01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

LOCATION.--Lat 42°34'34", long 71°47'19", Worcester County, Hydrologic Unit 01070004, on right bank 400 ft upstream from Fifth Street Bridge at Fitchburg and 1.8 mi upstream from Baker Brook.

DRAINAGE AREA.--63.4 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by mills and reservoirs upstream. Flow affected by diversions for municipal use. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--28 years, 122 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft^3/s, Apr. 5, 1987, gage height, 7.78 ft; maximum gage height, 9.25 ft, Apr. 5, 1987, backwater from landslide; minimum discharge, 1.5 ft^3/s, Sept. 11, 12, 1995; minimum daily, 2.7 ft^3/s, Sept. 5, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,840 ft^3/s, Apr. 22, gage height, 6.57 ft; minimum, 5.2 ft^3/s, June 30.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	51	74	57	e71	314	125	179	76	62	181	21
2	47	50	65	57	e70	273	110	165	84	55	135	24
3	41	179	63	66	e68	235	102	150	107	53	113	26
4	74	121	63	94	e64	196	167	139	85	58	123	27
5	83	90	62	195	e60	174	191	131	81	51	88	24
6	68	78	65	127	e58	155	144	125	371	42	69	21
7	54	70	146	100	e55	139	125	118	1260	38	69	18
8	46	63	126	87	e56	139	109	114	510	35	62	18
9	49	61	100	79	e56	146	376	126	280	36	55	17
10	52	61	90	121	e56	189	340	129	211	46	50	17
11	66	61	100	215	e59	190	223	237	171	38	43	14
12	62	56	83	148	e60	425	185	184	195	32	91	16
13	52	57	77	115	e62	388	152	171	180	28	96	66
14	62	57	73	96	126	276	139	195	175	25	106	44
15	56	68	91	84	177	244	125	152	155	24	99	80
16	50	62	104	e105	132	236	118	126	140	74	100	73
17	48	55	95	e100	100	495	106	110	166	57	80	51
18	105	51	83	e91	88	338	95	128	205	50	63	41
19	91	49	75	e82	92	254	97	197	174	40	64	44
20	105	53	77	e77	80	213	94	189	138	32	54	163
21	118	62	140	e76	72	183	203	157	114	43	44	103
22	92	58	119	e74	66	165	1420	140	116	90	39	74
23	94	57	97	e70	69	147	840	125	116	58	38	61
24	84	55	85	e69	99	130	542	169	92	43	44	53
25	75	54	78	e72	266	117	344	185	79	36	38	46
26	68	61	e75.0	e75	289	112	282	162	78	39	34	46
27	65	132	69	e75	278	101	290	131	74	154	29	51
28	60	127	e71.0	e73	553	280	253	110	65	117	28	45
29	56	96	62	e69	441	255	226	99	59	80	26	39
30	53	84	61	e70	---	184	200	91	65	67	23	36
31	53	---	59	e71	---	148	---	83	---	217	22	---
TOTAL	2087	2179	2628.0	2890	3723	6841	7723	4517	5622	1820	2106	1359
MEAN	67.3	72.6	84.8	93.2	128	221	257	146	187	58.7	67.9	45.3
MAX	118	179	146	215	553	495	1420	237	1260	217	181	163
MIN	41	49	59	57	55	101	94	83	59	24	22	14

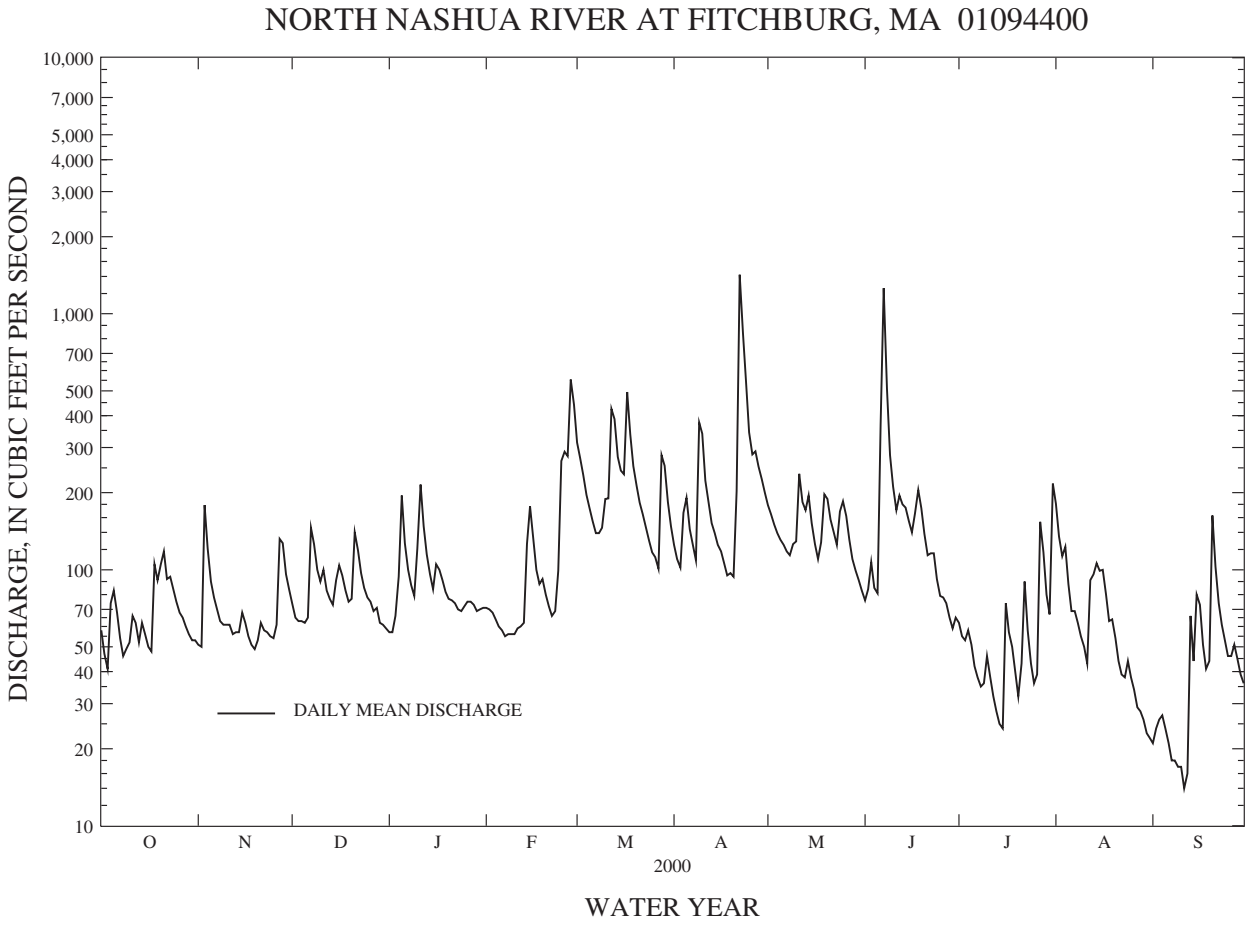
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2000, BY WATER YEAR (WY)

MEAN	79.5	117	139	140	142	234	241	144	96.5	46.2	47.1	42.8
MAX	220	243	347	304	294	528	600	277	368	90.3	137	121
(WY)	1997	1996	1997	1996	1984	1983	1987	1984	1982	1996	1991	1991
MIN	18.7	31.3	40.5	24.6	34.6	84.1	84.1	53.6	16.0	12.9	8.63	8.33
(WY)	1998	1979	1999	1981	1980	1989	1985	1999	1999	1999	1999	1995

01094400 NORTH NASHUA RIVER AT FITCHBURG, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1973 - 2000	
ANNUAL TOTAL	31940.7		43495.0			
ANNUAL MEAN	87.5		119		122	
HIGHEST ANNUAL MEAN					169	1973
LOWEST ANNUAL MEAN					59.5	1985
HIGHEST DAILY MEAN	785	Mar 22	1420	Apr 22	2830	Apr 5 1987
LOWEST DAILY MEAN	4.7	Sep 5	14	Sep 11	2.7	Sep 5 1995
ANNUAL SEVEN-DAY MINIMUM	6.5	Aug 7	17	Sep 6	4.3	Aug 31 1995
INSTANTANEOUS PEAK FLOW			1840	Apr 22	3510	Apr 5 1987
INSTANTANEOUS PEAK STAGE			6.57	Apr 22	9.25	Apr 5 1987
INSTANTANEOUS LOW FLOW			5.2	Jun 30	1.5	Sep 11 1995
10 PERCENT EXCEEDS	182		214		258	
50 PERCENT EXCEEDS	63		83		79	
90 PERCENT EXCEEDS	8.7		41		22	

e Estimated



01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA

LOCATION.--Lat 42°30'06", long 71°43'23", Worcester County, Hydrologic Unit 01070004, on right bank 1.3 mi upstream from Wekepeke Brook, 2.5 mi southeast of Leominster, and 6.1 mi upstream from confluence with Nashua River.

DRAINAGE AREA.--110 mi^2, includes 2.1 mi^2 above outlet of Ashby (Fitchburg) Reservoir.

PERIOD OF RECORD.--Discharge: September 1935 to current year.
Water-quality records: Water years 1955, 1958.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: Drainage area. WDR MA-RI-82-1: 1981. WDR MA-RI-92-1: 1978(M).

GAGE.--Water-stage recorder. Datum of gage is 270.04 ft above sea level.

REMARKS.--Records fair except those for discharges less than 35 ft^3/s, greater than 450 ft^3/s, and those for estimated daily discharge, which are poor. Regulation at low flow by mills upstream. Flow includes diversion to basin for municipal supplies: for Fitchburg, from Mare Meadow Reservoir since 1955; for Leominster, from Wachusett Reservoir since 1966 and from the Southeast Well Field since 1958.

AVERAGE DISCHARGE.--65 years, 200 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft^3/s, Mar. 18, 1936, gage height, 20.53 ft, from floodmarks, by computation of peak flow over dam; minimum, 11 ft^3/s, Aug. 29, 1948; minimum daily, 22 ft^3/s, Sept. 27, 1936, Sept. 2, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,730 ft^3/s, Apr. 22, gage height, 6.01 ft; minimum, 35 ft^3/s, Sept. 12, minimum daily, 40 ft^3/s, Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	71	117	86	e110	780	247	332	124	94	275	45
2	71	69	106	88	e92	543	223	290	125	82	201	55
3	62	280	100	105	99	457	218	260	164	74	167	51
4	133	185	100	157	96	402	313	241	123	88	186	50
5	136	140	97	315	91	332	356	226	119	78	135	50
6	105	118	100	209	87	287	276	220	618	67	108	48
7	84	105	245	173	85	257	248	207	2460	62	106	47
8	73	95	196	150	84	233	219	196	1020	59	99	44
9	76	90	163	132	82	230	637	223	579	58	86	43
10	80	90	143	226	80	233	632	224	400	78	80	45
11	98	98	159	395	83	292	411	477	299	63	70	43
12	86	85	129	265	98	314	348	324	369	55	111	40
13	72	84	118	213	97	870	293	279	313	51	129	116
14	92	84	117	181	85	775	263	399	313	48	173	74
15	81	99	161	153	290	512	244	271	275	47	149	170
16	71	93	174	140	310	433	234	216	248	105	164	120
17	67	82	158	142	241	406	218	185	299	88	128	83
18	168	74	132	155	190	993	199	220	373	79	101	63
19	131	71	116	114	155	687	207	351	291	65	101	60
20	158	72	113	108	164	490	201	334	235	56	82	269
21	175	95	220	113	146	405	356	260	194	52	70	153
22	141	84	185	115	130	348	2920	227	193	162	64	106
23	151	82	159	97	119	311	1750	203	198	84	64	85
24	125	80	138	99	130	e270	1170	312	158	64	71	75
25	109	77	112	106	202	247	756	300	139	57	62	66
26	97	89	112	126	581	220	617	253	144	67	57	72
27	91	232	108	114	623	207	627	199	132	302	52	75
28	84	204	98	105	527	582	521	167	118	188	51	65
29	77	160	95	99	961	524	456	151	107	124	50	60
30	73	138	93	96	---	365	395	135	106	103	47	56
31	73	---	92	110	---	293	---	123	---	430	46	---
TOTAL	3134	3326	4156	4687	6038	13298	15555	7805	10236	3030	3285	2329
MEAN	101	111	134	151	208	429	518	252	341	97.7	106	77.6
MAX	175	280	245	395	961	993	2920	477	2460	430	275	269
MIN	62	69	92	86	80	207	199	123	106	47	46	40

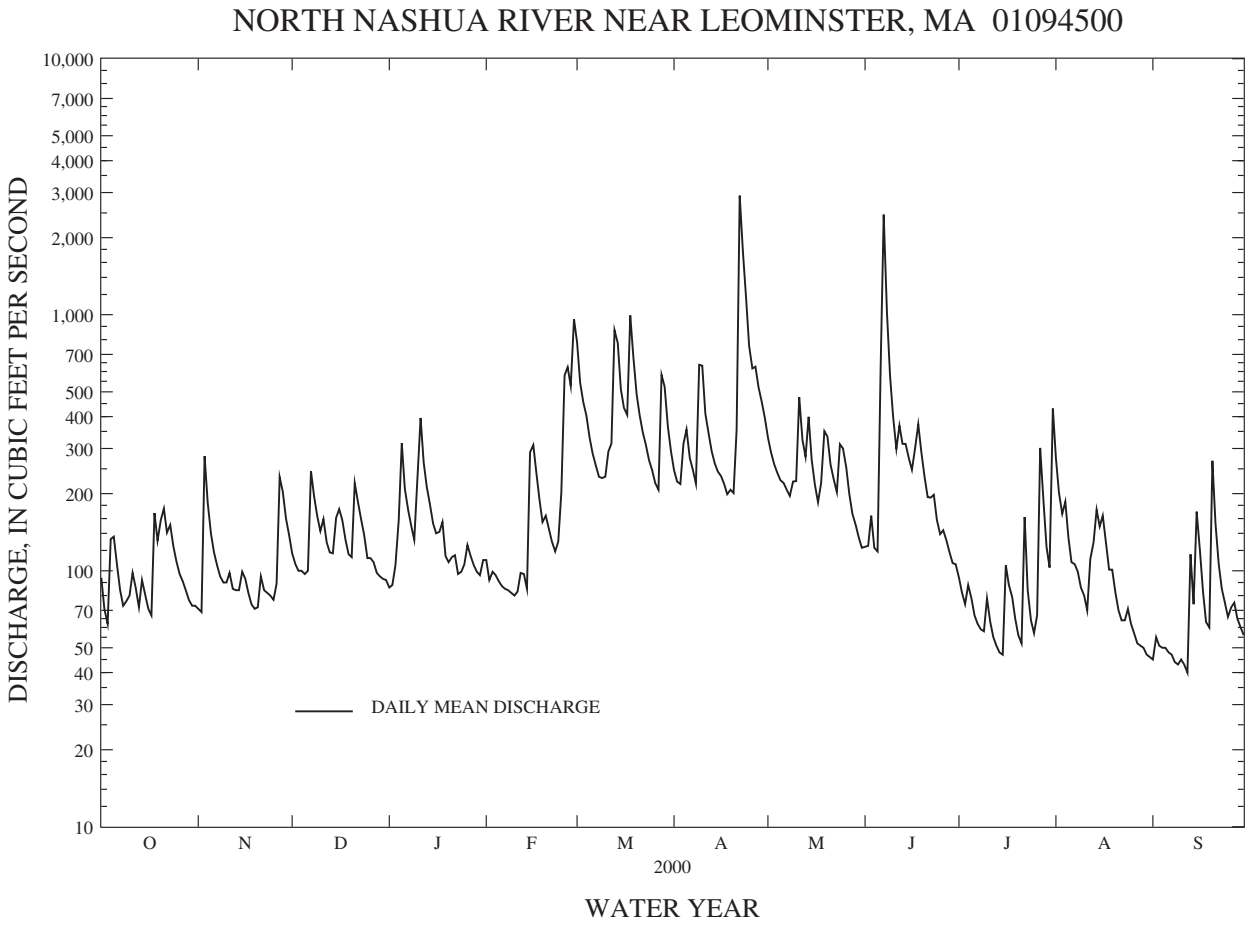
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2000, BY WATER YEAR (WY)

MEAN	115	174	206	215	229	384	419	244	165	89.6	80.6	87.4
MAX	606	485	682	466	534	1289	1126	503	642	392	286	595
(WY)	1956	1956	1997	1996	1970	1936	1987	1984	1982	1938	1938	1938
MIN	39.4	44.4	58.6	50.3	63.7	140	133	85.4	46.6	36.5	34.3	32.6
(WY)	1942	1950	1966	1981	1980	1965	1985	1965	1999	1993	1999	1995

01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1935 - 2000	
ANNUAL TOTAL	56097		76879			
ANNUAL MEAN	154		210		200	
HIGHEST ANNUAL MEAN					307	1956
LOWEST ANNUAL MEAN					81.2	1965
HIGHEST DAILY MEAN	1290	Mar 4	2920	Apr 22	7530	Mar 18 1936
LOWEST DAILY MEAN	27	Aug 10	40	Sep 12	22	Sep 27 1936
ANNUAL SEVEN-DAY MINIMUM	29	Aug 7	44	Sep 6	24	Aug 28 1993
INSTANTANEOUS PEAK FLOW			3730	Apr 22	16300	Mar 18 1936
INSTANTANEOUS PEAK STAGE			6.01	Apr 22	20.53	Mar 18 1936
INSTANTANEOUS LOW FLOW			35	Sep 12	11	Aug 29 1948
10 PERCENT EXCEEDS	319		401		420	
50 PERCENT EXCEEDS	99		132		126	
90 PERCENT EXCEEDS	33		64		49	

e Estimated



01095220 STILLWATER RIVER NEAR STERLING, MA
(National Water Quality Assessment Site)

LOCATION.--Lat 42°24'39", long 71°47'30", Worcester County, Hydrologic Unit 01070004, on left bank at downstream side of bridge on Muddy Pond Road, 1.5 mi upstream of mouth and 2.5 mi southwest of Sterling.

DRAINAGE AREA.--31.6 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Low-flow partial-record measurements in water years 1971–73, 1991–93. April 1994 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 400 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--6 years, 55.8 ft^3/s, 23.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 890 ft^3/s, Jan. 28, 1996, gage height, 8.50 ft from rating curve extended above 340 ft^3/s; minimum, 0.14 ft^3/s, Sept. 11, 12, 13, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 695 ft^3/s, Apr. 22, gage height, 7.99 ft; minimum, 0.65 ft^3/s, Sept. 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.5	15	29	e18	e26	171	81	94	25	16	71	1.9
2	8.8	20	25	19	e25	146	70	85	25	14	52	2.1
3	7.5	48	24	25	e24	127	61	76	51	12	41	2.9
4	8.4	68	23	32	e22	107	65	68	37	11	54	3.3
5	19	48	22	81	e21	95	83	62	28	11	43	2.9
6	17	34	20	75	e20	86	73	61	56	9.1	26	2.2
7	13	28	36	54	e19	77	66	57	465	7.6	20	1.7
8	11	25	61	43	e19	73	61	52	306	6.6	16	1.3
9	10	23	48	37	e18	70	116	52	161	5.7	11	1.4
10	8.7	21	39	40	18	73	185	51	101	6.3	8.7	1.5
11	12	21	39	108	19	74	117	100	70	5.4	6.6	1.3
12	15	20	35	91	26	217	93	100	93	4.8	7.2	.99
13	13	22	31	64	31	300	80	76	96	3.8	7.4	1.3
14	13	25	29	e50	40	183	70	90	84	3.2	16	1.8
15	21	25	33	e32	84	134	63	82	74	2.5	25	8.0
16	18	23	44	e29	83	113	59	63	61	7.4	21	14
17	15	20	45	e27	65	215	53	51	52	11	18	8.9
18	34	17	38	e25	58	211	51	44	66	53	12	5.6
19	40	16	31	e28	45	148	56	59	63	31	11	4.5
20	37	15	28	e26	41	125	58	80	51	14	8.7	13
21	57	15	46	e24	37	110	67	69	40	8.2	6.3	19
22	46	16	53	e23	34	100	559	60	36	6.7	5.3	13
23	41	18	43	e23	34	93	485	56	37	5.0	4.3	7.9
24	38	22	e31	e22	53	84	319	63	30	4.0	6.2	5.7
25	32	18	e29	e21	113	78	203	80	24	3.1	5.6	4.0
26	26	16	25	e20	190	75	160	62	22	3.3	4.5	3.8
27	22	33	e24	e24	160	69	177	48	25	43	3.7	3.7
28	20	69	e22	e23	259	122	155	39	25	72	2.9	3.6
29	19	50	e19	e21	249	184	132	35	20	43	2.4	3.6
30	21	37	e19	e20	---	125	111	32	19	29	2.3	3.4
31	18	---	e18	e23	---	96	---	29	---	49	2.3	---
TOTAL	670.9	828	1009	1148	1833	3881	3929	1976	2243	501.7	521.4	148.29
MEAN	21.6	27.6	32.5	37.0	63.2	125	131	63.7	74.8	16.2	16.8	4.94
MAX	57	69	61	108	259	300	559	100	465	72	71	19
MIN	7.5	15	18	18	18	69	51	29	19	2.5	2.3	.99
CFSM	.68	.87	1.03	1.17	2.00	3.96	4.14	2.02	2.37	.51	.53	.16
IN.	.79	.97	1.19	1.35	2.16	4.57	4.63	2.33	2.64	.59	.61	.17

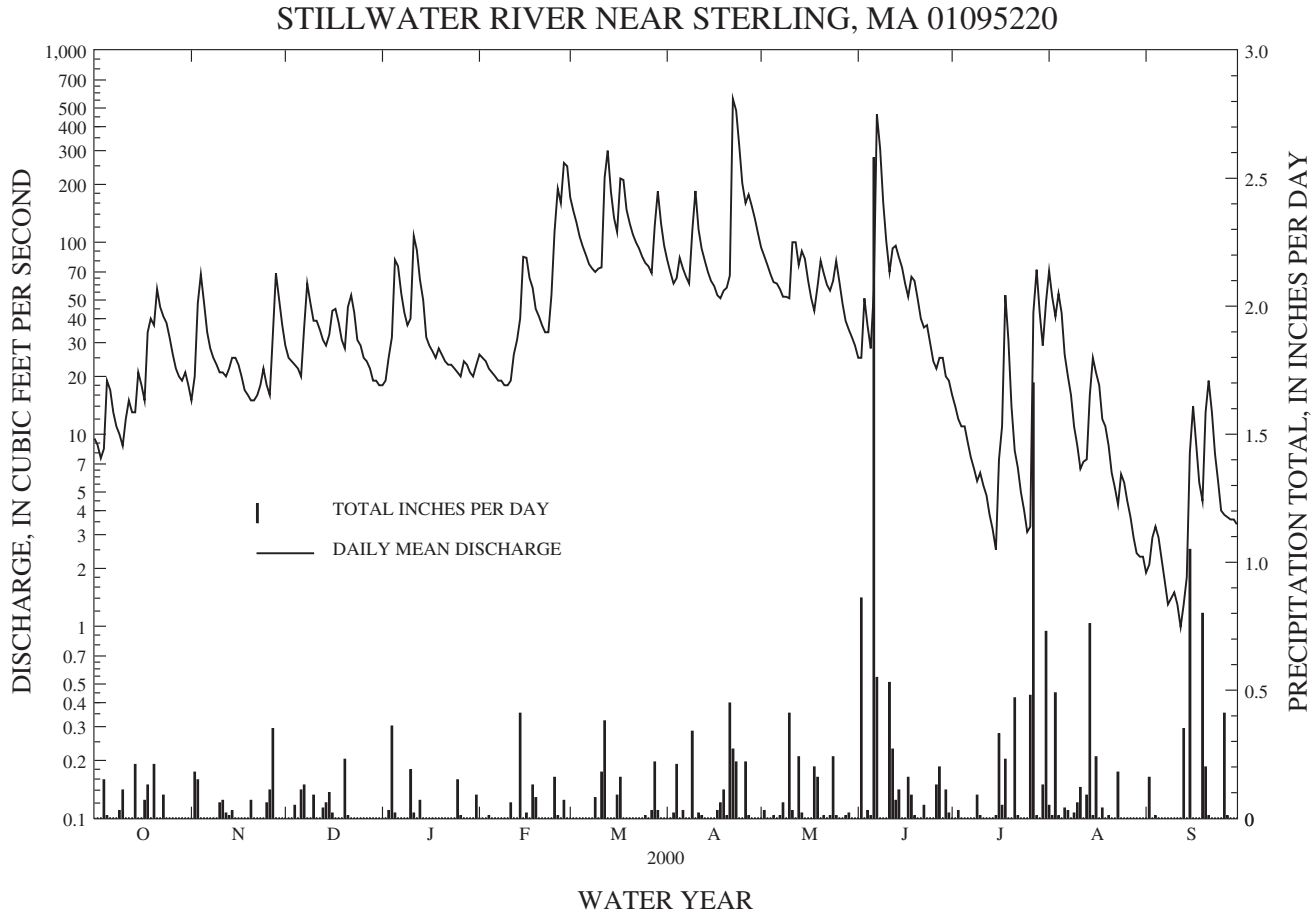
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2000, BY WATER YEAR (WY)

MEAN	30.0	46.6	65.4	92.2	82.2	115	104	63.5	37.8	16.9	10.3	10.4
MAX	83.8	106	171	157	120	163	172	100	113	34.4	29.1	22.5
(WY)	1997	1996	1997	1996	1996	1998	1997	1998	1998	1996	1994	1996
MIN	4.80	14.1	14.6	37.0	44.8	84.3	43.8	26.1	4.46	2.81	1.17	.92
(WY)	1998	1999	1999	2000	1995	1997	1999	1999	1999	1999	1999	1995

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1994 - 2000	
ANNUAL TOTAL	13716.16		18689.29			
ANNUAL MEAN	37.6		51.1		55.8	
HIGHEST ANNUAL MEAN					74.9	1996
LOWEST ANNUAL MEAN					34.4	1999
HIGHEST DAILY MEAN	352	Jan 25	559	Apr 22	742	Jan 28 1996
LOWEST DAILY MEAN	.57	Sep 5	.99	Sep 12	.24	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	.71	Aug 31	1.4	Sep 7	.29	Sep 10 1995
INSTANTANEOUS PEAK FLOW			695	Apr 22	890	Jan 28 1996
INSTANTANEOUS PEAK STAGE			7.99	Apr 22	8.50	Jan 28 1996
INSTANTANEOUS LOW FLOW			.65	Sep 12	.14	Sep 11 1995
ANNUAL RUNOFF (CFSM)	1.19		1.62		1.77	
ANNUAL RUNOFF (INCHES)	16.15		22.00		23.98	
10 PERCENT EXCEEDS	88		109		124	
50 PERCENT EXCEEDS	23		30		33	
90 PERCENT EXCEEDS	1.3		5.2		2.7	

e Estimated



01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1998 to current year.
WATER TEMPERATURE: April 1998 to current year.
PRECIPITATION: October 1998 to current year.

INSTRUMENTATION.--Heated tipping-bucket precipitation gage, specific conductance and temperature water-quality monitor.

REMARKS.--Water temperature and specific conductance records good. Extremes for period of daily record and current year are for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum recorded, 235 µS/cm, Oct. 9, 1998; minimum, 43 µS/cm, June 14, 1998.
WATER TEMPERATURE: Maximum recorded, 27.6°C, July 6, 1999; minimum, 0.0°C,on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 175 µS/cm, Oct. 1; minimum, 49 µS/cm, Apr. 22.
WATER TEMPERATURE: Maximum recorded, 23.3°C, Aug. 10; minimum, 0.0°C, on many days during winter periods.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
2	.00	.18	.00	.00	.00	.00	.00	.03	.86	.00	.01	.16
3	.00	.15	.00	.03	.00	.00	.02	.00	.00	.03	.49	.00
4	.15	.00	.05	.36	.01	.00	.21	.00	.03	.00	.01	.01
5	.01	.00	.00	.02	.00	.00	.00	.01	.01	.00	.00	.00
6	.00	.00	.11	.00	.00	.00	.03	.00	2.58	.00	.04	.00
7	.00	.00	.13	.00	.00	.00	.00	.01	.55	.00	.03	.00
8	.00	.00	.00	.00	.00	.00	.00	.06	.00	.00	.00	.00
9	.03	.00	.00	.00	.00	.08	.34	.00	.00	.09	.02	.00
10	.11	.06	.09	.19	.00	.00	.00	.41	.00	.01	.06	.00
11	.00	.07	.00	.02	.06	.18	.02	.03	.53	.00	.12	.00
12	.00	.02	.00	.00	.00	.38	.01	.00	.27	.00	.00	.00
13	.00	.01	.04	.07	.00	.00	.00	.24	.07	.00	.09	.35
14	.21	.03	.06	.00	.41	.00	.00	.02	.11	.00	.76	.00
15	.00	.00	.10	.00	.00	.00	.00	.00	.00	.01	.01	1.05
16	.00	.00	.02	.00	.02	.09	.00	.00	.00	.33	.24	.00
17	.07	.00	.00	.00	.00	.16	.03	.00	.16	.05	.00	.00
18	.13	.00	.00	.00	.13	.00	.06	.20	.09	.23	.04	.00
19	.00	.00	.00	.00	.08	.00	.11	.16	.01	.00	.00	.80
20	.21	.07	.23	.00	.00	.00	.01	.00	.00	.00	.01	.20
21	.00	.00	.01	.00	.00	.00	.45	.01	.00	.47	.00	.01
22	.00	.00	.00	.00	.00	.00	.27	.00	.05	.01	.00	.00
23	.09	.00	.00	.00	.00	.00	.22	.01	.00	.00	.18	.00
24	.00	.00	.00	.00	.00	.00	.00	.24	.00	.00	.00	.00
25	.00	.06	.00	.15	.16	.01	.00	.01	.00	.00	.00	.00
26	.00	.11	.00	.01	.01	.00	.22	.00	.13	.48	.00	.41
27	.00	.35	.00	.00	.00	.03	.01	.00	.20	1.70	.00	.01
28	.00	.00	.00	.00	.07	.22	.00	.01	.00	.01	.00	.00
29	.00	.00	.00	.00	.00	.03	.00	.02	.11	.00	.00	.00
30	.00	.00	.00	.00	---	.00	.00	.00	.02	.13	.00	.00
31	.00	---	.00	.09	---	.00	---	.00	---	.73	.00	---
TOTAL	1.01	1.11	0.84	0.94	0.95	1.18	2.01	1.47	5.78	4.28	2.16	3.00

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	175	145	157	115	106	112	97	94	95	106	91	98
2	145	140	143	113	105	109	100	94	96	108	99	104
3	144	133	140	128	97	112	103	97	101	108	102	106
4	167	141	155	112	93	101	104	101	102	104	100	102
5	152	128	133	94	92	93	103	101	102	104	72	88
6	128	126	127	96	92	93	104	101	102	77	67	72
7	130	126	128	97	93	95	111	93	103	80	71	76
8	134	127	130	99	96	98	95	90	93	83	75	79
9	147	131	138	100	98	99	90	88	89	88	81	85
10	149	141	144	102	100	101	93	89	90	96	86	90
11	150	135	143	107	102	104	93	90	91	94	76	82
12	135	128	131	108	105	106	95	90	92	77	76	76
13	143	130	134	108	104	106	96	92	93	77	67	73
14	147	139	144	105	103	104	101	95	97	73	68	71
15	146	127	132	105	99	101	103	99	101	78	73	75
16	132	127	128	102	99	100	100	95	96	80	77	79
17	135	128	131	105	102	103	97	94	95	83	79	81
18	148	119	132	108	105	106	95	93	93	84	82	83
19	122	118	120	110	107	108	94	87	91	85	83	84
20	125	118	121	112	107	109	102	86	92	85	83	84
21	123	105	113	117	109	110	106	91	99	84	82	83
22	106	104	105	113	107	111	93	85	90	85	83	84
23	107	102	105	110	107	108	89	82	85	87	84	85
24	108	99	101	108	101	106	88	78	82	87	85	86
25	108	99	101	111	106	109	87	77	82	86	84	85
26	105	100	103	111	108	110	94	83	89	85	82	83
27	107	103	104	126	98	113	95	85	89	84	82	83
28	117	106	108	104	95	97	92	84	88	84	81	82
29	110	106	109	103	91	93	97	88	92	85	82	83
30	110	105	107	95	91	93	103	93	98	87	82	84
31	116	108	111	---	---	---	103	93	97	88	83	86
MONTH	175	99	125	128	91	104	111	77	94	108	67	84

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	86	83	84	81	71	76	91	86	89	84	79	81
2	88	83	84	83	79	81	95	90	93	89	84	87
3	89	84	86	85	82	84	105	95	100	92	86	89
4	89	86	87	88	85	87	106	99	102	95	89	92
5	91	87	88	92	88	90	99	94	96	99	94	98
6	91	87	88	93	90	91	97	92	94	100	97	98
7	97	87	92	95	91	92	99	95	96	104	98	100
8	95	88	91	95	91	93	104	98	101	106	99	102
9	97	89	93	96	91	93	110	84	100	105	102	104
10	99	91	95	101	91	94	84	78	79	109	105	107
11	108	95	99	117	90	98	86	79	81	109	93	99
12	101	92	96	109	80	92	90	82	85	94	88	90
13	100	93	97	81	72	75	93	85	88	89	87	88
14	140	97	119	81	74	78	97	90	93	93	87	90
15	129	99	110	86	79	82	101	94	97	90	88	89
16	101	94	98	85	82	84	103	98	101	93	86	90
17	99	89	92	94	75	83	106	100	103	98	92	96
18	94	90	92	83	75	79	106	102	104	106	98	102
19	95	92	93	86	81	83	107	99	104	105	102	103
20	94	90	92	88	84	86	103	98	101	102	93	96
21	102	89	93	91	86	88	104	94	101	95	93	94
22	102	90	94	92	89	91	94	49	60	99	95	97
23	108	91	101	92	87	89	55	50	52	103	98	100
24	113	102	107	93	90	91	62	54	57	105	100	103
25	104	88	96	95	92	93	67	59	63	100	98	99
26	88	84	86	98	92	95	73	66	69	100	98	99
27	96	84	88	99	93	95	71	67	69	104	99	102
28	86	71	81	109	84	94	72	68	70	108	103	106
29	80	68	73	85	79	80	75	70	73	108	105	106
30	---	---	---	82	79	81	80	72	77	110	106	108
31	---	---	---	93	82	85	---	---	---	111	107	109
MONTH	140	68	93	117	71	87	110	49	87	111	79	98

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	114	108	111	116	111	114	85	80	82	141	137	139
2	123	114	118	123	115	119	80	79	80	137	131	133
3	122	103	107	125	121	123	88	80	81	132	130	131
4	114	105	110	125	118	122	89	79	83	130	122	124
5	115	113	114	121	117	119	85	83	84	122	115	118
6	117	91	112	123	117	121	90	85	88	118	113	116
7	91	52	57	127	121	125	94	90	92	120	115	118
8	58	52	55	129	124	127	98	91	94	122	119	120
9	64	58	60	132	126	130	108	98	104	122	120	121
10	72	64	68	132	126	130	112	108	110	123	120	121
11	79	72	76	131	127	129	116	110	114	124	122	123
12	82	75	78	131	127	129	119	111	116	128	124	125
13	76	74	75	138	128	134	113	111	112	132	128	130
14	77	75	76	145	136	141	121	107	114	135	131	133
15	79	76	77	145	141	143	107	102	104	138	126	134
16	85	79	82	151	123	142	108	102	105	126	105	111
17	89	85	87	123	110	117	108	107	107	108	104	105
18	87	83	84	110	90	96	112	107	110	115	108	111
19	83	81	82	99	96	97	112	110	111	122	115	118
20	87	83	84	108	99	104	113	110	111	130	122	126
21	91	87	89	117	108	112	117	111	114	129	111	117
22	93	90	92	129	117	124	120	116	118	117	112	115
23	93	89	90	132	127	130	120	118	119	128	115	121
24	98	91	95	138	131	135	122	117	121	128	123	125
25	105	98	103	144	138	140	119	115	117	133	126	129
26	109	105	107	148	140	143	121	117	119	136	128	130
27	111	107	109	147	91	123	122	119	120	139	134	137
28	109	105	107	93	88	91	125	121	123	135	130	133
29	112	108	110	88	86	86	130	125	127	130	127	129
30	115	110	113	90	85	87	132	128	130	129	124	126
31	---	---	---	100	82	91	137	131	134	---	---	---
MONTH	123	52	91	151	82	120	137	79	108	141	104	124
YEAR	175	49	101									

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	15.1	13.1	14.2	10.4	8.1	9.1	3.3	1.6	2.5	1.4	0.0	.7
2	14.7	12.8	13.8	11.1	7.8	9.1	2.2	1.2	1.7	2.0	.7	1.3
3	14.9	13.1	13.9	11.6	10.0	10.8	3.0	1.8	2.5	2.8	1.8	2.3
4	13.8	11.5	12.6	10.1	8.4	9.6	3.6	2.5	3.0	3.0	1.6	2.0
5	12.2	11.1	11.6	8.5	7.1	7.9	4.6	2.7	3.7	2.6	.4	1.3
6	11.9	10.5	11.3	8.3	7.0	7.6	5.5	4.1	4.8	.9	.0	.5
7	11.0	9.0	9.9	7.5	5.9	6.9	6.5	5.4	5.9	1.1	.2	.6
8	10.0	7.9	9.0	6.5	5.2	5.8	6.3	4.8	5.7	1.0	.2	.6
9	12.4	9.6	11.1	6.8	5.2	6.0	4.8	3.5	4.2	1.6	.6	1.0
10	12.0	10.9	11.4	8.1	6.1	7.1	4.2	3.0	3.6	1.9	1.1	1.5
11	13.1	11.4	12.3	7.4	5.3	6.6	4.0	2.5	3.0	1.9	1.4	1.6
12	11.8	10.3	11.0	6.4	4.6	5.6	3.3	2.3	2.8	2.0	1.3	1.7
13	12.2	9.9	11.0	7.3	6.0	6.6	3.2	1.8	2.5	1.4	.0	.9
14	12.4	10.0	11.7	6.7	5.3	6.0	3.0	2.6	2.8	.1	.0	.1
15	10.7	8.7	9.7	6.1	4.4	5.3	3.5	2.9	3.3	.2	.1	.1
16	11.4	8.5	10.0	4.8	3.8	4.3	4.3	3.5	3.9	.3	.1	.1
17	12.9	10.4	11.5	4.1	2.8	3.5	4.1	3.1	3.6	.2	.0	.1
18	12.2	10.2	11.6	4.5	2.6	3.4	3.1	2.1	2.7	.2	.1	.1
19	10.4	8.9	9.7	5.0	2.9	3.9	2.1	.8	1.5	.3	.1	.1
20	9.7	9.3	9.5	6.6	3.1	4.9	1.8	.7	1.3	.2	.1	.1
21	9.3	8.3	8.9	6.3	5.0	5.8	2.0	1.3	1.7	.2	.0	.1
22	9.0	7.5	8.3	8.0	5.9	6.9	1.5	.8	1.2	.2	.1	.1
23	9.4	8.3	8.9	9.5	7.6	8.5	1.5	.6	1.0	.2	.1	.2
24	9.5	7.9	8.6	10.9	8.8	9.9	.8	.1	.5	.3	.1	.2
25	8.9	7.6	8.2	10.4	9.8	10.2	.3	.0	.1	.2	.1	.1
26	9.2	6.7	8.0	10.1	9.6	9.9	.9	.1	.4	.3	.1	.2
27	8.8	7.2	8.0	10.8	8.7	10.1	.8	.1	.4	.2	.1	.1
28	8.1	6.2	7.2	8.7	7.2	8.1	.4	.0	.2	.2	.1	.1
29	8.9	6.4	7.6	7.2	5.3	6.3	.8	.1	.4	.3	.1	.2
30	8.5	6.6	7.6	5.3	3.3	4.5	1.5	.4	1.0	.3	.1	.2
31	10.3	7.1	8.8	---	---	---	1.2	.2	.7	.3	.1	.2
MONTH	15.1	6.2	10.2	11.6	2.6	7.0	6.5	0.0	2.3	3.0	0.0	0.6

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	0.3	0.1	0.2	1.3	0.2	0.8	9.6	7.2	8.2	11.8	10.5	11.0
2	.3	.1	.2	2.1	1.2	1.6	11.0	8.1	9.6	12.8	10.7	11.7
3	.3	.1	.2	2.4	1.5	2.0	11.0	10.0	10.5	13.8	10.6	11.9
4	.3	.2	.2	3.0	2.0	2.4	11.1	9.6	10.3	15.1	11.8	13.2
5	.4	.1	.2	3.5	2.4	3.0	10.7	8.6	9.8	16.7	13.1	15.1
6	.4	.1	.2	4.1	2.6	3.2	8.6	7.3	8.0	17.9	15.2	16.4
7	.5	.1	.3	4.5	2.7	3.5	10.0	6.7	8.3	19.3	15.4	17.3
8	.4	.1	.2	5.7	3.3	4.5	13.6	9.1	11.3	21.0	17.6	19.3
9	.5	.1	.3	7.8	4.6	6.2	13.4	10.3	12.6	22.4	19.2	20.5
10	.8	.2	.4	8.9	6.6	7.7	10.3	7.2	8.3	19.5	14.4	17.3
11	.6	.2	.4	7.5	4.3	6.3	8.5	7.4	7.9	14.4	12.8	13.2
12	.7	.0	.2	4.3	2.5	3.1	8.4	6.9	7.9	14.9	13.2	13.9
13	.4	.0	.1	3.6	2.0	2.9	8.7	6.3	7.3	14.9	13.3	14.5
14	.3	.1	.2	4.1	2.2	3.1	10.3	6.7	8.3	15.7	12.9	14.2
15	.4	.0	.1	5.1	3.7	4.4	11.9	8.2	10.2	15.5	13.1	14.6
16	.5	.0	.2	7.5	5.1	6.5	13.9	11.0	12.7	14.9	12.2	13.5
17	.6	.0	.1	7.7	2.8	5.6	13.3	11.0	12.2	15.9	12.7	14.1
18	.1	.0	.0	2.8	1.4	2.2	11.0	9.0	10.1	15.8	14.0	14.8
19	.2	.0	.1	3.4	1.8	2.7	9.0	7.7	8.2	14.8	12.7	13.9
20	.5	.0	.2	3.9	3.3	3.6	10.3	7.3	8.6	12.7	11.4	11.9
21	.9	.0	.2	4.2	3.8	4.0	10.1	8.0	9.5	12.3	11.6	12.1
22	1.1	.0	.3	4.9	3.8	4.2	8.0	6.4	6.9	12.2	11.4	11.8
23	1.7	.0	.7	6.8	4.3	5.5	6.9	6.5	6.7	13.6	11.6	12.5
24	1.7	.6	.9	9.1	6.0	7.5	8.3	6.6	7.3	14.3	12.8	13.4
25	.6	.1	.4	9.6	7.1	8.1	10.6	7.0	8.6	15.6	13.4	14.5
26	.3	.1	.2	10.7	7.8	9.1	10.6	6.9	8.5	17.0	15.0	15.8
27	.9	.2	.5	10.9	8.6	9.5	7.7	6.0	6.7	17.3	15.1	16.0
28	.7	.2	.5	9.6	8.5	9.0	8.0	7.4	7.8	16.0	14.8	15.5
29	1.1	.1	.5	9.0	7.5	8.3	9.7	7.2	8.2	15.1	13.8	14.5
30	---	---	---	9.0	7.7	8.3	11.7	9.7	10.8	16.1	12.5	14.2
31	---	---	---	8.6	7.0	7.7	---	---	---	17.4	13.3	15.1
MONTH	1.7	0.0	0.3	10.9	0.2	5.0	13.9	6.0	9.0	22.4	10.5	14.4

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.8	15.4	17.5	21.5	18.0	19.9	17.8	17.3	17.5	21.6	18.9	20.2
2	20.6	17.1	18.6	22.1	18.3	20.3	18.4	17.3	17.8	20.5	18.5	19.7
3	19.4	17.7	18.5	21.6	19.2	20.5	19.9	18.1	19.0	19.8	17.9	18.9
4	18.4	16.3	17.3	21.9	19.7	20.8	21.0	19.3	20.1	20.1	18.1	19.3
5	16.8	15.3	16.1	22.3	19.5	20.8	21.0	19.5	20.2	18.1	15.5	16.7
6	15.3	12.4	14.0	21.1	17.4	19.3	20.0	18.1	19.2	16.4	13.6	15.1
7	12.8	10.6	11.7	20.4	17.4	18.7	21.1	18.8	19.7	16.3	13.2	14.7
8	14.7	12.2	13.3	19.6	16.1	17.7	22.1	19.7	20.9	17.1	14.0	15.5
9	16.1	14.4	15.1	19.3	16.6	17.9	22.7	20.2	21.3	17.8	15.8	16.7
10	19.1	15.9	17.3	21.0	17.9	19.3	23.3	20.6	21.7	18.4	15.3	16.8
11	19.3	17.3	18.6	21.8	17.6	19.4	22.9	19.3	21.0	18.3	15.8	17.0
12	17.3	14.0	15.7	21.4	17.0	19.1	20.9	19.4	20.3	18.8	16.8	17.7
13	14.2	13.3	13.7	21.5	16.9	19.2	19.5	18.6	19.1	19.7	17.4	18.4
14	14.1	13.6	13.8	22.2	17.9	19.9	18.6	17.9	18.3	18.1	15.4	16.9
15	14.1	13.6	13.9	19.9	18.6	19.3	18.9	17.9	18.3	17.3	16.1	16.6
16	18.5	14.1	16.0	21.7	18.3	19.8	19.3	17.8	18.3	17.3	15.4	16.2
17	21.0	18.5	19.8	20.9	19.5	20.1	19.4	17.1	18.1	15.6	13.7	14.8
18	20.3	17.5	19.0	20.6	19.9	20.3	17.9	16.3	17.2	16.6	14.1	15.4
19	17.7	17.0	17.3	20.1	19.0	19.7	19.2	16.4	17.7	17.1	14.8	16.0
20	19.3	16.5	17.8	20.4	17.5	19.0	18.5	16.2	17.2	18.7	16.5	17.5
21	19.8	17.4	18.3	21.0	17.1	19.1	18.4	14.9	16.5	18.6	16.9	18.0
22	20.7	18.6	19.6	21.8	18.6	19.8	18.4	15.2	16.7	17.2	15.5	16.4
23	20.9	19.1	20.0	20.9	17.4	19.1	17.2	15.4	16.5	15.8	14.4	15.3
24	21.0	18.3	19.7	20.9	17.5	19.2	19.4	16.3	17.7	16.9	15.6	16.2
25	21.6	18.6	20.0	20.0	18.0	18.9	19.9	16.4	18.0	15.6	13.4	14.4
26	21.6	20.0	20.7	18.6	17.4	18.0	20.0	16.5	18.2	13.9	12.6	13.1
27	21.9	20.2	20.9	17.6	16.7	17.3	19.9	16.8	18.4	13.9	11.4	12.7
28	22.2	19.1	20.6	17.6	16.6	17.0	19.2	17.5	18.4	13.2	11.4	12.4
29	21.2	19.4	20.3	18.8	17.2	18.0	19.6	16.9	18.1	11.5	9.5	10.7
30	21.6	19.1	20.1	19.3	18.2	18.7	19.0	16.0	17.7	11.6	8.9	10.4
31	---	---	---	18.7	17.8	18.3	20.6	17.8	19.1	---	---	---
MONTH	22.2	10.6	17.5	22.3	16.1	19.2	23.3	14.9	18.7	21.6	8.9	16.0
YEAR	23.3	.0	10.1									

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued
(National Water Quality Assessment Site)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1998 to current year.

