge, leakage only, December 25, 1917, when gates in dam were closed.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,600 ft³/s, September 17, gage height, 7.99 ft; minimum daily discharge, 1,380 ft³/s, November 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1870	1620	1600	1730	2300	2590	3020	2210	1510	1480	1800	1540
2	1820	1620	1810	1730	2310	2750	3380	2280	1620	1430	1740	1530
3	1860	1560	1720	1730	2310	2750	3530	2330	1800	1610	1750	1580
4	1840	1470	1840	1920	2300	3260	3280	2400	1770	1620	1770	1520
5	1780	1470	1950	1900	2260	3280	3170	3160	1620	1630	1770	1540
6	1680	1440	1730	1810	2210	2750	4210	2960	1520	1750	1820	1530
7	1660	1430	1670	1770	2190	2440	5090	2550	1690	2000	1840	1570
8	1570	1430	1890	1700	2170	2580	5200	2380	1520	1850	1850	1580
9	1570	1420	1890	1770	2170	2640	5820	2410	1540	2060	1910	1570
10	1670	1390	1940	1780	2130	2510	6750	2420	1730	2170	1660	1740
11	2190	1460	1880	1750	2110	2500	5850	2230	1720	2200	1590	2250
12	2070	1630	1840	1730	2110	2450	4950	2080	1610	2140	1560	1520
13	1860	1530	1810	1820	2130	2440	3900	1980	1610	2110	1580	1440
14	1880	1450	1750	1710	2280	2410	3260	1960	1640	2000	1600	1580
15	1880	1530	1650	1760	2260	2460	3030	1920	1650	1790	1630	1640
16	1920	1650	1710	1960	2230	2410	2430	1880	1650	1780	1660	1880
17	1810	1680	1630	1990	2230	2350	2480	1820	1610	1820	1490	9730
18	1720	1680	1620	1990	2230	2470	2610	1560	1620	1750	1550	9330
19	1660	1540	1660	2210	2230	2530	2750	1590	1610	1750	1620	7510
20	1590	1460	1850	2410	2210	2500	2810	3050	1590	1790	1560	6210
21	1800	1470	1790	2310	2220	2430	2690	2170	1610	1750	1560	4670
22	1820	1450	1950	2200	2180	3120	2760	1890	1600	1750	1600	3420
23	1750	1440	1830	2080	2430	4000	3200	1730	1600	1750	1580	3430
24	1730	1410	2000	2340	2400	2860	3370	1690	1570	1760	1580	3220
25	1720	1380	1880	3410	2580	2720	3210	1910	1620	1860	1560	2620
26	1670	1430	1810	3150	2540	2340	3200	2280	1630	1990	1560	2500
27	1560	1510	1820	2860	2510	2390	3050	2190	1560	1910	1550	2450
28	1570	1510	1790	2540	2510	2430	2560	2080	1580	1850	1550	2090
29	1760	1510	1800	2510	---	2830	2430	1980	1660	1770	1570	2050
30	1770	1460	1770	2580	---	3430	2250	1910	1740	1760	1540	2550
31	1660	---	1630	2410	---	2980	---	1820	---	1850	1540	---
TOTAL	54710	45030	55510	65560	63740	83600	106240	66820	48800	56730	50940	87790
MEAN	1765	1501	1791	2115	2276	2697	3541	2155	1627	1830	1643	2926
MAX	2190	1680	2000	3410	2580	4000	6750	3160	1800	2200	1910	9730
MIN	1560	1380	1600	1700	2110	2340	2250	1560	1510	1430	1490	1440

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 1999, BY WATER YEAR (WY)

MEAN	2048	2096	2139	2146	2165	2501	3915	4254	2806	2095	1939	1988
MAX	4894	4292	5811	4044	4294	7684	6474	10050	10560	5840	2792	6387
(WY)	1955	1991	1974	1970	1996	1936	1976	1937	1917	1996	1990	1954
MIN	1374	1413	1257	1276	1299	1376	1755	1746	1545	1524	1462	1330
(WY)	1942	1922	1953	1953	1922	1922	1965	1941	1915	1980	1995	1995

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1914 - 1999
ANNUAL TOTAL	1022640	785470	
ANNUAL MEAN	2802	2152	2513
HIGHEST ANNUAL MEAN			4147
LOWEST ANNUAL MEAN			1689
HIGHEST DAILY MEAN	19900	9730	20000
LOWEST DAILY MEAN	1380	1380	795
ANNUAL SEVEN-DAY MINIMUM	1430	1430	866
INSTANTANEOUS PEAK FLOW		11600	21900
INSTANTANEOUS PEAK STAGE		7.99	Apr 30 1923
10 PERCENT EXCEEDS	4310	3020	3720
50 PERCENT EXCEEDS	2300	1840	2010
90 PERCENT EXCEEDS	1610	1540	1600

SACO RIVER BASIN

01064300 ELLIS RIVER NEAR JACKSON, NH

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

DRAINAGE AREA.--10.9 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	1515	904	4.33	May 25	0100	406	3.21
Mar. 4	0945	547	3.59	Sept. 16	2245	* 1,310	* 5.01
May 5	1145	670	3.86	Sept. 30	1315	985	4.48
May 19	2100	1,260	4.94				

Minimum discharge, 6.8 ft³/s, September 3, 4.

**DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES**

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	18	36	e11	e19	e68	63	56	40	16	11	7.9
2	16	18	29	e11	e20	e37	69	80	39	21	9.8	7.6
3	13	17	32	e12	e22	21	53	88	43	18	9.4	7.3
4	12	16	56	e14	e24	195	102	136	35	16	9.3	7.2
5	12	15	35	e14	e18	52	55	368	30	17	19	7.3
6	11	15	32	e13	e16	e32	55	224	30	48	15	7.8
7	11	15	64	13	e15	e29	71	165	37	37	12	18
8	12	15	40	12	e15	e24	65	195	40	26	17	19
9	14	14	30	e12	e14	e22	63	189	33	22	16	13
10	89	14	26	e20	14	e20	51	118	30	27	13	87
11	135	43	e23	e17	14	e20	42	65	27	23	12	57
12	49	27	e21	e12	18	e18	40	51	25	20	11	23
13	34	22	21	12	38	e17	34	44	24	18	11	17
14	61	19	e18	12	e20	17	30	42	27	17	17	15
15	67	26	e19	e12	e20	16	27	46	29	17	14	14
16	39	22	18	e21	e18	e16	28	48	24	16	12	219
17	31	19	18	16	16	17	31	49	23	15	11	624
18	28	17	e15	e15	15	20	39	58	24	14	11	188
19	25	17	e13	e61	14	19	43	361	21	14	10	63
20	23	19	e16	28	e14	17	42	225	20	13	9.8	43
21	21	20	e15	e21	e14	e16	47	78	19	12	11	50
22	20	17	38	e17	e12	61	47	61	18	12	13	58
23	19	17	e22	e16	e12	44	47	55	17	11	11	40
24	19	20	e17	385	e13	28	38	76	19	13	9.8	30
25	18	18	e15	e88	e14	25	32	162	19	14	9.2	26
26	17	21	e14	e39	14	23	35	82	17	16	8.9	24
27	16	24	e14	33	13	23	34	65	16	14	9.5	23
28	21	19	e15	e29	13	28	31	53	16	12	9.5	21
29	30	17	e15	e27	---	57	33	47	20	11	8.7	21
30	22	18	e13	e22	---	47	40	44	19	11	8.3	212
31	20	---	e11	e18	---	45	---	41	---	13	8.1	---
TOTAL	922	579	751	1033	469	1074	1387	3372	781	554	357.3	1950.1
MEAN	29.7	19.3	24.2	33.3	16.8	34.6	46.2	109	26.0	17.9	11.5	65.0
MAX	135	43	64	385	38	195	102	368	43	48	19	624
MIN	11	14	11	11	12	16	27	41	16	11	8.1	7.2
CFSM	2.73	1.77	2.22	3.06	1.54	3.18	4.24	9.98	2.39	1.64	1.06	5.96
IN.	3.15	1.98	2.56	3.53	1.60	3.67	4.73	11.51	2.67	1.89	1.22	6.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1999, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999			
MEAN	30.5	36.1	24.8	18.3	15.7	27.2	69.0	85.2	43.1	23.6	19.7	19.5																											
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	10.5	7.46	6.98																											
(WY)	1970	1979	1979	1977	1977	1969	1995	1993	1970	1980	1980	1978																											

SUMMARY STATISTICS

	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1964 - 1999
ANNUAL TOTAL	15436	13229.4	
ANNUAL MEAN	42.3	36.2	34.6
HIGHEST ANNUAL MEAN			53.0
LOWEST ANNUAL MEAN			21.6
HIGHEST DAILY MEAN	1070	624	1160
LOWEST DAILY MEAN	10	7.2	a 2.2
ANNUAL SEVEN-DAY MINIMUM	10	7.6	2.3
INSTANTANEOUS PEAK FLOW		b 1310	b 4500
INSTANTANEOUS PEAK STAGE		5.01	c 18.90
INSTANTANEOUS LOW FLOW		d 6.8	f
ANNUAL RUNOFF (CFSM)	3.88	3.33	3.18
ANNUAL RUNOFF (INCHES)	52.68	45.15	43.18
10 PERCENT EXCEEDS	71	63	70
50 PERCENT EXCEEDS	19	20	18
90 PERCENT EXCEEDS	12	12	8.3

a Also on March 3, 4 1980.

b From rating curve extended above 390 ft³/s on basis of slope-area measurements at gage height 10.34 ft.

c Gage height 10.34 ft from recorder, affected by drawdown; 18.9 ft from floodmarks, site and datum then in use.

d Also occurred on September 4.

e Estimated.

f Minimum not determined, occurred during ice effect in March 1980.

0106450 SACO RIVER NEAR CONWAY, NH

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

DRAINAGE AREA.--385 mi².

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

REVISED RECORDS.--WSP 1301: 1908-09. WDR ME-81-1: Drainage area. WRD ME-87-1: 1936 (M), 1951 (M), 1953 (M), 1960 (M), 1977 (M).

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

REMARKS.--Records good except for periods of ice effect, Dec. 24 to Mar. 1, which are fair. Satellite gage-height telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 47,200 ft³/s, March 27, 1953, gage height, 17.20 ft; maximum gage height, 19.03 ft, March 7, 1979, (ice jam); minimum discharge, 40 ft³/s, March 16, 1932, gage height, 1.61 ft.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 17	0945	* 24,500	* 11.92	No other peaks greater than base discharge.			
Minimum discharge, 118 ft ³ /s, September 6, gage height, 2.05 ft,							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	423	795	e325	e740	e1000	3530	1350	797	313	192	136
2	285	411	963	e310	e720	1900	3910	1530	743	309	178	131
3	259	423	880	e340	e800	1150	3420	1730	824	427	165	127
4	226	395	971	e410	e910	4230	3240	1780	726	326	159	123
5	208	370	1070	e400	e890	3440	2970	4780	630	283	173	120
6	196	354	870	e375	e850	1960	2880	4410	571	399	275	119
7	189	345	877	e370	e800	1610	3300	2960	611	1200	234	130
8	189	337	1060	e360	e740	1350	3410	2400	645	613	205	216
9	207	329	831	e390	e680	1320	3640	2810	638	442	265	380
10	532	319	725	e460	e600	1240	3240	2210	703	393	236	1070
11	4960	686	670	e570	e560	1090	2600	1680	560	430	194	3020
12	2060	1150	605	e510	e530	999	2420	1350	488	358	177	1010
13	1160	742	590	e450	e700	942	2200	1190	442	319	168	628
14	934	594	554	e400	e730	904	1900	1080	422	302	304	472
15	2250	680	507	e410	e700	874	1670	1020	673	278	425	399
16	1790	886	523	e580	e660	836	1570	996	534	256	328	717
17	1220	736	512	e900	e600	815	1700	964	434	241	257	17000
18	983	642	495	e750	e570	935	1710	918	431	227	220	6200
19	827	568	412	e1800	e545	1040	1870	1020	427	224	197	2670
20	719	583	464	e1500	e530	952	1850	4220	389	231	180	1760
21	634	700	446	e950	e480	878	1740	1810	370	215	173	1500
22	569	666	933	e750	e450	2400	1800	1280	389	198	221	2230
23	523	594	1020	e650	e430	3580	1780	1090	355	186	224	1700
24	493	566	e800	e1500	e445	2160	1690	1090	339	185	188	1320
25	464	558	e600	e2700	e460	1710	1450	2350	439	256	168	1100
26	439	590	e550	e1700	e470	1500	1360	1730	362	338	157	953
27	417	1660	e520	e1450	e455	1460	1410	1460	316	383	152	847
28	407	1130	e530	e1200	e440	1600	1280	1220	289	290	171	770
29	490	907	e510	e1050	---	2580	1260	1060	299	230	171	714
30	478	800	e420	e900	---	3170	1260	960	332	208	152	1560
31	436	---	e350	e770	---	2850	---	870	---	203	143	---
TOTAL	24781	19144	21053	25230	17485	52475	68060	55318	15178	10263	6452	49122
MEAN	799	638	679	814	624	1693	2269	1784	506	331	208	1637
MAX	4960	1660	1070	2700	910	4230	3910	4780	824	1200	425	17000
MIN	189	319	350	310	430	815	1260	870	289	185	143	119
CFSM	2.08	1.66	1.76	2.11	1.62	4.40	5.89	4.63	1.31	.86	.54	4.25
IN.	2.39	1.85	2.03	2.44	1.69	5.07	6.58	5.35	1.47	.99	.62	4.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1999, BY WATER YEAR (WY)

