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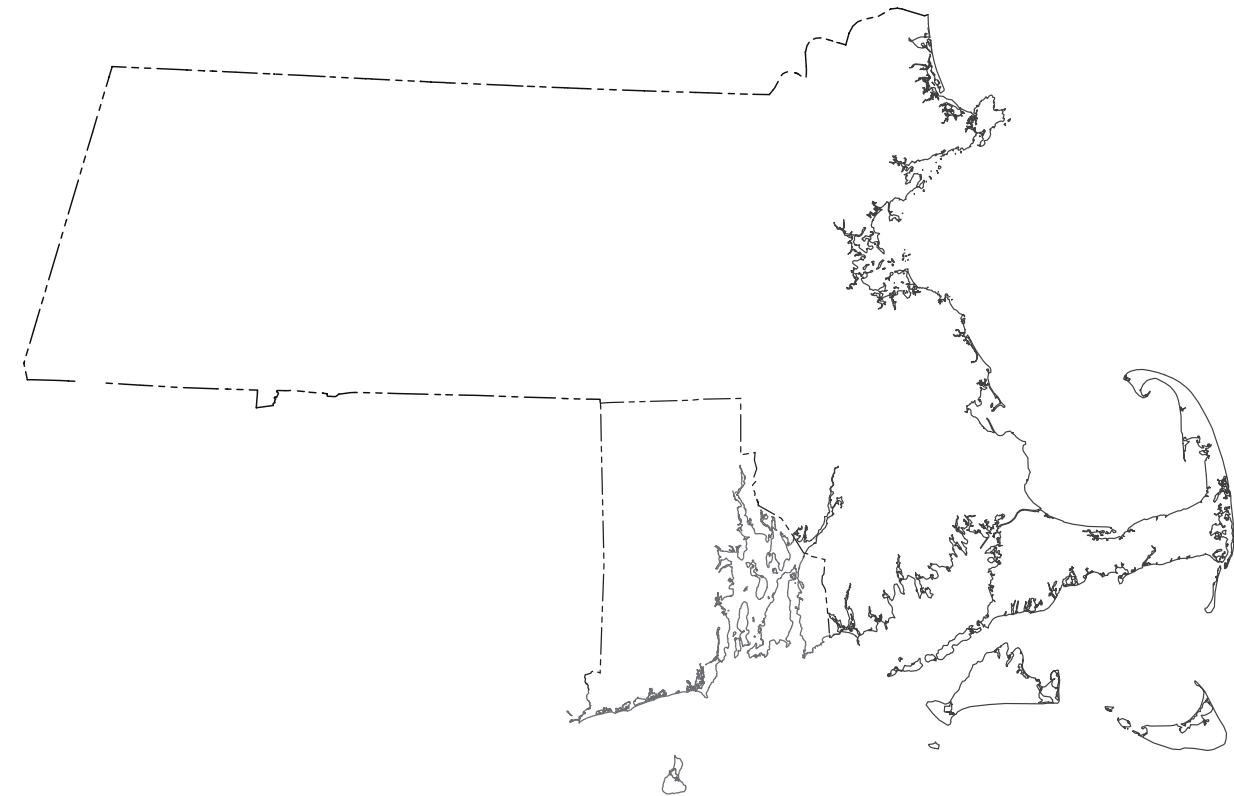


U.S. DEPARTMENT OF THE INTERIOR  
U.S. Geological Survey  
10 Bearfoot Road  
Northborough, MA 01532

U.S. Geological Survey Water Resources Data—Massachusetts and Rhode Island

# Water Resources Data Massachusetts and Rhode Island Water Year 2001

Water-Data Report MA-RI-01-1



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



Prepared in cooperation with the  
States of Massachusetts and Rhode Island  
and with other agencies

# CALENDAR FOR WATER YEAR 2001

2000

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OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
														31						

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2001

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JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3					1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28				25	26	27	28	29	30	31

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7			1	2	3	4	5						1	2
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15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30						27	28	29	30	31			24	25	26	27	28	29	30

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4							1
8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						

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**U.S. DEPARTMENT OF THE INTERIOR  
GALE A. NORTON, Secretary**

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

For additional information, write to:

U.S. Geological Survey  
Water Resources Division  
10 Bearfoot Road  
Northborough, MA 01532

2002

## PREFACE

This volume of the annual hydrologic data report of Massachusetts and Rhode Island is one of a series of annual reports that document hydrologic data gathered from the U.S Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Massachusetts and Rhode Island are contained in one volume. This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

Kimberly W. Campo  
Linda Y. Comeau  
Timothy R. Driskell  
Charles R. Leighton  
Domenic Murino, Jr.  
Lansen R. Ramsbey

Britt O. Stock  
Joan S. Whitley  
Joseph F. Whitley  
Dennis J. Ventetuolo  
Joseph L. Zanca

Anne M. Weaver was responsible for the word processing and publishing phases of the report, Mark V. Bonito prepared the illustrations, and Matthew G. Cooke provided the editorial review.

This report was prepared in cooperation with the States of Massachusetts and Rhode Island and with other agencies under the general supervision of Wayne H. Sonntag, Massachusetts-Rhode Island District Chief, and James B. Campbell, Subdistrict Chief, Rhode Island Office.

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

(Letters after station name designate type of data: (d) discharge; (l) lake; (c) chemical; (b) biological; (m) microbiological;  
(p) precipitation; (s) sediment; (t) water temperature' (st) stage only)

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## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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The following continuous-record surface-water discharge stations (gaging stations) in Massachusetts and Rhode Island have been discontinued. Daily streamflow records were collected and published for the period of record, expressed in water years, shown for each station.

**Discontinued surface-water discharge stations**

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>MERRIMACK RIVER BASIN</b>			
Rocky Brook near Sterling, Mass.	01095000	1.95	1947–67
Boulder Brook near East Bolton, Mass.	01096906	1.32	1975–78
Boulder Brook at East Bolton, Mass.	01096910	1.60	1972–81
Sudbury River at Ashland, Mass.	01097480	35.1	1994–95
Beaverdam Brook at Natick, Mass.	01098320	7.27	1978–79
Course Brook at Natick, Mass.	01098340	3.44	1978–79
Pegan Brook at Natick, Mass.	01098360	.54	1978–79
Snake Brook at Wayland, Mass.	01098450	2.10	1978–79
Lake Cochituate outlet at Framingham, Mass.	01098500	21.1	1978–79
Hager Pond outlet at Marlborough, Mass.	01098710	1.80	1978–80
East Meadow River near Haverhill, Mass.	01100700	5.47	1963–74
<b>IPSWICH RIVER BASIN</b>			
Maple Meadow Brook at Wilmington, Mass.	01101300	4.04	1963–74
<b>NORTH COASTAL BASIN</b>			
Mill Brook at Rockport, Mass.	01102029	0.55	1999–2000
Sawmill Brook near Rockport, Mass.	011020308	0.53	1999–2000
<b>CHARLES RIVER BASIN</b>			
Charles River at Millis, Mass.	01103305	84.0	1974–80
Hobbs Brook at Mill Street near Lincoln, Mass.	01104405	2.16	1998
Cambridge Reservoir, Unnamed Tributary 1 near Lexington, Mass.	01104410	.35	1998
Cambridge Reservoir, Unnamed Tributary 2 near Lexington, Mass.	01104415	.41	1998
Cambridge Reservoir, Unnamed Tributary 3 near Lexington, Mass.	01104420	.73	1998
Hobbs Brook at Kendal Green, Mass.	01104440	8.47	1998
Stony Brook, Unnamed Tributary 1 near Waltham, Mass.	01104455	.48	1998
Stony Brook at Route 20 near Waltham, Mass.	01104460	22.0	1998
Charles River above Watertown Dam at Watertown, Mass.	01104615	268	2000
<b>NEPONSET RIVER BASIN</b>			
Mine Brook at Walpole, Mass.	01104850	6.00	1967–68
<b>BLACKS CREEK BASIN</b>			
Furnace Brook at Quincy, Mass.	01105557	3.81	1973–80
<b>BOUND BROOK BASIN</b>			
Bound Brook near Cohasset, Mass.	01105660	4.86	1970–71
<b>NORTH RIVER BASIN</b>			
Indian Head Brook near Hanson, Mass.	01105700	4.30	1958–60
Pudding Brook at East Pembroke, Mass.	01105800	1.38	1958–62
<b>EEL RIVER BASIN</b>			
Eel River near Plymouth, Mass.	01105876	14.7	1970–71

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

## Discontinued surface-water discharge stations--Continued

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>HERRING RIVER BASIN</b>			
Herring River at North Harwich, Mass.	01105880	9.4	1966–88
<b>RED BROOK BASIN</b>			
Red Brook below Route 25 near Wareham, Mass.	01105885	9.14	1981–86
<b>WEWEANTIC RIVER BASIN</b>			
Weveantic River at South Wareham, Mass.	01105895	56.1	1970–71
<b>WEST BRANCH WESTPORT RIVER BASIN</b>			
Adamsville Brook at Adamsville, R.I.	01106000	8.01	1941–78, 1987
<b>TAUNTON RIVER BASIN</b>			
Matfield River at Elmwood, Mass.	01106500	40.5	1958–60
Poor Meadow Brook at South Hanson, Mass.	01106900	14.6	1958–60
Dorchester Brook near Brockton, Mass.	01107000	4.67	1963–74
Taunton River at Titicut near Brockton, Mass.	01107200	182	1920–25
Fall Brook near Middleborough, Mass.	01107400	9.32	1967
Wading River at West Mansfield, Mass.	01108500	19.5	1954–86
<b>PALMER RIVER BASIN</b>			
West Branch Palmer River near Rehoboth, Mass.	01109200	4.35	1962–74
<b>BLACKSTONE RIVER BASIN</b>			
Kettle Brook at Worcester, Mass.	01109500	31.6	1923–78
Mumford River at East Douglas, Mass.	01111000	29.1	1939–51
West River below West Hill Dam near Uxbridge, Mass.	01111200	27.9	1962–90
Chepachet River at Chepachet, R.I.	01111400	17.4	1965–73
Chepachet River at Gazzaville, R.I.	01111410	19.2	1973–75
Blackstone River tributary at Woonsocket, R.I.	01112700	2.31	1965–74
<b>PAWTUXET RIVER BASIN</b>			
Mosquitohawk Brook near North Scituate, R.I.	01115100	3.06	1965–74
Pawtuxet River at Fiskeville, R.I.	01115500	102	1915–25
Nooseneck River at Nooseneck, R.I.	01115630	8.23	1964–81
Carr River near Nooseneck, R.I.	01115770	6.73	1964–80
Flat River near Coventry, R.I.	01115900	9.13	1961–64
Furnace Hill Brook at Cranston, R.I.	01116300	4.19	1965–74
<b>ANNAQUATUCKET RIVER BASIN</b>			
Annaquatucket River at Belleville, R.I.	01117100	6.4	1961–64
<b>PAWCATUCK RIVER BASIN</b>			
Beaver River at Kenyon, R.I.	01117472	11.7	1975–79
Meadow Brook near Carolina, R.I.	01117600	5.53	1965–74
<b>THAMES RIVER BASIN</b>			
Quinebaug River below East Brimfield Dam near Fiskdale, Mass.	01123360	67.4	1973–90
Quinebaug River at Westville, Mass.	01123500	93.6	1940–62
Quinebaug River below Westville Dam near Southbridge, Mass.	01123600	99.0	1963–90
French River below Hodges Village Dam at Hodges Village, Mass.	01124350	31.2	1962–90
Little River near Oxford, Mass.	01124500	26.0	1939–90

## Discontinued surface-water discharge stations--Continued

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Period of Record (water years)
<b>PAWCATUCK RIVER BASIN—Continued</b>			
Browns Brook near Webster, Mass.	01124750	.49	1963–77
French River at Webster, Mass.	01125000	84.0	1949–81
Bucks Horn Brook at Greene, R.I.	01126200	5.52	1965–74
<b>CONNECTICUT RIVER BASIN</b>			
Tarbell Brook near Winchendon, Mass.	01161500	17.8	1916–82
Otter River near Gardner, Mass.	01163000	20.0	1916–17
Millers River at South Royalston, Mass.	01164000	189	1939–90
East Branch Tully River near Athol, Mass.	01165000	50.5	1916–90
Lake Rohunta Outlet near Athol, Mass.	01165300	20.3	1965–85
Moss Brook at Wendell Depot, Mass.	01165500	12.1	1909–10, 1916–82
Whetstone Brook at Depot Road at Wendell Depot, Mass.	01166105	5.22	1985–91
Deerfield River near Rowe, Mass.	01168151	254	1974–97
Unnamed Channel to Wilder Brook at Buckland, Mass.	01168639	0.01	1993–95
Wilder Brook at Buckland, Mass.	01168640	0.07	1993–95
Fort River near Amherst, Mass.	01171300	36.3	1966–96
Bassett Brook near Northampton, Mass.	01171800	5.56	1963–74
Natty Pond Brook Templeton Rd (DS) near Hubbardston, Mass.	01172680	1.63	1985–88
Natty Pond Brook near Hubbardston, Mass.	01172800	5.48	1985–88
Moose Brook near Barre, Mass.	01173260	4.63	1963–74
Hop Brook near New Salem, Mass.	01174000	3.39	1947–82
East Branch Fever Brook near Petersham, Mass.	01174050	4.85	1984–85
Dickey Brook near Cooleyville, Mass.	01174570	1.19	1985–89
Dickey Brook tributary near Cooleyville, Mass.	01174575	1.06	1985–89
Cadwell Creek near Pelham, Mass.	01174600	0.60	1962–94
Cadwell Creek near Belchertown, Mass.	01174900	2.55	1961–97
Mill River at Springfield, Mass.	01178000	33.2	1939–51
Westfield River at West Chesterfield, Mass.	01178500	110	1946–51
Sykes Brook at Knightville, Mass.	01180000	1.73	1945–74
Middle Branch Westfield River at Goss Heights, Mass.	01180500	52.7	1910–90
Walker Brook near Becket Center, Mass.	01180800	2.94	1963–77
Great Brook near Westfield, Mass.	01183450	22.6	1973–82
Fall River below Otis Reservoir near Otis, Mass.	01185100	16.5	1969–82
<b>HOUSATONIC RIVER BASIN</b>			
Town Brook at Bridge Street at Lanesborough, Mass.	01197015	10.6	1980–83
Marsh Brook at Lenox, Mass.	01197300	2.12	1963–74
Green River near Great Barrington, Mass.	01198000	51.0	1951–71, 1994–96
Schenob Brook near Sheffield, Mass.	01198030	23.3	1971–72
Willard Brook near Sheffield, Mass.	01198070	3.20	1971–72
Hubbard Brook at Sheffield, Mass.	01198075	25.8	1971–72
Ironworks Brook, East Road, at Sheffield, Mass.	01198122	11.2	1994–96
Housatonic River near Ashley Falls, Mass.	01198125	465	1994–96
Konkapot River at Ashley Falls, Mass.	01198200	61.1	1994–96
<b>HUDSON RIVER BASIN</b>			
Dry Brook at Adams, Mass.	01331400	7.67	1963–74
North Branch Hoosic River at North Adams, Mass.	01332000	40.9	1931–90



## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

The following continuous-record surface-water-quality stations have been discontinued. Daily records of temperature (temp.), specific conductance (S.C.), pH (pH), dissolved oxygen (D.O.) or sediment (sed.) were collected and published for the period of record, expressed in water years, shown for each station. Those stations currently being operated as water-quality partial-record stations (sampled quarterly or more frequently) are shown with an asterisk (\*) beside the station number.

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

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Type of record	Period of record (water years)
<b>MERRIMACK RIVER BASIN</b>				
North Nashua River near Lancaster, Mass.	01094700	128	Temp., S.C., pH, D.O.	1969–74
Merrimack River above Concord River at Lowell, Mass.	01096570	3956	Temp., S.C., pH, D.O.	1968–72
Boulder Brook near East Bolton, Mass.	01096906	1.32	Temp., S.C.	1971–78
Boulder Brook at East Bolton, Mass.	01096910	1.60	Temp., S.C.	1971–78
Nashoba Brook near Acton, Mass.	01097300	12.8	Temp., S.C.	1972–74, 1976–78
Merrimack River at West Newbury, Mass.	01100750	--	Temp., S.C., pH, D.O.	1969–76
<b>CHARLES RIVER BASIN</b>				
Charles River at Dover, Mass.	01103500	183	Temp., S.C.	1975–81
Hobbs Brook at Mill Street near Lincoln, Mass.	01104405	2.16	Temp., S.C.	1998
Cambridge Reservoir, Unnamed Tributary 1 near Lexington, Mass.	01104410	.35	Temp., S.C.	1998
Cambridge Reservoir, Unnamed Tributary 2 near Lexington, Mass.	01104415	.41	Temp., S.C.	1998
Cambridge Reservoir, Unnamed Tributary 3 near Lexington, Mass.	01104420	.73	Temp., S.C.	1998
Hobbs Brook at Kendal Green, Mass.	01104440	8.47	Temp., S.C.	1998
Stony Brook, Unnamed Tributary 1 near Waltham, Mass.	01104455	.48	Temp., S.C.	1998
Stony Brook at Route 20 near Waltham, Mass.	01104460	22.0	Temp., S.C.	1998
<b>NORTH RIVER BASIN</b>				
Indian Head River at Hanover, Mass.	01105730	30.3	Temp., S.C.	1970–71
<b>JONES RIVER BASIN</b>				
Jones River at Kingston, Mass.	01105870	15.7	Temp., S.C.	1970–71
<b>EEL RIVER BASIN</b>				
Eel River near Plymouth, Mass.	01105876	14.7	Temp. S.C.	1970–71 1971
<b>WEWEANTIC RIVER BASIN</b>				
Weweantic River at South Wareham, Mass.	01105895	56.1	Temp., S.C.	1970–71
<b>WEST BRANCH WESTPORT RIVER BASIN</b>				
Adamsville Brook at Adamsville, Mass.	01106000	8.01	Temp., S.C.	1973–74
<b>PALMER RIVER BASIN</b>				
West Branch Palmer River near Rehoboth, Mass.	01109200	4.35	Temp., S.C.	1973–74
<b>BLACKSTONE RIVER BASIN</b>				
Blackstone River at Millville, Mass.	*01111230	263	Temp., S.C., pH, D.O.	1969–81
Blackstone River at Woonsocket, R.I.	01112500	416	Temp.	1962–67

## DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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## Discontinued continuous-record surface-water-quality stations--Continued

Station Name	Station Number	Drainage Area (mi <sup>2</sup> )	Type of record	Period of record (water years)
<b>PAWTUXET RIVER BASIN</b>				
Pawtuxet River at Cranston, R.I.	*01116500	200	Temp., S.C.	1962–81
<b>POTOWOMUT RIVER BASIN</b>				
Hunt River near Davisville, R.I.	01116910	17.3	Temp.	1962–65
Hunt River near East Greenwich, R.I.	01117000	23.0	Temp., S.C.	1977–81
<b>PAWCATUCK RIVER BASIN</b>				
Chipuxet River at West Kingston, R.I.	01117350	9.99	Temp., S.C.	1974–83
Usquepaug River near Usquepaug, R.I.	01117420	36.1	Temp., S.C.	1975–83
Beaver River near Usquepaug, R.I.	01117468	8.87	Temp. S.C.	1979–83 1979–80, 1982–83
Beaver River at Kenyon, R.I.	01117472	11.7	Temp., S.C.	1976–79
<b>THAMES RIVER BASIN</b>				
Quinebaug River near Dudley, Mass.	01123990	156	Temp., S.C., pH, D.O.	1969–81
Browns Brook near Webster, Mass.	01124750	.49	Temp., S.C.	1972–77
<b>CONNECTICUT RIVER BASIN</b>				
Millers River at South Royalston, Mass.	01164000	189	Temp.	1966
Deerfield River near West Deerfield, Mass.	01170000	557	Temp., S.C.	1969–70
Moose Brook near Barre, Mass.	01173260	4.63	Temp., S.C.	1972–73
Hop Brook near New Salem, Mass.	01174000	3.39	Temp., S.C.	1972–73
Chicopee River at Chicopee Falls, Mass.	01177100	711	Temp., S.C., pH D.O.	1973–81 1973–76, 1978–81
Connecticut River at West Springfield, Mass.	01177200	9623	Temp., S.C., pH, D.O.	1972–75, 1977, 1979–81
Walker Brook near Becket Center, Mass.	01180800	2.94	Temp., S.C.	1972–77
Westfield River at West Springfield, Mass.	01183600	513	Temp., S.C., pH, D.O.	1972–76
Connecticut River at Agawam, Mass.	01183750	--	Temp., S.C., D.O. pH	1969–81 1969–76, 1979–81
<b>HOUSATONIC RIVER BASIN</b>				
Housatonic River near Great Barrington, Mass.	01197500	282	Sed.	1979–80, 1994–96



# Water Resources Data for Massachusetts and Rhode Island, 2001

By R.S. Socolow, C.R. Leighton, J.F. Whitley, and D.J. Ventetuolo

## INTRODUCTION

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

Hydrologic data are also available through the Massachusetts-Rhode Island District Home Page on the World Wide Web (<http://ma.water.usgs.gov>). Historical data and real-time data (for sites equipped with satellite gage-height telemeter) are also available. The home page also contains a link to the U.S. Geological Survey National Home Page where stream-flow data from locations throughout the United States can be retrieved. Please be advised that hydrographs for surface-water discharge stations and ground-water-level observation wells, published in the Massachusetts-Rhode Island Annual Water Data Report for water year 2000, are not included in this printed edition. However, improved versions of these hydrographs are now available on-line in page-sized pdf format for water year 2001 through the USGS Web page at: <http://water.usgs.gov/pubs/wdr/>.

This report series includes records of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and water levels of ground-water wells. This volume contains discharge records for 93 gaging stations; stage records for 1 gaging station; month-end contents of 4 lakes and reservoirs; water quality for 31 gaging stations; water levels for 139 observation wells; ground-water quality for 24 water-supply wells; and stage records for 1 pond. Locations of these sites are shown in figures 1 and 2. Short-term water-quality data were collected at 26 gaging stations and are shown in figure 3. Locations of ground-water-quality sites are not shown for homeland security reasons. Hydrologic data were collected at many sites that were not involved in the systematic data-collection program and are published as miscellaneous discharge measurements, miscellaneous surface-water-quality, and miscellaneous ground-water-quality data. The data in this report

represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating State and Federal agencies in Massachusetts and Rhode Island.

This series of annual reports for Massachusetts and Rhode Island began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Massachusetts and Rhode Island were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 1A and 1B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1939 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Information Services, Box 25286, Denver Federal Center, Box 25425, Denver, CO 80225-0286.

Publications similar to this report are published annually by the USGS for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report MA-RI-01-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161. Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (800) 696-4042.

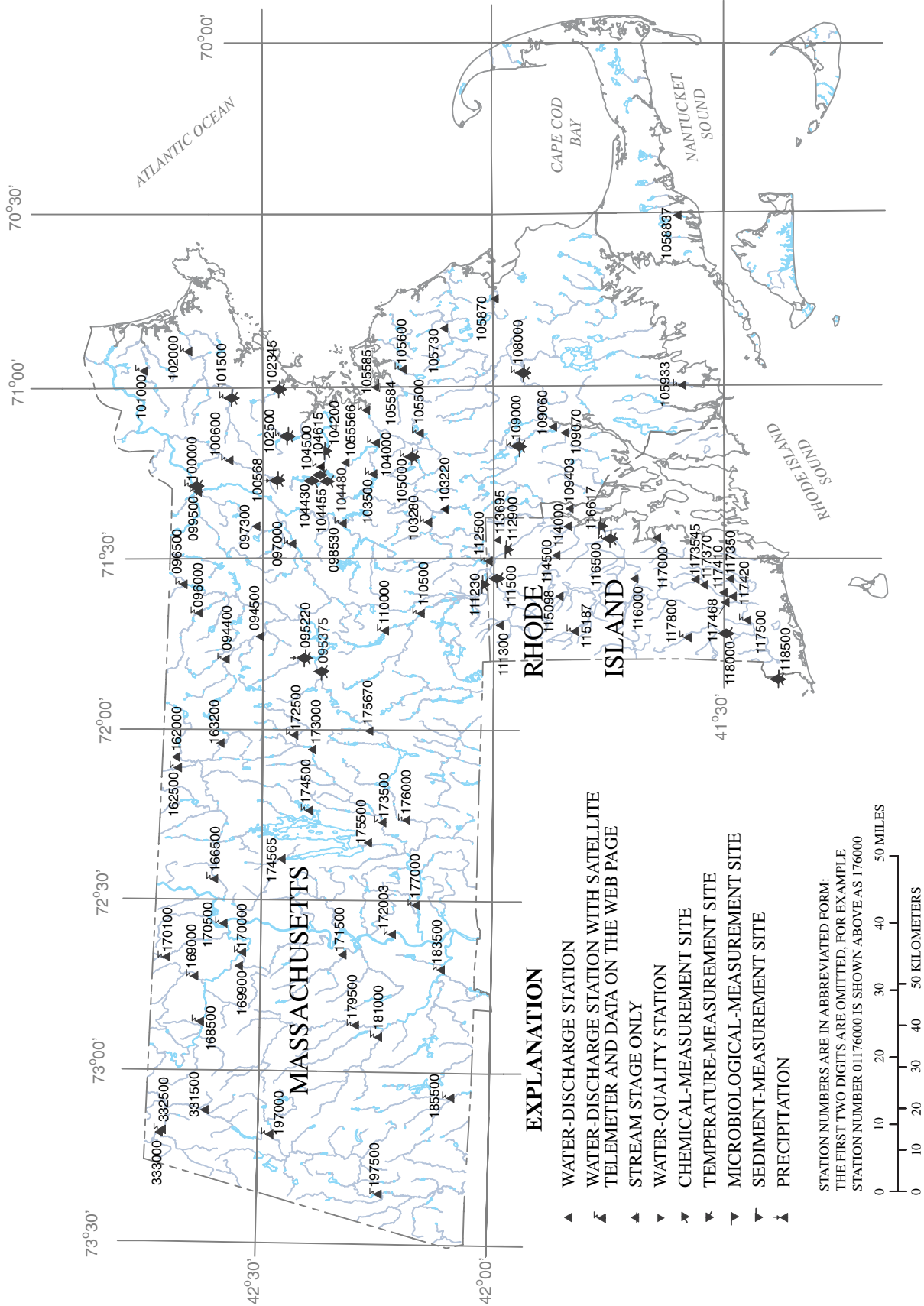


Figure 1. Location of gaging stations.

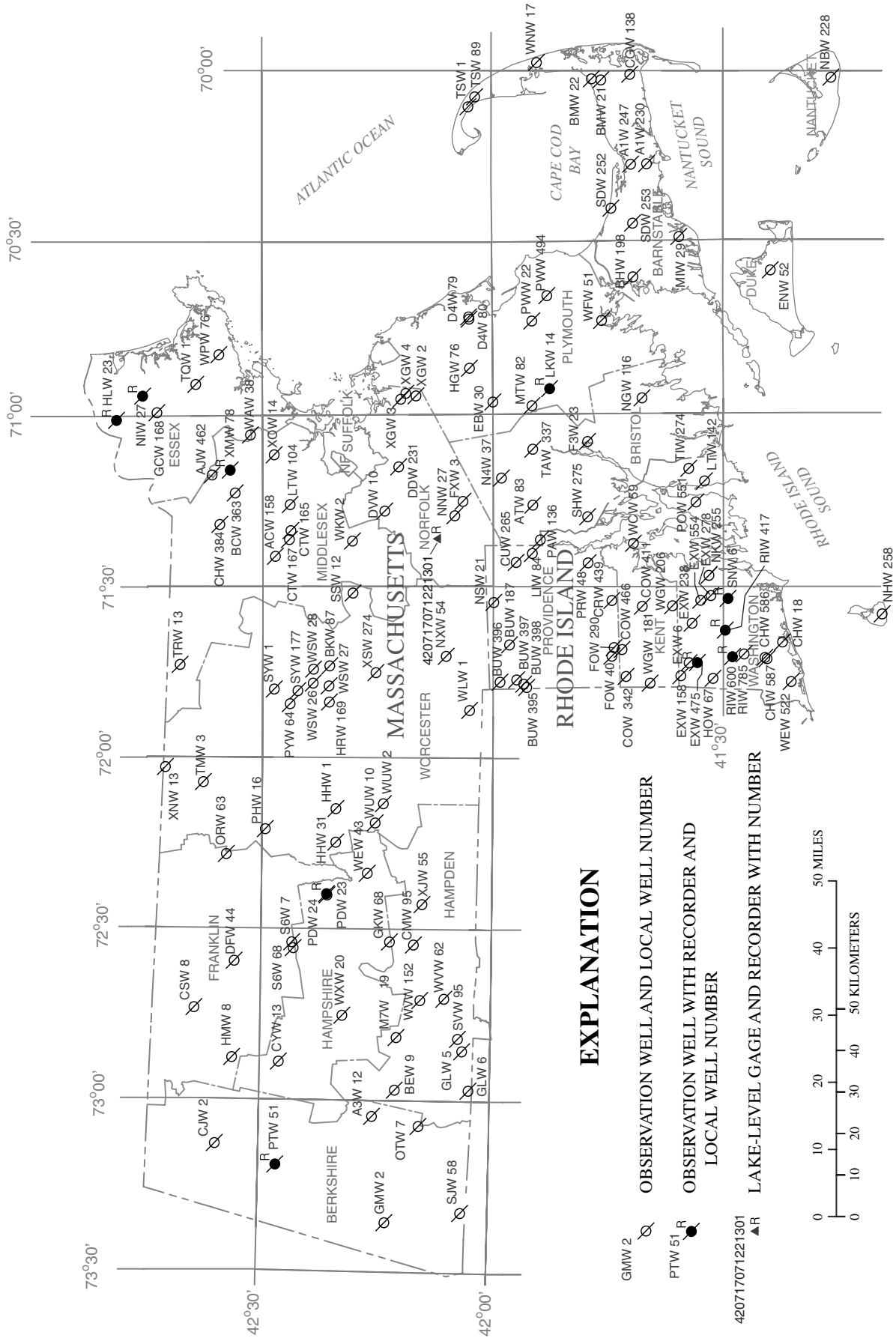


Figure 2. Location of observation wells.

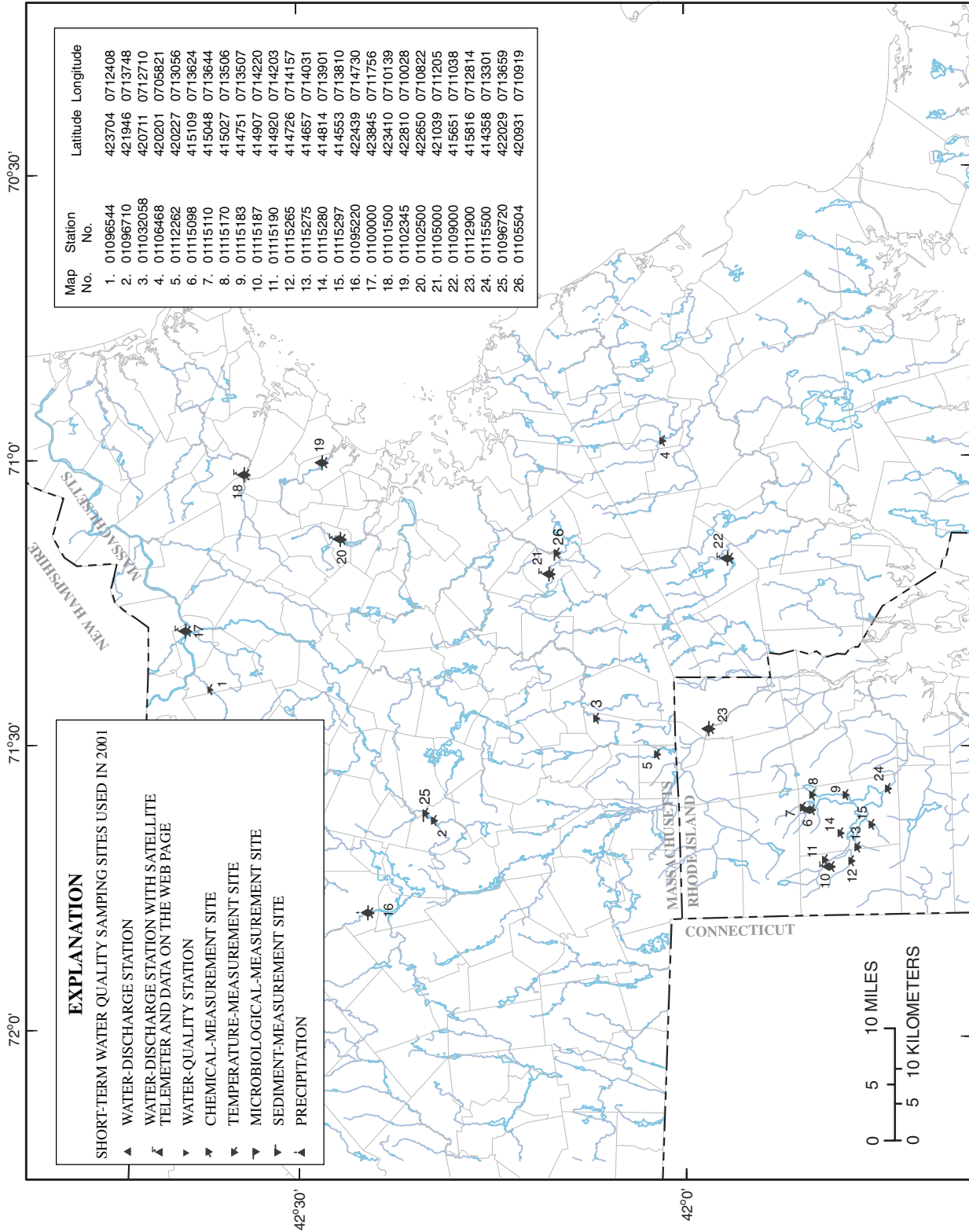


Figure 3. Location of short-term water-quality sampling sites.

## COOPERATION

The USGS and agencies of the States of Massachusetts and Rhode Island have had cooperative agreements for the collection of streamflow records since 1909 and 1941, respectively, and for water-quality records since 1954. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are:

### Massachusetts:

*Department of Environmental Management,  
P. Webber, Commissioner*

*Division of Resource Conservation,  
Michael Gildesgame, Director;*

*Department of Environmental Protection,  
L.A. Liss, Commissioner  
Office of Watershed Management,  
Glenn Haas, Director*

*Metropolitan District Commission,  
D.B. Balfour, Jr., Commissioner  
Division of Watershed Management,  
J.M. McGinn, Director  
Division of Parks, Engineering, and Construction,  
F.D. Faucher, Director*

*Town of Dartmouth,  
Manuel Branco, Water Superintendent*

*Town of Franklin  
W.A. Fitzgerald, Director, Department of Public Works*

### Rhode Island:

*State Water Resources Board,  
M. Paul Sams, General Manager  
D.W. Varin, Chairman*

*Department of Environmental Management,  
J.H. Reitsma, Director,  
E.S. Szymanski, Associate Director*

*Providence Water Supply Board,  
Robert Kilduff, General Manager and Chief Engineer  
A. Parillo, Chairman*

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for three gaging stations published in the report. Assistance in the form of services was given by the Cape Cod Commission, Barnstable County, Nantucket Land Council, Nantucket County, and Cooperative Extension, Martha's Vineyard, Dukes County, Massachusetts, in measuring observation wells on Cape Cod, Nantucket Island, and Martha's Vineyard Island, Massachusetts.

## SUMMARY OF HYDROLOGIC CONDITIONS

### Streamflow

Runoff for the 2001 water year was generally normal (between the lowest 25 percent of record and highest 25 percent of record) at stations in Massachusetts and Rhode Island. Runoff was above normal (highest 25 percent of record) for eastern Massachusetts and all of Rhode Island in March, all of Massachusetts and Rhode Island in April, and western and eastern Massachusetts and northern Rhode Island in June. Annual peak flows occurred primarily during storms on December 17 and from April 10 through 15 at most sites in west-central and western Massachusetts.

Annual peak flows occurred during the two weeks from March 22 to April 4 in central and eastern Massachusetts and all of Rhode Island. The March-to-April peak-flow event resulted from a combination of approximately 5 inches of rainfall onto a snow pack that ranged from approximately 24 to 36 inches deep in Massachusetts to approximately 12 to 24 inches deep in Rhode Island. New peak flows for period-of-station records were recorded at two stations with five or more years of record (Ipswich River at South Middleton, MA, operated since June 1938; and Aberjona River at Winchester, MA, operated since April 1939). Peak flows at both stations indicated recurrence intervals of 100 years. A table showing peak-flow information for those stations in eastern Massachusetts and Rhode Island most affected by the March flood appears in the "Floods" section following the "Ground-Water Levels" section.

Monthly and yearly discharges for the 2001 water year, and median monthly and yearly discharges for the 30-year reference period 1971–2000, for three index gaging stations are compared in figure 4. Maps showing monthly surface-water conditions during the 2001 water year in Massachusetts and Rhode Island are shown in figure 5. The maps show areas of normal, above-normal (within the highest 25 percent of record), or below-normal (within the lowest 25 percent of record) runoff for each month and are based on records for many of the streamflow-gaging stations contained in this report. Additional statistics for each gaging station are provided with the tables of daily mean discharge.

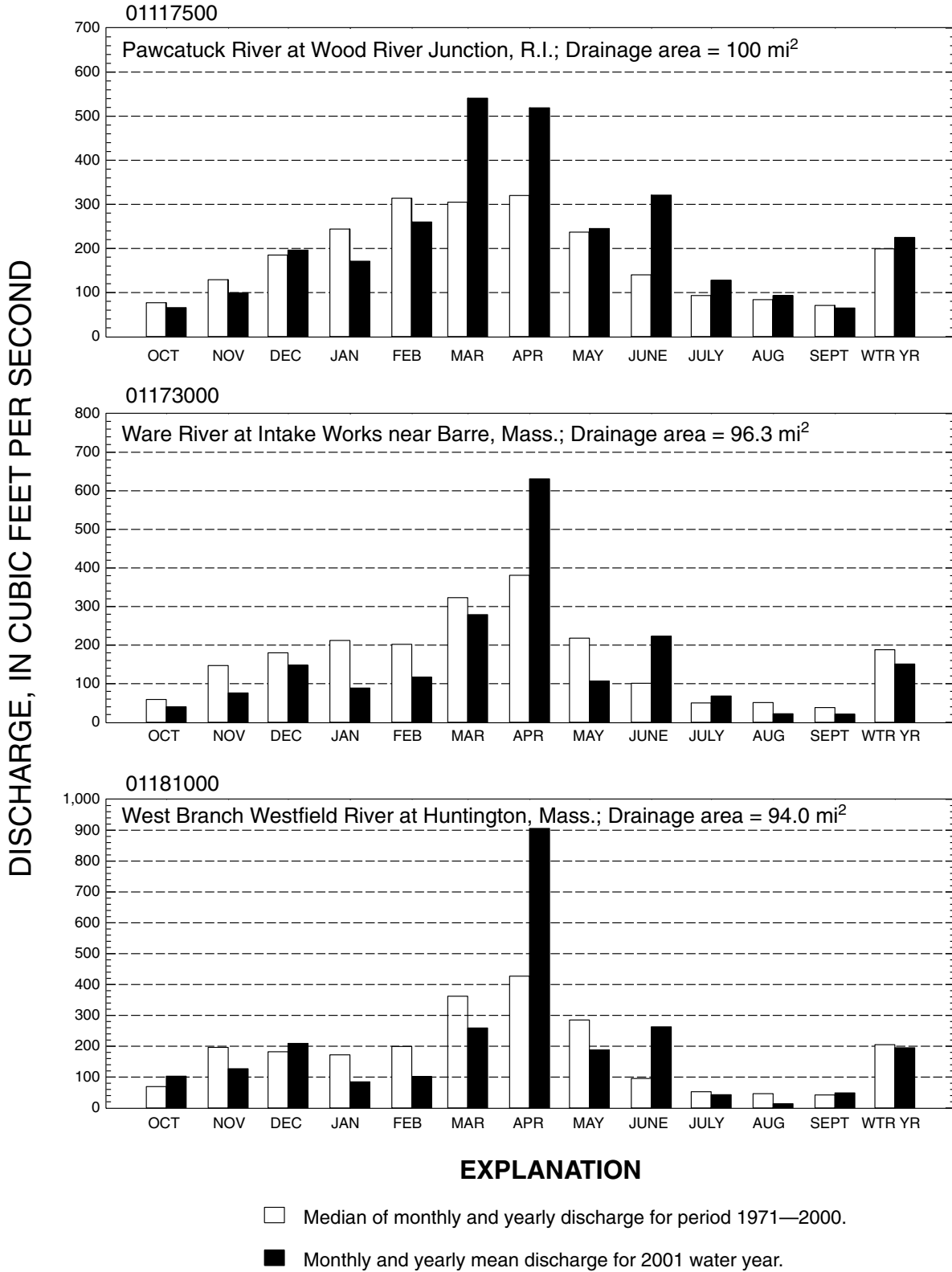
### Reservoir Storage

During the 2001 water year, month-end storage of Quabbin Reservoir in central Massachusetts ranged from 90 percent of usable capacity at the end of January and February to 98 percent of usable capacity at the end of April. Month-end storage of Borden Brook/Cobble Mountain Reservoir in western Massachusetts ranged from 73 percent of usable capacity at the end of October, January, and February to 94 percent of usable capacity at the end of May and June. Storage values for Quabbin and Borden Brook/Cobble Mountain Reservoirs were provided by the Metropolitan District Commission, Division of Watershed Management. The month-end storage of Scituate Reservoir in central Rhode Island ranged from 72 percent of usable capacity at the end of November to 104 percent of usable capacity at the end of March and June. Storage values were provided by the Providence Water Supply Board.

### Water Quality

Specific conductance and water temperature were recorded at 4 surface-water sites in Massachusetts and 11 surface-water sites in Rhode Island. In Massachusetts three sites were operating before the 2001 water year (Stillwater River, Quinapoxet River, and Hobbs Brook) and one site was started in the 2001 water year (Stony Brook, Unnamed Tributary 1, near Waltham, MA). In Rhode Island, 11 sites were operating before the 2001 water year. Of those sites, only Wood River at Hope Valley was operated for 10 or more years





**Figure 4.** Comparison of discharge at three long-term index stations during the 2001 water year with median discharge for 1971–2000.

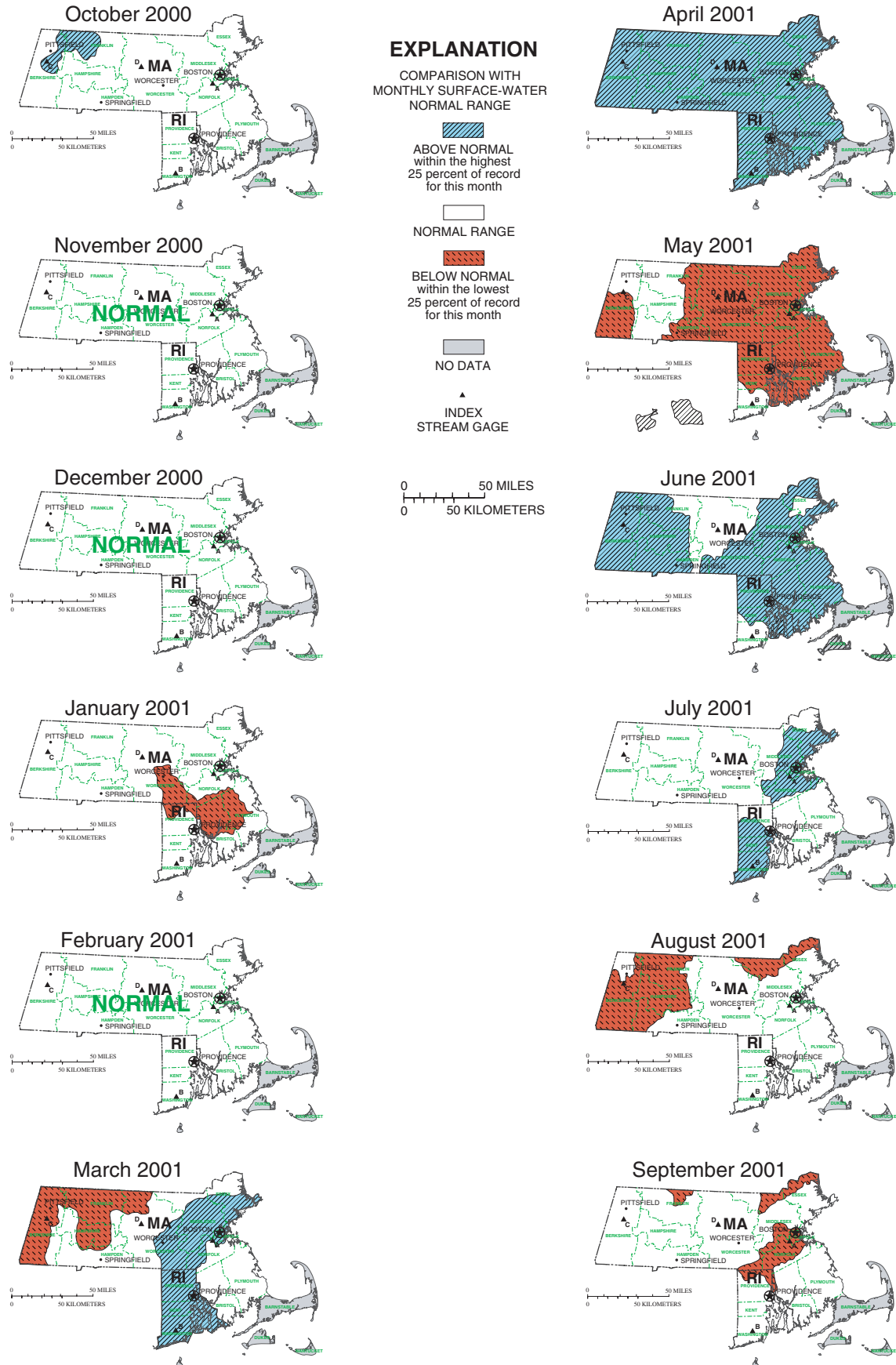


Figure 5. Monthly surface-water conditions during the 2001 water year in Massachusetts and Rhode Island.

(since October 1977). The remaining 10 sites were started in the 2000 water year (see table of contents, Pawtuxet River Basin, Scituate Reservoir).

New maximum specific conductance and minimum water-temperature values were recorded at Hobbs Brook below Cambridge Reservoir near Kendall Green, MA (1,940  $\mu\text{s}/\text{cm}$ , Mar. 20; 0.2°C, Jan. 18). A new minimum water-temperature value was recorded at Quinapoxet River at Canada Mills near Holden, MA (-0.8°C, Feb. 19). All readings of specific conductance and water temperature at the continuous-recording monitoring stations on the Stillwater River near Sterling, MA, and Wood River at Hope Valley, R.I., were within the previous extreme values for the period of daily record.

### Ground-Water Levels

From October through March, new historical high ground-water levels were measured at six wells, all of which were measured in March. The record-high levels resulted from high surface- and ground-water conditions present at that time due to a large snowpack and heavy rainfall on or about March 22, 2001. Also from October through March, 12 new monthly high-water levels and 52 new monthly low-water levels (including historical high levels) were measured at wells in Massachusetts and Rhode Island. Of the 12 new monthly high-water levels, 9 occurred in March. Of the 46 new monthly low-water levels, 37 occurred in January and February.

From April through September, new historical high ground-water levels were measured at four wells, three of which were measured in May and one was measured in April. During that same period, 42 new monthly high-water levels and 6 new monthly low-water levels were measured at wells in Massachusetts and Rhode Island. Of the 42 new monthly

high-water levels, 27 occurred in May and June. Wells with water-level records that started before 1997 in Massachusetts and Rhode Island are included in this summary.

Monthly water levels and median, maximum, and minimum monthly water levels for periods of record for three index-observation wells in Massachusetts and Rhode Island are compared in figure 6. Maps showing monthly ground-water conditions during the 2001 water year in Massachusetts and Rhode Island are shown in figure 7. The maps show areas of normal, above-normal, and below-normal ground-water levels for each month. From October 2000 through September 2001, ground-water levels for part or all of Cape Cod were below normal. From June through September 2001, ground-water levels for most of Massachusetts and Rhode Island were above normal.

### Floods and Droughts

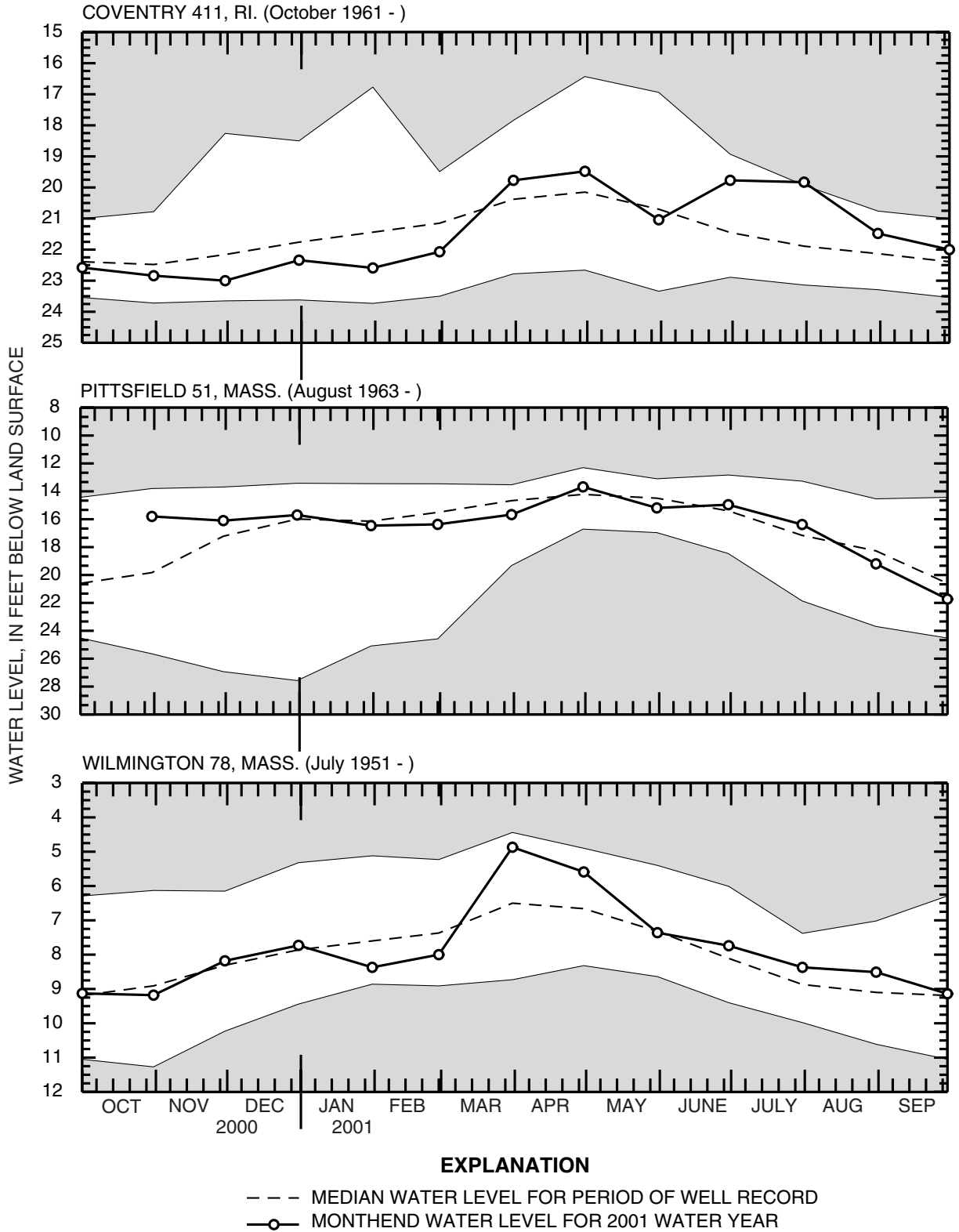
#### Floods

A major flood occurred in central and eastern Massachusetts and all of Rhode Island during the period from March 22 to April 3 and resulted from approximately 5 inches of rain on March 22 and 23 that fell on a snowpack ranging from approximately 24 to 36 inches in Massachusetts and approximately 12 to 24 inches in Rhode Island. Flood recurrence intervals during this period ranged from 5 to 100 years (peaks having a 1 in 5 to 1 in 100 chance of occurring in any one year). The following table shows 2001 water-year data and historical peak-flow and peak-stage data for those stations most affected by the March 2001 flood:

Additional information and photographs related to the March 2001 flood can be found on the USGS Massachusetts–Rhode Island District Flood Web page at: [http://ma.water.usgs.gov/water\\_floods.htm](http://ma.water.usgs.gov/water_floods.htm).