REMARKS.--Selected samples were analyzed for pesticide compounds on schedule 2001 (listed with minimum reporting levels in the section "Explanation of the Records"); only pesticide compounds identified by the analyses (either as estimated values or values measured at or above the minimum reporting level) for one or more samples are listed in the water-quality data tables.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
OCT												
18...	1015	29	747	8.4	--	126	11.1	12.0	7.32	1.24	1.8	14.7
NOV												
22...	0800	15	757	10.1	6.2	112	7.9	6.8	5.56	1.09	1.2	11.0
DEC												
01...	0930	30	756	11.4	6.6	94	-1.3	2.2	4.47	.87	1.0	10.0
JAN												
13...	0700	66	748	12.2	6.2	71	.8	1.0	3.19	.63	.7	7.1
FEB												
10...	1000	18	753	13.3	6.6	97	5.2	.2	4.90	.91	1.0	9.2
14...	1300	45	738	11.3	6.5	150	4.2	.3	8.69	2.02	1.6	32.6
MAR												
23...	0930	93	758	--	6.4	90	14.2	5.3	3.65	.72	.9	9.2
APR												
22...	0800	605	738	11.4	6.0	56	7.6	6.5	2.26	.47	.9	6.2
27...	1315	181	749	11.2	6.2	69	11.6	6.6	3.36	.65	.8	8.0
MAY												
11...	0950	100	757	9.1	6.4	89	14.2	12.8	4.29	.79	1.0	9.2
JUN												
27...	1020	24	746	8.1	6.7	105	28.6	21.3	5.71	.97	1.1	11.1
JUL												
12...	1000	5.0	749	8.0	6.6	131	23.9	18.1	7.94	1.33	1.5	13.4
AUG												
16...	0930	22	745	8.1	6.4	107	21.4	17.9	--	--	--	--
16...	0945	22	745	8.1	6.4	107	21.4	17.9	5.15	.95	1.2	10.6
16...	1100	22	--	--	--	--	--	--	--	--	--	--
SEP												
21...	1345	18	741	6.9	6.5	112	24.1	18.0	5.89	1.03	1.4	12.2

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)
OCT											
18...	--	--	27.0	<0.1	8.0	10.1	0.27	0.32	<0.020	0.072	<0.010
NOV											
22...	5	6	20.4	<.1	8.2	8.0	.28	.23	<.020	.131	<.010
DEC											
01...	5	6	16.5	<.1	8.0	7.1	.19	.27	<.020	.057	<.010
JAN											
13...	6	7	12.5	<.1	6.4	6.7	.24	.32	<.020	.122	<.010
FEB											
10...	6	8	17.2	<.1	8.5	7.0	.16	.26	.029	.282	<.010
14...	6	9	53.1	<.1	7.3	10.7	.21	.30	.053	.313	<.010
MAR											
23...	5	6	17.1	<.1	5.4	5.8	E.10	E.10	<.020	.180	<.010
APR											
22...	3	4	9.7	<.1	3.8	4.0	.30	.53	<.020	.095	<.010
27...	7	9	12.7	<.1	4.8	5.9	.18	.29	<.020	.111	<.010
MAY											
11...	7	9	16.1	<.1	4.0	5.9	.21	.30	.029	.120	<.010
JUN											
27...	11	13	--	--	4.8	--	.25	.30	.021	.190	<.010
JUL											
12...	13	16	23.3	<.1	5.3	6.7	.21	.26	<.020	.261	<.010
AUG											
16...	10	12	--	--	--	4.8	.30	.31	<.020	.174	<.010
16...	10	12	19.6	<.1	7.0	4.7	.28	.31	<.020	.174	<.010
16...	--	--	--	--	--	--	--	--	--	--	--
SEP											
21...	9	11	20.5	.1	6.5	5.7	.23	.29	<.020	.102	<.010

DATE	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTICULATE TOTAL (MG/L AS C) (00689)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	CHLOR-A PERIPHYTON CHROMOGRAPHIC FLUOROM (MG/M2) (70957)	IRON, DISSOLVED (UG/L AS FE) (01046)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	SEDIMENT, SUSPENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
18...	0.007	<0.010	0.021	7.3	0.3	93	--	190	53	10	74
NOV											
22...	<.006	<.010	E.007	5.1	.2	76	--	180	42	4	80
DEC											
01...	.007	<.010	.010	5.8	<.2	66	--	170	34	2	50
JAN											
13...	E.005	<.010	.019	5.0	.3	54	--	90	22	11	46
FEB											
10...	.006	<.010	E.006	3.4	<.2	65	--	150	34	2	67
14...	.009	<.010	.017	3.8	.4	142	--	160	108	7	72
MAR											
23...	E.003	<.010	<.008	3.1	<.2	54	--	50	19	2	60
APR											
22...	.013	<.010	.145	7.5	2.1	42	--	160	68	58	58
27...	E.004	<.010	E.005	4.6	.3	49	--	70	20	3	40
MAY											
11...	.006	<.010	.011	4.6	.7	58	--	200	43	7	60
JUN											
27...	.011	<.010	.018	4.9	.2	--	--	260	34	5	56
JUL											
12...	.007	<.010	.017	4.0	.3	83	--	140	61	4	73
AUG											
16...	.009	<.010	.018	--	--	--	--	--	--	--	--
16...	.009	<.010	.018	4.9	.3	74	--	290	31	3	82
16...	--	--	--	--	--	--	15.0	--	--	--	--
SEP											
21...	.008	<.010	.019	5.7	.2	78	--	140	25	2	78

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA

LOCATION.--Lat 42°22'22", long 71°49'43", Worcester County, Hydrologic Unit 01070004, on left bank, 300 ft upstream from bridge on Harris Street at Canada Mills, 2.1 mi north of Holden, MA, and about 3.5 mi upstream from mouth at Wachusett Reservoir.

DRAINAGE AREA.--44.4 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1996 to current year.

GAGE.--Water stage recorder. Elevation of gage is 560 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Quinapoxet Reservoir. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--3 years, 59.7 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,670 ft^3/s, Mar. 10, 1998, gage height, 13.76 ft; minimum, 0.48 ft^3/s, Aug. 10, 1999.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 21, 1996, reached a discharge of 890 ft^3/s, gage height, 12.45 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft^3/s, Apr. 22, gage height, 12.67 ft; minimum daily, 3.5 ft^3/s, Sept. 11, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	9.3	18	14	e14	194	91	134	38	27	38	5.5
2	8.4	14	16	14	e13	164	80	124	48	24	34	5.4
3	6.4	42	15	18	e13	139	74	108	74	21	31	5.6
4	12	27	15	23	e12	117	129	100	49	22	38	5.6
5	14	21	15	52	e11	104	150	94	41	22	22	4.7
6	10	16	15	33	e11	93	114	84	99	19	17	4.4
7	8.1	13	35	27	e10	85	99	77	614	e16	16	4.8
8	7.0	12	29	24	e10	81	73	71	365	e13	15	6.1
9	7.3	12	24	21	e10	80	207	60	205	e11	20	5.6
10	8.6	12	23	29	e10	88	222	57	141	e12	15	4.0
11	12	13	24	55	e11	98	164	115	104	9.3	11	3.5
12	10	12	19	37	e17	303	133	91	168	8.7	10	3.5
13	9.2	12	18	e25	25	295	105	75	156	7.5	8.7	5.7
14	13	12	18	e20	37	182	91	103	144	6.8	14	9.0
15	15	12	27	e16	52	138	91	82	126	6.2	16	19
16	16	12	30	e15	37	114	77	74	109	45	20	13
17	10	11	25	e14	31	246	72	69	91	21	22	7.6
18	28	10	20	e16	e27	196	69	92	84	16	15	6.6
19	21	10	18	e15	e24	144	73	120	78	26	12	6.5
20	22	10	17	e14	e22	148	70	130	69	24	10	20
21	25	11	36	e13	22	137	105	105	56	23	9.8	13
22	18	11	29	e13	29	125	1010	91	46	25	10	12
23	18	10	23	e12	21	113	676	81	44	17	8.8	8.2
24	16	11	20	e12	33	102	434	113	39	13	11	7.0
25	13	11	17	e11	56	92	343	126	34	12	15	6.6
26	11	12	e15	e12	72	90	295	94	34	17	9.2	8.9
27	11	39	e15	e13	66	79	300	63	46	61	6.4	11
28	10	34	e14	e12	104	173	258	52	48	45	5.9	14
29	9.7	24	14	e11	183	212	200	47	35	29	6.1	18
30	9.5	21	e14	e13	---	145	168	43	32	22	5.8	8.3
31	9.2	---	15	e15	---	109	---	39	---	37	5.8	---
TOTAL	401.4	476.3	633	619	983	4386	5973	2714	3217	658.5	478.5	253.1
MEAN	12.9	15.9	20.4	20.0	33.9	141	199	87.5	107	21.2	15.4	8.44
MAX	28	42	36	55	183	303	1010	134	614	61	38	20
MIN	6.4	9.3	14	11	10	79	69	39	32	6.2	5.8	3.5
CFSM	.29	.36	.46	.45	.76	3.19	4.48	1.97	2.42	.48	.35	.19
IN.	.34	.40	.53	.52	.82	3.67	5.00	2.27	2.70	.55	.40	.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2000, BY WATER YEAR (WY)

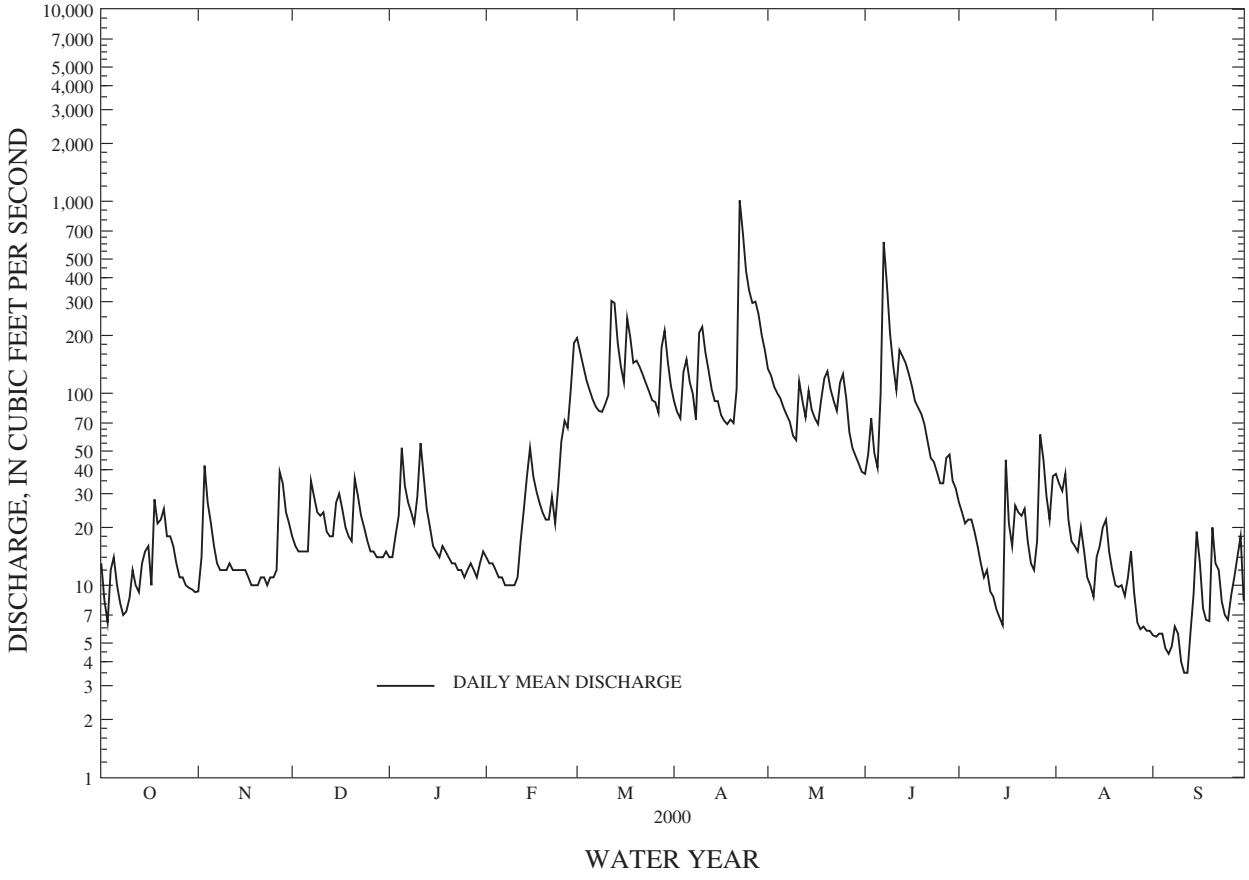
MEAN	10.8	14.0	72.5	73.0	81.6	166	151	90.6	77.2	19.6	7.73	7.90
MAX	14.3	16.3	247	104	119	267	251	165	176	47.3	15.4	14.8
(WY)	1999	1998	1997	1997	1998	1998	1997	1998	1998	1998	2000	1999
MIN	5.23	9.84	8.81	20.0	33.9	113	48.6	31.1	6.31	2.10	1.16	3.48
(WY)	1998	1999	1999	2000	2000	1997	1999	1999	1999	1999	1999	1997

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1997 - 2000	
ANNUAL TOTAL	14453.45		20792.8			
ANNUAL MEAN	39.6		56.8		59.7	
HIGHEST ANNUAL MEAN					84.1	1998
LOWEST ANNUAL MEAN					38.2	1999
HIGHEST DAILY MEAN	465	Jan 25	1010	Apr 22	1270	Mar 10 1998
LOWEST DAILY MEAN	.57	Aug 10	3.5	Sep 11	.57	Aug 10 1999
ANNUAL SEVEN-DAY MINIMUM	.63	Aug 4	4.6	Sep 6	.63	Aug 4 1999
INSTANTANEOUS PEAK FLOW			1340	Apr 22	1670	Mar 10 1998
INSTANTANEOUS PEAK STAGE			12.67	Apr 22	13.76	Mar 10 1998
INSTANTANEOUS LOW FLOW			3.1	Sep 11	.48	Aug 10 1999
ANNUAL RUNOFF (CFSM)	.89		1.28		1.35	
ANNUAL RUNOFF (INCHES)	12.11		17.42		18.28	
10 PERCENT EXCEEDS	100		135		168	
50 PERCENT EXCEEDS	17		22		25	
90 PERCENT EXCEEDS	1.2		8.8		3.9	

e Estimated

QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA 01095375



01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--April 1997 to current year.

INSTRUMENTATION.--Specific Conductance and Temperature water-quality monitor.

REMARKS.--Water Temperature and Specific Conductance records good. Extremes for period of daily record and current year are for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD, APRIL 1997 TO CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 659 µS/cm, Jan. 9, 1999; minimum, 61 µS/cm, June 18, 1998.
WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 1, 1999; minimum, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum recorded, 377 µS/cm, Feb. 15; minimum, 77 µS/cm, Apr. 22.
WATER TEMPERATURE: Maximum recorded, 24.3°C, Aug. 10; minimum, 0.0°C, Jan. 14.

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	190	171	182	211	204	208	197	186	192	217	190	204
2	200	190	195	214	187	206	195	180	189	216	209	213
3	208	200	204	195	187	189	195	189	193	215	203	211
4	210	198	205	193	187	190	195	191	193	205	184	200
5	215	196	203	197	193	195	196	189	193	184	155	162
6	208	195	198	195	192	193	193	186	190	168	156	162
7	240	182	201	196	191	193	186	163	173	174	165	170
8	218	205	210	198	191	195	181	171	176	176	169	172
9	233	218	226	198	191	194	185	180	182	181	172	177
10	234	227	231	196	192	194	186	176	182	203	155	178
11	232	219	226	199	193	195	181	177	179	167	147	158
12	226	217	221	202	195	198	183	180	181	167	165	167
13	230	223	226	200	195	197	185	180	183	167	152	162
14	229	204	219	201	196	199	189	182	186	164	151	155
15	204	194	197	205	198	201	188	179	183	166	156	162
16	214	198	206	211	204	207	182	175	178	169	163	166
17	225	213	220	213	207	211	184	181	183	171	164	167
18	224	194	205	217	207	212	186	182	184	177	170	174
19	204	194	199	218	207	213	189	174	182	180	175	177
20	204	197	202	216	202	208	197	175	186	183	180	181
21	197	190	193	207	202	204	197	182	186	181	179	180
22	195	190	193	206	203	204	193	184	188	182	179	181
23	196	191	193	210	206	207	193	182	187	185	182	184
24	194	192	193	213	208	210	193	174	183	185	181	184
25	199	194	196	218	210	214	197	172	182	183	181	182
26	202	197	199	213	208	210	201	182	191	188	180	181
27	203	200	201	211	159	184	200	186	191	188	178	182
28	203	199	201	187	178	183	203	183	192	192	182	187
29	204	200	202	189	183	185	211	192	200	192	187	190
30	204	199	201	193	187	190	216	202	209	192	187	190
31	213	203	209	---	---	---	213	196	204	220	185	192
MONTH	240	171	205	218	159	200	216	163	187	220	147	179

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA--Continued

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	220	194	208	119	112	114	131	120	123	117	111	114
2	225	195	206	116	114	115	130	123	126	121	115	118
3	225	215	219	122	113	118	130	127	128	124	114	119
4	219	212	216	128	119	123	171	129	151	141	120	129
5	220	207	214	131	127	129	148	139	142	163	141	150
6	217	207	211	135	130	132	139	129	134	186	163	174
7	219	209	214	137	133	135	134	129	132	216	186	200
8	219	208	212	139	135	137	140	132	136	254	216	231
9	216	208	211	140	135	137	137	112	124	276	251	267
10	228	207	217	136	130	134	116	110	113	251	210	230
11	224	212	220	200	134	143	117	113	115	216	193	212
12	233	204	214	176	107	127	117	114	116	193	171	176
13	224	209	215	114	105	109	120	115	118	172	159	167
14	307	197	224	116	113	114	123	117	119	184	159	170
15	377	259	349	121	116	118	140	122	133	199	184	191
16	344	297	317	124	119	121	139	134	135	214	198	204
17	297	255	282	131	114	120	139	133	135	230	214	221
18	256	236	248	128	116	122	135	133	134	229	196	219
19	236	202	218	129	120	125	137	134	135	196	166	178
20	240	210	226	129	116	120	136	135	135	170	166	168
21	248	218	231	119	114	116	135	95	130	174	168	171
22	251	215	232	119	115	118	95	77	82	182	174	178
23	252	226	241	120	113	116	83	80	82	192	182	186
24	284	248	268	120	115	118	92	83	88	188	168	178
25	268	209	255	123	120	121	98	91	95	169	152	163
26	222	207	212	125	119	122	97	96	97	152	139	144
27	217	193	208	126	122	125	101	97	98	143	137	140
28	193	160	177	126	112	118	109	101	105	148	143	144
29	161	116	129	113	106	109	113	108	110	156	148	152
30	---	---	---	127	107	116	114	111	112	171	155	163
31	---	---	---	127	118	122	---	---	---	187	170	178
MONTH	377	116	227	200	105	122	171	77	119	276	111	175

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	191	187	190	160	155	157	163	153	157	234	228	230
2	200	190	195	155	154	154	154	152	153	234	231	233
3	203	200	202	156	150	153	158	150	154	234	230	232
4	213	201	203	160	154	157	152	145	148	234	232	233
5	209	205	207	160	152	158	153	146	149	233	228	230
6	210	187	208	---	---	---	157	152	155	228	222	226
7	187	100	118	---	---	---	164	157	160	226	220	224
8	108	98	103	---	---	---	173	164	168	226	222	224
9	123	108	116	---	---	---	178	171	173	226	224	225
10	143	123	131	---	---	---	181	174	177	228	224	226
11	162	143	153	---	---	---	192	181	186	237	218	224
12	166	145	159	183	174	177	195	192	193	231	220	223
13	145	137	139	187	177	182	197	195	196	232	220	226
14	149	139	143	189	184	187	198	197	197	224	215	219
15	156	149	152	188	184	186	201	197	199	216	193	208
16	165	156	160	188	164	175	203	200	201	197	191	193
17	177	165	171	193	182	189	203	201	202	197	192	194
18	180	177	178	191	187	189	202	200	201	204	195	198
19	180	179	179	195	191	193	204	201	202	207	199	202
20	179	176	177	192	175	183	203	201	202	211	188	201
21	176	173	174	176	166	172	204	200	202	213	190	204
22	173	171	172	171	165	168	206	201	204	219	209	213
23	173	172	172	177	167	171	209	206	207	219	204	212
24	172	171	171	186	177	181	213	208	211	226	219	222
25	173	170	171	192	186	189	217	212	214	225	218	221
26	173	171	172	192	191	192	219	214	217	223	216	220
27	172	154	163	192	189	191	221	216	218	217	207	212
28	162	158	161	189	178	184	220	218	219	210	202	206
29	164	162	163	179	171	176	223	218	220	225	200	215
30	164	160	162	171	166	167	226	218	221	219	206	216
31	---	---	---	168	163	167	229	225	227	---	---	---
MONTH	213	98	166	---	---	---	229	145	191	237	188	217

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	16.4	12.5	14.6	11.6	9.1	10.2	3.1	1.2	2.4	2.4	0.3	1.2
2	16.1	12.0	14.3	12.0	8.6	10.1	2.4	.8	1.6	3.2	1.4	2.2
3	16.3	13.8	14.9	13.0	10.0	12.0	4.0	2.0	3.1	4.4	3.0	3.6
4	14.4	11.9	12.9	10.0	7.6	8.7	5.0	3.6	4.3	5.2	3.0	3.7
5	13.1	11.1	11.7	9.1	6.7	8.0	6.0	3.9	5.0	4.2	1.5	2.6
6	12.6	10.2	11.4	9.7	7.9	8.5	7.0	5.4	6.2	2.2	.8	1.4
7	11.8	9.1	10.3	8.2	5.7	7.2	7.7	5.7	7.0	2.6	1.1	1.7
8	11.1	7.4	9.6	6.5	4.7	5.4	5.7	4.1	5.0	2.3	1.2	1.6
9	14.4	10.9	12.7	7.1	4.8	6.1	4.7	3.3	3.9	3.0	1.3	2.0
10	13.7	12.2	12.9	9.7	7.0	8.5	5.3	2.8	4.1	3.3	2.3	2.8
11	15.3	12.5	13.9	9.3	5.2	7.6	5.0	2.3	3.7	3.4	2.4	2.9
12	13.2	10.8	12.1	6.1	4.2	5.3	3.2	1.9	2.5	3.1	1.9	2.5
13	14.1	10.9	12.6	7.2	5.5	6.4	3.6	1.6	2.7	1.9	.3	1.2
14	14.1	10.7	13.1	7.4	5.4	6.5	3.9	3.2	3.5	.6	.0	.2
15	11.5	9.2	10.4	6.8	4.2	5.6	4.0	3.7	3.9	.2	.1	.1
16	12.1	8.6	10.5	4.3	3.2	3.8	4.8	3.7	4.1	.4	.1	.2
17	14.3	11.4	13.0	3.9	2.2	3.0	3.8	2.4	3.2	.2	.1	.1
18	14.1	11.0	12.9	4.4	2.1	3.1	2.7	1.6	2.1	.2	.1	.1
19	11.5	9.2	10.4	5.4	2.9	4.1	2.1	.7	1.3	.2	.1	.1
20	10.2	9.7	9.9	7.8	3.8	5.9	2.1	.5	1.4	.2	.1	.1
21	11.1	9.0	9.9	8.2	6.6	7.4	2.8	1.6	2.2	.2	.1	.1
22	10.1	7.9	9.1	9.3	7.0	8.3	2.8	1.4	2.2	.2	.1	.1
23	11.2	9.3	10.2	11.0	9.0	9.8	2.2	.9	1.4	.2	.1	.1
24	9.3	8.4	8.9	11.7	9.6	10.8	1.6	.3	.9	.2	.1	.1
25	9.9	7.5	8.4	11.3	9.6	10.5	1.1	.1	.5	.1	.1	.1
26	10.1	6.5	8.4	9.8	9.3	9.5	1.5	.3	.9	.2	.1	.1
27	9.4	7.5	8.5	10.8	8.7	10.2	1.4	.4	.8	.2	.1	.1
28	9.1	6.3	7.7	8.7	7.1	7.8	1.1	.1	.5	.2	.1	.1
29	10.2	7.0	8.5	7.2	5.3	6.5	1.5	.4	.8	.2	.1	.1
30	9.4	6.9	8.3	5.4	3.1	4.7	2.3	.8	1.4	.2	.1	.1
31	11.8	8.3	10.2	---	---	---	2.0	.6	1.2	.2	.1	.1
MONTH	16.4	6.3	11.0	13.0	2.1	7.4	7.7	.1	2.7	5.2	.0	1.0

		FEBRUARY			MARCH			APRIL			MAY	
1	0.2	0.1	0.1	3.0	1.3	2.0	10.4	5.8	8.0	12.9	8.7	10.7
2	.2	.1	.1	2.9	1.8	2.3	11.4	7.8	9.4	13.0	10.5	11.3
3	.2	.1	.1	3.6	1.5	2.3	9.9	9.1	9.4	14.9	9.2	11.9
4	.2	.1	.1	4.0	1.5	2.4	11.2	9.0	10.1	15.9	10.5	13.1
5	.2	.1	.2	3.8	2.1	2.8	10.7	8.7	9.8	16.6	12.4	14.3
6	.3	.1	.2	4.6	1.9	3.0	9.5	7.9	8.6	17.9	14.4	15.9
7	.4	.1	.2	4.8	1.8	3.2	11.3	8.1	9.6	20.3	14.3	17.1
8	.3	.1	.1	5.5	3.0	4.1	14.4	9.2	11.4	21.6	17.1	19.2
9	.4	.1	.2	7.1	3.5	5.2	12.1	9.0	11.0	23.3	18.5	20.5
10	1.0	.1	.5	6.5	4.5	5.3	10.6	8.1	9.1	19.5	13.9	16.1
11	.9	.4	.6	4.5	3.0	3.8	9.9	7.5	8.7	16.2	13.6	14.8
12	1.1	.1	.4	3.8	3.2	3.5	9.1	7.4	8.5	17.3	14.0	15.7
13	.6	.1	.3	4.6	2.6	3.3	10.6	6.2	8.2	15.9	14.1	14.6
14	.6	.3	.4	5.2	2.4	3.6	11.6	6.9	9.0	18.0	13.7	15.5
15	1.2	.3	.6	5.9	3.1	4.4	13.2	8.4	10.7	16.1	13.8	15.0
16	1.5	.3	.8	7.7	4.5	5.9	13.1	11.4	12.1	16.8	12.4	14.6
17	1.7	.2	.7	5.9	3.1	4.4	12.2	9.9	11.3	17.7	13.8	15.7
18	.8	.2	.4	4.6	2.1	3.1	10.0	9.2	9.7	17.3	15.3	16.2
19	.4	.2	.3	5.2	1.9	3.4	9.2	8.7	8.9	16.4	13.4	14.8
20	1.6	.4	.8	5.4	3.0	4.1	11.5	8.6	9.8	14.8	13.0	13.8
21	2.2	.3	.9	4.6	3.9	4.2	10.7	7.9	9.7	14.0	13.4	13.6
22	2.1	.2	.8	5.6	4.0	4.5	8.8	7.8	8.5	14.0	13.0	13.5
23	2.8	.5	1.4	7.8	3.7	5.6	8.4	8.0	8.1	15.2	12.8	13.9
24	3.0	1.2	1.8	9.1	5.2	7.0	9.0	7.6	8.3	15.2	13.6	14.4
25	1.6	.8	1.3	9.2	5.4	7.3	10.8	7.5	9.0	17.2	14.8	15.8
26	1.3	.8	1.1	10.5	7.1	8.5	9.4	7.5	8.4	17.4	14.6	16.0
27	2.5	1.2	1.8	10.1	6.2	8.2	8.9	7.2	8.0	17.9	14.5	16.2
28	2.3	1.5	2.0	9.1	7.5	8.3	9.1	7.9	8.4	16.6	14.5	15.4
29	2.3	.6	1.4	9.2	7.5	8.1	11.1	7.3	9.0	15.5	13.9	14.7
30	---	---	---	8.4	6.9	7.7	12.7	9.2	10.6	16.6	12.4	14.5
31	---	---	---	9.2	5.9	7.4	---	---	---	18.0	13.4	15.7
MONTH	3.0	.1	.7	10.5	1.3	4.8	14.4	5.8	9.4	23.3	8.7	15.0

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	19.9	15.6	17.8	21.9	17.9	20.0	18.1	17.4	17.7	24.0	19.6	21.5
2	21.5	17.7	19.3	23.0	18.3	20.6	19.4	17.7	18.4	21.9	18.5	20.4
3	20.0	17.9	18.9	22.1	19.6	21.0	20.9	18.9	19.8	20.6	17.7	19.1
4	19.0	16.1	17.7	22.4	20.1	21.3	21.4	19.0	19.9	20.3	17.5	19.2
5	17.7	16.0	16.7	23.1	19.8	21.3	21.3	17.9	19.6	19.1	13.8	16.2
6	16.0	13.5	14.6	---	---	---	20.0	17.2	18.8	18.0	11.5	14.4
7	16.1	13.6	15.0	---	---	---	22.1	18.6	20.1	17.9	11.5	14.5
8	16.7	14.5	15.6	---	---	---	23.5	19.9	21.6	18.8	13.4	15.8
9	17.6	15.9	16.6	---	---	---	22.6	19.9	21.1	18.2	15.5	16.9
10	20.9	17.0	18.8	---	---	---	24.3	20.9	22.3	20.7	14.6	17.2
11	20.1	18.1	19.1	---	---	---	23.1	19.1	21.1	20.2	15.0	17.2
12	18.5	16.4	17.1	21.8	16.5	19.2	21.0	18.8	20.1	19.6	16.7	18.0
13	16.9	15.7	16.2	22.2	16.5	19.5	19.0	17.7	18.3	21.6	17.6	19.0
14	16.1	15.4	15.8	23.4	18.3	20.8	18.2	17.0	17.5	20.1	15.0	17.0
15	16.5	15.6	16.0	20.8	19.0	19.7	19.0	17.2	17.9	17.6	15.9	16.4
16	20.6	16.3	18.1	21.2	17.9	19.6	19.4	17.6	18.2	17.8	14.3	15.7
17	22.2	19.0	20.5	20.4	18.6	19.5	19.5	16.5	17.8	15.9	12.8	14.2
18	20.9	18.9	19.6	21.8	18.8	20.2	17.2	15.1	16.5	17.8	13.3	15.2
19	19.6	18.3	19.0	20.6	19.1	19.9	19.5	15.7	17.5	18.2	14.7	16.4
20	20.9	17.6	19.3	21.8	18.2	19.9	19.1	15.2	16.9	19.1	16.3	17.5
21	21.4	18.1	19.8	22.4	17.9	19.9	18.6	14.0	16.3	19.6	16.5	18.0
22	21.3	18.9	20.1	21.9	18.7	20.1	19.0	14.8	16.9	17.3	14.3	15.5
23	21.0	18.6	19.9	21.5	17.9	19.7	17.8	15.5	16.8	15.6	13.1	14.6
24	21.6	18.3	20.0	21.7	17.6	19.7	20.7	16.5	18.4	17.1	15.2	16.0
25	22.8	19.7	21.2	20.7	18.5	19.6	20.5	16.3	18.1	15.7	12.4	14.0
26	21.6	20.4	21.1	19.2	17.4	18.2	21.4	16.5	18.8	13.4	12.4	12.8
27	22.8	20.9	21.7	17.5	16.2	17.0	21.6	16.7	19.2	14.8	11.0	12.7
28	22.5	19.6	21.1	18.3	16.7	17.4	20.0	17.5	18.8	13.6	10.8	12.2
29	21.7	20.0	20.9	19.1	17.3	18.3	21.7	16.8	18.8	11.5	8.6	10.0
30	22.0	19.4	20.6	19.2	18.1	18.7	20.6	15.8	18.4	12.8	8.2	10.2
31	---	---	---	18.5	17.5	17.8	22.6	18.5	20.3	---	---	---
MONTH	22.8	13.5	18.6	---	---	---	24.3	14.0	18.8	24.0	8.2	15.9

01096000 SQUANNACOOK RIVER NEAR WEST GROTON, MA

LOCATION.--Lat 42°38'03", long 71°39'30", Middlesex County, Hydrologic Unit 01070004, on left bank 0.7 mi downstream from Trout Brook and 2.7 mi northwest of West Groton.

DRAINAGE AREA.--63.7 mi^2, excludes 2.16 mi^2, above outlet of Ashby Reservoir.

PERIOD OF RECORD.--Discharge: October 1949 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 244.27 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.16 mi^2 upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except for occasional periods of spill. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--51 years, 113 ft^3/s, 24.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,220 ft^3/s, Apr. 6, 1987, gage height, 8.16 ft; minimum daily, 2.0 ft^3/s, Sept. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,410 ft^3/s, Apr. 23, gage height, 5.96 ft; minimum, 19 ft^3/s, Sept. 11-13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	42	68	55	63	439	189	224	73	49	428	21
2	47	41	61	54	e60	343	164	197	68	45	253	28
3	42	68	59	60	e57	312	150	181	71	45	163	34
4	41	130	59	75	e54	268	156	163	82	44	134	32
5	76	94	58	135	e52	230	223	152	76	39	111	30
6	75	74	56	149	e50	205	230	147	73	35	83	27
7	59	64	81	115	e48	182	194	137	437	33	71	26
8	48	56	123	96	e47	168	168	126	849	30	70	23
9	43	53	106	85	e47	171	173	124	437	27	63	22
10	42	53	87	85	e48	178	342	125	250	33	57	22
11	47	56	83	218	e49	188	e345	170	179	39	49	20
12	50	52	80	235	e52	247	e285	241	146	36	44	19
13	45	51	72	159	58	440	e215	194	152	32	41	26
14	42	52	69	e115	76	382	e186	172	138	28	45	e29
15	37	52	71	e100	146	290	168	157	128	26	60	36
16	37	53	85	87	170	268	154	132	119	30	68	47
17	36	50	95	88	139	358	143	113	109	38	78	45
18	43	51	85	75	114	537	131	100	116	41	67	34
19	51	48	73	70	99	386	125	114	131	38	55	31
20	59	46	67	66	92	285	e127	150	121	35	49	43
21	85	49	89	66	83	242	129	150	97	32	42	59
22	90	47	122	65	78	221	584	130	82	47	37	46
23	75	47	103	61	76	203	1260	115	86	64	33	37
24	79	47	86	59	99	187	852	111	94	52	33	33
25	69	49	69	61	187	171	592	148	78	40	33	32
26	59	49	62	65	351	161	408	178	68	38	32	31
27	54	65	62	66	329	147	394	159	65	58	29	30
28	51	113	59	63	407	167	395	123	61	112	27	28
29	48	98	56	60	565	406	333	102	57	108	25	25
30	45	78	55	59	---	350	273	88	52	77	23	24
31	44	---	56	62	---	242	---	80	---	166	22	---
TOTAL	1662	1828	2357	2809	3696	8374	9088	4503	4495	1517	2325	940
MEAN	53.6	60.9	76.0	90.6	127	270	303	145	150	48.9	75.0	31.3
MAX	90	130	123	235	565	537	1260	241	849	166	428	59
MIN	36	41	55	54	47	147	125	80	52	26	22	19
CFSM	.84	.96	1.19	1.42	2.00	4.24	4.76	2.28	2.35	.77	1.18	.49
IN.	.97	1.07	1.38	1.64	2.16	4.89	5.31	2.63	2.63	.89	1.36	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2000, BY WATER YEAR (WY)

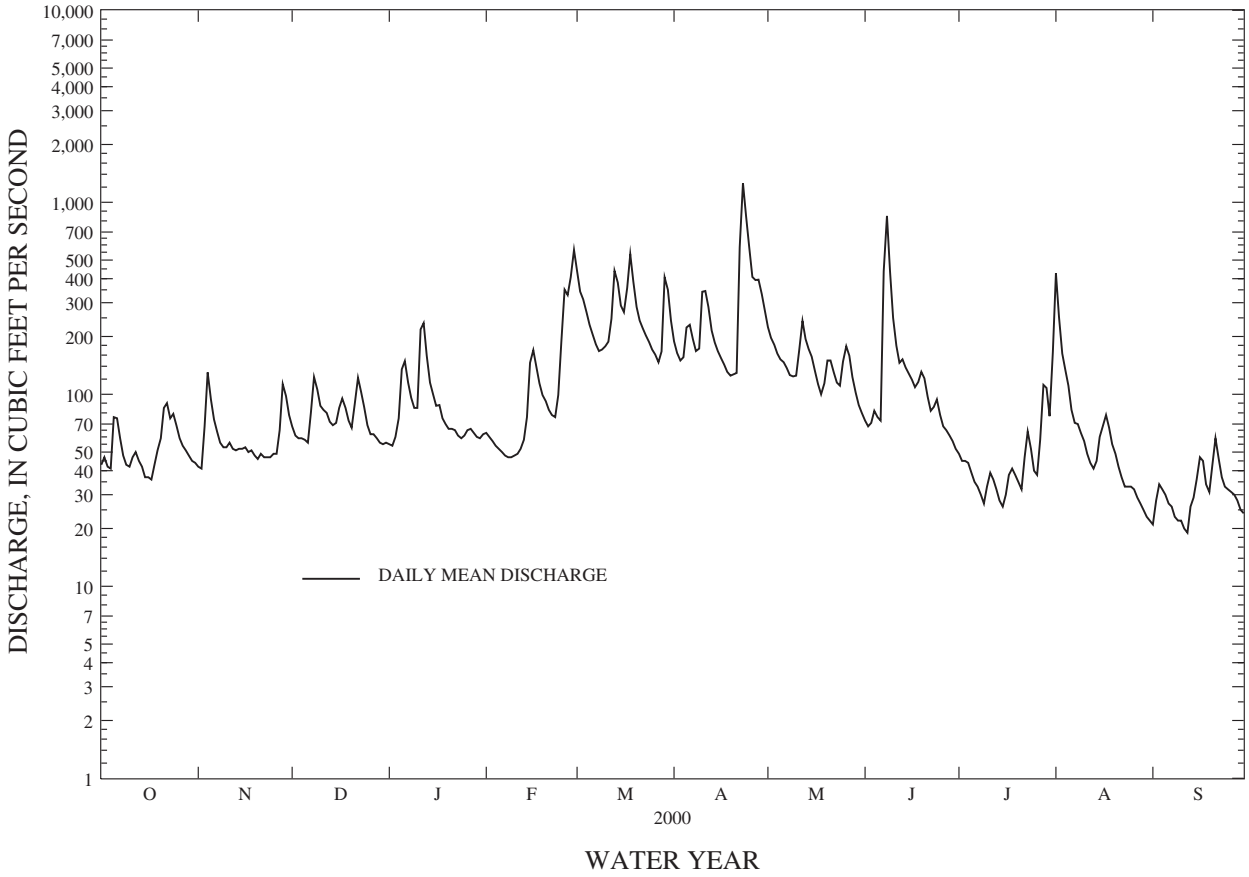
MEAN	54.4	99.2	122	124	133	229	273	147	83.4	37.1	29.7	31.5
MAX	296	304	349	323	328	554	654	343	330	84.7	98.8	245
(WY)	1956	1956	1997	1956	1970	1983	1987	1954	1998	1951	1986	1954
MIN	9.41	12.6	22.7	20.1	33.6	81.5	75.8	51.9	18.5	8.26	6.21	6.80
(WY)	1965	1965	1966	1981	1980	1989	1985	1965	1999	1965	1966	1965

01096000 SQUANNACOOK RIVER NEAR WEST GROTON, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1950 - 2000	
ANNUAL TOTAL	28988.7		43594			
ANNUAL MEAN	79.4		119		113	
HIGHEST ANNUAL MEAN					174	1956
LOWEST ANNUAL MEAN					35.9	1965
HIGHEST DAILY MEAN	700	Mar 5	1260	Apr 23	3420	Apr 6 1987
LOWEST DAILY MEAN	5.3	Aug 10	19	Sep 12	2.0	Sep 7 1965
ANNUAL SEVEN-DAY MINIMUM	5.7	Aug 5	23	Sep 7	4.3	Aug 28 1966
INSTANTANEOUS PEAK FLOW			1410	Apr 23	4220	Apr 6 1987
INSTANTANEOUS PEAK STAGE			5.96	Apr 23	8.16	Apr 6 1987
INSTANTANEOUS LOW FLOW			19	Sep 11		
ANNUAL RUNOFF (CFSM)	1.25		1.87		1.78	
ANNUAL RUNOFF (INCHES)	16.93		25.46		24.15	
10 PERCENT EXCEEDS	179		248		256	
50 PERCENT EXCEEDS	54		72		68	
90 PERCENT EXCEEDS	8.4		33		15	

e Estimated

SQUANNACOOK RIVER NEAR WEST GROTON, MA 01096000



01096500 NASHUA RIVER AT EAST PEPPERELL, MA

LOCATION.--Lat 42°40'03", long 71°34'32", Middlesex County, Hydrologic Unit 01070004, on right bank 200 ft downstream from powerplant of James River-Pepperell Co. at East Pepperell and 0.8 mi upstream from Nissitissit River.