MEAN	643	957	761	579	514	969	2619	2243	848	442	358	395
MAX	2369	2493	2656	1887	3170	5986	4564	4609	3644	2043	1685	1794
(WY)	1978	1908	1974	1986	1981	1936	1987	1940	1998	1973	1990	1954
MIN	114	211	152	144	124	146	871	614	300	158	129	102
(WY)	1948	1909	1956	1940	1940	1940	1995	1941	1964	1991	1936	1948

SUMMARY STATISTICS

	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1904 - 1999	
ANNUAL TOTAL	457910		364561			
ANNUAL MEAN	1255		999		945	
HIGHEST ANNUAL MEAN					1463	
LOWEST ANNUAL MEAN					489	
HIGHEST DAILY MEAN	25900	Jun 14	17000	Sep 17	33900	Mar 19 1936
LOWEST DAILY MEAN	173	Sep 26	119	Sep 6	66	Aug 4 1959
ANNUAL SEVEN-DAY MINIMUM	185	Sep 20	127	Sep 1	74	Aug 3 1959
INSTANTANEOUS PEAK FLOW			24500	Sep 17	47200	Mar 27 1953
INSTANTANEOUS PEAK STAGE			11.92	Sep 17	a 19.03	Mar 7 1979
INSTANTANEOUS LOW FLOW			118	Sep 6	40	Mar 16 1932
ANNUAL RUNOFF (CFSM)	3.26		2.59		2.45	
ANNUAL RUNOFF (INCHES)	44.24		35.23		33.34	
10 PERCENT EXCEEDS	2380		2180		2190	
50 PERCENT EXCEEDS	594		642		460	
90 PERCENT EXCEEDS	236		208		184	

a Ice jam.
e Estimated.

SACO RIVER BASIN

01064801 BEARCAMP RIVER AT SOUTH TAMWORTH, NH

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

DRAINAGE AREA.--67.6 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	0745	Ice Jam	* 8.13	Mar. 29	2130	1,070	6.01
Jan. 24	----	1,040	*a 8.13	Sept. 16	2245	* 3,160	7.68
Mar. 4	1615	1,270	6.30				

Minimum discharge, 10 ft³/s, September 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	60	156	e52	e99	e302	806	80	63	27	24	13
2	51	57	146	e48	e113	e328	770	83	56	29	20	12
3	40	55	129	e50	e208	e205	602	82	54	45	17	11
4	35	52	123	e55	e180	e717	539	86	48	31	15	11
5	32	50	116	e57	e179	e724	466	284	42	24	17	10
6	29	47	108	e53	154	e517	422	252	38	115	18	10
7	27	46	102	e52	139	e355	448	202	38	226	16	13
8	29	45	101	e51	130	e258	439	159	35	102	16	26
9	38	43	93	e51	99	e220	407	199	32	64	24	44
10	130	42	86	e78	109	e188	347	153	32	53	19	260
11	698	146	82	e90	e100	165	269	121	29	42	21	458
12	372	182	76	e76	101	149	227	101	26	33	16	180
13	208	127	74	e72	134	143	200	87	24	28	15	100
14	224	103	71	e69	e137	146	177	77	24	26	23	67
15	713	156	67	e70	e128	141	159	70	65	23	34	51
16	438	169	67	e107	e118	134	146	65	45	21	35	506
17	259	131	68	e135	e105	138	151	60	33	19	26	2290
18	190	114	67	e121	95	189	150	56	31	18	22	796
19	150	103	e62	e438	93	231	149	102	29	21	18	338
20	125	123	e65	e340	e88	211	145	496	25	22	16	189
21	107	167	61	e228	e82	191	135	218	26	19	16	213
22	94	140	164	e170	e80	543	130	140	42	17	26	449
23	86	120	144	e143	e70	759	124	107	32	16	25	326
24	78	108	e116	e423	e65	530	105	119	25	15	20	211
25	72	98	e83	e700	e66	377	93	273	24	18	17	151
26	67	154	e70	e450	e71	314	87	206	22	22	16	115
27	64	494	e63	e330	e70	320	88	181	20	44	15	93
28	62	297	e63	e228	e67	397	84	133	18	29	20	81
29	76	213	e62	e170	---	775	81	105	21	21	19	74
30	71	171	e60	e136	---	855	80	84	41	25	16	192
31	64	---	e57	e108	---	747	---	72	---	26	14	---
TOTAL	4681	3813	2802	5151	3080	11269	8026	4453	1040	1221	616	7290
MEAN	151	127	90.4	166	110	364	268	144	34.7	39.4	19.9	243
MAX	713	494	164	700	208	855	806	496	65	226	35	2290
MIN	27	42	57	48	65	134	80	56	18	15	14	10
CFSM	2.23	1.88	1.34	2.46	1.63	5.38	3.96	2.12	.51	.58	.29	3.59
IN.	2.58	2.10	1.54	2.83	1.69	6.20	4.42	2.45	.57	.67	.34	4.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999
MEAN	125	183	161	158	139	245	440
MAX	258	302	410	331	242	436	632
(WY)	1996	1996	1997	1996	1997	1998	1993
MIN	36.5	66.2	60.3	55.0	51.0	87.6	129
(WY)	1998	1995	1998	1994	1994	1994	1995

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1993 - 1999

ANNUAL TOTAL	77834	53442	
ANNUAL MEAN	213	146	168
HIGHEST ANNUAL MEAN			217
LOWEST ANNUAL MEAN			94.6
HIGHEST DAILY MEAN	5370	Jun 14	5370
LOWEST DAILY MEAN	18	Aug 10	4.5
ANNUAL SEVEN-DAY MINIMUM	19	Aug 4	11
INSTANTANEOUS PEAK FLOW			3160
INSTANTANEOUS PEAK STAGE			ac 8.13
INSTANTANEOUS LOW FLOW			b 10
ANNUAL RUNOFF (CFSM)	3.15		2.17
ANNUAL RUNOFF (INCHES)	42.83		29.41
10 PERCENT EXCEEDS	404		350
50 PERCENT EXCEEDS	95		86
90 PERCENT EXCEEDS	29		20

- a Ice jam.
- b Also occurred September 6.
- c Also occurred January 24.
- d Also occurred September 8, 1995.
- 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, 200 ft downstream from Milton Pond Dam at Milton.

DRAINAGE AREA.--108 mi².

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

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

REMARKS.--Records good except for the periods January 22-25, March 4-8, 30, 31, and September 17-22, which are fair. Flow regulated by Great East and Lovell Lakes and Horn, Wilson, and Milton (also controls Northeast and Town House) Ponds. These reservoirs have a combined usable capacity of about 1.28 billion ft³.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft³/s, March 30, gage height, 4.80 ft; minimum daily discharge 16 ft³/s, September 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	183	133	92	175	290	592	51	80	32	28	20
2	131	175	131	91	136	610	605	51	61	33	28	19
3	156	168	127	91	182	625	566	50	44	33	28	19
4	162	160	121	92	319	849	531	50	42	33	28	19
5	192	145	115	92	390	1020	472	56	38	33	28	19
6	218	140	112	72	376	882	425	70	36	33	28	19
7	236	139	109	53	331	725	359	86	36	34	27	18
8	257	138	108	53	285	422	274	98	35	34	27	18
9	302	136	106	53	250	242	245	109	34	34	26	18
10	377	91	103	54	225	295	252	113	32	34	26	18
11	522	49	102	54	206	314	243	102	32	33	25	16
12	589	50	100	55	195	316	243	68	31	33	25	17
13	551	51	99	55	203	310	208	49	31	32	25	17
14	492	51	98	55	218	311	175	43	31	32	25	17
15	459	52	96	57	215	318	174	38	32	31	25	18
16	434	76	96	63	204	308	170	38	31	31	24	78
17	412	88	96	79	194	295	174	38	32	31	24	586
18	376	88	96	153	196	310	175	38	32	31	23	992
19	342	89	95	238	215	341	124	45	32	31	23	787
20	326	121	96	263	224	357	98	66	32	31	23	505
21	305	138	95	274	213	346	99	83	32	30	23	319
22	271	136	95	446	198	493	97	84	32	30	22	204
23	245	134	94	531	179	885	93	79	31	30	22	142
24	224	133	95	510	165	879	87	85	31	30	21	149
25	207	109	95	332	148	669	86	121	31	31	21	151
26	226	96	95	136	135	559	86	142	31	31	21	146
27	225	97	95	149	134	525	86	138	31	31	21	140
28	242	100	94	208	134	529	73	125	31	30	21	133
29	241	114	94	246	---	829	64	111	31	29	21	130
30	215	127	94	242	---	1020	57	98	31	29	21	130
31	198	---	93	234	---	770	---	87	---	29	20	---
TOTAL	9163	3374	3178	5123	6045	16644	6933	2412	1066	979	750	4864
MEAN	296	112	103	165	216	537	231	77.8	35.5	31.6	24.2	162
MAX	589	183	133	531	390	1020	605	142	80	34	28	992
MIN	30	49	93	53	134	242	57	38	31	29	20	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1999, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	
MEAN	180	195	225	182	194	320	431	224	135	67.4	60.2	78.9																				
MAX	499	487	604	384	439	720	908	431	650	181	165	162																				
(WY)	1978	1996	1984	1978	1970	1979	1969	1984	1998	1996	1982	1999																				
MIN	81.4	77.9	40.5	59.7	60.8	108	103	55.4	35.5	26.1	24.2	22.3																				
(WY)	1969	1987	1979	1977	1977	1993	1985	1985	1999	1991	1999	1993																				

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR		FOR 1999 WATER YEAR		WATER YEARS 1969 - 1999	
ANNUAL TOTAL	85008		60531			
ANNUAL MEAN	233		166		191	
HIGHEST ANNUAL MEAN					307	
LOWEST ANNUAL MEAN					98.6	
HIGHEST DAILY MEAN	2260		a 1020		3220	
LOWEST DAILY MEAN	30		16		16	
ANNUAL SEVEN-DAY MINIMUM	31		17		17	
INSTANTANEOUS PEAK FLOW			1110		4000	
INSTANTANEOUS PEAK STAGE			4.80		6.70	
10 PERCENT EXCEEDS	520		416		406	
50 PERCENT EXCEEDS	128		96		134	
90 PERCENT EXCEEDS	47		26		37	

a Also occurred March 30.

PISCATAQUA RIVER BASIN

01072800 COCHECO RIVER NEAR ROCHESTER, NH

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

DRAINAGE AREA.-- 85.7 mi²

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

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

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

REMARKS.--Records good except those for estimated daily discharges and those for the period of January 29 to March 22, 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.--Maximum discharge, 1,310 ft³/s, September 17, gage height, 8.89 ft; minimum daily discharge, 2.5 ft³/s, September 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	37	75	e46	e145	579	321	57	40	15	6.1	3.7
2	11	35	64	e43	e155	838	274	54	35	14	5.7	3.8
3	8.5	31	59	e63	426	497	242	52	34	18	5.1	2.7
4	8.7	28	55	75	595	582	219	55	29	19	4.0	2.6
5	8.7	26	53	e63	520	928	196	87	26	17	3.3	2.5
6	8.8	24	51	e56	403	523	177	138	24	15	3.7	2.5
7	8.5	28	49	53	289	393	165	117	23	22	4.5	3.0
8	11	31	46	e49	211	e305	155	99	22	20	8.2	4.3
9	35	30	46	e56	181	245	143	106	20	18	13	4.4
10	76	28	44	e78	167	210	130	108	18	15	7.4	32
11	181	40	45	96	155	190	120	83	16	13	5.7	124
12	156	57	44	98	141	173	114	71	15	12	8.9	55
13	105	57	43	e85	194	166	108	61	15	11	6.3	33
14	81	48	42	82	219	188	104	56	16	9.9	8.5	26
15	101	48	41	e100	186	186	100	52	20	9.6	13	21
16	103	49	41	e140	e145	168	93	47	21	8.8	11	63
17	83	43	43	163	e140	171	106	43	19	8.1	9.1	832
18	72	42	49	e165	175	221	111	39	16	7.6	10	810
19	65	40	44	e210	e270	259	97	45	15	12	8.9	347
20	65	41	44	e330	229	244	94	104	14	22	6.0	175
21	56	44	44	e310	184	213	93	121	13	15	5.4	124
22	53	44	56	e230	152	328	87	82	12	11	6.8	114
23	49	41	e75	184	e130	864	82	63	11	9.2	7.0	114
24	45	38	e68	199	e110	539	78	80	12	7.2	6.1	97
25	40	35	e60	357	e105	427	74	157	16	7.3	4.9	77
26	37	44	e50	405	105	379	71	135	13	8.4	4.5	66
27	35	146	e47	272	101	342	67	105	11	8.2	4.2	57
28	38	154	47	184	113	341	64	85	9.7	7.6	4.6	53
29	40	105	48	157	---	535	61	67	12	6.3	4.1	50
30	40	86	49	147	---	513	58	56	17	5.8	4.7	64
31	37	---	e50	e145	---	389	---	47	---	6.1	4.3	---
TOTAL	1669.2	1500	1572	4641	5946	11936	3804	2472	564.7	379.1	205.0	3363.5
MEAN	53.8	50.0	50.7	150	212	385	127	79.7	18.8	12.2	6.61	112
MAX	181	154	75	405	595	928	321	157	40	22	13	832
MIN	8.5	24	41	43	101	166	58	39	9.7	5.8	3.3	2.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1999, BY WATER YEAR (WY)

MEAN	113	158	158	205	222	301	275	151	145	71.2	16.1	37.2
MAX	286	329	409	359	295	415	508	268	568	161	24.7	112
(WY)	1997	1996	1997	1996	1996	1998	1997	1996	1998	1996	1996	1999
MIN	20.3	50.0	50.7	150	152	227	127	71.9	18.8	11.6	6.61	4.85
(WY)	1998	1999	1999	1998	1997	1996	1999	1995	1999	1995	1999	1995

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1995 - 1999
ANNUAL TOTAL	61147.2	38052.5	
ANNUAL MEAN	168	104	164
HIGHEST ANNUAL MEAN			197
LOWEST ANNUAL MEAN			104
HIGHEST DAILY MEAN	2940	928	2940
LOWEST DAILY MEAN	8.5	a 2.5	2.2
ANNUAL SEVEN-DAY MINIMUM	9.3	3.0	2.5
INSTANTANEOUS PEAK FLOW		1310	3700
INSTANTANEOUS PEAK STAGE		8.89	15.51
10 PERCENT EXCEEDS	379	244	358
50 PERCENT EXCEEDS	75	53	81
90 PERCENT EXCEEDS	20	7.5	11

a Also occurred September 6.
e Estimated.