Peak Discharge and Stage Data for Flood of March 2001 and Historical Flow Data for Selected Stations

Station No.	Date of peak	Peak flow (in $\text{ft}^3/\text{s}$ )	Peak stage (in feet)	Flood recurrence interval (in years)	Peak flow for period of record (in $\text{ft}^3/\text{s}$ )	Peak stage for period of record (in feet)	Date of record peak
01097000	3-23-01	2,090	6.41	10	4,250	8.94	8-20-55
01099500	3-25-01	4,150	8.96	10	5,410	9.60	1-28-79
01100600	3-23-01	1,580	9.87	25	1,850	10.49	10-22-96
01101000	3-23-01	641	6.32	25	833	7.82	10-22-96
01101500	3-23-01	1,200	8.39	100	1,200	8.39	3-23-01
01102000	3-24-01	3,040	8.88	25	3,550	9.43	4-08-87
01102500	3-22-01	1,590	16.90	100	1,590	16.90	3-22-01
01103500	3-25-01	2,130	6.97	10	3,220	9.24	8-23-55
01104500	3-23-01	2,190	5.42	5	4,150	6.54	2-03-76
01105500	3-22-01	686	4.72	5	1,790	8.18	8-19-55
01109000	3-23-01	701	9.64	5	1,460	11.47	3-19-68
01110500	3-22-01	3,260	9.22	5	16,900	16.74	8-20-55
01112500	3-23-01	10,300	11.65	10	32,900	21.80	8-19-55
01116000	3-23-01	1,070	3.90	5	1,980	5.30	6-06-82
01116500	3-31-01	3,120	11.86	10	5,440	14.50	6-07-82
01117500	4-01-01	1,120	5.99	5	1,860	8.75	6-07-82



**Figure 6.** Comparison of monthly water levels in selected observation wells during the 2001 water year with average, maximum, and minimum monthly water levels for periods of record.

WATER RESOURCES DATA FOR MASSACHUSETTS AND RHODE ISLAND, 2001

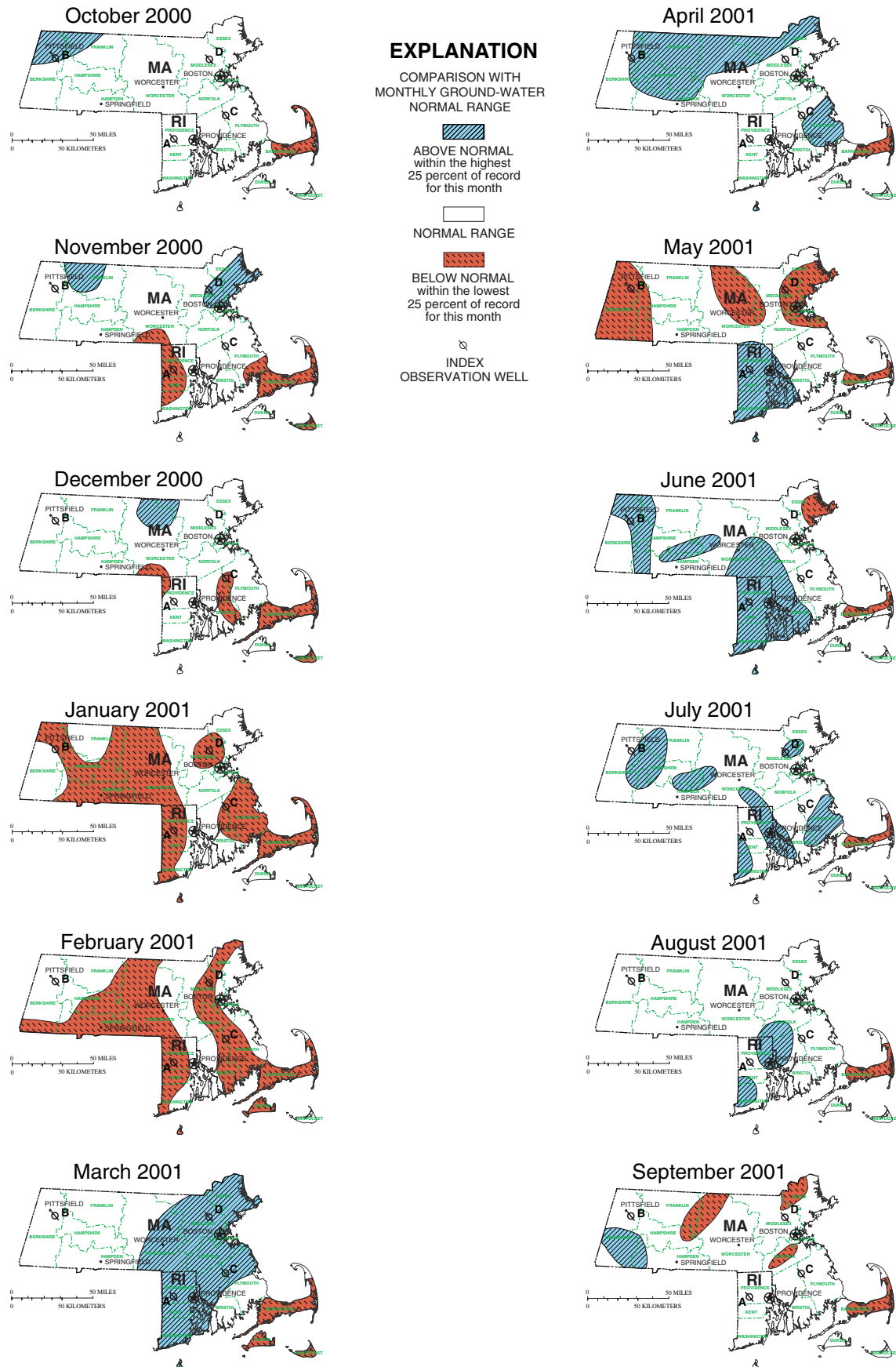


Figure 7. Monthly ground-water conditions during the 2001 water year in Massachusetts and Rhode Island.

### Droughts

No significant droughts occurred during the year.

### SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within four of the Nation's largest river basins—the Mississippi, Columbia, Colorado, and Rio Grande. The network consists of 39 stations. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used to (1) describe the long-term trends and changes in concentration and transport of these constituents; (2) test findings of the National Water-Quality Assessment Program (NAWQA); (3) characterize processes unique to large-river systems such as storage and re-mobilization of sediments and associated contaminants; and (4) refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical climate of precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to accomplish the following objectives: (1) Provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 181 precipitation chemistry monitoring sites, (Provide the mechanism to evaluate the effectiveness of the significant reduction in SO<sub>2</sub> emissions that began in 1995 as implementation of the Clean Air Act Amendments (CAAA) occurred, and (3) Provide the scientific basis and nationwide evaluation mechanism for implementation of the Phase II CAAA emission reductions for SO<sub>2</sub> and NO<sub>x</sub> scheduled to begin in 2000.

Data from the network, as well as information about individual sites, are available through the world wide web at: <http://nadp.sws.uiuc.edu>.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-

quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents are measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales provides information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

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

The New England Coastal Basins (NECB) NAWQA study unit encompasses 23,000 square miles (mi<sup>2</sup>) in western and central Maine, eastern New Hampshire, eastern Massachusetts, most of Rhode Island, and a small part of eastern Connecticut. The NECB NAWQA routine surface-water quality monitoring locations in WY 2001 published in this report are: Stillwater River near Sterling, MA (01095220); Merrimack River below Concord River, at Lowell, MA (01100000); Ipswich River at South Middleton, MA (01101500); Saugus River at Saugus Ironworks at Saugus, MA (01102345); Aberjona River (head of Mystic River) at Winchester, MA (01102500); and Charles River above Watertown Dam at Watertown, MA (01104615). The NECB NAWQA also conducted a synoptic study on nutrient/chlorophyll relations in 13 streams.

Water samples were collected from 5 domestic wells and 19 public-supply gravel-packed wells as part of the NAWQA program during the 2001 water year. Sampling protocols were followed to obtain and evaluate accurate water-quality

data (Koterba and others, 1995).<sup>1</sup> Untreated water samples were collected from domestic bedrock wells using a sample line connected from domestic bedrock wells using a sample line connected to a faucet that is at the base of the pressure tank from inside the home. Untreated water samples were collected from public-supply gravel-packed wells using a sample line connected to a faucet either at the well head (where available) or at a nearby pump house.

Additional information about the NAWQA Program is available through the World Wide Web at: <http://water.usgs.gov/nawqa>.

## EXPLANATION OF THE RECORDS

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

The locations of the stations and wells where the data were collected are shown in figures 1, 2, and 3. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

### Station-Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the USGS to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The “downstream order” system is used for surface-water stations and the “latitude-longitude” system is used for wells.

### Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in USGS reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is

followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indentation in the “List of Stations” in the front of this report. Each indentation represents one rank. This downstream order and system of identification shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between continuous-record stations and other types of stations; therefore, the station number for a continuous-record station indicates downstream-order position in a list made up of all types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete station number (usually eight digits, but sometimes nine or more if needed) appears just to the left of the station name. The first two digits indicate the Part number (formerly used in Water-Supply Papers to designate major river systems) and the last six or more digits indicate the downstream order within the Part. For example, in the station number 01094400, “01” is the Part number for “North Atlantic Slope Basins” and “094400” is the downstream order number.

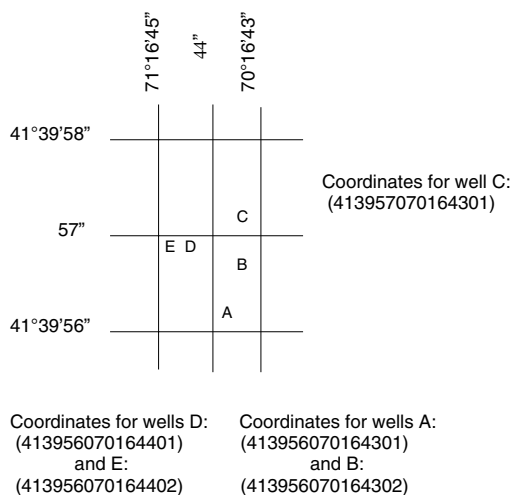
### Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude is found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure 7.)

### Numbering System for Wells

A local well numbering system is also used in this report. The local well number consists of a 2-letter code for the town in which the well is located followed by a “W” signifying that it is a well, and a sequential number. The local number is used to identify the location of observation wells in figure 3.

<sup>1</sup>Koterba, M.T., Wilde, F.D., and Lapham, W.W., 1995, Ground-water data-collection protocols and procedures for the National Water-Quality Assessment Program—Collection and documentation of water quality samples and related data: U.S. Geological Survey Open-File Report 95-399, 113 p.



**Figure 8.**--System for numbering wells (latitude and longitude)

## Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a continuous stage-recording device, but need not be. Because daily mean discharges and end-of-day contents commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report. There were no crest-stage stations this year. Location of all complete-record stations for which data are given in this report are shown in figure 1; location of all partial-record stations for which data are given in this report are shown in figure 2.

## Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the

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

Continuous records of stage are obtained with electronic recorders that log data at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the USGS as a result of experience accumulated since 1880. These methods are described in standard textbooks; in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6; and in U.S. Geological Survey Water-Supply Paper 2175, "Measurement and Computation of Stream-flow: Volume 1--Measurement of Stage and Discharge (p. 1--284); Volume 2--Computation of Discharge (p. 285--631)" by S.E. Rantz and others (1982).

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

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



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

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

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

### Data Presentation

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

### Station manuscript

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

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

**DRAINAGE AREA**--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

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

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

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

**REMARKS**--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a REMARKS paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the

records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

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

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

#### **Data table of daily mean values**

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and

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

#### **Statistics of monthly mean data**

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

#### **Summary statistics**

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS \_ - \_," will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated **ANNUAL** (See line headings below.), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

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

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

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

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

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

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

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

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

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

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

**INSTANTANEOUS PEAK STAGE**--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instanta-

neous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

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

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

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

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

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

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

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

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

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

### Identifying Estimated Daily Discharge

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

## Accuracy of the Records

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

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

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

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

## Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the District Office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the Massachusetts-Rhode Island District Office at the address given on the back of the title page or by telephone (800) 696-4042.

## Records of Surface-Water Quality

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

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

## Classification of Records

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

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

## Arrangement of Records

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

## On-Site Measurements and Sample Collection

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

Procedures for on-site measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. A1, A3, and A4; Book 9, Chap. A1–A9. All of these references are listed under "PUBLICA-

TIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples may be obtained from the Massachusetts–Rhode Island District Office.

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

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record.

### Water Temperature

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

### Sediment

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

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

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

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

### Laboratory Measurements

Sediment samples, samples for biochemical oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the USGS laboratory at the Denver Federal Center in Lakewood, CO. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1.

Methods used by the USGS laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

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

Selected ground-water samples from NECB NAWQA study sites were analyzed for pesticides on National Water Quality Laboratory (NWQL) schedule 2001 during the 2001 water year. The following table lists the pesticides on the schedule, the unit of measure (micrograms per liter,  $\mu\text{g/L}$ ), the U.S. Geological Survey National Water Information System parameter code, the NWQL compound name, and the minimum reporting level (MRL).

Estimated values for constituents in the 2001 schedule are preceded by an "E" to alert the data user to decreased confidence in accurate quantitation. Values for analytes in the 2001 schedule are preceded by an "E" in the following situations:

1. An analyte is determined outside the concentration range (upper concentration limits are to 20 mg/L for most compounds). The analyte is reported as greater than the highest calibration standard, and qualified with an "E". For example, a sample with a concentration of cyanazine determined as 41 mg/L from the calibration curve is reported as "E41."
2. The concentration is less than the MDL. The analyte meets all identification criteria to be positively identified, but the amount detected is below where it can be reliably quantified. The MDL's are used as the default reporting values when no analyte is detected in a sample.
3. An analyte demonstrated "poor" performance (that is, low and/or inconsistent recovery). These performance problems are related to either SPE or GC/MS procedures. The analyte is reported with an "E" code, to indicate that the concentration is an estimated measurement.

Only pesticides measured at or above the minimum reporting level for one or more samples are listed in the water-quality tables.

ANALYSES DESCRIPTION--Pesticides are partitioned from the filtered sample water by a C-18 Solid Phase Extraction (SPE) cartridge and analyzed by gas chromatography/mass spectrometry (GC/MS).

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

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

PCODE--The USGS parameter code.

COMPOUND NAME--IUPAC nomenclature.

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

LRL--Laboratory reporting level.

PCode	Compound Name/(Common Name)	LRL (µg/L)
82660	2,6-Diethylalanine (Metabolite of Alachlor)	0.002
49260	Acetochlor (Harness Plus, Surpass)	0.004
46342	Alachlor (Lasso, Bullet)	0.002
39632	Atrazine (Atrex, Atred)	0.007

PCode	Compound Name/(Common Name)	LRL (µg/L)
82686	Azinphos, Methyl- (Guthion, Gusathion)	0.050
82673	Benfluralin (Benefin, Balan)	0.010
04028	Butylate (Genate Plus, Suntan+)	0.002
82680	Carbaryl (Sevin, Denapan)	0.041
82674	Carbofuran (Furandan, Curaterr)	0.020
38933	Chlorpyrifos (Brodan, Dursban)	0.005
04041	Cyanazine (Bledex, Fortrol)	0.018
82682	DCPA (Dacthal, Chlorthal-dimethyl)	0.003
34653	DDE,p,p'-	0.003
04040	Deethylatrazine, (Metabolite of Atrazine)	0.006
39572	Diazinon (Basudin, Diazatol)	0.005
39381	Dieldrin (Panoram D-31, Octalox)	0.005
82677	Disulfoton (Disyston, Frumin AL)	0.021
82668	EPTC (Eptam, Farmarox)	0.002
82663	Ethalfuralin (Sonalan, Curbit)	0.009
82672	Ethoprop (Mocap, Ethoprofos)	0.005
04095	Fonofos (Dyfonate, Capfos)	0.003
34253	HCH,alpha- (alpha-BHC, alpha-lindane)	0.005
39341	HCH,gamma- (Lindane, gamma-BHC)	0.004
82666	Linuron (Lorex, Linex)	0.035
39532	Malathion	0.027
39415	Metolachlor (Dual, Pennant)	0.013
82630	Metribuzin (Lexon, Sencor)	0.006
82671	Molinate (Ordram)	0.002
82684	Napropamide (Devrinol)	0.007
39542	Parathion, Ethyl- (Roethyl-P, Alkron)	0.007
82667	Parathion, Methyl- (Penncap-M)	0.006
82669	Pebulate (Tillam, PEBL)	0.002
82683	Pendimethalin (Prowl, Stomp, Pre-M)	0.010
82687	Permethrin,cis- (Ambush, Astro)	0.005
82664	Phorate (Thimet, Granutox)	0.011
04037	Prometon (Pramitol, Princep)	0.015
82676	Pronamide (Kerb) (Propyzamid)	0.004
04024	Propachlor (Ramrod, Satecid)	0.010
82679	Propanil (Stampede, Stam)	0.011
82685	Propargite (Omite, Alkyl sulfite)	0.023
04035	Simazine (Princep, Caliber 91)	0.011
82670	Tebuthiuron (Spike, Tebusan)	0.016
82665	Terbacil (Sinbar)	0.034
82675	Terbufos (Counter, Contraven)	0.017
82681	Thiobencarb (Bolero, Saturn)	0.005
82678	Triallate (Avadex BW, Far-Go)	0.002
82661	Trifluralin (Treflan, Gowan)	0.009

### Analyses of volatile-organic compounds in ground-water samples (schedule 2020)

Selected ground-water samples from NECB NAWQA study sites were analyzed for volatile organic compounds (VOCs) in the 2001 water year. The NWQL created a method for accurate determination of VOCs in water in the nanogram per liter range, schedule 2020. The method described in USGS Open-File Report 97-829 (Connor and others) is similar to USEPA method 524-2 (Mund, 1995) and the method described by Rose and Schroeder (1995). Minor improvements to instrument operating conditions include the following: additional compounds, quantitation ions that are different from those recommended in USEPA Method 524.2 because of interferences from the additional compounds, and a data reporting strategy for measuring detected compounds extrapolated at less than the lowest calibration standard or measured at less than the reporting limit.

The following table lists the VOCs on the schedule, the unit of measure (micrograms per liter, µg/L), the USGS National Water Information System parameter code, the NWQL compound name, and the NWQL non-detection value (NDV). The NDV is a statistically defined reporting limit designed to limit false positives and false negatives to less than 1 percent. Positive detections measured at less than NDV are reported as estimated concentrations (E) to alert the data user to decreased confidence in accurate quantitation. Values for analytes in the 2020 schedule are preceded by an "E" in the following situations:

1. The calculated concentration is less than the lowest calibration standard. The analyte meets all identification criteria to be positively identified, but the amount detected is below where it can be reliably quantified.
2. A sample is diluted for any reason. The method reporting level is multiplied by the dilution factor to obtain the adjusted method reporting level. Values below the lowest calibration standard, multiplied by the dilution factor are qualified with an "E". For example, a value of 0.19 in a 1:2 dilution is reported as E0.1.
3. The set spike has recoveries out of the specified range (60-140%).
4. The analyte is also detected in the set blank. If the value in the sample is less than five times the blank value and greater than the blank value plus the long term method detection limit, the value is preceded by an "E" to indicate that the analyte is positively identified but not positively quantified because the analyte was also detected in the blank.

Only VOCs measured at or above the non-detection level for one or more samples are listed in the water-quality tables.

ANALYSES DESCRIPTION--The sample water is actively purged with helium to extract the volatile organic com-

pounds. The volatile organic compounds are collected onto a sorbent trap, thermally desorbed, separated by a gas chromatographic capillary column, and determined by a full scan quadrupole mass spectrometer. Compound identification is confirmed by the gas chromatographic retention time and by the resultant mass spectrum, typically identified by three unique ions.

SAMPLE REQUIREMENTS--Water is collected in vials placed in a stainless steel VOC sampler. Samples are preserved with 1:1 hydrochloric acid and chilled at 4°C (packed in ice).

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

PCODE--The USGS parameter code.

COMPOUND NAME--USGS NWQL nomenclature.

LRL--Laboratory reporting level.

PCODE	COMPOUND NAME	LRL (µg/L)
77562	1,1,1,2-Tetrachloroethane	0.044
34506	1,1,1-Trichloroethane	0.032
34516	1,1,2,2-Tetrachloroethane	0.13
34511	1,1,2-Trichloroethane	0.064
77652	1,1,2-Trichlorotrifluoroethane	0.032
34496	1,1-Dichloroethane	0.035
34501	1,1-Dichloroethylene	0.044
77168	1,1-Dichloropropene	0.026
49999	1,2,3,4-Tetramethylbenzene	0.23
50000	1,2,3,5-Tetramethylbenzene	0.2
77613	1,2,3-Trichlorobenzene	0.27
77443	1,2,3-Trichloropropane	0.16
77221	1,2,3-Trimethylbenzene	0.12
34551	1,2,4-Trichlorobenzene	0.19
77222	1,2,4-Trimethylbenzene	0.056
82625	1,2-Dibromo-3-chloropropane	0.21
77651	1,2-Dibromoethane	0.036
34536	1,2-Dichlorobenzene	0.048
32103	1,2-Dichloroethane	0.13
34541	1,2-Dichloropropane	0.028
77226	1,3,5-Trimethylbenzene	0.044
34566	1,3-Dichlorobenzene	0.030
77173	1,3-Dichloropropane	0.12
34571	1,4-Dichlorobenzene	0.05
77170	2,2-Dichloropropane	0.078
81595	2-Butanone	1.6
77275	2-Chlorotoluene	0.026
77103	2-Hexanone	0.7
78109	3-Chloropropene	0.07
77277	4-Chlorotoluene	0.056

PCODE	COMPOUND NAME	LRL (µg/L)	PCODE	COMPOUND NAME	LRL (µg/L)
77356	4-Isopropyl-1-methylbenzene	0.11	34546	trans-1,2-Dichloroethylene	0.032
78133	4-Methyl-2-pentanone	0.37	34699	trans-1,3-Dichloropropene	0.13
81552	Acetone	5	73547	trans-1,4-Dichloro-2-butene	0.7
34215	Acrylonitrile	1.2	39180	Trichloroethylene	0.038
34030	Benzene	0.1	34488	Trichlorofluoromethane	0.09
81555	Bromobenzene	0.036	50002	Vinyl bromide	0.1
77297	Bromochloromethane	0.044	39175	Vinyl chloride	0.11
32101	Bromodichloromethane	0.048			
32104	Bromoform	0.1			
34413	Bromomethane	0.15			
77342	Butylbenzene	0.19			
77041	Carbon disulfide	0.37			
34301	Chlorobenzene	0.028			
34311	Chloroethane	0.12			
32106	Chloroform	0.024			
34418	Chloromethane	0.25			
77093	cis-1,2-Dichloroethylene	0.038			
34704	cis-1,3-Dichloropropene	0.09			
32105	Dibromochloromethane	0.18			
30217	Dibromomethane	0.05			
34668	Dichlorodifluoromethane	0.14			
34423	Dichloromethane	0.16			
81576	Diethyl ether	0.17			
81577	Diisopropyl ether	0.098			
73570	Ethyl methacrylate	0.28			
50004	Ethyl tert-butyl ether	0.054			
34371	Ethylbenzene	0.03			
39702	Hexachlorobutadiene	0.14			
34396	Hexachloroethane	0.36			
77223	Isopropylbenzene	0.032			
85795	m- and p-Xylene	0.06			
49991	Methyl acrylate	1.4			
81593	Methyl acrylonitrile	0.57			
77424	Methyl iodide	0.21			
81597	Methyl methacrylate	0.35			
34696	Naphthalene	0.25			
77220	o-Ethyl toluene	0.1			
77135	o-Xylene	0.06			
77224	Propylbenzene	0.042			
77350	sec-Butylbenzene	0.048			
77128	Styrene	0.042			
78032	tert-butyl Methyl ether	0.17			
77353	tert-Butylbenzene	0.1			
50005	tert-Pentyl methyl ether	0.11			
34475	Tetrachloroethylene	0.1			
32102	Tetrachloromethane	0.088			
81607	Tetrahydrofuran	9			
34010	Toluene	0.05			

### Data Presentation

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

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

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

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

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

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

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

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

EXTREMES--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently because the true maximums or minimums may not have been



sampled. Extremes, when given, are provided for both the period of record and for the current water year.

**REVISIONS**--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of USGS water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates. The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

### Remark Codes

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

Printed Output	Remark
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range; non-ideal colony count
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant
V	Analyte was detected in both the environmental sample and the associated blanks.
M	Presence verified, not quantified.

### Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These

procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

### Blank Samples

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

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

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

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

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

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

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

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

### Reference Samples

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

### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general

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

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

**Split sample**—a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

### **Spike Samples**

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

### **Records of Ground-Water Levels**

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers.

### **Data Collection and Computation**

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

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table.

The secondary identification number is the local well number, an alphanumeric number, derived from a two-letter town code followed by the letter W to specify a well. Water-level records are obtained from direct measurements with a chalked steel tape, electric tape, or from digital water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the altitude of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported daily or for every fifth day and the end of each month (eom). Water levels are reported to as many significant figures as can be justified by

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

### **Data Presentation**

Each well record consists of three parts, the station description, the data table of water levels observed during the water year, and the hydrograph showing water-level fluctuations during the most recent five-year period. Hydrographs are based on end-of-month measurements, including those wells for which 5-day or more frequent water levels are published. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

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

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

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

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

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

**REMARKS**--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

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

**EXTREMES FOR PERIOD OF RECORD**--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence. A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum. For most wells all taped measurements of water level are published. For wells equipped with digital recorders, tables of daily mean water levels and the means, highs, and lows for each month are published. Abbreviated tables are published for wells.

### Records of Ground-Water Quality

Untreated water samples were collected from five domestic bedrock wells and 19 public-supply, gravel-packed wells between October 2000 and October 2001 in the Massachusetts and Rhode Island part of the New England Coastal Basins NAWQA study. Only one sample was collected from each well. These samples were collected as part of the NAWQA program to determine the occurrence and distribution of selected constituents in the ground waters of major aquifer systems and analyzed for major ions, nutrients, trace elements, radon gas, radionuclides, 48 pesticide compounds, and 86 volatile organic compounds (VOCs).

### Arrangement of Records

Water-quality data for special study sampling sites appear in separate tables following the continuous ground-water records.

### On-Site Measurement and Sample Collection

Sampling protocols were followed to obtain and evaluate accurate water-quality data (Koterba and others, 1995). For the domestic bedrock wells, the sample line was connected to the faucet that is at the base of the pressure tank from inside the home. For the public-supply gravel-packed wells, the sample line was connected to the faucet that is at the wellhead (where available) or at a nearby pump house.

### Laboratory Measurements

Samples were analyzed locally (in the field) for alkalinity, specific conductance, dissolved oxygen, pH, and temperature. All other samples were analyzed in the U.S. Geological Survey's National Water-Quality Laboratories in Lakewood, Colorado. Methods used by the U.S. Geological Survey

laboratories are given in the TWRI Book 1, Chapter D2; Book 3, Chapter D2; and Book 5, Chapters A1, A3, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

### ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed at <http://water.usgs.gov/>.

Some water-quality and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Discipline District Offices (See address on the back of the title page.)

### DEFINITION OF TERMS

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

**Acre-foot** (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 ft<sup>3</sup> or about 326,000 gallons or 1,233 m<sup>3</sup>.

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

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

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

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

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

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

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

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

**Aquifer** is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

**Artesian** means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

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

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

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

**Fecal streptococcal bacteria** are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-

streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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

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

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

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

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

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter, and periphyton and benthic organisms in grams per square mile.

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

**Organic mass** or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

**Wet mass** is the mass of living matter plus contained water.

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

**Bottom material:** See "Bed material."

**Cells/volume** refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters or liters.

**Chemical oxygen demand (COD)** is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

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

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

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

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

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

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

**Control** designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

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

**Cubic foot per second (ft<sup>3</sup>/s)** is the rate of discharge representing a volume of 1 ft<sup>3</sup> passing a given point during 1 second and is equivalent to 7.48 gal/s or 448.8 gal/min or 0.02832 m<sup>3</sup>/s.

**Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft<sup>3</sup>/s)/d])** is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, 646,317 gallons, or 2,447 cubic meters.

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

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

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

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

**Discharge** is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

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

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

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

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-mm membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

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

**Dissolved-solids concentration** of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

**Drainage area** of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from

precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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

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

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

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

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

**Hardness** of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

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

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

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

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

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

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

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

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

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

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

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

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

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

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

**Milligrams per liter (mg/L)** is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

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

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

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

**National Trends Network (NTN)** is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust-particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program.

**National Water-Quality Assessment (NAWQA)** Program of the USGS is a long-term program with goals to describe the status and trends of water-quality conditions for a large, diverse and geographically distributed part of the Nation's ground- and surface-water resources, and to identify, describe, and explain the major natural and human factors that affect these observed conditions and trends.

Assessment activities have begun in more than 50 of the study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents are measured in ground water, surface water, streambed sediments and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales provides information for decision making by water-resources manag-

ers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

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

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

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

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

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

**Total organism count** is the total number of organisms collected and enumerated in any particular sample.

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

**Parameter Code** is a 5-digit number used in the Survey's computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

**Partial-record station** is a particular site where limited streamflow and (or) water-quality data are collected systematically over a period of years for use in hydrologic analyses.

**Particle size** is the diameter, in millimeters, of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

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

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

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

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

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

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

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

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

**Picocurie** (PC, pCi) is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

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

**Blue-green algae** are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter of sample.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating “moss” in lakes. Their concentrations are expressed as number of cells per milliliter of sample.

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

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

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

**Precipitation** is falling products of condensation in the atmosphere as rain, snow, sleet, and hail.

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



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

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

**Radiochemical program** is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

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

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

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or non-exceedance of a

specified low flow). The terms “return period” and “recurrence interval” do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the non-exceedances of the  $7Q_{10}$  occur less than 10 years after the previous non-exceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous non-exceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Return period** is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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

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

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

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

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

**Bed load** is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

**Bed load discharge** (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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

**Mean concentration** (sediment), is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The entire sample is used for the analysis.

**Suspended-sediment discharge** (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L)  $\times$  discharge (ft<sup>3</sup>/s)  $\times$  0.0027.

**Suspended-sediment load** is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

**Total sediment discharge** (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

**Total sediment load** or total load is a term that refers to the total sediment (bed load plus suspended-sediment load) that is in transport. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with total sediment discharge.

**7-day 10-year low flow** (7Q10) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

**Sodium-adsorption-ratio** (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

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

**Specific conductance** is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is

related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

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

**Substrate** is the physical surface upon which an organism lives.

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

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

**Surface area** of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

**Surficial bed material** is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

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

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-mm membrane filter has been digested by a method

(usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the “total” amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of “suspended, recoverable” constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved, and (2) total recoverable concentrations of the constituent.

**Suspended, total** is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-mm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as “suspended, total.”

Determinations of “suspended, total” constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved, and (2) total concentrations of the constituent.

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

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

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	limbata

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

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

**Tons per acre-foot** indicates the dry mass of dissolved solids in 1 acre-ft of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day (T/DAY)** is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

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

**Total discharge** is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross-section per unit of time. This term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

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

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

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

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

**Tritium network** is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation’s surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

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

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

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

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

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

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and that includes 9 of the 12 months. Thus, the year ending September 30, 1994, is called the “1994 water year.”

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

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

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

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

## PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

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

#### Section D. Water Quality

- 1-D1. *Water temperature— influential factors, field measurement, and data presentation*, by H.H. Stevens, Jr., J.F. Ficke, and G.F. Smoot: USGS–TWRI book 1, chap. D1. 1975. 65 p.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

### Book 2. Collection of Environmental Data

#### Section D. Surface Geophysical Methods

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

#### Section E. Subsurface Geophysical Methods

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

#### Section F. Drilling and Sampling Methods

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

### Book 3. Applications of Hydraulics

#### Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 p.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 p.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 p.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 p.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 p.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 p.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 p.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 p.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 p.
- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS–TWRI book 3, chap. A10. 1984. 59 p.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 3, chap. A11. 1969. 22 p.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS–TWRI book 3, chap. A12. 1986. 34 p.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS–TWRI book 3, chap. A13. 1983. 53 p.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS–TWRI book 3, chap. A14. 1983. 46 p.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS–TWRI book 3, chap. A15. 1984. 48 p.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS–TWRI book 3, chap. A16. 1985. 52 p.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS–TWRI book 3, chap. A17. 1985. 38 p.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS–TWRI book 3, chap. A18. 1989. 52 p.

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

### **Section B. Ground-Water Techniques**

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS–TWRI book 3, chap. B1. 1971. 26 p.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G.D. Bennett: USGS–TWRI book 3, chap. B2. 1976. 172 p.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS–TWRI book 3, chap. B3. 1980. 106 p.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS–TWRI book 3, chap. B4. 1990. 232 p.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS–TWRI book 3, chap. B4. 1993. 8 p.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS–TWRI book 3, chap. B5. 1987. 15 p.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS–TWRI book 3, chap. B6. 1987. 28 p.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS–TWRI book 3, chap. B7. 1992. 190 p.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS–TWRI book 3, chap. B8. 2001. 29 p.

### **Section C. Sedimentation and Erosion Techniques**

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS–TWRI book 3, chap. C1. 1970. 55 p.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS–TWRI book 3, chap. C2. 1999. 89 p.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS–TWRI book 3, chap. C3. 1972. 66 p.

### **Book 4. Hydrologic Analysis and Interpretation**

#### **Section A. Statistical Analysis**

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS–TWRI book 4, chap. A1. 1968. 39 p.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS–TWRI book 4, chap. A2. 1968. 15 p.

#### **Section B. Surface Water**

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

#### **Section D. Interrelated Phases of the Hydrologic Cycle**

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

### **Book 5. Laboratory Analysis**

#### **Section A. Water Analysis**

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 p.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 p.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greenson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 p.

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

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

### Section C. Sediment Analysis

5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 p.

### Book 6. Modeling Techniques

#### Section A. Ground Water

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

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

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

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

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

6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D.

Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5, 1996. 125 p.

### Book 7. Automated Data Processing and Computations

#### Section C. Computer Programs

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

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

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

### Book 8. Instrumentation

#### Section A. Instruments for Measurement of Water Level

8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 p.

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

#### Section B. Instruments for Measurement of Discharge

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 p.

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

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

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

9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde,

- D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variousy paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variousy paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 p.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 p.



### Remark Codes

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

PRINT OUTPUT	REMARK
E	Value is estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
M	Presence of material verified, but not quantified.
N	Presumptive evidence of presence of material.
U	Material specifically analyzed for, but not detected.
A	Value is an average.
V	Analyte was detected in both the environmental sample and the associated blanks.
S	Most probable value.

### Dissolved Trace-Element Concentrations

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

### Change in National Trends Network Procedures

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

MERRIMACK RIVER BASIN

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<sup>2</sup>.

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.--29 years, 122 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft<sup>3</sup>/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<sup>3</sup>/s, Sept. 11, 12, 1995; minimum daily, 2.7 ft<sup>3</sup>/s, Sept. 5, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,880 ft<sup>3</sup>/s, June 17, gage height, 6.61 ft; minimum, 1.7 ft<sup>3</sup>/s, Sept. 3, 4.

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	35	43	87	e74	106	76	223	133	51	182	15	24
2	33	41	79	e67	91	72	200	123	119	182	14	11
3	68	39	69	e60	82	69	191	113	190	104	18	2.5
4	73	37	65	e56	74	67	201	104	158	79	33	3.9
5	77	40	62	e59	76	75	230	97	e113	83	26	5.6
6	131	44	60	79	e103	e100	272	87	88	87	22	9.0
7	97	42	56	e54	86	99	336	82	72	68	18	8.7
8	77	40	54	e50	76	83	488	77	62	62	16	9.1
9	68	38	54	e50	79	79	658	75	52	62	14	8.7
10	65	128	e43	e49	130	87	1130	70	46	57	14	6.7
11	47	168	53	e48	130	79	946	65	65	57	14	6.6
12	38	115	67	e48	110	78	932	65	137	51	21	8.6
13	36	85	63	e47	91	104	884	66	97	46	18	8.2
14	33	99	70	e47	88	121	863	58	74	42	17	16
15	31	161	69	e46	112	118	664	53	63	39	14	14
16	34	122	63	e46	102	125	541	58	54	37	12	15
17	37	100	519	e46	96	132	448	59	625	51	12	13
18	50	84	584	e46	85	142	384	56	573	50	12	14
19	85	75	269	e46	81	136	322	54	233	41	9.3	13
20	63	81	210	e45	75	147	282	50	164	38	8.4	12
21	54	75	e140	e45	e63	165	271	46	164	34	29	39
22	47	67	e110	e44	e61	1200	274	62	123	27	19	30
23	42	60	e93	e45	e61	1050	262	87	105	23	14	22
24	40	53	e87	e45	69	584	235	78	99	21	13	17
25	39	53	e80	55	72	419	204	67	85	17	12	77
26	40	101	e75	53	96	318	184	59	72	28	8.9	53
27	39	139	e72	52	89	262	168	70	62	27	8.3	29
28	40	108	e66	51	80	229	151	72	55	21	9.8	22
29	38	94	e62	e40	---	217	147	83	45	18	10	20
30	36	91	e58	59	---	240	143	70	64	17	9.1	17
31	45	---	e70	90	---	251	---	62	---	16	8.4	---
TOTAL	1638	2423	3509	1642	2464	6924	12234	2301	3910	1667	469.2	535.6
MEAN	52.8	80.8	113	53.0	88.0	223	408	74.2	130	53.8	15.1	17.9
MAX	131	168	584	90	130	1200	1130	133	625	182	33	77
MIN	31	37	43	40	61	67	143	46	45	16	8.3	2.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 2001, BY WATER YEAR (WY)

MEAN	78.5	115	138	137	140	234	246	142	97.7	46.4	46.0	41.9
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

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1973 - 2001

ANNUAL TOTAL	44171	39716.8	
ANNUAL MEAN	121	109	122
HIGHEST ANNUAL MEAN			169
LOWEST ANNUAL MEAN			59.5
HIGHEST DAILY MEAN	1420	Apr 22	2830
LOWEST DAILY MEAN	14	Sep 11	2.5
ANNUAL SEVEN-DAY MINIMUM	17	Sep 6	6.8
MAXIMUM PEAK FLOW			1880
MAXIMUM PEAK STAGE			6.61
INSTANTANEOUS LOW FLOW			1.7
10 PERCENT EXCEEDS	224	219	258
50 PERCENT EXCEEDS	82	65	79
90 PERCENT EXCEEDS	38	15	22

e Estimated



## MERRIMACK RIVER BASIN

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<sup>2</sup>.

### 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.-- 7 years, 54.2 ft<sup>3</sup>/s, 23.32 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 780 ft<sup>3</sup>/s, Mar. 22, gage height, 8.28 ft; minimum, 1.3 ft<sup>3</sup>/s, Oct. 16.

#### 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	3.1	e3.0	13	21	e19	e31	196	42	25	36	e5.5	e7.3
2	3.4	e3.9	11	e20	e19	e32	155	37	47	61	e6.4	e7.3
3	3.3	e3.5	7.2	21	e21	32	140	35	113	40	e7.5	e7.3
4	2.8	e3.2	5.9	21	e23	30	148	37	118	29	e7.8	e7.0
5	e2.5	e2.4	5.6	21	e30	33	169	32	75	26	e7.3	e7.0
6	e8.1	e2.5	5.2	22	e29	54	208	28	50	27	e6.7	e6.7
7	e16	2.4	4.2	22	e28	42	266	25	35	25	e6.7	e6.4
8	e12	e2.5	3.8	21	e28	38	330	23	25	22	e5.8	e6.1
9	8.9	e2.4	e3.6	22	30	35	355	22	20	22	e5.8	e5.5
10	e6.7	12	e3.4	e21	e38	35	461	20	17	20	e5.8	e5.5
11	e6.7	64	4.6	22	e41	34	424	18	15	26	e9.6	e5.5
12	e5.7	61	7.1	21	e46	34	373	16	43	22	e17	e6.7
13	e4.4	34	8.5	e20	45	42	352	17	37	17	e20	e7.8
14	e3.0	23	7.2	21	38	59	325	16	27	14	e19	e9.6
15	e2.0	39	7.3	22	58	57	260	14	21	12	e11	e9.0
16	2.0	33	6.9	23	57	66	210	16	18	11	e9.6	e7.8
17	2.4	21	60	24	e48	74	175	18	60	12	e9.0	e7.0
18	e3.7	15	291	e22	e39	80	148	17	295	e13	e9.0	e7.0
19	e11	11	131	23	e37	81	127	18	151	e12	e9.0	e7.0
20	16	9.0	69	24	38	85	110	15	77	e10	e9.0	e8.4
21	e10	7.8	43	e22	e36	96	99	24	70	e8.4	e9.0	e8.7
22	e5.5	6.5	36	e20	e29	484	92	25	65	e7.8	e8.4	e8.4
23	e5.3	5.4	e27	e22	e26	638	84	37	53	e7.3	e8.1	e7.8
24	e4.4	4.1	25	24	e29	415	77	35	45	e7.0	e8.1	e12
25	e4.0	3.2	e21	22	31	309	69	32	37	e7.0	e7.8	e24
26	e4.1	5.8	e17	23	44	233	61	26	30	e7.8	e7.8	e14
27	4.1	25	18	21	e42	185	57	40	25	e8.1	e7.8	e11
28	3.3	25	18	21	e36	159	53	35	20	e6.4	e7.8	e9.9
29	e2.7	17	16	e20	---	149	48	41	16	e5.5	e7.3	e9.3
30	e2.5	13	17	e20	---	164	45	34	17	e5.5	e7.3	e9.0
31	2.6	---	19	e20	---	231	---	26	---	e5.5	e7.3	---
TOTAL	172.2	460.6	912.5	669	985	4037	5617	821	1647	533.3	274.2	256.0
MEAN	5.55	15.4	29.4	21.6	35.2	130	187	26.5	54.9	17.2	8.85	8.53
MAX	16	64	291	24	58	638	461	42	295	61	20	24
MIN	2.0	2.4	3.4	20	19	30	45	14	15	5.5	5.5	5.5
CFSM	.18	.49	.93	.68	1.11	4.12	5.93	.84	1.74	.54	.28	.27
IN.	.20	.54	1.07	.79	1.16	4.75	6.61	.97	1.94	.63	.32	.30

#### STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	MEAN	26.5	42.2	60.3	82.1	75.6	117	116	58.9	39.9	17.0	10.1	10.1
MAX	83.8	106	171	157	120	163	187	100	113	34.4	29.1	22.5	
(WY)	1997	1996	1997	1996	1996	1998	2001	1998	1998	1996	1994	1996	
MIN	4.80	14.1	14.6	21.6	35.2	84.3	43.8	26.1	4.46	2.81	1.17	.92	
(WY)	1998	1999	1999	2001	2001	1997	1999	1999	1999	1999	1999	1995	

#### SUMMARY STATISTICS

#### FOR 2000 CALENDAR YEAR

#### FOR 2001 WATER YEAR

#### WATER YEARS 1994 - 2001

ANNUAL TOTAL		17726.69		16384.8		
ANNUAL MEAN		48.4		44.9		54.2
HIGHEST ANNUAL MEAN						74.9
LOWEST ANNUAL MEAN						34.4
HIGHEST DAILY MEAN						742
LOWEST DAILY MEAN			559	Apr 22	638	Mar 23
ANNUAL SEVEN-DAY MINIMUM		.99	Sep 12		2.0	Oct 15
MAXIMUM PEAK FLOW		1.4	Sep 7		2.7	Nov 3
MAXIMUM PEAK STAGE					780	Mar 22
INSTANTANEOUS LOW FLOW					8.28	Mar 22
ANNUAL RUNOFF (CFSM)		1.53			1.3	Oct 16
ANNUAL RUNOFF (INCHES)		20.87			1.42	
10 PERCENT EXCEEDS		112			103	124
50 PERCENT EXCEEDS		25			21	30
90 PERCENT EXCEEDS		3.2			5.3	2.9

e Estimated

## MERRIMACK RIVER BASIN

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  $\mu\text{S}/\text{cm}$ , Oct. 9, 1998; minimum, 43  $\mu\text{S}/\text{cm}$ , 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, 197  $\mu\text{S}/\text{cm}$ , Sept. 22; minimum, 47  $\mu\text{S}/\text{cm}$ , Dec. 19.

WATER TEMPERATURE: Maximum recorded, 25.2°C, July 25 ;minimum, 0.1°C, on many days during winter periods.

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
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	0.79	0.00	0.16
2	.00	.00	.00	.00	.02	.00	.00	.00	1.28	.00	.00	.00
3	.00	.00	.00	.00	.00	.00	.00	.00	.58	.00	.30	.00
4	.02	.00	.00	.00	.00	.00	.00	.00	.00	.00	.19	.13
5	.50	.15	.00	.08	1.08	1.25	.00	.00	.00	.13	.00	.01
6	.47	.01	.00	.09	.03	.37	.27	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.05	.06	.00	.51	.00	.00	.12	.00	.00
9	.01	.00	.00	.01	.14	.39	.12	.00	.00	.02	.00	.00
10	.00	1.58	.00	.00	.04	.10	.01	.00	.00	.29	.00	.01
11	.00	.21	.00	.00	.00	.00	.00	.00	.72	.05	.00	.00
12	.00	.00	.13	.00	.00	.00	.30	.09	.00	.04	2.57	.00
13	.00	.04	.00	.00	.00	.64	.02	.00	.01	.00	.62	.03
14	.00	.71	.56	.00	.37	.00	.00	.00	.00	.00	.00	.69
15	.00	.00	.00	.28	.00	.00	.00	.11	.00	.01	.00	.01
16	.34	.00	.26	.00	.10	.00	.00	.01	.00	.00	.00	.00
17	.00	.00	1.53	.00	.00	.00	.00	.00	1.85	.43	.20	.00
18	.49	.00	.00	.00	.00	.07	.00	.00	.00	.00	.00	.00
19	.01	.00	.05	.27	.00	.00	.00	.00	.00	.00	.00	.00
20	.00	.00	.15	.00	.00	.00	.00	.00	.60	.00	.07	.00
21	.00	.00	.00	.26	.00	.46	.00	.00	.01	.00	.01	.78
22	.00	.00	.00	.00	.00	2.12	.00	.71	.00	.00	.00	.00
23	.00	.00	.00	.00	.02	.02	.00	.09	.06	.00	.00	.00
24	.00	.00	.00	.00	.00	.01	.10	.33	.00	.00	.00	.00
25	.00	.00	.00	.00	.48	.00	.00	.01	.00	.00	.00	2.52
26	.00	.86	.00	.00	.00	.19	.00	.49	.00	.35	.00	.00
27	.00	.00	.00	.00	.00	.00	.00	.12	.00	.01	.00	.00
28	.00	.00	.00	.00	.00	.00	.00	.16	.00	.00	.00	.00
29	.00	.04	.00	.00	---	.00	.00	.01	.00	.00	.00	.00
30	.15	.14	.78	.46	---	1.87	.00	.03	.72	.00	.00	.00
31	.14	---	.00	.19	---	.00	---	.00	---	.00	.00	---
TOTAL	2.13	3.74	3.46	1.69	2.34	7.49	1.33	2.16	5.83	2.24	3.96	4.34

MERRIMACK RIVER BASIN

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	129	125	127	113	107	111	90	87	88	76	74	75
2	128	123	126	108	104	106	89	85	88	75	73	74
3	126	122	124	107	102	105	92	80	86	75	73	74
4	125	122	123	110	103	107	94	80	87	77	73	75
5	127	122	124	113	110	112	94	83	89	77	73	75
6	145	113	132	114	111	113	92	81	87	77	74	75
7	113	100	105	114	110	112	95	82	88	77	74	75
8	109	102	106	112	106	110	92	84	88	79	74	75
9	110	107	108	113	110	112	91	84	87	79	75	77
10	113	110	112	128	96	114	94	86	91	77	74	75
11	113	107	111	98	90	95	101	91	97	81	75	76
12	113	102	108	90	74	80	103	86	99	83	75	77
13	117	105	112	75	74	74	94	84	89	82	76	79
14	123	117	120	87	75	79	93	84	88	83	77	80
15	127	122	124	86	76	79	95	86	91	83	76	80
16	125	121	124	83	80	82	100	86	92	90	79	84
17	128	124	126	82	81	81	111	76	98	86	78	82
18	128	114	120	86	82	84	76	48	53	83	77	80
19	127	100	115	89	86	87	52	47	50	92	81	85
20	102	98	100	92	89	90	58	52	55	94	80	87
21	108	100	104	95	92	93	64	55	59	91	78	81
22	111	103	108	97	94	96	67	61	64	82	77	79
23	115	111	113	98	95	97	68	61	64	81	78	79
24	117	111	114	101	92	97	72	65	68	84	79	81
25	117	113	114	104	90	98	70	67	68	85	80	82
26	114	112	113	126	100	107	75	68	73	85	80	81
27	113	110	112	124	95	101	77	75	75	85	80	82
28	112	110	111	98	90	95	79	74	76	86	80	82
29	110	107	109	90	87	88	80	75	77	87	80	83
30	111	108	110	91	88	89	79	75	77	116	80	90
31	113	111	112	---	---	---	77	75	76	105	93	99
MONTH	145	98	115	128	74	96	111	47	80	116	73	80
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	96	86	91	110	92	100	86	78	82	112	102	106
2	94	84	88	104	91	96	90	83	87	112	107	110
3	86	77	81	109	94	99	91	84	87	113	111	112
4	83	77	80	108	93	100	101	84	88	112	108	110
5	85	75	79	98	91	94	87	77	84	115	111	113
6	91	75	79	96	90	91	79	72	75	117	114	116
7	82	76	78	92	87	90	72	65	69	121	117	119
8	81	74	78	92	87	89	74	65	68	124	119	121
9	98	78	86	98	86	91	68	62	66	126	121	123
10	106	81	95	109	87	97	63	58	60	129	126	128
11	91	76	83	113	97	105	59	58	58	133	129	130
12	90	83	87	114	94	104	62	59	61	138	132	135
13	88	81	84	127	100	114	62	61	61	138	130	133
14	92	81	86	115	102	109	62	60	61	135	132	133
15	93	82	88	123	107	114	64	62	63	137	133	136
16	92	82	86	113	98	106	66	64	65	139	132	136
17	96	82	88	111	95	103	68	66	67	132	128	129
18	87	79	84	110	99	104	71	68	70	130	127	129
19	90	80	85	114	98	106	157	68	82	130	123	128
20	98	85	92	115	98	107	79	74	77	132	128	131
21	99	83	91	107	100	104	83	79	81	128	112	114
22	90	83	87	107	52	70	87	83	85	118	114	116
23	98	83	90	57	51	54	91	85	87	114	103	107
24	103	88	94	72	56	64	95	89	91	116	104	112
25	124	88	93	78	64	72	94	91	92	115	111	113
26	137	111	124	78	69	75	96	91	94	122	111	113
27	121	100	110	87	71	80	98	94	96	131	108	117
28	122	99	110	112	83	96	100	95	98	111	108	109
29	---	---	---	104	94	99	103	97	100	111	100	104
30	---	---	---	98	79	89	105	99	102	106	101	104
31	---	---	---	81	74	78	---	---	---	107	105	106
MONTH	137	74	89	127	51	94	157	58	79	139	100	119