DRAINAGE AREA.--Total above gage, 435 mi^2, net above gage, 316 mi^2, excludes 119 mi^2 for use of Boston metropolitan district and city of Worcester.

PERIOD OF RECORD.--Discharge: October 1935 to current year.
Water-quality records: Water years 1952-53, 1973-74.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 169.04 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Extremes and daily discharge include water released while diverting flow of Nashua River for use of Boston metropolitan district and water diverted into basin from Ware River Basin since 1955 for municipal use of Fitchburg. Prior to October 1981, water diverted around station through plant of James River-Pepperell Co. was added to daily figures. Flow regulated by powerplant immediately upstream. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--65 years, 584 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft^3/s, Mar. 20, 1936, gage height, 19.1 ft, from floodmarks, from rating curve extended above 12,000 ft^3/s on basis of velocity-area studies; minimum daily, 1.1 ft^3/s, Aug. 13, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,660 ft^3/s, Apr. 24, gage height, 8.95 ft; minimum daily, 49 ft^3/s, Jan. 3.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	273	422	470	331	1850	912	1580	468	413	1030	188
2	265	349	396	173	326	1500	822	1360	457	334	983	104
3	256	308	331	49	320	1290	715	1230	462	233	680	61
4	437	496	302	177	318	1110	774	1100	494	186	e600	131
5	243	474	302	542	270	944	915	981	472	288	e520	200
6	207	341	300	716	251	977	917	865	503	290	e480	194
7	409	396	303	597	255	879	822	827	1910	251	e440	186
8	290	409	421	458	261	809	732	771	3210	244	407	188
9	141	396	483	424	266	783	891	741	3080	240	398	181
10	202	188	470	418	286	780	1410	612	1960	238	400	173
11	213	169	461	712	183	820	1410	963	1290	238	342	171
12	356	285	452	905	123	1160	1110	1100	1070	250	205	169
13	306	538	407	779	242	1770	947	961	1080	302	63	98
14	193	288	372	711	331	1740	839	962	1020	316	e104	140
15	195	157	370	674	653	1370	795	931	963	258	e175	213
16	197	417	372	337	692	1170	694	840	892	135	e250	286
17	199	496	377	182	602	1360	701	706	843	85	517	396
18	243	128	382	316	490	1920	663	762	731	273	618	173
19	371	112	382	411	431	1730	753	658	963	288	239	334
20	398	301	379	e440	458	1400	668	836	876	259	63	215
21	412	287	378	e380	406	1190	687	851	839	249	235	312
22	466	280	408	e400	371	1050	2040	839	651	281	265	332
23	435	280	508	e370	359	946	3940	694	468	325	258	284
24	458	297	516	e350	420	877	4570	717	568	297	242	262
25	467	286	500	e360	712	817	4220	903	613	285	218	256
26	266	284	402	e362	1160	769	3340	882	644	269	212	143
27	384	324	176	311	1270	750	2710	744	492	301	211	99
28	497	613	86	311	1530	782	2430	647	303	645	211	167
29	175	584	242	310	1960	1260	2150	528	253	602	211	241
30	57	461	432	314	---	1330	1840	514	321	416	210	240
31	135	---	488	331	---	1070	---	489	---	537	207	---
TOTAL	9086	10217	11820	13290	15277	36203	45417	26594	27896	9328	10994	6137
MEAN	293	341	381	429	527	1168	1514	858	930	301	355	205
MAX	497	613	516	905	1960	1920	4570	1580	3210	645	1030	396
MIN	57	112	86	49	123	750	663	489	253	85	63	61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2000, BY WATER YEAR (WY)

MEAN	317	482	599	618	681	1144	1255	729	493	253	215	233
MAX	1356	1781	1616	1417	1544	3930	3676	1382	1976	1366	966	1671
(WY)	1956	1956	1997	1979	1970	1936	1987	1953	1982	1938	1938	1938
MIN	91.1	108	134	116	186	386	369	236	107	90.0	71.3	76.4
(WY)	1942	1965	1966	1981	1980	1989	1985	1965	1999	1966	1966	1995

01096500 NASHUA RIVER AT EAST PEPPERELL, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1936 - 2000	
ANNUAL TOTAL	149413		222259			
ANNUAL MEAN	409		607		584	
HIGHEST ANNUAL MEAN					969	1956
LOWEST ANNUAL MEAN					214	1965
HIGHEST DAILY MEAN	2100	Mar 5	4570	Apr 24	19400	Mar 20 1936
LOWEST DAILY MEAN	53	Aug 2	49	Jan 3	1.1	Aug 13 1939
ANNUAL SEVEN-DAY MINIMUM	59	Aug 2	152	Sep 1	14	Aug 1 1965
INSTANTANEOUS PEAK FLOW			4660	Apr 24	20900	Mar 20 1936
INSTANTANEOUS PEAK STAGE			8.95	Apr 24	19.10	Mar 20 1936
INSTANTANEOUS LOW FLOW			41	Oct 29		
10 PERCENT EXCEEDS	941		1160		1260	
50 PERCENT EXCEEDS	290		412		369	
90 PERCENT EXCEEDS	70		186		98	

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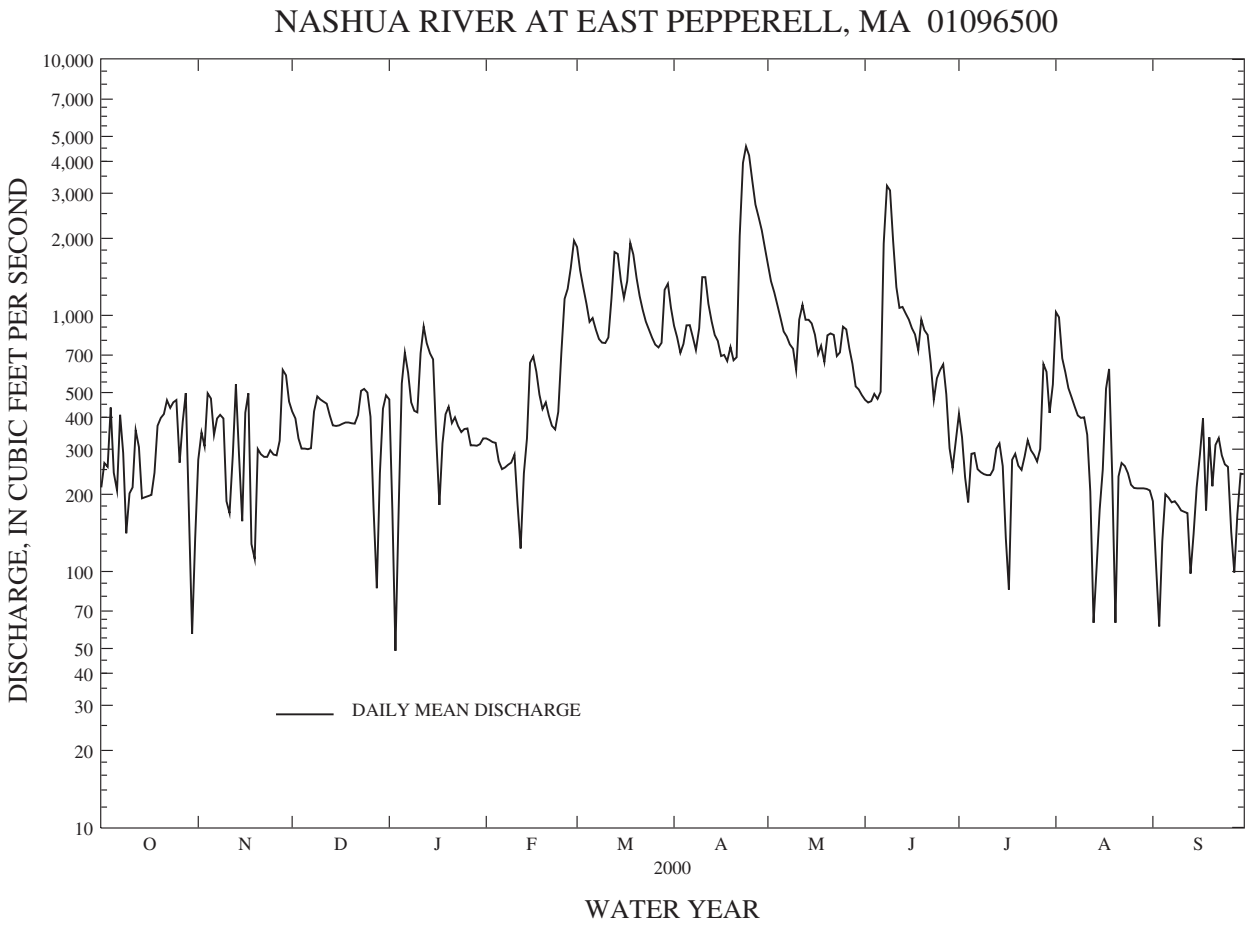

01097000 ASSABET RIVER AT MAYNARD, MA

LOCATION.--Lat 42°25'55", long 71°27'01", Middlesex County, Hydrologic Unit 01070005, on right bank at Maynard, 150 ft upstream from bridge on State Highway 27, 1.7 mi downstream from Assabet Brook, and 7.1 mi upstream from confluence with Sudbury River.

DRAINAGE AREA.--116 mi^2.

PERIOD OF RECORD.--Discharge: July 1941 to current year.
Water-quality records: Water years 1954, 1967-74.

REVISED RECORDS.--WSP 1231: 1945-46.

GAGE.--Water-stage recorder. Datum of gage is 142.12 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional diurnal fluctuation at low flow by mills upstream; greater regulation prior to 1969. Since 1962, high flow affected by retarding reservoirs and, since 1970, occasional release at low flow by these reservoirs.

AVERAGE DISCHARGE.--59 years, 190 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft^3/s, Aug. 20, 1955, gage height, 8.94 ft; maximum gage height, 8.96 ft, Aug. 20, 1955 (backwater from debris); minimum daily, 0.20 ft^3/s, Feb. 7, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, that of Aug. 20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,550 ft^3/s, Apr. 24, gage height, 5.62 ft; minimum daily, 25 ft^3/s, Sept. 9, 11, 12.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	68	107	96	114	575	370	528	138	95	214	40
2	60	73	92	92	e108	502	322	468	132	82	203	39
3	52	126	95	102	e102	432	287	418	156	72	173	37
4	57	159	92	132	101	372	283	375	165	66	153	36
5	74	155	87	214	99	330	284	335	145	62	130	e34
6	72	122	86	255	e96	295	271	304	167	55	105	31
7	63	95	162	228	94	268	255	280	485	54	88	28
8	55	86	233	187	e93	252	241	260	663	52	76	27
9	52	81	213	165	e83	255	313	263	625	50	67	25
10	51	76	174	167	90	243	469	262	495	56	60	26
11	56	86	153	250	98	246	484	323	386	54	51	25
12	55	94	142	294	e105	408	422	362	361	46	45	25
13	56	98	131	272	e102	549	357	345	364	39	45	32
14	61	90	119	218	167	535	311	333	364	38	71	31
15	63	83	135	e162	285	448	277	331	327	37	89	76
16	62	76	162	158	311	375	255	304	281	53	108	105
17	58	73	171	e125	276	429	239	257	243	53	105	72
18	141	74	159	e122	224	515	224	232	214	54	87	54
19	191	74	139	e118	193	516	248	239	207	55	79	46
20	181	68	126	110	196	461	262	278	195	44	69	58
21	179	74	167	e105	e169	407	270	292	176	38	62	56
22	168	77	205	e102	e154	367	750	266	156	38	55	47
23	165	74	193	e99	159	335	1370	234	139	36	48	43
24	150	72	163	97	198	309	1480	239	122	36	48	39
25	137	78	137	104	297	285	1200	266	115	35	46	38
26	118	88	119	110	438	267	960	266	96	38	43	44
27	96	117	115	e108	517	250	871	234	108	114	38	66
28	86	150	109	e108	563	338	802	195	123	192	34	68
29	86	146	101	e105	604	498	698	169	120	205	35	63
30	73	128	107	e99	---	509	603	158	111	179	34	54
31	70	---	102	107	---	442	---	147	---	198	e37	---
TOTAL	2848	2861	4296	4611	6036	12013	15178	8963	7379	2226	2498	1365
MEAN	91.9	95.4	139	149	208	388	506	289	246	71.8	80.6	45.5
MAX	191	159	233	294	604	575	1480	528	663	205	214	105
MIN	51	68	86	92	83	243	224	147	96	35	34	25

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

MEAN	92.0	150	194	221	250	405	385	237	153	72.8	61.3	63.5
MAX	375	542	547	670	696	776	1052	443	788	254	561	542
(WY)	1956	1956	1997	1979	1970	1983	1987	1954	1982	1959	1955	1954
MIN	9.92	22.1	35.6	37.6	72.5	143	127	106	28.8	11.6	5.18	5.00
(WY)	1958	1950	1950	1966	1965	1989	1966	1999	1999	1966	1966	1957

01097000 ASSABET RIVER AT MAYNARD, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1941 - 2000	
ANNUAL TOTAL	52934		70274			
ANNUAL MEAN	145		192		190	
HIGHEST ANNUAL MEAN					296	1984
LOWEST ANNUAL MEAN					73.3	1966
HIGHEST DAILY MEAN	770	Feb 4	1480	Apr 24	3650	Aug 20 1955
LOWEST DAILY MEAN	11	Aug 7	25	Sep 9	.20	Feb 7 1965
ANNUAL SEVEN-DAY MINIMUM	12	Aug 5	27	Sep 6	1.0	Feb 2 1965
INSTANTANEOUS PEAK FLOW			1550	Apr 24	4250	Aug 20 1955
INSTANTANEOUS PEAK STAGE			5.62	Apr 24	8.96	Aug 20 1955
INSTANTANEOUS LOW FLOW			24	Sep 12		
10 PERCENT EXCEEDS	345		411		423	
50 PERCENT EXCEEDS	101		127		127	
90 PERCENT EXCEEDS	17		46		25	

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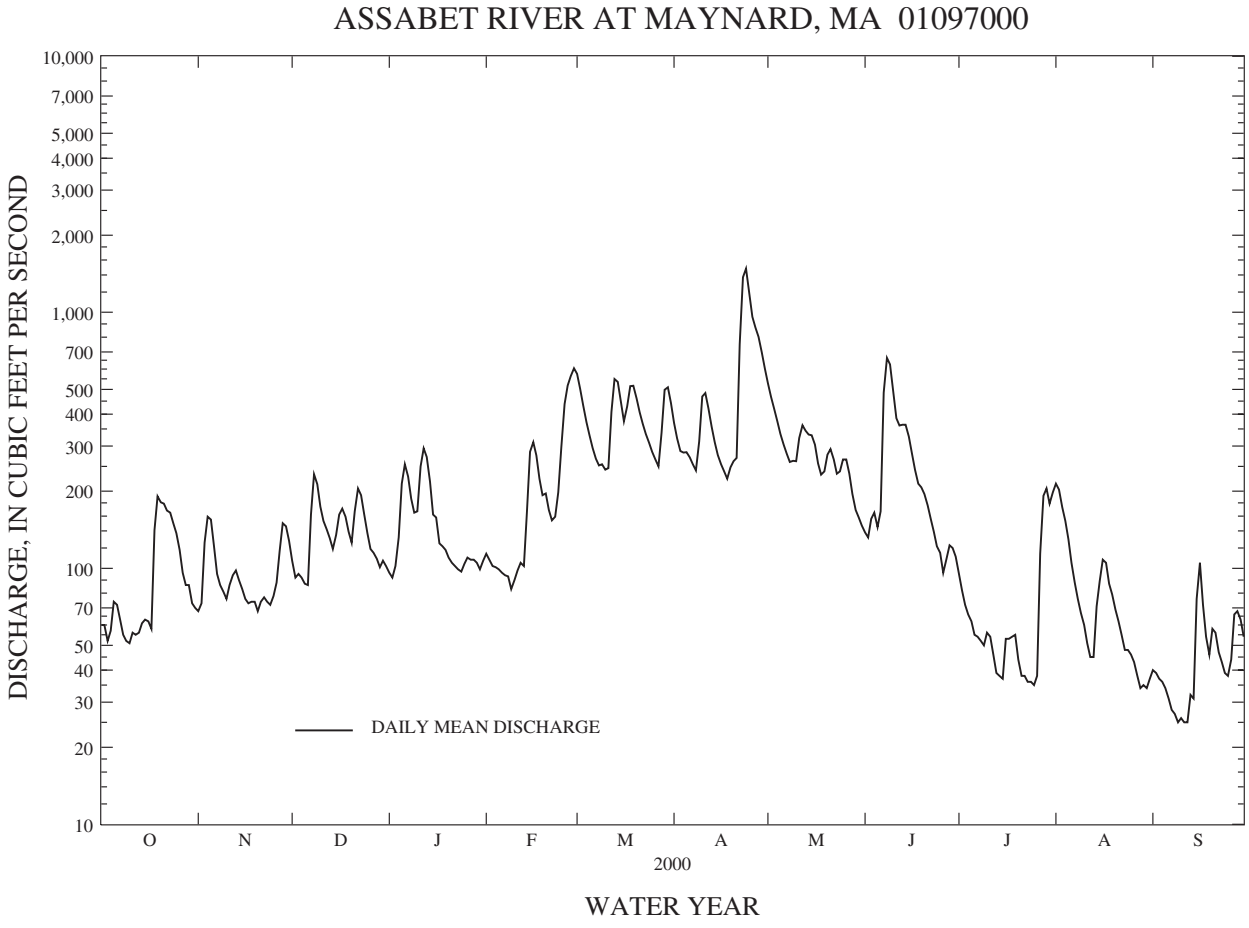


01097300 NASHOBA BROOK NEAR ACTON, MA

LOCATION.--Lat 42°30'45" (revised), long 71°24'17" (revised), Middlesex County, Hydrologic Unit 01070005, on right bank 500 ft downstream from dam at North Acton, 2.2 mi northeast of Acton, and 5 mi upstream from mouth. Prior to Jan. 8, 1997, lat. 42°30'39", long 71°24'25", on right bank 1,500 ft downstream from dam at North Acton.

DRAINAGE AREA.--12.8 mi^2.

PERIOD OF RECORD.--Discharge: Occasional low-flow measurements, water years 1962–63. July 1963 to current year. Water quality records: Water years 1972–74, 1976–78.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 155 ft above sea level, from topographic map. Prior to Jan. 8, 1997, at site 1,000 ft downstream, at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation since 1967 by pond upstream.

AVERAGE DISCHARGE.--37 years, 20.5 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 679 ft^3/s, Jan. 26, 1979, gage height, 5.57 ft, at former site; maximum gage height, 6.89 ft, June 14, 1998; minimum discharge, 0.01 ft^3/s, Sept. 4, 7, 8, 12, 13, 1995, Sept. 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 215 ft^3/s, Apr. 23; gage height, 6.36 ft; minimum, 1.2 ft^3/s, July 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.4	e10	e8.0	e9.3	59	30	35	11	5.7	23	1.7
2	3.5	4.4	9.0	8.0	e10	44	28	33	10	4.5	16	4.4
3	3.2	17	8.4	10	e9.5	38	26	32	16	3.7	12	11
4	3.2	26	8.4	14	e9.0	34	27	30	14	3.3	11	6.6
5	13	18	8.1	27	e8.0	32	29	28	11	3.0	9.5	4.8
6	13	11	18	e28	e8.0	30	26	27	15	2.8	5.9	3.4
7	4.1	8.5	24	22	e8.3	28	25	25	108	2.4	4.3	2.8
8	2.5	9.3	31	17	e8.8	27	23	23	122	2.2	3.6	2.4
9	2.2	8.7	25	15	e8.4	26	29	27	62	1.9	3.0	2.3
10	2.1	7.2	19	16	8.4	27	39	27	35	3.3	2.6	2.1
11	2.2	9.3	e15	31	9.4	27	31	44	28	4.2	2.2	2.0
12	2.2	11	e12	32	e9.6	54	27	42	26	2.8	1.9	2.0
13	2.2	11	e10	e24	9.9	78	25	31	28	2.9	1.8	3.3
14	2.8	10	e14	e19	15	54	22	32	25	1.9	4.8	4.0
15	15	9.2	e12	e17	29	38	20	33	22	1.3	12	9.7
16	7.5	9.1	e13	e14	e32	33	19	27	19	1.6	12	29
17	2.3	8.6	19	12	29	45	19	22	17	2.3	22	15
18	8.5	7.6	16	9.9	23	62	18	20	18	2.1	13	7.8
19	24	6.9	13	8.7	19	46	21	23	18	2.1	7.7	e5.0
20	19	6.4	11	e8.9	19	38	24	30	16	2.0	5.8	7.3
21	20	6.9	18	8.2	18	35	23	27	14	1.8	4.2	e6.2
22	20	7.0	22	8.2	17	33	139	23	11	2.5	3.3	e5.4
23	17	6.6	e17	7.3	17	31	189	21	14	3.6	3.0	e4.5
24	15	6.2	14	e7.0	23	29	128	24	20	2.5	4.1	e3.5
25	13	6.1	11	e7.3	44	27	88	32	13	1.8	4.1	e3.0
26	16	7.1	9.5	e7.6	81	25	65	26	9.1	1.6	3.2	e3.2
27	9.7	10	9.5	e8.4	76	24	69	20	7.9	6.0	2.6	e8.0
28	6.5	18	7.3	e11	82	35	60	16	8.3	23	2.1	e7.5
29	8.9	16	7.7	e13	82	66	47	14	7.4	15	2.0	e6.8
30	11	13	7.7	e10	---	50	39	13	6.4	11	1.8	e5.8
31	5.3	---	e8.4	9.1	---	35	---	12	---	13	1.8	---
TOTAL	278.0	300.5	428.0	438.6	722.6	1210	1355	819	732.1	137.8	206.3	180.5
MEAN	8.97	10.0	13.8	14.1	24.9	39.0	45.2	26.4	24.4	4.45	6.65	6.02
MAX	24	26	31	32	82	78	189	44	122	23	23	29
MIN	2.1	4.4	7.3	7.0	8.0	24	18	12	6.4	1.3	1.8	1.7

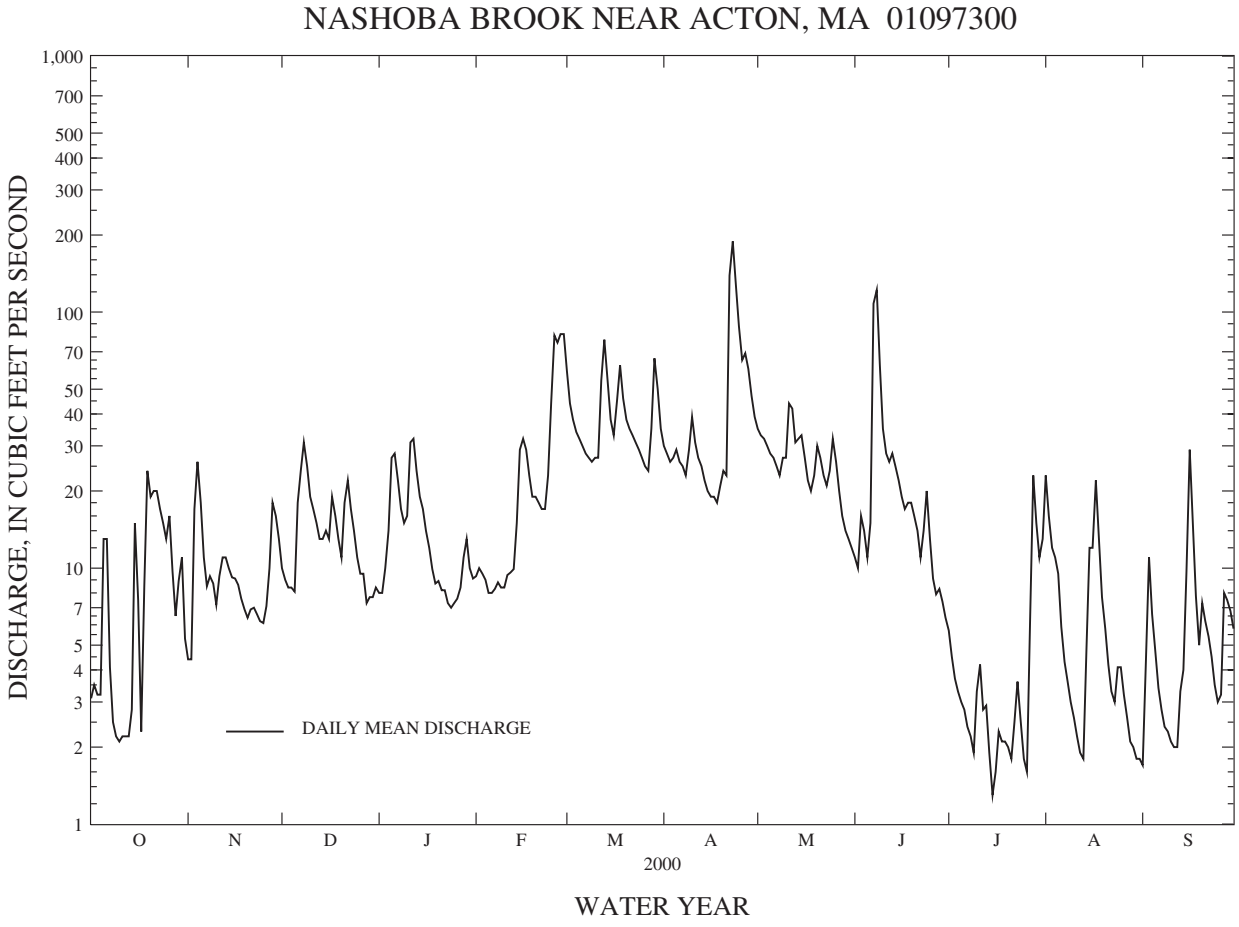
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2000, BY WATER YEAR (WY)

MEAN	9.91	17.3	22.6	25.9	29.4	45.5	41.3	24.5	15.3	5.88	4.26	4.26
MAX	64.0	47.3	55.2	101	88.7	96.9	93.6	57.0	72.5	19.2	19.2	15.7
(WY)	1997	1976	1987	1979	1976	1977	1987	1978	1982	1982	1991	1991
MIN	.60	1.20	2.34	2.58	6.30	15.1	12.7	8.59	1.37	.52	.076	.27
(WY)	1998	1966	1966	1966	1980	1989	1966	1965	1999	1999	1999	1965

01097300 NASHOBA BROOK NEAR ACTON, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1963 - 2000	
ANNUAL TOTAL	4431.28		6808.4			
ANNUAL MEAN	12.1		18.6		20.5	
HIGHEST ANNUAL MEAN					36.1	1978
LOWEST ANNUAL MEAN					7.09	1965
HIGHEST DAILY MEAN	91	Jan 25	189	Apr 23	560	Jan 26 1979
LOWEST DAILY MEAN	.02	Aug 31	1.3	Jul 15	.01	Sep 8 1995
ANNUAL SEVEN-DAY MINIMUM	.02	Aug 30	1.9	Jul 15	.02	Sep 3 1995
INSTANTANEOUS PEAK FLOW			215	Apr 23	679	Jan 26 1979
INSTANTANEOUS PEAK STAGE			6.36	Apr 23	6.89	Jun 14 1998
INSTANTANEOUS LOW FLOW			1.2	Jul 15	.01	Sep 4 1995
10 PERCENT EXCEEDS	28		35		50	
50 PERCENT EXCEEDS	8.4		12		12	
90 PERCENT EXCEEDS	.08		2.6		1.2	

e Estimated



01098530 SUDBURY RIVER AT SAXONVILLE, MA

LOCATION.--Lat 42°19'31", long 71°23'53", Middlesex County, Hydrologic Unit 01070005, on left bank at downstream side of new Danforth Street Bridge, at Saxonville, 600 ft east of Elm Street, 700 ft downstream from confluence with Lake Cochituate Outlet, and 0.7 mi downstream from Saxonville Dam.

DRAINAGE AREA.--106 mi^2.

PERIOD OF RECORD.--November 1979 to current year.
Water-quality records: Water years 1994-95.

GAGE.--Water-stage recorder. Datum of gage is 110.55 ft above sea level (Massachusetts Department of Public Works benchmark).

REMARKS.--Records good except those above 500 ft^3/s, which are fair, and those for estimated daily discharge, which are poor. Flow regulated by reservoirs upstream and affected by diversions and spill. Flow diverted as needed for use of Boston metropolitan district. Part of flow from Wachusett Reservoir on Nashua River is diverted into Sudbury Reservoir en route to Boston metropolitan district.

AVERAGE DISCHARGE.--20 years (water years 1981-2000), 197 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft^3/s, June 7, 1982, gage height, 13.30 ft; maximum gage height, 13.47 ft, Apr. 8, 1987; minimum daily, 6.0 ft^3/s, June 26, 1993, Aug. 3, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,180 ft^3/s, Apr. 24, gage height, 10.90 ft; minimum daily, 9.7 ft^3/s, Sept. 11.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	62	82	81	160	420	315	619	112	50	199	13
2	30	60	76	82	136	393	287	460	110	45	183	17
3	27	183	71	88	132	380	262	422	123	41	168	17
4	56	142	71	114	133	377	266	365	98	39	133	15
5	58	113	70	247	132	362	266	313	108	36	104	13
6	51	100	69	196	131	349	237	291	200	32	77	12
7	45	88	202	174	130	336	223	275	578	29	75	11
8	40	78	181	157	128	325	203	259	602	28	70	11
9	41	74	175	142	108	297	290	291	e559	29	66	11
10	46	73	161	183	59	272	295	289	e489	32	61	10
11	52	82	155	272	71	294	270	423	444	28	59	9.7
12	44	73	131	265	80	417	257	e361	491	25	57	9.9
13	42	73	124	247	76	398	224	298	425	29	56	12
14	64	71	127	224	230	388	209	e326	394	25	92	10
15	53	71	165	200	229	368	197	e293	358	21	78	49
16	48	63	170	192	195	350	193	259	324	54	83	32
17	46	58	157	192	205	494	186	e231	e311	32	76	19
18	143	55	142	183	186	491	164	216	e298	30	68	16
19	120	55	132	199	181	466	244	244	e269	41	62	15
20	133	55	125	191	163	441	232	e251	224	28	56	44
21	143	68	161	191	152	416	265	223	164	23	51	25
22	119	65	146	182	145	347	793	207	153	67	46	19
23	146	62	134	173	154	218	871	e211	145	35	29	16
24	129	60	119	178	198	196	1070	e282	130	25	32	16
25	108	66	107	188	278	180	1120	261	124	22	23	14
26	98	84	100	188	346	168	1020	227	119	86	20	20
27	86	119	96	181	358	152	897	e209	120	305	19	23
28	77	117	89	178	393	319	833	215	117	242	17	18
29	72	100	86	174	406	396	778	e193	108	196	16	22
30	67	91	84	173	---	392	728	e184	62	185	14	22
31	65	---	83	186	---	354	---	e183	---	225	14	---
TOTAL	2286	2461	3791	5621	5295	10756	13195	8881	7759	2085	2104	541.6
MEAN	73.7	82.0	122	181	183	347	440	286	259	67.3	67.9	18.1
MAX	146	183	202	272	406	494	1120	619	602	305	199	49
MIN	27	55	69	81	59	152	164	183	62	21	14	9.7

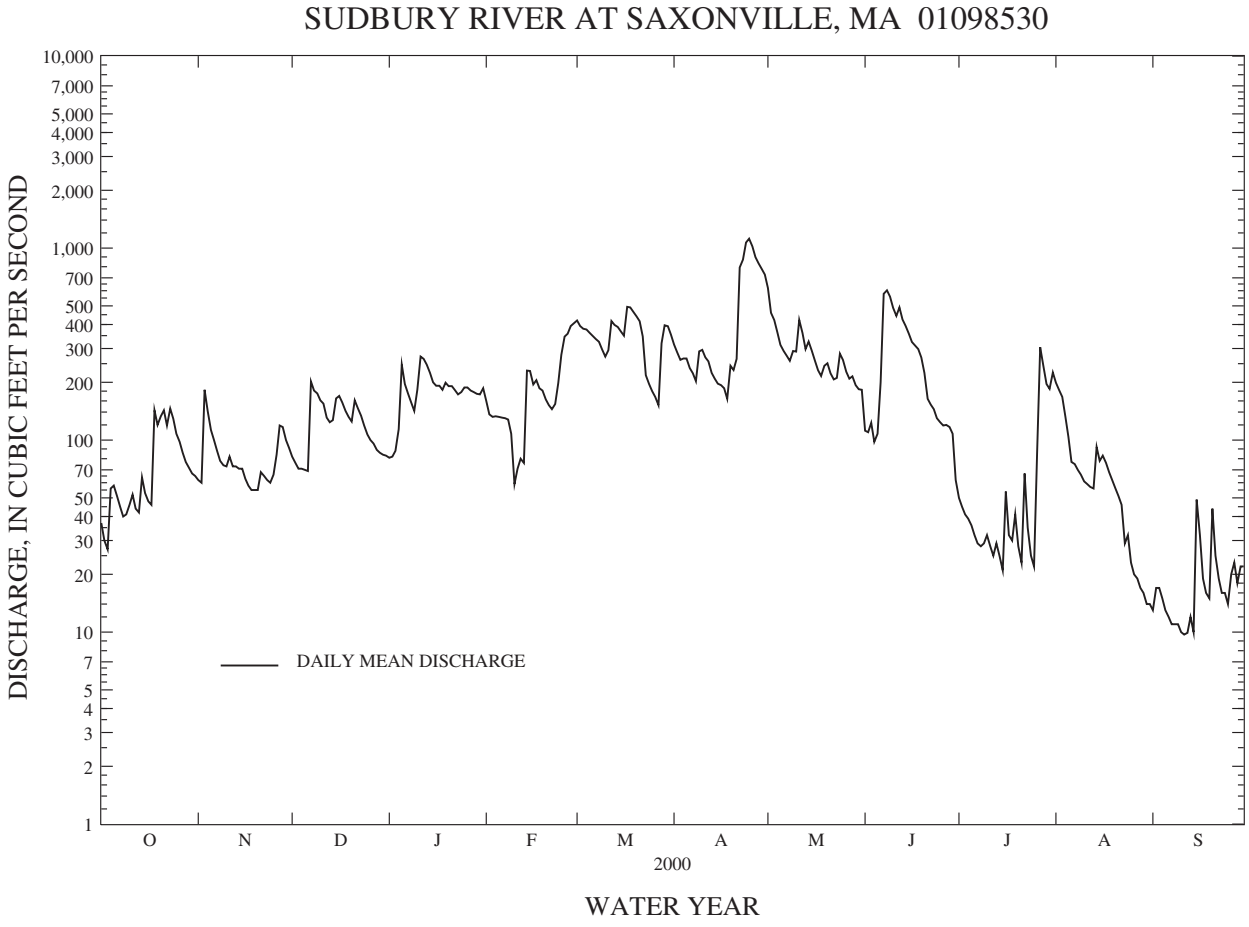
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2000, BY WATER YEAR (WY)

MEAN	115	169	243	231	266	343	369	219	174	73.5	79.7	62.9
MAX	376	385	572	471	480	757	920	415	739	156	192	147
(WY)	1997	1990	1997	1982	1990	1983	1987	1998	1982	1998	1989	1989
MIN	9.43	54.8	88.4	59.5	67.6	121	98.7	75.2	31.3	10.9	10.7	11.0
(WY)	1998	1999	1998	1981	1980	1985	1985	1986	1993	1993	1999	1997

01098530 SUDBURY RIVER AT SAXONVILLE, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1980 - 2000	
ANNUAL TOTAL	53011.6		64775.6			
ANNUAL MEAN	145		177		197	
HIGHEST ANNUAL MEAN					253	1984
LOWEST ANNUAL MEAN					96.6	1985
HIGHEST DAILY MEAN	672	Feb 5	1120	Apr 25	2250	Jun 7 1982
LOWEST DAILY MEAN	5.7	Aug 4	9.7	Sep 11	5.6	Oct 20 1997
ANNUAL SEVEN-DAY MINIMUM	6.0	Aug 4	11	Sep 8	5.8	Oct 16 1997
INSTANTANEOUS PEAK FLOW			1180	Apr 24	2420	Jun 7 1982
INSTANTANEOUS PEAK STAGE			10.90	Apr 24	13.47	Apr 8 1987
INSTANTANEOUS LOW FLOW			9.4	Sep 10		
10 PERCENT EXCEEDS	334		378		430	
50 PERCENT EXCEEDS	100		132		137	
90 PERCENT EXCEEDS	14		24		30	

e Estimated



01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA

LOCATION.--Lat 42°38'12", long 71°18'09", Middlesex County, Hydrologic Unit 01070005, on right bank 300 ft downstream from Rogers Street Bridge at Lowell, 0.3 mi downstream from River Meadow Brook, and 0.8 mi upstream from mouth.

DRAINAGE AREA.--Total above gage, 400 mi^2; net above gage, 307 mi^2 — diversion as needed from 92.6 mi^2 for use by Boston metropolitan district.

PERIOD OF RECORD.--Discharge: October 1936 to current year. October, November 1936 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1953, 1967-74.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 67.41 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Low flow regulated by mills upstream. Daily discharge includes undiverted water from 92.6 mi^2 in basins of Sudbury River and Lake Cochituate. Prior to December 1961, diversion upstream for use of city of Lowell. Satellite and telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years, 650 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft^3/s, Jan. 28, 1979, gage height, 9.60 ft; maximum gage height of 9.60 ft also occurred Apr. 10, 1987; minimum daily, 4.0 ft^3/s, Sept. 29, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,830 ft^3/s, Apr. 27; gage height, 7.88 ft; minimum daily, 77 ft^3/s, Sept. 10-12, 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	204	271	378	301	387	1450	1240	2310	613	369	534	79
2	191	259	362	296	387	1480	1220	2150	577	299	540	131
3	179	346	341	307	378	1450	1150	2000	546	280	542	92
4	171	397	324	347	372	1390	1110	1840	515	236	533	105
5	199	428	311	500	365	1330	1060	1680	494	217	484	104
6	204	443	299	576	355	1250	1010	1530	532	189	450	102
7	233	415	376	616	341	1180	964	1390	927	166	399	99
8	211	379	487	609	e340	1120	934	1260	1080	160	340	94
9	211	343	547	585	334	1070	956	1170	1250	156	324	83
10	184	316	570	588	327	1020	959	1090	1360	167	232	77
11	142	309	567	679	322	988	978	1180	1350	158	230	77
12	200	312	537	701	321	1150	1010	1170	1320	150	187	77
13	178	312	517	735	321	1240	1010	1170	1290	144	175	84
14	178	316	490	723	435	1310	980	1210	1260	97	198	77
15	193	313	485	e680	578	1350	942	1150	1230	149	235	145
16	197	302	509	e620	686	1330	898	1100	1180	97	279	205
17	195	283	526	e580	743	1390	830	1040	1100	151	297	197
18	292	272	516	e560	746	1410	769	992	1010	121	289	197
19	381	259	492	e520	681	1450	763	944	952	166	279	174
20	468	254	468	e470	682	1460	778	920	890	116	257	170
21	556	254	509	e460	662	1440	822	897	839	163	230	172
22	558	257	521	e450	631	1400	1470	875	783	129	201	159
23	581	258	532	e420	609	1350	1770	846	737	156	192	133
24	556	264	514	398	646	1260	2140	871	643	116	166	153
25	525	261	476	383	832	1180	2470	886	581	116	158	105
26	482	278	447	392	1030	1090	2660	869	548	139	123	113
27	436	326	414	430	1130	1020	2700	839	518	208	147	136
28	396	372	363	e430	1290	1080	2650	798	469	320	103	122
29	354	402	339	e420	1380	1150	2580	747	437	411	132	147
30	322	403	326	374	---	1210	2460	706	399	431	81	123
31	295	---	307	378	---	1240	---	663	---	517	108	---
TOTAL	9472	9604	13850	15528	17311	39238	41283	36293	25430	6294	8445	3732
MEAN	306	320	447	501	597	1266	1376	1171	848	203	272	124
MAX	581	443	570	735	1380	1480	2700	2310	1360	517	542	205
MIN	142	254	299	296	321	988	763	663	399	97	81	77

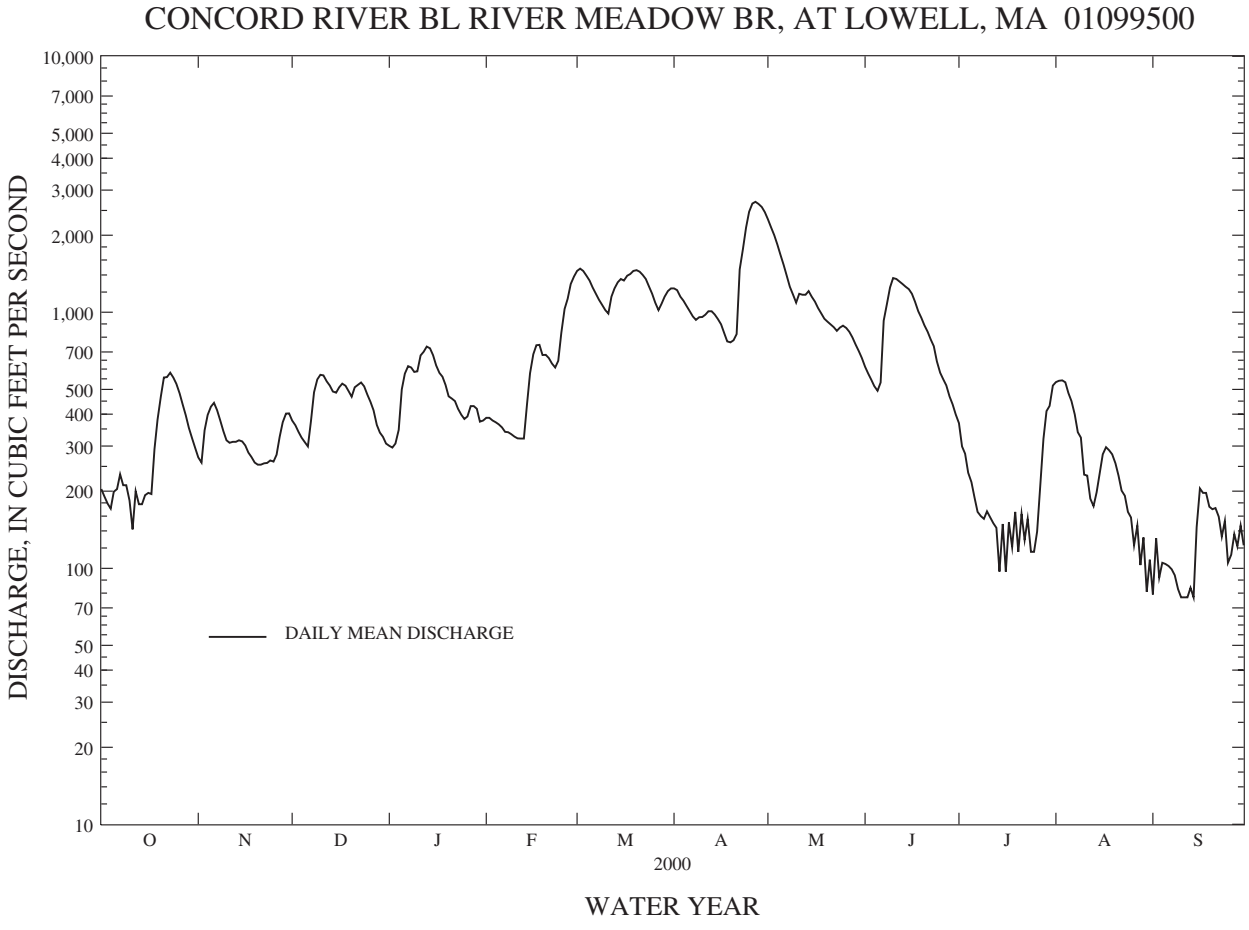
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2000, BY WATER YEAR (WY)

MEAN	328	526	708	739	870	1266	1301	819	524	266	233	233
MAX	1320	1866	1853	1996	1856	2510	3149	1599	2502	1512	1403	1694
(WY)	1997	1956	1997	1979	1970	1983	1987	1954	1982	1938	1955	1954
MIN	38.3	86.9	133	150	230	479	377	283	116	50.0	33.1	25.4
(WY)	1942	1966	1966	1981	1980	1989	1966	1941	1964	1949	1966	1957

01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1937 - 2000	
ANNUAL TOTAL	183247		226480			
ANNUAL MEAN	502		619		650	
HIGHEST ANNUAL MEAN					1112	1984
LOWEST ANNUAL MEAN					242	1966
HIGHEST DAILY MEAN	1920	Feb 6	2700	Apr 27	5340	Jan 28 1979
LOWEST DAILY MEAN	26	Aug 10	77	Sep 10	4.0	Sep 29 1957
ANNUAL SEVEN-DAY MINIMUM	28	Aug 6	81	Sep 8	16	Sep 26 1957
INSTANTANEOUS PEAK FLOW			2830	Apr 27	5410	Jan 28 1979
INSTANTANEOUS PEAK STAGE			7.88	Apr 27	9.60	Jan 28 1979
INSTANTANEOUS LOW FLOW			45	Oct 4		
10 PERCENT EXCEEDS	1210		1290		1400	
50 PERCENT EXCEEDS	376		455		488	
90 PERCENT EXCEEDS	60		146		100	

e Estimated



01100000 MERRIMACK RIVER BELOW CONCORD RIVER AT LOWELL, MA
(National Water Quality Assessment Site)

LOCATION.--Lat 42°38'45", long 71°17'56", Middlesex County, Hydrologic Unit 01070002, on right bank at Lowell, 1,100 ft downstream from Concord River.