PISCATAQUA RIVER BASIN

01073000 OYSTER RIVER NEAR DURHAM, NH

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

DRAINAGE AREA.--12.1 mi².

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

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

REMARKS.--Records good except for estimated daily discharges and those below 1.0 ft³/s, which are poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 17	0100	* 187	* 3.26				
Minimum discharge, 0.01 ft ³ /s, September 6, 7.				No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	3.9	7.4	3.8	e15	137	31	6.6	6.2	.93	.32	.10
2	2.4	e3.7	7.0	e3.4	22	88	27	6.0	5.6	2.0	.27	.07
3	2.1	e3.4	7.8	10	109	52	24	5.4	4.9	3.2	.22	.05
4	1.3	e3.0	6.5	24	84	82	22	6.3	4.2	1.9	.18	e.04
5	.87	e2.7	6.0	13	75	e56	20	21	3.8	1.5	.14	.03
6	.93	2.4	5.6	8.2	54	e38	19	22	3.3	1.3	.16	.01
7	1.0	2.5	5.3	6.5	42	34	18	18	2.7	1.8	.27	.02
8	3.6	2.5	7.0	5.3	34	33	17	16	2.3	1.1	.54	.07
9	12	2.5	7.5	5.9	28	28	15	18	2.3	.83	.68	.10
10	29	2.5	6.3	8.8	26	26	14	16	2.6	.92	.64	9.2
11	35	5.5	5.5	7.0	24	25	13	12	2.7	.84	.58	30
12	14	7.5	e5.9	6.1	25	24	12	10	2.3	.67	1.2	7.9
13	8.5	5.5	e5.8	6.0	40	28	11	8.9	2.0	.56	e.95	3.4
14	7.8	4.7	e5.8	5.6	34	32	10	7.9	1.7	.60	e1.3	2.1
15	14	4.4	5.8	8.5	27	31	9.9	6.8	1.6	.51	e1.4	2.0
16	9.7	4.3	5.7	19	23	30	9.8	5.7	1.4	.42	e1.3	29
17	7.7	4.7	6.3	15	21	36	14	4.9	1.1	.37	e.95	116
18	7.1	6.4	8.1	17	42	44	15	4.5	1.3	.39	e.70	46
19	6.0	6.5	6.5	40	55	42	12	6.5	1.3	1.1	e.50	26
20	4.9	7.1	6.0	36	41	36	11	21	1.1	2.0	e.35	15
21	4.8	7.7	6.0	29	e31	30	10	15	1.1	.93	e.40	10
22	4.2	7.3	8.0	25	e23	66	9.3	11	.93	.68	e.80	8.4
23	4.1	6.5	7.5	28	e18	63	9.0	8.8	.88	.70	e.80	7.3
24	3.9	5.8	6.1	45	16	46	9.5	24	.82	.63	e.30	6.1
25	3.7	5.9	5.3	74	14	38	8.6	40	.72	.53	.10	5.2
26	3.7	9.3	4.7	50	15	32	8.5	23	.74	.60	.08	4.1
27	3.8	18	4.3	36	15	28	9.0	18	.78	.56	.08	3.4
28	3.9	12	4.1	30	20	43	8.4	13	.70	.62	.41	3.2
29	4.5	9.1	4.2	25	---	67	7.8	11	1.4	.58	.17	3.1
30	4.6	8.1	4.3	e20	---	47	7.2	9.2	1.1	.50	.13	4.2
31	4.2	---	4.2	e17	---	36	---	7.7	---	.41	.13	---
TOTAL	216.40	175.4	186.5	628.1	973	1398	412.0	404.2	63.57	29.68	16.05	342.09
MEAN	6.98	5.85	6.02	20.3	34.8	45.1	13.7	13.0	2.12	.96	.52	11.4
MAX	35	18	8.1	74	109	137	31	40	6.2	3.2	1.4	116
MIN	.87	2.4	4.1	3.4	14	24	7.2	4.5	.70	.37	.08	.01
CFSM	.58	.48	.50	1.67	2.87	3.73	1.13	1.08	.18	.08	.04	.94
IN.	.67	.54	.57	1.93	2.99	4.30	1.27	1.24	.20	.09	.05	1.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1999, BY WATER YEAR (WY)

MEAN	7.45	18.2	22.3	19.5	22.1	47.8	48.7	24.8	12.4	5.07	3.46	4.38
MAX	65.2	62.7	55.6	58.1	84.5	122	104	97.5	71.1	33.7	22.7	52.6
(WY)	1997	1952	1997	1958	1981	1936	1956	1954	1998	1938	1991	1954
MIN	.89	1.58	2.73	2.25	3.47	13.5	13.7	8.85	2.07	.65	.52	.58
(WY)	1942	1979	1966	1981	1980	1967	1999	1957	1936	1949	1999	1995

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1935 - 1999

ANNUAL TOTAL	8676.04	4844.99		
ANNUAL MEAN	23.8	13.3		
HIGHEST ANNUAL MEAN			19.6	
LOWEST ANNUAL MEAN			32.3	1952
HIGHEST DAILY MEAN	469	Jun 14	9.09	1965
LOWEST DAILY MEAN	.87	Sep 14	.01	Sep 6 1999
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 14	.04	Sep 2 1999
INSTANTANEOUS PEAK FLOW			187	Sep 17 1996
INSTANTANEOUS PEAK STAGE			3.26	Sep 17 1936
INSTANTANEOUS LOW FLOW			a .01	Sep 6 1999
ANNUAL RUNOFF (CFSM)	1.96	1.10		1.62
ANNUAL RUNOFF (INCHES)	26.67	14.90		22.04
10 PERCENT EXCEEDS	57	35		48
50 PERCENT EXCEEDS	10	6.3		10
90 PERCENT EXCEEDS	1.7	.56		1.2

a Also occurred September 7, 1999.
e Estimated.

PISCATAQUA RIVER BASIN

01073500 LAMPREY RIVER NEAR NEWMARKET, NH

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

DRAINAGE AREA.--183 mi².

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

REVISED RECORDS.--WSP 1231: 1936-37, 1997 (datum correction)

GAGE.--Water-stage recorder. Datum of gage is 38.28 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some regulation by Pawtuckaway and Mendums Ponds. These reservoirs have a usable capacity of about 600 million ft³.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 976 ft³/s, March 2, gage height, 4.78 ft; minimum daily discharge, 2.3 ft³/s, September 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e10	55	161	e50	e260	795	511	88	76	19	e5.7	e2.8
2	e8.5	53	143	e50	278	947	425	83	67	19	e5.2	e2.8
3	e7.5	50	132	e63	677	929	345	77	61	27	e4.7	e2.7
4	e7.0	58	124	127	806	915	316	88	52	28	e4.3	e2.6
5	e6.5	59	113	e135	930	921	287	151	44	27	e3.6	e2.5
6	e6.3	56	105	e121	897	900	260	169	40	27	e3.9	e2.4
7	e6.1	52	101	e108	753	754	249	166	37	25	e4.5	e2.3
8	e12	55	99	e89	618	e650	232	157	35	20	e5.6	e2.5
9	e65	46	99	e81	510	e590	214	163	32	18	e6.4	e2.4
10	140	42	99	96	e440	510	201	153	29	17	e5.9	19
11	236	50	96	99	401	459	188	133	27	14	e5.7	196
12	154	74	92	96	374	427	179	114	e24	12	e5.7	97
13	108	71	90	93	445	409	171	96	e22	12	e5.7	65
14	81	87	85	89	460	419	163	88	e20	11	e6.7	44
15	149	86	81	93	419	420	123	81	e19	9.9	e7.0	38
16	196	87	74	148	371	414	135	74	e18	9.3	e7.0	84
17	170	77	65	166	328	432	155	65	e18	8.7	e6.7	622
18	147	99	70	181	380	489	166	58	e17	7.9	e6.4	586
19	126	123	66	302	e530	531	169	63	e17	10	e5.4	495
20	129	201	66	353	575	536	162	120	e16	13	e4.7	350
21	141	206	64	366	518	502	161	130	e15	13	e4.3	247
22	118	169	68	362	422	606	149	126	14	12	e4.1	195
23	102	148	71	350	333	749	142	106	13	10	e3.7	171
24	91	131	66	410	322	795	137	140	13	9.0	e3.4	141
25	81	116	63	610	e280	722	122	235	e13	e8.8	3.4	114
26	73	121	58	623	270	595	115	209	e12	e8.5	e3.4	92
27	67	181	56	630	262	505	111	184	e12	e8.1	e3.3	77
28	67	209	54	531	268	487	101	152	e13	e7.8	e3.2	65
29	68	201	52	414	---	621	97	124	e15	e7.2	e3.0	59
30	64	178	e52	349	---	622	95	104	20	e6.7	e2.9	57
31	58	---	e51	e295	---	585	---	89	---	e6.2	e2.9	---
TOTAL	2694.9	3141	2616	7480	13127	19236	5881	3786	811	432.1	148.4	3837.0
MEAN	86.9	105	84.4	241	469	621	196	122	27.0	13.9	4.79	128
MAX	236	209	161	630	930	947	511	235	76	28	7.0	622
MIN	6.1	42	51	50	260	409	95	58	12	6.2	2.9	2.3
CFSM	.48	.57	.46	1.32	2.56	3.39	1.07	.67	.15	.08	.03	.70
IN.	.55	.64	.53	1.52	2.67	3.91	1.20	.77	.16	.09	.03	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1934 - 1999, BY WATER YEAR (WY)

MEAN	129	263	333	289	311	608	687	351	191	94.9	71.9	72.4
MAX	879	742	851	796	811	1866	1756	1400	1117	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	105	27.0	12.2	4.79	3.44
(WY)	1948	1942	1942	1944	1980	1989	1985	1985	1999	1993	1999	1957

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1934 - 1999

ANNUAL TOTAL	124484.0	63190.4	
ANNUAL MEAN	341	173	283
HIGHEST ANNUAL MEAN			441
LOWEST ANNUAL MEAN			137
HIGHEST DAILY MEAN	4500	Jun 16	947
LOWEST DAILY MEAN	e 6.1	Oct 7	e 2.3
ANNUAL SEVEN-DAY MINIMUM	7.4	Oct 1	2.5
INSTANTANEOUS PEAK FLOW			976
INSTANTANEOUS PEAK STAGE			4.78
ANNUAL RUNOFF (CFSM)	1.86		.95
ANNUAL RUNOFF (INCHES)	25.30		12.85
10 PERCENT EXCEEDS	800		510
50 PERCENT EXCEEDS	162		92
90 PERCENT EXCEEDS	19		6.3
			23

a During refilling after repairs at Wiswell Dam.
e Estimated.

PISCATAQUA RIVER BASIN

01073587 EXETER RIVER AT HAIGH ROAD NEAR BRENTWOOD, NH

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

DRAINAGE AREA.--63.5 mi².