## MERRIMACK RIVER BASIN

01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SPECIFIC CONDUCTANCE ( $\mu\text{S}/\text{CM}$  AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	107	102	104	151	113	125	125	123	124	169	164	166
2	128	89	110	130	101	107	130	124	127	169	166	167
3	95	81	89	115	105	110	138	130	133	168	164	166
4	81	75	77	117	114	115	146	135	141	169	166	167
5	82	75	78	118	114	116	145	137	141	173	168	170
6	87	81	83	118	108	112	137	133	134	177	170	173
7	94	85	90	113	109	110	134	126	131	175	169	173
8	102	94	98	122	111	116	137	130	134	176	169	173
9	108	102	105	123	116	119	142	135	138	179	172	175
10	114	108	111	127	117	120	151	141	147	181	175	178
11	134	114	120	131	115	121	157	124	147	180	176	178
12	139	102	112	118	116	117	187	138	158	184	179	182
13	109	103	107	124	117	121	166	140	149	183	180	181
14	111	109	110	133	124	127	166	151	157	180	175	177
15	112	109	111	139	129	133	154	149	151	188	176	181
16	114	109	112	143	133	138	159	151	156	186	177	182
17	151	88	120	156	138	149	172	159	166	183	178	181
18	88	60	64	151	136	140	170	134	144	182	178	180
19	68	60	63	140	134	137	143	137	141	185	180	183
20	91	68	75	144	137	139	152	141	147	184	181	182
21	90	81	85	152	137	143	154	144	151	196	178	185
22	85	82	83	154	141	145	148	138	143	197	189	194
23	89	84	86	159	144	149	142	138	140	189	178	182
24	94	88	91	158	151	154	148	141	144	178	171	173
25	107	94	97	165	152	158	150	143	147	191	160	175
26	104	99	102	166	157	160	157	147	151	163	142	146
27	112	104	106	159	148	152	158	155	156	150	142	146
28	116	108	112	150	127	140	159	156	158	166	150	157
29	127	116	123	133	127	132	160	156	158	168	163	166
30	145	120	127	139	133	137	161	158	159	173	164	168
31	---	---	---	141	124	133	165	161	163	---	---	---
MONTH	151	60	98	166	101	131	187	123	146	197	142	174
YEAR	197	47	109									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	12.8	10.2	11.5	8.6	6.8	7.6	3.4	2.3	2.9	0.4	0.2	0.2
2	13.6	11.5	12.5	9.2	6.8	7.9	2.3	1.1	1.9	.3	.1	.2
3	14.3	11.9	13.1	9.1	7.2	8.0	1.8	.5	1.1	.5	.1	.3
4	13.9	12.6	13.4	9.7	7.4	8.4	1.9	.4	1.1	.6	.1	.3
5	13.6	12.5	12.9	8.9	7.9	8.4	2.6	.5	1.2	.5	.1	.3
6	12.7	12.4	12.5	8.8	7.0	7.8	1.2	.3	.7	.5	.2	.4
7	12.7	11.4	12.1	8.8	6.3	7.4	1.3	.2	.6	.6	.2	.4
8	11.7	10.2	10.9	9.0	6.6	7.7	.8	.2	.5	.6	.2	.4
9	10.3	9.1	9.6	8.9	6.8	8.0	.6	.1	.3	.7	.2	.5
10	9.4	8.4	8.9	8.5	8.2	8.4	.6	.1	.4	.4	.1	.2
11	10.5	8.1	9.2	8.6	7.8	8.2	1.6	.6	1.1	.6	.1	.3
12	10.4	8.1	9.3	8.9	8.2	8.5	2.4	.2	1.5	.6	.1	.3
13	11.9	8.7	10.2	8.5	8.1	8.3	.7	.1	.4	.5	.1	.3
14	12.8	10.0	11.2	8.1	7.8	8.0	.8	.1	.5	.7	.2	.4
15	13.2	11.1	12.1	7.9	6.8	7.3	1.0	.1	.6	.5	.1	.4
16	12.3	10.0	11.2	7.0	6.4	6.6	1.1	.1	.7	1.0	.4	.6
17	10.8	9.6	10.2	7.1	5.7	6.4	2.2	.6	1.4	1.2	.3	.7
18	10.5	10.1	10.3	6.1	5.2	5.5	.7	.2	.4	.5	.1	.3
19	11.5	9.8	10.5	5.7	3.9	5.1	.6	.1	.3	.8	.5	.6
20	10.7	8.5	9.6	4.8	3.2	4.0	.7	.1	.3	.9	.3	.6
21	11.8	9.1	10.2	4.4	3.0	3.7	.7	.1	.3	.3	.1	.2
22	10.8	8.7	9.8	3.6	2.3	2.9	.9	.1	.5	.4	.1	.2
23	9.9	7.2	8.5	2.8	1.7	2.2	.3	.1	.2	.5	.1	.2
24	10.4	7.4	8.8	2.2	1.0	1.6	.7	.1	.4	.6	.1	.3
25	11.3	8.4	9.7	2.1	.5	1.3	.3	.1	.2	.7	.2	.3
26	11.5	8.6	10.0	2.5	1.4	2.0	.4	.1	.2	.6	.1	.3
27	11.5	9.5	10.5	2.8	1.8	2.2	.5	.2	.3	.7	.2	.4
28	10.9	8.4	10.2	2.7	1.6	2.1	.5	.2	.3	.8	.1	.4
29	8.4	6.3	7.0	3.2	2.2	2.6	.6	.2	.3	.6	.1	.3
30	7.0	5.9	6.5	3.7	2.7	3.2	.4	.1	.2	.5	.1	.4
31	7.7	6.7	7.2	---	---	---	.4	.2	.3	.6	.3	.4
MONTH	14.3	5.9	10.3	9.7	0.5	5.7	3.4	0.1	0.7	1.2	0.1	0.4





## MERRIMACK RIVER BASIN

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

## WATER-QUALITY RECORDS

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

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED SATUR- ATION) (00301)	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)
OCT										
19...	1000	8.1	--	752	7.6	71	6.6	150	16.9	11.3
NOV										
15...	0900	40	--	742	9.5	80	6.6	81	3.9	6.8
DEC										
21...	0900	38	--	756	12.0	83	6.2	79	-7.1	.1
JAN										
26...	0900	21	--	755	11.9	82	6.7	107	-0.5	.1
FEB										
20...	0930	37	--	752	12.3	86	6.6	111	3.8	.3
MAR										
21...	0715	96	--	762	12.6	88	6.5	117	1.1	.6
APR										
04...	1130	144	--	756	11.8	90	6.3	110	9.7	3.5
MAY										
07...	1300	24	--	762	9.8	100	6.1	130	21.7	16.2
JUN										
08...	1430	25	1.0	745	8.2	91	6.6	106	18.0	19.1
20...	0815	81	--	752	6.8	78	6.1	74	23.2	21.3
JUL										
04...	1415	29	1.3	750	8.4	94	6.4	116	25.2	19.8
18...	0930	17	--	752	7.8	83	6.7	147	18.6	17.4
25...	1330	13	1.9	751	10.0	123	6.7	158	32.9	25.0
AUG										
15...	1330	25	--	752	8.7	100	6.7	141	25.1	21.3
15...	1400	25	1.2	752	8.7	100	6.7	141	25.1	21.3
29...	1100	42	--	757	8.3	93	6.6	158	26.6	20.5
SEP										
07...	0730	61	--	752	7.2	71	6.4	171	13.8	14.3
13...	1310	68	.8	749	8.7	92	6.7	189	23.2	16.9

## MERRIMACK RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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)	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)
OCT										
19...	6.75	1.18	3.99	13.7	9	10	27.2	<0.2	8.1	6.2
NOV										
15...	4.05	.756	1.33	8.5	7	8	13.9	.2	7.7	5.5
DEC										
21...	3.85	.773	1.07	8.1	5	6	13.1	<.2	7.5	5.8
JAN										
26...	5.38	.976	1.16	10.4	7	9	17.0	<.2	9.1	6.9
FEB										
20...	5.34	.971	1.14	12.2	8	10	19.8	<.2	8.6	6.8
MAR										
21...	4.54	.864	1.00	13.1	5	6	22.7	<.2	6.9	6.1
APR										
04...	4.39	.857	1.11	11.9	5	6	21.2	<.2	6.1	6.5
MAY										
07...	6.50	1.12	1.32	13.7	9	10	26.1	<.2	4.6	6.6
JUN										
08...	5.10	.919	1.01	11.7	--	--	20.6	<.2	5.8	5.3
20...	3.75	.668	.73	8.7	5	6	13.7	E.1	5.8	4.5
JUL										
04...	5.82	.989	1.05	14.0	--	--	23.4	<.2	6.8	4.7
18...	7.95	1.28	1.45	16.2	12	14	29.6	E.1	7.2	6.0
25...	8.98	1.53	1.66	16.4	--	--	31.8	<.2	7.0	6.3
AUG										
15...	8.71	1.36	1.58	16.2	14	17	29.9	<.2	7.3	7.7
15...	8.61	1.40	1.56	15.9	--	--	29.2	<.2	7.4	7.3
29...	--	--	--	--	--	--	--	--	--	--
SEP										
07...	11.1	1.88	2.11	16.3	17	20	34.3	<.2	8.4	9.0
13...	11.9	1.98	2.18	17.3	--	--	35.1	<.2	8.3	9.5

## MERRIMACK RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	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)
OCT									
19...	87	<.041	0.21	0.31	0.105	<.006	E0.005	<.018	0.027
NOV									
15...	62	<.041	.28	.34	.066	E.003	.006	E.009	.016
DEC									
21...	59	<.041	.17	.27	.170	<.006	.006	<.018	.011
JAN									
26...	63	.043	.20	.17	.303	<.006	.008	<.018	.010
FEB									
20...	62	E.024	E.10	.21	.267	.010	E.004	<.018	.009
MAR									
21...	74	E.023	.20	.17	.226	<.006	E.004	<.018	.012
APR									
04...	69	<.041	.14	.18	.231	<.006	E.005	<.018	.010
MAY									
07...	76	<.041	.19	.29	.153	E.003	.006	<.018	.016
JUN									
08...	77	<.040	.20	.26	.087	<.006	.008	<.020	.018
20...	65	E.025	.33	.51	.058	E.004	.015	<.020	.038
JUL									
04...	82	E.034	.28	.34	.098	.006	.013	<.020	.021
18...	99	<.040	.20	.27	.157	E.005	.007	<.020	.017
25...	96	<.040	.18	.23	.124	<.006	.006	<.020	.020
AUG									
15...	93	E.025	.24	.37	.124	<.006	.007	<.020	.024
15...	96	E.037	.26	.35	.120	<.006	.008	<.020	.024
29...	--	--	--	--	--	--	--	--	--
SEP									
07...	107	<.040	.15	.19	.210	<.006	<.006	<.020	.011
13...	104	E.022	.11	.34	.202	<.006	<.006	<.020	.043

## MERRIMACK RIVER BASIN

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01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT									
19...	5.9	0.3	--	--	--	210	51.7	57	8
NOV									
15...	7.6	.8	--	--	--	240	31.6	79	5
DEC									
21...	5.8	.2	--	--	--	150	48.4	69	5
JAN									
26...	--	--	--	--	--	220	37.8	62	3
FEB									
20...	--	--	--	--	--	100	34.2	50	3
MAR									
21...	--	--	--	--	--	80	55.1	50	4
APR									
04...	--	--	--	--	--	50	28.9	71	2
MAY									
07...	--	--	--	--	--	140	50.2	83	2
JUN									
08...	4.8	--	5.5	6.8	0.6	190	49.8	--	--
20...	--	--	--	--	--	290	50.9	78	7
JUL									
04...	5.4	--	6.1	4.5	1.2	290	44.0	--	--
18...	--	--	--	--	--	190	53.5	86	3
25...	3.3	--	4.5	1.4	1.7	140	83.3	--	--
AUG									
15...	--	--	--	--	--	240	73.2	74	5
15...	4.8	--	5.9	3.0	2.6	260	75.5	--	--
29...	--	--	--	27.6	--	--	--	--	--
SEP									
07...	--	--	--	--	--	80	120	80	3
13...	1.8	--	4.0	7.4	5.5	90	118	--	--

< Less than  
E Estimated

MERRIMACK RIVER BASIN

01095375 QUINAPOXET RIVER AT CANADA MILLS NEAR HOLDEN, MA

LOCATION.--Lat 42°22'25" (revised), 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<sup>2</sup>.

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.--4 years, 58.0 ft<sup>3</sup>/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 869 ft<sup>3</sup>/s, Mar. 22, gage height, 11.20 ft; minimum daily, 2.0 ft<sup>3</sup>/s, Sept. 10.

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	6.1	8.0	16	18	e18	e42	208	69	28	32	3.2	5.4
2	5.8	7.2	14	17	e18	41	171	59	61	47	3.0	3.8
3	5.8	8.3	12	16	e18	39	157	53	120	21	3.0	3.1
4	5.5	8.2	12	17	e18	36	161	50	116	15	6.4	2.8
5	5.9	6.5	13	17	e22	37	186	49	78	13	5.9	3.1
6	22	6.7	12	18	55	60	234	39	58	12	4.7	2.9
7	12	7.0	10	16	41	48	296	36	45	10	4.3	2.7
8	8.4	7.1	9.8	15	e36	41	444	34	43	10	3.8	2.6
9	8.0	7.8	e9.4	16	e35	39	537	33	32	11	3.3	2.2
10	8.3	31	e9.2	e14	e36	43	780	34	25	12	2.8	2.0
11	8.7	39	11	e13	e41	39	693	31	21	19	2.7	2.2
12	8.5	24	12	e15	e51	38	645	29	29	15	15	2.4
13	7.4	18	e11	e17	47	50	617	32	25	12	18	4.2
14	9.2	20	11	17	e46	63	573	28	21	11	18	8.7
15	6.9	31	12	17	71	59	445	26	18	9.4	10	6.5
16	6.7	21	10	18	66	63	346	24	16	8.4	7.6	4.1
17	8.8	17	67	e17	60	68	290	25	45	12	6.5	3.0
18	9.0	15	85	e17	e47	74	242	25	241	11	7.6	2.5
19	13	12	41	18	e46	76	204	26	119	8.5	6.1	2.2
20	14	13	31	20	44	80	175	23	77	7.0	5.8	2.6
21	9.6	20	e24	e16	44	90	157	22	77	5.9	6.5	8.1
22	7.7	14	23	e16	e36	544	150	29	61	5.3	5.8	8.2
23	7.2	11	e20	e20	e33	666	134	47	53	4.7	5.3	4.9
24	10	9.1	19	21	e36	376	120	54	47	4.6	5.3	3.8
25	9.0	8.5	e16	21	40	287	112	50	42	4.1	4.9	21
26	6.8	16	e16	20	53	233	98	41	35	5.8	4.0	22
27	6.8	28	16	20	53	194	90	58	30	6.4	3.6	10
28	6.1	19	16	19	47	163	85	52	28	4.9	4.1	7.5
29	5.0	15	15	19	---	149	76	51	21	4.2	4.8	6.9
30	5.1	16	15	e19	---	201	71	46	26	3.8	5.0	5.6
31	7.8	---	20	e18	---	245	---	38	---	3.4	4.2	---
TOTAL	261.1	464.4	608.4	542	1158	4184	8497	1213	1638	349.4	191.2	167.0
MEAN	8.42	15.5	19.6	17.5	41.4	135	283	39.1	54.6	11.3	6.17	5.57
MAX	22	39	85	21	71	666	780	69	241	47	18	22
MIN	5.0	6.5	9.2	13	18	36	71	22	16	3.4	2.7	2.0
CFSM	.19	.35	.44	.39	.93	3.04	6.38	.88	1.23	.25	.14	.13
IN.	.22	.39	.51	.45	.97	3.51	7.12	1.02	1.37	.29	.16	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	1997	1998	1999	2000	2001		
MEAN	10.2	14.4	61.9	61.9	73.6	160	178	80.3	72.7	17.9	7.42	7.43
MAX	14.3	16.3	247	104	119	267	283	165	176	47.3	15.4	14.8
(WY)	1999	1998	1997	1997	1998	1998	2001	1998	1998	1998	2000	1999
MIN	5.23	9.84	8.81	17.5	33.9	113	48.6	31.1	6.31	2.10	1.16	3.48
(WY)	1998	1999	1999	2001	2000	1997	1999	1999	1999	1999	1999	1997

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1997 - 2001
ANNUAL TOTAL	20616.0	19273.5	
ANNUAL MEAN	56.3	52.8	58.0
HIGHEST ANNUAL MEAN			84.1
LOWEST ANNUAL MEAN			38.2
HIGHEST DAILY MEAN	1010	Apr 22	1270
LOWEST DAILY MEAN	3.5	Sep 11	.57
ANNUAL SEVEN-DAY MINIMUM	4.6	Sep 6	.63
MAXIMUM PEAK FLOW		869	1670
MAXIMUM PEAK STAGE		11.20	13.76
INSTANTANEOUS LOW FLOW		1.9	.48
ANNUAL RUNOFF (CFSM)	1.27	1.19	1.31
ANNUAL RUNOFF (INCHES)	17.27	16.15	17.75
10 PERCENT EXCEEDS	135	119	163
50 PERCENT EXCEEDS	21	18	22
90 PERCENT EXCEEDS	6.9	4.7	4.0

e Estimated

MERRIMACK RIVER BASIN

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  $\mu$ S/cm, Jan. 9, 1999; minimum, 61  $\mu$ S/cm, June 18, 1998.

WATER TEMPERATURE: Maximum recorded, 28.5°C, Aug. 1, 1999; minimum, -0.8°C, Feb. 19, 2001.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 378  $\mu$ S/cm, Dec. 17; minimum, 94  $\mu$ S/cm, Apr. 14.

WATER TEMPERATURE: Maximum recorded, 28.3°C, Aug. 9; minimum, -0.8°C, Feb. 19.

SPECIFIC CONDUCTANCE ( $\mu$ S/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	223	214	219	200	194	196	215	192	204	191	182	188
2	222	217	219	201	193	195	193	180	188	186	182	183
3	224	217	220	202	192	193	213	172	191	188	183	185
4	224	219	222	199	194	196	216	190	202	190	184	186
5	223	217	219	196	192	194	220	194	209	189	184	186
6	218	194	207	193	191	192	223	196	209	190	183	186
7	213	192	209	195	193	194	226	199	211	192	182	187
8	208	199	202	198	194	196	217	199	208	199	182	190
9	203	198	201	200	196	198	210	192	198	211	193	201
10	205	201	203	201	180	194	205	192	199	199	182	192
11	214	205	208	180	169	173	224	205	215	187	180	182
12	214	206	212	171	166	168	224	202	213	184	173	178
13	216	208	212	168	165	167	224	205	213	176	171	173
14	215	207	212	171	167	168	217	192	203	177	170	172
15	214	207	210	171	156	162	226	193	208	170	163	166
16	214	210	212	160	156	158	221	194	210	176	164	169
17	210	207	209	163	159	161	378	161	247	188	168	173
18	211	208	210	168	163	165	188	153	162	190	166	171
19	212	199	206	181	161	169	169	151	161	316	175	200
20	200	191	196	177	169	174	189	161	173	271	182	223
21	205	191	198	199	173	188	189	164	176	189	181	186
22	205	199	202	194	176	184	219	187	204	191	189	190
23	199	196	198	191	170	180	221	191	204	193	187	191
24	204	195	200	188	166	175	219	194	205	187	169	178
25	198	189	193	193	168	181	196	184	189	172	168	169
26	200	191	195	218	186	195	225	187	197	171	165	167
27	202	196	200	219	189	197	227	201	217	166	161	164
28	203	196	200	210	194	203	211	196	204	165	156	160
29	198	195	196	194	187	190	211	198	202	157	153	155
30	201	195	198	214	188	194	202	198	199	187	153	157
31	199	196	196	---	---	---	199	191	195	259	187	247
MONTH	224	189	206	219	156	183	378	151	201	316	153	182



## MERRIMACK RIVER BASIN

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

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.6	10.1	12.0	9.1	6.4	7.6	4.2	2.8	3.4	0.5	0.3	0.3
2	15.1	11.5	13.0	9.8	6.6	8.0	2.8	1.1	2.0	.4	.3	.3
3	16.1	11.9	13.8	9.6	6.9	8.1	2.4	.7	1.3	.5	.3	.3
4	14.5	12.5	13.7	10.7	7.7	9.0	2.8	.8	1.5	.5	.3	.3
5	13.9	12.1	12.7	9.0	7.9	8.6	3.0	1.0	1.9	.5	.3	.3
6	12.5	11.9	12.2	8.4	6.6	7.5	2.2	.8	1.4	.6	.3	.4
7	13.2	10.7	11.9	9.0	6.0	7.3	2.2	.6	1.2	.7	.3	.5
8	11.5	9.0	10.2	9.2	6.4	7.7	1.2	.6	.9	.8	.3	.5
9	9.6	7.7	8.7	8.7	6.6	7.8	1.1	.4	.6	.9	.3	.6
10	9.0	7.5	8.2	8.5	8.3	8.4	.9	.4	.6	.5	.3	.3
11	11.2	7.3	8.9	8.9	8.3	8.5	2.3	.9	1.6	.6	.3	.4
12	11.7	7.5	9.5	9.4	7.9	8.6	3.1	.6	2.0	.6	.3	.4
13	12.6	8.7	10.6	8.4	7.9	8.2	1.2	.4	.8	.4	.3	.3
14	14.0	10.6	12.1	8.6	8.1	8.4	1.5	.4	.9	.6	.3	.4
15	14.5	12.0	13.2	8.4	6.6	7.3	1.8	.5	1.1	.5	.3	.4
16	13.2	10.0	11.4	7.4	6.2	6.7	1.6	.4	1.1	1.0	.4	.6
17	10.8	9.5	10.1	7.3	5.8	6.7	2.2	1.3	1.8	1.2	.4	.7
18	10.6	10.1	10.4	5.9	4.4	5.1	1.9	1.1	1.4	.6	.2	.4
19	12.0	9.8	10.7	5.4	3.8	4.7	1.9	.8	1.3	.8	.5	.6
20	11.5	8.1	9.7	4.9	2.9	3.8	1.7	.6	1.2	.9	.3	.6
21	12.9	9.2	10.9	3.8	2.5	3.1	1.6	.5	.9	.3	.2	.3
22	12.1	8.9	10.5	3.0	1.5	2.2	1.8	.7	1.3	.3	.2	.3
23	10.5	6.7	8.6	2.0	.7	1.2	1.0	.2	.5	.3	.2	.3
24	11.5	7.9	9.5	1.5	.4	.8	1.4	.4	.8	.4	.3	.3
25	12.0	8.6	10.2	1.6	.3	.9	.6	.2	.4	.5	.3	.3
26	12.8	8.9	10.8	1.9	1.0	1.4	.4	.3	.3	.5	.2	.3
27	12.5	10.2	11.4	3.8	1.8	2.8	.7	.3	.4	.5	.3	.3
28	12.5	8.6	10.9	5.1	3.8	4.3	.6	.3	.4	.6	.2	.3
29	8.6	5.7	6.6	5.1	3.8	4.3	.7	.3	.4	.4	.2	.3
30	6.7	5.3	6.0	4.2	3.4	3.7	.4	.2	.3	.4	.2	.3
31	7.4	6.3	6.9	---	---	---	.4	.3	.3	.5	.3	.4
MONTH	16.1	5.3	10.5	10.7	.3	5.8	4.2	.2	1.1	1.2	.2	.4
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.8	0.3	0.5	1.7	0.2	0.8	2.3	1.5	1.8	18.0	12.3	15.0
2	.9	.3	.5	1.7	.3	1.0	3.2	1.5	2.1	20.0	14.1	17.0
3	.8	.2	.4	2.6	.9	1.7	4.0	1.3	2.4	21.1	15.5	18.2
4	.4	.2	.3	2.5	.8	1.6	5.1	1.6	2.9	21.8	16.5	19.2
5	.5	-.1	.3	1.5	.2	.6	5.5	1.8	3.2	19.7	16.2	17.9
6	.3	.2	.3	.3	.2	.3	3.7	2.4	2.9	17.5	13.1	15.3
7	.4	.2	.3	2.0	.3	1.0	4.6	2.5	3.3	17.4	10.9	14.3
8	.5	.2	.3	3.0	.7	1.7	3.0	2.4	2.7	18.2	12.0	15.2
9	.7	.3	.5	2.4	1.0	1.6	5.3	2.2	3.4	19.0	13.3	16.2
10	1.2	.2	.7	3.1	.9	1.8	5.4	2.8	3.7	19.6	14.2	17.1
11	.6	.2	.3	3.4	.6	2.0	5.0	3.0	3.9	20.8	15.1	18.0
12	1.1	.2	.3	4.0	.7	2.2	4.1	3.9	4.0	21.8	17.1	19.3
13	1.1	.3	.5	2.0	.8	1.5	5.9	3.8	4.6	19.1	16.0	17.5
14	1.2	.2	.6	2.8	1.3	1.9	6.7	4.0	5.1	16.5	13.4	15.2
15	2.0	1.0	1.3	3.8	1.4	2.5	7.5	4.4	5.7	15.0	13.0	13.9
16	1.9	.5	1.2	4.4	1.3	2.6	7.9	5.4	6.5	13.9	12.4	13.0
17	2.2	.2	1.4	4.6	1.6	2.8	7.4	5.6	6.4	14.3	11.9	13.1
18	1.1	.2	.4	4.0	1.8	2.5	7.6	5.5	6.4	13.7	12.9	13.3
19	1.7	-.8	.4	4.6	1.4	2.6	8.6	4.7	6.4	17.1	12.7	14.7
20	2.9	.7	1.7	4.9	1.2	2.7	10.0	5.1	7.5	18.4	13.7	15.8
21	3.1	.3	1.8	3.5	1.7	2.5	10.6	7.3	8.9	18.3	13.8	16.0
22	1.4	-.4	.4	2.1	.6	1.0	14.5	9.3	11.5	16.7	13.8	14.6
23	1.6	.2	.8	2.2	1.0	1.7	15.4	10.8	12.9	14.9	13.7	14.2
24	1.9	.2	.8	2.7	1.2	1.8	17.1	11.8	14.0	15.3	13.4	14.3
25	.9	.2	.4	3.1	1.0	1.7	13.7	11.5	12.5	16.1	13.6	14.8
26	2.9	.9	1.8	2.5	.8	1.4	14.5	9.9	12.0	16.8	13.9	15.4
27	3.2	-.7	1.8	3.0	.7	1.5	14.8	9.7	12.2	15.7	15.0	15.2
28	2.5	.4	1.3	3.8	1.0	2.0	14.8	11.0	12.6	17.5	15.0	16.1
29	---	---	---	3.8	1.1	2.2	14.6	9.3	11.8	17.7	14.3	16.0
30	---	---	---	2.2	.3	1.0	15.0	9.8	12.5	16.8	14.5	15.6
31	---	---	---	2.0	1.1	1.6	---	---	---	16.4	13.0	14.7
MONTH	3.2	-.8	.8	4.9	.2	1.7	17.1	1.3	6.9	21.8	10.9	15.7





MERRIMACK RIVER BASIN

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<sup>2</sup>, excludes 2.16 mi<sup>2</sup>, 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 poor. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.16 mi<sup>2</sup> 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.--52 years, 113 ft<sup>3</sup>/s, 24.10 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft<sup>3</sup>/s, Mar. 23, gage height, 6.17 ft; minimum, 8.1 ft<sup>3</sup>/s, Sept. 13, 14.

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	24	32	77	66	80	e58	340	114	47	65	17	11
2	24	33	69	63	77	e56	275	108	66	118	16	12
3	22	31	61	61	71	55	253	101	188	97	16	10
4	21	29	56	60	e60	51	263	93	192	67	20	10
5	21	29	54	59	60	51	314	89	127	59	19	9.7
6	34	31	52	60	60	53	396	82	91	72	18	9.4
7	54	31	48	59	65	62	458	74	70	67	16	9.2
8	50	32	43	58	58	57	547	70	57	52	15	9.6
9	40	31	38	58	57	55	611	66	48	50	15	9.2
10	37	44	35	57	70	57	805	63	45	46	14	8.9
11	32	139	37	55	e86	56	862	60	42	40	14	9.0
12	30	140	46	53	e87	57	745	57	120	37	18	8.6
13	28	97	48	49	84	66	804	54	133	35	19	8.5
14	26	77	48	50	73	88	738	50	85	33	17	9.9
15	28	107	47	51	77	96	635	46	68	31	15	10
16	24	120	44	52	80	106	539	46	55	29	14	9.8
17	26	91	118	52	75	115	466	50	145	31	13	9.5
18	29	73	647	50	e64	128	399	50	548	34	13	9.1
19	47	63	443	50	e64	139	336	50	274	32	13	10
20	53	58	245	51	64	152	289	48	139	29	12	9.2
21	47	55	e174	51	62	174	252	44	117	28	16	13
22	40	52	142	e50	e55	498	250	47	108	24	15	14
23	35	49	e113	48	59	1400	239	64	96	22	13	14
24	33	45	e99	47	e55	901	217	78	87	20	12	13
25	31	41	e89	46	55	630	188	64	88	19	11	36
26	29	48	e77	45	64	481	167	55	73	21	12	63
27	28	112	69	45	73	379	151	68	60	22	10	34
28	26	130	68	44	67	305	139	75	51	21	10	25
29	24	101	62	41	---	281	128	72	44	20	10	22
30	24	85	61	46	---	286	122	64	43	19	9.7	19
31	28	---	66	62	---	313	---	53	---	18	11	---
TOTAL	995	2006	3276	1639	1902	7206	11928	2055	3307	1258	443.7	445.6
MEAN	32.1	66.9	106	52.9	67.9	232	398	66.3	110	40.6	14.3	14.9
MAX	54	140	647	66	87	1400	862	114	548	118	20	63
MIN	21	29	35	41	55	51	122	44	42	18	9.7	8.5
CFSM	.50	1.05	1.66	.83	1.07	3.65	6.24	1.04	1.73	.64	.22	.23
IN.	.58	1.17	1.91	.96	1.11	4.21	6.97	1.20	1.93	.73	.26	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2001, BY WATER YEAR (WY)

	1950	1956	1965	1966	1981	1980	1989	1985	1965	1999	1965	1966	1965
MEAN	54.0	98.6	121	122	132	229	275	145	83.9	37.2	29.4	31.2	
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	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1950 - 2001

ANNUAL TOTAL	44024	36461.3	
ANNUAL MEAN	120	99.9	113
HIGHEST ANNUAL MEAN			174
LOWEST ANNUAL MEAN			35.9
HIGHEST DAILY MEAN	1260	Apr 23	3420
LOWEST DAILY MEAN	19	Sep 12	2.0
ANNUAL SEVEN-DAY MINIMUM	23	Sep 7	4.3
MAXIMUM PEAK FLOW			4220
MAXIMUM PEAK STAGE			8.16
INSTANTANEOUS LOW FLOW			8.1
ANNUAL RUNOFF (CFSM)	1.89	1.57	1.77
ANNUAL RUNOFF (INCHES)	25.71	21.29	24.10
10 PERCENT EXCEEDS	258	247	256
50 PERCENT EXCEEDS	70	55	67
90 PERCENT EXCEEDS	29	14	15

e Estimated

## MERRIMACK RIVER BASIN

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<sup>2</sup>, net above gage, 316 mi<sup>2</sup>, excludes 119 mi<sup>2</sup> 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.--66 years, 583 ft<sup>3</sup>/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,080 ft<sup>3</sup>/s, Mar. 24, gage height, 9.51 ft; minimum daily, 31 ft<sup>3</sup>/s, Sept. 25.

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	222	221	546	406	298	401	2350	641	198	296	108	71
2	218	113	352	406	473	375	2180	594	179	766	106	75
3	216	314	415	345	437	328	1850	531	802	722	118	76
4	127	291	333	302	409	295	1690	497	897	525	125	73
5	75	244	337	302	406	347	1710	500	722	432	135	72
6	200	229	449	303	349	351	1700	469	561	452	143	69
7	424	241	476	304	311	359	e1900	374	396	380	140	65
8	510	255	196	348	349	435	e2330	323	325	327	135	64
9	340	270	66	310	385	405	e2660	339	330	323	127	65
10	214	276	143	389	414	412	3030	332	309	305	118	67
11	213	581	234	406	503	439	3560	322	243	291	112	68
12	117	730	577	401	463	413	3780	308	275	281	114	68
13	422	639	404	308	464	437	3740	296	550	266	130	66
14	490	569	186	227	447	587	3570	259	408	227	162	67
15	226	483	189	230	448	712	3340	236	318	217	149	70
16	122	689	251	233	488	658	3030	237	294	211	134	74
17	71	615	434	307	468	694	2660	248	245	207	132	73
18	75	501	1530	320	427	761	2350	249	1260	219	141	72
19	78	436	2020	318	407	830	2070	247	1760	223	138	70
20	229	394	1400	294	405	846	1780	246	1030	215	189	193
21	279	312	985	265	404	894	1580	248	765	157	209	334
22	258	245	817	293	e353	1850	1470	245	676	129	197	271
23	242	255	666	315	310	4030	1360	280	558	139	179	178
24	238	339	567	315	316	4980	1250	339	494	140	151	81
25	236	364	560	315	331	4610	1120	343	454	137	92	31
26	346	358	550	315	375	3580	988	318	427	178	70	35
27	208	395	357	314	470	2800	878	378	318	217	76	171
28	162	601	296	312	438	2290	794	435	239	150	116	219
29	219	508	406	310	---	1990	725	440	243	98	152	142
30	225	461	403	286	---	1940	676	425	207	106	108	39
31	231	---	407	254	---	2220	---	385	---	108	67	---
TOTAL	7233	11929	16552	9753	11348	41269	62121	11084	15483	8444	4073	3019
MEAN	233	398	534	315	405	1331	2071	358	516	272	131	101
MAX	510	730	2020	406	503	4980	3780	641	1760	766	209	334
MIN	71	113	66	227	298	295	676	236	179	98	67	31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2001, BY WATER YEAR (WY)

	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
MEAN	316	481	598	614	677	1147	1267	724	493	253	214	231																																																
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																																																

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1936 - 2001
ANNUAL TOTAL	226850	202308	
ANNUAL MEAN	620	554	583
HIGHEST ANNUAL MEAN			969
LOWEST ANNUAL MEAN			214
HIGHEST DAILY MEAN	4570	Apr 24	19400
LOWEST DAILY MEAN	49	Jan 3	1.1
ANNUAL SEVEN-DAY MINIMUM	152	Sep 1	14
MAXIMUM PEAK FLOW			5080
MAXIMUM PEAK STAGE			9.51
INSTANTANEOUS LOW FLOW			30
10 PERCENT EXCEEDS	1240		1380
50 PERCENT EXCEEDS	423		320
90 PERCENT EXCEEDS	185		108

e Estimated



## MERRIMACK RIVER BASIN

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<sup>2</sup>.

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 fair except those for estimated daily discharges, which are poor. Occasional regulation since 1967 by pond upstream.

AVERAGE DISCHARGE.--38 years, 20.4 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 679 ft<sup>3</sup>/s, Jan. 26, 1979, gage height, 5.57 ft (at former site); maximum gage height, 7.10 ft, Mar. 23, 2001; minimum discharge, 0.01 ft<sup>3</sup>/s, Sept. 4, 7, 8, 12, 13, 1995, Sept. 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 310 ft<sup>3</sup>/s, Mar. 23; gage height, 7.10 ft; minimum, 0.29 ft<sup>3</sup>/s, Sept. 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	4.5	21	e9.0	e14	e7.0	137	16	8.1	17	2.7	1.2
2	5.8	4.2	21	e8.9	e14	e6.0	103	14	11	24	2.6	1.1
3	5.5	3.0	15	e8.8	e10	e5.0	84	11	36	e12	2.7	1.0
4	4.2	2.4	12	e8.6	e7.0	e4.0	78	11	36	e11	7.3	.94
5	3.1	2.4	e10	e8.0	e5.0	e3.4	78	11	22	e10	9.5	.86
6	9.4	3.4	e9.2	e8.5	e6.0	e3.0	80	9.5	14	e12	4.9	.82
7	12	5.1	e8.4	e8.2	e7.0	e3.5	77	8.3	10	e10	4.3	.77
8	6.9	2.5	e7.8	e8.0	e8.0	e4.0	78	8.7	8.2	e9.5	4.0	.70
9	4.2	2.2	7.4	e7.6	e9.0	e5.0	85	7.2	6.7	e9.0	3.8	.62
10	3.5	8.6	6.8	e7.2	14	e5.4	84	7.3	5.8	e8.0	3.7	.50
11	3.1	47	6.5	e7.0	17	e5.6	73	6.8	5.5	e7.6	3.4	.39
12	3.2	43	e6.2	e6.7	e15	e5.8	62	6.2	9.1	e7.2	3.5	.32
13	3.6	28	e6.5	e6.4	e12	e6.0	62	6.1	12	e7.0	4.9	.32
14	3.2	21	7.2	e6.0	e8.0	e7.4	56	6.1	8.7	e6.0	4.7	.37
15	3.0	31	7.9	e6.5	e9.0	e9.2	46	6.0	6.8	e5.0	3.9	.35
16	4.1	32	8.1	e7.0	e10	e12	41	6.0	5.4	e4.5	3.5	.33
17	4.6	21	23	e6.5	e9.0	e16	36	6.1	27	e5.0	3.8	.35
18	4.7	16	99	e6.0	e8.0	e19	33	5.5	132	e5.7	4.0	.38
19	13	14	79	e7.0	e7.0	e25	31	5.4	80	5.2	4.5	.37
20	10	e12	50	e10	e6.6	e40	28	4.9	34	4.4	3.6	.34
21	5.5	e10	34	e9.0	e6.2	60	25	4.5	23	3.8	3.4	.41
22	3.9	e9.0	e25	e11	e6.0	197	24	4.6	19	3.5	3.0	.51
23	3.3	e8.0	e20	e9.0	e5.5	281	23	8.0	15	3.2	2.8	.65
24	4.6	e7.0	e16	e7.0	e5.0	256	23	11	14	2.8	2.5	.70
25	2.3	e6.0	e13	e6.5	e6.0	186	21	10	12	2.6	2.3	.76
26	2.0	e9.0	e11	e6.0	e7.0	149	19	7.4	10	2.4	2.1	.86
27	2.3	35	e9.6	e5.5	e9.0	106	18	13	8.1	2.5	1.9	.89
28	2.2	37	e8.6	e5.0	e8.0	86	18	23	6.9	2.7	1.7	1.0
29	e2.6	28	e8.0	e6.0	---	77	16	17	5.6	2.5	1.6	.99
30	e3.0	22	e7.8	e8.0	---	84	15	14	5.5	2.5	1.5	.95
31	e3.5	---	e8.0	e10	---	138	---	12	---	2.7	1.3	---
TOTAL	147.7	474.3	573.0	234.9	248.3	1812.3	1554	287.6	597.4	211.3	109.4	19.75
MEAN	4.76	15.8	18.5	7.58	8.87	58.5	51.8	9.28	19.9	6.82	3.53	.66
MAX	13	47	99	11	17	281	137	23	132	24	9.5	1.2
MIN	2.0	2.2	6.2	5.0	5.0	3.0	15	4.5	5.4	2.4	1.3	.32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 2001, BY WATER YEAR (WY)

MEAN	9.77	17.3	22.5	25.4	28.8	45.8	41.5	24.1	15.4	5.90	4.24	4.17
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

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1963 - 2001
ANNUAL TOTAL	6996.9	6269.95	
ANNUAL MEAN	19.1	17.2	20.4
HIGHEST ANNUAL MEAN			36.1
LOWEST ANNUAL MEAN			7.09
HIGHEST DAILY MEAN	189	Apr 23	560
LOWEST DAILY MEAN	1.3	Jul 15	.01
ANNUAL SEVEN-DAY MINIMUM	1.9	Jul 15	.02
MAXIMUM PEAK FLOW		310	679
MAXIMUM PEAK STAGE		7.10	7.10
INSTANTANEOUS LOW FLOW		.29	.01
10 PERCENT EXCEEDS	38	36	50
50 PERCENT EXCEEDS	12	7.2	11
90 PERCENT EXCEEDS	2.6	2.1	1.2

e Estimated

MERRIMACK RIVER BASIN

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<sup>2</sup>.

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 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.--21 years (water years 1981-2001), 196 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft<sup>3</sup>/s, June 7, 1982, gage height, 13.30 ft; maximum gage height, 13.47 ft, Apr. 8, 1987; minimum daily, 4.0 ft<sup>3</sup>/s, Sept. 12, 13, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft<sup>3</sup>/s, Mar. 23, gage height, 12.61 ft; minimum daily, 4.0 ft<sup>3</sup>/s, Sept. 12, 13.

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	20	39	153	207	149	162	1600	92	137	243	6.7	6.2
2	17	32	141	e189	141	156	1470	88	228	231	6.4	5.4
3	15	31	134	e152	135	151	1260	83	264	196	6.4	5.0
4	15	55	129	152	128	146	1080	81	234	175	11	5.4
5	18	61	116	150	137	159	938	75	209	176	10	5.6
6	46	65	93	138	156	186	798	70	185	173	7.3	4.7
7	31	60	89	128	139	171	725	64	163	141	6.6	4.6
8	24	59	81	127	135	165	711	54	140	133	5.9	4.5
9	21	58	74	133	146	171	675	50	109	127	5.3	4.4
10	21	180	72	128	196	187	608	47	97	120	11	4.5
11	19	226	73	126	190	183	560	45	95	116	11	4.3
12	17	176	78	125	170	190	535	49	165	110	52	4.0
13	15	148	75	122	165	277	530	48	122	105	44	4.0
14	14	155	88	122	181	298	520	41	106	97	32	14
15	14	192	86	129	205	313	486	37	95	92	19	7.4
16	16	153	81	129	204	333	458	37	83	88	14	5.4
17	19	134	291	123	206	352	432	38	251	86	14	5.0
18	20	117	447	90	191	384	416	38	484	47	29	4.9
19	52	105	390	100	185	383	372	39	431	35	21	4.6
20	31	97	412	107	182	397	289	36	378	31	22	4.7
21	27	90	365	108	190	434	266	33	318	28	24	26
22	25	84	343	100	181	1220	253	51	262	19	19	14
23	24	78	319	105	179	1830	224	60	230	12	15	9.0
24	25	73	298	103	164	1720	170	85	224	10	13	7.2
25	26	69	288	101	173	1550	156	115	229	9.2	10	22
26	24	107	277	99	200	1420	130	101	191	13	9.2	19
27	22	164	259	98	193	1300	115	193	166	13	8.5	13
28	24	158	200	97	175	1170	104	173	145	8.7	9.1	19
29	23	151	148	94	---	1070	94	163	130	7.6	7.8	16
30	21	161	211	126	---	1330	94	175	151	7.4	6.4	9.7
31	43	---	220	152	---	1670	---	151	---	7.0	6.2	---
TOTAL	729	3278	6031	3860	4796	19478	16069	2412	6022	2656.9	462.8	263.5
MEAN	23.5	109	195	125	171	628	536	77.8	201	85.7	14.9	8.78
MAX	52	226	447	207	206	1830	1600	193	484	243	52	26
MIN	14	31	72	90	128	146	94	33	83	7.0	5.3	4.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2001, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	
MEAN	111	167	241	226	261	356	377	213	175	74.0	76.8	60.4											
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	8.78											
(WY)	1998	1999	1998	1981	1980	1985	1985	1986	1993	1993	1999	2001											

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1980 - 2001

ANNUAL TOTAL	66275.6	66058.2		
ANNUAL MEAN	181	181		
HIGHEST ANNUAL MEAN			196	
LOWEST ANNUAL MEAN			253	1984
HIGHEST DAILY MEAN	1120	Apr 25	1830	Mar 23
LOWEST DAILY MEAN	9.7	Sep 11	4.0	Sep 12
ANNUAL SEVEN-DAY MINIMUM	11	Sep 8	4.3	Sep 7
MAXIMUM PEAK FLOW			1860	Mar 23
MAXIMUM PEAK STAGE			12.61	Mar 23
INSTANTANEOUS LOW FLOW			3.9	Sep 12
10 PERCENT EXCEEDS	391		383	
50 PERCENT EXCEEDS	152		107	
90 PERCENT EXCEEDS	19		9.1	

e Estimated

## MERRIMACK RIVER BASIN

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<sup>2</sup>; net above gage, 307 mi<sup>2</sup> - diversion as needed from 92.6 mi<sup>2</sup> 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<sup>2</sup> 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.--65 years, 650 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft<sup>3</sup>/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<sup>3</sup>/s, Sept. 29, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,150 ft<sup>3</sup>/s, Mar. 25; gage height, 8.96 ft; minimum daily, 35 ft<sup>3</sup>/s, Sept. 13.

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	132	184	518	520	376	566	3940	695	533	635	94	95
2	122	198	505	515	414	545	3960	646	563	695	90	67
3	116	189	468	482	433	519	3890	606	685	680	96	55
4	113	184	432	465	440	495	3770	573	757	658	192	57
5	113	185	418	435	430	474	3610	522	817	635	207	58
6	170	212	365	414	409	343	3450	479	828	605	178	58
7	178	218	340	405	415	459	3280	431	807	574	156	57
8	189	225	313	385	439	530	3180	403	738	534	144	54
9	e178	216	273	376	440	534	3100	378	667	486	88	49
10	171	302	260	e367	492	544	3000	337	594	454	96	45
11	163	481	253	364	531	552	2890	319	531	413	93	40
12	148	579	250	357	e544	564	2760	314	526	389	162	36
13	132	591	252	339	548	634	2650	274	495	364	265	35
14	132	607	262	339	550	740	2520	278	481	338	320	40
15	122	664	277	331	585	817	2370	267	454	326	298	40
16	118	643	267	331	613	900	2210	246	424	297	263	41
17	134	630	452	332	630	977	2060	255	578	284	230	42
18	148	591	805	331	e618	1070	1890	258	984	276	189	41
19	172	551	916	329	606	1160	1780	252	1030	264	163	36
20	204	502	1050	331	585	1250	1660	236	1120	232	156	36
21	215	453	1100	328	577	1340	1550	229	1170	192	146	62
22	207	422	1090	e325	561	2340	1430	229	1170	180	140	108
23	201	353	1020	328	547	3170	1330	260	1110	167	134	77
24	182	344	959	324	518	3660	1230	324	1030	150	106	86
25	169	293	884	323	514	4050	1120	372	943	132	95	97
26	158	307	e790	315	532	4100	e1020	379	869	101	104	103
27	145	433	e770	310	564	4070	e930	460	791	112	96	101
28	129	468	e706	299	576	3940	e829	524	715	136	93	90
29	108	509	653	294	---	3780	e768	594	636	125	86	85
30	146	519	592	304	---	3720	e722	597	592	97	80	106
31	153	---	530	343	---	3880	---	568	---	75	79	---
TOTAL	4768	12053	17770	11241	14487	51723	68899	12305	22638	10606	4639	1897
MEAN	154	402	573	363	517	1668	2297	397	755	342	150	63.2
MAX	215	664	1100	520	630	4100	3960	695	1170	695	320	108
MIN	108	184	250	294	376	343	722	229	424	75	79	35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2001, BY WATER YEAR (WY)

	326	524	706	733	865	1272	1316	812	527	267	232	230
MEAN	326	524	706	733	865	1272	1316	812	527	267	232	230
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

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1937 - 2001
ANNUAL TOTAL	228145	233026	
ANNUAL MEAN	623	638	650
HIGHEST ANNUAL MEAN			1112
LOWEST ANNUAL MEAN			242
HIGHEST DAILY MEAN	2700	Apr 27	5340
LOWEST DAILY MEAN	77	Sep 10	35
ANNUAL SEVEN-DAY MINIMUM	81	Sep 8	39
MAXIMUM PEAK FLOW			4150
MAXIMUM PEAK STAGE			8.96
INSTANTANEOUS LOW FLOW			34
10 PERCENT EXCEEDS	1290	1190	1400
50 PERCENT EXCEEDS	476	405	485
90 PERCENT EXCEEDS	130	96	100

e Estimated

MERRIMACK RIVER BASIN

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<sup>2</sup>; net above gage, 4,425 mi<sup>2</sup>--excludes 210 mi<sup>2</sup> 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, 2000-01.

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<sup>2</sup> in basins of Sudbury and Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipisaukee, Winnisquam, and other lakes and reservoirs upstream. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--78 years, 7,712 ft<sup>3</sup>/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40,200 ft<sup>3</sup>/s, Apr. 15; gage height, 50.95 ft; minimum daily, 839 ft<sup>3</sup>/s, Aug. 31.

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	2160	2910	6420	e5540	4740	4350	18200	17100	5030	3640	1580	913
2	2130	2390	6080	e5350	4950	4260	17500	15000	6560	4380	1550	998
3	2020	2540	5900	e5320	5090	4430	16600	14800	9400	4860	2090	1010
4	1960	2810	5030	e5320	4660	3930	15900	14900	18000	3950	2230	954
5	1630	2780	3780	e5460	4780	4050	15700	15100	21000	4220	2100	1080
6	2500	2590	4230	5550	4330	4100	16700	14200	18000	3960	1890	941
7	3220	3350	4280	5540	4540	4110	17700	11600	14200	3660	1630	1230
8	3760	3590	3450	5440	4990	4570	19400	9220	10400	3510	1510	1100
9	3400	2640	3070	5280	4990	4700	20900	9040	8350	3370	1400	1100
10	3260	4030	2880	e5080	5200	4720	23500	6690	7200	3160	1670	1110
11	3080	6130	3140	5300	5090	4670	27500	6690	7110	2920	1630	1150
12	3310	7230	3430	5040	4900	4460	31600	5220	7040	3190	1810	1040
13	2940	8480	3460	5050	5630	5240	34000	5410	9490	2850	1540	1070
14	3440	7790	3770	4700	5610	5350	38200	4870	9120	2750	1330	1100
15	5700	7630	3060	4500	5290	5760	39700	5880	8110	2420	1510	1020
16	3340	8120	3740	4860	5540	6450	37000	3950	6820	2340	1410	979
17	2500	8900	5450	4690	5370	6490	33900	4670	7210	2590	1380	1050
18	2600	8270	13600	4780	4840	7300	32100	4550	9040	2160	1300	912
19	3210	7070	26800	4730	4820	7700	30300	4190	9500	2380	1420	930
20	4280	5870	28100	4740	4680	7780	27300	4250	7930	2510	1520	1020
21	4060	5480	23800	4750	5440	8240	24700	3950	6880	2390	1590	1630
22	2910	5080	17900	5330	3700	14000	24000	3390	6380	2180	1740	1640
23	3330	4750	12800	4040	4290	25100	26400	3840	6160	1910	1680	1720
24	2960	4530	10000	3790	4070	29200	29900	3980	5750	1790	1310	1420
25	2890	4290	9720	4290	4060	28400	30000	3910	6070	1620	1270	1600
26	2830	4140	9770	4560	4040	25700	31500	3620	5400	1840	1130	4040
27	3070	5130	12100	4440	4590	22600	30100	4700	4630	2000	1100	4990
28	2210	6540	10700	4150	4540	19900	27800	5170	3950	1840	2080	3420
29	2030	7070	9520	4070	---	18000	23100	5930	3470	1660	1690	2420
30	2290	7300	6780	4270	---	17900	19500	6440	3500	1830	841	2060
31	2920	---	e5890	4480	---	18000	---	6350	---	1370	839	---
TOTAL	91940	159430	268650	150440	134770	331460	780700	228610	251700	85250	47770	45647
MEAN	2966	5314	8666	4853	4813	10690	26020	7375	8390	2750	1541	1522
MAX	5700	8900	28100	5550	5630	29200	39700	17100	21000	4860	2230	4990
MIN	1630	2390	2880	3790	3700	3930	15700	3390	3470	1370	839	912

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2001, BY WATER YEAR (WY)

MEAN	4160	6592	7629	7139	7513	13010	19410	11590	6360	3408	2802	2979
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

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1923 - 2001

ANNUAL TOTAL	3095440	2576367	
ANNUAL MEAN	8457	7059	
HIGHEST ANNUAL MEAN			7712
LOWEST ANNUAL MEAN			12490
HIGHEST DAILY MEAN	33300	Apr 25	39700
LOWEST DAILY MEAN	1200	Sep 9	839
ANNUAL SEVEN-DAY MINIMUM	1790	Sep 8	948
MAXIMUM PEAK FLOW			40200
MAXIMUM PEAK STAGE			50.95
INSTANTANEOUS LOW FLOW			493
10 PERCENT EXCEEDS	18200		18000
50 PERCENT EXCEEDS	5570		4550
90 PERCENT EXCEEDS	2520		1520

e Estimated



MERRIMACK RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1966-74, 1999-2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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 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												
05...	1100	1,790	761	10.1	7.3	194	17.3	16.0	8.44	1.62	2.52	22.5
NOV												
20...	1015	5,910	759	11.6	6.9	159	2.0	5.7	7.31	1.41	2.13	17.2
DEC												
27...	1100	14,300	755	13.0	6.8	172	-2.7	.1	6.78	1.38	1.80	20.0
JAN												
31...	0945	4,150	748	13.5	7.0	258	7.9	.1	9.26	1.72	2.46	30.9
FEB												
14...	1045	5,810	763	13.4	7.0	237	2.8	.1	7.61	1.47	1.91	28.1
MAR												
21...	1030	8,010	768	12.8	6.8	277	8.7	2.9	9.13	1.70	1.92	34.6
APR												
30...	1130	19,800	766	10.9	6.8	102	15.7	12.8	4.19	.762	.70	11.6
MAY												
08...	1030	8,830	767	9.7	6.6	103	14.9	17.3	4.17	.724	.91	10.5
JUN												
21...	1030	6,310	763	8.5	6.9	158	24.2	24.1	7.18	1.31	1.70	20.4
JUL												
19...	1000	2,320	763	8.2	7.0	229	21.4	23.0	9.52	1.74	2.41	27.9
AUG												
16...	1000	1,340	760	6.8	7.4	271	24.4	24.6	11.7	2.16	3.24	34.5
SEP												
07...	1100	1,080	760	8.8	7.3	240	23.0	23.0	9.69	1.84	2.99	32.0

DATE	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)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT												
05...	17	21	36.3	E0.1	4.4	10.3	113	0.218	0.51	0.65	0.698	0.031
NOV												
20...	13	15	27.5	E.1	6.6	8.0	91	.129	.45	.51	.287	E.005
DEC												
27...	11	13	34.5	E.1	6.5	8.7	96	.166	.43	.44	.350	.011
JAN												
31...	15	19	52.7	E.1	7.0	10.2	136	.432	.74	.79	.538	.016
FEB												
14...	12	15	47.4	E.1	6.8	9.4	125	--	--	--	--	--
MAR												
21...	12	15	62.4	<.2	6.2	8.7	153	.258	.48	.57	.430	.008
APR												
30...	6	8	20.5	E.1	4.2	5.6	72	.072	.25	.35	.129	E.004
MAY												
08...	8	10	17.7	.2	4.4	5.2	56	.127	.30	.44	.207	E.005
JUN												
21...	13	16	34.2	E.1	5.0	6.5	92	.127	.47	.61	.302	.014
JUL												
19...	17	20	47.7	.2	5.1	8.8	135	E.038	.28	.61	.591	.010
AUG												
16...	22	27	55.9	.2	4.2	12.2	153	.129	.43	.62	.673	.020
SEP												
07...	20	24	51.6	.2	1.4	10.9	137	.107	.41	.63	.898	.029

MERRIMACK RIVER BASIN

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

DATE	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)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT									
05...	0.070	0.053	0.102	--	0.2	160	35.9	73	4
NOV									
20...	.041	.031	.058	5.3	.4	170	35.1	73	5
DEC									
27...	.033	.023	.048	5.0	.4	120	55.0	53	6
JAN									
31...	.071	.062	.102	--	--	140	79.5	72	5
FEB									
14...	--	--	--	--	--	160	68.9	83	4
MAR									
21...	.031	.019	.059	--	--	150	89.4	83	3
APR									
30...	.015	<.018	.046	--	--	70	37.5	69	14
MAY									
08...	.017	<.018	.041	--	--	110	50.2	73	9
JUN									
21...	.045	.037	.081	--	--	320	49.4	82	5
JUL									
19...	.041	.024	.068	--	--	180	26.9	92	3
AUG									
16...	.051	.031	.097	--	--	120	79.1	83	4
SEP									
07...	.033	E.015	.069	--	--	20	6.1	90	2

< Less than  
E Estimated

## MERRIMACK RIVER BASIN

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<sup>2</sup>.