DRAINAGE AREA.--Total above gage, 4,635 mi^2; net above gage, 4,425 mi^2—excludes 210 mi^2 for use of Boston metropolitan district and city of Worcester.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: June 1923 to current year.
Water-quality records: Water years 1954, 1966-74, 2000.

GAGE.--Water-stage recorder. Datum of gage is 5.18 ft above sea level. Prior to Mar. 7, 1934, at Boott Mills, 1,800 ft upstream and 700 ft above mouth of Concord River, in same gage pool and at same datum; gage-height record (provided by Proprietors of the Locks and Canals on Merrimack River) was indicative of flow including that of Concord River.

REMARKS.--Records excellent except those for estimated daily discharge, which are good. Daily discharge includes water released from 210 mi^2 in basins of Sudbury and Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs upstream. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--77 years, 7,720 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft^3/s, Mar. 20, 1936, gage height, 68.4 ft, from floodmarks; minimum daily, 199 ft^3/s, Sept. 23, 1923.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1735, that of Mar. 20, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 33,800 ft^3/s, Apr. 25; gage height, 49.72 ft; minimum daily, 1,200 ft^3/s, Sept. 9.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6200	5130	8600	4960	4480	20000	25000	19600	6910	4600	7390	2170
2	7170	5700	8150	4680	5570	20300	20900	17800	5400	4330	8980	e1900
3	8050	5830	8610	4240	6920	18900	18100	15500	6010	3840	8680	e2000
4	7270	7590	5330	4640	4330	17200	18700	14500	5870	3290	7710	e2300
5	6670	9460	4980	6920	4310	15800	23700	13700	5300	3100	6660	2380
6	6980	9290	6200	8030	4340	14200	27900	12400	5830	3100	5770	2560
7	7090	7520	7960	8100	4140	13100	26800	12100	10200	3020	5530	2460
8	6230	6680	7480	7140	5280	12100	22000	11600	14500	2920	5330	2000
9	5690	6280	7680	7040	4560	11600	19600	11600	15900	2770	5430	1200
10	5310	e6200	7730	6210	3740	12400	25400	11300	13400	3360	5420	1630
11	5070	e6000	7480	8690	3910	15900	30600	13100	11700	3210	4700	1810
12	5050	e5950	7030	10700	4260	18000	31000	16900	9240	2790	4460	2280
13	4840	e5900	6930	11100	3620	18300	29400	17700	8900	2830	3970	1920
14	4320	e6200	6690	7810	5070	18000	25300	15900	8630	2370	4680	1660
15	4200	e6400	6000	7490	5610	16700	19800	14200	7500	2370	4720	2500
16	4950	7200	e5800	6970	6720	15400	16400	14100	7700	3010	5100	2990
17	5950	5800	e6400	8970	6330	18000	15500	12300	7170	4020	5000	3540
18	6810	4960	e5800	9090	5910	21200	14700	11100	7090	4250	4870	3140
19	4910	5190	e5600	5580	5750	20200	13700	9940	6810	5000	4560	2470
20	5020	4810	e6000	5590	5760	17900	12500	10400	7080	3890	3980	3140
21	e4700	4820	6430	5790	5490	16300	12100	11200	6440	3170	3220	3210
22	4540	5460	7750	8960	5160	15200	18900	11000	5410	3810	3060	2690
23	5410	5730	8110	7030	4800	14400	28800	9820	5450	3100	2860	2940
24	6840	4970	6850	4840	5440	14600	32200	8810	5120	2950	3090	2670
25	8380	5310	5170	4920	7120	15200	33300	10100	4990	2500	3190	2430
26	9110	5160	5210	4930	9690	15500	31800	13200	5310	2530	2740	2750
27	7750	6160	4730	6330	11000	15400	28800	13000	5570	4550	3070	2280
28	7430	8370	4660	6880	13300	18000	26200	11600	5250	4020	2510	2490
29	7160	12000	4380	5860	18000	26500	24100	9940	4790	4320	2650	2530
30	5840	11000	4280	4880	---	32700	21800	9540	4610	4440	1920	2380
31	5380	---	4330	4610	---	30600	---	8370	---	5510	2190	---
TOTAL	190320	197070	198350	208980	180610	549600	695000	392320	224080	108970	143440	72420
MEAN	6139	6569	6398	6741	6228	17730	23170	12660	7469	3515	4627	2414
MAX	9110	12000	8610	11100	18000	32700	33300	19600	15900	5510	8980	3540
MIN	4200	4810	4280	4240	3620	11600	12100	8370	4610	2370	1920	1200

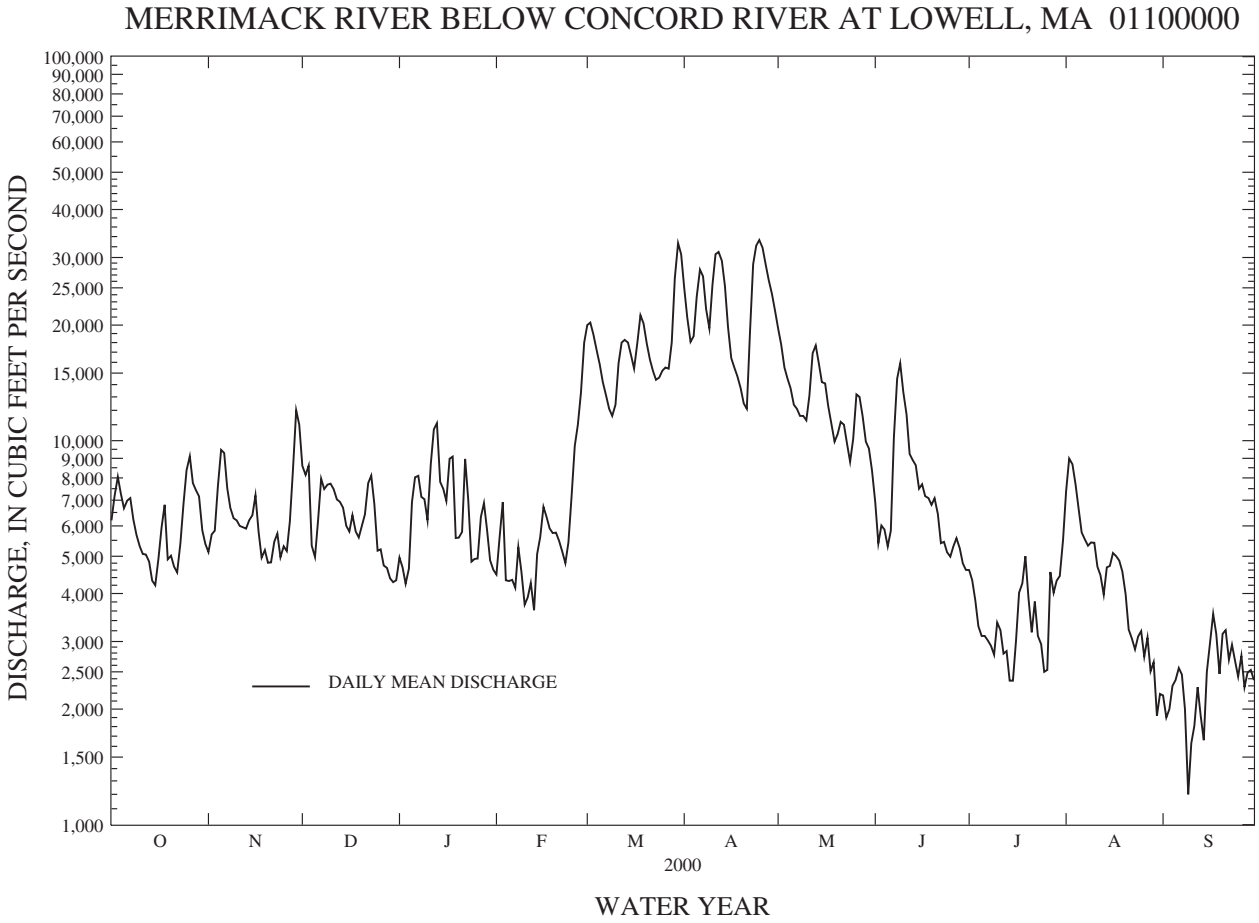
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2000, BY WATER YEAR (WY)

MEAN	4176	6608	7615	7168	7548	13040	19330	11640	6334	3416	2819	2997
MAX	12730	17690	20380	18530	18400	45780	37440	24770	23660	14520	11110	19650
(WY)	1978	1928	1997	1978	1970	1936	1987	1954	1984	1973	1990	1938
MIN	1036	1843	2127	1621	2105	4132	6979	4093	1825	1161	901	895
(WY)	1965	1965	1930	1925	1931	1940	1995	1941	1964	1965	1965	1957

01100000 MERRIMACK RIVER BELOW CONCORD RIVER AT LOWELL, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1923 - 2000	
ANNUAL TOTAL	2516058		3161160			
ANNUAL MEAN	6893		8637		7720	
HIGHEST ANNUAL MEAN					12490	1984
LOWEST ANNUAL MEAN					3068	1965
HIGHEST DAILY MEAN	33100	Sep 19	33300	Apr 25	161000	Mar 20 1936
LOWEST DAILY MEAN	597	Aug 7	1200	Sep 9	199	Sep 23 1923
ANNUAL SEVEN-DAY MINIMUM	845	Sep 2	1790	Sep 8	581	Sep 12 1995
INSTANTANEOUS PEAK FLOW			33800	Apr 25	173000	Mar 20 1936
INSTANTANEOUS PEAK STAGE			49.72	Apr 25	68.40	Mar 20 1936
INSTANTANEOUS LOW FLOW			808	Sep 10		
10 PERCENT EXCEEDS	14400		18000		17200	
50 PERCENT EXCEEDS	5800		6200		5190	
90 PERCENT EXCEEDS	1280		2850		1640	

e Estimated



01100000 MERRIMACK RIVER BELOW CONCORD RIVER AT LOWELL, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1966-74, 1999-2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT											
19...	1040	4,600	768	10.0	--	159	7.9	8.0	7.46	1.48	2.1
NOV											
01...	0940	5,280	764	10.4	--	135	18.0	12.0	5.77	1.23	1.6
DEC											
09...	0930	8,350	767	13.0	7.1	152	4.2	4.8	5.62	1.12	1.3
JAN											
05...	0845	5,980	753	13.2	6.8	161	4.2	2.7	6.17	1.32	1.5
FEB											
09...	0930	5,980	761	14.3	6.9	199	2.7	.1	7.47	1.50	1.8
MAR											
13...	1015	18,300	763	13.0	7.2	171	3.7	4.4	5.66	1.18	1.4
31...	1000	31,200	759	12.6	6.7	88	12.3	7.4	3.52	.71	.9
APR											
24...	1220	32,500	750	12.7	7.1	108	10.9	7.8	4.21	.85	1.1
MAY											
16...	1030	14,400	761	9.6	7.1	114	17.7	15.7	4.78	.94	1.0
JUN											
13...	1030	8,120	760	8.9	7.0	154	16.7	18.0	6.64	1.30	1.4
JUL											
10...	1030	3,440	749	7.4	7.3	173	27.6	23.6	7.37	1.38	1.6
AUG											
02...	0900	8,570	758	8.3	6.8	166	20.5	20.6	7.33	1.38	2.0
SEP											
13...	0915	2,020	755	8.1	7.3	209	23.6	22.0	8.69	1.66	2.6

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT											
19...	18.7	--	--	29.9	0.1	6.9	9.5	0.34	0.50	0.189	0.337
NOV											
01...	15.3	--	--	23.6	.1	6.5	8.5	.47	.51	.196	.176
DEC											
09...	14.8	10	12	23.4	.1	6.3	7.1	.36	.43	.162	.285
JAN											
05...	16.2	11	14	30.8	<.1	6.9	9.5	.56	.69	.352	.345
FEB											
09...	22.8	13	15	41.9	.1	6.7	9.5	.64	.69	.419	.430
MAR											
13...	19.9	9	11	33.2	<.1	5.6	7.4	.34	.35	.118	.278
31...	10.0	5	6	16.8	<.1	4.3	5.5	.21	.40	.065	.164
APR											
24...	12.6	9	10	19.8	<.1	4.3	5.8	.28	.41	.046	.145
MAY											
16...	13.2	9	11	21.3	<.1	4.2	5.6	.32	.45	.099	.181
JUN											
13...	17.8	12	15	29.6	<.1	4.6	6.9	.41	.49	.122	.238
JUL											
10...	20.1	15	18	32.7	.1	4.6	8.9	.30	.48	.040	.523
AUG											
02...	19.7	13	16	32.5	.1	4.8	7.8	.39	.52	.132	.500
SEP											
13...	25.9	18	22	38.5	.2	3.5	10.9	.46	.54	.148	.730

01100000 MERRIMACK RIVER BELOW CONCORD RIVER AT LOWELL, MA--Continued

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
19...	<0.010	0.037	0.037	0.070	4.1	0.3	97	130	63	5	80
NOV											
01...	<.010	.060	.047	.085	5.7	.2	82	120	40	3	83
DEC											
09...	<.010	.039	.025	.056	4.2	.2	77	140	28	--	--
JAN											
05...	.024	.060	.049	.081	3.5	.2	92	130	39	2	38
FEB											
09...	.033	.077	.065	.101	3.1	.2	117	120	53	2	67
MAR											
13...	<.010	.023	.015	.052	3.6	.5	91	80	40	10	89
31...	<.010	.012	.011	.075	4.4	1.2	50	70	34	37	72
APR											
24...	<.010	.011	<.010	.066	5.1	.8	63	120	36	37	38
MAY											
16...	<.010	.011	<.010	.046	4.4	.3	73	150	31	8	87
JUN											
13...	.013	.037	.021	.064	4.9	.3	96	270	48	4	86
JUL											
10...	.012	.036	.019	.073	3.9	.2	101	190	<2	3	82
AUG											
02...	.016	.050	.034	.081	3.9	.2	99	180	27	5	88
SEP											
13...	.025	.081	.062	.105	3.4	.4	121	90	17	2	67

01100568 SHAWSHEEN RIVER AT HANSCOM FIELD NEAR BEDFORD, MA

LOCATION.--Lat 42°28'01", long 71°16'22", Middlesex County, Hydrologic Unit 01070002, on left bank 300 ft downstream from FAA hangar, on Hanscom Field (revised), and 1.6 mi south of Bedford.

DRAINAGE AREA.--2.09 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: October 1995 to current year.
Precipitation: March 1996 to current year.

GAGE.--Water-stage recorder and tipping bucket rain gage. Elevation of gage is 115 ft above sea level, from topographic map. Telephone gage-height and rainfall telemeter at station.

REMARKS.--Records poor (discharge affected by backwater from beaver dam most of year). Collection, computation, and publication of precipitation data do not necessarily conform to standards used by the National Weather Service.

AVERAGE DISCHARGE.--5 years, 4.75 ft^3/s, 30.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 684 ft^3/s, June 13, 1998, gage height, 8.69 ft, from rating curve extended above 170 ft^3/s; minimum, 0.12 ft^3/s, Aug. 24, 25, 2000.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 133 ft^3/s, June 27, gage height, 3.96 ft; maximum gage height, 4.08 ft, Apr. 22; minimum discharge, 0.12 ft^3/s, Aug. 24, 25.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	4.7	3.7	e1.4	1.8	1.5	3.5	4.3	1.8	3.7	e2.0	2.0
2	6.2	4.9	3.7	e1.8	1.7	1.5	3.5	4.9	4.5	3.2	e3.5	3.8
3	7.5	11	3.7	e2.5	1.7	1.2	4.0	4.0	2.0	2.5	e2.4	1.2
4	13	4.0	3.8	e4.0	1.8	1.4	4.9	4.1	1.6	2.5	e1.9	1.3
5	6.4	4.5	3.6	5.3	1.7	1.4	3.7	4.0	1.7	2.1	e1.5	1.2
6	7.1	4.6	3.6	1.7	1.5	1.5	3.0	3.9	26	1.4	e1.2	e1.4
7	6.9	4.6	11	1.7	1.5	1.6	2.9	4.0	17	1.5	e.90	e1.2
8	6.5	4.7	2.8	1.9	1.5	1.7	2.9	4.2	4.9	1.8	e.70	e1.0
9	6.5	4.7	2.9	2.0	1.6	1.9	7.3	4.2	4.1	8.0	e.54	e.74
10	6.4	5.7	2.9	8.3	1.7	2.0	2.9	9.5	3.7	e5.4	e.40	.94
11	5.1	6.1	2.8	2.2	1.9	7.6	3.6	6.9	3.5	e3.7	e.30	1.1
12	4.4	4.6	2.8	2.1	1.6	5.1	4.0	3.1	6.7	e2.8	e.45	1.1
13	3.7	5.0	2.7	2.2	1.5	2.5	4.3	3.0	4.3	e2.2	e.70	1.6
14	9.3	5.2	2.8	2.1	18	2.7	4.7	6.0	4.9	1.9	e1.4	1.1
15	3.4	4.7	3.8	2.0	1.9	3.0	4.8	2.4	5.7	1.9	e1.2	7.9
16	3.2	4.5	3.0	2.1	1.6	e3.9	4.7	2.3	5.8	9.7	e2.0	.85
17	2.8	4.0	2.7	2.0	1.4	e5.0	4.5	2.3	5.9	2.8	e1.5	.94
18	18	3.9	2.6	2.0	1.5	e4.5	5.0	3.1	5.8	3.9	e1.1	1.1
19	e2.2	3.9	2.5	2.0	1.6	e5.0	7.2	5.8	4.9	2.2	e.80	1.1
20	e2.3	4.6	4.4	2.0	1.6	3.6	4.6	2.7	5.0	1.5	e.60	3.5
21	e2.5	3.8	3.1	2.0	1.6	3.8	18	2.5	5.3	1.4	e.52	.74
22	e2.7	3.7	e1.9	1.9	1.8	3.9	36	2.4	5.5	4.5	.77	.54
23	e2.9	3.9	e2.2	2.0	3.1	3.8	12	e3.1	5.4	1.0	1.6	.73
24	e3.0	3.8	e2.0	2.0	3.7	3.9	7.5	e8.0	4.8	.80	1.1	.76
25	e3.2	4.4	e1.8	2.0	7.0	3.9	6.0	3.0	3.0	.64	.45	.72
26	e3.3	5.0	e1.6	2.0	2.3	4.1	7.8	2.6	2.5	.72	.86	1.9
27	e3.5	6.2	e1.4	1.8	1.9	4.2	6.1	2.4	14	22	1.3	.84
28	e3.7	3.4	e1.2	1.7	3.0	15	5.3	2.3	5.7	.55	1.7	.72
29	e4.0	3.5	e1.1	1.7	1.5	5.6	5.0	2.2	8.9	.33	1.8	.72
30	4.4	3.6	e1.4	1.8	---	3.8	4.6	2.1	4.5	.28	1.9	.69
31	4.7	---	e1.5	2.4	---	3.4	---	2.1	---	e.84	2.1	---
TOTAL	163.2	141.2	91.0	72.6	75.0	114.0	194.3	117.4	179.4	97.76	39.19	43.43
MEAN	5.26	4.71	2.94	2.34	2.59	3.68	6.48	3.79	5.98	3.15	1.26	1.45
MAX	18	11	11	8.3	18	15	36	9.5	26	22	3.5	7.9
MIN	2.2	3.4	1.1	1.4	1.4	1.2	2.9	2.1	1.6	.28	.30	.54
CFSM	2.52	2.25	1.40	1.12	1.24	1.76	3.10	1.81	2.86	1.51	.60	.69
IN.	2.90	2.51	1.62	1.29	1.33	2.03	3.46	2.09	3.19	1.74	.70	.77

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

MEAN	6.98	4.41	3.82	5.62	5.17	5.16	5.73	4.46	6.60	3.52	1.90	3.66
MAX	19.6	4.88	8.14	7.57	7.65	7.95	8.19	8.65	21.9	6.62	2.72	7.83
(WY)	1997	1997	1997	1999	1998	1998	1997	1998	1998	1996	1998	1999
MIN	1.20	2.98	2.19	2.34	2.59	3.68	2.72	1.96	1.08	1.62	1.24	1.45
(WY)	1998	1999	1996	2000	2000	2000	1999	1999	1999	1999	1999	2000

01100568 SHAWSHEEN RIVER AT HANSCOM FIELD NEAR BEDFORD, MA--Continued

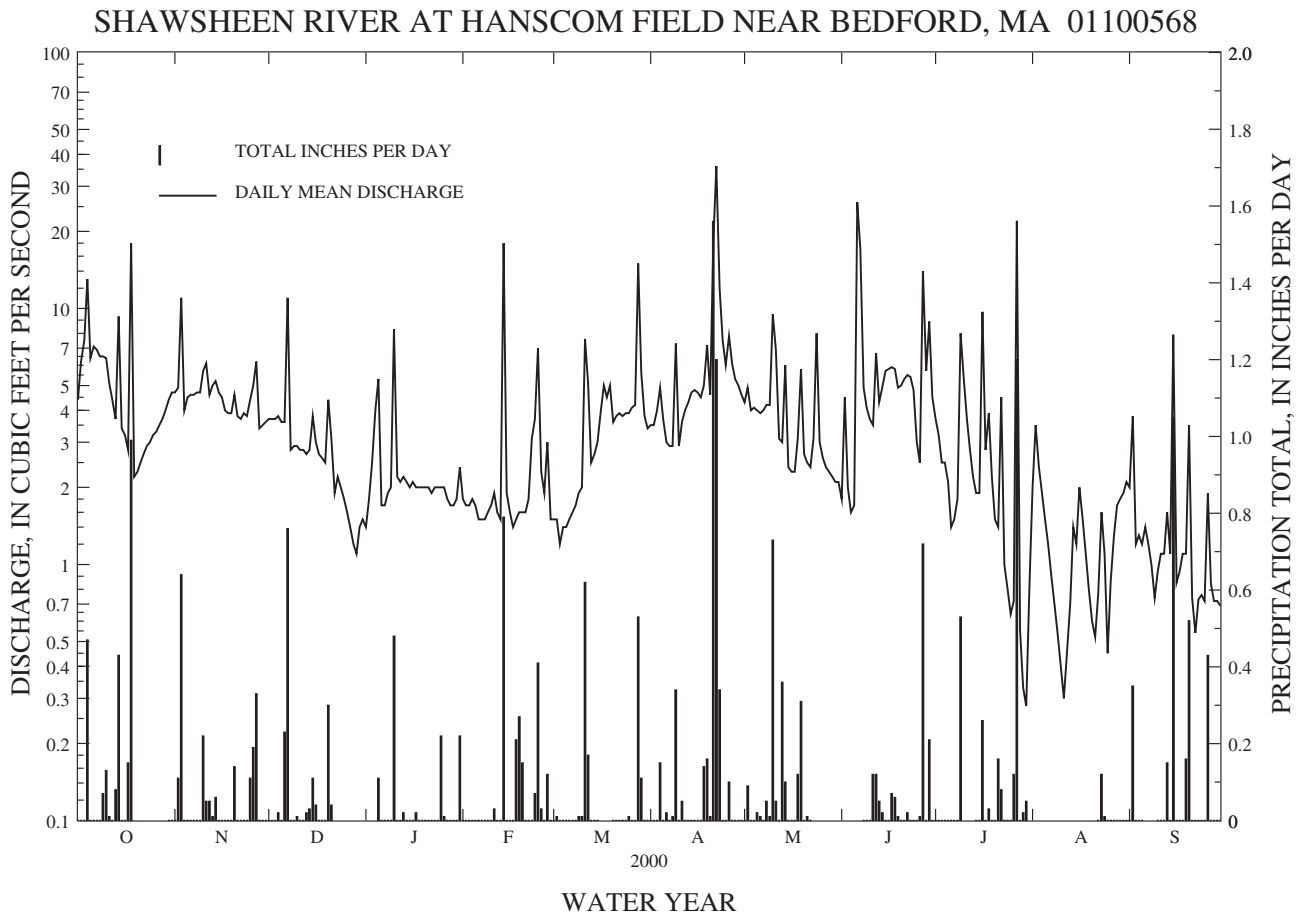
SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1995 - 2000	
ANNUAL TOTAL	1438.63		1328.48			
ANNUAL MEAN	3.94		3.63		4.75	
HIGHEST ANNUAL MEAN					6.25	1998
LOWEST ANNUAL MEAN					3.63	2000
HIGHEST DAILY MEAN	103	Sep 10	36	Apr 22	209	Oct 21 1996
LOWEST DAILY MEAN	.61	Sep 2	.28	Jul 30	.28	Jul 30 2000
ANNUAL SEVEN-DAY MINIMUM	.65	Aug 29	.57	Aug 7	.57	Aug 7 2000
INSTANTANEOUS PEAK FLOW			133	Jun 27	684	Jun 13 1998
INSTANTANEOUS PEAK STAGE			4.08	Apr 22	8.69	Jun 13 1998
INSTANTANEOUS LOW FLOW			.12	Aug 24	.52	Oct 1 1997
ANNUAL RUNOFF (CFSM)	1.89		1.74		2.27	
ANNUAL RUNOFF (INCHES)	25.61		23.65		30.85	
10 PERCENT EXCEEDS	6.3		6.3		7.5	
50 PERCENT EXCEEDS	2.4		2.8		2.9	
90 PERCENT EXCEEDS	.79		1.1		1.1	

e Estimated

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	---	0.00	---	0.00
2	.00	.11	.00	---	.00	.01	.00	.09	---	.00	---	.35
3	.00	.64	.00	---	.00	.00	.00	.00	---	.00	---	.00
4	.47	.00	.02	---	.00	.00	.15	.00	---	.00	---	.00
5	.00	.00	.00	0.11	.00	.00	.00	.02	---	.00	---	.00
6	.00	.00	.23	.00	.00	.00	.02	.01	---	.00	---	---
7	.00	.00	.76	.00	.00	.00	.00	.00	---	.00	---	---
8	.00	.00	.00	.00	.00	.00	.01	.05	0.00	.00	---	---
9	.07	.00	.00	.00	.00	.01	.34	.01	.00	.53	---	---
10	.13	.22	.01	.48	.00	.01	.00	.73	.00	---	---	.00
11	.01	.05	.00	.00	.03	.62	.05	.05	.12	---	---	.00
12	.00	.05	.00	.00	.00	.17	.00	.00	.12	---	---	.00
13	.08	.01	.02	.02	.00	.00	.00	.36	.05	---	---	.15
14	.43	.06	.03	.00	.79	.00	.00	.10	.02	.00	---	.00
15	.00	.00	.11	.00	.00	.00	.00	.00	.00	.00	---	1.05
16	.00	.00	.04	.00	.00	---	.00	.00	.00	.26	---	.00
17	.15	.00	.00	.02	.00	---	.00	.00	.07	.00	---	.00
18	.99	.00	.00	.00	.21	---	.14	.12	.06	.03	---	.00
19	---	.00	.00	.00	.27	---	.16	.31	.01	.00	---	.16
20	---	.14	.30	.00	.15	.00	.01	.00	.00	.00	---	.52
21	---	.00	.04	.00	.00	.00	1.56	.01	.00	.16	---	.00
22	---	.00	---	.00	.00	.00	1.20	.00	.02	.08	0.00	.00
23	---	.00	---	.00	.00	.00	.34	---	.00	.00	.12	.00
24	---	.00	---	.00	.07	.00	.00	---	.00	.00	.01	.00
25	---	.11	---	.22	.41	.01	.00	---	.00	.00	.00	.00
26	---	.19	---	.01	.03	.00	.10	---	.01	.12	.00	.43
27	---	.33	---	.00	.00	.00	.00	---	.72	1.20	.00	.00
28	---	.00	---	.00	.12	.53	.00	---	.00	.00	.00	.00
29	---	.00	---	.00	.00	.11	.00	---	.21	.02	.00	.00
30	.00	.00	---	.00	---	.00	.00	---	.00	.05	.00	.00
31	.00	---	---	.22	---	.00	---	---	---	---	.00	---
TOTAL	---	1.91	---	---	2.08	---	4.08	---	---	---	---	---

01100568 SHAWSHEEN RIVER AT HANSCOM FIELD NEAR BEDFORD, MA--Continued



01100568 SHAWSHEEN RIVER AT HANSCOM FIELD NEAR BEDFORD, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1995 to current year.

REMARKS.--Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
JUN											
28...	1130	6.1	775	79	7.8	6.8	7.6	455	448	26.8	16.5
JUL											
27...	1115	49	779	88	8.6	6.8	7.1	68	66	20.0	18.0
AUG											
21...	1040	.58	780	78	7.9	7.0	7.2	484	481	22.5	15.8

DATE	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
JUN											
28...	22.8	3.98	3.7	53.6	90.3	<0.1	13.6	26.2	0.29	0.34	0.113
JUL											
27...	3.32	.48	.8	6.9	10.7	<.1	1.9	2.9	.25	.33	.031
AUG											
21...	31.5	5.08	4.5	50.6	85.8	.1	15.6	46.8	.20	.23	.064

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	DRAIN-AGE AREA (SQ. MI.) (81024)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	E.COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
JUN											
28...	0.761	0.012	E0.005	<0.010	0.021	4.0	2.09	262	8,200	6,100	13
JUL											
27...	.130	<.010	.021	.013	.075	4.1	2.09	36	11,000	6,900	19
AUG											
21...	.777	.011	.036	<.010	.008	2.6	2.09	285	190	150	14

01100568 SHAWSHEEN RIVER AT HANSCOM FIELD NEAR BEDFORD, MA--Continued

DATE	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	BORON, DIS-SOLVED (UG/L AS B) (01020)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)
JUN											
28...	1	3.1	26	<1	20	<1.0	<0.8	3	<1	240	<1
JUL											
27...	<1	1.0	4	<1	<12	<1.0	<.8	<1	1	50	<1
AUG											
21...	<1	3.0	30	<1	23	<1.0	1.1	25	<1	150	<1

DATE	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	THAL-LIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS-SOLVED (UG/L AS U) (22703)
JUN											
28...	2.5	330	4	10	<0.7	<1	135	<0.9	<1	17	<1
JUL											
27...	.5	46	<1	1	<.7	<1	19.6	<.9	<1	15	<1
AUG											
21...	3.0	280	<1	71	<.7	<1	185	<.9	<1	25	<1

Great Blue Heron at Quinapoxet River Dam at Wachusett Reservoir
near West Boylston, MA.

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA

LOCATION.--Lat 42°34'05", long 71°12'55", Middlesex County, Hydrologic Unit 01070002, on right bank at downstream side of bridge on State Highway 129, 1 mi upstream from Content Brook, and 2.5 mi northwest of Wilmington.

DRAINAGE AREA.--36.5 mi^2.

PERIOD OF RECORD.--Discharge: November 1963 to current year.
Water-quality records: Water year 1973.

REVISED RECORDS.--WDR MA-NH-RI-VT-74-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 80.44 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Diversion upstream at times each year since 1973 for municipal supply of Burlington. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--36 years (water years 1965-2000), 59.1 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft^3/s, Oct. 22, 1996, gage height, 10.49 ft, minimum, 0.70 ft^3/s, Aug. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 614 ft^3/s, Apr. 23, gage height, 6.97 ft, minimum, 3.5 ft^3/s, Sept. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	22	30	24	33	156	103	88	23	24	51	6.8
2	16	20	26	24	31	129	82	77	22	21	56	13
3	13	39	26	28	29	105	70	72	36	18	47	28
4	18	60	24	37	29	90	66	71	31	17	37	16
5	34	60	23	69	28	79	69	60	31	14	28	12
6	20	45	22	92	27	70	68	56	42	8.4	21	10
7	14	34	48	91	27	62	64	53	182	7.2	18	9.2
8	12	29	77	70	26	57	51	48	333	6.2	15	8.1
9	12	27	86	49	25	54	55	48	224	5.8	8.7	7.4
10	13	27	68	46	26	55	70	48	133	17	7.7	7.1
11	16	41	42	73	29	54	71	78	85	19	7.3	6.7
12	13	46	30	92	31	96	60	112	65	12	5.4	6.5
13	11	40	26	89	28	167	52	100	61	8.6	4.3	7.4
14	16	38	25	e70	56	154	44	83	54	6.8	8.4	9.4
15	35	36	29	e50	125	117	39	80	42	5.6	18	20
16	26	28	39	38	143	89	36	70	38	12	17	41
17	21	26	38	34	117	94	34	53	32	13	29	35
18	46	23	32	30	81	135	31	43	30	11	32	21
19	75	21	26	27	47	138	48	51	32	12	23	13
20	86	20	23	25	58	114	69	66	35	7.8	15	23
21	82	27	40	26	47	95	74	67	32	5.7	9.6	25
22	79	25	54	25	41	84	291	57	29	8.3	8.9	16
23	74	23	46	23	43	76	578	50	32	10	11	12
24	71	22	37	23	62	70	379	59	26	6.3	13	10
25	66	22	39	24	93	63	231	81	23	5.4	12	9.9
26	50	32	30	26	182	58	171	86	21	9.8	9.7	9.8
27	35	44	27	26	208	55	168	66	19	28	8.7	15
28	30	57	23	26	182	77	153	45	38	56	8.0	6.7
29	28	56	21	25	179	162	129	38	36	63	7.8	6.0
30	25	41	19	24	---	180	105	31	24	48	7.4	9.7
31	23	---	24	27	---	138	---	25	---	41	7.2	---
TOTAL	1086	1031	1100	1333	2033	3073	3461	1962	1811	527.9	552.1	420.7
MEAN	35.0	34.4	35.5	43.0	70.1	99.1	115	63.3	60.4	17.0	17.8	14.0
MAX	86	60	86	92	208	180	578	112	333	63	56	41
MIN	11	20	19	23	25	54	31	25	19	5.4	4.3	6.0

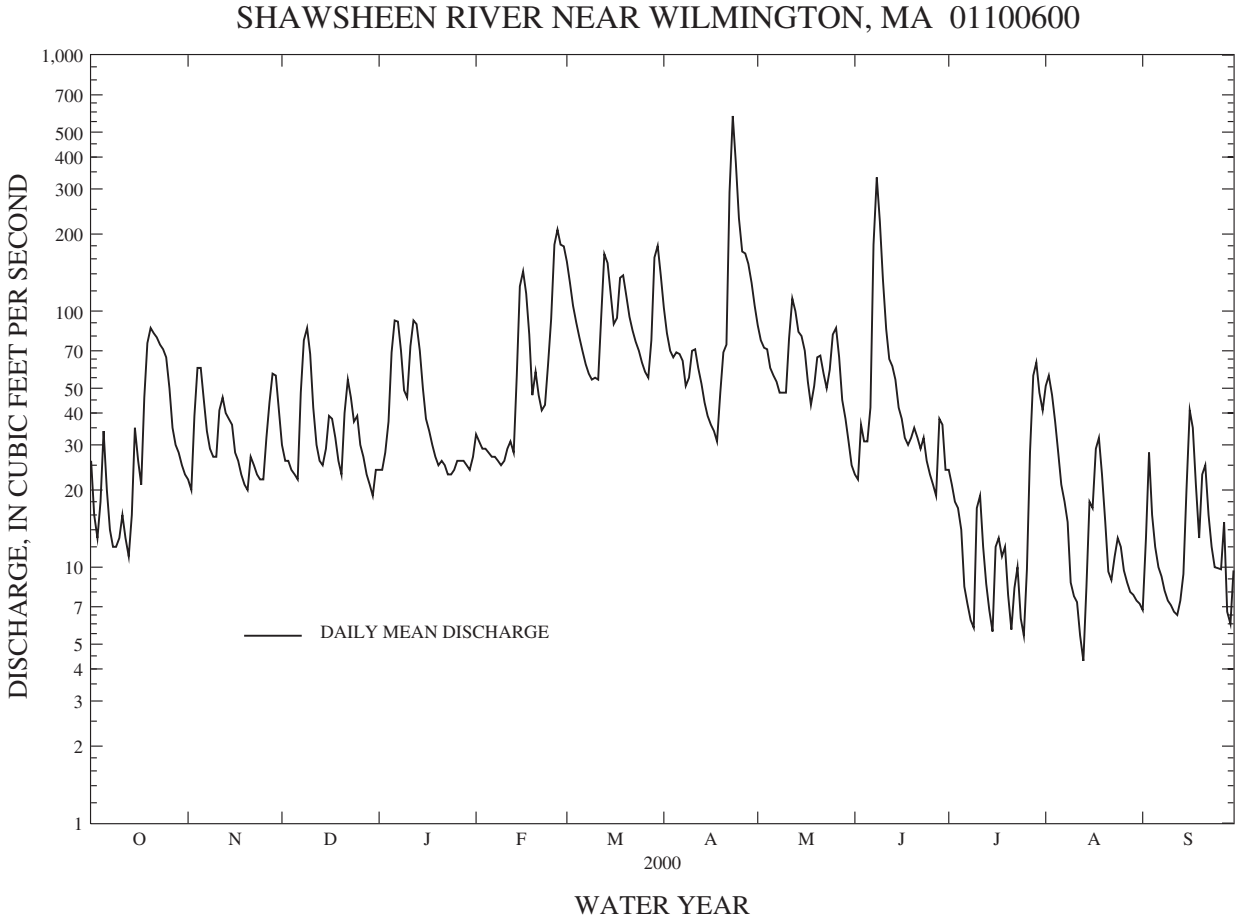
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2000, BY WATER YEAR (WY)

MEAN	34.4	53.8	66.3	74.6	83.1	116	101	63.6	48.8	24.7	21.8	21.8
MAX	204	128	156	289	208	279	269	130	251	72.4	56.9	56.4
(WY)	1997	1976	1997	1979	1984	1983	1987	1967	1982	1973	1976	1991
MIN	5.45	7.82	13.6	9.70	12.4	41.8	38.3	28.4	8.34	3.81	1.74	4.46
(WY)	1998	1966	1966	1981	1980	1989	1966	1999	1999	1965	1966	1965

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1964 - 2000	
ANNUAL TOTAL	16293.1		18390.7			
ANNUAL MEAN	44.6		50.2		59.1	
HIGHEST ANNUAL MEAN					107	1984
LOWEST ANNUAL MEAN					28.2	1966
HIGHEST DAILY MEAN	392	Feb 4	578	Apr 23	1610	Oct 22 1996
LOWEST DAILY MEAN	1.8	Sep 5	4.3	Aug 13	.63	Oct 19 1997
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 31	7.5	Sep 7	1.0	Sep 2 1995
INSTANTANEOUS PEAK FLOW			614	Apr 23	1850	Oct 22 1996
INSTANTANEOUS PEAK STAGE			6.97	Apr 23	10.49	Oct 22 1996
INSTANTANEOUS LOW FLOW			3.5	Sep 29	.70	Aug 19 1983
10 PERCENT EXCEEDS	98		95		128	
50 PERCENT EXCEEDS	28		32		38	
90 PERCENT EXCEEDS	4.2		9.7		7.7	

e Estimated



01101000 PARKER RIVER AT BYFIELD, MA

LOCATION.--Lat 42°45'10", long 70°56'46", Essex County, Hydrologic Unit 01090001, on left bank 1,400 ft downstream from dam, 0.5 mi south of Byfield, 0.7 mi upstream from Wheeler Brook, and 5.5 mi southwest of Newburyport.

DRAINAGE AREA.--21.3 mi^2.

PERIOD OF RECORD.--October 1945 to current year. October 1945 monthly discharge only, published in WSP 1301.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area; WDR MA-RI-00-1: 1999.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 23.46 ft above sea level (levels by Massachusetts Department of Public Works).

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation by mill and ponds upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--55 years, 37.2 ft^3/s, 23.73 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 883 ft^3/s, Oct. 22, 1996, gage height, 7.82 ft; minimum daily, 0.04 ft^3/s, Sept. 3-7, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 238 ft^3/s, Apr. 24, gage height, 3.81 ft; minimum, 2.3 ft^3/s, Oct. 13.

REVISIONS.--Discharges for the period Apr. 1-Sept. 30, 1999, have been revised. These figures supercede those published in the report for 1999.