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

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

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 4	2300	Ice Jam	* 6.65	Mar. 2	1315	* 462	6.58

Minimum daily discharge, 1.2 ft³/s, September 2-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUE

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	17	55	e27	133	248	176	45	37	8.0	3.5	1.3
2	3.3	16	52	e24	130	386	159	43	32	9.8	2.6	1.2
3	3.0	16	49	35	e300	304	145	42	29	13	2.0	1.2
4	2.9	15	46	e65	e380	307	134	44	24	15	1.8	1.2
5	2.6	15	43	e58	e410	335	97	59	20	10	3.1	1.2
6	2.5	15	41	e54	e380	272	107	75	17	e7.7	6.0	1.3
7	2.4	15	40	e51	e330	e215	103	75	19	8.1	4.9	1.5
8	3.8	14	38	e49	e270	e200	96	70	17	6.7	4.7	1.4
9	23	14	40	e51	e205	e190	89	72	14	5.8	4.2	1.4
10	62	14	41	60	179	e180	83	72	12	5.3	3.1	20
11	74	21	40	e57	159	162	76	64	10	4.2	2.7	50
12	57	32	36	e53	150	134	71	59	9.2	3.5	3.1	26
13	50	31	35	e51	167	127	66	49	8.2	3.0	2.9	30
14	45	28	35	e49	176	137	64	43	7.9	2.7	2.8	33
15	52	27	32	67	e170	140	64	39	7.3	2.4	2.9	52
16	56	25	31	90	e150	135	61	34	6.2	2.0	3.8	55
17	48	28	32	84	132	144	65	30	5.9	1.8	3.8	200
18	41	32	36	84	141	165	72	28	6.0	1.5	4.2	256
19	30	32	35	121	188	185	69	29	5.7	2.4	3.5	156
20	25	33	34	e120	202	189	66	47	5.2	4.0	2.7	149
21	25	36	33	e125	e185	181	67	59	4.8	3.2	2.3	133
22	23	36	36	121	e170	211	64	52	7.0	2.5	2.3	80
23	22	35	40	148	e140	267	61	46	11	2.0	2.1	81
24	21	30	37	192	e120	256	58	61	12	2.1	2.1	70
25	19	28	e33	e270	e105	233	55	82	8.6	4.4	2.0	60
26	18	31	e30	e320	98	208	52	82	8.4	8.1	2.0	50
27	18	60	28	e260	e96	183	49	74	9.2	10	1.9	42
28	18	72	27	e230	e100	175	46	65	7.3	8.2	1.9	38
29	19	60	28	e200	---	205	45	59	12	6.3	2.0	35
30	18	55	e32	e170	---	215	45	50	9.8	5.5	1.9	33
31	17	---	e30	e150	---	195	---	43	---	4.5	1.5	---
TOTAL	805.5	883	1145	3436	5366	6484	2405	1692	382.7	173.7	90.3	1660.7
MEAN	26.0	29.4	36.9	111	192	209	80.2	54.6	12.8	5.60	2.91	55.4
MAX	74	72	55	320	410	386	176	82	37	15	6.0	256
MIN	2.4	14	27	24	96	127	45	28	4.8	1.5	1.5	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 1999, BY WATER YEAR (WY)

MEAN	121	65.0	128	125	193	228	168	117	134	33.1	4.36	18.9
MAX	335	132	304	133	252	304	321	169	361	80.4	7.33	55.4
(WY)	1997	1997	1997	1998	1998	1998	1997	1998	1998	1998	1998	1999
MIN	1.94	29.4	36.9	111	135	172	80.2	54.6	12.8	5.60	1.47	1.58
(WY)	1998	1999	1999	1999	1997	1997	1999	1999	1999	1999	1997	1997

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1996 - 1999
ANNUAL TOTAL	45461.6	24523.9	
ANNUAL MEAN	125	67.2	111
HIGHEST ANNUAL MEAN			142
LOWEST ANNUAL MEAN			67.2
HIGHEST DAILY MEAN	1240	e 410	2630
LOWEST DAILY MEAN	2.2	a 1.2	.73
ANNUAL SEVEN-DAY MINIMUM	2.8	1.3	.77
INSTANTANEOUS PEAK FLOW		462	3060
INSTANTANEOUS PEAK STAGE		b 6.65	11.44
10 PERCENT EXCEEDS	310	185	259
50 PERCENT EXCEEDS	65	38	49
90 PERCENT EXCEEDS	5.0	2.7	2.0

a Also occurred September 3-5.
b Ice jam.
e Estimated.

MERRIMACK RIVER BASIN

01074520 EAST BRANCH PEMIGEWASSET RIVER AT LINCOLN NH

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

DRAINAGE AREA.--115 mi².

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 0104500) are not equivalent because of difference in drainage areas.

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

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 19, 1936, reached a stage of 9.80 ft, former site and datum, discharge, 17,000 ft³/s. Flood in October 1959 reached a discharge of 24,200 ft³/s, by computation of peak flow over dam.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 24	1730	4,970	5.10	Sept. 16	2400	*a 13,200	* 8.91
May 19	2300	4,370	4.80				

Minimum discharge, 51 ft³/s, September 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	213	251	e116	e200	e229	626	565	e244	146	74	55
2	142	189	268	e120	e212	e380	864	731	e241	226	67	54
3	111	171	284	e125	e261	e228	721	867	e273	216	64	55
4	97	153	381	e149	e256	e968	789	1020	e224	145	63	54
5	90	142	372	e132	e220	633	644	2010	206	142	159	52
6	85	132	297	e124	e200	405	614	1720	194	865	119	52
7	82	127	431	e119	e200	e335	679	1370	245	601	87	59
8	91	121	420	e116	e171	e269	674	1230	239	302	139	109
9	111	113	322	e119	e173	e250	725	1260	244	239	164	138
10	153	108	281	e212	e179	e241	662	973	230	267	95	410
11	661	394	261	e170	e168	e229	582	625	187	234	79	387
12	324	348	239	e142	e172	e200	569	524	160	194	73	182
13	229	246	228	e142	e217	e185	531	459	144	167	78	121
14	285	212	205	e135	e207	e175	478	418	156	152	294	97
15	959	330	e188	e137	e161	e175	443	403	212	134	231	88
16	607	298	195	e268	e186	e175	423	402	156	121	143	1340
17	375	246	188	e412	e169	e185	442	403	136	111	111	7150
18	302	216	160	e278	e159	e218	446	407	153	106	97	2790
19	260	201	143	e833	e150	235	471	946	139	109	87	1110
20	231	208	172	479	e142	211	482	1650	121	107	77	665
21	206	244	145	355	e131	e185	483	618	122	91	79	600
22	188	209	507	317	e116	744	516	439	133	86	90	687
23	172	192	273	294	e121	700	536	388	114	82	78	696
24	160	196	e172	2310	e120	424	519	376	167	111	69	473
25	148	186	e161	1570	e134	366	467	467	172	202	65	387
26	136	222	e146	697	e127	336	472	445	122	156	61	331
27	127	314	e151	e500	e123	329	482	401	103	132	62	290
28	140	235	e161	e386	e114	354	428	345	99	98	68	262
29	259	206	e159	e300	---	498	447	311	162	85	63	239
30	193	193	e145	e224	---	530	485	286	267	80	59	711
31	206	---	e118	e185	---	485	---	263	---	76	57	---
TOTAL	7252	6365	7424	11466	4789	10877	16700	22322	5365	5783	3052	19644
MEAN	234	212	239	370	171	351	557	720	179	187	98.5	655
MAX	959	394	507	2310	261	968	864	2010	273	865	294	7150
MIN	82	108	118	116	114	175	423	263	99	76	57	52
CFSM	2.03	1.84	2.08	3.22	1.49	3.05	4.84	6.26	1.56	1.62	.86	5.69
IN.	2.35	2.06	2.40	3.71	1.55	3.52	5.40	7.22	1.74	1.87	.99	6.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1999, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999
MEAN	317	389	245	308	177	272	748
MAX	740	760	509	564	389	535	1093
(WY)	1996	1996	1997	1996	1996	1998	1993
MIN	96.4	139	83.5	116	90.5	95.2	264
(WY)	1998	1995	1998	1994	1994	1994	1995

SUMMARY STATISTICS

	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	WATER YEARS 1993 - 1999
ANNUAL TOTAL	116556	121039	
ANNUAL MEAN	319	332	342
HIGHEST ANNUAL MEAN			507
LOWEST ANNUAL MEAN			202
HIGHEST DAILY MEAN	4080	Jun 14	7150
LOWEST DAILY MEAN	56	Jan 1	a 52
ANNUAL SEVEN-DAY MINIMUM	63	Aug 27	54
INSTANTANEOUS PEAK FLOW			b 13200
INSTANTANEOUS PEAK STAGE			8.91
INSTANTANEOUS LOW FLOW			a 51
ANNUAL RUNOFF (CFSM)			2.88
ANNUAL RUNOFF (INCHES)	37.70		39.15
10 PERCENT EXCEEDS	662		651
50 PERCENT EXCEEDS	188		209
90 PERCENT EXCEEDS	83		90

a Also occurred on September 6.
b From rating curve extended above 5,800 ft³/s.
c Estimated.

MERRIMACK RIVER BASIN

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 bridge at Plymouth and 0.3 mi downstream from Baker River.

DRAINAGE AREA.--622 mi².

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.

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

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

GAGE.--Water-stage recorder. Datum of gage is 457.07 ft above sea level. Prior to January 1, 1910, nonrecording gage at sites 150 ft and 200 ft upstream at present datum or datum 1.11 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 fair. Stage-discharge relationship at times is affected by variable slope. Some diurnal fluctuation during period 1940-52 caused by powerplants upstream.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 17	0845	* 28,000	14.81	Sept. 17	1230	(a)	* 15.56

Minimum discharge, 126 ft³/s, September 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	399	818	1430	e560	e1020	e1000	5490	1390	781	458	230	155
2	464	712	1610	e580	e1150	e2100	6410	1630	726	375	206	150
3	416	666	1410	e550	e1400	e1350	5440	1920	765	762	186	143
4	356	609	1440	e600	e1700	e3100	4940	2010	687	461	178	135
5	322	561	1550	e640	e1500	e5600	4330	3490	597	367	207	131
6	300	530	1300	e620	e1200	e2850	3860	3620	543	642	356	126
7	285	507	1220	e560	e1210	e2100	4320	2990	623	2500	287	133
8	298	489	1500	e570	e1010	e1650	4160	2550	598	985	258	161
9	382	473	1220	e550	e970	e1450	4030	2770	578	672	483	281
10	442	457	1060	e600	e1000	e1380	3560	2410	587	570	339	488
11	1870	842	990	e800	e950	e1300	2800	1850	504	638	260	2000
12	1900	1940	915	e720	e960	e1130	2480	1460	444	493	226	770
13	1010	1230	870	e610	e1050	e1060	2230	1220	400	419	207	467
14	826	978	821	e660	e1110	e1000	1980	1060	399	383	529	364
15	4410	1150	724	e680	e840	e990	1770	965	616	351	645	310
16	3300	1640	766	e940	e1000	e950	1640	918	525	315	434	851
17	1980	1230	748	e1600	e950	e1070	1720	886	420	294	339	22000
18	1470	1050	e718	e1350	e900	e1400	1800	854	407	274	281	12900
19	1210	918	e643	e3550	e830	e1700	1810	1140	408	306	252	4870
20	1040	912	e722	e3600	e830	1430	1830	7220	369	331	226	2990
21	852	1230	642	e2200	e650	1240	1760	3120	340	287	215	2430
22	756	1220	1290	e1800	e700	5130	1770	1980	384	250	253	2920
23	693	1030	e1380	e1250	e640	7550	1730	1520	363	234	255	2990
24	643	924	e890	e1700	e690	3970	1640	1360	322	225	219	2320
25	605	869	e830	e6400	e700	2820	1460	2190	391	340	196	1690
26	568	972	e790	e4000	e640	2370	1330	2030	334	620	179	1310
27	534	5260	e810	e2500	e700	2280	1390	1900	300	449	177	1110
28	517	2720	e840	e2000	e710	2630	1280	1450	275	341	196	991
29	763	1860	e880	e1600	---	4760	1230	1160	297	268	195	902
30	771	1500	e770	e1250	---	5710	1260	970	614	343	170	1960
31	723	---	e680	e970	---	4670	---	854	---	259	158	---
TOTAL	30105	35297	31459	46010	27010	77740	81450	60887	14597	15212	8342	68048
MEAN	971	1177	1015	1484	965	2508	2715	1964	487	491	269	2268
MAX	4410	5260	1610	6400	1700	7550	6410	7220	781	2500	645	22000
MIN	285	457	642	550	640	950	1230	854	275	225	158	126
CFSM	1.56	1.89	1.63	2.39	1.55	4.03	4.36	3.16	.78	.79	.43	3.65
IN.	1.80	2.11	1.88	2.75	1.62	4.65	4.87	3.64	.87	.91	.50	4.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1999, BY WATER YEAR (WY)

MEAN	966	1338	1131	883	737	1733	3926	2784	1156	646	509	599
MAX	3423	4578	4588	3191	4379	9266	7206	5304	3878	3103	3345	3813
(WY)	1978	1928	1974	1996	1981	1936	1969	1940	1917	1973	1990	1938
MIN	129	308	216	148	138	205	1222	806	283	160	111	107
(WY)	1948	1979	1948	1931	1931	1940	1995	1921	1921	1923	1923	1923

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1904 - 1999

ANNUAL TOTAL	588343	496157										
ANNUAL MEAN	1612	1359								1368		
HIGHEST ANNUAL MEAN										2156		1996
LOWEST ANNUAL MEAN										735		1965
HIGHEST DAILY MEAN	18100	Jun 14					22000	Sep 17		57300	Mar 19	1936
LOWEST DAILY MEAN	226	Aug 22					126	Sep 6		45	Sep 20	1923
ANNUAL SEVEN-DAY MINIMUM	258	Aug 18					139	Sep 1		66	Oct 11	1923
INSTANTANEOUS PEAK FLOW							28000	Sep 17		65400	Mar 19	1936
INSTANTANEOUS PEAK STAGE							15.56	Sep 17		b 29.00	Mar 19	1936
INSTANTANEOUS LOW FLOW							126	Sep 6		c 39	Oct 1	1948
ANNUAL RUNOFF (CFSM)	2.59						2.19					2.20
ANNUAL RUNOFF (INCHES)	35.19						29.67					29.88
10 PERCENT EXCEEDS	3290						2880			3180		
50 PERCENT EXCEEDS	900						880			680		
90 PERCENT EXCEEDS	326						275			237		

- a Discharge affected by variable slope.
- b From flood marks.
- c Also on October 3, 1948.
- e Estimated.