## 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.--6 years, 4.86 ft<sup>3</sup>/s, 31.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 684 ft<sup>3</sup>/s, June 13, 1998, gage height, 8.69 ft, from rating curve extended above 170 ft<sup>3</sup>/s; minimum, 0.10 ft<sup>3</sup>/s (estimated), Oct. 2, 3, 6, 2000, Jan. 27, 28, 30, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 354 ft<sup>3</sup>/s, June 17, gage height, 6.81 ft; minimum, 0.10 ft<sup>3</sup>/s (estimated), Oct. 2, 3, 6, 2000, Jan. 27, 28, 30, 2001.

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	0.69	0.73	1.7	3.2	1.6	e2.7	14	5.8	7.3	21	1.8	3.4
2	e.48	.57	1.4	2.9	.74	e2.3	12	6.0	20	5.4	1.6	3.4
3	e.41	.70	1.0	2.8	.97	e1.3	11	5.0	11	3.8	32	3.5
4	.39	.44	1.4	2.9	1.4	e1.3	11	5.2	8.9	3.1	4.6	3.9
5	1.2	1.2	1.7	3.1	1.7	e1.2	10	4.9	6.9	6.9	2.2	3.8
6	e1.8	.69	1.6	3.5	2.7	e.60	11	5.6	5.2	2.4	2.7	4.0
7	.57	.54	1.8	3.5	2.5	e1.3	9.7	6.2	4.6	1.8	2.8	4.1
8	.65	.47	1.9	3.5	1.9	e1.9	15	6.1	4.0	2.2	2.7	4.2
9	.65	.29	2.1	4.0	3.9	e1.6	11	6.4	3.3	1.9	2.7	4.2
10	.64	18	2.1	3.5	9.8	e2.1	10	5.5	4.5	2.0	2.7	4.3
11	.56	2.1	2.2	2.2	3.8	e2.6	9.0	5.4	8.7	1.3	2.6	4.3
12	.63	1.5	2.5	1.6	3.5	e2.6	11	8.6	7.6	.89	19	4.4
13	.66	1.4	1.8	2.0	3.9	e3.7	9.7	5.8	4.3	.87	5.7	4.5
14	.63	7.6	2.4	2.2	7.0	e6.7	9.3	6.4	2.2	3.1	3.1	6.9
15	.62	2.4	2.2	2.4	6.3	e9.6	9.2	7.3	2.0	1.7	2.8	4.8
16	1.5	1.7	2.6	2.8	4.8	7.4	8.9	6.7	1.8	1.5	2.5	4.9
17	.81	1.6	32	2.5	5.1	7.2	8.5	4.4	46	3.9	2.6	5.0
18	2.7	1.7	4.8	1.9	4.6	8.3	9.3	5.9	9.1	1.7	2.7	4.9
19	3.4	1.6	2.8	3.2	4.6	e9.5	7.8	6.4	7.9	1.6	2.5	5.1
20	.84	1.4	5.8	1.7	4.1	e10	7.6	6.9	16	1.5	2.8	5.3
21	.86	1.3	3.5	1.5	2.6	10	8.0	7.4	8.6	1.5	4.2	9.3
22	.72	1.2	3.8	.94	1.8	198	8.4	10	8.5	1.6	3.0	5.4
23	.74	1.2	4.0	.85	2.3	61	8.1	8.9	8.6	1.6	3.0	5.6
24	.76	.93	4.1	.68	e2.3	16	8.4	11	10	1.5	2.9	5.7
25	.75	1.1	4.3	.79	e2.0	12	7.5	7.6	7.1	1.1	2.8	8.3
26	.67	8.8	4.4	.27	e2.0	11	5.6	6.7	5.8	3.8	3.0	5.5
27	.64	1.7	4.6	.22	e3.5	11	3.8	15	4.3	1.6	3.1	5.3
28	.53	1.8	4.8	e.22	e2.7	9.7	3.6	8.9	3.3	1.6	3.3	5.5
29	.40	1.8	3.8	e.18	---	9.2	4.7	8.8	3.3	1.6	3.3	5.2
30	.88	2.3	3.2	e1.7	---	44	5.1	8.7	19	1.6	3.3	5.4
31	2.4	---	3.5	2.9	---	24	---	8.8	---	1.7	3.4	---
TOTAL	29.18	68.76	119.8	65.65	94.11	489.80	268.2	222.3	259.8	87.76	137.4	150.1
MEAN	.94	2.29	3.86	2.12	3.36	15.8	8.94	7.17	8.66	2.83	4.43	5.00
MAX	3.4	18	32	4.0	9.8	198	15	15	46	21	32	9.3
MIN	.39	.29	1.0	.18	.74	.60	3.6	4.4	1.8	.87	1.6	3.4
CFSM	.45	1.10	1.85	1.01	1.61	7.56	4.28	3.43	4.14	1.35	2.12	2.39
IN.	.52	1.22	2.13	1.17	1.68	8.72	4.77	3.96	4.62	1.56	2.45	2.67

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001
MEAN	5.97	4.06	3.83	5.04	4.87	6.93	6.26
MAX	19.6	4.88	8.14	7.57	7.65	15.8	8.94
(WY)	1997	1997	1997	1999	1998	2001	1998
MIN	.94	2.29	2.19	2.12	2.59	3.68	2.72
(WY)	2001	2001	1996	2001	2000	2000	1999

## SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1995 - 2001
ANNUAL TOTAL	1150.82	1992.86	
ANNUAL MEAN	3.14	5.46	4.86
HIGHEST ANNUAL MEAN			6.25
LOWEST ANNUAL MEAN			3.63
HIGHEST DAILY MEAN	36	198	209
LOWEST DAILY MEAN	.28	.18	.18
ANNUAL SEVEN-DAY MINIMUM	.57	.46	.46
MAXIMUM PEAK FLOW		354	684
MAXIMUM PEAK STAGE		6.81	8.69
INSTANTANEOUS LOW FLOW		.10	.10
ANNUAL RUNOFF (CFSM)	1.50	2.61	2.33
ANNUAL RUNOFF (INCHES)	20.48	35.47	31.62
10 PERCENT EXCEEDS	5.7	9.7	8.3
50 PERCENT EXCEEDS	2.0	3.3	2.9
90 PERCENT EXCEEDS	.70	.78	1.1

e Estimated

MERRIMACK RIVER BASIN

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

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
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	0.96	0.00	0.00
2	.00	.00	.00	.00	.00	---	.00	.00	.89	.00	.00	.00
3	.00	.00	.00	.00	.00	---	.00	.00	.18	.00	2.46	.00
4	.02	.00	.00	.00	.00	---	.00	.00	.00	.00	.06	.06
5	.40	.14	.00	.02	.15	---	.00	.00	.00	.46	.00	.00
6	.39	.00	.00	.17	.19	---	.10	.00	.00	.00	.00	.00
7	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00
8	.00	.00	.00	.01	.07	---	.27	.00	.00	.05	.00	.00
9	.00	.00	.00	.03	.09	---	.06	.00	.00	.00	.00	.00
10	.00	1.58	.00	.00	.01	---	.01	.00	.00	.08	.01	.00
11	.00	.08	.00	.00	.00	---	.00	.00	.45	.00	.00	.00
12	.00	.00	.02	.00	.00	---	.09	.17	.00	.00	1.31	.00
13	.00	.00	.00	.00	.00	---	.00	.00	.00	.00	.31	.01
14	.00	.72	.53	.00	.19	---	.00	.00	.00	.21	.00	.40
15	.00	.00	.00	.14	.00	---	.00	.02	.00	.00	.00	.00
16	.17	.00	.11	.05	.05	0.00	.00	.03	.00	.00	.00	.00
17	.00	.00	1.36	.00	.00	.02	.00	.00	2.45	.35	.00	.00
18	.61	.00	.00	.00	.00	.06	.03	.00	.01	.00	.00	.00
19	.13	.00	.03	.16	.00	---	.00	.00	.00	.00	.00	.00
20	.00	.00	.21	.00	.00	---	.00	.00	.60	.00	.08	.02
21	.00	.00	.00	.10	.00	.27	.00	.00	.00	.00	.21	.61
22	.00	.00	.00	.00	.01	2.36	.01	.27	.00	.00	.00	.00
23	.00	.00	.00	.00	.03	.02	.00	.02	.02	.00	.00	.00
24	.00	.00	.00	.00	---	.00	.03	.20	.31	.00	.00	.00
25	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.28
26	.00	.76	.00	.00	---	.09	.00	.01	.00	.37	.00	.00
27	.00	.00	.00	.00	---	.00	.00	.55	.00	.01	.01	.00
28	.00	.00	.00	.00	---	.00	.00	.08	.00	.00	.00	.04
29	.00	.00	.00	.00	---	.00	.00	.00	.00	.00	.00	.00
30	.18	.06	.38	.29	---	1.58	.00	.01	1.05	.00	.00	.00
31	.31	---	.09	.09	---	.00	---	.00	---	.00	.00	---
TOTAL	2.21	3.34	2.73	1.06	---	---	0.60	1.36	5.96	2.49	4.45	1.42

MERRIMACK RIVER BASIN

01100568 SHAW SHEEN 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 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	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 LAB (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	
JUN	06...	1030	7.4	2.09	762	7.8	6.2	7.1	649	651	21.4	13.3	29.5
JUL	10...	1030	1.8	2.09	755	7.3	6.9	7.0	637	634	24.5	16.5	29.7
DATE	TIME	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)	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)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA+ ORGANIC DIS. (MG/L AS N) (00623)
JUN	06...	5.29	4.79	80.6	41	50	152	<0.2	13.8	26.3	390	0.142	0.28
JUL	10...	5.09	4.97	78.3	48	58	142	<.2	13.8	27.4	364	.130	.32
DATE	TIME	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	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)	E COLI, MTEC MF WATER (COL./100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (UG/L AS SB) (01095)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)
JUN	06...	0.36	0.874	0.011	E0.004	<0.020	0.014	2.8	84	40	--	--	--
JUL	10...	.37	.985	.024	<.006	<.020	.010	3.7	<350	<290	11	0.17	3.1
DATE	TIME	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)	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)
JUN	06...	--	--	--	--	--	--	--	370	--	--	348	--
JUL	10...	35.2	<0.06	22	0.08	<0.8	2.60	0.7	260	0.10	2.3	320	0.8
DATE	TIME	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	06...	--	--	--	--	--	--	--	--	--	--	--	--
JUL	10...	6.40	<0.3	<1.0	173	E0.03	<0.2	12	0.16				

< Less than Estimated

MERRIMACK RIVER BASIN

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<sup>2</sup>.

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.--37 years (water years 1965-2001), 59.2 ft<sup>3</sup>/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,580 ft<sup>3</sup>/s, Mar. 23, gage height, 9.87 ft, minimum, 2.4 ft<sup>3</sup>/s, Sept. 30.

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	9.0	35	41	31	52	54	528	44	18	56	8.2	7.8
2	8.5	24	33	29	50	48	342	42	34	137	7.6	7.2
3	7.8	16	26	28	46	41	242	35	78	166	11	6.8
4	7.7	12	21	27	e42	37	203	33	98	110	65	7.8
5	7.4	12	19	26	e36	36	184	35	79	67	138	13
6	20	21	21	26	33	27	172	34	42	56	116	8.9
7	25	16	19	27	45	42	166	31	24	51	65	6.9
8	15	12	17	27	e37	49	171	30	19	38	34	5.9
9	11	11	16	28	37	46	190	29	17	29	20	5.7
10	8.5	30	16	26	52	48	184	27	14	25	e21	5.3
11	8.8	90	15	27	e67	52	165	26	13	22	e41	4.8
12	9.9	153	15	26	e71	55	149	25	35	20	e63	4.8
13	9.1	121	16	24	65	68	143	29	33	21	e100	4.4
14	8.5	73	15	25	e58	98	137	25	23	17	e140	5.8
15	7.5	66	19	25	60	124	126	23	19	23	98	13
16	8.1	74	17	26	69	140	111	24	19	23	63	8.9
17	15	69	52	27	66	165	98	26	34	20	36	6.8
18	13	52	181	26	e63	182	90	25	141	27	25	6.1
19	30	34	248	26	e59	185	86	24	219	22	22	5.5
20	38	24	180	33	51	183	83	22	154	17	20	4.8
21	30	21	139	29	50	182	77	20	94	13	20	9.9
22	21	21	101	36	50	717	72	16	85	11	21	25
23	16	19	e62	27	e45	1520	68	28	77	9.9	17	15
24	14	16	e52	26	e43	1170	64	32	58	12	15	10
25	15	14	e48	26	e40	628	60	35	50	11	13	9.2
26	13	20	e42	24	52	369	57	26	56	11	12	15
27	11	57	37	24	60	272	54	39	48	21	11	6.9
28	10	74	33	24	59	224	51	56	33	15	10	3.9
29	9.7	69	30	22	---	197	47	49	25	12	9.8	3.0
30	9.9	52	28	25	---	206	45	29	24	10	8.8	2.7
31	25	---	30	47	---	512	---	21	---	9.1	8.2	---
TOTAL	442.4	1308	1589	850	1458	7677	4165	940	1663	1082.0	1239.6	240.8
MEAN	14.3	43.6	51.3	27.4	52.1	248	139	30.3	55.4	34.9	40.0	8.03
MAX	38	153	248	47	71	1520	528	56	219	166	140	25
MIN	7.4	11	15	22	33	27	45	16	13	9.1	7.6	2.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

MEAN	33.8	53.5	65.9	73.4	82.3	119	102	62.8	48.9	25.0	22.3	21.4
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

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1964 - 2001

ANNUAL TOTAL	18513.1	22654.8	
ANNUAL MEAN	50.6	62.1	
HIGHEST ANNUAL MEAN			59.2
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	578	Apr 23	1610
LOWEST DAILY MEAN	4.3	Aug 13	28.2
ANNUAL SEVEN-DAY MINIMUM	7.5	Sep 7	1.0
MAXIMUM PEAK FLOW			1850
MAXIMUM PEAK STAGE			9.87
INSTANTANEOUS LOW FLOW			2.4
10 PERCENT EXCEEDS	113	140	128
50 PERCENT EXCEEDS	31	29	37
90 PERCENT EXCEEDS	8.5	9.1	7.7

e Estimated

PARKER RIVER BASIN

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<sup>2</sup>.

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 from Dec. 5 to Feb. 9 and those for estimated daily discharges, which are fair. Occasional regulation by mill and ponds upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--56 years, 37.2 ft<sup>3</sup>/s, 23.76 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 641 ft<sup>3</sup>/s, Mar. 23, gage height, 6.32 ft; minimum, 0.07 ft<sup>3</sup>/s, Sept. 23-25.

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

1	5.6	11	47	41	32	36	298	34	11	15	0.82	0.42
2	5.1	11	45	40	34	34	273	30	16	19	.73	.35
3	4.8	12	40	38	34	32	246	26	26	15	.75	.30
4	4.2	12	35	37	34	30	222	24	31	12	1.4	.27
5	3.9	16	32	38	34	28	199	22	31	10	1.7	.25
6	7.0	22	29	37	e32	e27	177	20	28	11	1.5	.24
7	7.6	28	25	36	34	27	166	18	25	9.7	1.2	.22
8	7.4	29	21	37	34	29	156	e17	24	8.7	1.0	.21
9	6.8	27	17	36	34	31	148	16	20	8.3	.86	.22
10	6.2	29	14	36	36	31	143	15	16	6.9	.77	.20
11	6.2	41	13	35	e36	32	135	13	14	5.9	.67	.20
12	5.8	52	16	35	e35	33	131	12	21	5.2	1.1	.16
13	5.1	54	16	34	36	38	129	10	20	4.9	1.5	.13
14	4.9	54	16	32	36	42	122	8.8	16	4.4	2.1	.15
15	4.6	61	18	31	37	48	111	7.6	12	4.3	1.7	.13
16	5.3	62	18	31	37	54	100	7.7	10	5.3	1.2	.11
17	7.2	61	39	31	37	62	90	e8.2	12	7.4	1.0	.10
18	8.2	57	94	30	e33	72	81	8.4	22	6.3	.96	.09
19	15	53	119	30	33	83	75	10	24	5.0	.87	.09
20	17	49	115	29	32	98	67	13	24	4.2	.77	.09
21	22	43	103	29	31	113	e48	14	23	3.5	.77	.11
22	22	37	90	28	e30	287	e46	13	20	2.9	.77	.10
23	22	32	e73	27	29	598	e46	11	17	2.4	.77	.07
24	20	28	66	26	28	554	e44	11	15	1.9	.72	.07
25	16	23	58	26	27	478	e44	12	17	1.6	.63	.10
26	13	25	e44	25	31	414	e44	11	16	1.7	.57	.12
27	11	38	e42	24	36	360	44	13	14	1.7	.59	.11
28	9.5	48	40	23	38	318	43	15	13	1.5	.56	.16
29	7.7	49	33	21	---	288	41	14	12	1.3	.52	.18
30	7.3	48	32	21	---	282	38	12	13	1.1	.44	.14
31	9.8	---	38	27	---	300	---	12	---	.94	.40	---
TOTAL	298.2	1112	1388	971	940	4859	3507	458.7	563	189.04	29.34	5.09
MEAN	9.62	37.1	44.8	31.3	33.6	157	117	14.8	18.8	6.10	.95	.17
MAX	22	62	119	41	38	598	298	34	31	19	2.1	.42
MIN	3.9	11	13	21	27	27	38	7.6	10	.94	.40	.07
CFSM	.45	1.74	2.10	1.47	1.58	7.36	5.49	.69	.88	.29	.04	.01
IN.	.52	1.94	2.42	1.70	1.64	8.49	6.12	.80	.98	.33	.05	.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

MEAN	16.1	29.5	41.4	43.4	51.5	86.0	83.6	49.2	28.1	8.76	5.48	6.29
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	14.8	2.86	.43	.13	.11
(WY)	1998	1966	1966	1966	1980	1989	1985	2001	1999	1999	1995	1997

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1946 - 2001

ANNUAL TOTAL	15079.3	14320.37		
ANNUAL MEAN	41.2	39.2	37.2	
HIGHEST ANNUAL MEAN			64.8	1984
LOWEST ANNUAL MEAN			13.2	1966
HIGHEST DAILY MEAN	236	Apr 24	598	Mar 23
LOWEST DAILY MEAN	2.9	Sep 12	.07	Sep 23
ANNUAL SEVEN-DAY MINIMUM	3.6	Sep 7	.09	Sep 18
MAXIMUM PEAK FLOW			641	Mar 23
MAXIMUM PEAK STAGE			6.32	Mar 23
INSTANTANEOUS LOW FLOW			.07	Sep 23
ANNUAL RUNOFF (CFSM)	1.93	1.84	1.75	
ANNUAL RUNOFF (INCHES)	26.34	25.01	23.76	
10 PERCENT EXCEEDS	91	77	89	
50 PERCENT EXCEEDS	29	22	23	
90 PERCENT EXCEEDS	7.2	.61	1.4	

e Estimated

IPSWICH RIVER BASIN

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<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: June 1938 to current year.

Water-quality records: Water years 1957, 1959, 1999, 2000, 2001.

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<sup>3</sup>/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.--63 years, 64.2 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft<sup>3</sup>/s, Mar. 23, 2001, gage height, 8.39 ft; minimum, 0.05 ft<sup>3</sup>/s, Sept. 6, 7, 8, 9, 11, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,200 ft<sup>3</sup>/s, Mar. 23, gage height, 8.39 ft; minimum, 0.60 ft<sup>3</sup>/s, Sept. 30.

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	4.3	47	94	60	58	48	523	59	23	53	2.4	2.4
2	3.9	38	87	57	58	45	466	57	33	91	2.0	2.0
3	3.4	32	75	53	55	46	422	53	62	82	4.5	1.9
4	2.8	30	66	49	53	55	383	49	55	74	19	2.8
5	2.8	45	60	46	52	56	344	46	51	70	20	3.3
6	7.0	66	56	46	53	62	308	42	50	69	13	4.0
7	11	58	50	46	56	59	276	39	46	58	11	2.3
8	8.1	53	45	46	56	58	264	35	40	49	9.9	1.9
9	6.5	61	39	46	57	58	257	32	30	45	8.4	1.5
10	6.1	82	34	45	71	62	246	29	23	40	16	1.3
11	5.5	138	33	44	86	62	232	26	21	34	26	1.1
12	4.5	126	38	43	79	67	222	24	34	29	43	.91
13	4.0	117	38	41	72	85	219	23	33	26	77	.85
14	4.5	121	37	38	70	106	203	21	25	25	65	1.4
15	5.4	157	39	38	80	116	185	19	21	23	62	1.7
16	5.2	147	38	39	83	135	169	17	17	18	59	1.6
17	5.9	130	111	38	83	161	155	19	33	e16	48	1.1
18	8.5	117	245	37	95	201	149	18	108	e14	39	.94
19	31	105	197	38	77	235	141	16	90	e12	33	.81
20	34	94	e170	42	70	267	129	15	76	e11	28	.83
21	21	85	e160	42	57	286	120	13	78	e10	24	2.4
22	18	77	e140	40	55	702	113	13	70	e9.6	20	3.8
23	16	69	e120	38	50	1160	106	15	60	e8.3	16	2.4
24	15	61	e110	38	44	1010	101	18	61	7.5	13	1.8
25	16	53	e100	37	40	878	96	23	70	6.7	10	2.1
26	15	60	e90	36	51	763	88	20	61	6.7	7.4	2.5
27	13	110	81	34	56	652	79	23	51	6.7	5.2	1.6
28	13	102	71	33	53	551	69	36	41	5.8	4.4	1.1
29	12	94	63	31	---	463	64	30	33	4.7	3.8	1.0
30	13	95	60	35	---	451	61	26	30	3.9	3.1	.86
31	34	---	62	50	---	550	---	25	---	3.1	2.8	---
TOTAL	350.4	2570	2609	1306	1770	9450	6190	881	1426	912.0	695.9	54.20
MEAN	11.3	85.7	84.2	42.1	63.2	305	206	28.4	47.5	29.4	22.4	1.81
MAX	34	157	245	60	95	1160	523	59	108	91	77	4.0
MIN	2.8	30	33	31	40	45	61	13	17	3.1	2.0	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2001, BY WATER YEAR (WY)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	29.8	52.1	69.7	71.5	86.5	153	141	80.9	47.0	19.0	12.9	14.4																																																				
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																																																				

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1938 - 2001

ANNUAL TOTAL	26590.3	28214.50	
ANNUAL MEAN	72.7	77.3	64.2
HIGHEST ANNUAL MEAN			121
LOWEST ANNUAL MEAN			18.6
HIGHEST DAILY MEAN	404	Apr 23	1160
LOWEST DAILY MEAN	1.1	Sep 12	.81
ANNUAL SEVEN-DAY MINIMUM	1.5	Sep 8	1.2
MAXIMUM PEAK FLOW			1200
MAXIMUM PEAK STAGE			8.39
INSTANTANEOUS LOW FLOW			.60
10 PERCENT EXCEEDS	156	156	156
50 PERCENT EXCEEDS	56	44	38
90 PERCENT EXCEEDS	6.2	3.6	2.2

e Estimated









IPSWICH RIVER BASIN

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT									
24...	19	0.7	--	--	--	600	144	80	7
NOV									
16...	18	.5	--	--	--	610	42.3	74	6
DEC									
28...	10	.3	--	--	--	320	63.8	56	5
JAN									
23...	--	--	--	--	--	310	133	77	4
FEB									
13...	--	--	--	--	--	280	124	62	4
MAR									
20...	--	--	--	--	--	150	116	36	5
APR									
06...	--	--	--	--	--	100	15.4	80	2
MAY									
30...	--	--	--	--	--	500	142	82	4
JUN									
12...	11	--	12	0.3	22.4	760	291	--	--
19...	--	--	--	--	--	740	129	90	5
JUL									
04...	18	--	19	10	.7	1,190	116	--	--
17...	--	--	--	--	--	730	236	86	7
24...	10	--	12	15.2	1.1	560	233	--	--
AUG									
07...	--	--	--	--	--	200	129	92	6
14...	19	--	19	24.9	1.6	980	3.3	--	--
SEP									
05...	--	--	--	--	--	1,100	714	83	6
06...	13	--	15	--	--	670	971	--	--
14...	--	--	--	8.1	2.6	--	--	--	--

< Less than  
E Estimated

## IPSWICH RIVER BASIN

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<sup>2</sup>.

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 except those for estimated daily discharge, which are fair. 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.--71 years, 189 ft<sup>3</sup>/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,040 ft<sup>3</sup>/s, Mar. 24, gage height, 8.88 ft; minimum, 7.2 ft<sup>3</sup>/s, Sept. 13-20; minimum daily, 7.2 ft<sup>3</sup>/s, Sept. 14-17.

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	42	77	250	190	107	186	1660	178	63	118	20	17
2	37	88	238	188	120	179	1610	164	72	126	18	16
3	34	93	221	173	130	173	1520	153	100	128	16	15
4	33	94	203	150	140	163	1430	141	114	134	16	14
5	32	101	186	131	144	151	1280	134	125	141	21	15
6	37	110	170	117	141	121	1070	130	132	141	31	16
7	43	113	151	110	145	118	909	119	127	135	34	15
8	49	117	128	104	149	137	807	109	119	129	31	14
9	51	123	114	99	152	159	739	99	107	122	27	13
10	48	137	99	94	166	168	691	90	96	115	26	12
11	43	189	89	91	182	183	650	86	85	107	29	9.4
12	38	244	85	88	187	196	615	80	89	98	52	8.5
13	35	272	85	83	192	222	601	79	91	90	72	7.8
14	32	291	83	76	202	245	573	78	87	81	83	7.2
15	30	316	87	69	217	274	545	70	82	73	92	7.2
16	30	324	96	68	224	310	506	64	73	68	99	7.2
17	35	328	151	71	228	357	462	65	79	62	99	7.2
18	38	324	280	73	227	417	433	66	117	60	95	7.3
19	52	304	436	73	213	476	413	69	131	55	89	7.5
20	65	285	576	75	208	546	386	68	153	52	82	7.3
21	72	260	613	76	211	600	364	61	179	46	73	7.7
22	76	232	542	76	202	1320	343	52	177	40	63	11
23	76	209	520	85	180	2290	322	45	168	35	53	15
24	70	189	457	90	168	2900	302	54	176	32	44	24
25	60	170	e400	91	156	2980	278	63	183	29	37	21
26	54	167	e350	90	159	2720	259	64	172	24	32	14
27	53	194	314	88	173	2350	242	70	165	25	28	15
28	52	208	260	87	185	1980	223	80	154	25	25	18
29	47	228	216	84	---	1710	207	86	139	24	22	16
30	43	245	181	83	---	1590	193	84	121	23	19	15
31	61	---	176	95	---	1670	---	75	---	21	18	---
TOTAL	1468	6032	7757	3068	4908	26891	19633	2776	3676	2359	1446	380.3
MEAN	47.4	201	250	99.0	175	867	654	89.5	123	76.1	46.6	12.7
MAX	76	328	613	190	228	2980	1660	178	183	141	99	24
MIN	30	77	83	68	107	118	193	45	63	21	16	7.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	79.3	749	4.75	1997	135	525	6.87	1933	192	621	11.5	1997
					208	566	14.4	1958	245	627	16.4	1984
					208	627	16.4	1984	438	833	19.1	1987
					245	1158	75.0	1983	240	821	25.6	1954
					455	1233	97.1	1987	148	518	2.13	1976
					627	1158	97.1	1985	57.6	356	1.76	1965
					1158	1233	1985	1985	37.3	356	1.76	1965
					1984	1987	1985	1985	41.7	390	1.76	1965
					1987	1954	1985	1985	390	1954	1.76	1965
					1987	1987	1985	1985	1.76	1.76	1.76	1.76
					1987	1987	1985	1985	1.76	1.76	1.76	1.76
					1987	1987	1985	1985	1.76	1.76	1.76	1.76

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1930 - 2001
ANNUAL TOTAL	78598	80394.3	
ANNUAL MEAN	215	220	189
HIGHEST ANNUAL MEAN			351
LOWEST ANNUAL MEAN			57.7
HIGHEST DAILY MEAN	1450	2980	3520
LOWEST DAILY MEAN	22	7.2	.59
ANNUAL SEVEN-DAY MINIMUM	26	7.3	.94
MAXIMUM PEAK FLOW		3040	3550
MAXIMUM PEAK STAGE		8.88	9.43
INSTANTANEOUS LOW FLOW		7.2	.34
10 PERCENT EXCEEDS	427	434	448
50 PERCENT EXCEEDS	151	107	114
90 PERCENT EXCEEDS	43	21	12

e Estimated

SAUGUS RIVER BASIN

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<sup>2</sup>.

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.--7 years, 31.2ft<sup>3</sup>/s, 18.18 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 738 ft<sup>3</sup>/s, Mar. 22, gage height, 6.12 ft; minimum, 2.3 ft<sup>3</sup>/s, Sept. 20, 21.

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	3.9	17	23	33	37	31	256	21	5.2	91	3.4	4.6
2	3.7	11	20	25	29	25	223	16	26	82	3.3	4.1
3	3.6	8.4	18	e22	26	22	195	13	31	56	9.8	3.8
4	3.5	7.2	16	21	25	21	174	11	15	43	32	5.2
5	4.0	22	15	20	23	21	148	10	21	37	19	5.8
6	15	24	14	22	29	19	117	9.1	22	39	8.9	4.2
7	10	15	13	21	34	24	101	8.4	16	33	7.3	3.7
8	5.9	11	e12	20	28	36	104	7.9	11	30	8.5	3.4
9	4.8	11	e12	20	30	36	101	7.3	8.6	29	9.3	3.3
10	4.4	40	e11	e18	50	36	88	7.1	7.2	26	8.6	3.1
11	4.0	66	11	e18	52	35	82	7.8	7.3	25	9.9	3.0
12	3.7	54	12	17	51	37	75	7.8	14	24	31	2.9
13	3.7	50	11	e15	40	70	72	7.8	8.7	24	41	2.6
14	3.5	54	e12	15	41	81	67	7.1	6.8	20	34	3.6
15	3.3	75	15	17	54	80	63	6.5	5.7	17	31	3.9
16	4.5	64	13	18	44	92	61	6.8	5.1	15	29	3.0
17	6.1	54	106	16	41	101	64	6.7	44	16	27	2.6
18	7.7	45	169	15	e37	102	69	6.2	78	17	24	2.5
19	27	41	101	18	e34	104	56	6.0	34	16	21	2.5
20	17	39	97	25	e31	104	46	5.7	34	14	17	2.3
21	9.0	37	107	21	e28	103	37	5.4	59	11	16	4.7
22	6.9	30	97	28	e25	494	33	6.4	44	9.5	14	19
23	5.9	22	73	24	24	476	32	7.3	36	8.2	12	8.0
24	5.5	16	61	18	28	360	32	9.6	31	7.4	11	4.1
25	5.1	14	49	15	32	314	32	8.5	47	6.3	8.7	5.8
26	5.0	30	54	15	43	277	29	6.1	33	7.4	7.8	5.9
27	4.8	47	31	13	39	244	29	10	23	8.4	7.4	4.6
28	5.0	32	28	13	34	207	28	10	20	6.0	7.2	5.6
29	5.6	25	26	14	---	179	27	7.4	18	4.8	6.9	6.0
30	6.1	24	36	20	---	251	26	6.5	38	4.0	5.8	5.3
31	19	---	51	38	---	330	---	6.0	---	3.6	5.0	---
TOTAL	217.2	985.6	1314	615	989	4312	2467	262.4	749.6	730.6	476.8	139.1
MEAN	7.01	32.9	42.4	19.8	35.3	139	82.2	8.46	25.0	23.6	15.4	4.64
MAX	27	75	169	38	54	494	256	21	78	91	41	19
MIN	3.3	7.2	11	13	23	19	26	5.4	5.1	3.6	3.3	2.3
CFSM	.30	1.41	1.82	.85	1.52	5.97	3.53	.36	1.07	1.01	.66	.20
IN.	.35	1.57	2.10	.98	1.58	6.88	3.94	.42	1.20	1.17	.76	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2001, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	26.4	25.4	35.2	40.6	43.6	69.4	55.7	28.3	26.6
MAX	122	49.2	108	62.3	80.7	139	96.3	65.3	117
(WY)	1997	1997	1997	1996	1998	2001	1997	1998	1998
MIN	2.35	6.29	6.45	15.3	18.8	26.8	13.0	7.89	3.06
(WY)	1998	1999	1999	2000	1995	1995	1995	1995	1999

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1993 - 2001
ANNUAL TOTAL	10833.8	13258.3	
ANNUAL MEAN	29.6	36.3	31.2
HIGHEST ANNUAL MEAN			45.0
LOWEST ANNUAL MEAN			15.5
HIGHEST DAILY MEAN	237	Apr 22	812
LOWEST DAILY MEAN	3.3	Oct 15	.50
ANNUAL SEVEN-DAY MINIMUM	3.9	Oct 10	.53
MAXIMUM PEAK FLOW		738	942
MAXIMUM PEAK STAGE		6.12	6.58
INSTANTANEOUS LOW FLOW		2.3	.06
ANNUAL RUNOFF (CFSM)	1.27	1.56	1.34
ANNUAL RUNOFF (INCHES)	17.30	21.17	18.18
10 PERCENT EXCEEDS	63	80	76
50 PERCENT EXCEEDS	19	20	15
90 PERCENT EXCEEDS	5.5	4.7	2.5

e Estimated









SAUGUS RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)
OCT									
24...	6.0	0.4	--	--	--	180	44.9	67	2
NOV									
16...	9.9	.6	--	--	--	290	37.9	79	7
DEC									
28...	6.6	.3	--	--	--	320	139	69	6
JAN									
23...	--	--	--	--	--	290	224	67	6
FEB									
13...	--	--	--	--	--	270	160	70	6
MAR									
20...	--	--	--	--	--	180	131	57	4
APR									
06...	--	--	--	--	--	110	52.6	50	6
MAY									
30...	--	--	--	--	--	200	160	84	12
JUN									
12...	8.5	--	8.5	2.2	1.1	350	109	--	--
19...	--	--	--	--	--	560	140	93	8
JUL									
02...	8.6	--	11	2.8	1.7	470	82.7	--	--
17...	--	--	--	--	--	410	114	80	15
24...	7.3	--	9.1	3.5	1.1	130	67.7	--	--
AUG									
07...	--	--	--	--	--	520	66.4	73	7
14...	9.9	--	13	6.4	1.2	270	44.5	--	--
SEP									
05...	--	--	--	--	--	110	46.6	85	4
08...	6.9	--	9.4	--	--	130	36.8	--	--
14...	--	--	--	1.8	1.3	--	--	--	--

< Less than  
E Estimated

MYSTIC RIVER BASIN

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<sup>2</sup>, excludes 0.6 mi<sup>2</sup> 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.--62 years, 29.8 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,590 ft<sup>3</sup>/s, Mar. 22, 2001, gage height, 16.90 ft (affected by backwater from Upper Mystic Lake), from rating curve extended above 400 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; no flow for part of Oct. 10, 12, 1950, caused by pumpage from gage pool; minimum daily discharge, 0.25 ft<sup>3</sup>/s, Oct. 10, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1886, that of Mar. 22, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft<sup>3</sup>/s, Mar. 22, gage height, 16.90 ft (affected by backwater from Upper Mystic Lake); minimum, 0.78 ft<sup>3</sup>/s, Oct. 11; minimum daily, 1.5 ft<sup>3</sup>/s, Oct. 11.

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

Table with 13 columns: DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. It lists daily mean discharge values for each month from October 2000 to September 2001. Summary statistics are provided at the bottom of the table.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)

Table with 13 columns: MEAN, MAX, (WY), MIN, (WY). It shows monthly mean, maximum, and minimum discharge values for water years 1939 through 2001.

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1939 - 2001

Summary statistics table comparing 2000 calendar year, 2001 water year, and historical data (1939-2001). Includes metrics like Annual Total, Annual Mean, Highest/Lowest Annual Mean, Highest/Lowest Daily Mean, Annual Seven-Day Minimum, Maximum Peak Flow, and Annual Runoff (CFSM and inches).







## MYSTIC RIVER BASIN

01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDE (MG/L) (80154)
OCT									
03...	3.5	0.6	--	--	--	20	171	87	4
NOV									
14...	22	1.2	--	--	--	200	141	87	10
DEC									
13...	4.0	.5	--	--	--	80	209	77	8
JAN									
17...	--	--	--	--	--	50	310	91	7
FEB									
12...	--	--	--	--	--	200	276	69	7
MAR									
19...	--	--	--	--	--	230	179	75	5
22...	--	--	--	--	--	110	115	71	128
APR									
05...	--	--	--	--	--	150	144	89	3
MAY									
29...	--	--	--	--	--	220	366	89	8
JUN									
12...	7.0	--	7.7	5.0	1.4	140	318	--	--
18...	--	--	--	--	--	280	115	79	10
JUL									
02...	5.0	--	7.7	14.4	3.6	280	59.8	--	--
16...	--	--	--	--	--	90	217	87	10
23...	3.9	--	5.4	42.0	4.4	120	223	--	--
AUG									
06...	--	--	--	--	--	210	157	85	13
13...	5.2	--	7.3	52.4	6.7	320	80.2	--	--
30...	--	--	--	21.6	--	--	--	--	--
SEP									
06...	--	--	--	--	--	80	155	85	3
07...	4.8	--	6.1	--	--	70	121	--	--
14...	--	--	--	18.0	6.1	--	--	--	--

< Less than  
E Estimated

CHARLES RIVER BASIN

01103220 MISCOE BROOK NEAR FRANKLIN, MA

LOCATION.--Lat 42°02'27", long 71°25'38", Norfolk County, Hydrologic Unit 01090001, on left bank 20 ft upstream from South Street and 3.5 mi southwest of Franklin, MA.

DRAINAGE AREA.--1.15 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2000 to September 2001.

GAGE.--Water-stage recorder with satellite telemeter. Elevation of gage is 260 ft above sea level from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, and those for discharges less than 0.30 ft<sup>3</sup>/s, which are poor.

AVERAGE DISCHARGE.--1 year, 0.90 ft<sup>3</sup>/s.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO SEPTEMBER 2001.--Maximum discharge, 24 ft<sup>3</sup>/s, Mar. 22, gage height, 2.65 ft; minimum, 0.08 ft<sup>3</sup>/s, Nov. 5.

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	e0.22	0.64	0.52	e0.48	0.58	0.52	6.1	0.77	0.52	2.6	0.17	0.15
2	e.22	.47	.45	e.47	.53	.48	3.6	.75	1.6	1.6	.17	.15
3	.22	.39	.39	e.46	.47	.47	2.8	.71	1.9	.72	.16	.15
4	.20	.34	.35	e.45	.42	.44	2.4	.67	1.0	.53	.20	.15
5	.22	.30	.35	e.44	.42	.53	2.2	.64	.67	.76	.19	.14
6	.31	.34	.35	e.44	.48	.49	2.1	.62	.55	.88	.18	.13
7	.27	.31	.32	e.43	.46	.59	2.1	.60	.49	.52	.16	.13
8	.24	.29	.32	e.43	.44	.50	2.9	.60	.44	.45	.15	.13
9	.23	.28	.33	e.42	.47	.52	3.1	.58	.41	.42	.14	.13
10	.24	1.1	.31	e.41	.85	.63	2.3	.57	.38	.54	.18	.12
11	.25	1.6	.34	e.41	.70	.71	1.8	.53	.39	1.1	.19	.12
12	.25	1.1	.41	e.40	.51	.74	1.9	.50	.68	.60	.50	.12
13	.23	.74	.39	e.41	.46	1.4	1.9	.47	.49	.41	2.6	.12
14	.25	.67	.57	.42	.45	1.3	1.6	.47	.42	.36	1.8	.16
15	.25	.93	.54	.46	.56	1.2	1.4	.48	.37	.33	.74	.15
16	.27	.65	.45	.49	.56	1.3	1.3	.50	.35	.30	.40	.14
17	.37	.52	2.8	.47	.59	1.4	1.2	.50	4.7	.35	.30	.13
18	.43	.44	5.1	.44	.53	1.6	1.3	.48	15	.36	.27	.12
19	.78	.40	2.9	.56	.46	1.5	1.2	.46	4.1	.32	.23	.12
20	.52	.37	1.9	.71	.49	1.5	1.1	.43	1.3	.28	.35	.12
21	.43	.35	1.2	.58	.59	1.7	1.1	.41	.73	.26	.30	.18
22	.37	.34	.93	.49	.52	13	1.0	.63	.66	.24	.24	.18
23	.34	.32	.77	.45	.48	16	.98	.72	.70	.22	.21	.15
24	.32	.30	.67	.43	.44	7.8	.97	1.5	.63	.21	.19	.14
25	.29	.29	.61	.41	.51	5.1	.91	1.3	.56	.20	.18	.18
26	.28	.71	.55	.46	.78	3.6	.88	.78	.46	.26	.17	.19
27	.27	1.2	.55	.38	.69	3.0	.86	1.7	.41	.25	.18	.16
28	.30	.83	.52	.38	.60	2.7	.84	1.1	.37	.22	.21	.15
29	.35	.61	.51	.36	---	2.4	.81	.83	.35	.20	.17	.15
30	.36	.57	e.50	.49	---	8.1	.79	.80	.69	.19	.16	.16
31	.87	---	e.49	.66	---	15	---	.60	---	.18	.16	---
TOTAL	10.15	17.40	26.39	14.29	15.04	96.22	53.44	21.70	41.32	15.86	11.25	4.32
MEAN	.33	.58	.85	.46	.54	3.10	1.78	.70	1.38	.51	.36	.14
MAX	.87	1.6	5.1	.71	.85	16	6.1	1.7	15	2.6	2.6	.19
MIN	.20	.28	.31	.36	.42	.44	.79	.41	.35	.18	.14	.12
CFSM	.28	.50	.74	.40	.47	2.70	1.55	.61	1.20	.44	.32	.13
IN.	.33	.56	.85	.46	.49	3.11	1.73	.70	1.34	.51	.36	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	2000	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
MEAN	.33	.58	.85	.46	.54	3.10	1.78	.70	1.38	.51	.36	.14
MAX	.33	.58	.85	.46	.54	3.10	1.78	.70	1.38	.51	.36	.14
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
MIN	.33	.58	.85	.46	.54	3.10	1.78	.70	1.38	.51	.36	.14
(WY)	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 2000 - 2001

ANNUAL TOTAL	327.38		
ANNUAL MEAN	.90	.90	
HIGHEST ANNUAL MEAN		.90	2001
LOWEST ANNUAL MEAN		.90	2001
HIGHEST DAILY MEAN	16	16	Mar 23 2001
LOWEST DAILY MEAN	.12	.12	Sep 10 2001
ANNUAL SEVEN-DAY MINIMUM	.12	.12	Sep 7 2001
MAXIMUM PEAK FLOW	24	24	Mar 22 2001
MAXIMUM PEAK STAGE	2.65	2.65	Mar 22 2001
INSTANTANEOUS LOW FLOW	.08	.08	Nov 5 2000
ANNUAL RUNOFF (CFSM)	.78	.78	
ANNUAL RUNOFF (INCHES)	10.59	10.60	
10 PERCENT EXCEEDS	1.6	1.6	
50 PERCENT EXCEEDS	.47	.47	
90 PERCENT EXCEEDS	.18	.18	

e Estimated



## CHARLES RIVER BASIN

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<sup>2</sup>.

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.--3 years, 106 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft<sup>3</sup>/s, Mar. 23, 2001, gage height, 6.35 ft; minimum, 2.0 ft<sup>3</sup>/s, Sept. 5, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft<sup>3</sup>/s, Mar. 23, gage height, 6.35 ft; minimum, 7.4 ft<sup>3</sup>/s, Sept. 12.

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	17	42	66	e60	e62	e78	1050	80	64	166	16	17
2	16	39	56	e56	e70	e74	817	79	98	186	15	15
3	15	34	46	e52	e64	e70	627	76	155	174	13	13
4	15	30	e39	e50	e58	e66	500	71	160	144	13	12
5	14	26	35	e49	e54	e64	394	66	140	125	14	12
6	16	26	33	e47	e58	e68	330	61	109	127	14	11
7	19	25	31	e46	e62	e72	302	56	77	113	13	11
8	19	24	30	e45	e64	e76	334	54	59	96	12	10
9	17	23	e29	e44	e64	82	355	51	47	82	11	10
10	16	63	e28	e43	e70	88	339	49	40	81	14	9.4
11	15	132	29	e42	e72	101	297	46	44	144	16	8.4
12	15	143	34	e41	e74	115	273	43	91	140	28	7.8
13	13	123	34	e40	e76	180	264	40	83	120	53	8.3
14	13	99	37	e40	e78	245	246	38	66	92	77	12
15	14	102	48	e40	e79	282	223	36	51	71	76	13
16	15	95	45	e30	e80	317	202	37	39	55	62	14
17	17	85	204	e46	e82	350	183	39	311	47	45	14
18	20	66	437	e49	e82	382	179	38	797	49	34	12
19	39	53	478	e52	e82	380	169	38	738	45	30	11
20	41	45	428	e56	e80	376	158	35	517	40	33	10
21	36	41	317	e60	e78	374	148	33	300	34	37	13
22	28	38	249	e64	e76	1000	139	37	204	29	32	16
23	23	34	e200	e60	e74	1410	130	55	158	25	25	20
24	21	31	e160	e54	e72	1290	122	83	128	22	21	16
25	19	27	e130	e50	e74	978	111	105	107	e20	18	16
26	17	40	e100	e47	e76	744	103	91	89	e21	17	19
27	17	95	e95	e44	e80	616	98	125	74	e23	19	24
28	18	101	e85	e42	e80	518	95	136	59	e25	22	19
29	18	91	e75	e40	---	430	90	127	49	e20	28	16
30	19	76	e70	e46	---	671	85	103	53	e19	23	15
31	31	---	e65	e54	---	1080	---	81	---	17	19	---
TOTAL	613	1849	3713	1489	2021	12577	8363	2009	4907	2352	850	404.9
MEAN	19.8	61.6	120	48.0	72.2	406	279	64.8	164	75.9	27.4	13.5
MAX	41	143	478	64	82	1410	1050	136	797	186	77	24
MIN	13	23	28	30	54	64	85	33	39	17	11	7.8
CFSM	.30	.94	1.82	.73	1.10	6.18	4.24	.99	2.49	1.15	.42	.21
IN.	.35	1.05	2.10	.84	1.14	7.12	4.74	1.14	2.78	1.33	.48	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	1998	1999	2000	2001	1998	1999	2000	2001	1998	1999	2000	2001
MEAN	56.8	60.5	74.2	140	180	304	209	138	163	63.3	21.2	36.6
MAX	82.8	74.0	120	227	257	406	279	271	339	138	28.9	94.8
(WY)	1999	2000	2001	1999	1998	2001	2001	1998	1998	1998	1999	1999
MIN	19.8	45.9	40.0	48.0	72.2	199	99.7	64.8	15.7	15.5	4.63	13.5
(WY)	2001	1999	1999	2001	2001	2000	1999	2001	1999	1999	1999	2001

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1998 - 2001
ANNUAL TOTAL	36586.9	41147.9	
ANNUAL MEAN	100	113	106
HIGHEST ANNUAL MEAN			113
LOWEST ANNUAL MEAN			103
HIGHEST DAILY MEAN	693	Apr 24	1410
LOWEST DAILY MEAN	7.6	Sep 14	7.8
ANNUAL SEVEN-DAY MINIMUM	7.9	Sep 8	9.3
MAXIMUM PEAK FLOW			1490
MAXIMUM PEAK STAGE			6.35
INSTANTANEOUS LOW FLOW			7.4
ANNUAL RUNOFF (CFSM)	1.52	1.72	1.61
ANNUAL RUNOFF (INCHES)	20.72	23.30	21.93
10 PERCENT EXCEEDS	238	288	297
50 PERCENT EXCEEDS	58	54	64
90 PERCENT EXCEEDS	15	15	14

e Estimated

CHARLES RIVER BASIN

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<sup>2</sup>.

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.--64 years, 305 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft<sup>3</sup>/s, Aug. 23, 1955, gage height, 9.24 ft and Mar. 22, 1968, gage height, 8.72 ft; minimum, 0.5 ft<sup>3</sup>/s, Oct. 24, 1952 (caused by unusual regulation); minimum daily, 0.9 ft<sup>3</sup>/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<sup>3</sup>/s, by computation of flow over dam at site 0.2 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,130 ft<sup>3</sup>/s, Mar. 25 ; gage height, 6.97 ft; minimum 28 ft<sup>3</sup>/s, Sept. 14.

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	62	93	229	218	197	315	1870	270	233	335	67	66
2	58	107	207	203	216	300	1900	255	239	388	62	59
3	55	112	183	187	225	281	1870	242	267	409	60	53
4	54	105	157	178	224	262	1760	227	292	423	73	47
5	55	93	148	166	214	250	1620	207	310	421	67	46
6	70	86	150	164	189	211	1460	196	309	399	59	44
7	69	84	133	161	221	223	1320	183	290	359	56	42
8	65	80	118	159	227	264	1220	170	256	331	52	39
9	62	76	106	160	228	285	1130	162	212	301	49	37
10	58	134	97	157	271	291	1050	155	171	270	46	34
11	54	232	96	154	303	298	977	148	144	258	49	33
12	50	276	102	154	295	310	927	141	193	254	68	31
13	47	291	102	152	315	382	878	130	223	251	102	30
14	45	296	117	141	315	434	813	122	222	247	151	32
15	41	309	131	145	321	480	765	114	207	230	171	36
16	43	292	140	149	322	537	721	114	176	202	170	36
17	48	279	284	155	327	599	675	114	336	177	157	36
18	55	254	467	157	319	666	638	114	669	157	170	36
19	100	224	522	164	306	714	600	112	704	146	141	35
20	112	192	613	182	295	756	567	109	810	138	126	34
21	126	166	649	181	296	786	535	104	867	128	122	38
22	120	147	650	e184	293	1410	504	109	843	117	119	45
23	107	133	601	e192	284	1740	466	127	767	107	107	45
24	94	120	e572	191	268	1940	438	161	682	97	91	46
25	83	109	495	183	258	2100	401	208	600	92	81	48
26	75	122	470	174	270	2100	375	229	520	84	73	50
27	68	182	412	166	295	2010	351	264	437	85	66	51
28	64	223	352	156	315	1850	326	270	378	84	68	52
29	62	240	290	150	---	1680	302	278	318	82	75	52
30	63	242	253	153	---	e1690	284	277	285	77	73	50
31	76	---	235	177	---	e1860	---	259	---	72	72	---
TOTAL	2141	5299	9081	5213	7609	27024	26743	5571	11960	6721	2843	1283
MEAN	69.1	177	293	168	272	872	891	180	399	217	91.7	42.8
MAX	126	309	650	218	327	2100	1900	278	867	423	171	66
MIN	41	76	96	141	189	211	284	104	144	72	46	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 2001, BY WATER YEAR (WY)

	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	142	247	340	367	430	620	588	359	240	127	113	100																																																				
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	1986	1981	1980	1985	1966	1986	1999	1957	1957	1957																																																				

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 WATER YEAR	FOR 2001 WATER YEAR	FOR 2000 WATER YEAR	FOR 2001 WATER YEAR	WATER YEARS 1938 - 2001
ANNUAL TOTAL	98137	111488	98137	111488	98137	111488	
ANNUAL MEAN	268	305	268	305	268	305	
HIGHEST ANNUAL MEAN							1984
LOWEST ANNUAL MEAN							1966
HIGHEST DAILY MEAN	1100	Apr 26	2100	Mar 25	3190	Mar 22	1968
LOWEST DAILY MEAN	25	Sep 14	30	Sep 13	.90	Oct 24	1952
ANNUAL SEVEN-DAY MINIMUM	30	Sep 9	33	Sep 10	4.3	Sep 10	1995
MAXIMUM PEAK FLOW			2130	Mar 25	3220	Aug 23	1955
MAXIMUM PEAK STAGE			6.97	Mar 25	9.24	Aug 23	1955
INSTANTANEOUS LOW FLOW			28	Sep 14	.50	Oct 24	1952
10 PERCENT EXCEEDS	564		671		687		
50 PERCENT EXCEEDS	187		183		210		
90 PERCENT EXCEEDS	56		52		43		

e Estimated

CHARLES RIVER BASIN

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 fair. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park.