DISCHARGE, CUBIC FEET PER SECOND, FOR THE PERIOD APRIL TO SEPTEMBER 1999

DAILY MEAN VALUES

DAY	APR	MAY	JUN	JUL	AUG	SEP
1	71	13	15	0.37	0.68	0.04
2	71	13	13	.39	.53	.04
3	66	15	13	.43	.43	.03
4	59	18	9.9	.49	.40	.03
5	53	18	7.0	.45	.38	.03
6	47	19	5.3	.46	.38	.03
7	41	22	4.4	.50	.33	.05
8	37	22	2.8	.42	.29	.05
9	33	26	1.6	.36	.26	.05
10	30	26	1.5	.33	.18	.47
11	26	22	1.4	.29	.17	1.1
12	23	21	1.3	.28	.17	.39
13	21	20	1.1	.28	e.24	.49
14	21	18	1.1	.25	e.24	.79
15	20	15	.84	.21	e.33	.88
16	18	12	.66	.17	e.17	12
17	22	11	.62	.17	e.17	36
18	22	10	.62	.17	e.09	45
19	21	10	.60	e.17	e.09	47
20	22	16	.53	e.17	e.09	41
21	22	17	.49	e.17	e.09	33
22	22	15	.51	e.24	e.09	26
23	22	16	.49	e.24	e.09	20
24	20	31	.43	e.43	e.09	15
25	18	42	.38	e.55	.05	12
26	17	47	.31	e.85	.05	9.2
27	16	44	.26	1.0	.04	7.0
28	16	36	.23	1.0	.04	5.4
29	15	29	.28	.91	.04	4.9
30	14	24	.25	.82	.05	6.0
31	---	19	---	.73	.05	---
TOTAL	906	667	85.90	13.30	6.30	323.97
MEAN	30.2	21.5	2.86	.43	.20	10.8
MAX	71	47	15	1.0	.68	47
MIN	14	10	.23	.17	.04	.03
CFSM	1.42	1.01	.13	.02	.01	.51
IN.	1.58	1.16	.15	.02	.01	.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1999, BY WATER YEAR (WY)

MEAN	82.8	49.5	27.7	8.64	5.37	6.40
MAX	249	151	138	39.6	18.0	65.8
(WY)	1987	1983	1982	1972	1982	1954
MIN	25.2	19.2	2.86	.43	.13	.11
(WY)	1985	1985	1999	1999	1995	1997

SUMMARY STATISTICS	FOR 1999 WATER YEAR		WATER YEARS 1946 - 1999	
ANNUAL TOTAL	9491.81			
ANNUAL MEAN	26.0		37.2	
HIGHEST ANNUAL MEAN			64.8	1984
LOWEST ANNUAL MEAN			13.2	1966
HIGHEST DAILY MEAN	155	Jan 26	858	Oct 22 1996
LOWEST DAILY MEAN	.03	Sep 3	.03	Sep 3 1999
ANNUAL SEVEN-DAY MINIMUM	.04	Aug 31	.04	Aug 31 1999
INSTANTANEOUS PEAK FLOW	160	Jan 25	883	Oct 22 1996
INSTANTANEOUS PEAK STAGE	3.20	Jan 25	7.82	Oct 22 1996
INSTANTANEOUS LOW FLOW	.03	Sep 3		
ANNUAL RUNOFF (CFSM)	1.22		1.75	
ANNUAL RUNOFF (INCHES)	16.58		23.73	
10 PERCENT EXCEEDS	73		89	
50 PERCENT EXCEEDS	13		24	
90 PERCENT EXCEEDS	.24		1.4	

e Estimated

01101000 PARKER RIVER AT BYFIELD, MA--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	13	14	14	20	131	82	138	29	26	38	3.2
2	4.7	12	13	14	20	124	72	121	26	21	39	3.8
3	3.7	16	13	18	19	112	62	106	27	17	37	4.8
4	4.9	17	15	23	19	98	56	95	28	15	34	4.8
5	5.4	15	15	38	18	84	54	84	30	13	29	4.3
6	5.0	14	15	40	18	72	50	76	38	11	25	4.0
7	4.2	14	32	40	17	61	48	71	89	10	23	3.8
8	3.8	14	45	36	16	54	48	64	133	8.3	20	3.8
9	4.1	13	47	33	16	48	63	59	138	7.5	17	3.8
10	4.0	14	38	34	16	41	71	55	134	8.7	15	3.6
11	4.1	18	32	50	16	36	70	61	126	8.3	13	3.2
12	3.2	18	28	56	17	55	65	69	113	7.2	11	2.9
13	2.6	17	24	51	16	77	57	71	100	6.1	8.8	3.8
14	3.2	17	21	e41	27	83	52	77	86	5.1	12	3.9
15	3.3	17	21	33	34	79	47	75	74	4.5	15	8.0
16	3.5	17	25	25	38	87	45	68	62	11	15	11
17	3.1	20	24	28	45	110	42	60	53	16	15	12
18	7.6	23	26	27	48	111	39	54	45	20	13	10
19	8.7	21	28	25	45	101	40	50	39	22	12	9.2
20	10	18	26	22	42	90	43	47	35	21	12	10
21	14	17	31	22	40	80	49	44	31	19	11	9.7
22	14	15	31	19	38	73	126	42	29	21	11	8.5
23	19	13	29	18	38	65	213	40	29	22	12	7.9
24	24	11	25	19	44	59	236	44	28	21	12	8.4
25	25	10	21	19	62	53	225	51	25	19	9.9	8.5
26	24	12	18	19	96	50	211	58	23	17	8.3	8.6
27	21	16	16	18	119	46	206	58	24	23	8.1	9.4
28	20	18	16	18	129	55	195	51	27	32	7.2	9.1
29	19	20	14	18	132	80	177	44	28	36	5.8	7.8
30	16	18	14	17	---	94	158	38	30	35	4.5	6.5
31	14	---	14	19	---	92	---	34	---	36	3.5	---
TOTAL	305.0	478	731	854	1205	2401	2902	2005	1679	539.7	497.1	198.3
MEAN	9.84	15.9	23.6	27.5	41.6	77.5	96.7	64.7	56.0	17.4	16.0	6.61
MAX	25	23	47	56	132	131	236	138	138	36	39	12
MIN	2.6	10	13	14	16	36	39	34	23	4.5	3.5	2.9
CFSM	.46	.75	1.11	1.29	1.95	3.64	4.54	3.04	2.63	.82	.75	.31
IN.	.53	.83	1.28	1.49	2.10	4.19	5.07	3.50	2.93	.94	.87	.35

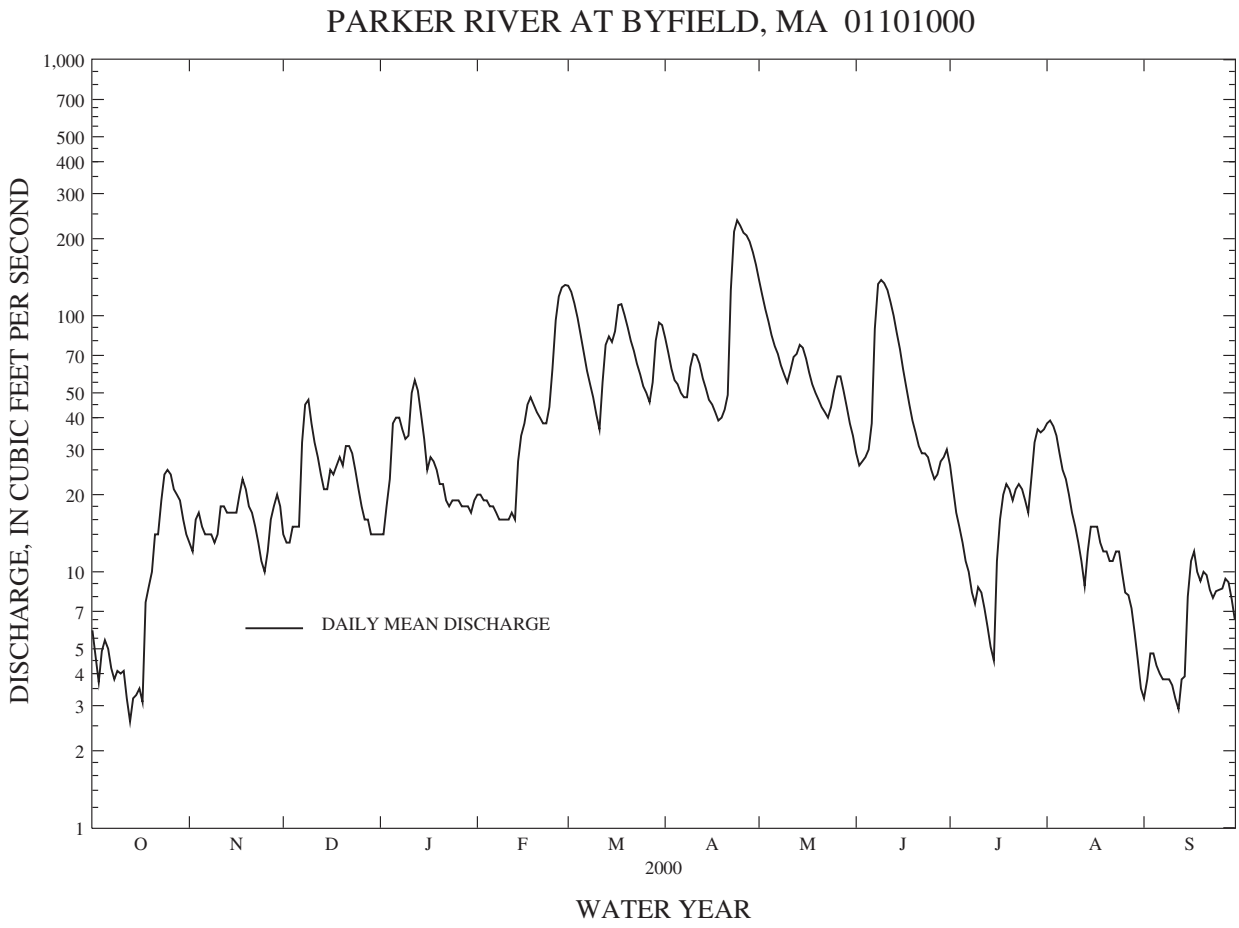
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2000, BY WATER YEAR (WY)

MEAN	16.3	29.4	41.4	43.6	51.8	84.7	83.0	49.8	28.2	8.80	5.56	6.41
MAX	186	87.3	117	116	122	226	249	151	138	39.6	18.0	65.8
(WY)	1997	1973	1997	1958	1976	1983	1987	1983	1982	1972	1982	1954
MIN	.15	.92	1.74	2.98	5.25	33.6	25.2	19.2	2.86	.43	.13	.11
(WY)	1998	1966	1966	1966	1980	1989	1985	1985	1999	1999	1995	1997

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1946 - 2000	
ANNUAL TOTAL	9660.17		13795.1			
ANNUAL MEAN	26.5		37.7		37.2	
HIGHEST ANNUAL MEAN					64.8	1984
LOWEST ANNUAL MEAN					13.2	1966
HIGHEST DAILY MEAN	155	Jan 26	236	Apr 24	858	Oct 22 1996
LOWEST DAILY MEAN	.03	Sep 3	2.6	Oct 13	.03	Sep 3 1999
ANNUAL SEVEN-DAY MINIMUM	.04	Aug 31	3.3	Oct 11	.04	Aug 31 1999
INSTANTANEOUS PEAK FLOW			238	Apr 24	883	Oct 22 1996
INSTANTANEOUS PEAK STAGE			3.81	Apr 24	7.82	Oct 22 1996
INSTANTANEOUS LOW FLOW			2.3	Oct 13		
ANNUAL RUNOFF (CFSM)	1.24		1.77		1.75	
ANNUAL RUNOFF (INCHES)	16.87		24.09		23.73	
10 PERCENT EXCEEDS	73		85		89	
50 PERCENT EXCEEDS	16		23		24	
90 PERCENT EXCEEDS	.24		6.0		1.4	

e Estimated

01101000 PARKER RIVER AT BYFIELD, MA--Continued



Cableway discharge measurement of Squannacook River near West Groton, MA, 01096000, on Dec. 17, 2000. (photo by Dominic Murino, Jr.)

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA
(National Water Quality Assessment Site)

LOCATION.--Lat 42°34'10", long 71°01'39", Essex County, Hydrologic Unit 01090001, on right bank in Peabody, 700 ft downstream from Boston Street Bridge at South Middleton, 1.3 mi downstream from Wills Brook, and 2 mi south of Middleton.

DRAINAGE AREA.--44.5 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: June 1938 to current year.
Water-quality records: Water years 1957, 1959, 1999, 2000.

REVISED RECORDS.--WSP 1301: 1942(M). WSP 1621: 1938-58 (monthly runoff). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 44.97 ft above sea level (Massachusetts Geodetic Survey benchmark.)

REMARKS.--Records fair except those for estimated daily discharges and those for discharges less than 10 ft^3/s, which are poor. Diversions upstream for municipal supply of Reading, Lynn, and Peabody. Occasional regulation by mill upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--62 years, 64.0 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft^3/s, Apr. 7, 1987, maximum gage height, 7.88 ft Oct. 21, 1997; minimum, 0.05 ft^3/s, Sept. 6, 7, 8, 9, 11, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 415 ft^3/s, Apr. 23, gage height, 5.63 ft; minimum, 0.99 ft^3/s, Sept. 12, 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.3	47	52	e32	38	239	145	206	59	27	73	3.1
2	8.0	43	49	e35	37	218	136	189	54	22	66	3.8
3	6.5	53	46	e44	35	196	125	174	54	19	61	4.5
4	7.9	57	45	e60	34	172	120	157	47	17	55	4.1
5	12	54	44	77	33	153	116	143	42	15	48	3.4
6	11	51	43	80	32	129	105	130	65	13	41	2.9
7	8.4	48	72	71	31	105	98	118	224	11	36	2.3
8	7.5	45	83	56	30	92	92	108	210	11	32	2.0
9	7.4	42	60	53	28	85	109	101	189	10	27	1.8
10	9.1	41	60	56	28	80	119	96	179	19	23	1.6
11	11	47	61	94	30	78	101	135	160	15	19	1.4
12	9.0	48	57	96	32	124	95	131	142	9.8	16	1.1
13	7.5	49	50	87	31	140	90	124	125	7.2	14	1.3
14	14	49	45	75	54	130	85	132	106	5.8	17	1.3
15	15	49	44	67	83	132	81	126	93	4.7	19	10
16	15	48	47	58	80	138	77	115	84	54	23	21
17	13	45	44	e54	82	160	80	105	75	42	28	11
18	38	42	39	e52	85	170	69	96	67	32	19	7.7
19	50	39	34	e50	84	161	84	97	61	e20	18	6.9
20	51	39	28	e48	79	152	93	101	56	e24	15	14
21	63	41	41	46	76	143	93	95	50	e29	13	13
22	64	39	52	43	74	133	309	89	46	34	10	9.1
23	75	36	62	39	74	124	404	87	46	30	8.6	7.7
24	81	34	59	36	86	115	376	95	41	21	9.4	7.0
25	71	34	53	38	130	105	345	107	34	18	8.3	6.2
26	64	42	48	37	195	99	332	99	33	16	6.9	6.2
27	61	52	44	35	212	92	354	92	49	40	5.8	8.4
28	60	59	39	33	251	121	315	84	44	69	4.4	7.4
29	58	56	34	32	263	163	272	78	35	54	4.4	5.9
30	55	54	32	32	---	162	238	71	32	49	3.9	5.2
31	52	---	31	35	---	156	---	65	---	62	3.4	---
TOTAL	1014.6	1383	1498	1651	2327	4267	5058	3546	2502	800.5	728.1	181.3
MEAN	32.7	46.1	48.3	53.3	80.2	138	169	114	83.4	25.8	23.5	6.04
MAX	81	59	83	96	263	239	404	206	224	69	73	21
MIN	6.5	34	28	32	28	78	69	65	32	4.7	3.4	1.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2000, BY WATER YEAR (WY)

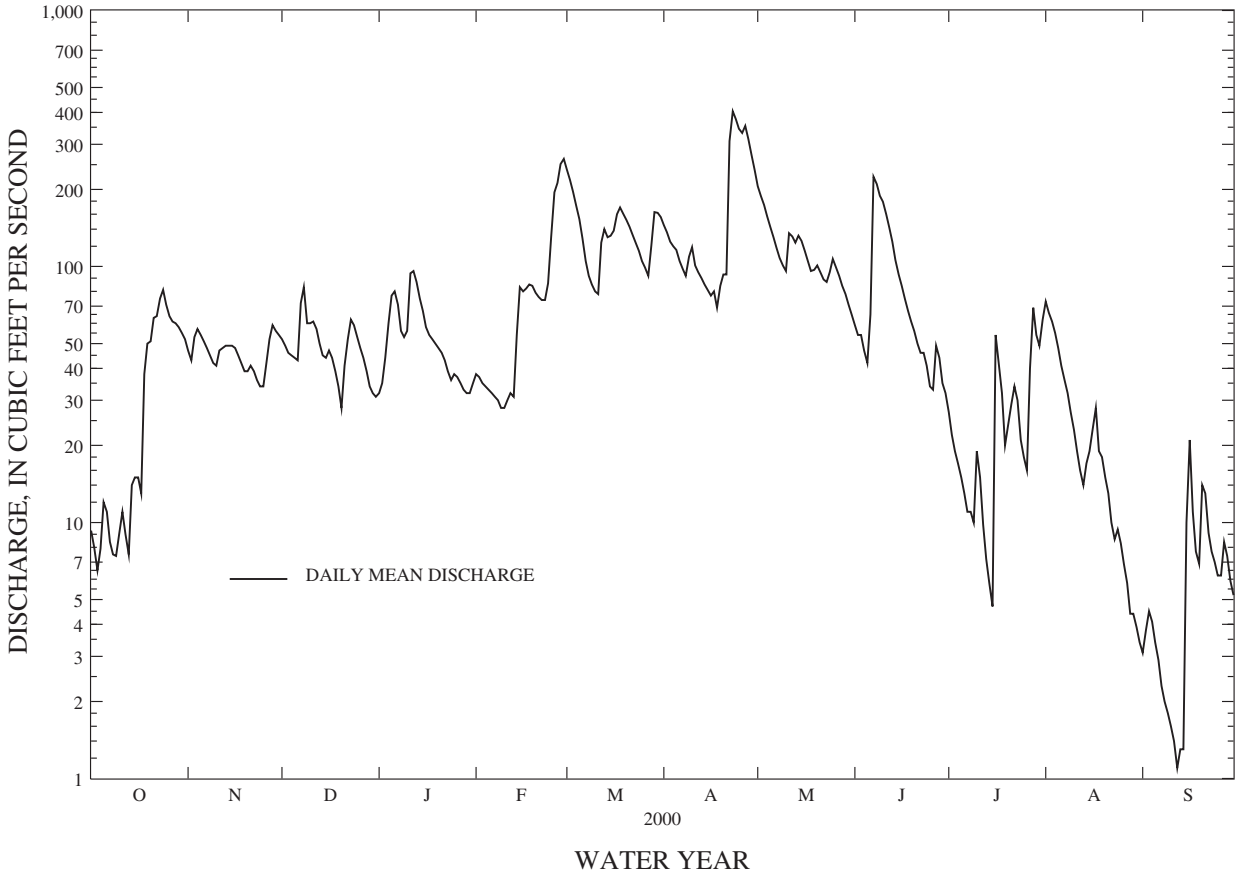
MEAN	30.1	51.5	69.5	71.9	86.8	151	140	81.8	47.0	18.8	12.7	14.6
MAX	240	199	217	215	212	351	389	298	262	195	95.5	164
(WY)	1963	1956	1987	1979	1984	1983	1987	1954	1982	1938	1938	1954
MIN	.38	1.28	1.05	1.07	9.66	36.3	29.6	18.5	4.71	.74	.17	.26
(WY)	1998	1966	1966	1966	1980	1989	1985	1965	1999	1966	1999	1957

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1938 - 2000	
ANNUAL TOTAL	18136.37		24956.5			
ANNUAL MEAN	49.7		68.2		64.0	
HIGHEST ANNUAL MEAN					121	1984
LOWEST ANNUAL MEAN					18.6	1966
HIGHEST DAILY MEAN	287	Feb 4	404	Apr 23	995	Apr 7 1987
LOWEST DAILY MEAN	.09	Sep 5	1.1	Sep 12	.05	Sep 7 1997
ANNUAL SEVEN-DAY MINIMUM	.11	Aug 31	1.5	Sep 8	.08	Sep 5 1997
INSTANTANEOUS PEAK FLOW			415	Apr 23	1010	Apr 7 1987
INSTANTANEOUS PEAK STAGE			5.63	Apr 23	7.88	Oct 21 1996
INSTANTANEOUS LOW FLOW			.99	Sep 12	.05	Sep 6 1997
10 PERCENT EXCEEDS	127		143		156	
50 PERCENT EXCEEDS	39		50		38	
90 PERCENT EXCEEDS	.17		7.8		2.2	

e Estimated

IPSWICH RIVER AT SOUTH MIDDLETON, MA 01101500



01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1959, 1999-2000.

REMARKS.--Selected samples were analyzed for pesticide compounds on schedule 2001 (listed with minimum reporting levels in the section "Explanation of the Records"); only pesticide compounds identified by the analyses (either as estimated values or values measured at or above the minimum reporting level) for one or more samples are listed in the water-quality data tables.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT										
26...	1040	64	759	9.6	--	242	15.3	8.0	12.7	2.95
NOV										
17...	1100	45	755	11.9	6.8	274	7.1	3.2	12.1	2.76
DEC										
08...	1030	87	765	11.4	6.7	224	8.4	5.7	10.9	2.43
JAN										
20...	1030	58	754	11.0	6.4	283	-4.3	.1	12.6	2.90
FEB										
15...	1015	83	757	11.5	6.5	332	2.8	.1	12.1	2.88
22...	0900	73	773	11.0	6.4	336	3.8	.1	12.4	2.85
MAR										
12...	0945	121	750	11.2	6.9	266	4.5	4.7	10.6	2.38
16...	0945	138	759	11.2	6.4	226	19.2	6.4	10.5	2.29
APR										
24...	1215	371	750	10.0	6.5	166	13.9	8.2	7.33	1.61
26...	1500	334	761	10.2	6.5	194	4.1	8.5	8.30	1.77
MAY										
17...	0945	106	763	9.0	6.7	261	18.1	14.5	11.1	2.36
JUN										
14...	0930	107	766	8.4	6.6	230	15.2	15.5	10.3	2.10
JUL										
05...	0930	16	754	7.5	7.0	292	25.1	23.1	14.3	2.94
AUG										
22...	0830	10	766	8.1	6.9	264	16.4	17.3	--	--
22...	0845	10	766	8.1	6.9	264	16.4	17.3	13.8	2.88
22...	0930	10	--	--	--	--	--	--	--	--
SEP										
20...	0830	13	753	8.4	7.1	265	21.2	17.5	14.4	3.01

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	ALKALINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICARBONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)
OCT									
26...	3.2	23.4	--	--	44.3	<0.1	10.8	21.7	0.75
NOV									
17...	2.2	27.9	16	20	52.8	<.1	9.9	17.0	.70
DEC									
08...	2.5	24.0	15	18	42.5	<.1	9.6	12.5	.59
JAN									
20...	2.3	31.2	17	20	56.7	<.1	10.2	15.4	.47
FEB									
15...	2.2	44.3	16	20	78.4	<.1	9.7	13.5	.45
22...	2.2	39.7	16	19	75.5	<.1	10.0	13.9	.44
MAR									
12...	2.0	31.0	10	13	56.1	<.1	3.8	13.1	.40
16...	1.9	34.0	10	12	64.5	<.1	3.7	12.3	.28
APR									
24...	1.7	21.5	11	14	36.7	<.1	3.0	7.4	.48
26...	1.9	26.5	29	35	44.8	<.1	2.6	8.7	.42
MAY									
17...	2.3	30.7	22	26	56.2	<.1	1.6	7.5	.64
JUN									
14...	1.9	27.2	27	33	48.3	<.1	5.9	5.6	.66
JUL									
05...	2.1	33.9	32	39	62.2	.1	11.1	4.8	.65
AUG									
22...	--	--	28	34	--	--	--	6.8	.68
22...	2.6	32.1	28	34	55.7	<.1	14.2	6.8	.62
22...	--	--	--	--	--	--	--	--	--
SEP									
20...	4.4	28.2	22	26	47.7	<.1	12.5	17.6	.45

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DISSOLVED (MG/L AS N) (00613)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DISSOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTICULATE TOTAL (MG/L AS C) (00689)
OCT									
26...	0.82	<0.020	0.051	<0.010	0.017	<0.010	0.028	22	0.3
NOV									
17...	.78	<.020	.071	<.010	.014	<.010	.023	17	.2
DEC									
08...	.59	<.020	.160	<.010	.013	<.010	.028	14	.2
JAN									
20...	.53	.045	.277	<.010	.008	<.010	.014	4.5	.2
FEB									
15...	.55	.157	.414	<.010	.012	<.010	.027	8.1	.4
22...	.47	.084	.341	<.010	.008	<.010	.014	9.7	<.2
MAR									
12...	.37	.025	.209	<.010	.006	<.010	.015	8.9	.4
16...	.39	<.020	.116	<.010	.007	<.010	.011	10	.2
APR									
24...	.61	<.020	.118	<.010	.011	<.010	.019	14	.3
26...	.50	<.020	.071	<.010	.010	<.010	.017	12	.3
MAY									
17...	.67	<.020	.080	<.010	.018	<.010	.026	15	.4
JUN									
14...	.71	.042	.105	<.010	.033	<.010	.047	16	<.2
JUL									
05...	.71	.040	.331	.011	.047	.027	.069	15	.2
AUG									
22...	.70	.028	.261	<.010	.034	.016	.049	--	--
22...	.75	.031	.273	<.010	.033	.016	.049	16	.2
22...	--	--	--	--	--	--	--	--	--
SEP									
20...	.52	<.020	.229	<.010	.020	<.010	.033	11	.3

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT									
26...	179	--	500	86	--	--	--	6	77
NOV									
17...	176	--	380	55	--	--	--	5	76
DEC									
08...	145	--	440	74	--	--	--	4	50
JAN									
20...	183	--	310	56	--	--	--	2	80
FEB									
15...	205	--	320	194	--	--	--	4	73
22...	200	--	250	82	--	--	--	2	60
MAR									
12...	145	--	200	38	--	--	--	5	75
16...	165	--	170	19	--	--	--	4	57
APR									
24...	113	--	260	25	--	--	--	3	78
26...	127	--	230	23	E0.002	0.013	E0.003	3	62
MAY									
17...	161	--	510	85	--	--	--	5	85
JUN									
14...	152	--	850	91	--	--	--	5	80
JUL									
05...	191	--	1,270	292	--	--	--	5	80
AUG									
22...	--	--	--	--	<.001	<.002	<.018	--	--
22...	183	--	690	78	--	--	--	4	85
22...	--	73.0	--	--	--	--	--	--	--
SEP									
20...	176	--	370	58	--	--	--	4	83

Hydrologic Technician makes mid-winter discharge measurement of Quinapoxet River near Holden, MA, 01095375. (photo by J. L. Zanca)

01102000 IPSWICH RIVER NEAR IPSWICH, MA

LOCATION.--Lat 42°39'35", long 70°53'39", Essex County, Hydrologic Unit 01090001, on left bank 200 ft downstream from Willowdale Dam, 1.5 mi downstream from Howlett Brook, and 4 mi upstream from Ipswich.

DRAINAGE AREA.--125 mi^2.

PERIOD OF RECORD.--Discharge: June 1930 to current year.
Water-quality records: Water years 1954, 1976-79.

REVISED RECORDS.--WSP 1621: 1930-58 (monthly runoff). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 20.63 ft above sea level.

REMARKS.--Records good. Diversions upstream for municipal supply of Reading, Lynn, Peabody, Danvers, Salem, and Beverly. Some regulation by reservoirs upstream. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--70 years, 189 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft^3/s, Apr. 8, 1987, gage height, 9.43 ft; minimum, 0.34 ft^3/s, Sept. 20, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1886, that of Apr. 8, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1460 ft^3/s, Apr 25, gage height, 6.24 ft; minimum, 9.9 ft^3/s, July 9; minimum daily, 22 ft^3/s, Sept. 13, 14.

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

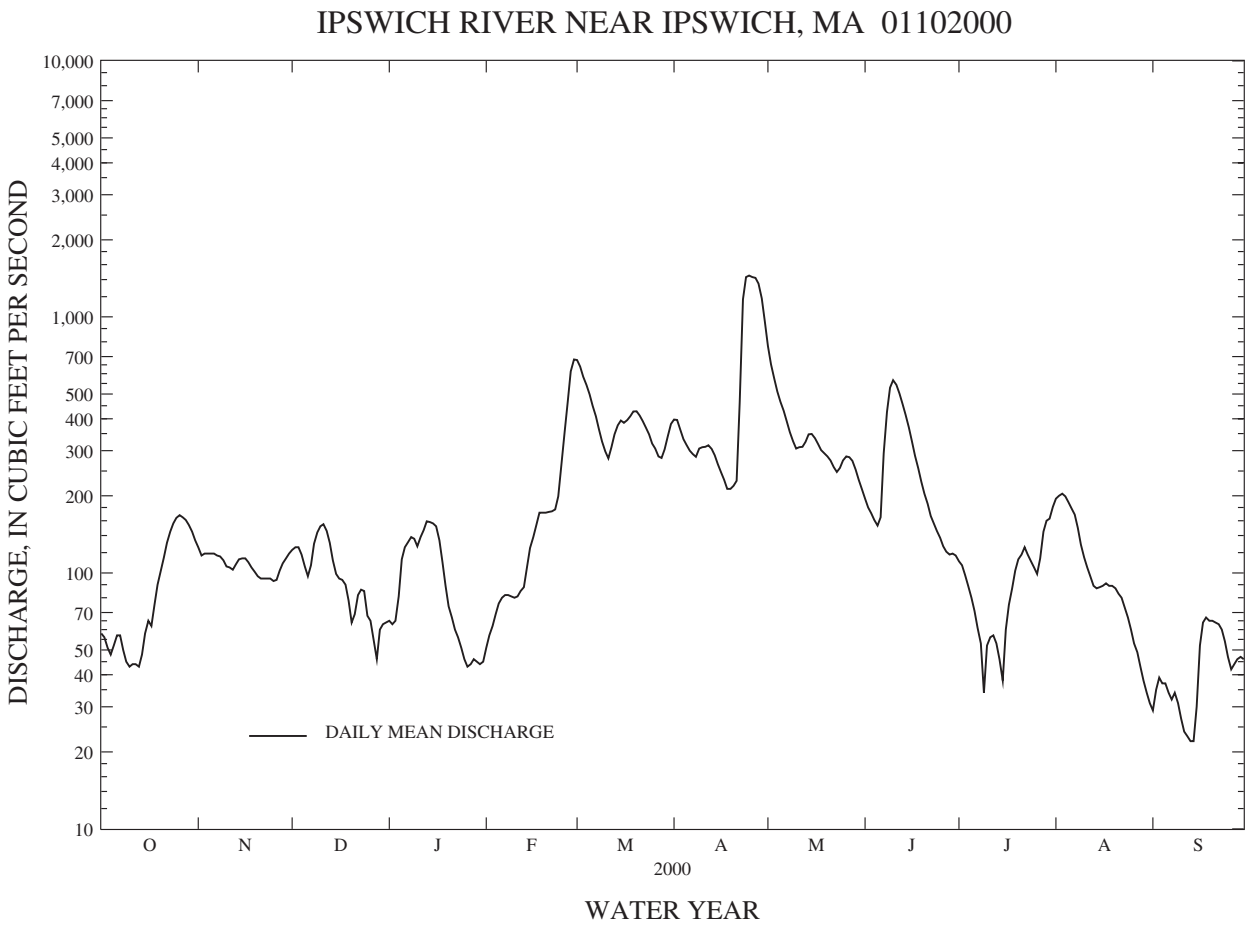
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	126	123	65	51	678	397	769	195	111	195	29
2	56	117	126	63	57	640	396	653	180	107	200	35
3	51	119	126	65	62	584	362	574	171	98	204	39
4	48	119	118	81	69	542	333	511	161	89	199	37
5	52	119	106	113	76	499	316	466	153	80	189	37
6	57	119	97	126	80	450	300	430	165	71	179	34
7	57	117	107	132	82	409	291	391	293	61	169	32
8	50	116	130	138	82	364	284	355	425	53	150	34
9	45	112	144	136	81	326	306	327	529	34	129	31
10	43	106	152	127	80	298	310	306	566	52	115	27
11	44	105	155	138	81	280	311	310	543	56	105	24
12	44	103	146	147	85	310	315	311	502	57	97	23
13	43	108	131	159	88	348	305	325	458	53	89	22
14	48	113	112	158	105	377	288	348	415	46	87	22
15	58	114	99	156	125	394	266	349	370	38	88	30
16	65	114	95	152	138	386	247	336	327	60	89	52
17	62	110	94	134	154	395	231	319	287	75	91	64
18	75	105	90	110	172	409	213	302	256	87	89	67
19	90	101	78	89	172	427	213	293	227	102	89	65
20	102	97	64	74	172	428	219	285	204	113	87	65
21	115	95	69	67	173	412	229	275	186	118	83	64
22	131	95	82	60	174	392	463	259	167	126	80	63
23	145	95	86	56	177	370	1170	248	156	118	73	60
24	156	95	85	51	199	348	1430	257	146	111	67	54
25	164	93	68	46	263	320	1450	275	137	105	60	47
26	168	94	65	43	354	306	1430	285	127	99	53	42
27	165	102	55	44	463	285	1420	283	121	114	49	44
28	161	109	46	46	613	281	1350	274	118	145	43	46
29	154	114	60	45	682	304	1180	253	119	160	38	47
30	145	119	63	44	---	343	959	231	117	163	34	46
31	134	---	64	45	---	382	---	213	---	181	31	---
TOTAL	2786	3251	3036	2910	5110	12287	16984	10813	7821	2883	3251	1282
MEAN	89.9	108	97.9	93.9	176	396	566	349	261	93.0	105	42.7
MAX	168	126	155	159	682	678	1450	769	566	181	204	67
MIN	43	93	46	43	51	280	213	213	117	34	31	22

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

MEAN	79.8	135	191	210	246	449	435	242	148	57.3	37.2	42.1
MAX	749	525	621	566	627	1158	1233	833	821	518	356	390
(WY)	1997	1933	1997	1958	1984	1983	1987	1954	1982	1938	1938	1954
MIN	4.75	6.87	11.5	14.4	16.4	75.0	97.1	83.5	25.6	5.75	2.13	1.76
(WY)	1998	1966	1966	1966	1980	1989	1985	1999	1976	1957	1965	1965

01102000 IPSWICH RIVER NEAR IPSWICH, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1930 - 2000	
ANNUAL TOTAL	49503.97		72414			
ANNUAL MEAN	136		198		189	
HIGHEST ANNUAL MEAN					351	1984
LOWEST ANNUAL MEAN					57.7	1966
HIGHEST DAILY MEAN	753	Feb 6	1450	Apr 25	3520	Apr 8 1987
LOWEST DAILY MEAN	.77	Sep 6	22	Sep 13	.59	Sep 21 1978
ANNUAL SEVEN-DAY MINIMUM	.94	Sep 1	26	Sep 9	.94	Sep 1 1999
INSTANTANEOUS PEAK FLOW			1460	Apr 25	3550	Apr 8 1987
INSTANTANEOUS PEAK STAGE			6.24	Apr 25	9.43	Apr 8 1987
INSTANTANEOUS LOW FLOW			9.9	Jul 9	.34	Sep 20 1978
10 PERCENT EXCEEDS	367		401		448	
50 PERCENT EXCEEDS	97		119		114	
90 PERCENT EXCEEDS	3.6		46		12	



01102029 MILL BROOK AT ROCKPORT, MA

LOCATION.--Lat 42°39'06", long 70°37'50", Essex County, Hydrologic Unit 01090001, on right bank, 150 ft upstream from Mill Brook pump house on Applecart Road, and 0.7 mi southwest of Rockport.

DRAINAGE AREA.--0.55 mi^2 (revised).

PERIOD OF RECORD.--December 1998 to November 2000 (discontinued).

GAGE.--Water-stage recorder and satellite telemeter. Elevation of gage is 60 ft above sea level, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--1 year, (water year 2000) 1.00 ft^3/s.

EXTREMES FOR PERIOD DECEMBER 1998 TO NOVEMBER 2000.--Maximum discharge, 18 ft^3/s, Feb. 3, 1999, gage height, 2.21 ft, minimum, no flow many days during, July, Aug., Sept. 1999.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.33	0.71	0.64	0.60	0.91	2.2	1.3	2.6	0.63	0.41	1.7	0.32
2	.29	.69	.62	.61	.76	2.1	1.3	2.7	.72	.28	1.8	.57
3	.28	1.4	.62	.63	.67	1.9	1.3	2.3	.98	.20	1.1	.52
4	.37	.89	.61	.85	.66	1.6	1.4	2.0	.62	.17	.83	.45
5	.42	.75	.61	2.5	.65	1.5	1.3	1.9	.57	.14	.62	.32
6	.39	.67	.62	1.2	.63	1.4	1.2	1.8	1.3	.09	.55	.25
7	.39	.71	2.6	1.1	.65	1.3	1.2	1.7	3.8	.10	.56	.16
8	.33	.67	1.3	.97	.62	1.3	1.1	1.5	1.8	.09	.51	.08
9	.33	.66	1.1	.93	.62	1.3	1.5	1.5	1.5	.13	.46	.09
10	.37	.69	1.1	1.3	.65	1.2	1.1	1.6	1.4	.35	.46	.08
11	.39	.87	1.1	1.9	.89	1.5	1.1	2.4	1.1	.10	.39	.09
12	.36	.70	.96	1.2	.79	3.4	1.2	1.6	1.1	.06	.40	.10
13	.33	.80	.95	1.2	.67	2.4	1.0	1.4	.98	.05	.38	.13
14	.76	.80	.95	1.1	3.2	1.8	.96	1.4	.84	.04	1.6	.10
15	.85	.81	1.1	.95	1.8	1.6	.90	1.2	.79	.05	1.0	.47
16	.84	.67	1.1	.98	1.4	1.6	.89	1.1	.75	.96	1.0	.40
17	.80	.60	.94	.83	1.3	3.0	.86	.96	.73	.45	.75	.20
18	1.4	.58	.86	.71	1.2	2.2	.84	.96	.72	.37	.57	.17
19	1.3	.58	.80	.70	1.3	2.0	2.0	1.2	.67	.31	.68	.12
20	1.5	.59	.82	.69	1.1	1.7	1.3	1.1	.59	.14	.52	.27
21	1.4	.65	1.1	.73	1.0	1.5	1.3	.95	.52	.08	.45	.20
22	1.1	.63	.91	.72	1.0	1.5	6.1	.87	.50	.63	.43	.13
23	2.0	.61	.82	.66	1.3	1.4	5.9	1.0	.49	.34	.47	.11
24	1.3	.60	.78	.67	1.7	1.3	4.4	1.8	.43	.14	.61	.11
25	1.1	.61	.72	1.1	3.2	1.3	3.6	1.4	.40	.10	.45	.10
26	1.0	.75	.70	1.1	3.0	1.2	3.8	1.1	.41	.24	.40	.14
27	1.0	1.1	.69	.84	2.7	1.1	4.1	.86	.47	2.2	.34	.20
28	.84	.92	.64	.70	2.9	2.4	3.2	.75	.47	1.3	.30	.13
29	.71	.72	.62	.63	2.6	2.2	2.8	.72	.40	.77	.24	.11
30	.70	.67	.61	.64	---	1.7	2.7	.67	.45	.61	.25	.10
31	.71	---	.61	1.0	---	1.5	---	.65	---	.98	.31	---
TOTAL	23.89	22.10	27.60	29.74	39.87	54.1	61.65	43.69	26.13	11.88	20.13	6.22
MEAN	.77	.74	.89	.96	1.37	1.75	2.06	1.41	.87	.38	.65	.21
MAX	2.0	1.4	2.6	2.5	3.2	3.4	6.1	2.7	3.8	2.2	1.8	.57
MIN	.28	.58	.61	.60	.62	1.1	.84	.65	.40	.04	.24	.08
CFSM	1.40	1.34	1.62	1.74	2.50	3.17	3.74	2.56	1.58	.70	1.18	.38
IN.	1.62	1.49	1.87	2.01	2.70	3.66	4.17	2.96	1.77	.80	1.36	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)

MEAN	0.77	0.74	0.89	1.27	1.68	2.08	1.52	1.09	0.64	0.20	0.32	0.22
MAX	.77	.74	.89	1.59	2.00	2.41	2.06	1.41	.87	.38	.65	.23
(WY)	2000	2000	2000	1999	1999	1999	2000	2000	2000	2000	2000	1999
MIN	.77	.74	.89	.96	1.37	1.75	.98	.77	.40	.025	.001	.21
(WY)	2000	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1999 - 2000	
ANNUAL TOTAL	326.69		367.00			
ANNUAL MEAN	.90		1.00		1.00	
HIGHEST ANNUAL MEAN					1.00	2000
LOWEST ANNUAL MEAN					1.00	2000
HIGHEST DAILY MEAN	8.4	Feb 3	6.1	Apr 22	8.4	Feb 3 1999
LOWEST DAILY MEAN	.00	Jul 30	.04	Jul 14	.00	Jul 30 1999
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 30	.10	Sep 8	.00	Jul 30 1999
INSTANTANEOUS PEAK FLOW			8.8	Apr 22	18	Feb 3 1999
INSTANTANEOUS PEAK STAGE			2.01	Apr 22	2.21	Feb 3 1999
INSTANTANEOUS LOW FLOW			.04	Jul 13	.00	Jul 29 1999
ANNUAL RUNOFF (CFSM)	1.63		1.82		1.82	
ANNUAL RUNOFF (INCHES)	22.10		24.82		24.77	
10 PERCENT EXCEEDS	2.1		1.9		2.2	
50 PERCENT EXCEEDS	.65		.80		.70	
90 PERCENT EXCEEDS	.00		.20		.04	

01102029 MILL BROOK AT ROCKPORT, MA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

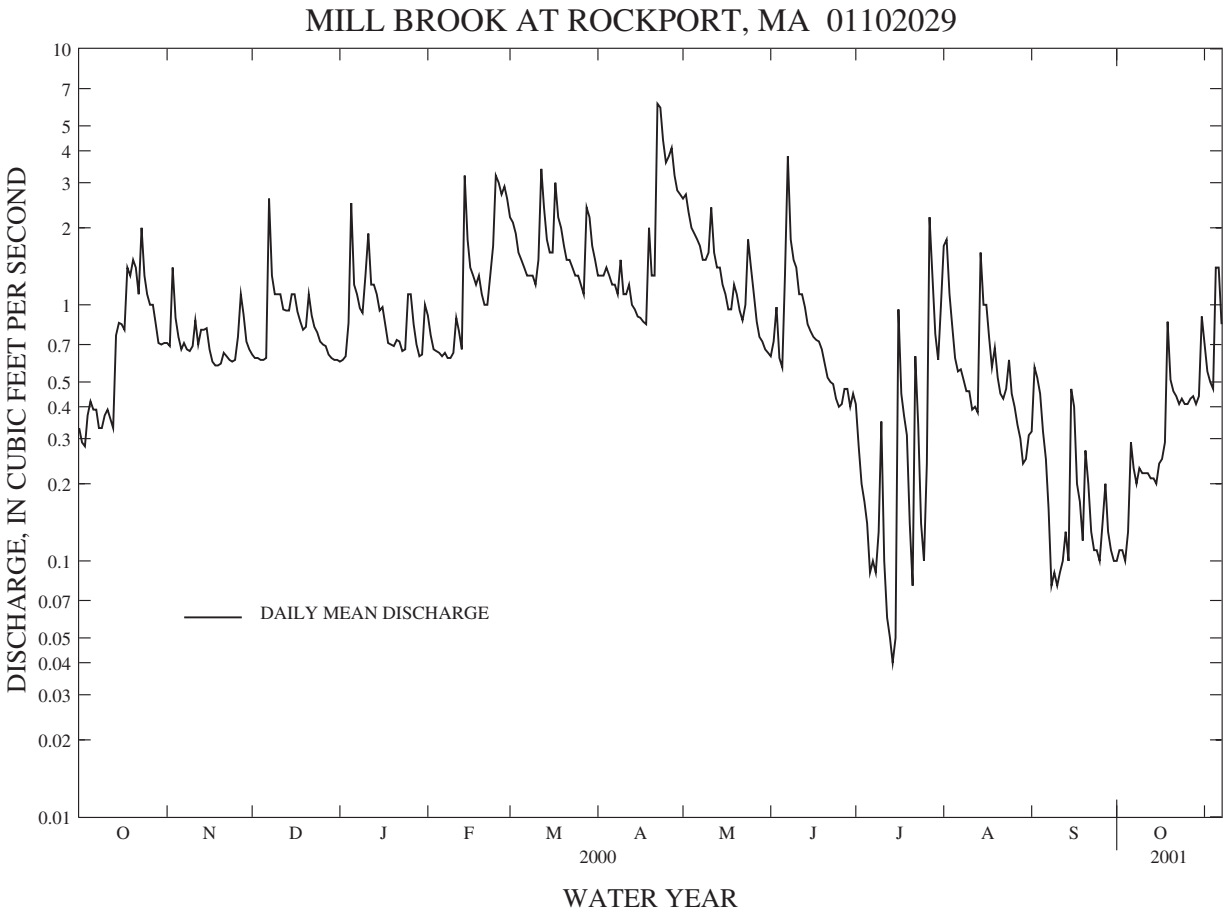
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.71	---	---	---	---	---	---	---	---	---	---
2	.11	.55	---	---	---	---	---	---	---	---	---	---
3	.11	.50	---	---	---	---	---	---	---	---	---	---
4	.10	.47	---	---	---	---	---	---	---	---	---	---
5	.13	1.4	---	---	---	---	---	---	---	---	---	---
6	.29	1.4	---	---	---	---	---	---	---	---	---	---
7	.23	.84	---	---	---	---	---	---	---	---	---	---
8	.20	---	---	---	---	---	---	---	---	---	---	---
9	.23	---	---	---	---	---	---	---	---	---	---	---
10	.22	---	---	---	---	---	---	---	---	---	---	---
11	.22	---	---	---	---	---	---	---	---	---	---	---
12	.22	---	---	---	---	---	---	---	---	---	---	---
13	.21	---	---	---	---	---	---	---	---	---	---	---
14	.21	---	---	---	---	---	---	---	---	---	---	---
15	.20	---	---	---	---	---	---	---	---	---	---	---
16	.24	---	---	---	---	---	---	---	---	---	---	---
17	.25	---	---	---	---	---	---	---	---	---	---	---
18	.29	---	---	---	---	---	---	---	---	---	---	---
19	.86	---	---	---	---	---	---	---	---	---	---	---
20	.51	---	---	---	---	---	---	---	---	---	---	---
21	.46	---	---	---	---	---	---	---	---	---	---	---
22	.44	---	---	---	---	---	---	---	---	---	---	---
23	.41	---	---	---	---	---	---	---	---	---	---	---
24	.43	---	---	---	---	---	---	---	---	---	---	---
25	.41	---	---	---	---	---	---	---	---	---	---	---
26	.41	---	---	---	---	---	---	---	---	---	---	---
27	.43	---	---	---	---	---	---	---	---	---	---	---
28	.44	---	---	---	---	---	---	---	---	---	---	---
29	.41	---	---	---	---	---	---	---	---	---	---	---
30	.44	---	---	---	---	---	---	---	---	---	---	---
31	.90	---	---	---	---	---	---	---	---	---	---	---
TOTAL	10.11	---	---	---	---	---	---	---	---	---	---	---
MEAN	.33	---	---	---	---	---	---	---	---	---	---	---
MAX	.90	---	---	---	---	---	---	---	---	---	---	---
MIN	.10	---	---	---	---	---	---	---	---	---	---	---
CFSM	.59	---	---	---	---	---	---	---	---	---	---	---
IN.	.68	---	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

MEAN	0.55	0.74	0.89	1.27	1.68	2.08	1.52	1.09	0.64	0.20	0.32	0.22
MAX	.77	.74	.89	1.59	2.00	2.41	2.06	1.41	.87	.38	.65	.23
(WY)	2000	2000	2000	1999	1999	1999	2000	2000	2000	2000	2000	1999
MIN	.33	.74	.89	.96	1.37	1.75	.98	.77	.40	.025	.001	.21
(WY)	2001	2000	2000	2000	2000	2000	1999	1999	1999	1999	1999	2000

SUMMARY STATISTICS	WATER YEARS 1999 - 2001	
ANNUAL MEAN	1.00	
HIGHEST ANNUAL MEAN	1.00	2000
LOWEST ANNUAL MEAN	1.00	2000
HIGHEST DAILY MEAN	8.4	Feb 3 1999
LOWEST DAILY MEAN	.00	Jul 30 1999
ANNUAL SEVEN-DAY MINIMUM	.00	Jul 30 1999
INSTANTANEOUS PEAK FLOW	18	Feb 3 1999
INSTANTANEOUS PEAK STAGE	2.21	Feb 3 1999
ANNUAL RUNOFF (CFSM)	1.82	
ANNUAL RUNOFF (INCHES)	24.77	
10 PERCENT EXCEEDS	2.1	
50 PERCENT EXCEEDS	.67	
90 PERCENT EXCEEDS	.05	

01102029 MILL BROOK AT ROCKPORT, MA--Continued



011020308 SAWMILL BROOK NEAR ROCKPORT, MA

LOCATION.--Lat 42°38'18", long 70°36'37", Essex County, Hydrologic Unit 01090001, on right bank, 20 ft upstream from culvert beneath Frank Road, 0.2 mi upstream from estuarine mouth, and 1.1 mi south of Rockport.