MERRIMACK RIVER BASIN

01078000 SMITH RIVER NEAR BRISTOL, NH

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

DRAINAGE AREA.--85.8 mi².

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

Water-quality records: Water years 1957, 1976-79.

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

GAGE.--Water-stage recorder. Datum of gage is 449.80 ft above sea level (levels by U.S. Army Corps of Engineers).

Prior to November 25, 1933, nonrecording gage at site 1.5 mi upstream at different datum.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Sept. 17	0215	* 2,250	* 7.77	No other peak greater than base discharge.			
Minimum discharge, 6.7 ft ³ /s, September 6.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	47	172	e44	e110	177	856	84	54	39	13	8.6
2	20	44	148	43	109	276	890	81	50	32	11	8.2
3	21	43	139	44	176	240	786	81	47	30	9.7	8.1
4	21	42	120	e49	221	486	676	85	45	27	8.9	7.6
5	19	40	107	e48	203	695	581	157	39	22	9.2	7.2
6	17	39	99	e46	165	591	501	214	35	20	8.6	6.9
7	17	38	95	e45	141	361	515	172	32	19	8.3	8.6
8	19	38	90	43	124	e240	515	142	29	18	11	13
9	30	37	87	44	112	e200	469	146	27	17	11	12
10	59	35	84	56	107	174	383	125	27	15	9.8	57
11	389	63	81	72	102	154	307	105	26	14	9.5	123
12	322	109	77	77	99	138	261	92	24	13	8.9	77
13	161	89	73	68	124	130	226	82	24	12	8.2	45
14	156	74	e68	61	e140	126	199	76	34	12	12	32
15	378	78	e64	63	e120	125	178	70	39	11	35	27
16	289	85	68	89	114	121	168	66	38	11	44	246
17	167	76	69	106	105	128	173	68	31	9.5	30	1770
18	125	73	e67	115	100	176	176	59	31	8.7	22	1430
19	106	68	63	e230	99	242	161	112	28	13	17	736
20	87	74	64	346	96	223	147	487	25	18	14	354
21	77	109	63	279	91	188	155	295	23	16	16	196
22	62	114	e100	201	e80	648	152	173	27	14	26	216
23	57	95	e125	158	e72	967	135	124	28	13	20	257
24	56	84	116	163	e70	813	121	131	24	13	18	210
25	52	82	84	331	72	549	111	173	21	28	15	142
26	50	183	64	381	74	404	105	146	19	34	13	109
27	48	666	e54	285	71	386	101	123	17	28	15	90
28	47	586	60	207	70	461	101	101	16	23	17	78
29	53	342	59	161	---	705	94	86	22	18	13	68
30	54	220	58	137	---	841	88	74	44	19	11	124
31	49	---	e44	e115	---	825	---	65	---	15	9.5	---
TOTAL	3028	3673	2662	4107	3167	11790	9331	3995	926	582.2	474.6	6467.2
MEAN	97.7	122	85.9	132	113	380	311	129	30.9	18.8	15.3	216
MAX	389	666	172	381	221	967	890	487	54	39	44	1770
MIN	17	35	44	43	70	121	88	59	16	8.7	8.2	6.9
CFSM	1.14	1.43	1.00	1.54	1.32	4.43	3.63	1.50	.36	.22	.18	2.51
IN.	1.31	1.59	1.15	1.78	1.37	5.11	4.05	1.73	.40	.25	.21	2.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 1999, BY WATER YEAR (WY)

	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	73.4	131	133	102	99.0	253	482	226	104	53.7	37.1	41.8																																																																						
MAX	279	379	393	300	578	1242	1077	504	391	387	340	457																																																																						
(WY)	1997	1928	1974	1996	1981	1936	1969	1954	1998	1973	1990	1938																																																																						
MIN	8.45	24.9	22.3	19.2	20.6	29.7	134	71.5	20.5	9.00	4.54	7.62																																																																						
(WY)	1948	1972	1923	1940	1980	1940	1995	1941	1964	1965	1965	1948																																																																						

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1918 - 1999

ANNUAL TOTAL	63459	50203.0	
ANNUAL MEAN	174	138	145
HIGHEST ANNUAL MEAN			240
LOWEST ANNUAL MEAN			64.7
HIGHEST DAILY MEAN	1780	Apr 1	1770
LOWEST DAILY MEAN	17	Oct 6	6.9
ANNUAL SEVEN-DAY MINIMUM	19	Oct 2	7.9
INSTANTANEOUS PEAK FLOW			2250
INSTANTANEOUS PEAK STAGE			7.77
INSTANTANEOUS LOW FLOW			6.7
ANNUAL RUNOFF (CFSM)	2.03	1.60	1.69
ANNUAL RUNOFF (INCHES)	27.51	21.77	22.91
10 PERCENT EXCEEDS	350	335	349
50 PERCENT EXCEEDS	86	76	67
90 PERCENT EXCEEDS	28	13	17

a From rating curve extended above 2,700 ft³/s on basis of contracted-opening measurement of peak flow.
b From floodmarks.
c 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 mi².

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

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

REMARKS.--Records good during period of May to September except those for estimated daily discharges and for June 16 and July 1, which are fair, and June 13-14, which are poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
June 14	1130	* e 730	* a 6.16	June 27	0745	144	4.67
June 16	1245	448	5.61	July 1	0845	421	5.55

Minimum discharge occurred during period of estimated daily discharges.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	8.9	121	2.5	1.4
2	---	---	---	---	---	---	---	---	4.9	50	2.2	1.5
3	---	---	---	---	---	---	---	---	4.4	36	2.0	2.2
4	---	---	---	---	---	---	---	---	3.4	31	1.8	1.8
5	---	---	---	---	---	---	---	---	2.9	31	1.6	1.4
6	---	---	---	---	---	---	---	---	2.6	18	1.8	1.1
7	---	---	---	---	---	---	---	---	3.0	14	2.2	1.2
8	---	---	---	---	---	---	---	---	5.1	12	1.8	e1.2
9	---	---	---	---	---	---	---	---	5.2	11	1.6	e1.1
10	---	---	---	---	---	---	---	---	4.8	9.1	1.5	e1.3
11	---	---	---	---	---	---	---	---	3.3	7.9	4.9	e1.1
12	---	---	---	---	---	---	---	---	2.8	7.2	7.7	e1.0
13	---	---	---	---	---	---	---	---	e149	6.5	4.5	e.98
14	---	---	---	---	---	---	---	---	e398	5.8	2.9	e.94
15	---	---	---	---	---	---	---	---	110	5.1	2.5	e1.0
16	---	---	---	---	---	---	---	13	205	4.6	2.3	e6.0
17	---	---	---	---	---	---	---	12	110	4.1	2.1	e2.0
18	---	---	---	---	---	---	---	11	67	3.9	2.0	1.3
19	---	---	---	---	---	---	---	9.5	57	3.3	1.8	1.1
20	---	---	---	---	---	---	---	8.6	48	4.7	1.6	1.0
21	---	---	---	---	---	---	---	7.8	44	4.2	1.5	1.5
22	---	---	---	---	---	---	---	7.1	39	3.3	1.5	1.8
23	---	---	---	---	---	---	---	6.6	32	5.2	2.3	1.9
24	---	---	---	---	---	---	---	5.5	29	6.1	4.2	1.4
25	---	---	---	---	---	---	---	4.8	25	3.7	4.3	1.3
26	---	---	---	---	---	---	---	4.3	20	3.2	4.1	1.1
27	---	---	---	---	---	---	---	4.1	68	3.0	2.8	1.5
28	---	---	---	---	---	---	---	3.2	42	2.6	2.0	1.6
29	---	---	---	---	---	---	---	2.9	34	5.3	1.8	1.3
30	---	---	---	---	---	---	---	3.1	31	4.1	1.6	1.1
31	---	---	---	---	---	---	---	4.0	---	3.0	1.5	---
TOTAL	---	---	---	---	---	---	---	107.5	1559.3	429.9	78.9	45.12
MEAN	---	---	---	---	---	---	---	6.72	52.0	13.9	2.55	1.50
MAX	---	---	---	---	---	---	---	13	398	121	7.7	6.0
MIN	---	---	---	---	---	---	---	2.9	2.6	2.6	1.5	.94
CFSM	---	---	---	---	---	---	---	1.05	8.15	2.17	.40	.24
IN.	---	---	---	---	---	---	---	.63	9.09	2.51	.46	.26

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

	1998	1998	1998	1998
MEAN	---	---	---	---
MAX	---	---	---	---
(WY)	---	---	---	---
MIN	---	---	---	---
(WY)	---	---	---	---

SUMMARY STATISTICS

FOR 1998 WATER YEAR

HIGHEST DAILY MEAN	e 398	Jun 14
LOWEST DAILY MEAN	e .94	Sep 14
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 9
INSTANTANEOUS PEAK FLOW	e 730	Jun 14
INSTANTANEOUS PEAK STAGE	a 6.16	Jun 14
10 PERCENT EXCEEDS	39	
50 PERCENT EXCEEDS	3.6	
90 PERCENT EXCEEDS	1.3	

a Validity of recorded gage height uncertain.

e Estimated.

MERRIMACK RIVER BASIN

01079602 POORFARM BROOK AT ELLACOYA STATE PARK NEAR GILFORD, NH

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

DRAINAGE AREA.--6.38 mi².

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

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

REMARKS.--Records good except those for estimated daily discharges and for Mar. 20, June 11-28, July 2-3, and Sep. 17, which are fair, and Jan. 19, 24, Feb. 2-3, and Sep. 16, which are poor.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 4	1130	123	4.94	Mar. 29	1645	123	4.94
Mar. 22	1045	121	4.93	Sept. 16	2300	* e 710	* a 7.33

Minimum discharge, 0.20 ft³/s, September 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	4.1	7.2	e4.9	e8.9	e41	50	6.4	3.5	2.1	.47	.28
2	1.6	4.0	6.5	e4.0	e15	30	46	6.0	3.4	1.6	.34	.27
3	1.4	3.7	6.3	e4.3	e44	20	37	5.7	3.1	1.3	.29	.25
4	1.3	3.4	6.1	e4.8	e24	80	34	7.6	2.9	.97	.28	.23
5	1.1	3.3	5.7	e4.1	20	e41	30	13	2.6	.79	.29	.23
6	1.0	3.3	5.7	e3.9	e15	e26	29	12	2.1	3.2	.27	.23
7	1.1	3.3	5.6	e3.9	e13	e22	30	10	2.2	2.2	.24	.28
8	1.5	3.3	4.9	e3.6	e12	e19	30	8.9	2.1	1.3	.47	.24
9	4.0	3.1	4.4	e4.0	e11	e16	47	8.8	1.8	.94	.42	.23
10	17	3.1	4.4	e8.0	e11	e15	52	7.5	1.9	.78	.31	15
11	42	7.2	4.8	6.1	e9.5	e14	43	6.3	1.6	.67	.28	22
12	28	5.3	4.2	6.0	11	13	28	6.1	1.6	.60	.30	5.9
13	20	4.6	4.3	e6.0	e16	13	17	5.4	1.4	.55	.25	2.7
14	21	4.0	4.5	5.5	e14	12	16	4.8	1.5	.49	1.1	2.1
15	23	5.1	4.0	e5.5	e12	12	15	4.4	1.4	.48	2.1	1.9
16	18	4.4	4.0	e14	e11	12	14	4.0	1.3	.37	1.2	e96
17	12	4.7	5.2	8.3	11	13	15	3.9	1.3	.31	.84	264
18	10	4.6	e4.7	e12	12	16	15	3.5	1.4	.26	.59	90
19	8.4	4.0	e4.4	e58	11	16	13	5.8	1.2	1.9	.43	64
20	7.5	5.5	4.3	e25	10	17	12	16	1.1	1.3	.38	52
21	6.5	6.3	4.1	e16	e9.6	20	12	8.4	1.1	.80	.72	53
22	5.1	4.8	e11	e14	e8.9	67	11	5.6	1.0	.60	1.5	56
23	5.0	5.0	e8.0	e14	e7.6	49	10	4.7	.81	.50	.97	45
24	5.0	5.0	e6.4	e30	e6.8	34	9.9	8.4	.66	.67	.74	23
25	4.8	4.3	e5.7	e38	e6.8	30	9.1	13	.56	.78	.67	16
26	4.6	15	e5.3	e21	e6.7	29	8.8	9.0	.43	1.2	.55	13
27	4.5	18	e5.0	e17	e6.9	29	8.2	7.4	.42	1.2	.65	11
28	5.0	10	e5.0	e14	e7.5	46	7.8	5.8	1.4	.85	.77	9.6
29	5.3	8.2	e5.0	e12	---	80	7.2	4.8	5.7	.70	.51	8.6
30	4.6	7.3	e4.7	e11	---	65	6.9	4.4	5.0	.67	.36	21
31	4.3	---	e4.5	e9.5	---	51	---	4.0	---	.58	.32	---
TOTAL	277.3	167.9	165.9	388.4	352.2	948	663.9	221.6	56.48	30.66	18.61	874.04
MEAN	8.95	5.60	5.35	12.5	12.6	30.6	22.1	7.15	1.88	.99	.60	29.1
MAX	42	18	11	58	44	80	52	16	5.7	3.2	2.1	264
MIN	1.0	3.1	4.0	3.6	6.7	12	6.9	3.5	.42	.26	.24	.23
CFSM	1.40	.88	.84	1.96	1.97	4.79	3.47	1.12	.30	.16	.09	4.57
IN.	1.62	.98	.97	2.26	2.05	5.53	3.87	1.29	.33	.18	.11	5.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
MEAN	8.95	5.60	5.35	12.5	12.6	30.6	22.1	7.15	26.9	7.43	1.57	15.3
MAX	8.95	5.60	5.35	12.5	12.6	30.6	22.1	7.15	52.0	13.9	2.55	29.1
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1998	1998	1998	1999
MIN	8.95	5.60	5.35	12.5	12.6	30.6	22.1	7.15	1.88	.99	.60	1.50
(WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998