AVERAGE DISCHARGE.--70 years, 75.9 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft<sup>3</sup>/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, 583 ft<sup>3</sup>/s, Mar. 26, 27, gage height, 86.20 ft; minimum, 1.3 ft<sup>3</sup>/s, Sept. 16, 17, 24.

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	4.1	6.5	44	32	45	43	535	6.1	56	99	5.4	4.0
2	3.3	6.2	36	27	51	38	523	9.9	64	101	5.2	2.9
3	3.7	5.8	27	22	52	32	511	36	68	102	9.9	2.4
4	5.5	4.6	18	20	51	26	489	37	67	98	20	2.8
5	6.4	4.1	14	25	51	24	452	44	77	99	8.4	2.1
6	9.8	2.8	27	25	47	28	411	39	78	92	5.4	2.0
7	7.1	1.8	26	22	49	23	371	35	75	69	5.1	2.0
8	4.9	1.9	21	18	49	29	340	34	64	53	4.3	1.8
9	3.8	5.5	16	17	48	34	312	31	52	49	4.0	1.5
10	3.0	30	12	15	68	37	286	28	37	62	3.9	1.4
11	2.5	68	12	14	e70	31	256	27	28	58	3.3	1.4
12	2.6	70	12	15	e66	36	253	28	43	46	8.0	1.4
13	2.1	65	11	13	68	65	246	26	43	43	13	1.7
14	1.7	66	15	12	70	89	220	23	41	49	27	2.3
15	1.6	81	17	14	74	100	191	23	36	43	26	1.4
16	2.1	60	16	14	72	118	169	21	35	36	27	1.3
17	2.1	45	73	13	73	136	153	22	77	35	27	1.3
18	6.6	37	165	14	70	156	142	20	215	28	38	1.4
19	19	28	151	19	60	174	124	21	194	25	24	1.4
20	12	17	171	24	54	183	108	18	192	19	15	1.4
21	9.0	9.8	175	24	55	195	96	16	205	13	10	2.3
22	8.5	9.7	172	21	50	428	89	23	202	9.3	6.8	3.3
23	5.9	22	159	22	46	562	77	27	186	7.6	4.3	1.8
24	3.6	21	136	21	40	552	68	37	155	9.8	2.9	1.4
25	2.1	18	119	16	34	566	61	43	124	9.0	2.4	2.4
26	2.2	24	68	17	39	577	51	50	102	8.7	2.3	2.3
27	5.1	40	70	15	42	570	34	60	105	9.0	3.1	2.8
28	7.3	44	71	12	44	533	21	57	89	7.4	2.7	2.8
29	5.8	48	56	12	---	485	12	55	82	5.8	3.3	2.2
30	4.8	57	46	15	---	492	8.6	55	75	5.0	5.0	1.8
31	9.3	---	43	25	---	555	---	55	---	5.6	4.6	---
TOTAL	167.5	899.7	1999	575	1538	6917	6609.6	1007.0	2867	1296.2	327.3	61.0
MEAN	5.40	30.0	64.5	18.5	54.9	223	220	32.5	95.6	41.8	10.6	2.03
MAX	19	81	175	32	74	577	535	60	215	102	38	4.0
MIN	1.6	1.8	11	12	34	23	8.6	6.1	28	5.0	2.3	1.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
26.9	54.4	83.2	95.6	112	176
182	308	285	287	360	490
1956	1956	1973	1976	1970	1936
.000	.60	.43	.14	.14	.54
1942	1999	1959	1959	1959	1959
88.1	55.2	22.4	21.0	20.2	160
253	328	339	306	189	437
1987	1954	1982	1938	1955	1987
.000	.000	.061	.000	.097	25.3
1960	1955	1957	1949	1943	1999

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1932 - 2001

ANNUAL TOTAL	18907.6	24264.3	
ANNUAL MEAN	51.7	66.5	75.9
HIGHEST ANNUAL MEAN			149
LOWEST ANNUAL MEAN			20.6
HIGHEST DAILY MEAN	352	Apr 26	577
LOWEST DAILY MEAN	1.6	Oct 15	1.3
ANNUAL SEVEN-DAY MINIMUM	2.1	Oct 11	1.5
MAXIMUM PEAK FLOW			583
MAXIMUM PEAK STAGE			86.20
INSTANTANEOUS LOW FLOW			1.3
10 PERCENT EXCEEDS	114		171
50 PERCENT EXCEEDS	29		27
90 PERCENT EXCEEDS	3.1		2.6
			1010
			.00
			.00
			1040
			92.90
			.00
			202
			38
			1.4

e Estimated

CHARLES RIVER BASIN

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<sup>2</sup>.

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.--42 years, 288 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft<sup>3</sup>/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<sup>3</sup>/s, Aug. 24, 31, Sept. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,750 ft<sup>3</sup>/s, Mar. 26, gage height, 5.41 ft; minimum daily, 20 ft<sup>3</sup>/s, Sept. 18.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	116	256	278	189	367	1650	347	198	391	56	66
2	71	123	236	253	211	357	1610	224	238	359	57	65
3	47	134	217	234	219	341	1580	230	261	359	73	60
4	50	134	193	199	219	323	1540	207	235	381	126	56
5	66	124	141	193	224	312	1450	190	250	402	90	38
6	97	121	147	199	231	272	1350	192	253	406	62	32
7	94	113	146	191	247	278	1260	169	253	373	55	31
8	87	74	131	188	253	314	1180	159	224	349	50	28
9	80	73	118	194	260	349	1110	157	196	263	47	35
10	78	160	109	187	312	368	1030	151	168	248	49	37
11	72	281	109	183	334	381	964	132	131	259	51	34
12	70	299	110	184	315	392	916	129	172	244	93	28
13	65	311	111	174	325	496	860	124	194	208	109	22
14	62	329	134	173	339	558	795	109	205	208	144	33
15	59	357	150	182	360	577	753	106	175	213	146	40
16	36	339	153	190	359	634	719	105	158	176	147	39
17	31	328	360	194	362	669	681	107	281	164	143	28
18	60	312	564	193	352	705	646	104	628	143	187	20
19	136	288	554	207	344	747	621	103	630	133	159	21
20	134	253	606	226	344	777	590	104	655	132	140	21
21	141	220	637	218	343	804	565	95	700	128	134	35
22	143	137	641	219	339	1310	530	106	722	121	125	60
23	139	130	594	225	332	1620	506	118	711	88	117	54
24	126	128	559	225	318	1620	479	143	660	83	104	38
25	113	120	518	221	316	1660	449	160	598	86	90	37
26	69	147	396	211	335	1710	426	182	460	77	80	43
27	67	209	404	201	350	1700	406	218	397	77	49	43
28	69	226	394	193	361	1630	401	238	324	77	52	48
29	76	245	344	184	---	1520	385	249	289	75	51	51
30	79	257	320	195	---	1560	363	253	286	60	58	51
31	113	---	316	174	---	1700	---	212	---	57	69	---
TOTAL	2606	6088	9668	6288	8493	26051	25815	5123	10652	6340	2913	1194
MEAN	84.1	203	312	203	303	840	860	165	355	205	94.0	39.8
MAX	143	357	641	278	362	1710	1650	347	722	406	187	66
MIN	31	73	109	173	189	272	363	95	131	57	47	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2001, BY WATER YEAR (WY)

MEAN	153	241	329	344	404	557	551	340	242	117	101	92.6
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

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1959 - 2001	
ANNUAL TOTAL	105178		111231			
ANNUAL MEAN	287		305		288	
HIGHEST ANNUAL MEAN					458	
LOWEST ANNUAL MEAN					108	
HIGHEST DAILY MEAN	982		1710		2330	
LOWEST DAILY MEAN	21		20		1.0	
ANNUAL SEVEN-DAY MINIMUM	27		29		4.1	
MAXIMUM PEAK FLOW			1750		2410	
MAXIMUM PEAK STAGE			5.41		6.20	
INSTANTANEOUS LOW FLOW			16		.00	
10 PERCENT EXCEEDS	605		657		630	
50 PERCENT EXCEEDS	228		196		210	
90 PERCENT EXCEEDS	63		55		45	

CHARLES RIVER BASIN

01104430 HOBBS BROOK BELOW CAMBRIDGE RESERVOIR NEAR KENDAL GREEN, MA

LOCATION.--Lat 42°23'53", Long 71°16'26", Middlesex County, Hydrologic Unit 01090001, 50 ft downstream of culvert on Winter Street, 300 ft downstream of gate house outlet from Cambridge Reservoir, and 1.3 mi north of Kendal Green.

DRAINAGE AREA.--6.86 mi<sup>2</sup>

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records good. Flow affected by regulation of dam 300 ft upstream at outflow of Cambridge Reservoir.

AVERAGE DISCHARGE.--4 years , 9.97 ft<sup>3</sup>/s

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 39 ft<sup>3</sup>/s, Apr. 22, 2000, gage height, 1.93 ft; minimum, no flow, Apr. 10, 2001; minimum daily, 0.01 ft<sup>3</sup>/s, Apr. 12, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 35 ft<sup>3</sup>/s, Oct. 26, gage height, 1.84 ft; minimum, no flow, Apr. 10, minimum daily, 0.01 ft<sup>3</sup>/s, Apr. 12.

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	31	31	32	0.29	0.37	0.37	1.1	9.5	1.1	11	23	21
2	30	33	31	.29	.36	.37	4.2	9.1	1.6	18	23	21
3	29	28	31	.25	.38	.36	12	8.8	1.7	16	23	21
4	29	21	31	.24	.40	.36	18	8.1	1.7	13	23	21
5	29	21	31	.27	.41	.37	22	7.9	1.5	13	23	21
6	28	26	31	.29	.42	.39	23	6.4	1.3	12	22	21
7	27	33	31	.32	.45	.40	26	4.4	1.3	9.9	23	21
8	27	33	31	.32	2.1	.38	30	7.5	1.2	8.4	23	21
9	26	32	30	.33	1.5	.39	33	15	1.1	7.2	23	21
10	28	30	30	.35	.15	.41	14	17	1.1	6.2	23	21
11	29	30	30	.35	.13	.41	.33	16	12	6.0	22	23
12	29	30	30	.35	.29	.41	.01	16	17	4.2	22	27
13	29	14	30	.34	.40	.41	.04	16	18	2.2	22	27
14	29	.12	30	.31	.41	.41	.05	16	17	1.6	22	27
15	29	.08	30	.31	.41	.40	.14	24	17	1.4	22	27
16	29	.06	30	.31	.40	.40	.12	29	17	1.1	22	27
17	29	.05	30	.32	.39	.41	.14	29	17	1.2	22	27
18	28	.04	30	.73	.37	.45	.02	30	6.3	1.3	22	26
19	27	.03	30	.33	.36	.45	.19	30	2.4	1.3	22	24
20	29	.03	11	.32	.37	.76	.67	29	3.5	1.0	22	22
21	30	.05	.49	.32	.37	1.1	.54	20	9.9	1.0	22	22
22	30	.05	.33	.34	.37	1.3	6.9	12	8.9	1.0	22	22
23	30	.05	.31	.34	.36	.52	13	12	8.3	1.1	22	22
24	30	.05	.26	.34	.35	.61	13	8.1	11	1.1	22	22
25	32	.05	.22	.33	.36	.67	13	.85	17	7.2	22	16
26	34	.05	.21	.32	.37	.67	14	.84	15	18	22	15
27	34	.05	.23	.32	.35	.67	13	.92	13	23	22	21
28	33	.05	.23	.32	.36	.70	10	.94	11	23	22	23
29	33	.05	.23	.35	---	.73	7.6	.98	8.2	23	22	23
30	33	21	.25	.34	---	.81	7.6	1.1	7.0	23	21	23
31	31	---	.27	.34	---	.97	---	1.0	---	23	21	---
TOTAL	921	383.86	593.03	10.28	12.96	17.06	283.65	387.43	250.1	280.4	689	676
MEAN	29.7	12.8	19.1	.33	.46	.55	9.45	12.5	8.34	9.05	22.2	22.5
MAX	34	33	32	.73	2.1	1.3	33	30	18	23	23	27
MIN	26	.03	.21	.24	.13	.36	.01	.84	1.1	1.0	21	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001
MEAN	15.7	11.8	10.3	4.24	2.91
MAX	29.7	24.0	19.1	6.11	6.74
(WY)	2001	1999	2001	2000	2000
MIN	.75	.42	4.83	.33	.32
(WY)	2000	2000	2000	2001	1999

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1997 - 2001

ANNUAL TOTAL	4866.60	4504.77	
ANNUAL MEAN	13.3	12.3	9.97
HIGHEST ANNUAL MEAN			12.8
LOWEST ANNUAL MEAN			6.14
HIGHEST DAILY MEAN	37	Apr 21	37
LOWEST DAILY MEAN	.03	Nov 19	.01
ANNUAL SEVEN-DAY MINIMUM	.04	Nov 17	.04
MAXIMUM PEAK FLOW			35
MAXIMUM PEAK STAGE			1.84
INSTANTANEOUS LOW FLOW			.00
10 PERCENT EXCEEDS	31	30	27
50 PERCENT EXCEEDS	6.4	9.1	5.6
90 PERCENT EXCEEDS	.54	.27	.31

01104430 HOBBS BROOK BELOW CAMBRIDGE RESERVOIR NEAR KENDAL GREEN, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1997 to current year.  
 WATER TEMPERATURE: July 1997 to current year.  
 CALCIUM CONCENTRATION: October 1997 to September 1998 (discontinued).  
 CALCIUM LOAD: October 1997 to September 1998 (discontinued).  
 SODIUM CONCENTRATION: October 1997 to September 1998 (discontinued).  
 SODIUM LOAD: October 1997 to September 1998 (discontinued).  
 CHLORIDE CONCENTRATION: October 1997 to September 1998 (discontinued).  
 CHLORIDE LOAD: October 1997 to September 1998 (discontinued).

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

REMARKS.--Records good. Specific conductance and temperature water-quality probes located in brook at outflow below Cambridge Reservoir.

EXTREMES FOR PERIOD OF RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,940 µS/cm, March 20, 2001; minimum, 163 µS/cm, Nov. 26, 2000.  
 WATER TEMPERATURE: Maximum recorded, 26.5°C, June 26, 2001; minimum, 0.2°C, Jan. 18, 2001.  
 CALCIUM CONCENTRATION: Maximum daily mean, 25 mg/L, Feb. 3, 4, 1998; minimum daily mean, 15 mg/L, many days.  
 CALCIUM LOAD: Maximum daily, 1.50 tons, June 19, 1998; minimum daily, 0.00 tons, Nov. 17, 18, 1997.  
 SODIUM CONCENTRATION: Maximum daily mean, 98 mg/L, Feb. 3, 1998; minimum daily mean, 53 mg/L, several days.  
 SODIUM LOAD: Maximum daily, 5.45 tons, June 19, 1998; minimum daily, 0.01 tons, Nov. 18, 1997.  
 CHLORIDE CONCENTRATION: Maximum daily mean, 180 mg/L, Feb. 3, 4, 1998; minimum daily mean, 96 mg/L, Sept. 29, 30, 1998.  
 CHLORIDE LOAD: Maximum daily, 9.91 tons, June 19, 1998; minimum daily, 0.03 tons, Nov. 17, 18, 1997.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,940 µS/cm, March 20; minimum, 163 µS/cm, Nov. 26.  
 WATER TEMPERATURE: Maximum recorded, 26.5°C, June 26; minimum, 0.2°C, Jan. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

SPECIFIC CONDUCTANCE (µS/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	605	595	601	615	611	613	613	595	606	655	629	640
2	605	596	601	615	608	612	615	602	610	661	640	651
3	604	594	600	615	563	601	617	602	612	672	643	658
4	605	598	601	615	563	599	617	563	603	684	657	669
5	606	594	601	614	562	591	620	547	577	690	668	680
6	601	591	597	616	609	612	624	566	597	700	663	687
7	600	592	596	613	610	612	627	601	619	706	682	696
8	600	584	596	613	608	611	629	593	622	711	687	703
9	598	583	594	613	608	611	629	599	623	726	694	712
10	596	581	592	612	588	602	636	625	630	748	717	732
11	594	572	589	599	592	596	631	596	627	749	688	708
12	593	583	589	599	594	598	628	607	624	782	722	751
13	590	579	587	599	594	598	628	609	623	798	761	782
14	593	582	589	---	---	---	626	613	621	834	770	808
15	599	575	593	---	---	---	624	605	619	899	833	862
16	602	585	596	---	---	---	626	608	621	955	889	924
17	595	588	592	---	---	---	622	602	615	1010	937	970
18	593	583	590	---	---	---	607	584	602	1030	233	956
19	589	578	585	---	---	---	610	592	605	1000	854	984
20	586	578	583	616	584	596	608	591	601	1010	960	998
21	584	574	581	622	578	607	607	593	599	1020	988	1010
22	584	577	581	623	591	614	605	590	597	1040	985	1020
23	583	573	578	638	606	623	611	591	599	1050	1000	1030
24	578	566	576	637	609	627	619	597	609	1060	997	1040
25	580	567	576	644	605	626	619	587	608	1140	1030	1070
26	580	571	577	627	163	532	625	605	616	1160	1090	1130
27	580	569	577	595	550	576	638	617	628	1160	1120	1140
28	582	571	578	604	572	590	643	623	633	1160	1110	1150
29	578	559	573	614	583	594	647	627	638	1280	1140	1210
30	572	562	569	607	580	598	651	626	634	1360	1270	1310
31	614	563	607	---	---	---	652	621	636	1460	1320	1380
MONTH	614	559	589	---	---	---	652	547	615	1460	233	905

CHARLES RIVER BASIN

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SPECIFIC CONDUCTANCE (μS/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1,520	1,440	1,500	1,530	1,430	1,480	651	614	628	761	742	750
2	1,520	1,430	1,500	1,530	1,460	1,500	618	600	607	765	745	756
3	1,520	1,450	1,500	1,550	1,470	1,520	620	585	604	767	757	762
4	1,540	1,450	1,520	1,560	1,500	1,530	604	572	586	775	761	769
5	1,540	1,490	1,530	1,550	1,480	1,530	617	578	597	792	767	777
6	1,550	1,460	1,510	1,560	1,460	1,530	601	568	585	806	769	786
7	1,570	1,490	1,550	1,570	1,500	1,540	641	578	599	826	794	812
8	1,780	1,550	1,660	1,570	1,470	1,530	634	586	619	806	742	785
9	1,740	1,470	1,620	1,550	1,500	1,520	628	600	617	830	742	790
10	1,540	1,320	1,450	1,550	1,500	1,520	621	610	616	832	815	821
11	1,560	1,430	1,510	1,550	1,490	1,530	666	617	635	832	775	795
12	1,570	1,360	1,450	1,560	1,520	1,540	662	632	641	814	781	800
13	1,440	1,350	1,390	1,560	1,480	1,520	651	634	639	836	812	824
14	1,450	1,370	1,410	1,530	1,450	1,510	655	605	629	822	796	810
15	1,460	1,380	1,430	1,530	1,460	1,500	647	630	639	836	791	821
16	1,470	1,380	1,440	1,520	1,440	1,490	668	640	653	806	784	799
17	1,490	1,400	1,460	1,490	1,390	1,460	669	650	659	784	774	778
18	1,490	1,400	1,450	1,480	1,370	1,450	670	659	664	779	771	775
19	1,480	1,370	1,440	1,460	1,400	1,430	703	666	683	779	770	774
20	1,460	1,400	1,420	1,940	1,390	1,630	699	692	695	779	767	775
21	1,480	1,380	1,430	1,920	1,850	1,900	704	696	700	799	774	785
22	1,470	1,410	1,440	1,900	753	1,270	718	703	709	800	783	794
23	1,470	1,390	1,430	760	676	724	731	714	721	807	777	792
24	1,450	1,360	1,430	711	661	682	732	714	722	800	736	781
25	1,430	1,370	1,410	719	652	679	735	729	732	800	735	761
26	1,450	1,360	1,420	729	669	691	737	729	733	762	728	742
27	1,460	1,380	1,430	708	660	674	744	731	737	786	732	763
28	1,500	1,410	1,460	715	658	685	745	734	739	763	733	748
29	---	---	---	705	659	688	747	732	739	757	730	739
30	---	---	---	694	613	652	748	737	743	817	734	777
31	---	---	---	650	618	633	---	---	---	788	753	767
MONTH	1780	1320	1470	1940	613	1280	748	568	662	836	728	781

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	823	757	796	824	807	819	829	812	821	789	777	783
2	836	806	826	822	812	817	840	822	830	783	776	779
3	817	787	797	822	814	819	836	818	828	782	776	779
4	793	774	782	824	817	820	830	811	821	781	774	777
5	811	775	794	824	809	819	815	808	811	787	775	781
6	793	770	781	829	815	823	820	804	809	783	774	778
7	830	790	815	831	822	826	834	817	827	786	776	780
8	841	799	822	824	818	821	833	816	825	780	770	775
9	824	805	811	829	818	823	821	810	817	786	772	779
10	818	786	798	829	818	825	823	802	811	794	783	788
11	808	771	790	827	816	821	811	798	805	810	789	798
12	798	777	786	828	820	823	802	793	798	791	783	787
13	789	776	784	826	817	821	797	789	793	786	771	779
14	794	773	784	828	819	822	792	782	789	778	771	775
15	803	774	789	830	820	824	790	782	786	784	775	779
16	798	776	788	830	821	825	789	782	785	787	777	782
17	801	772	787	825	816	821	786	782	784	788	778	783
18	800	753	770	825	816	820	786	777	783	791	782	786
19	773	760	768	823	812	817	785	776	782	812	785	797
20	774	741	764	823	808	814	786	777	780	836	812	827
21	761	751	757	820	808	812	782	773	778	839	829	834
22	824	751	780	816	805	810	785	775	780	837	821	829
23	822	815	820	815	806	811	782	774	778	821	810	814
24	822	796	815	817	809	812	783	776	779	819	810	814
25	823	804	813	850	809	825	783	776	779	816	791	804
26	829	811	819	839	813	828	780	774	776	806	790	797
27	827	812	820	826	810	821	781	773	777	795	773	785
28	838	820	828	824	812	819	784	775	780	782	774	778
29	836	821	827	821	803	813	787	775	780	779	772	776
30	829	818	824	816	804	812	787	778	782	777	772	774
31	---	---	---	823	811	816	786	778	782	---	---	---
MONTH	841	741	798	850	803	819	840	773	795	839	770	790

CHARLES RIVER BASIN

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TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN												
													OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	16.9	16.7	16.8	9.7	9.4	9.6	4.3	3.6	4.1	3.6	2.7	3.1												
2	17.1	16.5	16.8	9.9	9.3	9.6	3.8	3.0	3.5	3.6	3.1	3.2												
3	16.9	16.8	16.9	10.0	9.6	9.8	3.5	3.1	3.3	3.9	3.1	3.4												
4	17.2	16.9	17.0	10.2	9.6	9.8	3.5	3.2	3.4	3.8	3.2	3.4												
5	17.1	16.9	17.0	10.2	9.6	9.9	3.2	2.9	3.1	4.0	3.2	3.6												
6	16.9	16.5	16.7	9.7	9.2	9.4	3.4	2.9	3.2	4.3	3.5	3.9												
7	16.7	16.2	16.5	9.7	9.1	9.4	3.4	3.3	3.4	4.3	3.7	4.0												
8	16.5	15.9	16.2	9.7	9.2	9.4	3.4	3.3	3.4	4.4	3.8	4.0												
9	15.9	14.9	15.3	9.4	9.1	9.3	3.3	3.1	3.2	4.4	3.8	4.1												
10	14.9	14.2	14.6	9.4	9.3	9.3	3.1	3.0	3.0	4.3	3.4	3.8												
11	14.2	13.7	13.9	9.4	9.2	9.3	3.2	3.0	3.1	4.6	3.8	4.2												
12	13.7	13.5	13.6	9.7	9.0	9.4	3.4	3.2	3.3	4.5	3.8	4.1												
13	13.6	13.2	13.4	9.4	9.2	9.3	3.6	3.4	3.5	4.5	3.8	4.1												
14	13.9	13.5	13.7	---	---	---	3.7	3.6	3.6	4.9	4.1	4.4												
15	14.9	13.7	14.1	---	---	---	3.6	3.0	3.3	4.6	4.2	4.4												
16	14.8	13.9	14.3	---	---	---	3.3	3.2	3.3	4.9	4.4	4.6												
17	13.9	13.6	13.7	---	---	---	4.0	3.2	3.3	4.8	4.4	4.5												
18	13.7	13.3	13.5	---	---	---	3.5	3.0	3.2	5.0	.2	4.3												
19	13.6	13.1	13.3	---	---	---	3.3	2.9	3.2	4.8	4.5	4.6												
20	13.2	12.8	13.0	8.1	5.6	7.0	3.0	2.4	2.6	4.7	4.4	4.6												
21	12.9	12.6	12.8	7.3	4.6	5.6	3.0	2.5	2.7	4.7	3.4	4.3												
22	13.0	12.6	12.8	6.2	3.6	4.5	3.2	2.8	3.0	5.1	4.1	4.4												
23	12.7	12.4	12.5	4.8	2.1	3.2	3.2	2.7	2.9	5.0	4.2	4.5												
24	12.4	12.1	12.2	4.0	1.9	2.5	3.1	2.7	2.9	5.1	4.4	4.7												
25	12.7	12.1	12.4	3.9	1.3	2.5	2.9	2.0	2.4	5.2	4.5	4.7												
26	12.6	12.4	12.5	6.2	1.9	4.0	2.6	2.0	2.2	5.1	4.3	4.6												
27	12.7	12.5	12.6	8.5	5.4	6.7	2.7	2.1	2.3	5.3	4.6	4.8												
28	12.9	12.1	12.6	8.9	5.3	7.0	2.5	2.0	2.2	5.2	4.5	4.8												
29	12.1	10.9	11.4	7.8	4.9	6.1	2.5	2.0	2.2	5.2	4.4	4.8												
30	10.9	10.2	10.6	5.6	4.2	4.7	2.8	2.0	2.5	5.2	4.7	5.0												
31	10.2	9.6	9.8	---	---	---	3.0	2.6	2.7	5.5	5.0	5.2												
MONTH	17.2	9.6	14.0	---	---	---	4.3	2.0	3.0	5.5	.2	4.3												
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN												
FEBRUARY				MARCH			APRIL			MAY														
1	5.7	5.0	5.2	6.0	5.0	5.3	4.3	4.1	4.2	17.1	13.7	15.1												
2	5.6	5.0	5.2	5.8	5.0	5.4	4.4	3.9	4.2	17.7	14.1	15.9												
3	5.5	4.9	5.1	6.0	5.2	5.4	4.8	4.2	4.5	18.0	16.7	17.2												
4	5.5	4.9	5.2	6.0	5.1	5.4	5.8	4.5	5.0	18.7	16.9	17.8												
5	5.6	4.5	5.1	5.5	3.9	5.1	6.1	4.7	5.3	19.1	18.1	18.7												
6	5.8	5.0	5.4	5.4	4.1	5.0	6.3	5.4	5.7	18.1	16.9	17.5												
7	6.0	5.2	5.4	5.8	5.0	5.3	5.7	4.8	5.3	17.5	15.5	16.5												
8	5.8	5.1	5.4	6.7	4.7	5.4	5.3	5.1	5.2	16.4	12.5	14.5												
9	5.6	5.0	5.3	6.2	4.6	5.5	8.3	5.1	6.3	13.4	12.3	12.8												
10	6.7	3.7	5.2	6.4	5.2	5.5	9.1	7.4	8.2	13.3	12.7	12.9												
11	4.9	2.6	3.4	6.5	5.0	5.5	8.5	6.3	7.1	13.6	12.7	13.0												
12	5.3	2.5	4.0	6.5	4.9	5.5	7.5	6.4	7.1	13.7	12.6	13.0												
13	5.7	4.9	5.2	5.8	5.2	5.4	8.0	7.4	7.6	13.3	12.8	13.0												
14	5.5	4.9	5.2	6.4	5.1	5.4	8.9	7.5	8.1	13.5	12.9	13.1												
15	5.8	5.1	5.4	6.4	5.1	5.4	9.5	7.9	8.6	15.5	12.8	14.0												
16	5.7	5.0	5.2	6.6	5.0	5.5	10.4	8.7	9.5	15.8	14.4	15.1												
17	5.7	4.6	5.1	6.5	5.0	5.5	10.7	9.1	9.9	14.6	14.0	14.3												
18	5.5	4.5	4.8	6.5	5.0	5.4	10.5	9.1	9.6	14.2	13.8	14.0												
19	5.4	4.6	4.9	6.7	5.0	5.5	9.5	8.6	9.0	15.5	13.8	14.4												
20	5.6	5.0	5.2	6.6	5.0	5.8	9.4	8.6	8.9	15.2	14.3	14.6												
21	5.7	4.6	5.1	6.2	6.0	6.0	9.9	8.9	9.4	14.8	13.1	14.0												
22	5.4	4.5	4.8	6.3	5.0	5.7	11.2	9.6	10.3	14.3	13.5	13.9												
23	5.7	4.7	5.1	5.5	4.7	5.2	14.7	11.2	12.5	14.2	13.5	13.8												
24	5.6	4.5	5.0	6.1	5.1	5.4	12.6	11.2	11.7	16.0	13.6	14.6												
25	5.4	4.9	5.2	5.9	4.5	5.3	13.4	12.6	12.9	17.2	15.2	16.0												
26	6.2	5.3	5.5	4.8	4.0	4.3	13.8	12.6	13.1	18.1	15.8	16.7												
27	6.3	5.1	5.5	4.6	3.8	4.1	15.1	12.9	14.0	17.1	16.3	16.8												
28	6.1	5.1	5.3	4.8	4.0	4.3	14.5	13.2	13.8	17.6	15.6	16.4												
29	---	---	---	5.0	4.1	4.6	14.5	12.9	13.6	16.9	15.6	16.1												
30	---	---	---	4.7	4.0	4.4	14.5	13.1	13.9	17.8	15.9	16.5												
31	---	---	---	4.5	4.2	4.4	---	---	---	16.9	15.7	16.3												
MONTH	6.7	2.5	5.1	6.7	3.8	5.2	15.1	3.9	8.8	19.1	12.3	15.1												



## CHARLES RIVER BASIN

01104430 HOBBS BROOK BELOW CAMBRIDGE RESERVOIR NEAR KENDAL GREEN, MA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.5	15.7	16.4	24.5	23.9	24.2	20.6	19.8	20.2	24.1	23.4	23.7
2	16.6	15.7	16.1	24.0	23.2	23.7	20.8	20.0	20.4	23.6	23.2	23.4
3	16.8	16.1	16.5	23.3	22.8	23.0	22.1	20.1	20.7	23.5	23.0	23.2
4	17.4	16.2	16.5	23.0	22.5	22.8	21.1	20.1	20.7	23.2	22.8	23.0
5	17.5	16.3	16.9	23.4	22.5	23.0	21.0	20.4	20.8	23.3	22.6	22.9
6	18.4	17.4	17.8	23.5	22.6	23.1	21.2	20.6	20.9	22.9	22.4	22.6
7	19.8	17.6	18.4	23.3	22.3	22.7	21.6	20.6	21.1	22.5	22.2	22.4
8	20.5	17.7	19.0	22.7	22.3	22.5	21.7	20.7	21.1	22.4	22.1	22.3
9	20.5	18.8	19.7	24.3	22.1	23.2	21.8	20.8	21.3	22.5	22.2	22.4
10	21.1	18.8	19.7	24.0	22.9	23.6	22.5	21.2	21.6	22.7	22.4	22.5
11	20.9	14.7	17.2	24.1	22.7	23.2	22.6	21.5	21.9	23.5	22.6	23.0
12	15.7	15.0	15.3	23.3	22.7	23.0	22.5	21.8	22.1	23.3	22.7	23.0
13	15.8	15.2	15.4	23.1	22.3	22.6	22.2	21.7	22.0	23.0	22.6	22.8
14	15.8	15.2	15.5	23.8	22.2	22.9	22.9	22.1	22.5	22.9	21.9	22.4
15	16.0	15.2	15.6	24.2	22.5	23.4	22.6	21.9	22.2	21.9	21.2	21.5
16	16.2	15.2	15.7	24.8	22.9	23.8	22.6	21.9	22.2	21.5	21.0	21.2
17	16.8	15.4	15.9	23.8	23.1	23.4	22.5	22.1	22.3	21.2	20.6	20.9
18	22.9	15.8	20.2	24.4	22.7	23.5	22.7	22.2	22.4	21.4	20.8	21.0
19	22.8	21.4	22.2	23.9	23.1	23.5	22.9	22.2	22.6	21.8	20.9	21.3
20	23.5	21.8	22.6	24.9	22.9	23.7	23.2	22.4	22.7	21.4	21.0	21.1
21	23.5	22.9	23.2	24.5	22.9	23.5	23.1	22.4	22.8	21.1	20.8	21.0
22	23.3	22.6	22.8	23.6	22.9	23.3	23.3	22.5	22.8	21.1	20.8	20.9
23	23.5	22.5	22.8	24.2	22.9	23.6	23.1	22.7	22.9	21.4	20.8	21.1
24	23.3	22.7	23.0	24.6	23.7	24.1	23.9	22.9	23.4	21.6	21.0	21.1
25	25.8	22.9	24.2	25.4	18.3	22.1	23.6	23.0	23.3	21.3	21.0	21.1
26	26.5	23.5	24.9	19.7	18.1	19.1	23.2	22.9	23.1	21.2	20.8	21.0
27	25.6	23.9	24.8	20.2	19.3	19.6	23.3	22.9	23.1	21.3	20.3	20.5
28	26.3	24.6	25.4	20.2	19.3	19.7	23.5	23.2	23.3	20.5	19.8	20.1
29	25.3	23.9	24.6	20.1	19.5	19.8	23.8	23.1	23.4	19.8	18.9	19.5
30	24.6	23.7	24.1	20.4	19.7	20.0	23.8	23.4	23.6	18.9	17.8	18.3
31	---	---	---	20.5	19.6	20.0	23.6	23.3	23.4	---	---	---
MONTH	26.5	14.7	19.7	25.4	18.1	22.6	23.9	19.8	22.2	24.1	17.8	21.7

CHARLES RIVER BASIN

01104455 STONY BROOK, UNNAMED TRIBUTARY 1, NEAR WALTHAM, MA

LOCATION.--Lat 42°22'21", Long 71°16'15", Middlesex County, Hydrologic Unit 01090001, 20 ft downstream of culvert on ramp from southbound lane of State Highway 128 to State Highway 20, 800 ft upstream from mouth, 1.8 mi west of Waltham.

DRAINAGE AREA.--0.48 mi<sup>2</sup>

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: October 1997 to September 1998; October 2000 to current year.

Water-quality records: Water years 1998, 2001.

GAGE.--Water-stage recorder. Elevation of gage is 85 ft above sea level from topographic maps.

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

AVERAGE DISCHARGE.-- 2 years , 0.91 ft<sup>3</sup>/s, 25.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 119 ft<sup>3</sup>/s, June 17, 2001 , gage height, 3.82 ft; minimum, 0.12 ft<sup>3</sup>/s, Sept. 26, 2001; minimum daily, 0.07 ft<sup>3</sup>/s, Oct. 1, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft<sup>3</sup>/s, June 17, gage height, 3.82 ft; minimum, 0.12 ft<sup>3</sup>/s, Sept. 26, 28 ; minimum daily, 0.13 ft<sup>3</sup>/s, Sept. 26, 27, 29.

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	0.26	0.27	0.32	0.51	0.68	0.62	3.6	0.59	0.35	1.6	0.29	0.24
2	.26	.27	.31	.46	.54	.59	2.8	.62	2.9	.63	.28	.25
3	.25	.27	.31	.45	.50	.57	2.3	.60	.54	.48	1.7	.25
4	.27	.28	.31	.44	.46	.54	2.0	.56	.35	.45	.29	.59
5	.68	.44	.31	.46	.62	.75	1.7	.53	.30	1.8	.24	.18
6	.86	.29	.32	.74	.85	.88	1.9	.50	.29	.47	.24	.17
7	.25	.29	.31	.45	.67	.68	1.4	.49	.26	.40	.24	.18
8	.25	.30	.32	.47	.59	.66	2.6	.48	.26	.48	.24	.17
9	.25	.31	.32	.63	.98	.95	1.5	.48	.27	.37	.55	.16
10	.26	4.3	.31	.42	1.7	1.0	1.3	.47	.25	.66	.42	.17
11	.26	.74	.32	.40	.89	.91	1.1	.46	.86	.33	.26	.17
12	.26	.35	.40	.38	.82	.92	1.6	.64	.46	.31	2.1	.16
13	.26	.33	.40	.34	.80	3.9	1.1	.41	.26	.30	1.9	.17
14	.26	1.5	.98	.35	1.4	1.7	.98	.41	.24	.46	.25	.80
15	.26	.52	.36	.82	1.1	1.9	.91	.46	.22	.29	.21	.15
16	.48	.37	.64	.48	.97	1.9	.86	.47	.22	.29	.20	.15
17	.27	.36	6.7	.41	.94	1.9	.82	.40	13	.74	.22	.15
18	1.5	.34	1.8	.35	.77	2.2	1.1	.40	1.3	.28	.20	.15
19	.72	.33	1.1	.99	.74	1.9	.77	.40	.73	.28	.19	.16
20	.26	.32	2.4	.46	.79	1.9	.72	.40	2.1	.28	.44	.18
21	.26	.31	1.1	.45	.76	2.7	.69	.40	.78	.28	.43	1.0
22	.26	.31	1.0	.40	.68	e36	.67	1.6	.56	.29	.20	.15
23	.27	.30	.84	.39	.75	e7.4	.64	.49	.60	.30	.20	.15
24	.27	.30	.79	.39	.61	e3.9	.90	1.1	7.5	.33	.20	.15
25	.27	.30	.72	.38	1.2	e3.1	.62	.39	1.6	.36	.20	.36
26	.28	2.2	.63	.37	.91	3.0	.58	.36	1.1	.96	.21	.13
27	.28	.46	.61	.37	.69	2.6	.57	1.5	.86	.26	.24	.13
28	.30	.34	.58	.36	.66	2.0	.54	.47	.74	.26	.20	.14
29	.34	.33	.54	.35	---	1.7	.53	.45	.63	.26	.23	.13
30	.62	.57	.81	1.6	---	11	.52	.39	1.4	.29	.22	.14
31	.90	---	.78	.93	---	6.0	---	.36	---	.28	.23	---
TOTAL	12.17	17.60	26.64	16.00	23.07	105.77	37.32	17.28	40.93	14.77	13.02	7.08
MEAN	.39	.59	.86	.52	.82	3.41	1.24	.56	1.36	.48	.42	.24
MAX	1.5	4.3	6.7	1.6	1.7	36	3.6	1.6	13	1.8	2.1	1.0
MIN	.25	.27	.31	.34	.46	.54	.52	.36	.22	.26	.19	.13
MED	.27	.33	.58	.44	.76	1.9	.95	.47	.58	.33	.24	.16
CFSM	.82	1.22	1.79	1.08	1.72	7.11	2.59	1.16	2.84	.99	.88	.49
IN.	.94	1.36	2.06	1.24	1.79	8.20	2.89	1.34	3.17	1.14	1.01	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2001, BY WATER YEAR (WY)

	1998	1998	2001	1999	1998	2001	1998	1998	1998	1998	1998	2001
MEAN	.50	.88	.58	1.16	1.34	2.20	1.16	1.31	2.28	.65	.44	.24
MAX	.92	1.18	.86	1.51	1.90	3.41	1.24	2.06	3.19	.82	.47	.24
(WY)	1999	1998	2001	1999	1998	2001	2001	1998	1998	1998	1998	2001
MIN	.17	.59	.23	.52	.82	1.06	1.07	.56	1.36	.48	.42	.24
(WY)	1998	2001	1999	2001	2001	1999	1998	2001	2001	2001	2001	2001

SUMMARY STATISTICS

FOR 2001 WATER YEAR

WATER YEARS 1998 - 2001

ANNUAL TOTAL	331.65		
ANNUAL MEAN	.91	.91	
HIGHEST ANNUAL MEAN		.91	2001
LOWEST ANNUAL MEAN		.91	2001
HIGHEST DAILY MEAN	36	50	Jun 13 1998
LOWEST DAILY MEAN	.13	.07	Oct 1 1997
ANNUAL SEVEN-DAY MINIMUM	.17	.07	Oct 13 1997
MAXIMUM PEAK FLOW	119	119	Jun 17 2001
MAXIMUM PEAK STAGE	3.82	3.82	Jun 17 2001
INSTANTANEOUS LOW FLOW	.12	.12	Sep 26 2001
ANNUAL RUNOFF (CFSM)	1.89	1.89	
ANNUAL RUNOFF (INCHES)	25.70	25.72	
10 PERCENT EXCEEDS	1.7	2.2	
50 PERCENT EXCEEDS	.46	.54	
90 PERCENT EXCEEDS	.22	.17	

e Estimated

CHARLES RIVER BASIN

01104455 STONY BROOK, UNNAMED TRIBUTARY 1, NEAR WALTHAM, MA--Continued

PERIOD OF RECORD.-- Water year 1998, October 2000 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 2000 to current year.

WATER TEMPERATURE: October 2000 to current year.

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

REMARKS.--Records good.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 62,400 S/cm, Dec. 14; minimum, 21.0  $\mu$ S/cm, Oct. 18.

WATER TEMPERATURE: Maximum recorded, 25.1BC, June 24; minimum, 0.7BC, Dec. 14.

SPECIFIC CONDUCTANCE ( $\mu$ S/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	1,010	992	1,000	592	400	526	1,480	841	940	1,530	965	1,150
2	1,010	977	1,000	614	592	607	941	899	916	984	905	931
3	1,000	990	996	619	613	616	947	928	940	932	897	903
4	1,070	859	985	619	615	617	953	915	941	897	884	892
5	1,030	72	816	619	165	516	961	936	952	27,500	884	4,530
6	909	38	452	590	165	474	975	954	960	43,200	20,200	32,300
7	993	909	964	612	589	605	964	915	946	20,200	1,770	11,900
8	997	979	987	615	610	613	1,110	920	943	31,400	1,040	3,550
9	999	982	990	617	612	615	1,210	938	1,040	41,800	31,300	37,600
10	997	982	988	617	22	285	960	938	950	36,200	14,000	21,800
11	1,570	959	1,160	610	181	377	7,770	957	6,120	14,000	5,740	11,500
12	1,050	964	977	815	610	731	34,700	1,340	24,000	5,740	1,110	1,690
13	974	963	967	907	721	857	30,200	9,940	18,300	1,110	1,070	1,090
14	967	961	965	943	54	629	62,400	2,750	16,500	1,190	1,060	1,090
15	965	959	964	804	222	613	4,380	1,100	2,670	26,000	1,060	9,850
16	964	126	727	888	778	851	5,950	982	1,900	13,300	1,740	8,100
17	950	382	812	928	888	908	1,470	188	377	1,740	1,210	1,300
18	958	21	791	951	926	939	696	414	623	1,230	1,170	1,190
19	581	28	368	959	951	955	1,750	650	715	24,500	1,150	3,930
20	622	561	604	966	956	961	20,200	862	5,160	6,710	1,260	2,060
21	634	622	629	991	964	970	952	750	832	21,400	1,440	18,800
22	634	626	632	965	950	962	7,870	771	1,850	19,300	10,100	13,900
23	636	627	633	963	955	958	862	803	820	10,100	1,530	5,890
24	638	633	636	956	950	954	805	783	796	2,530	1,230	1,630
25	641	634	637	955	945	950	809	782	792	2,120	1,410	1,540
26	635	631	633	30,100	120	3,690	840	809	823	2,330	1,430	1,510
27	633	627	629	781	537	678	881	819	834	1,630	1,400	1,450
28	630	617	624	859	781	825	846	817	829	1,520	1,360	1,420
29	627	619	622	897	848	876	849	802	830	1,430	1,340	1,360
30	653	566	617	6,030	723	1,800	45,400	826	14,300	10,100	676	2,050
31	642	182	393	---	---	---	19,100	1,530	10,000	2,340	879	1,130
MONTH	1,570	21	781	30,100	22	865	62,400	188	3,830	43,200	676	6710



## CHARLES RIVER BASIN

01104455 STONY BROOK, UNNAMED TRIBUTARY 1, NEAR WALTHAM, MA--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	13.2	12.8	13.0	12.2	11.2	11.8	11.1	10.3	10.8	8.6	8.0	8.3
2	13.3	12.8	13.1	12.4	12.0	12.2	10.8	9.9	10.4	8.6	8.0	8.3
3	13.3	12.9	13.1	12.7	12.0	12.3	10.5	9.8	10.1	8.7	8.0	8.4
4	14.1	13.0	13.3	12.7	12.0	12.4	10.6	9.8	10.2	9.0	8.2	8.6
5	14.6	13.0	13.4	12.6	9.8	11.9	10.9	9.9	10.4	9.1	7.6	8.5
6	14.2	13.3	13.8	12.0	10.2	11.5	10.9	9.9	10.3	8.2	4.0	6.4
7	13.3	12.9	13.2	12.4	11.6	12.0	10.4	9.8	10.0	8.9	8.2	8.6
8	13.1	12.4	12.8	12.6	12.0	12.2	9.8	9.6	9.7	9.2	6.8	8.7
9	12.8	12.4	12.6	12.5	11.9	12.3	10.0	9.3	9.6	8.3	6.3	7.2
10	12.9	12.2	12.6	12.6	10.0	11.1	10.3	9.2	9.7	8.4	8.1	8.2
11	13.0	12.2	12.7	12.1	11.0	11.6	10.7	10.1	10.5	9.0	8.1	8.5
12	13.0	12.1	12.6	12.5	12.0	12.2	10.9	10.4	10.6	8.9	8.2	8.6
13	13.1	12.2	12.7	12.4	11.9	12.2	10.4	9.8	10.1	8.9	7.8	8.3
14	13.1	12.7	12.9	12.5	10.1	11.7	10.3	7.7	7.0	9.3	8.4	8.9
15	13.2	13.0	13.1	11.6	10.7	11.2	9.6	7.9	8.8	9.2	2.5	6.8
16	13.1	10.6	12.4	11.9	11.4	11.7	10.2	5.2	9.0	8.7	7.3	8.0
17	12.8	11.5	12.4	12.4	11.8	12.0	13.6	4.0	8.3	8.9	8.5	8.6
18	13.2	11.3	12.7	11.8	11.2	11.5	7.9	6.7	7.2	8.9	8.1	8.5
19	12.7	11.4	12.3	11.8	11.2	11.6	8.5	6.8	7.9	9.1	3.3	6.9
20	12.9	12.1	12.5	11.6	10.9	11.3	7.3	2.1	5.6	8.1	6.3	7.8
21	13.1	12.6	12.9	11.7	11.1	11.4	8.2	7.3	7.8	8.1	6.0	7.0
22	13.0	12.1	12.7	11.4	11.1	11.3	8.6	8.2	8.4	8.0	6.9	7.5
23	12.8	11.9	12.4	11.2	10.5	10.9	8.3	7.7	8.0	8.2	7.1	7.6
24	12.9	12.1	12.5	10.9	10.2	10.5	8.8	8.1	8.4	8.4	7.5	8.0
25	13.0	12.3	12.7	10.8	10.0	10.4	8.6	7.4	7.9	8.6	7.9	8.3
26	13.0	12.4	12.8	10.8	6.6	9.2	8.1	7.3	7.7	8.4	7.7	8.1
27	13.1	12.6	12.9	11.1	9.1	10.4	8.5	8.1	8.3	9.0	8.1	8.5
28	12.9	12.1	12.6	11.6	10.9	11.3	8.4	8.1	8.3	8.7	8.0	8.4
29	12.1	11.8	11.9	11.5	11.0	11.3	8.8	8.1	8.4	8.5	7.6	8.1
30	12.4	7.6	11.3	11.2	8.3	10.2	8.9	3.0	7.2	8.7	1.8	6.0
31	11.5	7.8	9.5	---	---	---	8.1	4.8	7.3	7.1	3.7	5.8
MONTH	14.6	7.6	12.6	12.7	6.6	11.5	13.6	.7	8.8	9.3	1.8	7.9

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	7.3	6.0	6.6	7.4	6.3	6.8	7.2	6.4	6.8	12.5	10.3	11.1
2	7.7	6.7	7.2	7.5	6.6	7.0	8.0	6.7	7.2	12.5	10.5	11.3
3	7.6	6.8	7.1	7.7	7.0	7.3	8.8	6.8	7.7	12.6	10.6	11.4
4	7.6	6.5	7.1	7.9	7.1	7.5	9.7	7.5	8.3	12.5	10.9	11.6
5	7.9	3.1	6.2	7.5	3.5	5.8	10.0	7.6	8.6	11.6	10.9	11.3
6	6.8	4.3	5.5	5.8	2.5	4.9	9.3	8.0	8.6	11.1	10.3	10.7
7	7.2	6.4	6.9	7.0	5.2	6.4	9.7	8.2	8.7	11.0	9.8	10.4
8	7.8	4.9	7.1	7.2	6.5	6.9	8.4	4.9	7.3	11.2	10.1	10.6
9	7.5	4.5	6.2	7.7	2.3	6.3	10.9	8.1	9.2	11.4	10.5	10.8
10	5.9	4.5	5.2	6.5	4.2	5.5	10.8	9.0	9.7	11.3	10.6	10.9
11	6.0	5.0	5.5	7.4	6.2	6.7	10.6	9.0	9.6	11.4	10.8	11.0
12	7.0	5.3	6.0	7.6	6.3	6.8	9.4	8.9	9.2	20.4	10.8	12.5
13	7.4	6.5	7.0	7.0	1.6	4.3	10.5	8.9	9.4	13.5	10.9	11.5
14	7.7	2.8	6.4	6.5	5.2	5.9	10.5	8.6	9.4	11.0	10.5	10.8
15	6.8	5.4	6.3	6.9	5.8	6.3	10.8	8.6	9.5	12.0	10.5	10.8
16	7.3	5.3	6.4	7.8	6.1	6.5	10.6	8.9	9.6	11.6	10.8	11.1
17	7.0	5.6	6.5	8.0	6.1	6.6	10.4	8.9	9.5	10.9	10.7	10.8
18	7.2	5.6	6.3	7.4	4.7	6.1	9.9	8.0	9.0	10.9	10.7	10.8
19	7.7	6.3	6.9	8.2	5.9	6.7	10.5	8.4	9.2	11.1	10.8	10.9
20	7.9	6.9	7.4	8.5	6.1	6.8	11.0	8.6	9.6	11.2	10.8	10.9
21	7.6	6.2	7.1	7.8	4.5	6.6	11.3	9.5	10.3	11.1	10.7	10.9
22	7.1	6.0	6.4	4.9	4.1	4.7	12.3	10.1	11.0	14.2	10.8	12.8
23	7.5	5.2	6.6	6.4	3.8	5.5	12.0	10.4	11.0	12.8	11.6	11.8
24	7.6	6.5	7.0	8.0	5.8	6.7	18.3	10.4	12.1	13.0	11.6	12.2
25	7.2	3.0	5.3	8.3	6.1	7.0	12.6	10.3	10.8	11.8	11.3	11.5
26	6.9	4.7	6.2	8.0	5.7	6.8	11.4	9.7	10.4	11.7	11.1	11.3
27	7.8	6.4	6.9	8.4	5.6	7.0	11.5	9.9	10.5	15.2	11.3	13.3
28	7.2	6.5	6.8	9.1	6.8	7.6	11.0	9.8	10.4	12.8	12.0	12.3
29	---	---	---	8.9	7.2	7.9	11.0	9.5	10.1	14.6	11.5	11.8
30	---	---	---	8.1	1.2	3.8	11.1	9.6	10.3	14.4	11.1	11.9
31	---	---	---	7.2	4.6	6.2	---	---	---	11.2	10.9	11.0
MONTH	7.9	2.8	6.5	9.1	1.2	6.4	18.3	4.9	9.4	20.4	9.8	11.4



CHARLES RIVER BASIN

01104480 STONY BROOK RESERVOIR AT DAM NEAR WALTHAM, MA

LOCATION.--Lat 42°21'20", Long 71°15'56", Middlesex County, Hydrologic Unit 01090001, 10 ft upstream from bridge on River Road, 300 ft downstream from gate house outlet for Stony Brook Reservoir, and 2.0 mi southwest of Waltham.