DRAINAGE AREA.--0.53 mi^2 (revised).

PERIOD OF RECORD.--December 1998 to November 2000 (discontinued).

GAGE.--Water-stage recorder and satellite telemeter. Elevation of gage is 40 ft above sea level, from topographic map.

REMARKS.--Records excellent from zero to 2.5 ft^3/s. Records good for flows greater than 2.5 ft^3/s and fair for estimated daily discharges and discharges from Apr. 4 to July 18 (when eel migration ramp was installed) and Oct. 31, 2000, to Nov. 8, 2000 (leaf build-up). Flows affected by pumping from water-supply detention pond 100 ft upstream from gage, Apr. 20, 21, 24-30, and May 1.

AVERAGE DISCHARGE.--1 year, (water year 2000) 0.96 ft^3/s.

EXTREMES FOR PERIOD DECEMBER 1998 TO NOVEMBER 2000.--Maximum discharge, 48 ft^3/s, Feb. 3, 1999, gage height, 3.00 ft (from peak stage indicator), minimum, no flow, many days during July, Aug., Sept. 1999.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.181	e1.60	0.415	0.248	0.960	e2.20	1.11	0.858	0.339	0.223	3.38	0.061
2	.084	.351	.360	.307	.680	e1.40	.936	1.21	.349	.146	e2.70	.204
3	.068	e.720	.353	.433	.501	e1.40	.840	1.03	.524	.104	1.51	.197
4	.450	e.720	.348	.686	.442	1.79	.666	.806	.355	.080	.994	.141
5	.419	.541	.325	4.17	.418	1.62	.548	.705	.308	.058	.660	.089
6	.215	.458	.338	1.57	.371	1.46	.425	.633	.976	.017	.483	.060
7	.127	.382	4.25	1.28	.373	1.32	e.370	.573	4.74	.004	.417	.048
8	.090	.332	2.16	1.03	.388	1.26	.375	.516	1.83	.002	.334	.041
9	.103	.305	1.39	.857	.337	1.23	.878	.475	1.23	.015	.246	.032
10	.107	.316	1.10	1.44	.360	1.23	e.530	.568	.978	.192	.215	.026
11	.156	.528	1.01	2.42	.751	1.72	e.390	1.42	.718	.052	.160	.025
12	.081	.348	1.01	1.48	.653	9.09	.470	.945	.667	.008	.123	.026
13	.069	.627	.919	1.08	.456	6.46	.377	.674	.608	.000	.104	.047
14	3.62	.556	.935	.744	8.09	4.44	.336	.719	.557	.000	1.24	.032
15	1.88	.586	e.780	.527	3.41	3.75	.301	.564	.532	.000	1.05	.492
16	.959	.425	e.780	.570	2.67	3.35	.311	.468	.506	.751	1.44	.308
17	.662	.337	.621	.514	2.34	e6.00	.286	e.370	.490	.379	.967	.137
18	5.59	.301	.495	.325	2.02	e3.20	.262	e.370	.501	.273	.536	.075
19	2.04	.299	.434	.254	e1.33	e2.30	1.38	.583	.467	.202	.561	.058
20	2.22	.309	.431	e.100	e1.09	e1.40	.888	.591	.383	.120	.415	.116
21	2.49	.394	.828	e.090	e.840	1.50	1.08	.497	.323	.072	.304	.085
22	1.65	.335	.588	e.070	e.720	1.28	12.4	.460	.272	.953	.227	.045
23	3.61	.318	.483	e.060	e1.12	1.09	7.16	.571	.303	.446	.215	.036
24	2.06	.309	.423	e.060	3.83	.962	3.32	1.32	.214	.207	.340	.043
25	1.54	.358	.300	e.170	6.95	.849	1.91	1.33	.173	.141	.229	.031
26	1.30	.575	.292	.975	5.44	.847	1.90	.815	.154	e.100	.169	.064
27	.872	1.10	.281	.912	3.42	.707	2.66	.566	.186	4.79	.139	.191
28	.499	.936	.227	.618	3.94	3.10	1.56	.466	.212	e2.30	.114	.095
29	.429	.639	.215	.473	3.24	2.92	1.21	.408	.165	1.17	.095	.052
30	.392	.510	.243	.425	---	1.95	.996	.372	.192	.690	.083	.038
31	.412	---	.257	1.16	---	1.44	---	.354	---	1.19	.073	---
TOTAL	34.375	15.515	22.591	25.048	57.140	73.265	45.875	21.237	19.252	14.685	19.523	2.895
MEAN	1.11	.52	.73	.81	1.97	2.36	1.53	.69	.64	.47	.63	.097
MAX	5.59	1.60	4.25	4.17	8.09	9.09	12.4	1.42	4.74	4.79	3.38	.492
MIN	.068	.299	.215	.060	.337	.707	.262	.354	.154	.000	.073	.025
CFSM	2.09	.98	1.37	1.52	3.72	4.46	2.89	1.29	1.21	.89	1.19	.18
IN.	2.41	1.09	1.59	1.76	4.01	5.14	3.22	1.49	1.35	1.03	1.37	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2000, BY WATER YEAR (WY)

MEAN	1.11	0.52	0.73	1.49	1.93	2.31	0.99	0.74	0.35	0.24	0.32	0.19
MAX	1.11	.52	.73	2.18	1.97	2.36	1.53	.79	.64	.47	.63	.28
(WY)	2000	2000	2000	1999	2000	2000	2000	1999	2000	2000	2000	1999
MIN	1.11	.52	.73	.81	1.89	2.26	.45	.69	.057	.003	.000	.097
(WY)	2000	2000	2000	2000	1999	1999	1999	2000	1999	1999	1999	2000

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR	FOR 2000 WATER YEAR	WATER YEARS 1999 - 2000
ANNUAL TOTAL	311.186	351.401	
ANNUAL MEAN	.85	.96	0.96
HIGHEST ANNUAL MEAN			.96 2000
LOWEST ANNUAL MEAN			.96 2000
HIGHEST DAILY MEAN	15.8 Feb 3	12.4 Apr 22	15.8 Feb 3 1999
LOWEST DAILY MEAN	.000 Aug 9	.000 Jul 13	.000 Aug 9 1999
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 9	.03 Sep 8	.00 Aug 9 1999
INSTANTANEOUS PEAK FLOW		26 Apr 22	48 Feb 3 1999
INSTANTANEOUS PEAK STAGE		2.90 Apr 22	3.00 Feb 3 1999
INSTANTANEOUS LOW FLOW		.00 May 1	.00 Jul 9 1999
ANNUAL RUNOFF (CFSM)	1.61	1.81	1.81
ANNUAL RUNOFF (INCHES)	21.84	24.66	24.61
10 PERCENT EXCEEDS	2.2	2.2	2.3
50 PERCENT EXCEEDS	.36	.50	.42
90 PERCENT EXCEEDS	.00	.08	.00

e Estimated

011020308 SAWMILL BROOK NEAR ROCKPORT, MA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.039	1.83	---	---	---	---	---	---	---	---	---	---
2	.035	1.19	---	---	---	---	---	---	---	---	---	---
3	.036	1.35	---	---	---	---	---	---	---	---	---	---
4	.023	1.30	---	---	---	---	---	---	---	---	---	---
5	.026	2.17	---	---	---	---	---	---	---	---	---	---
6	.286	2.33	---	---	---	---	---	---	---	---	---	---
7	.163	1.35	---	---	---	---	---	---	---	---	---	---
8	.087	---	---	---	---	---	---	---	---	---	---	---
9	.081	---	---	---	---	---	---	---	---	---	---	---
10	.127	---	---	---	---	---	---	---	---	---	---	---
11	.073	---	---	---	---	---	---	---	---	---	---	---
12	.048	---	---	---	---	---	---	---	---	---	---	---
13	.037	---	---	---	---	---	---	---	---	---	---	---
14	.031	---	---	---	---	---	---	---	---	---	---	---
15	.022	---	---	---	---	---	---	---	---	---	---	---
16	.057	---	---	---	---	---	---	---	---	---	---	---
17	.217	---	---	---	---	---	---	---	---	---	---	---
18	.168	---	---	---	---	---	---	---	---	---	---	---
19	2.26	---	---	---	---	---	---	---	---	---	---	---
20	.821	---	---	---	---	---	---	---	---	---	---	---
21	.592	---	---	---	---	---	---	---	---	---	---	---
22	.426	---	---	---	---	---	---	---	---	---	---	---
23	.343	---	---	---	---	---	---	---	---	---	---	---
24	.318	---	---	---	---	---	---	---	---	---	---	---
25	.289	---	---	---	---	---	---	---	---	---	---	---
26	.279	---	---	---	---	---	---	---	---	---	---	---
27	.280	---	---	---	---	---	---	---	---	---	---	---
28	.270	---	---	---	---	---	---	---	---	---	---	---
29	.221	---	---	---	---	---	---	---	---	---	---	---
30	.265	---	---	---	---	---	---	---	---	---	---	---
31	2.11	---	---	---	---	---	---	---	---	---	---	---
TOTAL	10.030	---	---	---	---	---	---	---	---	---	---	---
MEAN	.32	---	---	---	---	---	---	---	---	---	---	---
MAX	2.26	---	---	---	---	---	---	---	---	---	---	---
MIN	.022	---	---	---	---	---	---	---	---	---	---	---
CFSM	.61	---	---	---	---	---	---	---	---	---	---	---
IN.	.70	---	---	---	---	---	---	---	---	---	---	---

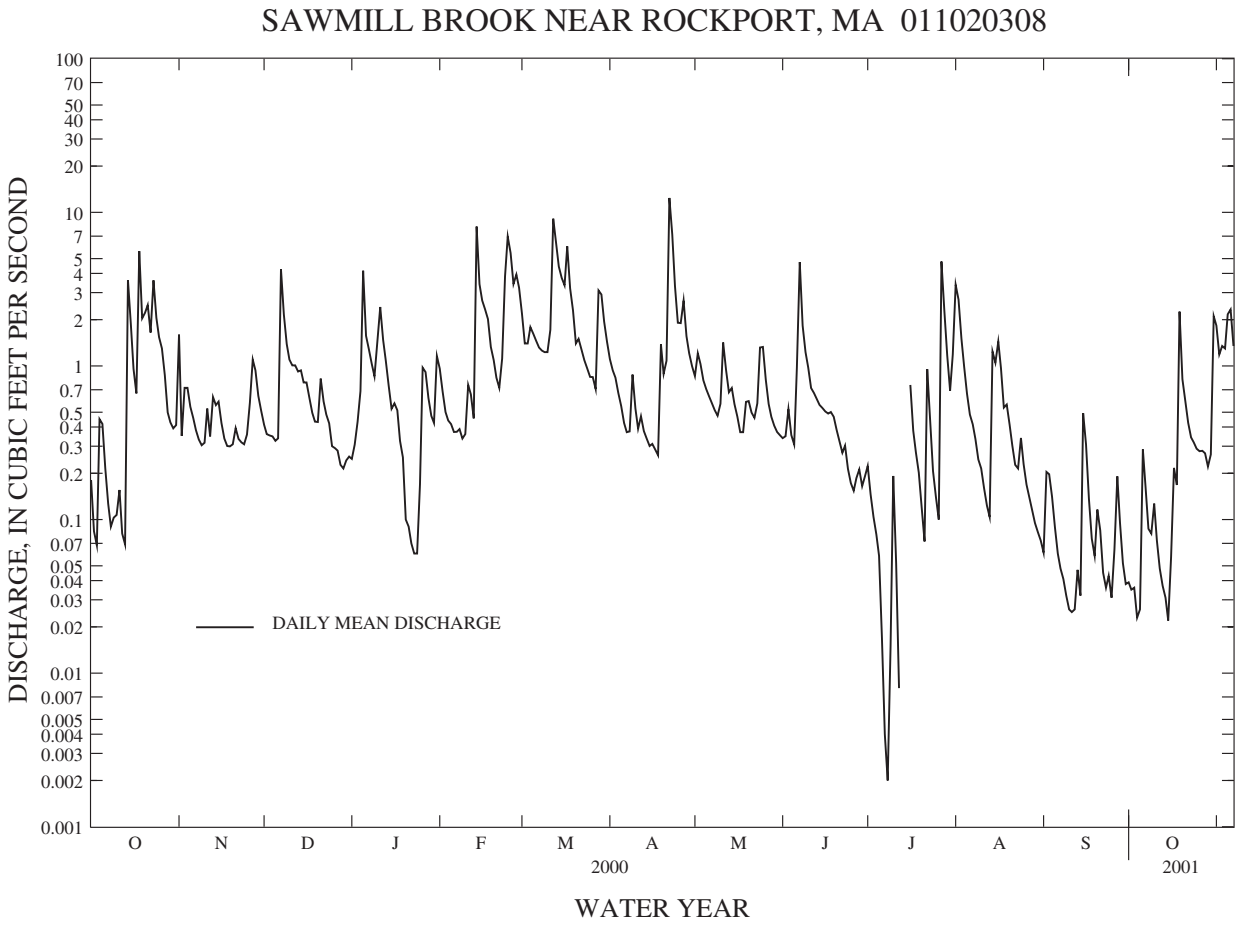
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2001, BY WATER YEAR (WY)

MEAN	0.72	0.52	0.73	1.49	1.93	2.31	0.99	0.74	0.35	0.24	0.32	0.19
MAX	1.11	.52	.73	2.18	1.97	2.36	1.53	.79	.64	.47	.63	.28
(WY)	2000	2000	2000	1999	2000	2000	2000	1999	2000	2000	2000	1999
MIN	.32	.52	.73	.81	1.89	2.26	.45	.69	.057	.003	.000	.097
(WY)	2001	2000	2000	2000	1999	1999	1999	2000	1999	1999	1999	2000

SUMMARY STATISTICS WATER YEARS 1999 - 2001

ANNUAL MEAN	0.96		
HIGHEST ANNUAL MEAN	.96		2000
LOWEST ANNUAL MEAN	.96		2000
HIGHEST DAILY MEAN	15.8	Feb 3	1999
LOWEST DAILY MEAN	.000	Aug 9	1999
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 9	1999
INSTANTANEOUS PEAK FLOW	48	Feb 3	1999
INSTANTANEOUS PEAK STAGE	2.90	Apr 22	0000
INSTANTANEOUS LOW FLOW	.00	Jul 9	1999
ANNUAL RUNOFF (CFSM)	1.81		
ANNUAL RUNOFF (INCHES)	24.61		
10 PERCENT EXCEEDS	2.2		
50 PERCENT EXCEEDS	.41		
90 PERCENT EXCEEDS	.00		

011020308 SAWMILL BROOK NEAR ROCKPORT, MA--Continued



01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA
(National Water Quality Assessment Site)

LOCATION.--Lat 42°28'05", long 71°00'27", Essex County, Hydrologic Unit 01090001, on left bank 20 ft upstream from Bridge Street opposite Saugus Ironworks National Historic Site, at Saugus.

DRAINAGE AREA.--23.3 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1994 to current year.

GAGE.--Water stage recorder. Elevation of gage is 15 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. There is evidence of seasonal regulation by ponds upstream. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--6 years, 30.3 ft^3/s, 17.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 942 ft^3/s, Oct. 21, 1996, gage height, 6.58 ft; minimum, about 0.60 ft^3/s, Sept. 5, 6, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 298 ft^3/s, Apr. 22, gage height, 4.65 ft; minimum, 3.9 ft^3/s, Sept. 12, 13, 15.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.8	11	e6.2	13	61	e48	106	18	8.6	22	7.2
2	7.2	8.3	10	e6.6	12	49	e42	75	20	7.9	17	10
3	5.6	20	9.7	7.6	e12	45	e38	63	25	7.2	14	12
4	11	18	9.6	11	e9.4	41	e40	59	18	6.9	17	6.6
5	12	13	9.1	38	e9.0	29	e37	49	17	6.8	18	5.5
6	7.9	11	8.9	21	e7.8	21	e35	43	53	6.5	16	5.1
7	5.9	9.6	41	14	e7.8	18	e33	38	170	7.0	19	4.8
8	5.1	8.6	34	12	e7.8	17	31	38	122	7.2	16	4.6
9	5.2	8.2	19	11	e7.8	16	52	39	103	9.1	15	4.5
10	6.0	8.6	16	20	7.6	15	48	33	93	17	15	4.3
11	6.7	16	14	46	8.6	22	37	48	83	9.7	13	4.0
12	5.1	13	13	27	9.6	66	39	34	77	6.3	12	3.9
13	4.7	13	11	20	11	46	36	29	63	5.2	10	4.7
14	18	12	11	e19	54	31	34	34	54	4.7	15	4.4
15	16	12	15	e18	60	26	33	29	43	4.2	14	23
16	9.3	10	17	e17	34	25	32	25	34	54	25	25
17	7.1	8.9	13	e16	26	76	30	22	31	28	25	9.6
18	35	8.1	12	e15	20	74	30	22	29	28	15	6.4
19	30	7.7	10	e14	20	49	47	27	29	31	14	5.3
20	27	7.6	9.7	e13	19	47	36	27	27	29	12	18
21	32	9.4	18	e12	17	47	42	22	25	20	10	11
22	e20	8.8	15	e11	16	44	237	21	19	23	9.5	6.2
23	e19	7.8	12	e11	19	37	205	27	15	16	9.7	5.0
24	e18	7.5	10	10	31	29	167	42	12	13	11	4.6
25	e17	9.4	e9.2	10	56	26	136	39	11	12	9.7	4.2
26	15	13	e8.2	12	68	21	155	36	10	11	8.8	5.5
27	13	21	e7.6	11	53	18	160	34	12	38	8.3	8.1
28	12	22	e7.0	e11	59	e70	140	26	14	38	8.0	5.8
29	11	16	e6.6	e11	72	e90	132	21	11	21	7.8	4.6
30	9.8	13	e6.2	9.5	---	e70	121	20	9.7	15	7.5	4.1
31	9.2	---	e6.0	13	---	e56	---	20	---	24	7.4	---
TOTAL	412.8	350.3	399.8	473.9	747.4	1282	2253	1148	1247.7	515.3	421.7	228.0
MEAN	13.3	11.7	12.9	15.3	25.8	41.4	75.1	37.0	41.6	16.6	13.6	7.60
MAX	35	22	41	46	72	90	237	106	170	54	25	25
MIN	4.7	7.5	6.0	6.2	7.6	15	30	20	9.7	4.2	7.4	3.9
CFSM	.57	.50	.55	.66	1.11	1.77	3.22	1.59	1.78	.71	.58	.33
IN.	.66	.56	.64	.76	1.19	2.05	3.60	1.83	1.99	.82	.67	.36

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

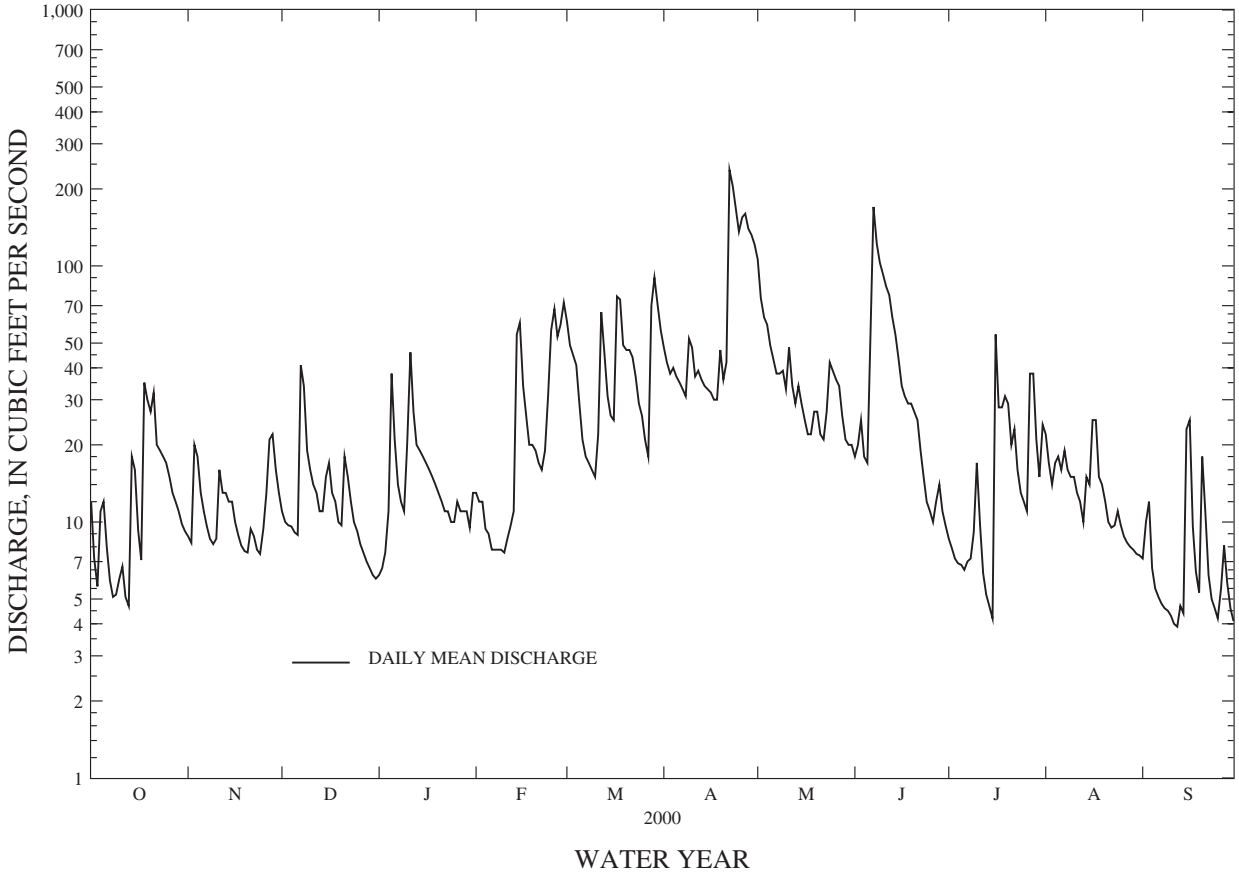
MEAN	29.6	24.2	34.0	44.0	45.0	59.5	51.9	31.2	26.8	9.01	5.21	11.1
MAX	122	49.2	108	62.3	80.7	105	96.3	65.3	117	24.1	13.6	25.5
(WY)	1997	1997	1997	1996	1998	1994	1997	1998	1998	1998	2000	1999
MIN	2.35	6.29	6.45	15.3	18.8	26.8	13.0	7.89	3.06	2.23	1.39	2.11
(WY)	1998	1999	1999	2000	1995	1995	1995	1995	1999	1997	1999	1997

01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1993 - 2000	
ANNUAL TOTAL	7887.28		9479.9			
ANNUAL MEAN	21.6		25.9		30.3	
HIGHEST ANNUAL MEAN					45.0	1997
LOWEST ANNUAL MEAN					15.5	1995
HIGHEST DAILY MEAN	164	Sep 17	237	Apr 22	812	Oct 21 1996
LOWEST DAILY MEAN	.50	Sep 5	3.9	Sep 12	.50	Sep 5 1999
ANNUAL SEVEN-DAY MINIMUM	.53	Aug 31	4.3	Sep 8	.53	Aug 31 1999
INSTANTANEOUS PEAK FLOW			298	Apr 22	942	Oct 21 1996
INSTANTANEOUS PEAK STAGE			4.65	Apr 22	6.58	Oct 21 1996
INSTANTANEOUS LOW FLOW			3.9	Sep 12	.06	Sep 5 1995
ANNUAL RUNOFF (CFSM)	.93		1.11		1.30	
ANNUAL RUNOFF (INCHES)	12.59		15.14		17.68	
10 PERCENT EXCEEDS	57		53		76	
50 PERCENT EXCEEDS	10		16		15	
90 PERCENT EXCEEDS	1.4		6.6		2.2	

e Estimated

SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA 01102345



01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1999-2000.

REMARKS.--Selected samples were analyzed for pesticide compounds on schedule 2001 (listed with minimum reporting levels in the section "Explanation of the Records."); only pesticide compounds identified by the analyses (either as estimated values or values measured at or above the minimum reporting level) for one or more samples are listed in the water-quality data tables.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
OCT										
28...	1030	12	771	9.8	--	496	11.1	9.0	23.7	6.61
NOV										
17...	0930	8.9	756	12.1	7.4	517	6.2	3.5	24.0	6.93
DEC										
08...	0930	37	767	11.2	7.3	305	5.6	6.2	14.5	4.20
JAN										
20...	0845	52	756	12.1	7.0	521	-6.5	.1	23.2	6.51
FEB										
17...	1015	27	771	13.2	7.1	508	3.3	.8	18.7	5.05
MAR										
12...	0830	64	752	11.1	7.0	305	6.3	4.3	11.6	3.23
16...	0900	25	760	11.3	6.9	404	18.3	7.6	13.8	2.28
APR										
22...	0740	216	755	10.7	7.1	160	6.1	7.1	7.35	2.49
26...	1130	161	761	10.5	7.2	307	3.0	7.8	12.3	5.90
MAY										
15...	0850	29	760	9.0	7.4	492	14.2	13.3	20.4	7.56
JUN										
14...	1015	54	767	8.6	7.4	400	15.6	15.4	16.9	8.08
JUL										
05...	1030	7.0	754	8.0	7.6	588	24.3	20.9	25.6	10.8
AUG										
22...	0930	9.5	767	8.9	7.6	510	21.6	16.7	--	--
22...	0945	9.5	767	8.9	7.6	510	21.6	16.7	22.4	10.4
22...	1500	9.5	--	--	--	--	--	--	--	--
SEP										
20...	1000	15	754	7.4	7.0	200	20.2	18.4	9.60	2.57

DATE	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT										
28...	3.3	57.1	--	--	104	0.1	13.4	18.6	0.35	0.46
NOV										
17...	2.6	54.4	51	62	107	<.1	12.9	17.6	.41	.53
DEC										
08...	2.5	34.9	29	35	60.4	<.1	9.3	11.9	.43	.49
JAN										
20...	3.0	61.7	45	55	113	.1	9.7	16.8	.30	.40
FEB										
17...	2.5	60.4	33	40	112	<.1	9.6	16.6	.40	.46
MAR										
12...	1.8	34.4	22	28	62.0	<.1	5.7	10.4	.45	.48
16...	1.7	41.4	35	43	77.1	<.1	3.3	10.9	.52	.32
APR										
22...	1.4	19.5	19	23	32.4	<.1	3.3	6.3	.81	.66
26...	2.3	35.9	34	41	65.9	<.1	4.4	10.5	.34	.49
MAY										
15...	3.3	54.4	53	65	106	<.1	6.6	11.0	.59	.64
JUN										
14...	1.9	42.5	61	75	77.7	<.1	7.4	8.6	.52	.59
JUL										
05...	3.0	65.3	70	86	128	.2	10.8	11.2	.42	.57
AUG										
22...	--	--	65	80	--	--	--	9.1	.48	.50
22...	3.1	58.2	65	80	112	.1	12.7	9.9	.50	.56
22...	--	--	--	--	--	--	--	--	--	--
SEP										
20...	1.8	21.6	22	26	36.2	<.1	5.0	7.2	.28	.42

01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA--Continued

WATER-QUALITY RECORDS

DATE	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	SOLIDS, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	CHLOR-A RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)
OCT										
28...	0.031	0.598	<0.010	0.012	<0.010	0.032	7.5	0.2	276	--
NOV										
17...	.068	.632	<.010	.012	<.010	.035	6.7	.2	278	--
DEC										
08...	.024	.479	<.010	.025	<.010	.056	9.5	.5	178	--
JAN										
20...	.102	.721	.011	.008	.010	.024	4.3	.3	295	--
FEB										
17...	.145	.820	<.010	.011	.010	.030	6.1	--	266	--
MAR										
12...	.163	.686	<.010	.017	.015	.054	5.7	1.1	173	--
16...	.044	.762	<.010	.011	<.010	.024	6.1	.3	185	--
APR										
22...	.079	--	<.010	.024	.033	.024	6.7	3.2	93	--
26...	.020	.390	<.010	.011	<.010	.029	8.4	.7	179	--
MAY										
15...	.099	.483	.016	.011	<.010	.038	9.8	.3	284	--
JUN										
14...	.037	.306	<.010	.023	.010	.042	11	.3	231	--
JUL										
05...	.022	.809	.011	.032	<.010	.082	8.4	.4	337	--
AUG										
22...	<.020	.508	<.010	.023	.013	.050	--	--	--	--
22...	.021	.537	<.010	.026	.017	.052	10	.4	299	--
22...	--	--	--	--	--	--	--	--	--	18.7
SEP										
20...	.046	.514	<.010	.022	.014	.061	4.4	.7	116	--

DATE	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CHLOR-PYRIFOS DIS-SOLVED (UG/L) (38933)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	PRO-METON, WATER, DISS, REC (UG/L) (04037)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
28...	370	131	--	--	--	--	--	--	2	50
NOV										
17...	370	122	--	--	--	--	--	--	3	90
DEC										
08...	370	104	--	--	--	--	--	--	6	75
JAN										
20...	360	251	--	--	--	--	--	--	4	75
FEB										
17...	400	306	--	--	--	--	--	--	4	73
MAR										
12...	200	120	--	--	--	--	--	--	9	72
16...	70	64	--	--	--	--	--	--	4	64
APR										
22...	180	127	--	--	--	--	--	--	42	63
26...	150	44	E0.002	E0.001	<0.004	E0.007	E0.002	E0.001	4	58
MAY										
15...	440	76	--	--	--	--	--	--	10	80
JUN										
14...	410	89	--	--	--	--	--	--	9	69
JUL										
05...	530	105	--	--	--	--	--	--	9	82
AUG										
22...	--	--	<.001	<.002	<.004	.025	E.004	<.002	--	--
22...	290	50	--	--	--	--	--	--	3	88
22...	--	--	--	--	--	--	--	--	--	--
SEP										
20...	140	42	--	--	--	--	--	--	5	88

01102460 ABERJONA RIVER NEAR WOBURN, MA

LOCATION.--Lat 42°29'29", long 71°07'46", Middlesex County, Hydrologic Unit 01090001, at Salem Street, downstream side bridge, 1.4 mi northeast of Woburn.

DRAINAGE AREA.--6.91 mi^2.

PERIOD of RECORD.--Water Years 1973-74, 1999-2000.

REMARKS.--Discharge obtained by discharge measurements on the day of sampling. Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV										
08...	1345	3.86	4.4	771	5.9	6.9	518	8.0	6.0	4.0
JAN										
05...	1245	4.69	48	757	7.7	6.6	279	5.0	5.0	2.4
MAR										
29...	1145	4.71	45	754	7.3	6.9	621	17.4	10.5	5.3
MAY										
09...	1000	3.99	20	766	7.1	7.0	574	26.0	20.5	3.9
JUN										
07...	0830	5.55	89	760	8.9	6.9	330	12.5	11.8	6.5

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	DRAIN-AGE AREA (SQ. MI.) (81024)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV										
08...	4.2	3.30	1.78	0.019	0.011	<0.010	0.020	6.91	660	370
JAN										
05...	2.7	2.13	.849	<.010	.008	<.010	.025	6.91	1,200	1,700
MAR										
29...	5.6	4.79	1.05	.018	.010	<.010	.036	6.91	580	380
MAY										
09...	4.0	3.01	1.32	.063	.011	<.010	.035	6.91	520	530
JUN										
07...	6.7	5.51	.462	.016	.028	<.010	.067	6.91	46,000	47,000

01102474 ABERJONA RIVER NEAR WINCHESTER, MA

LOCATION.--Lat 42°28'10", long 71°07'32", Middlesex County, Hydrologic Unit 01090001, at Washington Street, upstream side of bridge, 2.2 mi south from Route 128 and 1.5 mi north of Winchester.

DRAINAGE AREA.--11.9 mi^2, excludes 0.6 mi^2 drained by Winchester North Reservoir.

PERIOD of RECORD.--Water Years 1967, 1973-74, 1999-2000.

REMARKS.--Discharge obtained by discharge measurements on the day of sampling. Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV										
09...	1100	1.36	7.6	774	10.8	7.4	589	7.0	6.0	2.5
JAN										
05...	1545	2.30	54	762	10.9	6.8	304	3.0	4.5	1.9
MAR										
29...	1315	2.49	63	754	9.2	7.1	653	16.6	11.5	4.1
MAY										
09...	1215	1.34	7.7	766	7.7	7.1	650	32.0	19.5	2.3
JUN										
07...	0950	4.27	196	760	9.0	7.0	306	12.0	11.7	4.3

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	DRAIN-AGE AREA (SQ. MI.) (81024)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV										
09...	2.6	1.96	1.98	0.017	0.007	<0.010	0.014	11.9	1,400	1,400
JAN										
05...	2.1	1.59	1.04	.012	.012	<.010	.031	11.9	1,500	1,800
MAR										
29...	4.3	3.57	1.34	.024	.009	<.010	.041	11.9	1,100	520
MAY										
09...	2.5	1.70	1.79	.072	.008	<.010	.026	11.9	340	340
JUN										
07...	4.2	3.47	.599	.018	.023	.014	.070	11.9	7,600	8,700

01102500 ABERJONA RIVER AT WINCHESTER, MA
(National Water Quality Assessment Site)

LOCATION.--Lat 42°26'50", long 71°08'22", Middlesex County, Hydrologic Unit 01090001, on left bank at Winchester, 0.5 mi upstream from head of Mystic Lakes.

DRAINAGE AREA.--24.1 mi^2, excludes 0.6 mi^2 drained by Winchester North Reservoir.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: April 1939 to current year.
Water-quality records: Water year 1958-59, 1973, 1999 to current year.

REVISED RECORDS.--WDR MA-RI-79-1: 1955. WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is sea level.

REMARKS.--Records good. Flow affected by diversions for industrial use and for municipal supply of Woburn and Winchester, and by wastage and leakage from Winchester North Reservoir. Some regulation by Winchester at dam 1,800 ft upstream. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years, 29.6 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft^3/s, Jan. 25, 1979, gage height, 15.46 ft, from rating curve extended above 400 ft^3/s on basis of slope-area measurement of peak flow, maximum gage height, 16.78 ft, Oct. 21, 1996 (backwater from Upper Mystic Lake); no flow for part of Oct. 10, 12, 1950, caused by pumpage from gage pool; minimum daily discharge, 0.25 ft^3/s, Oct. 10, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1886, that of Jan. 25, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 388 ft^3/s, Apr. 22, gage height, 12.75 ft; minimum, 1.4 ft^3/s, May 31, June 20; minimum daily, 4.5 ft^3/s, Sept 12.

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

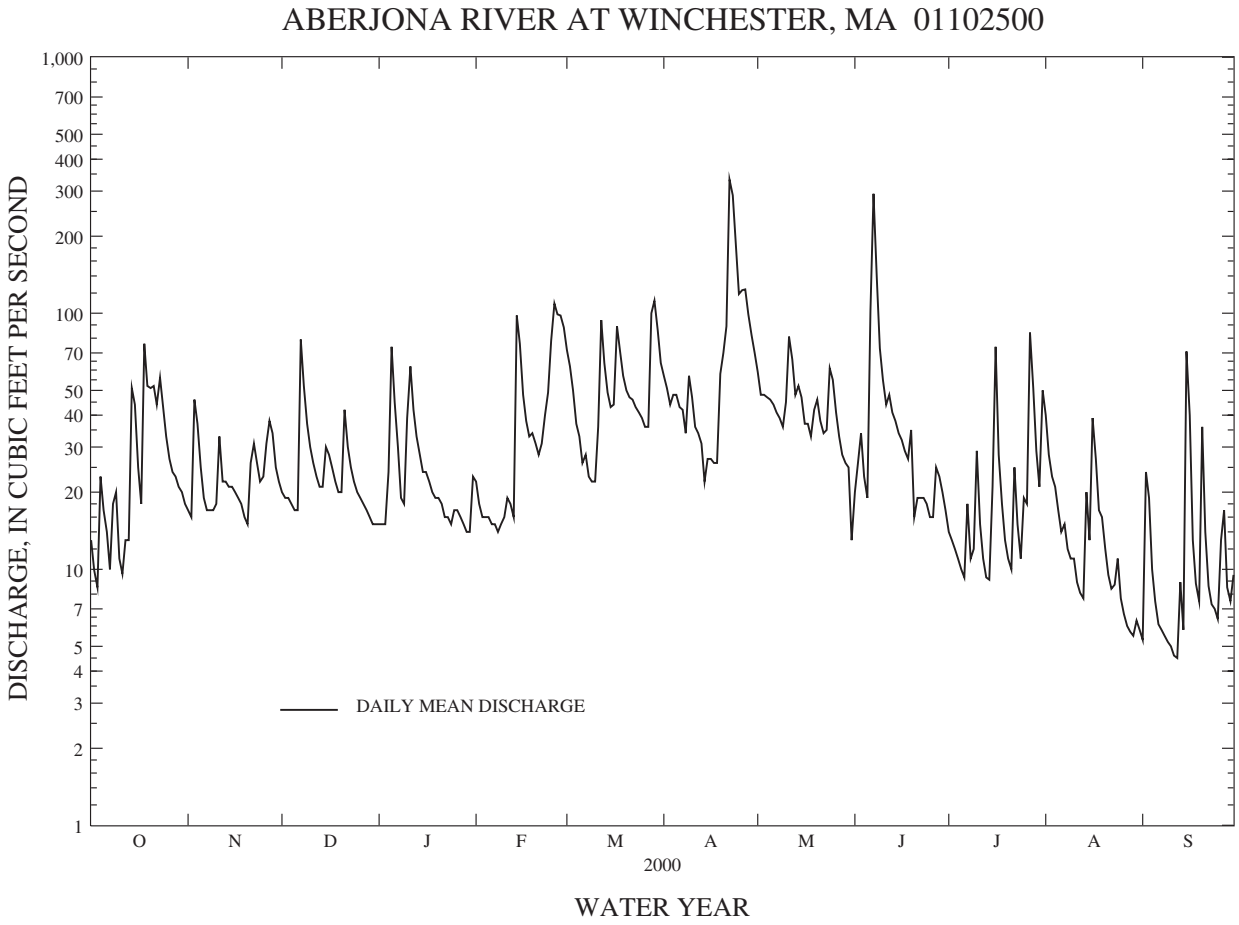
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	17	20	15	22	72	57	59	20	14	40	5.3
2	9.9	16	19	15	18	62	51	48	26	13	28	24
3	8.5	46	19	15	16	50	44	48	34	12	23	19
4	23	37	18	24	16	37	48	47	23	11	21	10
5	17	25	17	74	16	33	48	46	19	10	17	7.5
6	14	19	17	45	15	26	43	44	102	9.3	14	6.1
7	10	17	79	30	15	28	42	41	293	18	15	5.8
8	18	17	52	19	14	23	34	39	138	11	12	5.5
9	20	17	37	18	15	22	57	36	73	12	11	5.2
10	11	18	30	39	16	22	47	45	55	29	11	5.0
11	9.6	33	26	62	19	36	36	81	44	15	8.9	4.6
12	13	22	23	42	18	94	34	66	48	11	8.1	4.5
13	13	22	21	33	16	64	31	48	41	9.3	7.7	8.9
14	51	21	21	28	98	49	22	52	38	9.1	20	5.8
15	44	21	30	24	76	43	27	47	34	21	13	71
16	25	20	28	24	48	44	27	37	32	74	39	40
17	18	19	25	22	38	89	26	37	29	28	27	13
18	76	18	22	20	33	71	26	33	27	18	17	8.8
19	52	16	20	19	34	57	58	42	35	13	16	7.5
20	51	15	20	19	31	50	70	46	16	11	12	36
21	52	26	42	18	28	47	89	38	19	10	9.5	14
22	44	31	30	16	31	46	333	34	19	25	8.4	8.6
23	56	26	25	16	40	43	289	35	19	15	8.7	7.3
24	43	22	22	15	49	41	185	61	18	11	11	7.0
25	33	23	20	17	78	39	119	55	16	19	7.7	6.4
26	27	31	19	17	109	36	123	41	16	18	6.7	13
27	24	38	18	16	99	36	124	33	25	84	6.0	17
28	23	34	17	15	98	100	99	28	23	51	5.7	8.5
29	21	25	16	14	88	112	82	26	20	29	5.5	7.5
30	20	22	15	14	---	86	70	25	17	21	6.3	9.5
31	18	---	15	23	---	64	---	13	---	50	5.8	---
TOTAL	858.0	714	783	768	1194	1622	2341	1331	1319	681.7	442.0	392.3
MEAN	27.7	23.8	25.3	24.8	41.2	52.3	78.0	42.9	44.0	22.0	14.3	13.1
MAX	76	46	79	74	109	112	333	81	293	84	40	71
MIN	8.5	15	15	14	14	22	22	13	16	9.1	5.5	4.5

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

MEAN	14.9	23.8	31.8	37.6	41.8	63.9	54.0	33.6	23.1	10.3	9.93	10.3
MAX	125	102	95.7	169	104	167	175	134	159	40.4	79.4	78.2
(WY)	1997	1956	1970	1979	1984	1983	1987	1954	1982	1959	1955	1954
MIN	.48	.59	.63	2.34	4.39	19.2	12.4	11.3	3.02	.69	.62	.49
(WY)	1942	1942	1942	1966	1980	1989	1966	1965	1957	1950	1957	1957

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1939 - 2000	
ANNUAL TOTAL	9816.2		12446.0			
ANNUAL MEAN	26.9		34.0		29.6	
HIGHEST ANNUAL MEAN					58.3	1984
LOWEST ANNUAL MEAN					8.23	1966
HIGHEST DAILY MEAN	228	Sep 17	333	Apr 22	1070	Oct 21 1996
LOWEST DAILY MEAN	1.4	May 18	4.5	Sep 12	.25	Oct 10 1950
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 30	5.2	Sep 6	.31	Dec 6 1941
INSTANTANEOUS PEAK FLOW			388	Apr 22	1330	Jan 25 1979
INSTANTANEOUS PEAK STAGE			12.75	Apr 22	16.78	Oct 21 1996
INSTANTANEOUS LOW FLOW			1.4	May 31	.00	Oct 10 1950
10 PERCENT EXCEEDS	54		67		69	
50 PERCENT EXCEEDS	19		23		17	
90 PERCENT EXCEEDS	2.9		9.5		1.4	



01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958–59, 1973, October 1998 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: July 1999 to current year.
WATER TEMPERATURE: July 1999 to current year.