SUMMARY STATISTICS

FOR 1999 WATER YEAR

WATER YEARS 1998 - 1999

ANNUAL TOTAL	4164.99	
ANNUAL MEAN	11.4	11.4
HIGHEST ANNUAL MEAN		11.4
LOWEST ANNUAL MEAN		11.4
HIGHEST DAILY MEAN	264	Sep 17
LOWEST DAILY MEAN	a .23	Sep 4
ANNUAL SEVEN-DAY MINIMUM	.24	Sep 3
INSTANTANEOUS PEAK FLOW	e 710	Sep 16
INSTANTANEOUS PEAK STAGE	b 7.33	Sep 16
INSTANTANEOUS LOW FLOW	.20	Sep 9
ANNUAL RUNOFF (CFSM)	1.79	
ANNUAL RUNOFF (INCHES)	24.28	
10 PERCENT EXCEEDS	29	
50 PERCENT EXCEEDS	5.4	
90 PERCENT EXCEEDS	.55	

a Also occurred on September 5,6, and 9.
b Validity of recorded stage uncertain.
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 mi².

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

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

REMARKS.--Records good during period of July to September.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 120 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Aug. 12	0945	* 31	* 4.72	No other peak greater than base discharge.			
Minimum discharge, 1.2 ft ³ /s, August 6, 10.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	---	---	1.9	2.5
2	---	---	---	---	---	---	---	---	---	---	1.7	2.5
3	---	---	---	---	---	---	---	---	---	---	1.6	5.2
4	---	---	---	---	---	---	---	---	---	---	1.4	3.3
5	---	---	---	---	---	---	---	---	---	---	1.3	2.6
6	---	---	---	---	---	---	---	---	---	---	1.3	2.2
7	---	---	---	---	---	---	---	---	---	---	1.6	2.2
8	---	---	---	---	---	---	---	---	---	---	1.6	2.2
9	---	---	---	---	---	---	---	---	---	---	1.4	2.3
10	---	---	---	---	---	---	---	---	---	7.9	1.3	2.4
11	---	---	---	---	---	---	---	---	---	7.0	2.8	2.0
12	---	---	---	---	---	---	---	---	---	6.5	20	1.9
13	---	---	---	---	---	---	---	---	---	5.8	8.6	1.8
14	---	---	---	---	---	---	---	---	---	5.1	4.7	1.6
15	---	---	---	---	---	---	---	---	---	4.3	3.4	1.9
16	---	---	---	---	---	---	---	---	---	3.7	2.7	9.0
17	---	---	---	---	---	---	---	---	---	3.3	2.5	4.0
18	---	---	---	---	---	---	---	---	---	3.0	2.5	2.6
19	---	---	---	---	---	---	---	---	---	2.6	2.2	2.3
20	---	---	---	---	---	---	---	---	---	4.7	1.8	2.2
21	---	---	---	---	---	---	---	---	---	5.5	1.7	2.1
22	---	---	---	---	---	---	---	---	---	3.5	1.7	2.9
23	---	---	---	---	---	---	---	---	---	3.4	1.9	4.6
24	---	---	---	---	---	---	---	---	---	5.4	4.8	2.8
25	---	---	---	---	---	---	---	---	---	3.2	9.3	2.5
26	---	---	---	---	---	---	---	---	---	2.6	17	2.2
27	---	---	---	---	---	---	---	---	---	2.4	7.0	3.0
28	---	---	---	---	---	---	---	---	---	2.2	4.5	3.1
29	---	---	---	---	---	---	---	---	---	2.4	3.5	2.4
30	---	---	---	---	---	---	---	---	---	2.3	3.3	2.2
31	---	---	---	---	---	---	---	---	---	2.1	2.8	---
TOTAL	---	---	---	---	---	---	---	---	---	---	123.8	84.5
MEAN	---	---	---	---	---	---	---	---	---	---	3.99	2.82
MAX	---	---	---	---	---	---	---	---	---	---	20	9.0
MIN	---	---	---	---	---	---	---	---	---	---	1.3	1.6
CFSM	---	---	---	---	---	---	---	---	---	---	.57	.40
IN.	---	---	---	---	---	---	---	---	---	---	.66	.45

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

MEAN	---	---	---	---	---	---	---	---	---	---	3.99	2.82
MAX	---	---	---	---	---	---	---	---	---	---	3.99	2.82
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998
MIN	---	---	---	---	---	---	---	---	---	---	3.99	2.82
(WY)	---	---	---	---	---	---	---	---	---	---	1998	1998

MERRIMACK RIVER BASIN

01079900 SHANNON BROOK NEAR MOULTONBOROUGH, NH

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

DRAINAGE AREA.--6.99 mi².

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair, and January 3-4, 7-12, 24-26 and August 14, which are poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 4	1230	161	6.14	Sept. 17	0430	* 333	* 7.22
Mar. 22	1700	124	5.84				

Minimum daily discharge, 0.15 ft³/s, September 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	4.3	12	5.9	e9.1	51	38	5.4	3.0	.91	.68	.39
2	2.5	4.1	11	e4.7	e9.6	31	36	5.2	2.7	1.5	.45	.37
3	2.2	3.9	9.7	e5.3	e45	20	30	4.9	2.6	1.7	.32	.30
4	2.1	3.7	8.8	e5.6	e33	105	27	5.8	2.2	1.0	.25	.23
5	2.1	3.7	8.0	e4.7	e21	49	23	9.2	2.0	.79	.35	.21
6	2.1	3.5	7.8	e4.3	e15	e36	21	8.4	2.0	5.3	.53	.20
7	2.1	3.4	7.5	e4.4	e14	e28	21	7.1	2.2	5.4	.44	.30
8	2.8	3.4	6.9	e4.3	e13	e22	20	6.8	1.7	1.7	.60	.42
9	4.0	3.3	6.9	e4.8	e12	e16	18	6.8	1.8	1.2	1.0	.41
10	5.9	3.2	6.6	e12	e12	e15	16	5.9	1.8	1.1	.59	34
11	63	16	6.4	e9.5	e11	14	15	5.3	1.5	.95	.41	40
12	29	13	6.0	e7.6	e11	13	15	4.9	1.4	.74	e.34	10
13	17	8.7	5.8	e7.0	e20	15	13	4.5	1.4	.63	e.32	5.5
14	17	7.4	5.5	e6.8	e14	16	12	4.2	1.5	.68	e.70	3.7
15	36	11	5.1	e7.3	e13	15	11	4.0	1.7	.56	e8.0	2.9
16	22	10	5.2	e15	12	13	11	3.7	1.2	.44	e3.3	12
17	16	9.1	5.8	e9.8	11	17	11	3.4	1.2	.38	1.7	190
18	13	8.7	e5.6	e9.0	11	24	11	3.1	1.4	.33	1.2	50
19	11	8.3	e5.0	e54	10	24	9.5	5.1	1.2	1.1	.95	21
20	9.0	12	4.9	e29	9.8	20	9.1	14	.93	1.5	.79	13
21	7.8	14	4.8	e18	e9.2	18	8.5	7.4	.78	.79	.93	21
22	6.9	11	e14	e15	e8.4	73	8.1	5.8	1.0	.51	2.3	40
23	6.4	9.9	e10	e14	e6.1	49	8.3	4.8	.92	.45	1.3	25
24	6.0	9.1	7.2	e27	e6.5	34	7.2	6.6	.92	.38	1.0	16
25	5.5	8.0	6.1	e48	e6.6	27	6.9	8.8	1.0	.60	.81	12
26	5.2	15	5.4	e29	e6.8	25	6.8	8.2	.87	.85	.66	9.2
27	4.8	39	5.2	e18	e6.8	25	6.5	7.6	.63	1.4	.81	7.5
28	5.1	20	5.7	e14	e7.3	42	6.2	6.1	.65	.86	1.0	6.7
29	6.1	15	5.5	e13	---	79	5.9	6.1	1.1	.56	.80	6.1
30	5.0	13	e5.2	e11	---	52	5.6	4.1	1.4	1.4	.61	14
31	4.7	---	e4.5	e9.8	---	41	---	3.4	---	1.0	.47	---
TOTAL	324.8	294.7	214.1	427.8	364.2	1009	437.6	186.6	44.70	36.71	33.61	542.43
MEAN	10.5	9.82	6.91	13.8	13.0	32.5	14.6	6.02	1.49	1.18	1.08	18.1
MAX	63	39	14	54	45	105	38	14	3.0	5.4	8.0	190
MIN	2.1	3.2	4.5	4.3	6.1	13	5.6	3.1	.63	.33	.25	.20
CFSM	1.50	1.41	.99	1.97	1.86	4.66	2.09	.86	.21	.17	.16	2.59
IN.	1.73	1.57	1.14	2.28	1.94	5.37	2.33	.99	.24	.20	.18	2.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 1999, BY WATER YEAR (WY)

	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999	1998	1999
MEAN	10.5	9.82	6.91	13.8	13.0	32.5	14.6	6.02	1.49	1.18	2.54	10.4
MAX (WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998	1999
MIN (WY)	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1999	1998

SUMMARY STATISTICS

FOR 1999 WATER YEAR

WATER YEARS 1998 - 1999

ANNUAL TOTAL	3916.25											
ANNUAL MEAN	10.7									10.7		
HIGHEST ANNUAL MEAN										10.7		1999
LOWEST ANNUAL MEAN										10.7		1999
HIGHEST DAILY MEAN	190	Sep 17								190	Sep 17	1999
LOWEST DAILY MEAN	.20	Sep 6								.20	Sep 6	1999
ANNUAL SEVEN-DAY MINIMUM	.29	Sep 1								.29	Sep 1	1999
INSTANTANEOUS PEAK FLOW	333	Sep 17								333	Sep 17	1999
INSTANTANEOUS PEAK STAGE	7.22	Sep 17								7.22	Sep 17	1999
INSTANTANEOUS LOW FLOW	.15	Sep 6								.15	Sep 6	1999
ANNUAL RUNOFF (CFSM)	1.53									1.53		
ANNUAL RUNOFF (INCHES)	20.84									20.86		
10 PERCENT EXCEEDS	25									21		
50 PERCENT EXCEEDS	6.4									5.3		
90 PERCENT EXCEEDS	.68									.81		

e Estimated.

01080000 LAKE WINNIPESAUKEE AT WEIRS BEACH, NH

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

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

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

REVISED RECORDS.--WDR NH-VT-78-1: 1938-77 (datum correction). WDR NH-VT-99-1: 1998 (†).

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

REMARKS.--Lake used for recreation and conservation for development of water power. Usable capacity, 7.22 billion ft³ between elevations 500.57 ft and 504.24 ft above sea level. Stage regulated at outlet and by Wentworth, Merrymeeting, and other lakes. Contents given herein are computed from gage height at 2400 on last day of month.

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

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

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

EXTREMES FOR CURRENT YEAR.--Maximum daily gage height, 3.62 ft, May 24-27; minimum daily gage height, 2.38 ft, February 27, 28.