DRAINAGE AREA.--23.7 mi<sup>2</sup>

PERIOD OF RECORD.--Discharge: October 1999 to current year.  
Water-quality records (Stony Brook Reservoir): Water year 2000.

GAGE.--Water-stage recorder located about 300 ft downstream from Stony Brook Dam. Elevation of gage is 43 ft above sea level from topographic maps.

REMARKS.--Records poor. Flow affected by regulation of dam, 300 ft upstream at outflow of Stony Brook Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 479 ft<sup>3</sup>/s, Mar. 23, 2001, gage height, 5.27 ft; minimum, no flow, many days throughout the period of record (controlled shutdown); minimum daily, no flow, Jan. 22-29, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 479 ft<sup>3</sup>/s, Mar. 23, gage height, 5.27 ft; minimum, no flow, many days throughout the water year (controlled shutdown); minimum daily, no flow, Jan. 22-29.

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	46	49	52	14	0.03	24	223	1.1	0.76	1.4	0.30	0.17
2	45	49	52	15	.02	18	175	e2.0	.59	14	.21	.16
3	44	49	49	17	.03	16	119	.04	.29	12	.31	.15
4	43	33	50	15	.02	14	120	.05	.33	4.0	.32	.34
5	44	29	46	11	.02	16	121	.05	.36	1.3	.24	.57
6	54	33	45	11	.04	23	120	.07	.43	5.5	.20	.57
7	46	43	44	11	.03	20	121	.05	.72	3.4	.16	.62
8	44	45	44	11	.03	17	119	.05	.88	.29	.18	.62
9	42	44	44	11	.03	19	119	.05	.92	.07	.15	.66
10	40	63	42	11	.05	24	120	.06	.87	.20	.31	.61
11	43	93	46	10	.05	24	119	.08	.93	.08	.27	.78
12	43	68	48	11	.04	26	117	.28	1.0	.09	.31	.77
13	42	58	45	9.5	.05	45	114	.13	.43	.09	.21	.77
14	41	28	46	9.4	.05	57	112	.13	.04	.12	.15	1.1
15	41	37	47	15	.06	54	108	.15	.05	.10	.19	.76
16	42	25	44	17	.05	103	59	.13	.06	.09	.17	.85
17	43	19	72	14	.06	181	36	.13	.52	.07	.18	.86
18	41	16	120	11	.05	168	38	.12	.07	.08	.27	.90
19	57	13	113	4.0	.05	53	39	.31	.07	.08	.28	.87
20	49	14	97	.02	.05	19	39	.26	.26	.08	.29	.78
21	45	12	60	.01	9.1	46	34	.20	.09	.09	.36	.98
22	45	9.8	44	.00	17	91	38	.15	.57	.11	.24	.83
23	43	9.0	31	.00	19	320	28	.13	1.4	.14	.21	.89
24	42	7.7	25	.00	18	305	22	.19	6.9	.13	.28	.76
25	43	6.8	23	.00	17	248	23	.19	46	.24	.17	.87
26	49	10	21	.00	22	195	23	.15	43	.40	.14	1.0
27	46	32	18	.00	23	159	22	.17	23	.39	.17	.84
28	47	22	16	.00	23	207	23	.24	12	.30	.21	1.0
29	45	26	14	.00	---	240	8.4	.32	5.1	.34	.32	1.0
30	46	25	14	.01	---	222	.98	.51	1.3	.35	.23	.94
31	56	---	17	.03	---	223	---	.60	---	.28	.11	---
TOTAL	1397	968.3	1429	227.97	148.91	3177	2360.38	8.09	148.94	45.81	7.14	22.02
MEAN	45.1	32.3	46.1	7.35	5.32	102	78.7	.26	4.96	1.48	.23	.73
MAX	57	93	120	17	23	320	223	2.0	46	14	.36	1.1
MIN	40	6.8	14	.00	.02	14	.98	.04	.04	.07	.11	.15

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

	1999	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
MEAN	32.5	25.9	36.1	19.5	26.7	86.4	83.6	28.4	14.8	5.73	7.26	14.8	
MAX	45.1	32.3	46.1	31.7	47.3	102	88.6	56.6	24.6	9.98	14.3	22.7	
(WY)	2001	2001	2001	2000	2000	2001	2000	2000	2000	2000	2000	2000	2000
MIN	19.9	19.6	26.1	7.35	5.32	70.3	78.7	.26	4.96	1.48	.23	.73	
(WY)	2000	2000	2000	2001	2001	2000	2001	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1999 - 2001

ANNUAL TOTAL	14912.7	9940.56											
ANNUAL MEAN	40.7	27.2								31.6			
HIGHEST ANNUAL MEAN										35.9			2000
LOWEST ANNUAL MEAN										27.2			2001
HIGHEST DAILY MEAN	143	Apr 25				320	Mar 23			320	Mar 23		2001
LOWEST DAILY MEAN	1.1	Aug 19				.00	Jan 22			.00	Jan 22		2001
ANNUAL SEVEN-DAY MINIMUM	4.0	Sep 8				.00	Jan 22			.00	Jan 22		2001
MAXIMUM PEAK FLOW						479	Mar 23			479	Mar 23		2001
MAXIMUM PEAK STAGE						5.27	Mar 23			5.27	Mar 23		2001
INSTANTANEOUS LOW FLOW						.00	Jan 21			.00	Aug 18		2000
10 PERCENT EXCEEDS		79				59				73			
50 PERCENT EXCEEDS		40				7.7				19			
90 PERCENT EXCEEDS		5.8				.05				.17			

e Estimated





## CHARLES RIVER BASIN

01104615 CHARLES RIVER ABOVE WATERTOWN DAM AT WATERTOWN, MA

PERIOD OF RECORD.--October 1998 to September 2001.

Discharge records: August 1999 to September 2000 (discontinued).

PERIOD OF DAILY RECORD.--

DISCHARGE: August 1999 to September 2000 (discontinued).

SPECIFIC CONDUCTANCE: August 1999 to September 2000 (discontinued).

WATER TEMPERATURE: August 1999 to September 2000 (discontinued).

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

DISCHARGE: Maximum discharge, 1,370 ft<sup>3</sup>/s, Sept. 10, 1999, gage height, 5.48 ft; minimum 14 ft<sup>3</sup>/s, Sept. 7, 1999.

SPECIFIC CONDUCTANCE: Maximum recorded, 1200 us/cm, Jan. 31, 2000; minimum, 167 us/cm, June 6, 2000.

WATER TEMPERATURE: Maximum recorded, 26.0 °C, Aug. 19, 1999; minimum, -0.2 °C, Dec. 28, 1999.

REMARKS.--Instantaneous discharge estimated from Charles River at Waltham, MA gage, 01104500.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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											
03...	1015	E224	754	9.6	7.4	453	19.0	15.3	20.2	3.98	4.68
NOV											
14...	1000	E487	759	10.1	7.0	332	12.4	9.5	16.2	3.45	3.77
DEC											
13...	0915	E288	776	12.7	7.2	433	-5.6	.1	19.0	4.00	3.18
JAN											
17...	1100	E339	762	14.5	7.2	877	4.9	.5	20.5	5.20	3.82
FEB											
12...	1030	E442	778	14.3	7.1	642	-6.6	.1	18.3	4.01	3.19
MAR											
19...	1045	E924	765	13.2	7.0	506	8.7	3.7	16.3	3.32	2.28
APR											
05...	1030	E1,590	768	12.9	7.0	303	10.4	6.6	11.3	2.44	1.88
MAY											
29...	1015	E389	755	9.5	7.2	446	16.5	18.5	20.1	4.30	3.20
JUN											
18...	0900	E849	762	7.1	7.1	259	23.2	23.1	12.5	2.61	2.29
JUL											
16...	1000	E364	761	7.5	7.1	347	26.6	23.3	15.6	3.41	2.46
AUG											
06...	0900	E201	763	5.4	6.9	431	27.8	25.1	16.5	3.28	3.22
SEP											
06...	0945	E122	765	5.2	6.9	424	16.5	20.0	20.5	4.63	3.78

CHARLES RIVER BASIN

01104615 CHARLES RIVER ABOVE WATERTOWN DAM AT WATERTOWN, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
OCT											
03...	53.7	36	44	99.4	0.1	3.3	17.6	242	0.020	0.30	0.51
NOV											
14...	37.6	30	36	67.4	E.1	7.1	14.8	188	.071	.46	.60
DEC											
13...	49.3	31	38	94.3	<.2	8.4	16.3	238	.103	.42	.53
JAN											
17...	125	32	39	216	<.2	10.7	20.8	449	.235	.48	.38
FEB											
12...	89.5	28	34	151	E.1	9.1	15.1	328	.122	.35	.47
MAR											
19...	65.6	21	25	122	<.2	7.0	12.7	290	E.037	.25	.41
APR											
05...	40.1	15	18	69.5	<.2	5.2	10.1	163	<.041	.27	.41
MAY											
29...	53.8	38	47	95.1	E.1	4.1	12.8	250	.111	.47	.74
JUN											
18...	31.6	23	28	58.0	<.2	4.1	7.5	159	.095	.54	.76
JUL											
16...	41.1	27	33	75.8	E.1	7.2	9.3	199	E.028	.44	.52
AUG											
06...	38.2	36	43	64.9	E.1	10.6	16.1	196	.052	.48	.56
SEP											
06...	52.3	38	47	98.6	E.1	3.6	14.7	250	.054	.40	.53

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 DIS- SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (MG/L AS C) (00689)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	SEDI- MENT, SUS- PENDEED (MG/L) (80154)
OCT											
03...	0.337	<0.010	0.010	<0.010	0.043	4.8	0.5	120	47.2	69	4
NOV											
14...	.653	.011	.015	E.010	.046	7.3	1.0	190	53.5	75	7
DEC											
13...	.828	.008	.015	<.018	.037	6.3	.4	190	71.3	79	5
JAN											
17...	1.27	.015	.055	.044	.085	--	--	220	129	67	3
FEB											
12...	1.09	.011	.030	.023	.058	--	--	210	136	77	4
MAR											
19...	.778	.006	.013	E.009	.038	--	--	170	132	79	5
APR											
05...	.532	E.004	.009	<.018	.027	--	--	110	43.5	80	5
MAY											
29...	.528	.014	.022	<.020	.068	--	--	200	106	90	8
JUN											
18...	.315	.011	.045	.024	.114	--	--	310	74.8	91	13
JUL											
16...	.343	.008	.041	.024	.071	--	--	540	67.4	92	4
AUG											
06...	.212	.012	.032	<.020	.058	--	--	330	335	77	5
SEP											
06...	.196	.007	.030	E.012	.046	--	--	140	83.6	88	3

< Less than  
E Estimated value

NEPONSET RIVER BASIN

01105000 NEPONSET RIVER AT NORWOOD, MA  
(National Water Quality Assessment Site)

LOCATION.--Lat 42°10'39", long 71°12'05", Norfolk County, Hydrologic Unit 01090001, on left bank 200 ft upstream from Pleasant Street Bridge, 200 ft downstream from railroad bridge, 0.45 mi downstream from Hawes Brook, and 0.5 mi south of Norwood.

DRAINAGE AREA.--34.7 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: October 1939 to current year. October 1939 monthly discharge only, published in WSP 1301. Water-quality records: Water years 1958-59, 1966-68, 1999.

REVISED RECORDS.--WDR MA-RI-78-1: 1976(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 44.04 ft above sea level. Since Oct. 1, 1960, recording orifice at upstream side of railroad bridge, at same datum.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by mills and reservoirs upstream. Flow affected by several diversions upstream for municipal and industrial use. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--61 years, 56.1 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 14.65 ft, from floodmarks; minimum daily, 1.4 ft<sup>3</sup>/s, Oct. 20, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1886, that of Aug. 19, 1955. Flood of July 24, 1938, reached a stage of 11.05 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 735 ft<sup>3</sup>/s, June. 17, gage height, 9.46 ft, minimum daily, 2.0 ft<sup>3</sup>/s, Aug. 7.

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	15	29	39	46	54	59	401	49	30	267	7.9	8.6
2	10	24	34	41	51	53	317	45	74	204	7.3	7.9
3	12	19	29	37	47	48	262	43	89	128	6.8	7.1
4	12	16	26	35	39	45	237	41	77	93	8.0	6.8
5	11	16	24	35	41	49	210	38	56	88	7.6	6.4
6	12	16	22	38	52	69	195	35	44	83	17	6.3
7	11	15	20	37	49	64	192	32	36	72	2.0	7.4
8	9.9	14	19	35	45	58	203	30	30	56	4.2	7.4
9	8.9	13	18	36	46	60	200	29	27	53	5.4	7.0
10	10	59	17	35	75	69	185	27	24	58	12	5.4
11	7.9	86	18	32	74	73	163	26	22	63	12	4.5
12	5.9	75	20	31	66	76	165	25	63	59	29	4.2
13	7.9	57	20	e30	57	131	e154	23	45	42	59	4.1
14	6.3	56	31	29	55	140	e142	21	36	42	70	8.2
15	5.3	68	36	33	64	138	e130	20	29	38	53	12
16	6.9	58	31	37	66	146	e120	22	25	27	22	12
17	7.7	47	166	35	67	157	e105	22	263	28	19	9.7
18	13	39	259	33	61	165	96	22	393	36	18	8.8
19	35	35	194	42	54	168	107	22	258	33	14	8.1
20	28	28	163	54	52	163	98	21	163	21	19	9.9
21	20	28	131	50	59	180	93	20	116	18	18	17
22	15	28	110	e46	55	351	88	26	92	16	15	25
23	14	24	94	e42	52	319	81	31	92	14	13	21
24	12	21	69	37	48	381	76	74	66	11	11	18
25	10	18	67	34	50	373	67	70	65	11	9.8	21
26	9.8	40	57	32	72	313	65	58	56	13	8.7	15
27	10	66	52	30	74	277	59	48	45	12	11	15
28	11	56	42	29	67	252	57	48	35	11	15	13
29	11	49	43	27	---	237	53	45	32	10	13	11
30	12	42	45	38	---	360	50	44	63	8.7	10	9.8
31	30	---	51	52	---	428	---	36	---	8.2	9.2	---
TOTAL	390.5	1142	1947	1148	1592	5402	4371	1093	2446	1623.9	526.9	317.6
MEAN	12.6	38.1	62.8	37.0	56.9	174	146	35.3	81.5	52.4	17.0	10.6
MAX	35	86	259	54	75	428	401	74	393	267	70	25
MIN	5.3	13	17	27	39	45	50	20	22	8.2	2.0	4.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
28.6	46.6	62.5	70.4	78.8	113
135	188	187	224	188	236
1997	1956	1987	1979	1970	1983
5.14	5.88	7.78	5.35	13.4	45.3
1998	1966	1966	1981	1980	1985

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1940 - 2001

ANNUAL TOTAL	20365.3	21999.9			
ANNUAL MEAN	55.6	60.3			56.1
HIGHEST ANNUAL MEAN					106
LOWEST ANNUAL MEAN					21.7
HIGHEST DAILY MEAN	320	Apr 23	428	Mar 31	1260
LOWEST DAILY MEAN	4.1	Sep 8	2.0	Aug 7	1.4
ANNUAL SEVEN-DAY MINIMUM	5.1	Sep 3	5.7	Sep 7	2.2
MAXIMUM PEAK FLOW			735	Jun 17	1490
MAXIMUM PEAK STAGE			9.46	Jun 17	14.65
INSTANTANEOUS LOW FLOW			1.9	Aug 8	
10 PERCENT EXCEEDS	121		159		125
50 PERCENT EXCEEDS	37		36		37
90 PERCENT EXCEEDS	11		9.5		8.9

e Estimated

NEPONSET RIVER BASIN

01105000 NEPONSET RIVER AT NORWOOD, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1958-59, 1966-68, 1999-2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	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)	
JUN	07...	1500	33	3.2	755	7.6	85	7.2	281	23.4	20.4	12.1
JUL	03...	1210	137	5.2	765	8.7	96	6.9	207	24.1	20.6	9.74
	24...	1230	11	2.0	756	7.8	95	7.2	331	32.4	25.0	15.9
AUG	14...	1810	69	3.5	758	8.7	100	7.0	287	25.9	22.3	12.8
SEP	12...	1410	4.8	1.7	763	10.6	119	7.4	662	29.4	20.8	19.2
DATE		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)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)
JUN	07...	3.30	1.61	33.7	61.6	<0.2	5.8	6.8	178	E0.025	0.37	0.48
JUL	03...	2.32	1.70	24.9	42.9	<.2	7.0	6.3	141	.043	.49	.62
	24...	4.07	2.12	42.5	76.8	<.2	6.5	7.7	182	E.025	.31	.35
AUG	14...	3.43	2.38	34.3	59.5	<.2	6.5	10.7	164	<.040	.36	.51
SEP	12...	4.26	3.04	95.5	149	E.2	4.6	8.9	344	<.040	1.1	1.3
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-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 TOTAL (MG/L AS C) (00680)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
JUN	07...	0.246	0.006	0.020	<0.020	0.040	8.1	9.3	7.6	0.7	500	97.9
JUL	03...	.153	.009	.022	<.020	.050	10	12	8.5	2.3	470	60.1
	24...	.323	E.004	.015	<.020	.024	5.9	6.4	3.4	1.2	460	91.8
AUG	14...	.224	E.005	.016	<.020	.044	6.0	7.4	6.5	2.8	310	99.6
SEP	12...	.589	E.003	.035	.019	.044	4.2	4.9	4.9	.3	200	74.9

< Less than  
E Estimated



NEPONSET RIVER BASIN

011055566 NEPONSET RIVER AT MILTON VILLAGE, MA

LOCATION.--Lat 42°16'15", long 71°04'08", Norfolk County, Hydrologic Unit 01090001, 100 ft upstream from bridge on Adams Street, at Milton Village.

DRAINAGE AREA.--101 mi<sup>2</sup>.

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

GAGE.--Water stage recorder. Elevation of gage is 20 ft below sea level, from topographic map.

REMARKS.--Records good except those below 40 ft<sup>3</sup>/s, which are fair, and those for estimated daily discharge, which are poor. Record on most days is adjusted for tidal backwater, which lasts as much as 4 hours during times of high tide. Flow regulated by mills and reservoirs upstream. Flow affected by diversion from Charles River basin to Neponset River basin by Mother Brook (station 01104000) through Dedham and Hyde Park and by diversions to and from basin for municipal supplies. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--4 years (water years 1998-2001), 303 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,720 ft<sup>3</sup>/s, June 18, 1998, gage height, 36.93 ft; minimum, 4.8 ft<sup>3</sup>/s, Oct. 24, 1997, minimum daily, 10 ft<sup>3</sup>/s, Oct. 23, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,250 ft<sup>3</sup>/s, Mar. 30, gage height, 36.48 ft; minimum discharge, 9.5 ft<sup>3</sup>/s, Sept. 17, minimum daily, 18 ft<sup>3</sup>/s, Sept. 13.

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	62	126	196	242	261	258	2010	152	156	498	33	40
2	58	115	172	207	258	225	1950	124	235	563	38	37
3	43	100	148	189	240	199	1840	161	331	573	44	34
4	53	86	128	167	216	179	1700	165	294	518	78	33
5	51	82	115	163	203	181	1560	170	263	465	51	30
6	74	79	119	170	227	224	1440	155	221	414	42	31
7	70	81	116	169	255	256	1330	123	186	333	40	23
8	61	75	104	159	236	278	1260	126	165	264	32	29
9	54	64	98	156	234	282	1170	124	139	203	24	28
10	38	185	94	151	330	308	1080	113	110	225	38	27
11	49	333	90	142	377	309	1010	109	83	258	71	19
12	36	336	94	139	337	310	983	106	233	222	121	23
13	42	296	97	129	302	427	948	100	208	171	150	18
14	44	267	129	127	286	508	878	91	159	170	211	33
15	42	e317	153	142	308	550	792	87	113	162	184	35
16	37	e290	144	157	316	591	719	88	113	116	115	32
17	50	231	402	150	320	629	650	90	273	120	88	23
18	48	192	705	139	306	664	610	77	753	113	125	28
19	144	162	710	163	273	690	558	86	780	106	87	20
20	120	131	750	219	253	701	507	83	766	94	81	26
21	103	123	715	210	267	712	460	67	705	77	81	28
22	84	110	675	203	261	1610	421	108	644	64	66	101
23	65	117	615	186	243	1910	378	136	584	51	50	161
24	65	111	548	159	222	2010	334	194	487	54	48	110
25	59	102	481	149	212	2040	297	269	390	51	42	89
26	48	157	446	140	271	1960	267	258	291	48	39	82
27	53	263	392	135	300	1860	220	227	279	61	37	76
28	56	270	303	128	289	1730	199	204	217	52	70	56
29	55	237	259	121	---	1600	178	188	190	47	50	49
30	46	213	251	144	---	1830	163	190	192	33	47	41
31	121	---	270	222	---	2000	---	156	---	40	44	---
TOTAL	1931	5251	9519	5077	7603	27031	25912	4327	9560	6166	2227	1362
MEAN	62.3	175	307	164	272	872	864	140	319	199	71.8	45.4
MAX	144	336	750	242	377	2040	2010	269	780	573	211	161
MIN	36	64	90	121	203	179	163	67	83	33	24	18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2001, BY WATER YEAR (WY)

MEAN	122	161	300	366	445	658	626	349	370	166	74.3	96.6
MAX	244	274	860	577	611	872	1002	783	1046	443	161	271
(WY)	1999	1997	1997	1999	1999	2001	1997	1998	1998	1998	1998	1999
MIN	20.9	96.6	85.0	164	272	437	207	140	39.6	29.2	24.9	19.3
(WY)	1998	1999	1999	2001	2001	2000	1999	2001	1999	1997	1999	1997

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1997 - 2001

ANNUAL TOTAL	93639	105966		
ANNUAL MEAN	256	290		303
HIGHEST ANNUAL MEAN				426
LOWEST ANNUAL MEAN				248
HIGHEST DAILY MEAN	1120	Apr 26	2040	Mar 25
LOWEST DAILY MEAN	36	Oct 12	18	Sep 13
ANNUAL SEVEN-DAY MINIMUM	41	Oct 10	24	Sep 7
MAXIMUM PEAK FLOW			2250	Mar 30
MAXIMUM PEAK STAGE			36.48	Mar 30
INSTANTANEOUS LOW FLOW			9.5	Sep 17
10 PERCENT EXCEEDS	550		694	781
50 PERCENT EXCEEDS	170		161	178
90 PERCENT EXCEEDS	58		42	33

e Estimated

WEYMOUTH FORE RIVER BASIN

01105584 TOWN BROOK AT DIVERSION TUNNEL AT QUINCY, MA

LOCATION.--Lat 42°14'40", long 71°00'16", Norfolk County, Hydrologic Unit 01090001, on left bank at spillway into Burgin Brook and diversion tunnel, 100 ft west of Burgin Parkway, and 0.5 mi south of Quincy.

DRAINAGE AREA.--About 2.0 mi<sup>2</sup> (partially culverted).

PERIOD OF RECORD.--Gage height: February 1999 to September 2000; March 2001 to current year. Precipitation: February 1999 to September 2000; March 2001 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 14.90 ft above National Geodetic Vertical Datum (NGVD) of 1929. Elevation of spillway into diversion tunnel is 18.0 ft above NGVD. Elevation data provided by U.S. Army Corps of Engineers.

REMARKS.--Records not rated.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 18.85 ft above NGVD, June 30, 2001, but may have been higher during periods of no gage height record; minimum gage height, 14.78 ft, Sept. 7, 2001, but may have been lower during periods of no gage height record.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 18.85 ft above NGVD, June 30, but may have been higher during periods of no gage height record; minimum gage height, 14.78 ft, Sept. 7, but may have been lower during periods of no gage height record.

WATER LEVEL, IN FEET ABOVE NGVD OF 1929, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

Table with columns: DAY, MAX, MIN, MEAN, MAX, MIN, MEAN, MAX, MIN, MEAN, MAX, MIN, MEAN. Rows are organized by month: FEBRUARY, MARCH, APRIL, MAY, JUNE, JULY, AUGUST, SEPTEMBER.

## WEYMOUTH FORE RIVER BASIN

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01105584 TOWN BROOK AT DIVERSION TUNNEL AT QUINCY, MA--Continued

PRECIPITATION, TOTAL, INCHES, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	0.00	0.00	0.00	0.67	0.00	0.00
2	---	---	---	---	---	---	.00	.00	.80	.01	.00	.00
3	---	---	---	---	---	---	.00	.00	.08	.00	1.45	.00
4	---	---	---	---	---	---	.00	.00	.00	.00	.10	.10
5	---	---	---	---	---	---	.00	.00	.00	.43	.00	.00
6	---	---	---	---	---	---	.21	.00	.00	.00	.00	.00
7	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
8	---	---	---	---	---	---	.41	.00	.00	.11	.00	.00
9	---	---	---	---	---	---	.04	.00	.00	.00	.00	.00
10	---	---	---	---	---	---	.00	.00	.00	.38	.66	.00
11	---	---	---	---	---	---	.00	.00	.85	.03	.00	.00
12	---	---	---	---	---	---	.45	.00	.47	.00	.71	.00
13	---	---	---	---	---	---	.00	.00	.00	.00	.70	.09
14	---	---	---	---	---	---	.00	.01	.00	.08	.00	.37
15	---	---	---	---	---	---	.00	.03	.00	.00	.00	.00
16	---	---	---	---	---	---	.00	.06	.00	.00	.00	.00
17	---	---	---	---	---	---	.00	.00	3.08	.13	.35	.00
18	---	---	---	---	---	---	.23	.00	.00	.00	.00	.00
19	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
20	---	---	---	---	---	---	.00	.00	.00	.00	.51	.00
21	---	---	---	---	---	---	.00	.00	.00	.00	.00	.44
22	---	---	---	---	---	3.83	.00	.87	.00	.00	.00	2.55
23	---	---	---	---	---	.10	.00	.08	.59	.00	.00	.11
24	---	---	---	---	---	.00	.00	.52	.05	.00	.00	.00
25	---	---	---	---	---	.00	.00	.00	.00	.00	.00	1.12
26	---	---	---	---	---	.14	.00	.00	.00	.44	.00	.00
27	---	---	---	---	---	.08	.00	.24	.00	.00	.28	.00
28	---	---	---	---	---	.02	.00	.15	.00	.00	.00	.00
29	---	---	---	---	---	.00	.00	.07	.00	.00	.00	.00
30	---	---	---	---	---	3.48	.00	.00	2.77	.00	.00	.00
31	---	---	---	---	---	.00	---	.00	---	.00	.00	---
TOTAL	---	---	---	---	---	---	1.34	2.03	8.69	2.28	4.76	4.78



## WEYMOUTH FORE RIVER BASIN

01105585 TOWN BROOK AT QUINCY, MA

LOCATION.--Lat 42°14'52", long 70°59'52", Norfolk County, Hydrologic Unit 01090001, on left bank 200 ft downstream from Miller Stile Road at Quincy and 0.8 mi upstream from Town River Bay.

DRAINAGE AREA.--4.22 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: Water years 1972-86; 1999. Prior to October 1974 published as Town River at Quincy. Water-quality records: May to August 1999, November 1999 to June 2000.

REVISED RECORDS.--WDR MA-RI-81-1: 1975-80 (P). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except those for discharges greater than 50 ft<sup>3</sup>/s, which are poor. Flow affected by unknown regulation. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--17 years (water years 1972-86, 1999-2001) 8.15 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 381 ft<sup>3</sup>/s May 13, 1975, gage height, 7.40 ft, from rating curve extended above 210 ft<sup>3</sup>/s on basis of U.S. Army Corps of Engineers computation of the backwater effect from culvert downstream; minimum daily, 0.33 ft<sup>3</sup>/s Oct. 3, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 345 ft<sup>3</sup>/s June 30, gage height, 6.61 ft; minimum daily, 0.62 ft<sup>3</sup>/s, Sept. 19.

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	1.1	1.4	2.0	3.1	4.9	3.4	13	2.7	2.3	17	1.3	0.86
2	1.2	1.3	1.8	2.8	4.0	3.1	11	2.5	12	4.4	1.2	.92
3	1.1	1.2	1.7	2.7	3.7	2.8	9.3	2.5	3.6	2.8	15	.93
4	2.0	1.2	1.7	2.6	3.3	2.7	8.2	2.5	2.7	2.5	3.8	2.7
5	1.5	6.1	1.7	2.5	4.4	5.5	7.3	2.4	2.4	6.3	1.5	1.1
6	3.5	1.7	1.7	4.6	7.8	15	9.3	2.4	2.4	2.5	1.2	.79
7	1.2	1.2	1.6	2.8	5.4	8.1	6.7	2.4	2.4	2.2	1.3	.83
8	1.1	1.1	1.4	2.7	4.1	5.3	13	2.4	2.1	2.7	1.2	.81
9	1.1	1.1	1.5	3.8	6.1	6.4	6.8	2.4	2.0	2.1	1.2	.71
10	1.1	18	1.4	2.9	13	8.3	6.1	2.4	2.0	6.6	6.9	.78
11	1.1	12	1.7	2.5	5.9	7.1	5.4	2.4	6.0	3.0	1.4	.70
12	1.0	2.4	1.9	2.3	4.7	6.5	10	2.3	14	2.0	7.9	.70
13	1.1	2.0	1.5	2.2	4.6	23	5.9	2.3	2.5	1.9	9.3	1.0
14	1.1	9.3	12	2.3	5.0	11	5.3	2.1	2.3	2.6	1.7	3.5
15	1.1	3.8	2.6	7.0	5.5	11	5.0	2.2	2.1	1.9	1.4	.92
16	2.1	2.2	2.7	3.6	5.5	10	4.8	2.4	2.0	1.8	1.3	.72
17	1.2	1.8	32	2.8	5.2	9.5	4.8	2.2	32	2.4	5.2	.66
18	6.1	1.7	9.2	2.4	3.9	9.9	7.0	2.2	7.3	1.8	1.5	.69
19	5.6	1.6	8.1	9.2	3.7	8.1	4.4	2.2	3.2	1.8	1.1	.62
20	1.2	1.6	15	4.4	3.9	7.4	4.2	1.9	2.6	1.6	5.3	.66
21	1.1	1.6	6.0	3.2	3.9	11	4.0	1.9	2.5	1.5	1.5	3.9
22	1.1	1.6	5.2	2.9	3.5	75	4.0	10	2.4	1.5	1.3	31
23	1.0	1.6	4.5	2.8	3.9	27	3.9	3.5	9.8	1.4	1.2	2.0
24	1.0	1.6	4.0	2.8	3.3	15	3.8	10	2.5	1.4	1.1	1.1
25	1.0	1.4	3.8	2.7	6.9	11	3.7	2.9	2.2	1.3	1.0	12
26	1.0	16	3.4	2.4	6.0	11	3.6	2.5	2.1	5.1	1.0	2.2
27	1.0	3.6	3.2	2.5	3.9	10	3.2	4.8	2.0	1.5	2.8	1.5
28	1.5	2.3	3.1	2.4	3.6	8.4	2.8	4.0	1.8	1.3	1.2	1.3
29	1.8	2.0	3.0	2.3	---	7.4	2.7	3.9	1.8	1.3	1.0	1.0
30	3.3	3.0	12	12	---	63	2.7	3.1	29	1.3	.97	1.0
31	5.5	---	4.8	7.2	---	22	---	2.4	---	1.3	.97	---
TOTAL	55.8	107.4	156.2	112.4	139.6	424.9	181.9	95.8	164.0	88.8	84.74	77.60
MEAN	1.80	3.58	5.04	3.63	4.99	13.7	6.06	3.09	5.47	2.86	2.73	2.59
MAX	6.1	18	32	12	13	75	13	10	32	17	15	31
MIN	1.0	1.1	1.4	2.2	3.3	2.7	2.7	1.9	1.8	1.3	.97	.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2001, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	5.73	7.49	8.75	11.1	11.6	13.5	10.4	7.50	7.81	4.33	5.50	4.30																		
MAX (WY)	15.1	18.5	20.3	36.0	29.3	33.8	26.5	18.9	32.2	9.33	12.3	7.97																		
MIN (WY)	1.80	2.22	2.13	2.52	2.38	6.10	4.86	3.09	1.82	2.03	1.73	1.16																		

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1972 - 2001

ANNUAL TOTAL	1811.60	1689.14	
ANNUAL MEAN	4.95	4.63	8.15
HIGHEST ANNUAL MEAN			15.6
LOWEST ANNUAL MEAN			4.63
HIGHEST DAILY MEAN	50	Jun 6	75
LOWEST DAILY MEAN	.92	Aug 27	.62
ANNUAL SEVEN-DAY MINIMUM	.95	Sep 6	.76
MAXIMUM PEAK FLOW			345
MAXIMUM PEAK STAGE			6.61
INSTANTANEOUS LOW FLOW			.25
10 PERCENT EXCEEDS	9.9	10	18
50 PERCENT EXCEEDS	3.4	2.6	4.5
90 PERCENT EXCEEDS	1.1	1.1	1.3

WEYMOUTH BACK RIVER BASIN

01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA

LOCATION.--Lat 42°11'25", long 70°56'43", Norfolk County, Hydrologic Unit 01090001, on left bank between divided lanes of State Highways 3 and 128, 50 ft (revised) downstream from unnamed tributary entering from left, 0.4 mi upstream from Whitmans Pond, and 1.2 mi north of South Weymouth.

DRAINAGE AREA.--4.50 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: May 1966 to current year.  
Water-quality records: Water years 1967-68, 1999-2000.

GAGE.--Water-stage recorder. Elevation of gage is 70 ft above sea level, from topographic map. Prior to Aug. 3, 1996, at site 50 ft downstream at same datum.

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

AVERAGE DISCHARGE.--35 years, 9.15 ft<sup>3</sup>/s, 27.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 590 ft<sup>3</sup>/s, May 31, 1984, gage height, 5.02 ft; maximum gage height, 5.35 ft, Feb. 15, 1971 (ice jam); minimum discharge, 0.05 ft<sup>3</sup>/s, Sept. 10-13, 15, 16, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge; 290 ft<sup>3</sup>/s, Mar. 22, (from rating curve extended above 140 ft<sup>3</sup>/s), gage height, 5.24 ft; minimum, 0.42 ft<sup>3</sup>/s, Aug. 2.

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	1.1	11	6.5	e5.7	11	e6.1	38	4.7	2.8	43	0.54	1.4
2	.98	6.1	4.9	4.2	8.9	5.0	23	4.4	9.4	23	.46	1.1
3	1.4	4.1	3.8	e3.5	6.8	4.5	18	4.2	8.7	7.2	2.9	.94
4	1.9	3.3	3.2	e3.1	e5.4	4.3	15	3.9	5.2	4.4	2.6	1.1
5	2.2	6.5	3.0	e3.0	e4.9	6.3	14	3.7	3.9	6.8	1.2	1.2
6	3.5	9.1	2.9	4.4	12	e56	14	3.5	3.1	7.4	.88	.87
7	2.7	4.9	2.6	4.0	11	e19	14	3.3	2.7	3.8	.74	.77
8	2.2	3.4	e2.3	3.6	8.3	e15	18	3.2	2.3	3.3	.52	.75
9	2.1	2.9	e2.2	4.2	7.8	14	16	3.1	2.0	2.9	.52	.67
10	2.4	11	2.1	e3.7	22	13	13	3.0	1.8	4.1	2.0	.63
11	2.1	25	2.7	e3.3	e20	13	11	2.7	2.0	5.7	1.8	.57
12	2.0	16	4.1	3.1	e9.9	13	15	2.5	10	3.2	2.4	.52
13	1.8	7.6	3.5	e2.8	7.9	29	17	2.4	4.4	1.9	28	.49
14	1.7	7.8	10	2.7	7.5	33	12	2.3	3.0	1.9	12	.95
15	1.8	12	9.3	5.6	10	30	10	2.3	2.3	1.9	3.9	.74
16	2.4	7.3	5.4	7.4	9.4	31	9.1	2.6	1.9	1.4	2.4	.61
17	3.5	5.2	35	5.6	10	31	8.6	2.6	14	1.6	1.8	.54
18	3.4	4.3	57	4.5	e8.4	30	11	2.3	28	1.7	1.6	.51
19	13	3.7	23	8.8	e6.0	24	9.9	2.2	8.4	1.7	1.3	.48
20	5.7	3.2	20	13	6.4	23	8.2	2.0	3.5	1.5	3.0	.49
21	4.0	3.1	13	e28	8.0	22	7.4	1.9	2.6	1.1	2.0	2.2
22	3.3	2.9	9.3	e13	e6.2	209	7.1	6.1	2.1	.98	1.4	20
23	2.9	2.6	7.4	e5.6	5.2	162	6.6	6.2	9.5	1.0	1.3	5.3
24	2.8	2.4	5.8	4.6	4.7	47	6.3	15	4.0	.80	1.0	2.3
25	2.7	2.2	e5.1	4.2	6.3	28	5.8	8.8	2.7	.76	.97	8.2
26	2.5	12	e4.5	e3.9	14	21	5.4	4.8	2.1	1.6	.93	10
27	2.6	21	3.9	3.7	11	19	5.2	8.0	1.7	1.1	3.3	3.7
28	2.8	10	3.4	3.6	8.0	17	5.1	6.7	1.5	.74	8.3	2.3
29	2.8	5.9	3.2	e3.2	---	15	4.7	5.7	1.2	.66	3.0	1.9
30	3.6	6.7	6.3	7.8	---	90	4.7	4.4	8.7	.62	1.7	1.7
31	14	---	e9.2	12	---	130	---	3.5	---	.59	1.4	---
TOTAL	101.88	223.2	274.6	185.8	257.0	1160.2	353.1	132.0	155.5	138.35	95.86	72.93
MEAN	3.29	7.44	8.86	5.99	9.18	37.4	11.8	4.26	5.18	4.46	3.09	2.43
MAX	14	25	57	28	22	209	38	15	28	43	28	20
MIN	.98	2.2	2.1	2.7	4.7	4.3	4.7	1.9	1.2	.59	.46	.48
CFSM	.73	1.65	1.97	1.33	2.04	8.32	2.62	.95	1.15	.99	.69	.54
IN.	.84	1.85	2.27	1.54	2.12	9.59	2.92	1.09	1.29	1.14	.79	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001			
MEAN	5.16	9.67	12.4	12.3	13.1	17.8	13.8	9.42	7.09	2.87	3.04	3.32																											
MAX	26.0	24.7	30.9	30.8	30.4	51.5	38.7	21.6	46.2	7.78	8.99	12.9																											
(WY)	1997	1992	1970	1979	1998	1983	1987	1967	1982	1988	1990	1996																											
MIN	1.14	2.80	2.77	2.16	2.86	6.25	4.95	4.11	1.08	.54	.50	.18																											
(WY)	1998	1985	1981	1981	1980	1981	1985	1986	1999	1991	1971	1980																											

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1966 - 2001
ANNUAL TOTAL	3187.56	3150.42	
ANNUAL MEAN	8.71	8.63	9.15
HIGHEST ANNUAL MEAN			14.4
LOWEST ANNUAL MEAN			3.91
HIGHEST DAILY MEAN	97	Apr 22	361
LOWEST DAILY MEAN	.84	Jul 15	.05
ANNUAL SEVEN-DAY MINIMUM	1.1	Sep 7	.06
MAXIMUM PEAK FLOW			290
MAXIMUM PEAK STAGE			5.24
INSTANTANEOUS LOW FLOW			.42
ANNUAL RUNOFF (CFSM)	1.94		1.92
ANNUAL RUNOFF (INCHES)	26.35		26.04
10 PERCENT EXCEEDS	17		18
50 PERCENT EXCEEDS	6.1		4.1
90 PERCENT EXCEEDS	1.8		1.1

e Estimated

NORTH RIVER BASIN

01105730 INDIAN HEAD RIVER AT HANOVER, MA

LOCATION.--Lat 42°06'02", long 70°49'23", Plymouth County, Hydrologic Unit 01090002, on right bank at downstream side of Elm Street Bridge, 0.3 mi upstream from Iron Mine Brook, and 1 mi southwest of Hanover.

DRAINAGE AREA.--30.3 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: July 1966 to current year.  
Water-quality records: Water years 1970-71.

GAGE.--Water-stage recorder. Datum of gage is 3.16 ft above sea level.

REMARKS.--Records good. Some regulation by mills and by Wampatuck, Indian Head, Maquan, and other ponds upstream.

AVERAGE DISCHARGE.--35 years, 63.0 ft<sup>3</sup>/s, 28.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft<sup>3</sup>/s, Mar. 18, 1968, gage height, 7.13 ft; minimum, 0.14 ft<sup>3</sup>/s, Sept. 26, 27, 1980; minimum daily, 0.18 ft<sup>3</sup>/s, Sept. 27, 29, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft<sup>3</sup>/s, Mar. 23, gage height, 6.49 ft; minimum, 5.0 ft<sup>3</sup>/s, Aug. 7; minimum daily, 5.4 ft<sup>3</sup>/s, Sept. 20.

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	13	65	57	56	84	57	485	42	32	98	7.6	18
2	13	46	48	45	75	51	280	41	48	90	7.2	15
3	13	34	40	39	64	47	197	39	81	55	6.3	13
4	12	28	36	36	55	45	158	37	56	39	6.7	12
5	11	27	33	34	60	53	136	35	42	38	7.7	12
6	13	45	32	41	110	168	125	34	35	57	7.3	11
7	15	41	30	44	99	193	126	33	31	40	6.4	11
8	14	32	28	40	82	139	134	31	28	31	7.5	9.6
9	16	28	26	42	73	118	142	30	25	28	7.0	8.6
10	17	38	25	41	124	116	123	29	22	26	7.2	8.0
11	15	104	26	37	141	112	106	28	21	27	11	7.3
12	14	107	30	35	93	113	111	26	41	28	14	6.8
13	13	70	30	32	73	166	136	24	41	25	128	6.2
14	12	56	48	31	67	213	115	23	30	23	113	6.1
15	11	81	75	41	74	193	94	22	26	22	54	6.4
16	10	68	54	62	75	200	83	23	23	19	34	6.4
17	11	52	110	53	79	207	77	24	43	18	26	6.1
18	12	43	215	47	70	207	94	24	169	19	22	5.8
19	21	39	177	55	58	183	96	23	94	18	19	5.5
20	27	36	142	100	55	168	78	22	51	17	22	5.4
21	25	33	116	75	61	158	70	20	40	15	24	6.6
22	22	31	86	61	55	702	67	25	34	14	22	68
23	20	29	69	53	50	1040	63	38	50	12	19	64
24	17	27	57	48	47	638	59	74	47	10	16	32
25	15	26	51	45	47	340	55	71	38	9.3	14	28
26	14	43	42	43	87	223	52	45	32	9.8	13	52
27	14	130	38	41	86	179	50	63	27	11	14	38
28	13	97	36	39	69	159	48	67	23	11	46	28
29	12	65	34	37	---	143	45	57	20	10	42	22
30	12	56	43	47	---	330	43	45	22	9.1	25	19
31	29	---	73	92	---	711	---	36	---	8.2	21	---
TOTAL	476	1577	1907	1492	2113	7372	3448	1131	1272	837.4	769.9	537.8
MEAN	15.4	52.6	61.5	48.1	75.5	238	115	36.5	42.4	27.0	24.8	17.9
MAX	29	130	215	100	141	1040	485	74	169	98	128	68
MIN	10	26	25	31	47	45	43	20	20	8.2	6.3	5.4
CFSM	.51	1.73	2.03	1.59	2.49	7.85	3.79	1.20	1.40	.89	.82	.59
IN.	.58	1.94	2.34	1.83	2.59	9.05	4.23	1.39	1.56	1.03	.95	.66

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001		
MEAN	35.5	62.6	82.5	84.2	93.0	122	99.8	65.0	45.4	22.4	22.3	21.9																										
MAX	199	143	185	218	205	276	230	155	203	83.2	93.0	90.1																										
(WY)	1997	1973	1997	1979	1998	1983	1987	1967	1982	1998	1990	1996																										
MIN	6.57	18.0	16.4	11.4	19.4	54.9	34.1	26.1	10.8	5.68	2.02	1.13																										
(WY)	1998	1981	1981	1981	1980	1985	1985	1981	1999	1971	1966	1980																										

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1966 - 2001

ANNUAL TOTAL	21614.4	22933.1	
ANNUAL MEAN	59.1	62.8	63.0
HIGHEST ANNUAL MEAN			97.3
LOWEST ANNUAL MEAN			27.6
HIGHEST DAILY MEAN	472	Apr 23	1040
LOWEST DAILY MEAN	6.5	Sep 14	5.4
ANNUAL SEVEN-DAY MINIMUM	7.7	Sep 8	6.0
MAXIMUM PEAK FLOW			1110
MAXIMUM PEAK STAGE			6.49
INSTANTANEOUS LOW FLOW			5.0
ANNUAL RUNOFF (CFSM)	1.95	2.07	2.08
ANNUAL RUNOFF (INCHES)	26.54	28.16	28.25
10 PERCENT EXCEEDS	128	129	140
50 PERCENT EXCEEDS	41	39	41
90 PERCENT EXCEEDS	13	11	7.3

JONES RIVER BASIN

01105870 JONES RIVER AT KINGSTON, MA

LOCATION.--Lat 41°59'27", long 70°44'03", Plymouth County, Hydrologic Unit 01090002, on left bank 100 ft downstream from Elm Street Bridge at Kingston and 2.8 mi upstream from mouth.

DRAINAGE AREA.--15.7 mi<sup>2</sup>, excludes 4.09 mi<sup>2</sup> above outlet of Silver Lake, from which flow is diverted for municipal supply of Brockton, Whitman, and Hanson.

PERIOD OF RECORD.--Discharge: August 1966 to current year.  
Water-quality records: Water years 1970-71.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4.76 ft above sea level (levels by Massachusetts Department of Public Works).

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by pond upstream. Flow affected at times by wastage from Silver Lake. Surface flow may be affected by ground water that enters from or moves into adjacent basins. Occasional backwater from tidal surge.

AVERAGE DISCHARGE.--35 years, 32.8 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 575 ft<sup>3</sup>/s, Mar. 19, 1968, gage height, 4.50 ft; maximum gage height, 5.88 ft, Feb. 7, 1978, from peak-stage indicator (backwater from tide); minimum daily, 0.59 ft<sup>3</sup>/s, Aug. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 265 ft<sup>3</sup>/s, Mar. 31, gage height, 4.77 ft, maximum gage height, 4.97 ft (from peak stage indicator); minimum daily, 4.6 ft<sup>3</sup>/s, Sept. 4.

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	11	33	28	21	39	29	193	50	29	32	11	9.9
2	9.5	29	24	20	38	26	150	50	50	37	10	9.7
3	8.9	27	21	19	35	24	132	46	73	29	11	9.4
4	8.5	25	18	21	31	24	121	49	64	22	20	4.7
5	13	22	17	19	33	35	109	47	56	21	19	7.9
6	12	24	17	19	56	e116	101	41	48	19	15	8.5
7	11	25	16	19	55	e114	96	38	40	17	14	8.1
8	11	24	15	18	50	95	98	35	31	15	12	7.6
9	15	21	13	e20	46	e83	102	33	26	15	10	7.5
10	20	23	13	e21	54	75	98	26	22	16	9.9	6.8
11	17	36	13	24	e54	70	91	23	20	18	11	6.5
12	16	39	e14	22	e46	67	92	22	35	19	12	6.4
13	16	35	13	19	38	82	101	22	37	17	24	6.0
14	14	32	19	22	35	98	93	19	31	16	32	6.5
15	13	34	24	27	33	89	87	21	26	16	26	6.7
16	12	31	23	31	30	82	82	23	22	15	21	6.2
17	12	27	36	28	34	74	71	24	e29	16	17	6.0
18	13	24	50	29	32	71	78	24	62	17	14	6.4
19	16	22	45	28	30	66	82	30	56	16	12	e6.4
20	17	20	54	40	28	60	74	37	44	15	e18	5.9
21	13	20	43	39	29	58	62	27	34	15	26	8.4
22	11	19	35	36	27	175	56	27	27	14	23	16
23	14	19	22	30	31	233	50	34	25	15	20	16
24	14	17	23	29	35	180	50	47	26	12	18	13
25	16	16	19	28	29	146	47	59	25	11	16	11
26	15	21	17	26	35	124	46	48	25	14	14	11
27	16	39	17	25	36	119	48	55	22	15	13	11
28	16	39	18	24	33	108	50	48	19	14	12	12
29	16	33	19	22	---	98	51	42	17	13	12	12
30	14	30	18	26	---	148	50	36	16	12	7.9	10
31	28	---	24	39	---	244	---	31	---	12	13	---
TOTAL	438.9	806	728	791	1052	3013	2561	1114	1037	535	493.8	263.5
MEAN	14.2	26.9	23.5	25.5	37.6	97.2	85.4	35.9	34.6	17.3	15.9	8.78
MAX	28	39	54	40	56	244	193	59	73	37	32	16
MIN	8.5	16	13	18	27	24	46	19	16	11	7.9	4.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001			
MEAN	19.2	29.6	33.7	36.9	45.2	60.2	52.5	39.2	26.8	17.6	16.3	16.9																											
MAX	83.6	66.0	88.1	78.2	97.5	135	114	71.2	69.4	41.6	42.9	55.8																											
(WY)	1967	1973	1977	1979	1998	1983	1984	1998	1984	1998	1979	1996																											
MIN	7.94	5.71	10.8	9.00	20.1	25.8	17.3	14.9	9.56	6.34	4.79	5.02																											
(WY)	1967	1975	1981	1981	1980	1985	1985	1981	1981	1981	1981	1995																											

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1966 - 2001
ANNUAL TOTAL	12773.3	12833.2	
ANNUAL MEAN	34.9	35.2	32.8
HIGHEST ANNUAL MEAN			54.6
LOWEST ANNUAL MEAN			14.9
HIGHEST DAILY MEAN	190	Apr 23	527
LOWEST DAILY MEAN	8.5	Oct 4	.59
ANNUAL SEVEN-DAY MINIMUM	9.2	Sep 8	1.1
MAXIMUM PEAK FLOW			575
MAXIMUM PEAK STAGE			5.88
INSTANTANEOUS LOW FLOW			.58
10 PERCENT EXCEEDS	69	76	65
50 PERCENT EXCEEDS	24	24	24
90 PERCENT EXCEEDS	13	11	9.1

e Estimated

QUASHNET RIVER BASIN

011058837 QUASHNET RIVER AT WAQUOIT VILLAGE, MA

LOCATION.--Lat 41°35'32", long 70°30'30", Barnstable County, Hydrologic Unit 01090002, on right bank 15 ft upstream from bridge on Martins Road, 0.5 mi northeast of Waquoit Village, and 1.4 mi upstream from mouth.

DRAINAGE AREA.--Surface drainage, from topography, about 2.58 mi<sup>2</sup>, excludes area drained by Johns Pond. This stream drains from a ground-water basin which is larger than, and not coincident with, the surface-water basin.

PERIOD OF RECORD.--October 1988 to current year.

REVISED RECORDS.--WDR MA-RI-92-1: 1990 (M), 1991.

GAGE.--Water-stage recorder. Elevation of gage is 0.86 ft above sea level.

REMARKS.--Records good. Flow at times includes overflow and leakage from Johns Pond. Occasional regulation by cranberry bog upstream. Occasional backwater from tidal surge.

AVERAGE DISCHARGE.--13 years, 15.7 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 42 ft<sup>3</sup>/s, July 1, 1998, gage height, 3.09 ft; maximum gage height, 4.55 ft, Aug. 19, 1991 (tidal surge); minimum discharge, 5.7 ft<sup>3</sup>/s, Oct. 24, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 39 ft<sup>3</sup>/s, Mar. 30, gage height, 2.90 ft; minimum, 7.4 ft<sup>3</sup>/s, Jan. 8.