INSTRUMENTATION.--Specific conductance and temperature water-quality monitor.

EXTREMES FOR PERIOD JULY 1999 TO SEPTEMBER 2000.--
SPECIFIC CONDUCTANCE: Maximum recorded, 4,710 µS/cm, Jan. 31, 2000; minimum, 65 mS/cm, Sept. 16, 1999.
WATER TEMPERATURE: Maximum recorded, 26.0°C, July 7, 1999; minimum, 0.1°C, Jan. 31, 2000.

REMARKS.--Selected samples were analyzed for volatile organic compounds on schedule 2020 and pesticide compounds on schedule 2001 (listed with non-detection values or minimum reporting levels in the section "Explanation of the Records."); only volatile organic compounds or pesticide compounds identified by the analyses (either as estimated values or values measured at or above the non-detection level or minimum reporting level) for one or more samples are listed in the water-quality data tables.

Instantaneous records are representitive of the cross section while continuous records are based on point samples. Daily specific conductance values on Jan. 14–18, 22, 26–28, 31, Feb. 1–5, 12–14, 19–21, and Mar. 17–18 are questionable and may not be representative of the cross section due to pooling caused by debris build-up along the left stream bank where the monitoring probe is located. Also, conductance values greater than 1000 mS/cm exceed the probe calibration range. These high conductances may be the result of road salting activities.

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	559	545	552	537	485	509
2	---	---	---	---	---	---	547	503	523	533	475	510
3	---	---	---	---	---	---	518	503	510	529	465	507
4	---	---	---	---	---	---	526	504	520	536	470	511
5	---	---	---	---	---	---	527	496	517	518	489	505
6	---	---	---	---	---	---	529	471	508	537	439	509
7	---	---	---	580	547	565	548	444	504	533	493	519
8	---	---	---	607	573	592	503	486	496	516	465	494
9	---	---	---	612	604	608	516	488	502	482	466	476
10	---	---	---	623	549	610	528	498	512	557	85	324
11	---	---	---	597	540	557	520	511	515	375	103	269
12	---	---	---	649	519	586	519	502	515	375	368	371
13	---	---	---	570	529	537	522	502	516	472	375	422
14	---	---	---	545	530	543	531	362	513	472	444	455
15	---	---	---	558	544	551	525	274	360	445	436	442
16	---	---	---	565	547	556	446	333	387	439	65	286
17	---	---	---	568	554	561	497	446	481	257	154	217
18	---	---	---	577	563	572	521	495	510	348	256	304
19	---	---	---	583	492	564	526	510	519	402	348	374
20	---	---	---	527	303	382	541	511	521	438	402	419
21	---	---	---	379	357	369	560	521	528	460	438	449
22	---	---	---	388	356	373	555	499	536	482	459	471
23	---	---	---	370	195	275	536	480	514	484	464	474
24	---	---	---	337	275	319	493	463	480	513	456	472
25	---	---	---	394	337	364	482	457	472	492	455	480
26	---	---	---	614	394	496	488	463	478	501	479	491
27	---	---	---	649	601	624	493	479	486	526	481	501
28	---	---	---	610	565	583	497	482	489	543	526	537
29	---	---	---	572	534	554	510	480	493	553	543	547
30	---	---	---	587	540	573	526	499	510	557	408	514
31	---	---	---	569	554	560	538	489	512	---	---	---
MONTH	---	---	---	---	---	---	560	274	499	557	65	445

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	417	321	361	531	518	523	485	470	478	568	565	567
2	506	417	469	540	527	534	498	485	492	567	559	563
3	530	506	523	539	325	422	509	497	503	572	560	563
4	546	293	452	470	414	434	515	508	513	589	525	574
5	435	292	361	475	441	460	520	514	517	525	294	354
6	492	435	469	504	474	494	522	518	521	431	317	387
7	512	492	502	518	490	506	518	225	346	454	431	443
8	519	486	514	518	514	516	373	302	334	484	454	472
9	486	473	478	527	514	521	422	372	405	492	484	489
10	514	481	498	526	477	524	439	422	431	496	395	477
11	516	503	507	492	362	425	460	439	453	396	315	335
12	530	498	513	464	443	456	476	460	469	394	335	373
13	562	475	550	457	438	448	490	476	484	445	394	412
14	496	252	352	475	454	463	506	489	496	1,500	445	1,140
15	408	323	352	482	470	476	506	492	500	1,190	994	1,100
16	505	408	456	501	474	487	493	479	486	1,030	713	894
17	517	474	487	502	498	500	482	479	480	1,030	658	858
18	496	156	287	499	491	495	491	482	486	1,010	858	939
19	351	277	310	509	491	500	503	491	496	858	689	790
20	369	267	341	520	508	513	515	503	509	689	591	616
21	353	272	329	513	443	487	518	463	492	770	573	601
22	391	353	373	463	444	457	463	450	455	1,020	770	963
23	389	290	344	468	463	465	478	452	464	990	768	900
24	410	367	382	479	468	474	499	478	492	768	675	714
25	449	410	427	486	472	480	515	498	507	675	571	634
26	473	434	457	486	411	446	533	515	524	1,130	516	629
27	489	472	479	449	331	418	546	533	539	1,510	1,130	1,390
28	497	489	494	427	339	400	555	546	551	1,220	689	920
29	500	495	498	443	427	432	561	555	558	689	329	489
30	512	498	506	470	443	458	566	560	564	329	196	254
31	519	511	515	---	---	---	568	565	566	4,710	156	1,160
MONTH	562	156	438	540	325	474	568	225	487	4,710	156	677

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4,640	3,640	3,930	578	567	573	600	582	590	619	587	602
2	3,650	2,400	3,160	588	577	584	615	600	607	625	615	620
3	2,400	1,690	2,020	643	587	601	633	614	624	626	596	607
4	1,690	1,180	1,420	688	643	671	632	590	618	621	592	605
5	1,180	296	953	689	675	684	605	578	591	626	595	611
6	946	855	898	686	676	680	626	602	610	659	617	640
7	859	750	783	701	674	687	634	618	624	643	593	616
8	762	731	748	736	674	708	653	628	637	661	488	608
9	749	729	743	745	736	742	657	383	520	598	572	590
10	758	735	743	757	742	745	580	497	530	596	383	557
11	885	754	804	754	520	720	630	580	609	473	368	418
12	1,370	885	1,180	577	429	472	637	624	630	501	473	495
13	1,080	907	984	536	487	519	631	624	627	532	501	518
14	1,640	861	1,050	536	518	525	652	631	638	531	466	489
15	871	771	808	526	506	516	656	642	648	525	488	508
16	817	738	772	542	524	531	649	637	645	567	525	545
17	738	697	717	1,680	278	733	639	624	633	611	567	593
18	704	691	699	1,190	775	923	637	624	632	650	596	618
19	1,610	683	906	775	663	690	625	395	485	596	462	542
20	2,270	1,310	1,860	681	661	668	499	471	484	514	454	481
21	1,310	942	1,120	681	653	662	519	190	486	547	514	535
22	942	751	861	677	652	661	333	163	249	577	547	561
23	856	716	757	661	651	655	372	333	356	582	498	535
24	890	743	798	673	651	657	421	371	392	520	312	427
25	907	628	788	674	660	665	476	421	453	488	392	453
26	632	612	624	684	671	678	484	458	475	526	488	510
27	613	586	602	695	680	687	469	445	454	543	526	535
28	594	560	579	874	484	614	505	469	487	570	543	552
29	570	562	566	572	508	546	552	505	531	573	554	567
30	---	---	---	595	559	566	587	552	568	592	556	582
31	---	---	---	584	565	575	---	---	---	683	590	635
MONTH	4,640	296	1,100	1,680	278	643	657	163	548	683	312	553

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	654	594	630	595	575	582	420	321	375	622	593	612
2	617	436	578	608	595	603	441	419	429	627	293	493
3	518	373	448	619	607	616	475	440	460	436	320	373
4	532	475	510	629	614	623	486	472	479	548	436	500
5	557	519	543	628	609	622	501	486	495	601	548	574
6	577	95	397	645	614	635	529	496	513	618	600	607
7	311	121	252	660	456	614	544	451	517	635	615	618
8	364	311	341	639	527	588	528	497	512	635	613	620
9	416	364	391	665	347	630	555	527	544	632	606	620
10	459	415	440	437	244	378	558	547	553	634	611	627
11	497	459	479	546	427	485	575	550	566	651	634	644
12	497	441	478	589	546	572	582	566	575	649	642	645
13	510	476	496	613	588	602	593	573	585	644	575	618
14	524	509	519	626	611	618	594	505	553	609	592	603
15	537	506	529	625	523	565	505	458	479	593	121	351
16	550	535	544	541	150	277	471	249	370	450	242	356
17	557	539	552	505	348	455	440	339	379	480	450	469
18	569	539	562	509	432	499	488	440	469	489	480	485
19	578	519	554	539	500	522	483	468	473	502	473	498
20	622	552	580	565	537	551	505	483	497	473	222	304
21	636	596	612	575	564	568	526	501	514	387	280	332
22	602	585	594	577	418	495	549	524	539	460	387	425
23	608	582	600	465	418	430	567	501	551	502	460	482
24	617	577	606	529	465	494	552	528	541	531	502	517
25	623	611	619	552	512	535	539	528	535	560	531	544
26	632	603	619	538	512	523	553	538	543	566	516	552
27	636	501	599	539	123	325	561	553	557	533	431	470
28	505	404	461	450	247	379	584	561	574	450	428	438
29	570	503	541	446	431	440	607	583	596	512	448	471
30	579	563	570	473	444	460	613	581	602	531	512	520
31	---	---	---	477	264	359	618	602	613	---	---	---
MONTH	654	95	521	665	123	518	618	249	516	651	121	512
YEAR	4710	95	580									

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	---	---	---	25.2	23.8	24.5	19.5	16.5	17.9
2	---	---	---	---	---	---	25.0	22.8	23.7	19.8	16.7	18.3
3	---	---	---	---	---	---	23.3	20.8	21.9	21.1	17.5	19.2
4	---	---	---	---	---	---	22.6	20.4	21.5	21.0	18.7	19.9
5	---	---	---	---	---	---	21.5	20.2	20.8	20.6	19.5	20.2
6	---	---	---	---	---	---	22.8	20.9	21.8	22.8	18.5	20.7
7	---	---	---	26.0	24.8	25.4	22.7	20.7	21.5	24.2	22.6	23.3
8	---	---	---	25.1	22.7	23.3	22.1	20.9	21.2	23.8	22.2	22.7
9	---	---	---	22.7	21.2	21.7	21.0	19.0	19.7	22.6	21.4	22.0
10	---	---	---	21.7	20.8	21.2	19.7	17.4	18.6	23.2	18.8	22.0
11	---	---	---	21.3	19.7	20.6	19.5	18.6	19.0	21.6	20.2	20.9
12	---	---	---	21.4	19.0	20.2	21.5	19.2	20.1	21.4	19.0	20.2
13	---	---	---	21.0	19.4	19.9	22.8	20.5	21.6	20.6	18.3	19.4
14	---	---	---	21.4	18.3	19.7	24.0	21.5	22.1	20.2	18.2	19.2
15	---	---	---	22.2	19.1	20.5	24.3	21.4	22.6	20.9	19.7	20.3
16	---	---	---	23.1	20.2	21.6	23.5	20.5	21.8	20.6	17.8	19.6
17	---	---	---	24.5	21.8	22.9	24.0	21.8	22.8	19.5	17.2	18.5
18	---	---	---	24.5	22.5	23.5	24.8	22.8	23.7	18.7	16.5	17.5
19	---	---	---	25.2	21.4	23.0	24.0	21.5	22.4	18.8	16.0	17.3
20	---	---	---	24.9	22.4	23.3	21.7	19.9	20.8	18.7	16.5	17.5
21	---	---	---	23.7	21.3	22.5	21.0	18.8	19.6	18.7	17.3	17.9
22	---	---	---	23.4	21.6	22.5	19.6	18.3	18.8	18.1	17.1	17.8
23	---	---	---	25.0	21.2	23.4	21.2	17.9	19.2	17.6	15.6	16.6
24	---	---	---	24.5	23.2	23.8	21.6	19.0	20.1	17.9	16.2	17.2
25	---	---	---	24.6	23.5	24.1	21.5	19.1	20.3	18.3	17.2	17.7
26	---	---	---	23.8	22.7	23.2	21.0	19.3	19.9	17.9	16.5	17.2
27	---	---	---	24.4	22.1	23.1	20.7	19.5	20.0	17.5	15.8	16.6
28	---	---	---	24.7	22.4	23.5	21.9	20.1	20.9	17.2	15.9	16.5
29	---	---	---	24.7	22.8	23.8	21.7	20.1	21.0	17.2	16.8	17.0
30	---	---	---	24.7	22.9	23.7	20.1	17.5	18.4	17.7	16.7	17.1
31	---	---	---	25.8	23.2	24.4	18.3	16.5	17.5	---	---	---
MONTH	---	---	---	---	---	---	25.2	16.5	20.9	24.2	15.6	18.9

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	17.0	16.0	16.5	13.0	12.1	12.5	5.5	3.1	4.2	2.9	2.3	2.6
2	16.6	15.2	16.0	12.9	11.8	12.2	3.5	2.4	3.0	3.5	2.6	2.9
3	17.0	15.5	16.2	15.6	12.9	14.4	5.3	3.5	4.4	4.9	3.5	4.2
4	16.7	13.5	15.0	13.1	10.3	11.3	6.2	5.3	5.8	7.1	4.7	5.2
5	13.5	12.6	12.9	10.3	9.0	9.6	6.7	5.6	6.2	8.2	3.4	5.7
6	12.9	12.0	12.5	11.0	9.8	10.4	8.3	6.7	7.4	3.4	1.8	2.4
7	12.6	11.0	11.7	10.7	8.9	9.8	9.8	8.1	9.1	3.0	2.2	2.6
8	11.4	10.3	10.9	8.9	7.4	8.0	8.2	6.4	7.0	3.0	2.4	2.7
9	13.7	10.4	11.8	8.0	7.1	7.4	6.4	5.2	5.6	3.2	2.4	2.8
10	14.1	13.1	13.5	11.0	8.0	9.1	6.7	5.2	5.6	5.7	3.2	4.0
11	15.2	13.8	14.4	11.0	8.7	10.1	6.8	4.8	6.0	5.6	4.7	5.1
12	14.6	13.3	14.0	8.7	7.1	7.5	4.8	3.7	4.2	4.9	3.5	4.2
13	14.4	11.9	12.7	8.8	7.3	8.0	5.0	4.0	4.4	3.5	1.2	2.5
14	15.1	12.8	14.3	9.1	8.3	8.7	5.4	4.9	5.3	1.2	.4	.7
15	12.8	11.2	12.0	8.9	7.0	8.1	6.2	5.4	5.7	1.1	.4	.7
16	13.9	11.0	12.3	7.0	5.1	6.0	6.7	6.1	6.4	1.1	.7	.8
17	15.4	12.8	13.9	5.1	4.3	4.7	6.5	5.0	5.6	.7	.2	.4
18	15.4	12.9	14.5	5.6	4.2	4.8	5.0	3.8	4.3	1.0	.3	.6
19	12.9	11.3	11.9	6.6	5.4	6.0	3.8	3.0	3.5	1.1	.5	.8
20	12.2	11.3	11.6	9.2	6.5	7.4	3.6	2.9	3.2	.9	.6	.8
21	12.4	11.2	11.8	10.2	8.9	9.4	5.9	3.6	5.0	.9	.5	.7
22	11.9	10.8	11.2	10.3	8.7	9.5	4.7	3.8	4.3	.9	.4	.6
23	13.0	11.1	12.0	11.4	10.2	10.7	3.8	2.8	3.1	1.0	.6	.8
24	12.0	10.6	11.4	12.6	11.2	11.7	3.0	2.1	2.6	1.3	.8	1.0
25	11.6	10.6	11.1	12.6	11.4	12.1	2.1	1.2	1.6	1.0	.4	.8
26	11.8	10.1	10.9	11.4	10.7	10.9	2.1	1.5	1.8	1.2	.8	.9
27	11.8	11.0	11.4	12.3	10.7	11.6	2.2	1.6	1.9	1.1	.4	.7
28	11.0	9.8	10.3	11.8	9.0	10.0	1.9	1.5	1.7	1.0	.4	.6
29	11.2	9.8	10.4	9.0	7.5	8.1	1.9	1.5	1.7	1.2	.6	.8
30	11.2	10.1	10.6	7.5	5.5	6.5	2.6	1.8	2.2	1.5	.6	.9
31	12.7	10.8	11.5	---	---	---	2.9	2.4	2.6	1.1	.1	.8
MONTH	17.0	9.8	12.6	15.6	4.2	9.2	9.8	1.2	4.4	8.2	.1	1.9

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	1.1	0.2	0.6	5.6	4.2	4.8	11.6	8.5	9.9	13.1	10.3	11.8
2	1.2	.4	.7	5.9	5.0	5.4	12.5	10.0	11.2	13.3	11.6	12.5
3	1.3	.4	.8	5.7	4.4	5.1	11.9	10.9	11.4	14.4	11.1	12.8
4	1.3	.8	1.0	6.3	4.4	5.3	12.4	10.3	11.3	15.7	12.3	13.9
5	1.6	.9	1.2	6.9	5.5	6.1	12.5	10.6	11.6	17.0	13.7	15.2
6	1.7	1.0	1.2	6.9	5.3	6.2	10.6	8.8	9.5	17.1	16.0	16.6
7	2.0	.8	1.3	6.4	5.4	5.9	12.3	8.9	10.6	19.2	14.9	16.8
8	1.6	1.0	1.2	8.0	6.4	7.1	14.8	11.1	12.8	21.3	18.5	19.6
9	1.9	1.0	1.4	9.1	7.5	8.2	14.6	11.6	13.9	21.1	18.4	19.5
10	2.0	1.3	1.6	9.5	8.9	9.3	11.6	8.9	10.3	18.4	12.8	15.6
11	2.0	1.8	1.9	8.9	4.9	7.7	11.0	9.0	10.1	14.7	12.0	13.1
12	2.3	1.5	1.7	5.2	4.2	4.8	11.6	10.0	10.6	16.3	13.4	14.9
13	2.2	1.4	1.7	5.9	4.0	5.0	11.4	8.7	10.1	16.4	13.8	15.3
14	2.1	.6	1.2	6.4	4.3	5.3	12.2	9.6	10.7	17.6	13.3	15.3
15	1.8	.8	1.2	7.1	5.3	6.2	13.1	10.8	11.8	17.3	15.4	16.2
16	2.1	1.1	1.5	8.9	6.6	7.6	14.6	13.1	13.8	17.2	13.9	15.4
17	2.3	1.6	2.0	8.5	3.5	5.7	13.8	12.5	13.2	18.0	14.8	16.2
18	1.9	1.4	1.6	4.6	2.0	3.3	12.5	11.1	11.8	17.6	15.4	16.4
19	1.6	1.2	1.4	5.6	3.1	4.3	11.1	9.4	9.8	16.8	13.0	15.0
20	2.3	1.5	1.9	5.2	4.4	4.8	12.2	9.3	10.5	14.7	12.4	13.5
21	2.8	1.9	2.3	5.0	4.6	4.8	11.8	8.1	11.0	14.5	13.8	14.2
22	2.8	2.2	2.5	6.3	4.8	5.4	8.8	7.5	8.2	16.0	13.3	14.4
23	3.7	2.6	3.0	8.3	5.6	6.8	9.1	8.6	8.8	15.8	13.9	14.7
24	4.3	3.2	3.7	9.6	7.2	8.3	10.4	8.6	9.4	15.3	13.8	14.6
25	4.3	2.7	3.5	9.7	7.8	8.8	11.9	8.9	10.4	17.0	14.2	15.4
26	2.7	2.0	2.3	11.3	8.9	10.0	11.0	7.9	8.8	18.5	15.3	16.7
27	4.6	2.5	3.4	11.3	9.2	10.3	9.7	7.7	8.6	19.1	15.8	17.2
28	5.4	4.6	5.0	10.5	9.5	9.9	9.9	8.8	9.3	17.3	15.9	16.5
29	5.1	3.6	4.4	10.6	9.1	9.8	11.4	8.6	10.0	16.4	14.8	15.5
30	---	---	---	10.0	8.7	9.4	13.3	10.4	11.7	17.0	13.7	15.1
31	---	---	---	10.5	8.5	9.5	---	---	---	17.7	14.3	15.6
MONTH	5.4	.2	2.0	11.3	2.0	6.8	14.8	7.5	10.7	21.3	10.3	15.3

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	20.7	16.8	18.6	24.0	21.0	22.3	19.6	19.0	19.3	23.7	21.5	22.5
2	21.5	19.2	20.3	24.1	21.3	22.5	20.5	19.1	19.7	23.6	20.4	22.1
3	21.6	19.8	20.6	23.8	22.0	22.9	21.9	20.2	20.9	21.0	19.6	20.2
4	20.4	18.7	19.5	24.6	22.3	23.3	23.5	21.2	22.2	20.9	19.8	20.3
5	19.0	17.5	18.4	24.8	22.4	23.5	23.6	21.6	22.5	19.8	18.0	18.9
6	18.0	12.5	15.7	23.5	21.1	22.3	22.4	21.4	21.9	18.8	16.9	18.0
7	15.5	12.3	13.9	22.5	20.6	21.4	23.5	21.2	22.0	18.2	16.3	17.4
8	17.5	14.6	16.0	21.2	18.9	20.1	24.5	22.1	23.3	18.8	16.8	17.8
9	18.5	16.2	17.4	21.1	18.5	19.7	24.1	22.8	23.5	20.8	18.4	19.4
10	22.1	18.0	19.7	22.6	20.3	21.5	25.6	23.1	24.2	20.4	18.5	19.5
11	20.7	18.5	19.8	23.4	20.9	22.1	24.8	22.7	23.8	20.4	18.3	19.2
12	18.5	15.8	16.9	23.6	20.8	22.1	23.7	21.3	22.2	20.3	18.6	19.5
13	17.8	15.3	16.4	23.3	20.8	22.1	21.3	20.2	20.6	22.0	19.4	20.6
14	17.8	16.5	17.0	23.1	21.1	22.2	20.2	18.9	19.4	20.7	18.9	19.9
15	17.2	16.7	16.9	24.1	21.9	22.9	20.0	18.7	19.3	20.1	18.1	18.8
16	21.8	16.9	18.8	22.4	20.2	21.2	21.2	19.2	20.1	18.1	16.7	17.4
17	23.6	20.8	22.1	21.2	19.9	20.4	21.1	19.5	20.3	16.8	15.6	16.2
18	23.0	20.5	21.7	22.3	19.6	20.6	20.4	19.0	19.6	17.8	15.7	16.6
19	20.5	19.2	19.8	21.4	20.1	20.4	21.4	19.0	19.9	18.3	16.8	17.5
20	21.8	18.0	19.6	21.5	19.3	20.3	20.6	19.2	19.9	20.2	18.0	19.1
21	21.6	19.1	20.7	21.3	19.1	20.2	20.6	18.4	19.5	19.8	19.0	19.4
22	22.7	20.7	21.6	22.2	20.0	21.1	20.6	18.0	19.3	19.1	17.5	18.1
23	23.3	21.2	22.2	22.7	20.4	21.5	20.3	18.7	19.2	17.7	16.6	17.0
24	23.2	21.1	22.0	23.0	20.4	21.7	21.6	18.5	19.8	17.3	16.9	17.1
25	22.9	20.9	21.9	22.1	20.9	21.5	22.4	19.2	20.6	17.1	15.7	16.3
26	23.5	22.2	22.8	21.8	19.5	20.5	22.4	19.7	21.0	16.4	14.1	15.3
27	24.5	22.1	23.1	19.7	18.0	18.9	22.0	19.9	21.0	15.3	13.4	14.3
28	24.5	22.4	23.4	19.7	18.4	19.0	21.9	20.8	21.2	15.2	14.4	14.7
29	23.8	22.2	22.8	21.3	18.6	19.8	21.5	19.3	20.4	14.4	13.1	13.7
30	23.0	21.3	22.1	21.9	20.5	21.1	22.1	19.1	20.5	14.1	12.2	13.1
31	---	---	---	21.1	19.1	19.8	22.7	20.4	21.4	---	---	---
MONTH	24.5	12.3	19.7	24.8	18.0	21.3	25.6	18.0	20.9	23.7	12.2	18.0
YEAR	25.6	.1	11.9									

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
OCT											
14...	0930	67	745	8.2	--	298	14.2	14.5	16.5	2.86	2.8
20...	1800	76	761	9.2	--	335	13.2	12.0	17.5	2.99	3.1
28...	1200	24	771	9.4	--	495	10.2	9.7	26.9	4.53	3.4
NOV											
15...	0900	21	750	9.5	6.9	492	7.5	7.8	26.8	4.56	3.4
29...	0900	26	765	10.1	6.9	430	4.5	7.8	26.7	4.38	3.4
DEC											
07...	1000	93	755	10.8	7.2	240	11.4	9.4	12.1	2.06	1.8
28...	0925	17	755	12.5	7.5	551	-4.6	1.3	31.1	5.42	3.7
JAN											
11...	0950	63	749	11.5	7.0	330	11.7	4.7	17.3	2.97	2.2
25...	0830	17	755	14.5	7.1	657	-.1	.5	31.7	5.64	3.6
FEB											
07...	0830	15	757	12.5	7.0	790	2.7	1.0	33.3	5.93	3.6
19...	0930	33	759	11.3	7.3	787	-.9	.8	27.4	4.80	3.0
22...	1000	26	774	12.6	7.3	894	5.6	2.1	29.4	5.09	3.6
MAR											
12...	1100	96	751	11.1	7.1	474	5.8	4.6	19.1	3.26	2.5
15...	1000	43	766	12.1	7.0	506	14.4	5.3	26.7	4.58	3.1
17...	0900	96	756	11.2	7.1	284	2.0	5.8	21.2	5.40	2.7
28...	1530	127	734	10.1	7.3	494	15.6	10.1	17.1	2.85	2.3
APR											
03...	0745	46	760	9.9	7.2	620	15.2	11.1	29.3	4.88	3.4
10...	1115	46	759	9.6	7.1	520	11.9	8.9	23.9	4.03	3.0
20...	1415	90	762	10.6	7.4	502	16.1	11.0	25.0	4.25	3.0
27...	0810	131	760	10.6	7.2	445	6.4	7.6	21.8	3.55	2.8
MAY											
04...	0930	47	768	11.8	7.2	600	16.7	12.4	30.1	5.04	3.4
08...	0830	40	756	9.9	7.1	607	30.3	18.5	30.3	5.07	3.4
15...	1000	51	761	8.2	7.2	507	19.2	15.5	26.0	4.34	3.3
22...	1000	34	760	8.2	7.2	555	16.7	13.4	28.6	4.83	3.4
30...	0930	26	768	8.3	7.2	583	13.8	13.6	31.7	5.34	3.3
JUN											
07...	1000	312	758	8.8	7.1	270	12.7	13.0	15.6	2.52	2.1
12...	0915	49	764	8.1	7.2	492	13.1	16.8	24.3	4.15	2.9
20...	0920	26	763	7.3	7.0	580	23.3	18.2	30.5	5.23	3.4
26...	0900	15	760	6.0	7.1	619	28.2	22.3	33.0	5.66	3.3
JUL											
07...	1030	8.4	759	6.5	7.1	648	27.5	20.8	36.4	6.51	3.9
13...	0930	9.4	760	5.8	7.1	604	23.2	21.0	34.6	5.86	3.8
17...	0900	17	760	5.5	6.9	453	19.5	19.9	26.6	4.25	3.6
27...	1045	139	763	8.2	7.0	273	19.5	18.3	12.9	2.14	1.9
31...	0830	79	767	7.8	7.0	405	20.6	19.6	23.9	4.00	2.9
AUG											
11...	1030	9.4	759	7.5	7.1	563	26.9	23.4	34.2	5.88	3.8
18...	0830	17	760	7.1	7.1	466	19.3	19.0	28.4	4.66	4.0
21...	1000	9.4	766	6.7	7.1	515	21.0	18.7	--	--	--
21...	1015	9.4	766	6.7	7.1	515	21.0	18.7	32.0	5.64	3.7
21...	1400	9.4	--	--	--	--	--	--	--	--	--
28...	0900	5.8	763	6.7	7.1	575	21.2	20.8	36.9	6.28	4.0
SEP											
07...	0830	5.8	769	6.6	7.1	616	16.5	16.1	38.6	6.48	4.2
11...	1030	4.6	765	6.1	7.1	649	22.6	18.3	39.3	6.51	3.9
20...	1330	34	755	7.7	7.0	240	20.7	19.1	13.6	2.21	2.2
26...	1130	7.5	761	6.8	7.1	560	13.0	15.2	35.4	5.79	3.6

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)
OCT											
14...	31.6	--	--	56.8	0.1	5.1	16.2	0.74	1.2	0.501	1.05
20...	35.1	--	--	65.5	<.1	5.9	18.7	.77	1.1	.478	1.07
28...	46.4	--	--	94.3	.1	8.3	25.2	.83	1.0	.529	1.37
NOV											
15...	49.0	48	59	95.7	.2	8.1	27.4	1.4	1.6	1.05	1.61
29...	43.7	44	54	82.9	.1	7.7	21.2	.88	1.1	.566	1.28
DEC											
07...	24.8	22	26	44.3	<.1	3.6	12.1	.66	.73	.542	.696
28...	56.2	54	66	106	.1	9.2	28.6	1.4	1.4	1.26	1.62
JAN											
11...	34.0	31	38	64.3	<.1	5.5	17.0	1.3	1.6	1.05	1.12
25...	74.7	61	75	145	.1	9.3	27.4	2.2	2.3	1.80	1.54
FEB											
07...	102	53	64	180	.1	9.4	29.0	1.9	1.9	1.57	1.39
19...	105	44	53	187	<.1	7.5	24.0	1.4	1.4	1.15	1.26
22...	115	45	54	213	<.1	7.6	25.5	1.5	1.9	1.27	1.38
MAR											
12...	55.7	29	35	101	<.1	4.9	18.5	1.3	1.3	1.03	1.25
15...	70.4	38	47	138	<.1	6.8	23.6	--	1.2	.844	1.51
17...	59.5	21	25	116	<.1	9.1	15.9	.37	.67	.355	.892
28...	64.4	27	33	112	.1	3.6	13.4	.74	.99	.422	.936
APR											
03...	73.5	48	59	131	<.1	5.3	21.9	.50	.88	.398	1.54
10...	60.7	52	63	109	.1	5.3	21.2	1.1	1.4	.845	1.48
20...	62.3	38	47	108	<.1	4.6	21.2	1.1	1.5	.818	1.27
27...	54.5	33	40	99.0	<.1	5.5	18.2	.78	1.0	.509	1.28
MAY											
04...	68.2	45	55	129	<.1	5.6	24.5	1.1	1.2	.815	1.81
08...	67.5	66	80	129	.1	4.9	23.0	.37	.51	<.020	.289
15...	54.9	45	55	106	<.1	4.5	21.5	1.2	1.2	.742	1.40
22...	61.2	50	61	117	.1	5.7	22.8	1.4	1.5	.957	1.43
30...	64.7	50	61	121	.1	7.0	24.3	1.2	--	.818	1.78
JUN											
07...	30.0	32	39	51.8	<.1	3.4	20.0	2.1	2.4	1.79	.582
12...	56.7	42	51	102	<.1	6.3	18.4	.92	1.1	.494	1.34
20...	64.9	55	67	120	.1	8.5	23.5	1.1	1.2	.679	1.73
26...	67.2	55	67	129	.1	9.0	26.6	.89	.96	.504	2.04
JUL											
07...	73.9	58	70	134	.2	10.3	27.3	.57	.75	.226	2.33
13...	62.0	56	68	113	.1	9.2	42.3	1.8	1.9	1.43	2.35
17...	42.2	44	54	70.0	.1	6.9	45.3	4.1	4.5	3.64	1.19
27...	25.8	20	24	46.3	<.1	3.6	9.9	.53	1.2	.258	.805
31...	44.7	40	49	80.4	.1	6.9	20.7	.72	1.1	.362	1.41
AUG											
11...	63.3	53	65	115	.2	9.9	27.0	.47	.70	.168	2.23
18...	49.6	56	68	86.0	.2	7.8	32.9	2.2	2.3	1.89	1.52
21...	--	51	62	--	--	--	26.2	.73	.91	.405	1.93
21...	59.5	51	62	103	.2	9.1	26.4	.70	.94	.413	1.96
21...	--	--	--	--	--	--	--	--	--	--	--
28...	63.3	59	72	118	.2	9.6	35.5	.58	.68	.268	2.51
SEP											
07...	61.3	66	81	110	.2	10.2	42.6	2.3	2.2	1.78	2.63
11...	66.0	55	67	119	.2	10.3	38.4	.82	.86	.497	2.82
20...	25.2	32	39	42.8	<.1	3.8	12.3	.57	.77	.235	.939
26...	55.6	55	67	105	.2	9.6	29.8	.69	.74	.370	2.23

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC-ULATE TOTAL (MG/L AS C) (00689)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	ATRA-ZINE, WATER, DISS, REC (UG/L) (39632)
OCT											
14...	0.041	0.010	0.011	0.121	4.3	2.4	164	--	60	143	<0.001
20...	.031	.011	<.010	.044	5.7	.8	182	--	80	82	--
28...	.028	E.005	<.010	.023	4.4	.4	270	--	80	94	E.004
NOV											
15...	.030	E.004	<.010	.028	4.8	.4	275	--	70	92	<.001
29...	.026	.008	<.010	.031	4.5	.5	233	--	150	83	<.001
DEC											
07...	.019	.011	.017	.081	3.4	1.1	123	--	80	75	<.006
28...	.011	.021	<.010	.019	4.0	.2	302	--	170	130	.005
JAN											
11...	.014	.007	<.010	.032	3.8	.4	186	--	170	90	<.005
25...	<.010	E.003	<.010	.015	3.4	.2	362	--	170	243	.005
FEB											
07...	<.010	<.006	<.010	.015	3.4	.3	429	--	170	297	.005
19...	<.010	E.005	<.010	.022	--	.3	416	--	190	241	<.005
22...	<.010	E.004	<.010	.021	3.7	.3	463	--	170	237	E.004
MAR											
12...	.013	E.005	<.010	.039	4.3	.7	254	--	130	104	--
15...	.012	E.005	<.010	.024	4.1	.5	332	--	190	107	E.004
17...	.010	.009	<.010	.068	2.9	1.4	285	--	320	161	--
28...	.014	.009	<.010	.074	4.1	.4	246	--	80	95	E.002
APR											
03...	.025	E.005	<.010	.032	4.0	.8	328	--	180	135	--
10...	.027	.006	<.010	.039	4.8	.7	275	--	160	114	.006
20...	.020	E.005	<.010	.012	4.6	2.4	279	--	140	101	.004
27...	.011	.007	<.010	.033	5.0	.8	255	--	210	85	--
MAY											
04...	.036	E.005	<.010	.033	4.7	.5	339	--	290	173	.006
08...	<.010	.017	<.010	.054	4.9	.6	335	--	190	201	--
15...	.054	E.004	<.010	.036	5.4	.5	293	--	300	164	.009
22...	.062	.008	<.010	.029	5.1	.5	309	--	380	209	--
30...	.096	.009	<.010	.042	4.7	.5	344	--	300	279	--
JUN											
07...	.019	.013	<.010	.081	5.5	1.3	163	--	380	90	.008
12...	.068	.013	.012	.059	6.1	.8	285	--	520	187	--
20...	.123	.009	<.010	.049	5.0	.6	340	--	300	290	.007
26...	.164	<.006	<.010	.041	4.5	.5	352	--	350	318	.005
JUL											
07...	.134	E.005	<.010	.048	4.2	.5	387	--	150	351	--
13...	.247	.010	<.010	.041	5.0	.5	354	--	300	342	.006
17...	.104	.012	<.010	.056	6.2	.8	260	--	290	176	--
27...	.040	.014	<.010	.197	3.7	4.0	129	--	130	104	<.001
31...	.083	.009	<.010	.093	4.6	1.8	245	--	300	206	--
AUG											
11...	.073	E.004	<.010	.051	19	.7	342	--	30	181	<.001
18...	.101	.007	<.010	.047	4.7	.2	272	--	100	189	--
21...	.100	.006	<.010	.042	--	--	--	--	--	--	E.004
21...	.100	.031	<.010	.041	4.1	.7	304	--	90	238	E.004
21...	--	--	--	--	--	--	--	25.1	--	--	--
28...	.106	E.005	<.010	.030	4.0	.3	346	--	50	193	--
SEP											
07...	.183	.008	<.010	.029	4.2	.3	337	--	110	246	<.005
11...	.133	.007	<.010	.026	3.4	.3	352	--	90	266	--
20...	.037	.012	<.010	.074	4.1	.8	137	--	100	108	<.001
26...	.077	E.005	<.010	.039	4.3	.8	310	--	40	247	--

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	BEN-FLUR-ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	CAR-BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (UG/L) (04040)	DI-AZINON, DIS-SOLVED (UG/L) (39572)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	METO-LACHLOR WATER DISSOLV (UG/L) (39415)	NAPROP-AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	P,P' DDE DISSOLV (UG/L) (34653)	PENDI-METH-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PRO-METON, WATER, DISS, REC (UG/L) (04037)
OCT											
14...	<0.002	E0.023	<0.002	<0.002	0.090	<0.002	<0.002	<0.003	<0.006	<0.004	<0.018
20...	--	--	--	--	--	--	--	--	--	--	--
28...	<.002	<.003	<.002	<.002	<.002	<.002	<.002	.029	--	<.004	.021
NOV											
15...	<.002	E.004	<.002	<.002	.010	<.002	<.002	<.003	<.006	<.004	E.018
29...	<.002	<.003	<.002	<.002	<.002	<.002	<.002	<.003	<.006	<.004	.018
DEC											
07...	<.002	<.007	E.001	<.002	.017	<.006	<.002	<.003	<.006	<.004	<.018
28...	<.002	<.003	<.002	<.002	<.010	<.002	<.002	<.003	<.006	<.004	E.010
JAN											
11...	<.002	<.003	<.002	<.002	.008	<.002	<.002	<.003	<.006	<.004	E.008
25...	<.002	<.003	<.002	<.002	E.003	<.002	.004	<.003	<.006	<.004	E.011
FEB											
07...	<.002	E.004	<.002	E.004	<.002	<.002	.006	<.003	<.006	<.004	E.012
19...	<.002	<.003	<.002	<.002	.005	<.002	.005	<.003	<.006	<.004	E.014
22...	<.002	<.003	<.002	<.002	E.003	<.002	.005	<.003	<.006	<.004	E.010
MAR											
12...	--	--	--	--	--	--	--	--	--	--	--
15...	<.002	<.015	<.002	<.002	E.004	<.002	.005	<.003	<.006	<.004	E.010
17...	--	--	--	--	--	--	--	--	--	--	--
28...	<.002	E.21	<.002	<.002	.014	<.002	E.004	<.003	<.006	.015	E.006
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	<.002	E.015	<.002	<.002	.015	E.001	E.003	<.003	<.006	<.015	E.006
20...	E.001	<.007	<.002	E.002	.015	<.002	.006	<.003	E.002	.009	E.008
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	<.002	<.003	<.002	E.003	.011	<.002	.006	<.003	<.006	<.004	E.010
08...	--	--	--	--	--	--	--	--	--	--	--
15...	<.002	E.007	<.002	E.005	.021	<.020	.007	<.003	<.006	<.009	E.010
22...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
07...	<.002	E.018	<.002	E.002	.043	<.002	.007	<.003	<.006	.007	E.005
12...	--	--	--	--	--	--	--	--	--	--	--
20...	<.002	E.009	<.002	<.004	.021	<.002	.008	<.003	<.006	<.004	E.008
26...	<.002	E.008	<.002	E.003	.007	<.002	.005	<.003	<.006	<.004	E.007
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
13...	<.002	E.069	<.002	E.003	.032	<.010	E.003	<.003	<.006	<.004	E.007
17...	--	--	--	--	--	--	--	--	--	--	--
27...	<.002	E.091	<.002	<.002	.146	<.002	<.002	<.003	<.006	.009	E.010
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
11...	<.002	E.022	<.002	<.002	.021	<.002	<.002	<.003	<.006	<.004	E.006
18...	--	--	--	--	--	--	--	--	--	--	--
21...	<.002	E.014	<.002	<.002	.026	<.002	<.002	<.003	<.006	<.004	E.006
21...	<.002	E.015	<.002	<.002	.028	<.002	<.002	<.003	<.006	<.004	E.006
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
SEP											
07...	<.002	E.012	<.002	E.003	.018	<.002	E.002	<.003	<.006	<.004	E.006
11...	--	--	--	--	--	--	--	--	--	--	--
20...	<.002	E.054	<.002	<.002	.180	<.002	<.002	<.003	<.006	<.004	E.012
26...	--	--	--	--	--	--	--	--	--	--	--