REVISIONS.--Month-end change in contents equivalent in cubic feet per second figures for the 1998 water year have been revised as shown in the following table. They supersede figures published in the 1998 report.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
(†)	-175	-116	-101	+63	-103	+963	-85	+172	+980	-1,130	-67	-278

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.25	3.19	2.98	2.82	2.83	2.50	3.44	3.51	3.59	3.30	2.96	2.48
2	3.23	3.13	2.99	2.80	2.82	2.53	3.47	3.51	3.58	3.27	2.93	2.46
3	3.19	3.10	2.99	2.85	2.89	2.54	3.49	3.50	3.56	3.28	2.90	2.45
4	3.17	3.08	2.98	2.86	2.88	2.67	3.49	3.51	3.54	3.26	2.88	2.44
5	3.15	3.04	2.98	2.85	2.86	2.73	3.51	3.55	3.53	3.24	2.86	2.43
6	3.13	3.03	2.98	2.85	2.84	2.77	3.52	3.57	3.52	3.31	2.82	2.42
7	3.12	3.00	2.96	2.82	2.81	2.80	3.51	3.58	3.52	3.33	2.79	2.41
8	3.13	2.97	2.97	2.81	2.79	2.80	3.52	3.59	3.50	3.30	2.78	2.41
9	3.17	2.95	2.96	2.84	2.76	2.80	3.53	3.59	3.52	3.28	2.73	2.40
10	3.19	2.94	2.95	2.85	2.72	2.81	3.52	3.56	3.50	3.23	2.71	2.54
11	3.28	2.96	2.93	2.84	2.68	2.80	3.52	3.55	3.47	3.20	2.70	2.69
12	3.31	2.95	2.93	2.83	2.65	2.81	3.51	3.54	3.45	3.20	2.68	2.69
13	3.32	2.93	2.92	2.84	2.63	2.82	3.49	3.53	3.44	3.18	2.67	2.70
14	3.36	2.93	2.90	2.83	2.61	2.82	3.49	3.53	3.44	3.16	2.67	2.69
15	3.39	2.92	2.89	2.88	2.59	2.83	3.49	3.52	3.41	3.14	2.73	2.68
16	3.40	2.92	2.89	2.92	2.57	2.82	3.49	3.52	3.39	3.13	2.73	2.79
17	3.43	2.93	2.89	2.91	2.55	2.82	3.51	3.51	3.37	3.11	2.71	3.01
18	3.44	2.92	2.85	2.91	2.56	2.81	3.52	3.50	3.36	3.10	2.69	3.09
19	3.42	2.92	2.88	2.98	2.56	2.81	3.54	3.52	3.35	3.11	2.67	3.14
20	3.43	2.92	2.87	2.98	2.54	2.79	3.55	3.56	3.33	3.11	2.65	3.16
21	3.42	2.91	2.88	2.97	2.52	2.80	3.55	3.58	3.31	3.09	2.65	3.23
22	3.41	2.90	2.86	2.94	2.49	2.92	3.56	3.58	3.30	3.07	2.66	3.30
23	3.41	2.90	2.87	2.94	2.47	3.02	3.55	3.57	3.29	3.04	2.63	3.30
24	3.41	2.86	2.87	2.94	2.45	3.07	3.51	3.62	3.29	3.05	2.62	3.33
25	3.42	2.87	2.86	2.96	2.43	3.09	3.53	3.62	3.25	3.05	2.60	3.33
26	3.42	2.90	2.86	2.95	2.40	3.11	3.53	3.62	3.23	3.04	2.59	3.33
27	3.38	2.96	2.86	2.94	2.38	3.12	3.53	3.62	3.22	3.04	2.59	3.32
28	3.35	2.97	2.85	2.93	2.38	3.17	3.52	3.61	3.22	3.02	2.57	3.31
29	3.29	2.99	2.86	2.93	---	3.29	3.52	3.61	3.27	3.00	2.54	3.31
30	3.23	3.00	2.82	2.90	---	3.35	3.51	3.61	3.30	3.01	2.52	3.33
31	3.23	---	2.83	2.87	---	3.40	---	3.60	---	2.99	2.50	---
MEAN	3.31	2.97	2.91	2.89	2.63	2.88	3.51	3.56	3.40	3.15	2.70	2.87
MAX	3.44	3.19	2.99	2.98	2.89	3.40	3.56	3.62	3.59	3.33	2.96	3.33
MIN	3.12	2.86	2.82	2.80	2.38	2.50	3.44	3.50	3.22	2.99	2.50	2.40
(†)	16,300	15,860	15,530	15,530	14,740	16,660	16,860	17,020	16,440	15,770	14,840	16,520
(‡)	-37	-170	-123	0	-327	+717	+77	+60	-224	-250	-347	+648

CAL YR 1998 MEAN 3.47 MAX 5.54 MIN 2.32 (†) +16
WTR YR 1999 MEAN 3.07 MAX 3.62 MIN 2.38 (†) +3.8

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

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

MERRIMACK RIVER BASIN

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 highway bridge across Paugus Bay, 150 ft upstream of dam across Paugus Bay, at Lakeport, 1.4 mi north of Laconia Post Office.

DRAINAGE AREA.--363 mi².

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

GAGE.--Acoustic velocity meter and measuring flume. Datum of gage is 500.55 ft above sea level. 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 excellent except those for the periods October 13-26, December 28, January 20-21, February 26-27, March 6, March 31 to June 15, and September 9, which are good. Flow completely regulated by Winnepesaukee (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, 1,380 ft³/s, January 22; minimum daily discharge, 2.5 ft³/s, October 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999 DAILY MEAN VALUES

Table with 13 columns (DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP) and 31 rows of daily mean discharge data for water years 1998 and 1999.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1983, 1988 - 1999, BY WATER YEAR (WY)

Table with 13 columns (MEAN, MAX, (WY), MIN, (WY)) and 4 rows of monthly mean statistics for water years 1933-1983, 1988-1999.

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1933 - 1983, 1988 - 1999

Summary statistics table with 4 main columns and multiple rows listing annual totals, means, and percent exceedances for 1998, 1999, and historical years.

a Dam closed. e Estimated.

01081000 WINNIPESAUKEE RIVER AT TILTON, NH

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

DRAINAGE AREA.--471 mi².

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

Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 1901: 1960.

GAGE.--Water-stage recorder. Datum of gage is 441.87 ft above sea level.

REMARKS.--Records good except for estimated daily discharges and those for the period of January 3-26, which are fair. Flow regulated by powerplants prior to 1967 and by Winnepesaukee (station 01080000), Winnisquam 4.5 mi upstream, Wentworth, Merrymeeting, and other lakes upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,850 ft³/s, March 5, gage height 5.51 ft; minimum daily discharge, 92 ft³/s, October 22-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	277	516	585	e305	1590	997	1600	332	329	265	246	243
2	274	524	582	e305	1520	1090	1570	330	327	261	245	242
3	274	530	574	313	1550	1070	1550	326	323	257	241	242
4	273	530	569	381	1650	1480	1510	333	316	254	245	242
5	272	526	566	602	1650	1820	1470	357	288	252	247	241
6	277	530	563	535	1610	1620	1430	362	282	254	245	238
7	292	530	497	550	1580	1420	1300	352	283	249	243	238
8	300	528	338	556	1570	1350	1090	344	280	249	243	245
9	307	530	317	566	1560	1200	1050	344	283	247	240	250
10	318	587	315	566	1540	891	1040	340	280	245	238	329
11	367	763	315	569	1530	864	1010	333	279	245	241	390
12	406	778	312	575	1390	860	896	330	278	244	242	335
13	742	595	311	653	1230	858	611	326	279	243	240	291
14	800	245	311	794	1200	863	573	324	277	242	260	271
15	848	342	310	825	1170	939	567	324	263	241	267	264
16	581	353	310	833	1160	1110	504	321	257	242	254	410
17	177	356	314	830	1160	1140	389	318	252	240	245	1380
18	120	353	353	848	1160	1200	378	318	254	239	242	1390
19	e105	343	339	927	1160	1270	372	344	253	254	240	1040
20	e97	322	319	1210	1150	1250	365	437	253	254	236	740
21	e95	301	319	1420	1150	1240	361	383	246	244	244	626
22	e92	348	335	1430	1110	1490	358	342	190	241	249	679
23	e92	350	342	1500	989	1750	354	321	266	235	247	700
24	e92	348	333	1550	864	1720	349	337	242	244	245	654
25	e92	345	325	1620	852	1630	345	372	224	245	243	613
26	e140	367	319	1640	850	1620	341	453	233	248	244	588
27	277	439	313	1590	850	1590	339	587	297	252	257	575
28	298	434	309	1560	855	1600	338	496	281	249	257	569
29	346	413	311	1540	---	1730	337	355	276	247	251	566
30	469	467	e312	1530	---	1750	335	337	273	246	247	580
31	430	---	e312	1490	---	1680	---	332	---	246	246	---
TOTAL	9530	13593	11630	29613	35650	41092	22732	11110	8164	7674	7630	15171
MEAN	307	453	375	955	1273	1326	758	358	272	248	246	506
MAX	848	778	585	1640	1650	1820	1600	587	329	265	267	1390
MIN	92	245	309	305	850	858	335	318	190	235	236	238

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1999, BY WATER YEAR (WY)

MEAN	423	522	721	850	939	971	1148	972	711	470	405	406
MAX	1257	1304	2209	1855	1889	2043	2745	2605	2821	1922	897	954
(WY)	1978	1976	1984	1952	1958	1983	1953	1954	1984	1998	1986	1938
MIN	219	235	136	145	158	418	420	217	201	179	181	182
(WY)	1958	1972	1942	1942	1942	1989	1948	1957	1957	1957	1957	1957

SUMMARY STATISTICS	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR	FOR 1998 CALENDAR YEAR	FOR 1999 WATER YEAR
ANNUAL TOTAL	324858	213589				
ANNUAL MEAN	890	585				
HIGHEST ANNUAL MEAN					707	
LOWEST ANNUAL MEAN					1229	1984
HIGHEST DAILY MEAN	3850	Jun 28	1820	Mar 5	304	1965
LOWEST DAILY MEAN	ae 92	Oct 22	ae 92	Oct 22	4480	May 31 1984
ANNUAL SEVEN-DAY MINIMUM	95	Oct 19	95	Oct 19	48	Aug 31 1941
INSTANTANEOUS PEAK FLOW			1850	Mar 5	73	Oct 11 1995
INSTANTANEOUS PEAK STAGE			5.51	Mar 5	4580	May 31 1984
10 PERCENT EXCEEDS	2010		1480		8.68	May 31 1984
50 PERCENT EXCEEDS	617		344			
90 PERCENT EXCEEDS	274		243			

a Also occurred October 23-25.
e Estimated.

MERRIMACK RIVER BASIN

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 highway bridge, and 3.5 mi west of Bradford.

DRAINAGE AREA.--5.75 mi².

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

Water-quality records: Water year 1976.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 950 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges and those below 1.0 ft³/s, which are fair.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 14	1815	140	6.13	Mar. 22	1315	277	7.02
Nov. 26	2045	126	6.01	Mar. 29	1700	134	6.08
Jan. 24	----	e 120	Ice Jam	Apr. 1	1815	147	6.19
Mar. 4	0930	294	7.11	Sept. 17	Unknown	* 829	* 9.04

Minimum daily discharge, .15 ft³/s, September 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.4	9.8	4.2	8.7	32	96	5.0	3.3	.64	.22	.19
2	2.1	3.2	8.4	3.6	12	23	80	4.8	2.8	.80	.20	.18
3	2.1	3.0	7.5	3.8	46	15	53	4.5	2.6	.75	.18	.17
4	1.5	2.8	6.9	4.2	24	145	49	4.7	2.2	.58	.18	.15
5	1.3	2.7	6.2	3.7	17	46	36	12	1.9	.47	.18	.16
6	1.2	2.6	6.1	3.4	14	25	33	16	1.7	.41	.18	.24
7	1.0	2.6	5.8	3.3	12	19	38	11	1.6	.37	.20	.34
8	1.4	2.6	5.4	3.1	11	e16	32	10	1.4	.28	.28	.38
9	3.4	2.5	5.6	e8.5	9.7	14	25	13	1.5	.26	.25	.30
10	9.3	2.5	5.3	e20	9.0	12	20	9.4	1.7	.27	.28	7.7
11	45	8.7	5.2	9.8	8.3	11	17	7.7	1.4	.23	.16	4.1
12	13	7.9	4.9	6.4	8.8	10	15	6.6	1.2	.23	.21	1.3
13	7.8	5.6	4.8	5.5	18	9.6	13	5.8	1.1	.23	.21	.78
14	45	4.5	4.6	4.9	13	9.4	12	5.1	1.5	.22	.29	.63
15	37	4.8	4.4	e9.0	11	9.7	11	4.5	1.3	.21	.62	.58
16	15	4.7	4.5	e13	9.8	9.1	10	4.2	.93	.20	.62	122
17	11	4.8	4.8	e7.9	9.0	11	15	3.7	.88	.20	.41	227
18	8.4	4.4	4.4	9.2	9.0	22	14	3.5	1.1	.18	.31	29
19	6.8	4.0	4.0	e60	8.6	23	11	14	.94	.26	.24	12
20	5.9	5.8	4.1	23	8.0	17	11	39	.80	.32	.22	7.4
21	5.4	11	4.0	13	7.3	15	9.8	15	.73	.20	.33	8.1
22	4.7	7.3	25	11	6.5	128	8.9	9.3	.77	.20	.58	13
23	4.2	6.0	14	9.7	6.4	57	8.5	7.2	.75	.37	.45	10
24	3.9	5.7	9.0	e55	5.9	34	7.7	22	.62	.47	.31	6.5
25	3.8	5.7	6.7	e50	5.6	26	7.4	24	.55	.88	.23	4.8
26	3.5	33	5.6	23	5.6	26	7.0	14	.52	.78	.23	3.9
27	3.8	49	5.1	16	5.4	32	6.6	11	.44	.50	.28	3.4
28	3.5	19	5.0	13	5.8	42	6.1	8.2	.47	.36	.28	3.1
29	5.2	14	4.8	11	---	83	5.6	6.3	.76	.31	.22	3.0
30	4.2	11	4.8	9.8	---	72	5.2	4.8	.90	.24	.20	15
31	3.7	---	e4.4	8.9	---	76	---	3.9	---	.23	.19	---
TOTAL	266.2	244.8	201.1	426.9	315.4	1069.8	663.8	310.2	38.36	11.65	8.74	485.40
MEAN	8.59	8.16	6.49	13.8	11.3	34.5	22.1	10.0	1.28	.38	.28	16.2
MAX	45	49	25	60	46	145	96	39	3.3	.88	.62	227
MIN	1.0	2.5	4.0	3.1	5.4	9.1	5.2	3.5	.44	.18	.16	.15
CFSM	1.49	1.42	1.13	2.39	1.96	6.00	3.85	1.74	.22	.07	.05	2.81
IN.	1.72	1.58	1.30	2.76	2.04	6.92	4.29	2.01	.25	.08	.06	3.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1999, BY WATER YEAR (WY)