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	12	18	12	8.2	11	15	23	19	21	15	15	13
2	12	14	12	8.0	11	18	21	19	24	21	15	13
3	12	13	12	7.8	11	13	20	19	24	20	15	12
4	12	12	12	7.7	12	13	20	19	23	18	15	12
5	12	13	12	7.7	12	16	20	19	22	20	16	12
6	13	12	12	7.8	13	21	20	19	22	18	15	12
7	12	12	12	7.8	12	17	21	19	22	17	15	12
8	12	12	11	7.8	11	15	22	19	21	17	14	12
9	13	12	11	8.4	11	14	24	19	22	18	14	12
10	14	14	11	8.2	11	15	22	19	21	17	14	11
11	13	15	12	8.4	11	14	19	19	21	19	15	11
12	12	13	12	8.7	11	14	21	19	25	19	16	11
13	12	13	11	8.9	11	17	21	19	20	18	17	11
14	12	13	14	9.1	11	18	20	19	19	17	17	11
15	12	14	14	9.9	11	24	20	19	20	17	16	12
16	12	13	12	11	11	25	20	19	20	17	16	11
17	12	13	13	10	12	20	20	18	20	17	16	12
18	12	12	14	9.8	11	17	23	19	23	17	16	12
19	13	12	12	11	11	16	21	18	19	17	15	12
20	12	12	14	12	11	15	20	18	18	16	20	12
21	12	13	12	12	11	16	20	18	18	16	21	14
22	12	12	12	11	11	24	20	19	18	16	16	15
23	12	12	12	10	12	20	20	19	19	16	15	13
24	12	12	12	10	13	17	20	26	18	16	15	12
25	12	12	12	10	14	17	20	23	18	15	14	14
26	12	13	11	10	16	17	20	20	17	18	14	15
27	12	14	11	10	15	18	20	27	18	19	14	13
28	10	13	11	9.9	14	18	20	24	16	16	14	12
29	10	12	9.0	9.8	---	17	19	24	13	16	13	12
30	10	12	8.6	11	---	28	19	23	14	15	13	12
31	14	---	8.3	12	---	31	---	22	---	15	13	---
TOTAL	374	387	363.9	293.9	332	560	616	622	596	533	474	368
MEAN	12.1	12.9	11.7	9.48	11.9	18.1	20.5	20.1	19.9	17.2	15.3	12.3
MAX	14	18	14	12	16	31	24	27	25	21	21	15
MIN	10	12	8.3	7.7	11	13	19	18	13	15	13	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 2001, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	13.4	14.5	13.2	13.8	14.4	16.9	20.2	19.8	17.6	15.3	14.9	14.1	
MAX	23.9	22.9	20.3	18.5	23.6	28.4	30.0	27.4	24.3	21.0	21.1	20.7	
(WY)	1997	1997	1997	1993	1998	1998	1998	1997	1998	1997	1997	1996	
MIN	10.2	11.6	9.56	9.48	10.2	11.4	12.9	11.7	12.2	11.9	12.2	10.7	
(WY)	1996	2000	1996	2001	1995	1989	1992	1995	1995	1991	1995	1995	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1989 - 2001

	2000 CALENDAR YEAR	2001 WATER YEAR	WATER YEARS 1989 - 2001
ANNUAL TOTAL	5104.3	5519.8	
ANNUAL MEAN	13.9	15.1	15.7
HIGHEST ANNUAL MEAN			21.8
LOWEST ANNUAL MEAN			12.4
HIGHEST DAILY MEAN	24	Apr 22	41
LOWEST DAILY MEAN	8.0	Jan 1	5.9
ANNUAL SEVEN-DAY MINIMUM	8.9	Jan 1	7.2
MAXIMUM PEAK FLOW		39	Mar 30
MAXIMUM PEAK STAGE		2.90	Mar 30
INSTANTANEOUS LOW FLOW		7.4	Jan 8
10 PERCENT EXCEEDS	18	21	23
50 PERCENT EXCEEDS	13	14	14
90 PERCENT EXCEEDS	11	11	11

SLOCUMS RIVER BASIN

01105933 PASKAMANSET RIVER NEAR SOUTH DARTMOUTH, MA

LOCATION.--Lat 41°35'07", long 70°59'27", Bristol County, Hydrologic Unit 01090002, at bridge on Russells Mills Road, 3.0 mi west of South Dartmouth.

DRAINAGE AREA.--26.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1995 to current year. Discharge measurements made in water years 1972-74, 1991-92.

GAGE.--Water-stage recorder. Elevation of gage is 10 ft above sea level, from topographic map. Telephone gage-height telemeter at station.

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

AVERAGE DISCHARGE.--6 years, 53.3 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 772 ft<sup>3</sup>/s, Mar. 31, 2001, gage height, 14.33 ft; minimum, 0.38 ft<sup>3</sup>/s, Aug. 8, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 772 ft<sup>3</sup>/s, Mar. 31, gage height, 14.33 ft; minimum, 2.1 ft<sup>3</sup>/s, Sept. 19-21.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	16	29	29	104	71	674	28	66	18	18	9.8
2	5.5	14	26	25	95	58	542	27	86	18	16	8.6
3	5.3	12	23	21	78	50	419	25	220	15	14	7.7
4	5.0	10	20	20	67	44	304	23	210	14	22	7.0
5	5.1	9.4	19	18	61	47	209	22	164	22	23	6.4
6	5.8	11	18	24	86	147	154	21	108	18	19	5.6
7	6.0	10	17	26	113	222	131	20	79	15	16	5.2
8	5.4	9.7	16	23	108	204	128	19	63	13	13	4.8
9	5.1	9.5	15	28	91	170	155	18	47	12	11	4.5
10	7.4	15	15	e27	86	157	144	17	35	11	9.6	4.3
11	6.7	32	15	e24	90	148	121	17	30	17	10	4.0
12	5.9	28	16	21	87	128	114	16	117	20	9.1	3.3
13	5.3	22	16	e19	78	142	164	15	190	26	32	3.0
14	4.9	19	29	17	68	241	154	14	166	19	46	3.0
15	4.8	39	55	24	63	234	124	13	111	14	42	3.2
16	5.1	35	46	43	58	196	98	13	77	11	24	2.9
17	5.4	28	51	38	59	168	85	13	71	9.6	18	2.7
18	5.6	22	82	32	56	145	81	12	219	9.6	15	2.6
19	7.2	18	95	36	48	121	81	12	252	8.9	13	2.4
20	8.2	17	110	71	42	98	75	11	196	8.2	40	2.4
21	6.2	16	122	80	40	85	68	10	132	7.2	57	1.6
22	5.5	15	103	73	36	193	63	13	89	6.5	42	4.8
23	5.0	14	88	62	32	346	57	20	74	6.0	27	3.3
24	4.8	13	76	51	31	330	51	78	67	5.6	22	2.1
25	4.6	12	65	40	32	283	46	188	55	5.2	19	1.5
26	4.3	16	56	35	77	235	41	181	41	25	17	1.5
27	4.3	52	46	32	97	195	37	142	32	90	15	1.3
28	4.4	56	34	30	88	162	34	111	27	92	14	1.2
29	5.5	49	27	28	---	134	32	104	22	59	12	1.1
30	5.3	34	25	34	---	256	29	95	20	26	11	1.0
31	11	---	33	87	---	741	---	81	---	21	10	---
TOTAL	176.4	653.6	1388	1118	1971	5751	4415	1379	3066	642.8	656.7	287.4
MEAN	5.69	21.8	44.8	36.1	70.4	186	147	44.5	102	20.7	21.2	9.58
MAX	11	56	122	87	113	741	674	188	252	92	57	48
MIN	4.3	9.4	15	17	31	44	29	10	20	5.2	9.1	2.4
CFSM	.22	.83	1.71	1.38	2.69	7.08	5.62	1.70	3.90	.79	.81	.37
IN.	.25	.93	1.97	1.59	2.80	8.17	6.27	1.96	4.35	.91	.93	.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2001, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001
MEAN	35.2	39.2	54.6	69.5	80.3	112	101
MAX	105	69.2	150	120	145	186	147
(WY)	1997	1996	1997	1998	1998	2001	2001
MIN	3.97	21.8	16.1	36.1	55.1	60.2	32.0
(WY)	1998	2001	1999	2001	2000	1997	1999

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1995 - 2001
ANNUAL TOTAL	15973.7	21504.9	
ANNUAL MEAN	43.6	58.9	53.3
HIGHEST ANNUAL MEAN			70.3
LOWEST ANNUAL MEAN			33.7
HIGHEST DAILY MEAN	380	741	741
LOWEST DAILY MEAN	2.9	2.4	.47
ANNUAL SEVEN-DAY MINIMUM	4.3	2.7	.55
MAXIMUM PEAK FLOW		772	772
MAXIMUM PEAK STAGE		14.33	14.33
INSTANTANEOUS LOW FLOW		2.1	.38
ANNUAL RUNOFF (CFSM)	1.67	2.25	2.04
ANNUAL RUNOFF (INCHES)	22.68	30.53	27.65
10 PERCENT EXCEEDS	96	150	122
50 PERCENT EXCEEDS	28	27	34
90 PERCENT EXCEEDS	5.4	5.6	4.3

e Estimated

TAUNTON RIVER BASIN

01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA

LOCATION.--Lat 41°56'02", long 70°57'25", Plymouth County, Hydrologic Unit 01090004, on right bank at bridge on Titicut Road, 1 mi upstream from Sawmill Brook, 3.5 mi northwest of Middleboro, and 4.0 mi southeast of Bridgewater.

DRAINAGE AREA.--258 mi<sup>2</sup>.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--October 1929 to April 1976, April 1985 to May 1988, October 1996 to current year. Published as "at State Farm" October 1929 to September 1969, and as "at State Farm near Bridgewater" October 1969 to April 1976.

REVISED RECORDS.--WSP 781: 1934. WSP 1051: 1933. WSP 1201: 1931. WSP 1301: 1930(M), 1933(M), 1935(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 9.61 ft above sea level. Prior to October 1996, at sites 40 ft apart about 600 ft upstream: October 1929 to Sept. 30, 1931, inverted nonrecording gage with zero of gage at 10.02 ft; Oct. 1, 1931, to June 8, 1934, nonrecording gage, and June 9, 1934, to April 1976, April 1985 to May 1988, water-stage recorders, at present datum.

REMARKS.--Records good. Flow affected by diversions to and from basin for municipal supplies. Flow regulated by reservoirs and, prior to about 1975, by powerplants upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--53 years (water years 1930-75, 1986-87, 1998 to current year), 475 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,980 ft<sup>3</sup>/s, Mar. 20, 1968, gage height, 14.48 ft; minimum, 8.0 ft<sup>3</sup>/s, Sept. 10, 1944; minimum daily, 9.0 ft<sup>3</sup>/s, Sept. 9-12, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft<sup>3</sup>/s, Mar. 24, gage height, 11.30 ft; minimum, 62 ft<sup>3</sup>/s, Sept. 20.

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

Table with columns DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. Rows 1-31 and summary rows TOTAL, MEAN, MAX, MIN.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2001, BY WATER YEAR (WY)

Table with columns for MEAN, MAX, MIN values for years 1930, 1934, 1935, 1936, 1937, 1938, 1939, 1940, 1941, 1942.

SUMMARY STATISTICS

Table with columns FOR 2000 CALENDAR YEAR, FOR 2001 WATER YEAR, WATER YEARS 1930 - 2001. Rows ANNUAL TOTAL, ANNUAL MEAN, HIGHEST ANNUAL MEAN, LOWEST ANNUAL MEAN, HIGHEST DAILY MEAN, LOWEST DAILY MEAN, ANNUAL SEVEN-DAY MINIMUM, MAXIMUM PEAK FLOW, MAXIMUM PEAK STAGE, INSTANTANEOUS LOW FLOW, 10 PERCENT EXCEEDS, 50 PERCENT EXCEEDS, 90 PERCENT EXCEEDS.

TAUNTON RIVER BASIN

01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1967-74, 1997-2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	PH WATER WHOLE LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	
APR	19...	0930	9.61	1,040	60	258.00	780	8.7	73	6.7	6.7	197	195
JUN	18...	1300	9.61	1,120	--	258.00	767	4.5	51	6.0	6.6	158	146
JUL	17...	1340	9.61	162	40	258.00	760	5.4	61	6.8	6.9	249	254
SEP	05...	1415	9.61	101	30	258.00	767	6.3	71	6.6	7.1	280	280

DATE	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)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	ALKA-LINITY TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE 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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	
APR	19...	17.0	8.7	7.11	1.87	1.84	25.1	11	12	14	40.2	E0.1	8.9
JUN	18...	31.5	22.0	--	--	--	--	--	15	18	--	--	--
JUL	17...	24.5	21.2	11.3	2.53	2.89	30.7	20	18	22	50.5	E.1	9.3
SEP	05...	25.1	21.2	11.3	2.70	3.37	34.0	21	18	22	56.9	<.2	12.3

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	
APR	19...	<10	144	0.237	0.72	0.375	0.030	0.021	E0.059	10	22	40	39
JUN	18...	--	--	.306	.47	.703	.039	.079	E.050	16	--	2,900	5,900
JUL	17...	<10	170	.058	.57	1.40	.038	.041	.113	13	28	47	29
SEP	05...	<10	172	<.040	.55	E1.46	E.005	E.044	.101	7.9	27	43	56



## TAUNTON RIVER BASIN

01108000 TAUNTON RIVER NEAR BRIDGEWATER, MA--Continued

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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)
APR 19...	91	153	0.09	0.5	<2	15.3	<0.06	19	E0.03	<0.8	0.38	1.7
JUN 18...	101	519	.17	.9	E1	14.1	<.06	29	.04	<.8	.48	3.1
JUL 17...	28	76	.12	.7	E1	16.1	<.06	45	.04	<.8	.52	1.4
SEP 05...	15	59	<.05	.6	<2	13.4	<.06	53	<.04	<.8	.37	1.6
DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
APR 19...	580	0.51	0.6	63.1	69	<0.01	E0.2	0.72	<0.3	<0.2	45.2	<0.04
JUN 18...	2,200	1.82	1.0	124	183	.02	.4	1.55	E.3	<.2	39.9	.09
JUL 17...	790	.45	1.0	196	237	<.01	.4	.95	<.3	<.2	62.2	.05
SEP 05...	870	.52	1.1	144	148	<.01	.5	.95	<.3	<.2	65.2	<.04
DATE	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	PHENOLS TOTAL (UG/L) (32730)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	ALPHA- HCH-D6 SUR SCD 1325 BED MAT PERCENT (90504)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG) (39423)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	ISODRIN SUR SCD 1325 BED MAT PERCENT (90568)
APR 19...	0.4	11	<16	--	--	--	--	--	--	--	--	--
JUN 18...	.9	10	--	--	--	--	--	--	--	--	--	--
JUL 17...	.4	4	<16	--	--	--	--	--	--	--	--	--
SEP 05...	.4	4	<16	<0.2	77.0	6	0.9	<0.2	<0.2	<0.2	<0.2	68
DATE	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	BI- PHENYL, NONA- CHLORO- SUR SCD 1325 PERCENT (90575)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)		
APR 19...	--	--	--	--	--	--	--	--	--	--	--	E0.01
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	.02
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	E.01
SEP 05...	<0.2	<2	<0.2	58.0	<0.5	3.6	1.6	<5	<50	<.02		

TAUNTON RIVER BASIN

01109000 WADING RIVER NEAR NORTON, MA  
(National Water Quality Assessment Site)

LOCATION.--Lat 41°56'51", long 71°10'38", Bristol County, Hydrologic Unit 01090004, on left bank 200 ft downstream from bridge on State Highway 140, 0.9 mi upstream from confluence with Rumford River, and 1.5 mi southeast of Norton.

DRAINAGE AREA.--43.3 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: June 1925 to current year.

Water-quality records: Water year 1967-68, 1999-2001.

REVISED RECORDS.--WSP 871: 1938. WSP 1301: 1929-33(M). WSP 1621: 1925-58 (monthly runoff). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 55.14 ft above sea level. Prior to Oct. 1, 1930, nonrecording gage at same site at datum 0.62 ft higher and Oct. 1, 1930, to May 5, 1933, at same site at present datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated to some extent by Lake Mirimichi and other lakes and reservoirs upstream. Diversion upstream for municipal supply of Attleboro and small diversions to and from basin for other municipal supplies. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--76 years, 73.6 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft<sup>3</sup>/s, Mar. 19, 1968; maximum gage height, 11.47 ft, Mar. 19, 1968, June 14, 1998; minimum discharge, 0.3 ft<sup>3</sup>/s, Sept. 10, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 701 ft<sup>3</sup>/s, Mar. 23, gage height, 9.64 ft; minimum, 4.0 ft<sup>3</sup>/s, Sept. 12-16, 19-21.

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	11	15	55	62	84	86	504	57	54	52	5.7	8.9
2	11	19	49	57	84	78	396	55	70	87	5.4	7.6
3	9.8	21	43	52	79	74	334	52	140	68	6.1	6.7
4	9.1	18	37	47	71	72	288	48	123	53	8.2	6.1
5	9.8	17	34	41	67	70	248	44	98	47	7.3	5.9
6	10	16	31	40	75	82	218	40	80	48	9.5	5.4
7	9.8	16	28	46	87	103	206	37	66	47	15	5.2
8	9.0	20	25	46	90	116	215	34	55	41	9.8	4.8
9	8.4	19	23	46	83	105	237	32	46	35	7.3	4.7
10	8.1	26	21	44	102	102	214	30	39	32	6.2	4.5
11	7.5	61	21	42	122	108	187	29	33	45	6.6	4.3
12	7.4	80	24	40	106	112	176	27	42	54	8.3	4.2
13	8.0	67	25	37	95	140	177	25	43	46	59	4.0
14	11	58	33	34	89	191	167	24	39	39	99	4.1
15	12	62	46	38	94	196	151	23	31	32	62	4.1
16	13	66	47	45	98	194	139	22	26	26	43	4.1
17	14	58	80	48	101	197	129	22	64	23	31	4.2
18	13	50	238	47	95	200	122	22	269	22	25	4.2
19	24	45	254	46	84	194	122	22	253	21	21	4.2
20	38	40	224	47	82	185	114	21	167	20	24	4.0
21	32	35	203	54	83	176	105	20	117	18	29	5.5
22	23	33	175	63	79	409	101	21	101	16	24	45
23	18	30	144	64	75	648	95	28	108	14	19	77
24	16	26	124	58	67	501	84	71	84	12	16	43
25	14	22	108	55	67	413	81	117	73	10	14	38
26	12	30	92	53	91	349	76	93	60	9.9	12	51
27	11	68	80	49	104	308	72	79	47	10	11	40
28	11	83	73	47	97	276	68	78	38	9.2	14	28
29	9.7	68	67	44	---	245	64	76	30	7.4	14	23
30	9.1	59	62	47	---	335	60	76	24	6.6	11	20
31	11	---	62	68	---	645	---	67	---	6.1	10	---
TOTAL	410.7	1228	2528	1507	2451	6910	5150	1392	2420	957.2	633.4	471.7
MEAN	13.2	40.9	81.5	48.6	87.5	223	172	44.9	80.7	30.9	20.4	15.7
MAX	38	83	254	68	122	648	504	117	269	87	99	77
MIN	7.4	15	21	34	67	70	60	20	24	6.1	5.4	4.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2001, BY WATER YEAR (WY)

	30.4	60.0	90.7	101	108	156	136	82.5	53.6	24.9	21.6	20.8
MEAN	30.4	60.0	90.7	101	108	156	136	82.5	53.6	24.9	21.6	20.8
MAX	143	210	257	353	232	354	323	227	284	225	175	106
(WY)	1956	1956	1946	1979	1970	1936	1987	1954	1998	1938	1955	1954
MIN	3.11	5.21	10.4	13.7	26.1	65.6	35.0	28.6	9.79	2.98	1.91	1.76
(WY)	1958	1958	1966	1981	1980	1985	1985	1965	1957	1999	1993	1930

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1925 - 2001
ANNUAL TOTAL	24970.6	26059.0	
ANNUAL MEAN	68.2	71.4	
HIGHEST ANNUAL MEAN			123 1984
LOWEST ANNUAL MEAN			28.8 1966
HIGHEST DAILY MEAN	443 Apr 23	648 Mar 23	1280 Mar 19 1968
LOWEST DAILY MEAN	5.0 Sep 11	4.0 Sep 13	.30 Sep 10 1926
ANNUAL SEVEN-DAY MINIMUM	5.2 Sep 8	4.1 Sep 12	.62 Aug 30 1993
MAXIMUM PEAK FLOW		701 Mar 23	1460 Mar 19 1968
MAXIMUM PEAK STAGE		9.64 Mar 23	11.47 Mar 19 1968
INSTANTANEOUS LOW FLOW		4.0 Sep 12	4.0 Sep 10 1926
10 PERCENT EXCEEDS	154	176	168
50 PERCENT EXCEEDS	45	46	50
90 PERCENT EXCEEDS	8.5	8.4	6.8

TAUNTON RIVER BASIN

01109000 WADING RIVER NEAR NORTON, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1967-68, 1999-2001.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED SATUR-ATION (00301)	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)	
JUN	08...	0900	57	1.9	754	7.9	85	6.7	269	17.1	18.2	10.1
JUL	02...	1720	81	4.0	760	7.7	88	6.6	232	24.0	22.1	9.28
	23...	1700	14	1.5	757	7.5	91	6.9	317	28.4	24.6	12.5
AUG	13...	1150	71	7.0	759	7.5	85	6.5	193	25.4	21.6	8.59
SEP	10...	1700	4.4	.9	760	6.8	79	6.9	287	24.4	22.4	12.2

DATE	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)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (MG/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	
JUN	08...	2.26	1.41	34.3	64.2	<0.2	5.0	5.8	175	0.045	0.40	0.52
JUL	02...	1.88	1.40	31.8	55.8	<.2	7.1	6.2	158	E.036	.45	.53
	23...	2.72	1.74	43.7	77.6	<.2	4.0	5.5	166	E.025	.33	.33
AUG	13...	1.88	1.72	22.2	36.7	<.2	4.5	8.3	110	.049	.35	2.0
SEP	10...	2.69	2.15	33.8	61.0	<.2	3.8	7.9	148	<.040	.29	.37

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 DIS-SOLVED (MG/L AS C) (00681)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	CHLOR-A PERI-PHYTON CHROMO-FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO-PLANK-TON CHROMO-FLUOROM (UG/L) (70953)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
JUN	08...	0.127	E0.004	0.016	<0.020	0.031	10	12	5.7	0.6	470	84.5
JUL	02...	.198	.009	.041	<.020	.037	8.7	10	6.6	1.2	450	95.5
	23...	.163	E.004	.012	<.020	.020	5.9	6.6	3.8	.7	340	65.7
AUG	13...	.215	.010	.020	<.020	.069	6.0	8.4	4.6	3.5	320	166
SEP	10...	.142	<.006	.011	<.020	.016	5.7	6.8	3.6	.7	190	74.9

< Less than  
E Estimated





TEN MILE RIVER BASIN

01109403 TEN MILE RIVER AT PAWTUCKET AVENUE AT EAST PROVIDENCE, RI

LOCATION.--Lat 41°49'51", long 71°21'06", Providence County, Hydrologic Unit 01090004, on right bank on upstream side of bridge on State Highways 1A and 114, 0.3 mi south of junction with State Highway 114A, and 0.7 mi upstream from mouth.

DRAINAGE AREA.--53.1 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 5 ft above sea level, from topographic map.

REMARKS.--Records good. Flow affected by regulation and diversions from reservoirs upstream.

AVERAGE DISCHARGE.--15 years, 107 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,450 ft<sup>3</sup>/s, June 15, 1998, gage height, 8.50 ft; minimum, 5.0 ft<sup>3</sup>/s, Apr. 19, 1991; minimum daily, 6.6 ft<sup>3</sup>/s, Apr. 19, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft<sup>3</sup>/s, Mar. 31, gage height, 7.30 ft; minimum, 17 ft<sup>3</sup>/s, Oct. 29.

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	29	37	62	73	115	112	803	67	72	60	29	35
2	30	35	59	70	106	102	499	65	142	80	28	27
3	36	33	53	67	97	94	373	63	234	73	24	25
4	32	32	51	64	87	88	315	59	170	67	61	27
5	29	33	49	61	93	102	275	58	118	72	51	29
6	52	32	47	65	109	132	245	54	96	74	39	25
7	54	34	46	64	108	131	241	49	83	63	34	24
8	50	36	44	62	103	121	273	51	75	57	28	24
9	49	34	43	64	99	121	322	52	66	56	26	22
10	45	81	42	61	140	131	277	52	60	58	28	22
11	43	133	43	58	167	136	228	50	60	109	35	24
12	43	96	46	57	133	142	221	48	115	88	40	20
13	51	73	45	54	116	218	219	47	82	67	175	20
14	45	70	62	52	111	305	198	44	68	59	207	25
15	39	82	75	65	121	284	178	45	59	51	104	24
16	35	72	63	72	128	260	160	44	54	46	67	21
17	33	64	169	67	134	245	153	44	150	47	56	21
18	34	56	416	65	122	240	155	45	507	48	51	22
19	76	51	389	75	107	222	148	46	417	46	44	22
20	66	48	276	107	100	199	132	43	199	42	65	22
21	49	47	221	97	104	188	123	41	134	39	70	38
22	42	45	178	80	101	493	122	50	108	37	55	117
23	32	43	147	74	98	884	115	62	120	35	45	96
24	32	41	125	69	90	646	111	161	107	33	43	60
25	32	38	110	66	94	478	99	190	95	33	36	54
26	31	72	95	63	135	383	87	126	82	39	33	57
27	31	135	88	61	139	334	81	128	73	38	36	46
28	36	101	83	59	126	300	79	110	65	32	61	40
29	21	75	77	58	---	274	71	100	55	30	50	36
30	24	68	81	74	---	447	69	98	52	29	39	30
31	36	---	80	123	---	925	---	86	---	28	35	---
TOTAL	1237	1797	3365	2147	3183	8737	6372	2178	3718	1636	1695	1055
MEAN	39.9	59.9	109	69.3	114	282	212	70.3	124	52.8	54.7	35.2
MAX	76	135	416	123	167	925	803	190	507	109	207	117
MIN	21	32	42	52	87	88	69	41	52	28	24	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2001, BY WATER YEAR (WY)

MEAN	62.3	93.1	132	137	145	188	187	112	80.5	48.0	49.1	47.9
MAX	171	223	304	206	261	348	407	206	317	181	119	94.4
(WY)	1990	1990	1993	1999	1988	1994	1987	1998	1998	1998	1989	1987
MIN	23.1	44.8	49.4	41.4	60.5	90.2	78.0	60.4	32.1	19.7	16.6	22.3
(WY)	1994	1994	1999	1989	1989	1989	1995	1992	1991	1999	1993	1993

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1987 - 2001

ANNUAL TOTAL	35924	37120										
ANNUAL MEAN	98.2	102								107		
HIGHEST ANNUAL MEAN										154		1998
LOWEST ANNUAL MEAN										67.5		1995
HIGHEST DAILY MEAN	784	Apr 23	925	Mar 31	1380	Jun 15	1998					
LOWEST DAILY MEAN	21	Oct 29	20	Sep 12	6.6	Apr 19	1991					
ANNUAL SEVEN-DAY MINIMUM	25	Sep 8	22	Sep 12	12	Aug 31	1993					
MAXIMUM PEAK FLOW			1030	Mar 31	1450	Jun 15	1998					
MAXIMUM PEAK STAGE			7.30	Mar 31	8.50	Jun 15	1998					
INSTANTANEOUS LOW FLOW			17	Oct 29	5.0	Apr 19	1991					
10 PERCENT EXCEEDS	185		218		220							
50 PERCENT EXCEEDS	69		65		76							
90 PERCENT EXCEEDS	33		32		25							

BLACKSTONE RIVER BASIN

01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA

LOCATION.--Lat 42°13'49", long 71°42'41", Worcester County, Hydrologic Unit 01090003, on right bank 800 ft downstream from dam at outlet of Hovey Pond at North Grafton and 0.3 mi upstream from Bummatt Brook.

DRAINAGE AREA.--25.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1939 to current year.  
Water-quality records: Water years, 2000.

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

GAGE.--Water-stage recorder. Elevation of gage is 335 ft above sea level, from topographic map. Prior to Dec. 7, 1939, staff gage at same site and datum.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Some regulation by Lake Quinsigamond 2.3 mi upstream and by ponds upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--62 years, 41.1 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft<sup>3</sup>/s, Aug. 20, 1955, gage height, 5.15 ft; no flow Aug. 6-9, 22, 1966 (caused by unusual regulation), Sept. 13-17, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 368 ft<sup>3</sup>/s, Mar. 23, gage height, 3.47 ft; minimum daily, 0.03 ft<sup>3</sup>/s, Sept. 12, 13.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	8.0	23	22	24	29	236	34	19	42	1.1	0.54
2	5.2	7.3	21	20	25	28	202	34	35	45	.88	.41
3	5.2	6.4	17	19	24	27	172	32	76	34	1.4	.20
4	5.2	6.2	15	19	22	26	149	30	75	27	17	.13
5	6.2	7.4	14	17	23	30	136	28	62	27	19	.12
6	16	9.6	14	18	30	43	129	26	50	28	16	.07
7	18	8.4	12	18	27	39	132	23	40	21	13	.05
8	15	7.2	11	17	25	34	150	22	35	18	10	.04
9	13	6.8	11	18	25	32	165	21	29	17	7.7	.04
10	11	22	10	18	33	38	157	20	25	17	5.9	.04
11	9.5	45	10	16	36	34	139	19	23	18	4.8	.04
12	7.3	39	12	15	32	33	134	19	32	17	6.9	.03
13	6.5	32	12	15	29	46	134	22	33	15	11	.03
14	6.2	30	14	14	28	58	121	20	29	12	12	.22
15	6.0	42	15	15	36	56	104	19	29	11	9.6	.31
16	6.0	34	14	16	36	58	93	17	29	9.6	7.6	.19
17	7.6	29	47	16	38	60	84	17	62	9.8	6.5	.13
18	8.2	25	114	15	35	65	80	16	127	10	9.7	.08
19	13	20	94	16	30	68	72	16	95	9.7	7.4	.07
20	11	18	84	19	28	69	66	16	72	8.6	7.0	.06
21	10	16	63	21	29	73	61	14	62	7.4	10	1.3
22	9.4	16	53	20	27	238	60	17	49	6.5	7.9	.88
23	7.5	13	44	18	27	362	53	21	41	5.2	6.2	.45
24	6.7	11	37	17	26	328	51	25	36	4.4	4.9	.32
25	6.5	9.5	33	16	27	277	51	27	34	4.2	3.5	3.9
26	6.0	14	e28	16	34	228	45	24	29	4.6	2.3	17
27	5.9	29	e24	15	35	198	43	30	25	4.7	1.7	15
28	7.8	28	22	14	32	165	42	29	21	3.3	1.8	12
29	6.9	25	20	13	---	141	39	28	17	2.4	1.6	8.9
30	4.5	24	21	16	---	187	37	e27	17	1.8	1.1	6.6
31	7.2	---	25	23	---	266	---	e24	---	1.4	.61	---
TOTAL	260.1	588.8	934	532	823	3336	3137	717	1308	442.6	216.09	69.15
MEAN	8.39	19.6	30.1	17.2	29.4	108	105	23.1	43.6	14.3	6.97	2.31
MAX	18	45	114	23	38	362	236	34	127	45	19	17
MIN	4.5	6.2	10	13	22	26	37	14	17	1.4	.61	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	20.5	32.3	43.3	47.6	53.5	78.4	77.3	51.6	38.0	19.5	17.0	15.1
MEAN	20.5	32.3	43.3	47.6	53.5	78.4	77.3	51.6	38.0	19.5	17.0	15.1
MAX	94.3	149	109	159	141	154	202	92.3	143	64.2	169	130
(WY)	1956	1956	1997	1979	1970	1972	1987	1954	1982	1959	1955	1954
MIN	1.22	1.80	3.07	7.85	11.0	29.4	22.5	18.7	2.81	2.67	.050	.70
(WY)	1943	1942	1942	1981	1977	1989	1966	1999	1999	1965	1999	1995

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1940 - 2001

ANNUAL TOTAL	13102.41	12363.74	
ANNUAL MEAN	35.8	33.9	41.1
HIGHEST ANNUAL MEAN			68.4
LOWEST ANNUAL MEAN			16.5
HIGHEST DAILY MEAN	269	Apr 23	790
LOWEST DAILY MEAN	.91	Sep 12	.00
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 7	.04
MAXIMUM PEAK FLOW			368
MAXIMUM PEAK STAGE			3.47
INSTANTANEOUS LOW FLOW			.03
10 PERCENT EXCEEDS	75	72	87
50 PERCENT EXCEEDS	24	19	30
90 PERCENT EXCEEDS	6.5	2.9	5.5

e Estimated





BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA

LOCATION.--Lat 42°01'22", long 71°34'22", Worcester County, Hydrologic Unit 01090003, on railroad bridge, 0.6 mi southeast of Millville, and 1.6 mi upstream from Branch River. Prior to December 1980, at site 0.2 mi downstream.

DRAINAGE AREA.--277 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to December 1980.

pH: July 1969 to December 1980.

WATER TEMPERATURE: July 1969 to December 1980.

DISSOLVED OXYGEN: July 1969 to December 1980.

REMARKS.--Discharge computed by discharge measurements on the day of sampling. Instantaneous records are representative of the cross section while continuous records are based on point samples.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,000 µS/cm, May 30, June 3, 5, 1975; minimum, 49 µS/cm, June 30, 1973.

pH: Maximum recorded, 9.3 units, Sept. 10, 1976; minimum, 4.3 units, Sept. 6, 1973.

WATER TEMPERATURE: Maximum recorded, 29.0°C, July 29, 1970, July 21, 1977, July 23, 1978; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 14.9 mg/L, Feb. 25, 1971; minimum, 0.0 mg/L, July 12, 15-20, 26-30, Aug. 2, 3, 1971.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC DUCT-ANCE (US/CM) (90095)	SPE-CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)
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APR	18...	0830	979	10	277.00	760	10.1	90	6.3	6.9	350	344	5.0
JUN	19...	0900	1,710	--	277.00	766	7.0	80	6.2	6.7	214	205	24.8
JUL	17...	0840	194	12	277.00	761	7.1	81	7.2	6.6	356	366	24.5
SEP	05...	0900	90	5	277.00	761	6.3	68	6.9	7.2	501	499	22.0

DATE	TEMPER-ATURE (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)	ANC UNFLTRD TIT 4.5 LAB AS (MG/L) (90410)	ALKA-LINITY WAT DIS TOT IT (MG/L AS) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL DEG. C, SUS-PENDED (MG/L) (00530)
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APR	18...	10.0	13.0	2.16	2.92	45.2	15	16	20	78.8	E0.1	13.2	<10
JUN	19...	22.0	--	--	--	--	--	12	14	--	--	--	--
JUL	17...	21.5	14.7	2.50	4.31	46.9	22	19	23	77.1	.2	15.7	10
SEP	05...	19.0	19.3	3.37	7.86	63.6	30	28	34	102	.3	25.8	10

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
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APR	18...	190	0.390	0.84	0.601	0.023	0.032	0.105	4.9	15	61	19	33
JUN	19...	--	.169	.78	.444	.026	.056	.157	10	--	800	580	69
JUL	17...	224	<.040	.51	1.64	.010	.035	.112	6.1	21	73	250	15
SEP	05...	284	E.063	.80	E3.78	E.088	E.181	.297	6.8	<10	68	44	6

BLACKSTONE RIVER BASIN

0111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
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APR	18...	133	0.17	1.0	E2	22.1	E0.04	30	0.36	E0.4	0.34	3.8	510
JUN	19...	276	.26	1.6	2	17.1	E.05	22	.32	E.6	.18	5.5	940
JUL	17...	91	.39	1.5	2	18.5	<.06	55	.41	E.6	.19	4.2	590
SEP	05...	68	.37	2.5	3	16.3	<.06	118	.59	E.6	.29	6.9	520

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
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APR	18...	0.60	1.7	91.0	104	<0.01	0.7	3.21	<0.3	<0.2	85.0	<0.04	0.3
JUN	19...	1.35	.9	47.0	70	.02	.9	3.79	<.3	<.2	53.1	<.04	.5
JUL	17...	.47	1.3	45.6	60	<.01	1.8	5.05	E.2	<.2	90.1	<.04	.3
SEP	05...	.83	2.6	74.5	98	<.01	5.3	11.8	.3	<.2	107	<.04	.5

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	PHENOLS TOTAL (UG/L AS ZN) (32730)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	ALPHA- HCH-D6 SUR SCD BED MAT PERCENT (90504)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39423)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	ISODRIN SUR SCD BED MAT PERCENT (90568)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)
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APR	18...	20	<16	--	--	--	--	--	--	--	--	--
JUN	19...	15	--	--	--	--	--	--	--	--	--	--
JUL	17...	13	<16	--	--	--	--	--	--	--	--	--
SEP	05...	23	<16	<0.2	77.0	3	0.9	<0.2	<0.2	<0.2	67	<0.2

DATE	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	BI- PHENYL, NONA- CHLORO- SUR SCD 1325 PERCENT (90575)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
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APR	18...	--	--	--	--	--	--	--	--	0.03
JUN	19...	--	--	--	--	--	--	--	--	.04
JUL	17...	--	--	--	--	--	--	--	--	.02
SEP	05...	<2	<0.2	62.0	<0.5	1.9	0.6	17	<50	<.02

BLACKSTONE RIVER BASIN

01111300 NIPMUC RIVER NEAR HARRISVILLE, RI

LOCATION.--Lat 41°58'52", long 71°41'11", Providence County, Hydrologic Unit 01090003, on left bank 1.0 mi upstream from mouth and 1.2 mi northwest of Harrisville.

DRAINAGE AREA.--16.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: March 1964 to September 1991, October 1993 to current year.  
Water-quality records: Water year 1968.

REVISED RECORDS.--WDR MA-RI-98-1: 1999.

GAGE.--Water-stage recorder. Elevation of gage is 340 ft above sea level, from topographic map.

REMARKS.--Records poor.

AVERAGE DISCHARGE.--35 years (water years 1965-91, 1994-current year), 30.6 ft<sup>3</sup>/s, 25.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft<sup>3</sup>/s, Jan. 25, 1979, gage height, 8.53 ft, from rating curve extended above 530 ft<sup>3</sup>/s; minimum, no flow, Sept. 5, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,680 ft<sup>3</sup>/s, Mar. 22, gage height, 7.26 ft; minimum, 0.26 ft<sup>3</sup>/s, Oct. 5.

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	0.61	6.0	25	23	34	e31	179	29	5.6	24	2.3	1.9
2	.51	6.2	21	23	31	e28	135	28	34	19	1.9	1.4
3	.44	4.9	e16	23	28	27	113	26	49	11	1.7	1.3
4	.35	3.5	14	23	26	26	103	24	30	8.4	1.8	1.3
5	.32	2.9	12	23	25	32	95	23	22	14	2.0	1.2
6	.49	6.4	12	23	31	50	92	22	14	28	1.8	.91
7	.67	5.2	12	22	30	45	98	21	9.5	17	1.6	.76
8	1.4	3.0	10	22	28	37	144	20	6.7	12	1.2	.68
9	.74	2.0	9.8	22	e28	34	141	19	4.7	18	1.1	.64
10	1.1	18	11	22	e28	35	104	18	3.2	13	4.9	.63
11	.71	45	13	22	e29	34	85	16	2.6	35	9.1	e.56
12	.49	35	14	21	e29	35	83	14	12	23	9.4	e.51
13	.44	25	e14	21	e32	50	86	12	11	14	37	e.48
14	.41	23	16	21	30	61	74	10	6.0	9.6	31	e.78
15	.28	43	18	22	33	55	66	10	3.5	10	17	e1.0
16	.31	35	e15	24	32	59	61	9.7	2.6	7.3	9.1	e1.1
17	.64	27	80	24	33	67	56	10	207	6.4	5.9	e1.1
18	.68	22	170	23	e31	75	55	8.9	292	6.5	4.9	e1.0
19	4.3	19	75	24	27	71	52	9.5	76	6.1	4.3	e.96
20	4.6	17	56	30	25	72	48	8.4	38	5.4	5.3	e1.1
21	3.3	15	e38	28	30	78	46	4.5	27	4.8	6.7	e1.5
22	2.4	15	32	26	e28	874	52	8.5	23	4.3	5.4	e1.8
23	1.3	14	e30	25	e26	331	42	17	25	3.8	4.2	e1.7
24	.83	13	27	24	24	196	39	22	21	3.4	3.6	e1.6
25	3.0	12	24	24	25	163	37	25	20	3.1	3.0	e1.8
26	3.3	17	23	23	38	131	36	19	15	3.3	2.5	e1.9
27	1.8	38	22	22	e37	112	34	26	11	3.6	2.6	e1.8
28	.78	34	22	22	34	98	37	23	7.9	3.1	3.6	e1.7
29	.60	27	21	21	---	91	33	17	6.2	2.8	3.4	e1.6
30	1.2	25	21	24	---	407	31	13	5.6	2.8	2.9	e1.5
31	4.0	---	24	35	---	372	---	9.0	---	2.5	2.2	---
TOTAL	42.00	559.1	897.8	732	832	3777	2257	522.5	991.1	325.2	193.4	36.21
MEAN	1.35	18.6	29.0	23.6	29.7	122	75.2	16.9	33.0	10.5	6.24	1.21
MAX	4.6	45	170	35	38	874	179	29	292	35	37	1.9
MIN	.28	2.0	9.8	21	24	26	31	4.5	2.6	2.5	1.1	.48
CFSM	.08	1.16	1.81	1.48	1.86	7.61	4.70	1.05	2.06	.66	.39	.08
IN.	.10	1.30	2.09	1.70	1.93	8.78	5.25	1.21	2.30	.76	.45	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001				
MEAN	13.6	25.6	38.8	43.0	44.3	64.2	57.6	35.2	22.6	8.05	7.70	5.75																														
MAX	59.9	81.5	113	176	92.7	124	156	69.0	109	29.8	49.5	23.7																														
(WY)	1990	1973	1997	1979	1970	1983	1987	1967	1982	1984	1990	1989																														
MIN	1.35	3.32	7.45	7.13	7.93	30.5	19.3	12.6	3.06	1.07	.32	.36																														
(WY)	2001	1966	1966	1981	1980	1989	1966	1986	1999	1997	1999	1983																														

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1964 - 2001

ANNUAL TOTAL	9557.45	11165.31	
ANNUAL MEAN	26.1	30.6	
HIGHEST ANNUAL MEAN			30.6
LOWEST ANNUAL MEAN			44.9
HIGHEST DAILY MEAN	170	874	13.5
LOWEST DAILY MEAN	.23	.28	1966
ANNUAL SEVEN-DAY MINIMUM	.42	.46	1966
MAXIMUM PEAK FLOW		1680	1979
MAXIMUM PEAK STAGE		7.26	1979
INSTANTANEOUS LOW FLOW		.26	1999
ANNUAL RUNOFF (CFSM)	1.63	1.91	1.91
ANNUAL RUNOFF (INCHES)	22.22	25.96	25.97
10 PERCENT EXCEEDS	53	63	67
50 PERCENT EXCEEDS	22	19	19
90 PERCENT EXCEEDS	1.2	1.2	1.7

e Estimated

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI

LOCATION.--Lat 41°59'47", long 71°33'47", Providence County, Hydrologic Unit 01090003, on left bank 20 ft upstream from abandoned bridge site, 400 ft downstream from milldam at Forestdale, 1 mi east of Slatersville, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--91.2 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September to December 1909 and January 1912 to July 1913 (gage heights only; published as "at Branch Village"), January 1940 to current year.

REVISED RECORDS.--WSP 2101: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 180 ft above sea level, from topographic map. Prior to July 28, 1913, non-recording gage at site 1 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharge and those for the period March 23 to May 23, which are poor. Occasional regulation by pond upstream. Prior to 1957, greater regulation by mills and reservoirs upstream.

AVERAGE DISCHARGE.--61 years, 175 ft<sup>3</sup>/s, 26.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft<sup>3</sup>/s, Jan. 25, 1979, gage height, 11.80 ft; maximum gage height, 11.90 ft, Mar. 18, 1968; minimum daily, 5.2 ft<sup>3</sup>/s, Oct. 7, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, about 5,800 ft<sup>3</sup>/s, Mar. 19, 1936, by computation of flow over dam 1 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,030 ft<sup>3</sup>/s, Mar. 22, gage height, 10.29 ft; minimum, 13 ft<sup>3</sup>/s, Sept. 12, 13, 14.

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

Table with columns: DAY, OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP. Rows include daily discharge values and summary statistics like MEAN, MAX, MIN, CFMSM, IN.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

Table with columns: MEAN, MAX, (WY), MIN, (WY). Rows show monthly mean data for water years 1940 to 1999.

SUMMARY STATISTICS

Table with columns: FOR 2000 CALENDAR YEAR, FOR 2001 WATER YEAR, WATER YEARS 1940 - 2001. Rows include ANNUAL TOTAL, HIGHEST ANNUAL MEAN, LOWEST ANNUAL MEAN, etc.

e Estimated

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1968, 1979 to current year.

REMARKS.--Discharge computed by discharge measurements on the day of sampling. Instantaneous records are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD ARD UNITS) (00400)	PH WATER WHOLE LAB ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	
APR												
18...	1300	180.00	144	18	91.20	763	11.2	101	5.9	6.8	114	111
23...	1345	180.00	101	--	91.20	777	8.3	93	6.9	--	--	126
JUN												
18...	1430	180.00	2,240	--	91.20	764	9.4	106	6.0	6.1	66	65
JUL												
18...	0815	180.00	55	40	91.20	763	7.6	87	6.5	7.0	129	131
SEP												
06...	0815	180.00	20	15	91.20	767	8.8	96	6.5	6.7	144	142
DATE	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)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
APR												
18...	14.7	10.8	3.88	0.800	1.20	13.8	5	5	6	24.8	E0.1	7.2
23...	25.5	22.0	--	--	--	--	--	10	--	--	--	--
JUN												
18...	26.7	21.4	--	--	--	--	--	5	6	--	--	--
JUL												
18...	25.6	22.0	4.63	.970	1.73	16.9	9	10	12	27.2	E.1	5.6
SEP												
06...	9.5	19.8	5.41	1.24	1.95	17.3	12	11	13	28.7	<.2	6.6
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./ 100 ML) (31625)
APR												
18...	<10	62	0.067	0.28	0.204	<0.006	<0.018	<0.060	4.3	14	3	1
23...	--	--	--	--	--	--	--	--	--	--	8	17
JUN												
18...	--	--	.308	.98	.081	E.004	<.020	.167	13	--	6,800	7,100
JUL												
18...	<10	90	E.037	.29	.216	E.005	<.020	<.060	6.1	20	--	--
SEP												
06...	<10	94	E.047	.35	E.140	<.006	<.020	<.060	5.8	17	15	19

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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)
APR												
18...	98	139	0.09	E0.2	<2	18.3	0.08	10	0.05	<0.8	0.20	1.2
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
18...	186	360	.14	.3	<2	13.7	.13	11	.07	E.4	.31	2.3
JUL												
18...	47	57	.11	.3	<2	17.1	E.05	17	E.02	<.8	.08	1.3
SEP												
06...	22	41	<.05	.3	<2	16.9	<.06	18	.04	E.5	.06	1.2

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
APR											
18...	240	0.55	1.3	72.2	74	<0.01	<0.2	0.10	<0.3	<0.2	29.6
23...	--	--	--	--	--	--	--	--	--	--	--
JUN											
18...	760	1.46	.6	94.3	105	<.01	<.2	.61	E.2	<.2	18.7
JUL											
18...	850	.72	.6	52.5	69	<.01	E.2	.35	E.2	<.2	35.8
SEP											
06...	750	.60	.6	76.0	93	<.01	E.1	.41	<.3	<.2	42.5

DATE	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)	PHENOLS TOTAL (UG/L) (32730)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR					
18...	<0.04	E0.1	9	<16	E0.01
23...	--	--	--	--	--
JUN					
18...	<.04	.6	8	--	.03
JUL					
18...	<.04	.3	3	<16	.02
SEP					
06...	<.04	.2	3	<16	<.02

BLACKSTONE RIVER BASIN

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

LOCATION.--Lat 42°00'22", long 71°30'13", Providence County, Hydrologic Unit 01090003, on right bank 50 ft upstream from Peters River pressure conduit at Woonsocket. Records include flow of Peters River.

DRAINAGE AREA.--416 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: February 1929 to current year.

Water-quality records: Water years 1952-53, 1957-58, 1962-67.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M). WSP 871: 1938. WSP 1051: 1931.

GAGE.--Water-stage recorder. Datum of gage is 107.42 ft above sea level.

REMARKS.--Records good. Flow regulated by powerplants, by West Hill Reservoir since May 1961, and by other reservoirs upstream. Extremes and figures of daily discharge include flow diverted from Nashua River basin and, at times since January 1966, from Quabbin Reservoir for supply of Worcester, MA, and, prior to July 1964, flow diverted around station in Hamlet Trench. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--72 years, 778 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 21.80 ft, from floodmarks, from rating curve extended above 15,000 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow (affected by failure of Horseshoe Dam on Mill River); minimum daily, 21 ft<sup>3</sup>/s, Aug. 11, 1934 (flow diverted around station in Hamlet Trench not included).

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1645, that of Aug. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,300 ft<sup>3</sup>/s, Mar. 23, gage height, 11.65 ft; minimum, 90 ft<sup>3</sup>/s, Sept. 20.

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	165	261	407	514	644	703	5390	563	436	789	146	136
2	150	243	385	463	630	651	4050	542	686	832	138	127
3	140	228	344	435	582	588	3260	518	1470	603	134	118
4	133	223	312	416	519	558	2880	464	1240	484	228	114
5	151	213	304	403	499	591	2560	432	953	496	291	113
6	225	220	292	403	534	669	2390	416	745	627	209	105
7	296	217	278	423	537	666	2420	396	558	518	181	103
8	246	222	275	397	503	637	2640	366	478	417	160	104
9	231	224	272	409	493	628	3120	366	407	384	136	111
10	242	439	259	393	731	671	2810	330	355	428	174	111
11	234	854	265	379	956	724	2540	308	324	936	196	107
12	272	712	291	373	771	746	2370	297	503	861	250	108
13	270	534	296	367	689	1030	2360	317	491	634	664	107
14	275	492	333	352	637	1460	2060	297	404	485	667	134
15	270	715	358	382	710	1410	1800	279	358	388	439	185
16	260	663	345	402	771	1460	1610	272	326	328	321	153
17	283	513	1070	399	769	1610	1480	275	2080	311	261	120
18	300	433	3040	388	701	1800	1380	264	5530	322	276	108
19	368	382	2320	411	599	1830	1280	270	3340	306	244	103
20	327	343	1730	534	575	1830	1160	269	2190	267	247	98
21	300	315	1370	532	625	1920	1060	253	1590	245	261	125
22	275	291	1100	474	603	6360	1010	286	1210	211	232	201
23	248	276	937	444	581	8940	933	395	980	207	211	210
24	247	258	814	418	544	5960	869	623	798	196	181	160
25	239	242	726	402	545	4470	820	689	678	180	170	185
26	233	304	661	381	727	3680	777	584	581	194	160	386
27	235	579	605	372	869	3240	721	916	529	209	158	316
28	230	563	573	358	789	2900	661	928	437	186	189	229
29	180	461	514	335	---	2680	603	715	387	167	170	169
30	180	413	508	376	---	4120	591	602	384	163	153	140
31	239	---	539	568	---	7480	---	497	---	150	149	---
TOTAL	7444	11833	21523	12903	18133	72012	57605	13729	30448	12524	7396	4486
MEAN	240	394	694	416	648	2323	1920	443	1015	404	239	150
MAX	368	854	3040	568	956	8940	5390	928	5530	936	667	386
MIN	133	213	259	335	493	558	591	253	324	150	134	98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2001, BY WATER YEAR (WY)

MEAN	427	658	865	966	1012	1520	1436	883	620	335	307	325
MAX	2007	2233	2371	3167	2493	4063	3643	1779	2826	2453	2704	1980
(WY)	1956	1956	1997	1979	1970	1936	1987	1972	1982	1938	1955	1954
MIN	123	127	186	183	262	653	479	303	136	120	71.5	104
(WY)	1998	1932	1966	1981	1980	1989	1966	1930	1999	1999	1999	1997

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2001 WATER YEAR	FOR 2001 WATER YEAR	FOR 2001 WATER YEAR	WATER YEARS 1929 - 2001
ANNUAL TOTAL	271871	270036				
ANNUAL MEAN	743	740				778
HIGHEST ANNUAL MEAN						1162
LOWEST ANNUAL MEAN						345
HIGHEST DAILY MEAN	5490	Apr 23	8940	Mar 23	25900	Aug 20 1955
LOWEST DAILY MEAN	109	Sep 11	98	Sep 20	21	Aug 11 1934
ANNUAL SEVEN-DAY MINIMUM	118	Sep 8	107	Sep 6	55	Aug 30 1999
MAXIMUM PEAK FLOW			10300	Mar 23	32900	Aug 19 1955
MAXIMUM PEAK STAGE			11.65	Mar 23	21.80	Aug 19 1955
INSTANTANEOUS LOW FLOW			90	Sep 20		
10 PERCENT EXCEEDS	1560	1660				1680
50 PERCENT EXCEEDS	523	407				536
90 PERCENT EXCEEDS	184	162				162

BLACKSTONE RIVER BASIN

0112900 BLACKSTONE RIVER AT MANVILLE, RI

LOCATION.--Lat 41°58'18", long 71°28'14", Providence County, Hydrologic Unit 01090003, at Manville Road Bridge, 400 ft downstream from milldam at Manville, and 2.5 mi downstream from Woonsocket Sewage Treatment Plant.