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	SI-MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TRI-FLUR-ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)	1,1,1-TRI-CHLORO-ETHANE TOTAL (UG/L) (34506)	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYL-ENE TOTAL (UG/L) (34501)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	BENZENE 124-TRI METHYL UNFILT RECOVER (UG/L) (77222)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	BENZENE TOTAL (UG/L) (34030)
OCT											
14...	<0.005	<0.010	<0.005	E0.01	<0.07	<0.04	<0.03	<7	<0.06	<0.05	<0.04
20...	--	--	--	--	--	--	--	--	--	--	--
28...	.006	<.010	<.002	E.02	<.13	<.08	<.06	<14	<.11	<.10	E.02
NOV											
15...	<.005	<.010	<.002	E.01	<.13	<.08	<.06	<14	<.11	<.10	E.02
29...	<.005	<.010	<.002	E.02	E.02	<.04	<.03	<7	<.06	<.05	E.02
DEC											
07...	.007	<.010	E.003	E.02	<.07	<.04	<.03	E3	<.06	<.05	E.01
28...	<.010	<.010	<.002	E.04	E.05	E.02	<.03	<7	<.06	<.05	E.04
JAN											
11...	E.005	<.010	E.001	E.04	E.02	<.04	<.03	<7	<.06	<.05	E.02
25...	.006	E.004	<.002	E.09	E.10	E.04	E.02	<7	<.06	E.02	E.05
FEB											
07...	.006	E.004	<.002	E.04	E.06	E.02	<.03	<7	<.06	<.05	E.03
19...	.005	<.010	E.001	E.06	E.04	E.02	<.03	<7	E.03	<.05	E.07
22...	E.005	<.010	<.002	E.05	E.04	E.02	<.03	E2	E.02	<.05	E.05
MAR											
12...	--	--	--	--	--	--	--	--	--	--	--
15...	.006	<.010	<.002	E.08	E.04	E.01	<.03	<7	<.06	<.05	E.03
17...	--	--	--	E.04	E.02	<.04	<.03	E2	<.06	<.05	E.02
28...	<.005	<.010	E.001	E.05	<.07	<.04	<.03	E2	<.06	<.05	E.01
APR											
03...	--	--	--	--	--	--	--	--	--	--	--
10...	<.005	<.010	E.001	--	--	--	--	--	--	--	--
20...	E.004	<.010	E.001	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
MAY											
04...	.007	E.006	<.002	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--
15...	.007	<.010	<.005	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--	--
JUN											
07...	<.005	<.010	<.002	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--	--
20...	.006	E.002	<.002	--	--	--	--	--	--	--	--
26...	E.004	E.007	<.002	--	--	--	--	--	--	--	--
JUL											
07...	--	--	--	--	--	--	--	--	--	--	--
13...	E.003	E.010	<.002	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--	--
27...	<.005	<.010	E.001	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--	--
AUG											
11...	<.005	<.010	<.002	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--
21...	<.005	<.010	<.002	--	--	--	--	--	--	--	--
21...	<.005	<.010	<.002	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--	--
SEP											
07...	<.005	E.007	E.003	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--
20...	<.005	<.010	<.005	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L) (32105)	CHLORO-FORM TOTAL (UG/L) (32106)	CIS-1,2-DI-CHLORO-ETHENE WATER TOTAL (UG/L) (77093)	BROMO-DI-CHLORO-METHANE TOTAL (UG/L) (32101)	ETHER TERT-PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL-BENZENE TOTAL (UG/L) (34371)	FREON-113 WATER UNFLTRD REC (UG/L) (77652)	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)	METHYL ENE CHLO-RIDE TOTAL (UG/L) (34423)	METHYL-ETHYL-KETONE WATER WHOLE TOTAL (UG/L) (81595)
OCT										
14...	<0.2	E0.04	E0.08	<0.05	<0.1	<0.03	<0.06	0.9	<0.4	<2
20...	--	--	--	--	--	--	--	--	--	--
28...	<.4	E.06	E.10	<.10	E.05	<.06	<.12	2.5	<.8	<3
NOV										
15...	<.4	E.06	E.13	<.10	E.1	<.06	<.12	3.7	<.8	<3
29...	<.2	E.06	.12	<.05	<.1	<.03	<.06	2.0	<.4	<2
DEC										
07...	<.2	E.03	E.09	<.05	<.1	E.01	<.06	1.3	<.4	E1
28...	<.2	E.09	.22	<.05	E.1	<.03	E.02	3.6	<.4	<2
JAN										
11...	<.2	E.03	.13	<.05	E.03	<.03	E.03	1.6	<.4	<2
25...	<.2	.15	.73	E.02	E.1	<.03	E.05	3.2	<.4	<2
FEB										
07...	<.2	.10	.36	E.02	E.1	<.03	E.02	1.9	<.4	<2
19...	<.2	E.08	.21	<.05	E.1	E.02	E.02	4.2	<.4	<2
22...	<.2	E.08	.27	<.05	E.1	<.03	E.02	2.2	E.03	<2
MAR										
12...	--	--	--	--	--	--	--	--	--	--
15...	E.02	.17	.13	E.05	E.1	<.03	E.02	3.1	<.4	<2
17...	<.2	E.04	E.07	<.05	E.04	<.03	E.02	1.8	<.4	<2
28...	<.2	E.04	E.07	<.05	E.03	<.03	E.02	1.1	<.4	<2
APR										
03...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
MAY										
04...	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--
22...	--	--	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--	--	--
JUN										
07...	--	--	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--
JUL										
07...	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
31...	--	--	--	--	--	--	--	--	--	--
AUG										
11...	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
SEP										
07...	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	METHYL ISO-BUTYL KETONE WAT.WH. TOTAL (UG/L) (78133)	META/ PARA-XYLENE WATER UNFLTRD REC (UG/L) (85795)	O-XYLENE WATER WHOLE TOTAL (UG/L) (77135)	STYRENE TOTAL (UG/L) (77128)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	TRI-CHLORO-ETHYL-ENE TOTAL (UG/L) (39180)	VINYL CHLO-RIDE TOTAL (UG/L) (39175)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
14...	<0.4	<0.06	<0.04	<0.04	E0.1	<0.06	E0.09	<0.1	22	92
20...	--	--	--	--	--	--	--	--	10	80
28...	<.7	E.03	<.08	<.08	E.1	<.12	E.15	<.2	5	73
NOV										
15...	<.7	<.12	<.08	<.08	E.2	<.12	.20	<.2	2	75
29...	<.4	<.06	<.04	<.04	.2	<.06	.21	<.1	5	83
DEC										
07...	E.1	E.02	E.02	<.04	E.1	<.06	.13	<.1	17	89
28...	<.4	E.02	<.04	<.04	.3	<.06	.38	<.1	9	43
JAN										
11...	E.2	E.03	E.02	<.04	.1	<.06	.19	<.1	4	93
25...	<.4	E.03	E.02	<.04	.4	<.06	.78	<.1	2	80
FEB										
07...	<.4	<.06	<.04	<.04	.4	<.06	.43	<.1	4	92
19...	<.4	E.06	E.03	E.01	.2	E.01	.30	E.01	4	75
22...	<.4	E.04	E.03	<.04	.2	<.06	.34	<.1	4	83
MAR										
12...	--	--	--	--	--	--	--	--	7	71
15...	<.4	E.03	<.04	<.04	.1	<.06	.20	<.1	6	75
17...	E.2	E.03	<.04	<.04	E.1	<.06	.11	<.1	18	88
28...	E.3	<.06	<.04	<.04	E.1	<.06	E.10	<.1	18	87
APR										
03...	--	--	--	--	--	--	--	--	10	76
10...	--	--	--	--	--	--	--	--	10	90
20...	--	--	--	--	--	--	--	--	26	81
27...	--	--	--	--	--	--	--	--	9	75
MAY										
04...	--	--	--	--	--	--	--	--	9	87
08...	--	--	--	--	--	--	--	--	9	85
15...	--	--	--	--	--	--	--	--	9	92
22...	--	--	--	--	--	--	--	--	8	89
30...	--	--	--	--	--	--	--	--	11	95
JUN										
07...	--	--	--	--	--	--	--	--	22	84
12...	--	--	--	--	--	--	--	--	11	97
20...	--	--	--	--	--	--	--	--	11	88
26...	--	--	--	--	--	--	--	--	7	92
JUL										
07...	--	--	--	--	--	--	--	--	7	90
13...	--	--	--	--	--	--	--	--	7	72
17...	--	--	--	--	--	--	--	--	10	82
27...	--	--	--	--	--	--	--	--	62	82
31...	--	--	--	--	--	--	--	--	25	83
AUG										
11...	--	--	--	--	--	--	--	--	7	54
18...	--	--	--	--	--	--	--	--	9	94
21...	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	8	78
21...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	3	80
SEP										
07...	--	--	--	--	--	--	--	--	4	87
11...	--	--	--	--	--	--	--	--	4	79
20...	--	--	--	--	--	--	--	--	10	90
26...	--	--	--	--	--	--	--	--	4	85

01103015 MILL BROOK AT ARLINGTON, MA

LOCATION.--Lat 42°25'20", long 71°08'59", Middlesex County, Hydrologic Unit 01090001, 500 ft upstream from mouth, 0.6 mi north of Arlington.

DRAINAGE AREA.--About 5.3 mi^2.

PERIOD of RECORD.--Water Years 1999–2000.

REMARKS.--Discharge obtained by discharge measurements on the day of sampling. Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV										
09...	1400	1.16	3.5	779	10.0	7.4	560	14.0	8.5	0.70
JAN										
06...	1500	1.31	7.1	785	12.6	7.4	447	3.0	3.0	.52
MAR										
28...	1110	1.74	32	745	9.7	6.3	507	18.4	11.0	.38
MAY										
10...	1130	1.25	5.1	778	--	7.2	649	10.0	14.3	.94
JUN										
07...	1500	1.95	54	760	8.8	7.4	376	19.0	15.3	.64

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	DRAIN-AGE AREA (SQ. MI.) (81024)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV										
09...	0.79	0.265	1.09	0.028	0.022	0.016	0.020	5.21	820	620
JAN										
06...	.64	.147	.981	.015	.014	<.010	.048	5.21	880	580
MAR										
28...	.85	.165	.560	.016	.028	.015	.199	5.21	1,800	1,500
MAY										
10...	1.1	.223	1.39	.035	.046	.019	.077	5.21	7,400	7,200
JUN										
07...	.88	.078	.469	.010	.029	.013	.091	5.21	0	3,800

01103017 MYSTIC RIVER AT MEDFORD, MA

LOCATION.--Lat 42°25'14", long 71°08'36", Middlesex County, Hydrologic Unit 01090001, at Route 60, upstream side High Street bridge, 1 mi west of Medford.

DRAINAGE AREA.--Not determined.

PERIOD of RECORD.--Water Years 1999-2000.

REMARKS.--Discharge obtained by discharge measurements on the day of sampling. Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	GAGE HEIGHT (FEET) (00065)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV									
10...	1015	12.16	762	8.2	7.1	504	21.0	11.5	0.74
JAN									
06...	1230	12.20	785	11.6	7.4	543	8.0	4.0	.79
MAR									
29...	1440	12.47	754	12.0	7.2	672	16.6	9.0	.97
MAY									
11...	0845	12.36	777	--	7.4	514	11.0	15.7	.54
24...	0830	12.50	767	9.8	6.5	520	17.0	15.2	.52
JUN									
07...	1240	12.95	760	8.0	7.3	482	14.5	12.0	.50

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV									
10...	0.92	0.406	0.655	0.025	E0.004	<0.010	0.018	31	21
JAN									
06...	.94	.518	.923	.025	.006	<.010	.024	150	150
MAR									
29...	1.1	.663	1.20	.016	.007	<.010	.023	72	78
MAY									
11...	.91	.198	1.33	.024	.006	<.010	.037	460	470
24...	.91	.149	1.26	.029	E.004	<.010	.037	250	210
JUN									
07...	.79	.187	1.16	.034	.006	<.010	.039	580	490

01103025 ALEWIFE BROOK NEAR ARLINGTON, MA

LOCATION.--Lat 42°24'25", long 71°07'04", Middlesex County, Hydrologic Unit 01090001, at Broadway Street, downstream side of bridge, 0.6 mi upstream from mouth, 1 mi east of Arlington.

DRAINAGE AREA.--About 8.5 mi^2.

PERIOD of RECORD.--Water Years 1973-74, 1999-2000.

REMARKS.--Discharge obtained by discharge measurements on the day of sampling. Instantaneous records are based on composite samples and are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
NOV										
10...	1400	1.95	5.4	759	7.2	7.1	754	15.5	11.0	1.0
10...	1415	1.95	5.4	759	7.2	7.1	754	15.5	11.0	1.0
JAN										
04...	1500	2.22	11	749	6.8	7.1	855	9.0	7.5	1.0
MAR										
28...	1240	2.74	45	745	9.2	7.1	643	18.5	11.0	.70
MAY										
10...	0900	2.26	8.1	777	--	7.3	834	10.0	20.0	.79
JUN										
08...	1220	3.08	2.1	764	7.3	7.1	585	21.0	15.5	.43
08...	1230	3.08	2.1	764	7.3	7.1	585	21.0	15.5	.44

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	E. COLI WATER WHOLE TOTAL UREASE (COL / 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
NOV									
10...	1.1	0.620	0.606	0.043	0.014	0.010	0.083	--	--
10...	1.1	.614	.600	.042	.015	<.010	.078	--	--
JAN									
04...	1.4	.724	1.40	.054	.022	<.010	.119	680	K1,500
MAR									
28...	1.3	.286	.575	.018	.031	<.010	.185	7,900	11,000
MAY									
10...	1.4	.189	.845	.030	.044	<.010	.134	1,400	1,200
JUN									
08...	.94	.123	.579	.015	.017	<.010	.118	1,700	1,000
08...	.98	.124	.564	.014	.017	<.010	.120	--	--

USGS drill rig installs land-based portion of pond-level monitoring gage on Kingsbury Pond near Franklin, MA. (photo by J. L. Zanca)

01103280 CHARLES RIVER AT MEDWAY, MA

LOCATION.--Lat 42°08'23", long 71°23'24", Norfolk County, Hydrologic Unit 01090001, on right bank at upstream side of Walker Street bridge at intersection with Populatic Street, 0.5 mi east of Medway, MA.

DRAINAGE AREA.--65.7 mi^2.

PERIOD OF RECORD.--November 1997 to current year.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is 175 ft above sea level from topographic map.

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

AVERAGE DISCHARGE.--2 years, 103 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s, gage height, 5.34 ft, June 14, 1998; minimum, 2.0 ft^3/s, Sept. 5, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 747 ft^3/s, Apr. 23, gage height, 4.02 ft; minimum, 7.2 ft^3/s, Sept. 14.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	51	72	50	e61	265	238	212	56	51	47	8.8
2	45	50	64	51	e59	227	194	180	55	41	44	9.6
3	38	137	58	59	e56	189	161	158	80	34	41	10
4	46	150	57	72	e54	160	154	142	74	29	38	11
5	65	145	56	174	e52	139	158	127	62	25	33	9.8
6	63	122	56	169	e50	122	148	116	94	21	30	8.5
7	51	99	149	157	e48	109	132	106	421	18	26	8.7
8	44	84	180	129	e47	101	118	97	458	17	22	8.8
9	40	73	177	104	e46	96	177	87	419	16	18	8.2
10	39	66	153	110	e45	94	205	86	305	15	20	7.7
11	47	63	126	178	e52	103	207	143	212	13	19	7.7
12	45	58	104	176	e60	239	183	145	197	12	19	7.7
13	40	57	89	162	e90	265	153	138	182	12	17	7.8
14	57	56	84	e140	237	256	129	150	164	11	27	7.6
15	59	56	109	e115	e320	215	111	133	144	10	31	17
16	52	54	126	e100	e280	175	109	113	124	17	34	27
17	46	51	120	e82	e205	275	108	90	102	17	33	30
18	84	48	106	e73	e160	298	105	78	90	19	30	26
19	104	47	92	e65	e130	295	140	99	92	20	27	19
20	116	46	81	e58	119	257	151	128	84	17	23	44
21	133	53	102	e58	108	219	158	126	73	17	19	46
22	123	55	103	e54	e89	189	507	118	62	18	17	48
23	115	53	91	e47	101	165	688	108	58	17	15	42
24	109	51	81	e44	149	145	693	137	50	15	17	32
25	99	53	e56	e44	225	130	542	177	47	14	16	23
26	84	65	e59	e45	309	117	431	174	41	14	15	19
27	74	88	58	e48	337	106	397	144	52	39	13	23
28	65	106	e56	e51	340	240	345	113	100	52	12	23
29	59	99	51	e46	303	330	298	87	83	57	11	20
30	55	83	50	e45	---	354	253	72	65	49	9.8	18
31	53	---	51	e50	---	297	---	63	---	47	9.2	---
TOTAL	2098	2219	2817	2756	4132	6172	7393	3847	4046	754	733.0	578.9
MEAN	67.7	74.0	90.9	88.9	142	199	246	124	135	24.3	23.6	19.3
MAX	133	150	180	178	340	354	693	212	458	57	47	48
MIN	38	46	50	44	45	94	105	63	41	10	9.2	7.6
CFSM	1.03	1.13	1.38	1.35	2.17	3.03	3.75	1.89	2.05	.37	.36	.29
IN.	1.19	1.26	1.60	1.56	2.34	3.49	4.19	2.18	2.29	.43	.42	.33

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

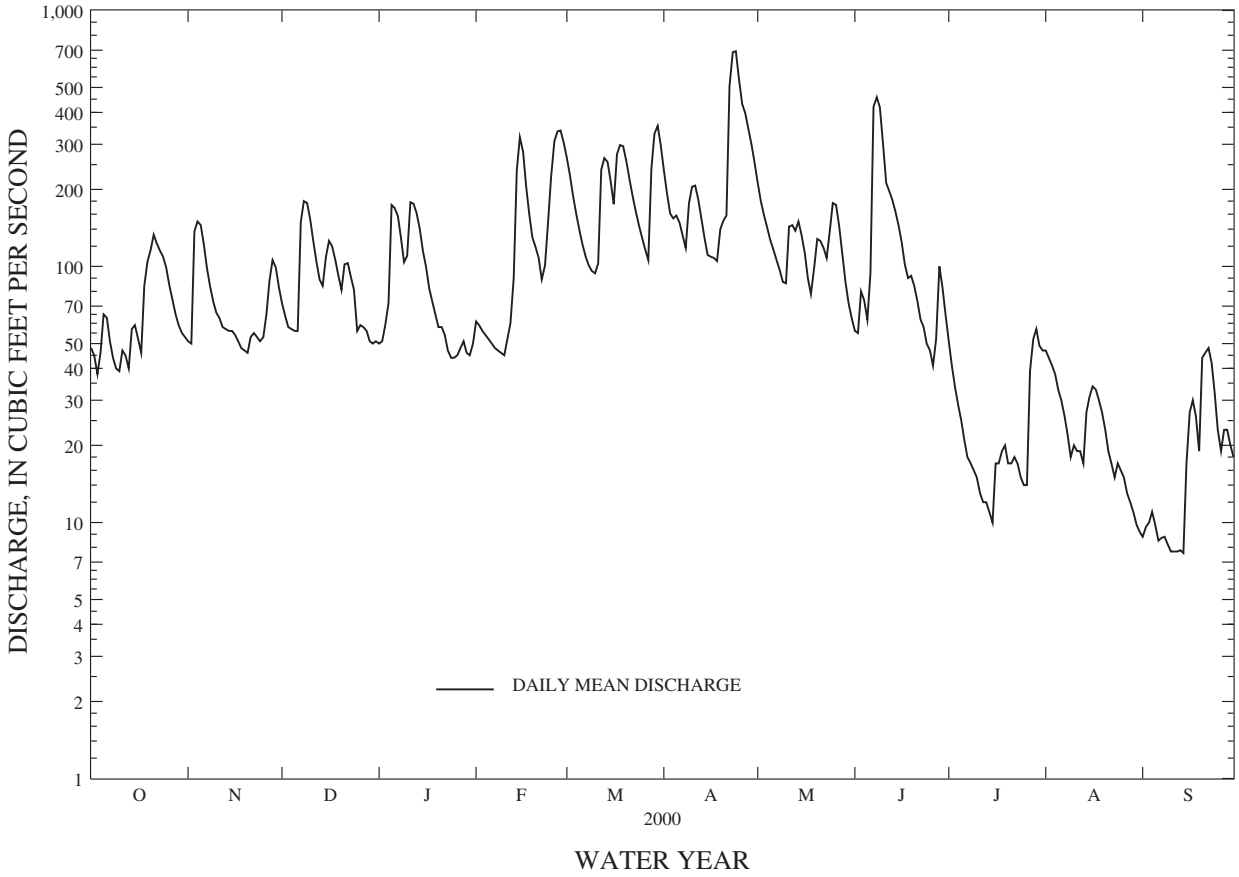
MEAN	75.2	59.9	59.1	170	216	270	186	163	163	59.1	19.1	44.3
MAX	82.8	74.0	90.9	227	257	338	246	271	339	138	28.9	94.8
(WY)	1999	2000	2000	1999	1998	1998	2000	1998	1998	1998	1998	1999
MIN	67.7	45.9	40.0	88.9	142	199	99.7	92.5	15.7	15.5	4.63	18.9
(WY)	2000	1999	1999	2000	2000	2000	1999	1999	1999	1999	1999	1998

01103280 CHARLES RIVER AT MEDWAY, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1998 - 2000	
ANNUAL TOTAL	39473.6		37545.9			
ANNUAL MEAN	108		103		103	
HIGHEST ANNUAL MEAN					103	1999
LOWEST ANNUAL MEAN					103	2000
HIGHEST DAILY MEAN	671	Feb 4	693	Apr 24	1050	Jun 15 1998
LOWEST DAILY MEAN	2.1	Sep 4	7.6	Sep 14	2.1	Sep 4 1999
ANNUAL SEVEN-DAY MINIMUM	3.0	Sep 1	7.9	Sep 8	3.0	Sep 1 1999
INSTANTANEOUS PEAK FLOW			747	Apr 23	1100	Jun 14 1998
INSTANTANEOUS PEAK STAGE			4.02	Apr 23	5.34	Jun 14 1998
INSTANTANEOUS LOW FLOW			7.2	Sep 14	2.0	Sep 5 1999
ANNUAL RUNOFF (CFSM)	1.65		1.56		1.56	
ANNUAL RUNOFF (INCHES)	22.35		21.26		21.24	
10 PERCENT EXCEEDS	261		216		298	
50 PERCENT EXCEEDS	70		69		72	
90 PERCENT EXCEEDS	5.7		17		14	

e Estimated

CHARLES RIVER AT MEDWAY, MA 01103280



01103500 CHARLES RIVER AT DOVER, MA

LOCATION.--Lat 42°15'22", long 71°15'38", Norfolk County, Hydrologic Unit 01090001, on right bank 0.3 mi downstream from highway bridge, 0.8 mi downstream from Noanet Brook, and 1.3 mi northeast of intersection of Centre and Walpole Streets in Dover.

DRAINAGE AREA.--183 mi^2.

PERIOD OF RECORD.--Discharge: October 1937 to current year. Prior to October 1977, published as "at Charles River Village."
Water-quality records: Water years 1975-95 (National stream-quality accounting network station).

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 89.76 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow affected by diversions to and from basin for municipal supplies. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--63 years, 305 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft^3/s, Aug. 23, 1955, gage height, 9.24 ft and Mar. 22, 1968, gage height, 8.72 ft; minimum, 0.5 ft^3/s, Oct. 24, 1952 (caused by unusual regulation); minimum daily, 0.9 ft^3/s, Oct. 24, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since flood in 1886, that of August 1955 and March 1968. Flood in March 1936 reached a discharge of 3,170 ft^3/s, by computation of flow over dam at site 0.2 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft^3/s, Apr. 26; gage height, 4.40 ft; minimum 24 ft^3/s, Sept. 15.

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

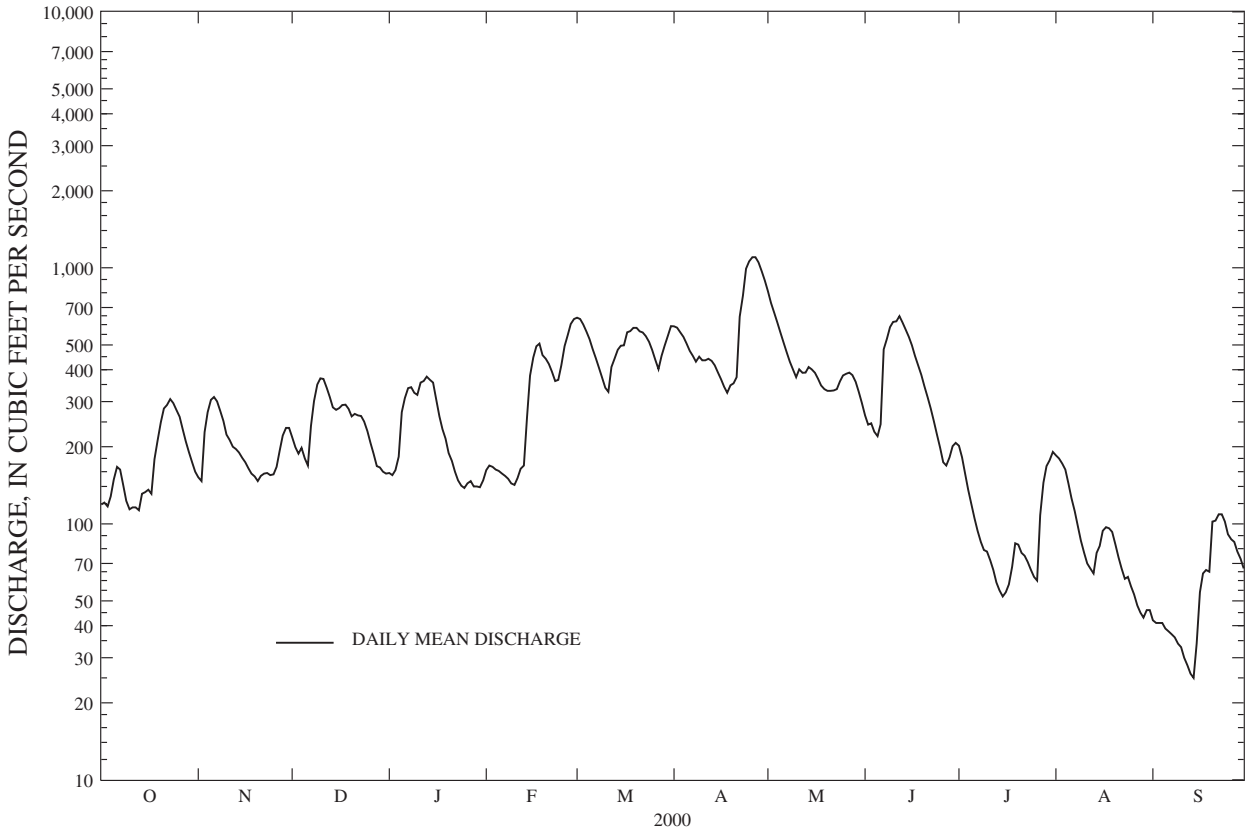
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	152	218	158	162	639	591	810	265	202	185	42
2	121	147	199	155	169	631	584	729	244	182	180	41
3	117	228	188	162	167	601	559	667	247	157	172	41
4	128	273	198	183	163	563	537	612	229	136	163	41
5	149	305	180	273	161	526	507	559	220	119	144	39
6	167	313	169	310	157	482	474	509	245	105	126	38
7	163	301	241	339	154	443	453	467	480	94	112	37
8	142	277	302	342	150	407	430	430	529	85	98	36
9	123	252	350	325	144	373	450	400	587	79	86	34
10	114	223	370	319	142	340	435	374	615	78	77	33
11	116	213	368	356	151	328	435	401	618	72	70	30
12	116	200	340	361	164	410	441	389	647	66	67	28
13	113	196	313	376	169	441	433	390	612	59	64	26
14	131	190	285	365	259	479	416	410	575	55	77	25
15	133	181	279	356	379	496	391	401	537	52	82	34
16	136	174	283	307	447	498	367	389	498	54	94	54
17	131	165	291	263	494	560	343	369	453	58	97	64
18	179	157	292	234	506	566	325	347	415	68	96	66
19	211	153	281	215	456	583	348	336	382	84	93	65
20	249	147	263	189	441	583	354	331	345	83	83	102
21	282	154	269	176	421	565	374	331	312	77	74	103
22	291	157	265	e160	393	559	644	332	282	75	67	109
23	307	158	264	148	361	541	780	336	252	71	61	109
24	296	155	251	141	365	514	992	360	224	66	62	102
25	279	156	230	138	416	478	1060	380	198	62	57	91
26	262	167	207	144	495	438	1100	386	174	60	53	87
27	234	193	188	147	545	402	1100	390	169	108	48	85
28	210	221	168	e140	603	453	1050	381	182	145	45	78
29	191	237	166	e140	631	496	968	359	201	168	43	73
30	174	237	160	139	---	543	891	328	207	177	46	67
31	160	---	157	148	---	592	---	297	---	191	46	---
TOTAL	5544	6082	7735	7209	9265	15530	17832	13200	10944	3088	2768	1780
MEAN	179	203	250	233	319	501	594	426	365	99.6	89.3	59.3
MAX	307	313	370	376	631	639	1100	810	647	202	185	109
MIN	113	147	157	138	142	328	325	297	169	52	43	25
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2000, BY WATER YEAR (WY)												
MEAN	143	248	341	371	432	616	583	362	238	126	113	101
MAX	600	892	866	1180	998	1172	1474	746	1129	1060	956	640
(WY)	1956	1956	1997	1979	1970	1983	1987	1954	1982	1938	1955	1954
MIN	13.4	33.1	54.6	45.3	86.7	227	169	138	57.5	19.5	9.01	7.78
(WY)	1958	1966	1966	1981	1980	1985	1966	1986	1999	1957	1957	1957

01103500 CHARLES RIVER AT DOVER, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1938 - 2000	
ANNUAL TOTAL	97192.9		100977			
ANNUAL MEAN	266		276		305	
HIGHEST ANNUAL MEAN					496	1984
LOWEST ANNUAL MEAN					117	1966
HIGHEST DAILY MEAN	1050	Feb 6	1100	Apr 26	3190	Mar 22 1968
LOWEST DAILY MEAN	7.8	Sep 5	25	Sep 14	.90	Oct 24 1952
ANNUAL SEVEN-DAY MINIMUM	9.1	Sep 2	30	Sep 9	4.3	Sep 10 1995
INSTANTANEOUS PEAK FLOW			1120	Apr 26	3220	Aug 23 1955
INSTANTANEOUS PEAK STAGE			4.40	Apr 26	9.24	Aug 23 1955
INSTANTANEOUS LOW FLOW			24	Sep 15	.50	Oct 24 1952
10 PERCENT EXCEEDS	593		549		687	
50 PERCENT EXCEEDS	210		220		211	
90 PERCENT EXCEEDS	19		66		42	

e Estimated

CHARLES RIVER AT DOVER, MA 01103500



01104000 MOTHER BROOK AT DEDHAM, MA

LOCATION.--Lat 42°15'18", long 71°09'53", Norfolk County, Hydrologic Unit 01090001, on right bank 100 ft upstream from Washington Street Bridge at Dedham and 0.4 mi downstream from point of diversion from Charles River.

PERIOD OF RECORD.--Discharge: October 1931 to current year.
Water-quality records: Water years 1959, 1969-70.

REVISED RECORDS.--WSP 1301: 1932(M).

GAGE.--Water-stage recorder. Concrete control since June 10, 1960. Datum of gage is 0.03 ft below sea level. Dec. 9, 1931, to June 9, 1960, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park.

AVERAGE DISCHARGE.--69 years, 76.1 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s, Mar. 21, 1968, gage height, 87.18 ft; maximum gage height, 92.90 ft, Aug. 24, 1955, from graph based on gage readings; no flow at times.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 357 ft^3/s, Apr. 26, gage height, 84.15 ft; minimum, 0.41 ft^3/s, Dec. 3, 4, 5 and 6.

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

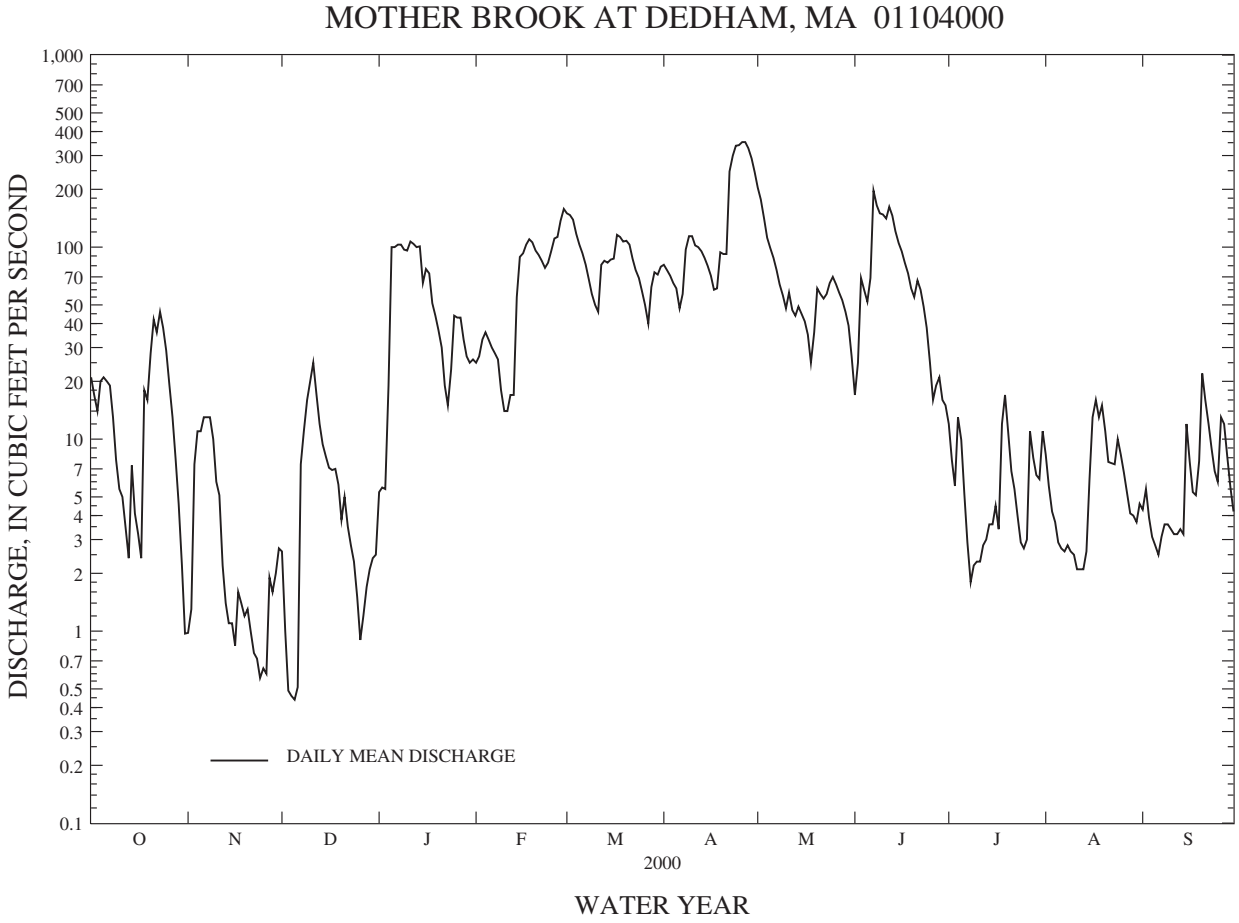
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	0.98	2.6	5.3	25	150	81	204	17	12	8.3	4.3
2	17	1.3	1.0	5.6	27	147	76	177	25	7.8	5.7	5.5
3	14	7.4	.49	5.5	33	139	71	141	69	5.7	4.2	3.9
4	20	11	.46	19	36	117	65	112	60	13	3.7	3.1
5	21	11	.44	100	33	103	61	99	52	9.9	2.9	2.8
6	20	13	.51	100	30	93	48	88	69	5.2	2.7	2.5
7	19	13	7.4	103	28	81	57	76	197	2.9	2.6	3.1
8	13	13	11	103	26	68	97	64	165	1.8	2.8	3.6
9	7.8	10	16	97	18	57	114	56	150	2.2	2.6	3.6
10	5.5	6.0	20	96	14	50	114	48	148	2.3	2.5	3.4
11	5.0	5.1	25	107	14	46	102	58	141	2.3	2.1	3.2
12	3.5	2.2	17	104	17	81	100	47	162	2.8	2.1	3.2
13	2.4	1.4	12	100	17	85	95	44	146	3.0	2.1	3.4
14	7.3	1.1	9.4	101	55	83	88	49	121	3.6	2.6	3.2
15	4.1	1.1	8.1	65	89	86	80	45	105	3.6	6.2	12
16	3.2	.84	7.1	77	93	87	71	41	95	4.5	13	7.6
17	2.4	1.6	6.9	73	103	116	60	35	83	3.4	16	5.3
18	18	1.4	7.0	51	110	113	61	25	73	12	13	5.1
19	16	1.2	5.8	44	106	107	94	36	61	17	15	7.7
20	28	1.3	3.8	37	96	108	92	61	55	11	11	22
21	42	1.0	5.0	30	91	103	92	57	67	6.8	7.6	16
22	36	.77	3.5	19	85	87	248	54	60	5.5	7.5	12
23	46	.72	2.8	15	78	76	299	57	49	4.0	7.4	8.9
24	38	.57	2.3	23	83	69	337	65	38	2.9	10	6.8
25	29	.64	1.5	44	95	59	340	70	25	2.7	8.3	6.0
26	19	.60	.90	43	111	50	352	64	16	3.0	6.7	13
27	13	1.9	1.2	43	113	40	352	58	19	11	5.2	12
28	7.9	1.6	1.7	33	137	62	327	53	21	8.0	4.1	8.2
29	4.6	2.0	2.1	27	158	74	290	46	16	6.5	4.0	5.6
30	2.2	2.7	2.4	25	---	72	246	39	15	6.2	3.7	4.2
31	.97	---	2.5	26	---	79	---	27	---	11	4.6	---
TOTAL	486.87	116.42	187.90	1721.4	1921	2688	4510	2096	2320	193.6	190.2	201.2
MEAN	15.7	3.88	6.06	55.5	66.2	86.7	150	67.6	77.3	6.25	6.14	6.71
MAX	46	13	25	107	158	150	352	204	197	17	16	22
MIN	.97	.57	.44	5.3	14	40	48	25	15	1.8	2.1	2.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2000, BY WATER YEAR (WY)

MEAN	27.2	54.8	83.5	96.7	112	175	159	88.9	54.6	22.1	21.1	20.5
MAX	182	308	285	287	360	490	437	253	328	339	306	189
(WY)	1956	1956	1973	1976	1970	1936	1987	1954	1982	1938	1955	1954
MIN	.000	.60	.43	.14	.14	.54	25.3	.000	.000	.061	.000	.097
(WY)	1942	1999	1959	1959	1959	1959	1999	1960	1955	1957	1949	1943

01104000 MOTHER BROOK AT DEDHAM, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1932 - 2000	
ANNUAL TOTAL	17830.56		16632.59			
ANNUAL MEAN	48.9		45.4		76.1	
HIGHEST ANNUAL MEAN					149	1938
LOWEST ANNUAL MEAN					20.6	1960
HIGHEST DAILY MEAN	340	Sep 17	352	Apr 26	1010	Mar 21 1968
LOWEST DAILY MEAN	.10	Jul 21	.44	Dec 5	.00	Sep 12 1941
ANNUAL SEVEN-DAY MINIMUM	.15	Jul 26	.80	Nov 20	.00	Sep 12 1941
INSTANTANEOUS PEAK FLOW			357	Apr 26	1040	Mar 21 1968
INSTANTANEOUS PEAK STAGE			84.15	Apr 26	92.90	Aug 24 1955
INSTANTANEOUS LOW FLOW			.41	Dec 3	.00	Sep 12 1941
10 PERCENT EXCEEDS	170		107		203	
50 PERCENT EXCEEDS	11		19		38	
90 PERCENT EXCEEDS	.37		2.2		1.3	



01104200 CHARLES RIVER AT WELLESLEY, MA

LOCATION.--Lat 42°18'59", long 71°13'42", Norfolk County, Hydrologic Unit 01090001, on left bank at east limits of Wellesley, 30 ft upstream from a horseshoe-shaped dam and 50 ft upstream from bridge on State Highway 9.

DRAINAGE AREA.--211 mi^2.

PERIOD OF RECORD.--Discharge: August 1959 to current year.
Water-quality records: Water year 1968.

GAGE.--Water-stage recorder and masonry dam. Datum of gage is 67.92 ft above sea level.

REMARKS.--Records good. Flow affected by diversion to Mother Brook (station 01104000), and by diversions to and from basin for municipal supplies. Occasional regulation at dam 0.2 mi upstream and by other ponds upstream.

AVERAGE DISCHARGE.--41 years, 288 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft^3/s, Mar. 21, 1968, gage height, 6.20 ft; no flow Sept. 15, Oct. 6, 1959 (caused by closing of gates at dam at gage); minimum daily, 1.0 ft^3/s, Aug. 24, 31, Sept. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,000 ft^3/s, Apr. 27, gage height, 4.58 ft; minimum daily, 21 ft^3/s, Sept. 8.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	194	281	169	179	617	657	825	338	259	245	45
2	129	188	265	183	185	608	655	751	214	243	227	58
3	128	279	240	186	183	584	636	693	234	154	216	60
4	152	317	240	127	174	571	626	645	234	154	208	53
5	169	346	235	230	172	540	597	593	225	150	186	50
6	173	360	218	265	171	507	571	555	292	139	167	49
7	178	357	329	283	169	479	385	515	662	127	153	33
8	168	343	382	297	171	450	374	487	633	117	143	21
9	151	319	408	294	168	423	440	459	612	113	119	29
10	142	293	432	307	173	395	434	440	623	115	113	37
11	138	283	427	345	182	394	427	498	628	72	60	29
12	134	262	424	328	194	500	423	469	687	70	75	23
13	136	251	397	338	200	499	427	456	669	59	92	25
14	159	238	372	322	308	510	424	479	632	59	65	26
15	163	229	369	275	373	523	407	468	595	64	55	74
16	162	217	363	284	372	525	396	457	562	75	83	80
17	160	209	358	261	392	613	379	442	520	49	89	78
18	244	197	358	244	417	615	292	426	488	64	82	60
19	262	187	351	245	427	604	327	339	458	110	88	63
20	297	183	336	227	416	605	348	353	339	103	83	113
21	334	188	347	193	410	588	371	358	326	97	66	113
22	334	191	337	173	395	588	689	359	318	94	62	114
23	354	197	331	168	376	595	778	375	294	89	59	118
24	348	190	320	141	386	579	859	418	272	85	64	116
25	332	191	297	140	446	554	916	439	249	79	56	81
26	319	208	270	143	532	518	951	432	222	78	53	83
27	297	246	245	144	557	489	982	429	237	164	50	100
28	272	277	214	148	593	601	969	425	266	201	39	90
29	246	290	209	153	608	629	926	413	255	203	37	84
30	227	295	201	154	---	622	865	391	261	210	37	79
31	208	---	146	166	---	646	---	367	---	257	42	---
TOTAL	6648	7525	9702	6933	9329	16971	17531	14756	12345	3853	3114	1984
MEAN	214	251	313	224	322	547	584	476	412	124	100	66.1
MAX	354	360	432	345	608	646	982	825	687	259	245	118
MIN	128	183	146	127	168	394	292	339	214	49	37	21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2000, BY WATER YEAR (WY)

MEAN	155	242	330	347	406	551	544	345	240	115	101	93.8
MAX	495	561	805	1018	766	1048	1223	697	951	439	430	253
(WY)	1997	1990	1997	1979	1970	1983	1987	1998	1982	1998	1990	1961
MIN	23.2	34.0	52.6	43.8	95.7	211	154	124	64.7	24.5	13.0	14.9
(WY)	1966	1966	1966	1981	1980	1985	1985	1986	1999	1997	1965	1965

01104200 CHARLES RIVER AT WELLESLEY, MA--Continued

SUMMARY STATISTICS	FOR 1999 CALENDAR YEAR		FOR 2000 WATER YEAR		WATER YEARS 1959 - 2000	
ANNUAL TOTAL	104415.4		110691			
ANNUAL MEAN	286		302		288	
HIGHEST ANNUAL MEAN					458	1984
LOWEST ANNUAL MEAN					108	1966
HIGHEST DAILY MEAN	949	Feb 7	982	Apr 27	2330	Mar 22 1968
LOWEST DAILY MEAN	6.1	Jul 31	21	Sep 8	1.0	Aug 24 1965
ANNUAL SEVEN-DAY MINIMUM	11	Aug 31	27	Sep 8	4.1	Aug 20 1965
INSTANTANEOUS PEAK FLOW			1000	Apr 27	2410	Mar 21 1968
INSTANTANEOUS PEAK STAGE			4.58	Apr 27	6.20	Mar 21 1968
INSTANTANEOUS LOW FLOW			8.2	Jan 4	.00	Sep 15 1959
10 PERCENT EXCEEDS	588		598		629	
50 PERCENT EXCEEDS	245		264		210	
90 PERCENT EXCEEDS	21		71		44