	7.89	12.5	11.8	8.87	9.76	22.2	36.3	18.0	7.42	3.07	2.67	2.59
MEAN	7.89	12.5	11.8	8.87	9.76	22.2	36.3	18.0	7.42	3.07	2.67	2.59
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	.49	1.59	3.04	1.87	.95	7.34	10.5	5.01	1.04	.26	.17	.17
(WY)	1964	1979	1979	1977	1980	1965	1995	1965	1965	1965	1965	1964

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1962 - 1999

ANNUAL TOTAL	5325.4	4042.35	
ANNUAL MEAN	14.6	11.1	11.9
HIGHEST ANNUAL MEAN			18.6
LOWEST ANNUAL MEAN			4.60
HIGHEST DAILY MEAN	238	Jun 14	351
LOWEST DAILY MEAN	1.0	Oct 7	.07
ANNUAL SEVEN-DAY MINIMUM	1.3	Jul 31	.18
INSTANTANEOUS PEAK FLOW			a 829
INSTANTANEOUS PEAK STAGE			b 9.04
INSTANTANEOUS LOW FLOW			a 829
ANNUAL RUNOFF (CFSM)	2.54	1.93	b 9.04
ANNUAL RUNOFF (INCHES)	34.45	26.15	c .06
10 PERCENT EXCEEDS	27	25	c Sep 20 1964
50 PERCENT EXCEEDS	5.9	5.2	
90 PERCENT EXCEEDS	1.7	.26	

a From rating curve extended above 300 ft³/s.

b From floodmarks.

c About.

e Estimated.

01089100 SOUHOOK RIVER AT PEMBROKE ROAD NEAR CONCORD, NH

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

DRAINAGE AREA.--81.9 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 5	0015	726	7.70	Sept. 17	1830	* 886	* 8.24
Mar. 23	0600	778	7.88				

Minimum discharge, 6.8 ft³/s, August 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	21	54	e29	e120	315	293	52	34	12	10	12
2	11	20	49	28	122	424	261	50	32	17	9.1	11
3	10	20	47	30	e235	e300	230	47	32	23	8.3	11
4	10	19	44	e36	e350	480	211	45	27	19	7.8	10
5	9.9	19	40	e33	e345	645	186	63	23	15	7.7	9.6
6	9.8	18	38	e31	e290	423	169	70	21	14	7.5	10
7	9.7	20	37	30	244	303	158	67	19	21	7.4	12
8	11	19	35	27	e190	e230	149	67	18	15	9.2	12
9	16	18	35	e28	e160	e220	138	65	16	12	11	11
10	25	17	35	e32	142	e200	128	62	15	11	13	69
11	57	22	34	e33	126	178	118	53	14	9.8	12	174
12	52	35	33	e34	121	159	110	47	14	8.8	12	85
13	39	34	31	e35	e190	150	102	42	13	8.9	11	58
14	40	30	31	e35	e200	155	96	40	13	9.4	13	43
15	84	29	e28	e39	e165	152	91	37	13	8.8	17	35
16	74	29	e28	e44	e140	147	86	34	12	8.6	18	77
17	60	29	30	e52	126	154	96	32	11	8.2	15	750
18	51	29	e28	e70	142	208	100	31	11	7.7	14	597
19	50	29	e30	e120	193	235	92	37	11	10	12	311
20	40	29	e30	e200	171	210	90	107	11	14	11	204
21	33	30	30	e170	e145	189	90	104	11	12	12	168
22	32	32	36	e155	e130	360	82	73	19	10	15	299
23	31	30	e42	e150	e110	678	77	58	16	11	16	294
24	28	29	e39	e180	e95	454	70	55	12	13	14	231
25	26	28	e36	e280	87	352	65	74	11	13	13	171
26	24	31	34	e260	83	297	62	71	10	16	14	134
27	22	86	32	e230	82	267	78	62	9.2	21	18	110
28	22	86	32	e200	89	273	63	54	9.2	17	24	95
29	23	69	32	170	---	415	58	46	12	14	19	86
30	23	59	e30	e150	---	399	55	39	13	12	17	101
31	22	---	e30	e135	---	341	---	35	---	11	15	---
TOTAL	956.4	966	1090	3046	4593	9313	3604	1719	482.4	403.2	403.0	4190.6
MEAN	30.9	32.2	35.2	98.3	164	300	120	55.5	16.1	13.0	13.0	140
MAX	84	86	54	280	350	678	293	107	34	23	24	750
MIN	9.7	17	28	27	82	147	55	31	9.2	7.7	7.4	9.6
CFSM	.38	.39	.43	1.20	2.00	3.67	1.47	.68	.20	.16	.16	1.71
IN.	.43	.44	.50	1.38	2.09	4.23	1.64	.78	.22	.18	.18	1.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1999, BY WATER YEAR (WY)

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	80.8	132	139	138	133	224	261	162	94.5	43.7	34.9	39.5
MAX	168	289	368	420	350	417	429	333	441	127	95.4	140
(WY)	1992	1996	1997	1996	1996	1998	1993	1996	1998	1998	1990	1999
MIN	12.7	30.6	35.2	35.8	34.6	134	120	55.5	16.1	11.6	13.0	8.33
(WY)	1998	1995	1999	1989	1993	1992	1999	1999	1999	1993	1999	1995

SUMMARY STATISTICS

FOR 1998 CALENDAR YEAR

FOR 1999 WATER YEAR

WATER YEARS 1988 - 1999

ANNUAL TOTAL	52826.4	30766.6	
ANNUAL MEAN	145	84.3	124
HIGHEST ANNUAL MEAN			198
LOWEST ANNUAL MEAN			84.3
HIGHEST DAILY MEAN	1790	Jun 17	2020
LOWEST DAILY MEAN	9.7	Oct 7	6.4
ANNUAL SEVEN-DAY MINIMUM	10	Oct 1	8.1
INSTANTANEOUS PEAK FLOW			886
INSTANTANEOUS PEAK STAGE			8.24
INSTANTANEOUS LOW FLOW			6.8
ANNUAL RUNOFF (CFSM)	1.77	1.03	1.51
ANNUAL RUNOFF (INCHES)	23.99	13.97	20.53
10 PERCENT EXCEEDS	363	224	282
50 PERCENT EXCEEDS	64	35	72
90 PERCENT EXCEEDS	16	11	14

a At site located 0.9 mi upstream (station 01089000).

e Estimated.

MERRIMACK RIVER BASIN

010965852 BEAVER BROOK AT NORTH PELHAM, NH

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

DRAINAGE AREA.--47.8 mi².

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

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 3	----	* 310	* 8.28	No other peak greater than base discharge.			
Minimum discharge, 0.60 ft ³ /s, September 4, 5, 8.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	9.4	24	e14	e77	226	110	28	28	7.7	1.9	.98
2	2.4	12	22	e13	e83	242	99	26	23	7.4	1.7	.97
3	2.6	16	20	e22	e192	198	90	24	14	8.6	1.9	.91
4	2.0	16	14	e43	e210	217	84	35	12	9.0	1.7	.83
5	2.1	12	16	e35	e213	216	77	51	9.5	7.5	1.6	.84
6	2.2	4.6	11	e30	e187	179	70	53	9.0	7.1	1.6	.98
7	2.9	4.0	16	e27	e161	158	66	47	8.2	7.0	1.7	1.0
8	4.4	4.8	12	e24	e134	136	60	46	6.9	6.6	1.9	.94
9	7.6	6.0	4.8	e26	e121	130	56	54	6.3	5.7	1.9	1.0
10	12	5.5	11	e32	e98	110	52	40	6.0	5.3	1.6	7.8
11	38	11	14	e30	e89	100	50	35	5.8	4.6	1.6	50
12	24	27	9.3	e28	92	94	48	29	5.5	4.3	1.8	22
13	16	17	22	e28	118	92	46	27	5.5	4.1	1.6	12
14	17	18	18	e28	111	100	44	22	5.4	3.6	1.7	8.2
15	23	11	13	e35	94	104	47	21	5.3	3.2	1.7	6.8
16	22	18	14	e50	85	110	41	18	5.1	2.8	1.4	26
17	18	17	7.5	e49	76	119	52	18	5.1	2.4	1.7	147
18	19	7.4	22	e55	96	148	49	17	4.6	1.5	1.8	114
19	20	8.1	20	e92	152	162	46	18	4.4	1.4	1.4	56
20	20	21	16	e106	139	158	60	46	4.2	1.5	1.1	36
21	19	15	e17	e103	123	147	70	42	4.2	1.4	1.4	27
22	16	11	e20	e99	100	178	63	34	3.9	1.9	1.4	25
23	14	18	e21	e103	104	224	54	26	4.0	3.1	1.3	27
24	6.4	16	e18	e128	82	205	50	35	3.7	4.3	1.2	23
25	5.4	14	e17	e185	61	182	43	67	3.4	4.2	1.3	19
26	7.5	6.9	e15	e178	59	156	41	53	3.3	3.5	1.2	16
27	8.1	46	e14	e154	58	135	39	43	3.2	3.2	1.4	16
28	7.8	38	e14	e134	66	133	36	35	3.8	2.9	1.4	17
29	7.9	26	e15	e115	---	151	33	28	7.9	2.5	1.1	15
30	8.4	26	e17	e98	---	138	30	26	7.0	2.2	1.0	15
31	9.6	---	e16	e87	---	127	---	22	---	2.0	1.0	---
TOTAL	367.8	462.7	490.6	2151	3181	4775	1706	1066	218.2	132.5	47.0	694.25
MEAN	11.9	15.4	15.8	69.4	114	154	56.9	34.4	7.27	4.27	1.52	23.1
MAX	38	46	24	185	213	242	110	67	28	9.0	1.9	147
MIN	2.0	4.0	4.8	13	58	92	30	17	3.2	1.4	1.0	.83
CFSM	.25	.32	.33	1.45	2.38	3.22	1.19	.72	.15	.09	.03	.48
IN.	.29	.36	.38	1.67	2.48	3.72	1.33	.83	.17	.10	.04	.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1999, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MEAN	47.6	76.2	97.0	89.4	95.5	147	160	92.7	50.4	20.7	21.1	21.8	
MAX	186	148	228	223	181	281	406	145	241	50.2	80.1	86.5	
(WY)	1997	1996	1987	1996	1996	1994	1987	1989	1998	1998	1991	1991	
MIN	5.15	15.4	15.8	27.5	41.4	56.5	56.9	34.4	7.27	3.53	1.52	2.71	
(WY)	1998	1999	1999	1989	1987	1989	1999	1999	1999	1993	1999	1997	

SUMMARY STATISTICS FOR 1998 CALENDAR YEAR FOR 1999 WATER YEAR WATER YEARS 1987 - 1999

ANNUAL TOTAL	30391.6	15292.05	
ANNUAL MEAN	83.3	41.9	76.5
HIGHEST ANNUAL MEAN			99.9
LOWEST ANNUAL MEAN			41.9
HIGHEST DAILY MEAN	1200	Jun 15	1500
LOWEST DAILY MEAN	2.0	Oct 4	.83
ANNUAL SEVEN-DAY MINIMUM	2.3	Sep 30	.92
INSTANTANEOUS PEAK FLOW			310
INSTANTANEOUS PEAK STAGE			8.28
INSTANTANEOUS LOW FLOW			a .60
ANNUAL RUNOFF (CFSM)	1.74		.88
ANNUAL RUNOFF (INCHES)	23.65		11.90
10 PERCENT EXCEEDS	207	127	170
50 PERCENT EXCEEDS	41	18	50
90 PERCENT EXCEEDS	4.3	1.7	5.8

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