PERIOD OF RECORD.--Water years 1970, 1979 to current year.

REMARKS.--Discharge obtained from gage at Woonsocket and inflow from Woonsocket Treatment Plant on the day of sampling. Instantaneous records are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (MG/L) (00301)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	PH WATER WHOLE LAB (STAND-ARD) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)
APR												
23...	1200	973	12	430.63	769	9.7	97	6.7	6.9	333	325	27.3
JUN												
19...	1230	3,300	--	430.63	766	8.5	97	6.5	6.6	154	150	31.5
JUL												
18...	0945	362	20	430.63	762	8.2	93	6.7	6.9	333	355	22.5
AUG												
28...	1330	193	18	430.63	759	8.1	98	6.2	7.0	400	401	28.1

DATE	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)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	ALKA-LINITY TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE 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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
APR												
23...	15.8	12.4	2.13	2.85	43.0	13	19	24	74.4	0.2	13.6	<10
JUN												
19...	22.0	--	--	--	--	--	9	10	--	--	--	--
JUL												
18...	21.5	12.4	2.25	3.86	44.3	20	24	30	69.6	.4	18.5	<10
AUG												
28...	24.5	14.8	2.70	5.35	50.2	21	25	30	77.8	.5	26.1	10

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L) AS AL) (01106)
APR												
23...	194	0.720	1.2	0.690	0.049	0.055	0.144	5.3	12	51	27	29
JUN												
19...	--	.074	.13	.271	.020	.040	<.060	12	--	1,800	1,400	107
JUL												
18...	208	.336	.87	1.08	.026	.223	.295	6.9	22	230	73	25
AUG												
28...	232	E.693	1.4	E1.32	E.035	E.239	.390	6.9	18	E8,100	4,100	12



BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
APR 23...	83	0.19	0.8	E1	23.3	<0.06	30	0.21	E0.5	0.25	3.1	440
JUN 19...	381	.22	1.0	E2	16.0	E.05	17	.17	E.5	.24	4.5	1,030
JUL 18...	86	.38	1.3	E2	19.7	<.06	47	.19	E.7	.24	3.7	770
AUG 28...	67	.57	2.0	2	17.7	E.06	69	.20	E.6	.20	5.2	380

DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
APR 23...	0.60	1.1	79.1	91	<0.01	0.7	2.69	<0.3	<0.2	81.1	E0.04	0.4
JUN 19...	1.55	.7	64.6	89	.02	.5	2.95	E.2	<.2	38.6	<.04	.7
JUL 18...	1.14	1.1	80.7	97	<.01	1.5	3.94	.4	<.2	76.4	<.04	.5
AUG 28...	.62	1.5	48.0	91	<.01	2.5	4.36	2.0	<.2	84.9	<.04	.7

DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	PHENOLS TOTAL (UG/L AS ZN) (32730)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	ALPHA- HCH-D6 1325 BED MAT PERCENT (90504)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39423)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	ISODRIN 1325 BED MAT PERCENT (90568)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)
APR 23...	14	<16	--	--	--	--	--	--	--	--	--	--
JUN 19...	12	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	10	<16	--	--	--	--	--	--	--	--	--	--
AUG 28...	13	<16	<0.2	67.0	<3	4.2	<0.2	<0.2	<0.2	<0.2	59	<0.2

DATE	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	BI- PHENYL, NONA- CHLORO- SUR SCD 1325 PERCENT (90575)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR 23...	--	--	--	--	--	--	--	--	0.02
JUN 19...	--	--	--	--	--	--	--	--	.04
JUL 18...	--	--	--	--	--	--	--	--	.03
AUG 28...	<2	<0.2	75.0	<0.5	3.8	<0.5	20	<50	<.02

BLACKSTONE RIVER BASIN

01113695 CATAMINT BROOK AT CUMBERLAND, RI

LOCATION.--Lat 41°59'06", long 71°24'51", Providence County, Hydrologic Unit 01090003, on left bank at downstream culvert of bridge at Thomas Leighton Blvd. in Cumberland, RI.

DRAINAGE AREA.--13.8 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1993 to August 1994, July 1999 to current year.

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

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

AVERAGE DISCHARGE.--2 years (water years 2000-2001), 6.49 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 119 ft<sup>3</sup>/s, Mar.. 22, 2001, gage height, 3.15 ft; minimum, no flow, many days during water years 2000, 2001.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 119 ft<sup>3</sup>/s, Mar. 22, gage height, 3.15 ft; minimum, no flow, Oct. 15-18, Sept. 5-7, 9-21, 23-30.

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	0.44	3.1	4.5	5.7	5.2	7.0	52	5.2	4.3	18	1.2	0.21
2	.36	3.4	4.0	e5.2	5.1	6.7	39	5.0	9.2	12	1.1	.17
3	.33	3.2	e3.5	e5.0	5.0	6.3	30	4.8	12	8.2	.98	.17
4	.29	3.3	e3.1	e4.8	e4.6	6.0	24	4.6	9.5	6.3	1.1	.17
5	.29	3.6	e2.8	e4.6	4.7	6.3	21	4.2	7.0	6.5	.96	.13
6	.39	3.6	e2.7	4.9	5.6	7.9	19	4.0	5.8	7.5	.89	.00
7	.30	3.3	e2.5	4.9	5.1	6.9	19	3.7	4.9	5.9	.84	.03
8	.27	2.9	e2.1	4.8	5.0	6.4	25	3.6	4.3	5.1	.79	.06
9	.28	2.7	e2.1	4.9	5.0	6.5	25	3.5	3.7	4.7	.70	.03
10	.27	4.3	e2.0	4.8	6.6	7.1	20	3.4	3.4	4.9	.92	.03
11	.23	6.1	2.0	4.6	e6.6	7.4	16	3.2	3.0	7.9	.84	.03
12	.13	5.6	2.5	4.3	e6.1	7.7	17	2.9	4.1	6.5	1.1	.00
13	.12	4.8	e2.5	e4.2	5.6	14	17	2.6	2.5	5.1	4.3	.00
14	.05	4.7	4.2	4.1	5.5	16	15	2.4	2.0	4.2	2.7	.04
15	.02	5.3	5.0	4.4	6.4	16	13	2.3	1.8	3.6	3.5	.05
16	.00	4.7	4.9	4.6	6.5	17	12	2.2	1.9	3.3	4.9	.00
17	.00	4.2	19	4.5	6.9	19	11	2.3	15	3.1	3.1	.00
18	.34	3.6	39	4.3	e6.1	21	11	2.2	40	3.1	2.5	.00
19	1.0	3.3	23	4.9	e5.8	21	10	2.2	23	2.7	2.1	.00
20	.40	3.0	21	5.9	5.8	21	9.6	1.9	14	2.5	2.3	.00
21	.25	2.8	15	5.9	6.1	21	9.2	1.7	9.9	2.2	2.8	.07
22	.27	2.6	13	e5.4	e6.1	78	8.8	2.4	7.8	2.0	2.0	.11
23	.27	2.3	11	4.6	4.9	74	8.0	3.4	7.4	1.9	1.5	.02
24	.24	2.0	9.5	4.5	4.5	51	7.3	6.6	6.8	1.9	1.1	.00
25	.23	1.8	e8.4	4.3	4.7	44	6.9	6.9	5.9	1.7	.83	.00
26	.22	3.3	e8.1	4.2	6.8	35	6.4	5.7	5.1	1.7	.60	.01
27	.20	5.9	6.8	4.1	8.1	30	6.0	9.2	4.2	1.6	.49	.00
28	.17	5.7	6.1	4.0	7.6	25	5.8	7.5	3.6	1.6	.41	.00
29	.14	5.2	5.8	e3.8	---	22	5.3	6.3	3.1	1.5	.29	.00
30	.24	4.9	5.8	4.4	---	52	5.2	5.7	5.0	1.4	.26	.00
31	1.8	---	6.1	5.1	---	73	---	5.0	---	1.3	.24	---
TOTAL	9.54	115.2	248.0	145.7	162.0	732.2	474.5	126.6	230.2	139.9	47.34	1.33
MEAN	.31	3.84	8.00	4.70	5.79	23.6	15.8	4.08	7.67	4.51	1.53	.044
MAX	1.8	6.1	39	5.9	8.1	78	52	9.2	40	18	4.9	.21
MIN	.00	1.8	2.0	3.8	4.5	6.0	5.2	1.7	1.8	1.3	.24	.00
CFSM	.02	.28	.58	.34	.42	1.71	1.15	.30	.56	.33	.11	.00
IN.	.03	.31	.67	.39	.44	1.97	1.28	.34	.62	.38	.13	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	1.79	4.36	6.96	5.45	7.57	18.0	15.1	6.52
MAX	3.27	4.89	8.00	6.21	9.29	23.6	15.8	8.96
(WY)	2000	2000	2001	2000	2000	2001	2000	2001
MIN	.31	3.84	5.93	4.70	5.79	12.4	14.4	4.08
(WY)	2001	2001	2000	2001	2001	2000	2000	2000

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1994 - 2001

ANNUAL TOTAL	2254.10	2432.51	
ANNUAL MEAN	6.16	6.66	6.49
HIGHEST ANNUAL MEAN			6.66
LOWEST ANNUAL MEAN			6.32
HIGHEST DAILY MEAN	43	Apr 23	78
LOWEST DAILY MEAN	.00	Oct 16	.00
ANNUAL SEVEN-DAY MINIMUM	.08	Oct 11	.00
MAXIMUM PEAK FLOW		119	119
MAXIMUM PEAK STAGE		3.15	3.15
INSTANTANEOUS LOW FLOW		.00	.00
ANNUAL RUNOFF (CFSM)	.45	.48	.47
ANNUAL RUNOFF (INCHES)	6.08	6.56	6.39
10 PERCENT EXCEEDS	13	16	13
50 PERCENT EXCEEDS	4.5	4.3	4.3
90 PERCENT EXCEEDS	.36	.17	.17

e Estimated



WOONASQUATUCKET RIVER BASIN

01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI

LOCATION.--Lat 41°51'32", long 71°29'16", Providence County, Hydrologic Unit 01090004, on right bank 75 ft downstream from bridge on U.S. Highway 44 at Centerdale and 6.5 mi upstream from mouth.

DRAINAGE AREA.--38.3 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: July 1941 to current year.  
Water-quality records: Water years 1955-56.

GAGE.--Water-stage recorder. Elevation of gage is 95 ft above sea level, from topographic map.

REMARKS.--Records fair. Some regulation by reservoirs upstream; regulation greater prior to 1956. Discharge figures prior to 1966 included leakage around station through bypass canal; leakage negligible subsequently.

AVERAGE DISCHARGE.--60 years, 73.8 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,520 ft<sup>3</sup>/s, June 30, 1998, gage height, 7.26, maximum gage height, 7.75 ft, Mar. 18, 1968, from floodmarks; minimum daily, 2.1 ft<sup>3</sup>/s, Aug. 26, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge during March 1936, 1,000 ft<sup>3</sup>/s, by computation of flow over dam 0.7 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft<sup>3</sup>/s, Mar. 22, gage height, 6.57 ft; minimum, 7.8 ft<sup>3</sup>/s, Oct. 30.

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	26	11	78	81	71	67	567	48	84	76	14	23
2	26	10	70	79	68	65	417	47	156	67	13	22
3	18	10	52	78	64	64	332	47	175	65	13	22
4	14	10	26	78	61	63	285	62	146	65	16	22
5	14	35	25	77	65	70	234	67	114	73	14	16
6	15	66	25	67	68	75	185	61	93	63	12	14
7	14	61	25	47	65	67	164	62	77	28	12	13
8	13	51	24	46	63	65	213	58	64	22	11	13
9	12	44	25	46	64	67	216	34	62	21	11	13
10	12	60	25	40	97	72	204	31	56	31	15	13
11	11	53	22	25	87	75	180	29	58	59	14	13
12	11	48	13	25	72	86	173	23	81	78	18	12
13	11	48	17	25	70	171	167	18	65	69	107	12
14	11	52	23	25	69	175	149	17	59	55	88	14
15	11	56	20	28	76	151	134	16	54	45	83	14
16	10	67	23	28	76	145	124	16	49	41	64	13
17	11	68	92	28	79	146	119	17	269	42	57	12
18	14	70	80	28	71	151	121	16	759	42	63	12
19	24	79	71	49	67	139	116	16	542	40	62	12
20	15	87	78	76	67	132	113	15	343	38	71	12
21	13	79	73	70	70	138	112	15	240	31	55	16
22	12	79	74	62	66	986	112	23	174	29	49	20
23	12	85	81	59	66	843	102	37	156	28	29	14
24	11	89	83	57	63	642	60	93	130	25	25	13
25	11	87	80	56	68	478	53	89	106	23	24	15
26	11	100	76	56	84	373	51	75	86	26	24	14
27	11	95	77	55	76	323	51	112	77	24	28	12
28	10	89	77	57	71	279	50	115	71	18	28	11
29	8.9	86	76	56	---	244	49	112	67	15	24	11
30	8.6	85	79	67	---	641	49	124	67	15	23	10
31	13	---	82	79	---	778	---	103	---	14	23	---
TOTAL	414.5	1860	1672	1650	1984	7771	4902	1598	4480	1268	1090	433
MEAN	13.4	62.0	53.9	53.2	70.9	251	163	51.5	149	40.9	35.2	14.4
MAX	26	100	92	81	97	986	567	124	759	78	107	23
MIN	8.6	10	13	25	61	63	49	15	49	14	11	10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

MEAN	38.8	59.7	85.1	92.6	104	142	130	86.1	58.4	31.8	28.6	30.1
MAX	200	208	239	281	254	357	364	191	214	112	83.6	116
(WY)	1956	1956	1973	1979	1970	1983	1983	1967	1982	1998	1955	1954
MIN	10.3	9.90	17.9	20.6	31.2	54.1	44.9	34.1	23.2	11.7	9.21	6.99
(WY)	1958	1958	1966	1966	1944	1944	1966	1986	1965	1999	1963	1980

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1941 - 2001

ANNUAL TOTAL	23153.8	29122.5	
ANNUAL MEAN	63.3	79.8	73.8
HIGHEST ANNUAL MEAN			119
LOWEST ANNUAL MEAN			31.5
HIGHEST DAILY MEAN	383	Apr 22	986
LOWEST DAILY MEAN	8.6	Oct 30	8.6
ANNUAL SEVEN-DAY MINIMUM	10	Oct 24	10
MAXIMUM PEAK FLOW			1300
MAXIMUM PEAK STAGE			6.57
INSTANTANEOUS LOW FLOW			7.8
10 PERCENT EXCEEDS	117		150
50 PERCENT EXCEEDS	52		59
90 PERCENT EXCEEDS	12		13

PAWTUXET RIVER BASIN

01115098 PEEPTOAD BROOK AT ELMDALE ROAD NEAR NORTH SCITUATE, RI

LOCATION.--Lat 41°51'08", long 71°23'35", Providence County, Hydrologic Unit 01090004, on left bank 5 ft downstream from bridge on Elmdale Road, 0.5 mi upstream from regulating reservoir and 1.7 mi northwest of North Scituate.

DRAINAGE AREA.--4.96 mi<sup>2</sup>.

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: June 1994 to current year.

Water-quality records: Water years, 2000, 2001.

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above sea level, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--7 years, 10.5 ft<sup>3</sup>/s, 28.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 180 ft<sup>3</sup>/s, Oct. 20, 1996, gage height, 2.40 ft; no flow Sept. 13, 16, 17, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 149 ft<sup>3</sup>/s, Mar. 22, gage height, 2.44 ft; minimum, 0.32 ft<sup>3</sup>/s, Oct. 15.

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	0.47	1.5	4.0	5.9	11	10	48	6.7	7.5	5.0	1.6	1.5
2	.47	1.5	3.5	5.4	10	9.3	38	6.3	26	5.3	1.5	1.2
3	.44	1.4	3.0	5.2	8.8	8.7	31	5.8	37	4.6	1.4	1.1
4	.41	1.4	2.5	5.0	7.4	8.0	25	5.3	19	4.1	2.4	1.0
5	.42	1.4	2.4	4.9	7.0	8.5	22	5.0	12	5.2	2.5	1.3
6	.53	1.4	2.4	5.0	8.4	10	20	4.6	8.6	5.7	2.1	1.1
7	.53	1.4	2.3	5.0	7.9	8.8	21	4.4	7.0	4.5	1.8	1.0
8	.49	1.4	2.2	4.8	7.2	8.0	34	4.4	5.9	3.9	1.6	.98
9	.46	1.4	2.2	4.8	6.9	7.8	37	4.1	5.1	3.7	1.4	.88
10	.43	4.5	2.2	4.7	13	8.6	26	3.9	4.6	4.0	1.7	.86
11	.41	6.2	2.3	4.5	17	9.0	20	3.6	4.3	11	2.5	.77
12	.40	4.2	3.0	4.4	12	9.6	19	3.3	9.1	8.3	3.2	.71
13	.40	3.2	2.9	4.1	9.9	20	21	3.0	6.7	5.6	23	.65
14	.37	3.3	3.9	4.0	9.3	29	17	2.7	5.1	4.3	22	.84
15	.37	6.5	5.6	4.5	11	22	14	2.7	4.3	3.6	9.3	1.0
16	.39	6.0	5.4	5.2	12	23	13	2.7	3.7	3.1	5.8	.86
17	.44	4.5	30	5.2	13	28	12	2.7	47	3.1	4.4	.75
18	.46	3.6	66	5.0	11	33	13	2.7	96	3.2	3.7	.66
19	.95	2.8	28	5.3	9.3	29	13	2.6	39	3.0	3.2	.62
20	.80	2.4	20	8.1	8.9	27	11	2.4	23	2.6	4.2	.56
21	.68	2.1	15	8.2	10	29	11	2.2	16	2.4	4.3	.83
22	.65	1.8	12	6.9	9.3	112	11	2.9	14	2.2	3.5	1.1
23	.63	1.6	11	5.7	8.7	92	10	4.5	14	2.0	2.9	.80
24	.67	1.4	9.3	5.2	7.9	56	9.6	7.3	12	2.0	2.5	.69
25	.69	1.2	8.4	5.0	8.0	43	8.9	8.8	10	1.9	2.3	.94
26	.72	2.0	7.0	4.8	15	34	8.4	6.2	8.6	2.0	2.0	1.2
27	.72	5.9	6.3	4.6	15	30	8.1	31	7.0	2.1	2.1	.78
28	.71	6.0	6.1	4.5	13	26	7.7	17	5.8	1.9	2.6	.68
29	.66	4.9	5.6	4.2	---	22	7.2	14	5.0	1.7	2.1	.63
30	.68	4.3	5.8	5.1	---	65	6.9	32	4.6	1.7	1.8	.62
31	1.2	---	6.6	10	---	90	---	12	---	1.7	1.5	---
TOTAL	17.65	91.2	286.9	165.2	287.9	916.3	543.8	216.8	467.9	115.4	126.9	26.61
MEAN	.57	3.04	9.25	5.33	10.3	29.6	18.1	6.99	15.6	3.72	4.09	.89
MAX	1.2	6.5	66	10	17	112	48	32	96	11	23	1.5
MIN	.37	1.2	2.2	4.0	6.9	7.8	6.9	2.2	3.7	1.7	1.4	.56
CFSM	.11	.61	1.87	1.07	2.07	5.96	3.65	1.41	3.14	.75	.83	.18
IN.	.13	.68	2.15	1.24	2.16	6.87	4.08	1.63	3.51	.87	.95	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	4.47	7.78	11.9	16.7	16.6	22.0	19.2	12.1
MAX	15.7	14.4	33.6	23.9	22.4	29.6	30.2	23.5
(WY)	1997	1996	1997	1996	1998	2001	1997	1998
MIN	.51	3.04	3.08	5.33	10.3	16.2	9.40	6.99
(WY)	1998	2001	1999	2001	2001	1995	1999	2001

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1994 - 2001

ANNUAL TOTAL	3056.15	3262.56		
ANNUAL MEAN	8.35	8.94	10.5	
HIGHEST ANNUAL MEAN			14.1	1998
LOWEST ANNUAL MEAN			7.17	1995
HIGHEST DAILY MEAN	72	Apr 22	117	Jan 20 1996
LOWEST DAILY MEAN	.37	Oct 14	.00	Sep 16 1995
ANNUAL SEVEN-DAY MINIMUM	.40	Oct 10	.01	Sep 10 1995
MAXIMUM PEAK FLOW	149	Mar 22	180	Oct 20 1996
MAXIMUM PEAK STAGE	2.44	Mar 22	2.48	Jul 1 1998
INSTANTANEOUS LOW FLOW	.32	Oct 15	.00	Sep 13 1995
ANNUAL RUNOFF (CFSM)	1.68		2.11	
ANNUAL RUNOFF (INCHES)	22.92		28.64	
10 PERCENT EXCEEDS	19		24	
50 PERCENT EXCEEDS	5.7		6.3	
90 PERCENT EXCEEDS	.64		.58	

## PAWTUXET RIVER BASIN

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01115098 PEEPTOAD BROOK AT ELMDALE ROAD NEAR NORTH SCITUATE, RI--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 185  $\mu\text{S}/\text{cm}$ , Mar. 13; minimum, 92  $\mu\text{S}/\text{cm}$ , Mar. 20.

WATER TEMPERATURE: Maximum recorded, 24.1°C, May 4; minimum, 0.2°C, on many days during winter period.

## WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{CM}$  AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	122	121	121	117	116	117	150	147	148	133	131	132
2	122	120	121	118	117	117	153	150	151	132	131	132
3	123	121	122	118	117	118	159	153	156	133	132	132
4	123	121	122	118	118	118	162	158	160	134	132	133
5	124	122	123	118	117	117	162	160	161	134	132	133
6	122	120	121	118	116	117	162	160	161	134	130	132
7	122	120	121	118	116	117	164	161	162	131	129	130
8	121	120	121	118	117	118	168	163	165	130	129	130
9	122	119	120	118	118	118	172	168	170	132	130	131
10	119	118	119	118	107	112	173	172	172	132	130	131
11	120	118	119	116	113	114	172	171	172	131	129	130
12	121	119	120	122	114	118	172	166	169	131	129	130
13	122	121	121	121	119	120	169	166	167	131	129	130
14	124	121	122	121	117	119	169	165	167	132	130	131
15	124	122	123	128	121	125	166	163	164	133	130	131
16	126	123	125	131	128	129	169	164	168	131	128	130
17	123	120	121	136	131	133	165	121	152	134	128	132
18	122	118	121	137	136	136	160	120	143	139	134	137
19	120	117	118	140	137	138	160	150	155	157	139	143
20	121	119	120	142	138	140	150	142	148	143	142	143
21	122	120	121	146	142	143	146	142	144	144	139	142
22	121	119	120	152	146	150	144	142	143	139	135	137
23	120	118	119	157	152	155	144	140	142	137	135	136
24	121	120	121	158	155	157	145	141	142	137	135	136
25	122	120	121	156	154	155	144	141	142	137	135	136
26	122	120	121	156	152	154	147	140	144	136	134	135
27	123	121	122	153	142	148	148	142	144	135	133	134
28	122	118	120	149	143	146	148	142	145	135	133	134
29	118	116	117	147	144	146	149	143	145	136	133	135
30	118	116	117	147	144	146	144	140	142	153	134	139
31	117	115	116	---	---	---	140	133	136	155	135	146
MONTH	126	115	121	158	107	131	173	120	154	157	128	134

## PAWTUXET RIVER BASIN

01115098 PEEPTOAD BROOK AT ELMDALE ROAD NEAR NORTH SCITUATE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	154	148	150	161	160	160	105	102	104	141	137	139
2	150	149	149	160	157	158	110	102	107	---	---	---
3	150	149	149	158	156	157	110	102	107	---	---	---
4	149	146	148	158	156	157	107	102	105	---	---	---
5	147	144	146	158	150	155	111	104	107	---	---	---
6	145	136	141	150	144	147	106	102	104	144	140	142
7	138	134	136	146	144	145	108	104	106	144	142	143
8	156	138	148	152	146	149	109	104	106	145	142	144
9	160	156	158	158	152	155	120	106	112	147	143	144
10	166	159	163	166	155	158	124	115	119	---	---	---
11	164	154	158	166	160	162	125	117	121	---	---	---
12	156	153	154	176	166	170	138	117	121	---	---	---
13	157	155	156	185	155	168	136	118	123	---	---	---
14	160	157	158	168	151	158	137	123	126	---	---	---
15	162	158	160	174	168	170	132	124	127	146	145	145
16	161	156	158	174	168	172	131	125	128	145	143	143
17	158	156	157	168	162	166	130	125	127	---	---	---
18	161	157	159	164	162	163	135	124	129	---	---	---
19	162	158	160	165	158	162	135	128	130	---	---	---
20	162	160	161	158	148	153	131	127	129	---	---	---
21	162	156	160	150	136	147	135	129	131	---	---	---
22	156	151	154	136	93	113	139	131	136	---	---	---
23	151	146	148	106	96	99	142	135	137	---	---	---
24	151	148	150	120	93	99	144	136	140	---	---	---
25	178	151	156	104	97	100	143	138	139	---	---	---
26	165	154	160	105	100	103	141	135	138	---	---	---
27	163	161	162	111	102	106	144	136	139	---	---	---
28	163	161	163	112	107	109	143	136	139	---	---	---
29	---	---	---	108	104	107	142	138	139	---	---	---
30	---	---	---	109	92	103	144	138	140	---	---	---
31	---	---	---	113	105	108	---	---	---	---	---	---
MONTH	178	134	154	185	92	141	144	102	124	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.8	12.9	13.9	8.5	7.7	8.1	3.5	3.1	3.3	0.4	0.3	0.4
2	16.1	13.8	14.7	9.3	7.7	8.7	3.5	3.1	3.3	.3	.2	.3
3	17.4	14.6	15.7	9.4	8.6	9.0	3.8	3.4	3.7	.3	.2	.3
4	17.1	15.4	16.0	9.5	8.5	9.0	4.1	3.6	3.8	.3	.2	.3
5	16.1	15.0	15.5	9.1	7.9	8.7	4.1	3.5	3.8	.3	.2	.3
6	15.2	14.8	15.0	8.7	7.6	8.1	3.8	3.5	3.6	.3	.2	.3
7	15.2	13.9	14.5	8.7	7.4	8.2	4.0	3.7	3.8	.3	.2	.3
8	14.6	12.9	13.5	9.1	8.0	8.6	3.7	3.1	3.5	.3	.2	.3
9	13.2	11.3	12.0	9.2	8.0	8.7	3.1	2.5	2.8	.4	.3	.4
10	11.4	10.6	11.1	9.0	8.6	8.8	2.7	2.3	2.5	.5	.4	.5
11	12.0	10.7	11.4	9.0	8.8	8.9	2.4	2.1	2.3	.5	.3	.4
12	12.8	10.4	11.7	9.6	8.8	9.2	2.2	1.9	2.0	.4	.2	.3
13	13.2	11.1	12.1	9.1	8.8	9.0	2.6	1.9	2.3	.3	.2	.3
14	13.4	12.1	12.9	8.9	8.3	8.8	2.6	2.1	2.5	.3	.2	.3
15	15.4	12.9	14.2	8.4	7.8	8.1	2.4	2.0	2.2	.4	.2	.3
16	14.3	11.8	13.0	8.0	7.4	7.7	2.2	1.9	2.1	.4	.3	.4
17	12.3	11.5	12.0	7.9	6.7	7.4	4.8	2.0	2.9	.7	.4	.6
18	12.6	12.0	12.3	6.9	6.2	6.6	4.8	2.6	3.7	1.0	.7	.9
19	12.8	11.6	12.3	6.5	5.3	6.0	2.8	2.3	2.6	.9	.8	.9
20	12.6	11.2	11.9	5.8	4.7	5.3	2.5	1.4	2.1	1.0	.9	1.0
21	12.7	11.6	12.2	4.9	4.1	4.6	2.0	1.3	1.7	.9	.4	.7
22	12.2	10.5	11.5	4.1	2.2	3.2	1.6	1.4	1.5	.4	.1	.3
23	11.3	10.1	10.7	2.6	2.0	2.3	1.5	.9	1.2	.2	.1	.2
24	11.8	10.1	11.0	3.3	2.3	2.8	1.3	.8	1.1	.2	.1	.2
25	12.1	11.0	11.5	3.7	3.2	3.5	1.3	.8	1.1	.2	.1	.2
26	12.6	10.8	11.9	3.7	2.8	3.4	1.2	.7	1.0	.2	.1	.2
27	12.7	11.8	12.3	2.9	2.6	2.8	1.2	.8	1.0	.3	.2	.2
28	12.4	9.2	11.3	3.7	2.8	3.4	1.2	.8	1.0	.3	.2	.3
29	9.2	7.7	8.5	4.2	3.7	4.1	1.3	.8	1.1	.4	.3	.4
30	8.4	7.6	8.0	4.1	3.3	3.8	1.0	.7	.9	.5	.4	.5
31	8.3	7.8	8.1	---	---	---	.7	.4	.5	.9	.4	.7
MONTH	17.4	7.6	12.3	9.6	2.0	6.6	4.8	.4	2.3	1.0	.1	.4

## PAWTUXET RIVER BASIN

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01115098 PEEPTOAD BROOK AT ELMDALE ROAD NEAR NORTH SCITUATE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.1	0.9	1.0	2.0	1.5	1.7	4.3	3.8	4.0	19.1	15.0	17.4
2	1.2	1.0	1.1	1.8	1.2	1.4	4.2	3.6	3.9	22.2	17.0	19.8
3	1.3	1.0	1.2	1.7	1.5	1.6	5.7	3.9	4.8	22.8	19.0	21.1
4	1.1	.8	1.0	1.9	1.6	1.7	7.4	4.9	6.2	24.1	20.4	22.4
5	.8	.7	.7	1.9	.9	1.4	8.7	5.8	7.4	22.1	18.8	21.0
6	.7	.2	.5	.9	.3	.5	7.7	7.0	7.4	20.1	16.8	18.7
7	.3	.2	.3	.3	.2	.2	8.5	6.7	7.7	18.3	16.0	17.2
8	.7	.3	.6	.6	.3	.4	7.4	5.9	6.7	18.4	15.7	17.2
9	1.2	.7	1.0	1.0	.6	.8	10.6	5.7	8.4	19.8	16.2	18.3
10	2.2	1.2	1.8	1.4	.9	1.0	13.2	9.9	11.4	22.0	17.2	19.8
11	1.5	.5	.8	2.0	1.1	1.4	11.2	9.8	10.6	22.9	18.6	20.8
12	.5	.4	.5	2.7	1.6	2.0	10.5	9.3	9.8	23.2	20.0	21.7
13	.7	.5	.6	2.7	.9	2.0	11.2	9.1	9.7	21.3	19.1	20.4
14	1.2	.7	1.0	1.9	.7	1.2	11.3	8.9	10.1	19.5	17.8	18.9
15	2.1	1.2	1.9	2.7	1.4	1.8	12.2	10.1	11.3	17.8	15.9	16.8
16	2.1	1.4	1.7	3.5	2.3	2.8	13.7	11.0	12.2	15.9	14.6	15.2
17	1.8	1.4	1.7	3.9	2.9	3.3	11.9	10.6	11.3	---	---	---
18	1.4	1.0	1.1	3.7	2.8	3.2	10.6	9.3	9.9	---	---	---
19	1.1	.9	1.0	3.9	2.5	3.1	11.1	9.1	10.0	---	---	---
20	1.6	1.0	1.4	4.2	3.2	3.7	12.4	9.1	10.9	---	---	---
21	2.6	1.6	2.3	4.1	3.6	3.8	14.2	10.9	12.7	---	---	---
22	2.3	1.4	1.7	3.6	2.3	2.7	18.5	13.5	16.1	---	---	---
23	1.4	.8	1.0	3.5	2.2	2.9	19.0	15.9	17.4	---	---	---
24	1.3	1.0	1.1	4.3	2.6	3.5	21.3	16.4	18.7	---	---	---
25	1.5	1.2	1.3	4.5	2.9	3.8	17.6	14.1	15.6	---	---	---
26	2.2	1.3	1.9	4.2	2.8	3.8	15.7	13.4	14.5	---	---	---
27	2.2	1.5	1.8	4.0	2.3	3.3	16.6	12.9	14.6	---	---	---
28	2.3	1.9	2.1	4.7	3.0	4.0	15.4	13.6	14.4	---	---	---
29	---	---	---	4.7	4.2	4.4	16.1	13.2	14.6	---	---	---
30	---	---	---	4.7	3.3	4.0	16.5	13.4	15.2	---	---	---
31	---	---	---	4.5	3.2	4.0	---	---	---	---	---	---
MONTH	2.6	.2	1.2	4.7	.2	2.4	21.3	3.6	10.9	---	---	---



## PAWTUXET RIVER BASIN

01115110 HUNTINGHOUSE BROOK AT ELMDALE RD AT NORTH SCITUATE, RI

LOCATION.--Lat 41°50'48", long 71°36'44", Providence County, Hydrologic Unit 01090004, on right bank 1,000 ft downstream from bridge on Elmdale Road, and 1.6 mi northwest of North Scituate

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good for temperature, fair for specific conductance.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 117  $\mu\text{S}/\text{cm}$ , Dec. 15; minimum, 17  $\mu\text{S}/\text{cm}$ , Mar. 22.

WATER TEMPERATURE: Maximum recorded, 20.9°C, May 4; minimum, -0.3°C, Nov. 23.

## WATER-QUALITY DATA, OCTOBER TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{S}/\text{CM}$  at 25°C), OCTOBER TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	68	66	67	65	63	64	60	57	58	60	48	55
2	68	66	67	72	65	68	57	47	52	50	46	47
3	68	66	67	74	71	73	51	48	49	47	46	46
4	68	66	67	71	67	68	54	50	52	48	46	47
5	69	67	68	69	67	69	54	50	52	47	46	46
6	68	66	67	68	64	66	53	50	51	46	44	45
7	67	65	66	65	63	64	53	48	50	53	44	47
8	66	64	65	66	65	65	48	46	47	50	46	48
9	66	64	65	68	66	67	46	44	45	46	44	45
10	65	64	65	69	57	66	47	45	46	59	44	50
11	66	65	65	65	62	64	47	44	45	51	45	47
12	68	65	67	66	64	65	62	44	54	46	44	45
13	68	66	67	66	62	63	54	51	52	46	45	46
14	73	67	70	63	57	62	51	46	49	46	44	45
15	77	72	75	61	57	58	117	51	76	45	43	44
16	77	75	76	60	58	58	61	54	58	53	44	47
17	76	74	75	59	58	59	54	36	45	49	44	47
18	79	65	76	60	59	59	42	36	39	46	43	45
19	74	64	69	61	59	60	44	40	42	45	41	43
20	75	72	74	61	60	61	44	40	43	58	43	48
21	78	74	76	62	59	61	43	40	41	47	42	44
22	75	70	73	59	55	58	45	41	42	45	42	43
23	70	69	69	55	50	52	44	39	41	47	42	44
24	71	68	69	54	49	51	43	42	42	43	41	42
25	82	71	76	56	52	54	44	41	42	42	40	41
26	86	81	83	56	48	53	46	43	45	41	40	41
27	81	76	79	64	50	59	47	45	46	41	39	40
28	76	65	70	60	56	58	46	45	45	40	39	39
29	67	65	65	58	57	57	48	46	47	41	39	40
30	67	65	66	58	56	57	47	45	46	41	37	40
31	66	62	64	---	---	---	48	44	45	46	37	41
MONTH	86	62	70	74	48	61	117	36	48	60	37	45

PAWTUXET RIVER BASIN

01115110 HUNTINGHOUSE BROOK AT ELMDALE RD AT NORTH SCITUATE, RI--Continued

SPECIFIC CONDUCTANCE (µS/CM at 25°C), OCTOBER TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	40	38	39	45	39	41	55	29	35	52	48	50
2	39	37	38	44	40	41	56	31	38	50	45	48
3	39	37	38	50	41	46	57	54	56	50	42	47
4	41	38	39	52	44	48	56	52	55	46	40	44
5	40	38	39	46	39	41	56	37	50	41	40	41
6	39	37	38	43	39	41	50	36	38	43	40	42
7	58	39	46	49	43	45	48	36	38	46	41	43
8	43	40	41	48	42	44	45	34	37	46	40	43
9	68	40	46	44	41	43	42	37	40	47	42	44
10	50	42	45	47	40	43	50	41	45	51	43	48
11	44	40	43	59	40	51	49	44	47	44	40	42
12	44	41	42	55	44	50	49	41	46	46	42	44
13	43	40	41	51	40	45	43	40	41	56	44	46
14	44	40	42	45	39	42	51	41	48	50	43	46
15	50	43	47	51	39	45	50	46	48	46	44	45
16	50	44	47	47	42	45	52	39	48	48	45	46
17	60	45	50	45	42	44	51	49	50	---	---	---
18	47	42	45	45	41	43	50	45	49	---	---	---
19	45	42	44	44	42	43	52	50	51	---	---	---
20	49	43	46	44	41	42	52	50	51	---	---	---
21	51	43	47	43	38	42	53	51	52	---	---	---
22	45	41	43	39	17	22	52	51	51	---	---	---
23	45	42	43	28	23	25	52	45	49	---	---	---
24	59	41	49	30	27	29	51	41	45	---	---	---
25	48	44	45	33	30	31	43	40	42	---	---	---
26	55	42	49	34	32	33	47	41	44	---	---	---
27	49	42	45	38	32	34	50	42	46	---	---	---
28	47	40	44	38	36	37	49	45	48	---	---	---
29	---	---	---	37	36	37	51	47	49	---	---	---
30	---	---	---	37	22	30	51	46	49	---	---	---
31	---	---	---	48	23	26	---	---	---	---	---	---
MONTH	68	37	44	59	17	40	57	29	46	---	---	---

WATER TEMPERATURE, DEGREES CELSIUS, OCTOBER TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.2	8.3	9.7	7.9	6.5	7.2	2.9	1.5	2.2	0.0	0.0	0.0
2	12.2	9.7	10.9	8.8	6.9	7.9	1.5	-.2	.5	.1	.0	.1
3	13.4	10.7	12.1	9.1	7.5	8.4	-.1	-.2	-.2	.2	.1	.1
4	13.7	11.4	12.6	8.8	7.1	8.0	.1	-.2	-.1	.2	.1	.1
5	12.8	12.4	12.5	8.3	7.3	7.8	.1	-.2	-.1	.2	.1	.1
6	13.1	12.4	12.7	7.4	6.2	6.9	.0	-.2	-.2	.2	.1	.1
7	12.8	11.1	11.9	7.0	5.3	6.3	.0	-.2	-.2	.2	.1	.1
8	11.1	8.6	9.7	7.6	5.5	6.7	-.1	-.1	-.1	.2	.1	.1
9	8.6	7.2	7.8	8.3	5.8	7.2	.0	-.1	-.1	.1	.1	.1
10	7.8	6.4	7.0	9.1	8.2	8.5	.0	-.1	-.1	.1	.1	.1
11	9.3	6.7	7.8	9.3	8.9	9.1	.0	-.1	-.1	.2	.1	.1
12	9.7	6.3	8.0	9.8	8.7	9.2	.2	-.2	.0	.2	.1	.1
13	10.6	7.2	8.9	8.7	8.2	8.4	-.1	-.1	-.1	.2	.1	.1
14	12.4	8.9	10.4	8.8	8.2	8.5	.0	-.1	-.1	.2	.1	.1
15	13.6	10.6	11.9	8.6	6.4	7.4	-.1	-.2	-.1	.2	.1	.2
16	12.1	9.6	10.8	6.5	5.6	6.2	.0	-.1	-.1	.2	.2	.2
17	10.8	9.1	9.9	7.2	5.7	6.6	7.8	.0	3.5	.2	.2	.2
18	11.3	10.0	10.6	5.7	4.2	4.9	7.7	2.5	4.6	.2	.2	.2
19	11.8	10.3	11.0	4.8	3.2	4.2	2.5	1.3	2.0	.2	.2	.2
20	10.3	8.4	9.5	3.4	2.2	2.8	2.4	.8	1.8	.2	.2	.2
21	11.7	9.0	10.3	2.7	1.7	2.3	.8	.0	.4	.2	.2	.2
22	11.3	8.3	10.0	1.9	.6	1.2	1.2	.5	.8	.2	.2	.2
23	8.3	6.2	7.5	.6	-.3	.1	.5	.0	.0	.2	.2	.2
24	8.9	6.5	7.8	.1	-.2	-.1	.1	.0	.0	.2	.2	.2
25	10.1	7.8	9.0	.1	-.2	-.1	.0	.0	.0	.2	.2	.2
26	10.6	7.9	9.5	.4	-.2	.0	.1	.0	.0	.2	.2	.2
27	11.3	9.2	10.3	3.6	.4	2.4	.1	.0	.1	.2	.2	.2
28	11.1	7.7	10.0	4.9	3.5	4.2	.2	.0	.0	.4	.2	.3
29	7.7	4.6	5.7	4.5	3.5	3.9	.1	.0	.0	.4	.3	.3
30	5.6	4.1	4.9	3.8	2.9	3.4	.1	.0	.0	.3	.3	.3
31	6.8	5.3	6.2	---	---	---	.0	.0	.0	.3	.3	.3
MONTH	13.7	4.1	9.6	9.8	-.3	5.3	7.8	-.2	.5	.4	.0	.2

## PAWTUXET RIVER BASIN

01115110 HUNTINGHOUSE BROOK AT ELMDALE RD AT NORTH SCITUATE, RI--Continued

WATER TEMPERATURE, DEGREES CELSIUS, OCTOBER TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.3	0.2	0.3	1.4	0.4	0.7	4.8	4.0	4.4	17.8	12.3	15.1
2	.3	.3	.3	1.1	.3	.6	5.2	3.3	4.3	19.5	13.6	16.6
3	.3	.2	.3	1.9	.5	1.2	7.2	3.1	5.1	20.2	15.6	18.1
4	.3	.3	.3	2.0	.8	1.4	8.2	4.3	6.2	20.9	16.8	18.9
5	.3	.3	.3	1.3	.4	.5	9.5	4.8	7.1	19.2	15.5	17.6
6	.3	.3	.3	.5	.4	.4	7.7	5.8	6.7	15.6	12.4	14.2
7	.3	.3	.3	.5	.4	.4	9.0	6.0	7.3	14.5	9.2	12.1
8	.4	.3	.3	.7	.4	.5	7.7	5.6	6.1	15.5	9.9	12.8
9	.3	.3	.3	.8	.4	.5	12.0	5.4	8.4	16.7	11.1	14.0
10	.9	.3	.5	1.2	.4	.7	12.5	9.6	11.0	17.5	12.3	15.1
11	.4	.4	.4	2.2	.4	1.1	10.8	8.1	9.7	18.7	13.8	16.3
12	.4	.4	.4	3.2	.4	1.7	9.4	8.5	8.9	19.8	15.8	17.8
13	.5	.4	.4	1.9	.4	1.1	10.8	8.2	9.3	17.8	15.1	16.4
14	.8	.4	.6	1.8	.4	1.0	12.2	7.9	10.0	15.1	12.3	13.8
15	1.8	.8	1.3	3.4	.5	2.0	12.3	7.9	10.2	13.3	11.5	12.4
16	1.5	.3	.9	4.8	1.3	3.1	12.2	8.9	10.6	12.3	11.1	11.6
17	1.9	.4	1.3	5.4	1.9	3.5	10.4	8.1	9.2	---	---	---
18	.5	.4	.4	4.1	2.3	3.2	9.2	7.5	8.4	---	---	---
19	.6	.4	.5	5.8	1.8	3.7	10.5	5.7	8.1	---	---	---
20	2.1	.5	1.3	6.7	2.3	4.5	11.6	6.3	9.1	---	---	---
21	2.9	.6	1.9	5.0	3.2	4.2	13.3	9.8	11.4	---	---	---
22	.6	.3	.4	4.0	1.6	2.6	17.0	11.7	14.2	---	---	---
23	.8	.4	.5	4.8	2.9	3.8	17.6	13.4	15.4	---	---	---
24	1.0	.4	.6	5.9	3.1	4.5	18.7	13.4	16.1	---	---	---
25	.8	.4	.5	6.1	2.7	4.4	16.4	11.6	13.4	---	---	---
26	1.8	.7	1.1	4.4	2.6	3.4	13.6	9.1	11.4	---	---	---
27	2.6	.4	1.4	4.9	1.5	3.2	14.3	9.0	11.7	---	---	---
28	2.2	.5	1.3	6.2	2.2	4.2	14.9	10.8	12.8	---	---	---
29	---	---	---	5.6	3.0	4.4	13.9	8.8	11.5	---	---	---
30	---	---	---	5.0	3.4	3.9	14.9	9.1	12.2	---	---	---
31	---	---	---	5.2	3.1	4.2	---	---	---	---	---	---
MONTH	2.9	.2	.7	6.7	.3	2.4	18.7	3.1	9.7	---	---	---

PAWTUXET RIVER BASIN

01115170 MOSWANSICUT STREAM NEAR NORTH SCITUATE, RI

LOCATION.--Lat 41°50'27", long 71°35'06", Providence County, Hydrologic Unit 01090004, on left bank 50 ft downstream from bridge on State Route 116, and 0.6 mi northeast of North Scituate.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 2000 to May 2001.

WATER TEMPERATURE: March to 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since March 2000.

REMARKS.--Records good.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 249  $\mu$ S/cm, Dec. 1; minimum, 43  $\mu$ S/cm, May 6.

WATER TEMPERATURE: Maximum recorded, 23.2°C, May 3; minimum, 1.8°C, Feb. 24, 25.

WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	131	130	131	161	154	158	249	118	123	---	---	---
2	132	130	131	172	160	167	127	124	125	---	---	---
3	132	131	131	176	172	173	128	125	127	---	---	---
4	132	131	132	179	171	175	128	125	127	---	---	---
5	135	132	133	178	174	176	128	125	127	---	---	---
6	135	132	133	179	174	176	128	127	128	---	---	---
7	133	131	132	184	176	180	---	---	---	---	---	---
8	136	131	134	189	181	185	---	---	---	---	---	---
9	136	134	135	193	185	189	---	---	---	---	---	---
10	140	136	138	188	133	161	---	---	---	---	---	---
11	139	136	138	133	125	128	---	---	---	---	---	---
12	144	135	139	135	130	133	---	---	---	---	---	---
13	148	144	146	134	121	125	---	---	---	---	---	---
14	151	147	149	124	122	123	---	---	---	---	---	---
15	157	150	152	123	120	122	---	---	---	---	---	---
16	162	157	161	121	119	120	---	---	---	---	---	---
17	164	161	163	123	120	122	---	---	---	---	---	---
18	168	162	163	124	123	124	---	---	---	---	---	---
19	172	163	167	125	124	124	---	---	---	---	---	---
20	177	163	171	126	124	125	---	---	---	---	---	---
21	179	176	177	125	124	124	---	---	---	---	---	---
22	181	172	177	126	125	125	---	---	---	---	---	---
23	174	169	172	128	126	127	---	---	---	---	---	---
24	170	165	167	131	128	129	---	---	---	---	---	---
25	170	163	165	133	128	131	---	---	---	---	---	---
26	168	161	164	131	119	128	---	---	---	---	---	---
27	167	165	166	119	114	116	---	---	---	---	---	---
28	166	156	163	117	116	116	---	---	---	---	---	---
29	156	150	152	117	116	117	---	---	---	---	---	---
30	150	147	149	118	117	118	---	---	---	---	---	---
31	155	150	153	---	---	---	---	---	---	---	---	---
MONTH	181	130	151	193	114	141	---	---	---	---	---	---

## PAWTUXET RIVER BASIN

01115170 MOSWANSICUT STREAM NEAR NORTH SCITUATE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	131	130	131	121	114	117	171	164	167
2	---	---	---	130	129	129	121	117	119	175	167	171
3	---	---	---	129	128	129	122	117	120	186	171	176
4	---	---	---	129	128	129	122	118	120	190	173	183
5	---	---	---	132	128	129	128	103	122	200	49	139
6	---	---	---	131	128	129	129	127	128	49	40	43
7	---	---	---	130	129	129	132	127	130	175	37	99
8	---	---	---	129	124	127	134	127	129	142	140	141
9	---	---	---	124	121	124	129	125	127	144	141	142
10	---	---	---	123	120	121	130	124	127	145	142	143
11	---	---	---	127	123	125	129	126	127	146	144	144
12	---	---	---	126	125	125	128	126	127	146	144	145
13	---	---	---	135	125	127	129	126	128	148	144	145
14	---	---	---	125	123	124	129	126	127	150	143	146
15	---	---	---	125	122	123	130	126	128	144	143	143
16	---	---	---	196	122	139	132	128	129	145	142	143
17	---	---	---	206	121	148	132	128	129	---	---	---
18	---	---	---	121	119	120	132	129	130	---	---	---
19	---	---	---	120	118	119	132	128	129	---	---	---
20	---	---	---	120	118	119	132	128	130	---	---	---
21	---	---	---	119	115	118	135	130	131	---	---	---
22	---	---	---	115	94	100	134	131	132	---	---	---
23	132	131	131	102	99	100	136	133	135	---	---	---
24	132	131	131	99	95	97	136	134	135	---	---	---
25	149	131	133	104	99	102	137	135	136	---	---	---
26	132	131	132	102	98	101	139	135	137	---	---	---
27	132	131	131	101	97	98	140	135	137	---	---	---
28	132	130	131	104	101	103	138	135	137	---	---	---
29	---	---	---	110	104	107	138	134	136	---	---	---
30	---	---	---	115	90	104	166	136	147	---	---	---
31	---	---	---	119	108	114	---	---	---	---	---	---
MONTH	---	---	---	206	90	119	166	103	130	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	17.4	14.3	15.8	11.7	9.6	10.4	6.3	4.7	5.2	---	---	---
2	18.1	14.8	16.3	12.8	9.3	11.0	5.0	3.7	4.3	---	---	---
3	18.3	15.5	16.9	12.4	9.6	11.0	4.3	3.4	3.7	---	---	---
4	17.9	15.4	16.7	13.0	9.4	10.9	4.7	3.3	3.8	---	---	---
5	16.6	16.0	16.3	11.2	9.5	10.4	4.6	3.2	3.8	---	---	---
6	17.0	16.0	16.4	11.1	8.4	9.5	3.6	2.7	3.1	---	---	---
7	16.3	14.3	15.4	11.5	8.0	9.6	---	---	---	---	---	---
8	15.0	12.8	13.9	12.2	8.8	10.3	---	---	---	---	---	---
9	13.3	12.1	12.8	12.3	8.7	10.6	---	---	---	---	---	---
10	13.1	11.5	12.3	11.2	10.3	10.7	---	---	---	---	---	---
11	14.3	11.9	13.0	10.6	10.3	10.4	---	---	---	---	---	---
12	14.6	11.3	13.0	11.1	10.1	10.5	---	---	---	---	---	---
13	15.1	12.0	13.6	10.4	10.1	10.3	---	---	---	---	---	---
14	16.2	13.5	14.6	10.4	10.1	10.2	---	---	---	---	---	---
15	16.6	14.2	15.3	10.2	9.2	9.7	---	---	---	---	---	---
16	15.0	12.4	13.6	9.9	9.0	9.4	---	---	---	---	---	---
17	14.1	12.2	13.1	9.9	8.4	9.3	---	---	---	---	---	---
18	14.8	13.0	13.7	9.2	8.1	8.5	---	---	---	---	---	---
19	14.9	12.4	13.5	8.9	7.7	8.3	---	---	---	---	---	---
20	14.4	11.2	12.6	8.7	7.2	7.8	---	---	---	---	---	---
21	15.5	12.1	13.7	8.2	6.7	7.3	---	---	---	---	---	---
22	14.1	11.1	12.7	7.1	5.9	6.4	---	---	---	---	---	---
23	13.3	9.9	11.5	6.2	4.8	5.5	---	---	---	---	---	---
24	14.4	10.9	12.4	5.4	4.0	4.6	---	---	---	---	---	---
25	15.0	11.9	13.2	5.4	3.2	4.3	---	---	---	---	---	---
26	15.6	11.7	13.4	6.1	4.3	5.3	---	---	---	---	---	---
27	15.6	12.6	13.9	6.7	5.8	6.1	---	---	---	---	---	---
28	14.0	10.5	13.0	6.5	5.6	6.0	---	---	---	---	---	---
29	10.5	8.2	9.0	6.5	5.6	5.9	---	---	---	---	---	---
30	10.6	8.3	9.3	5.8	5.2	5.5	---	---	---	---	---	---
31	11.1	9.1	10.2	---	---	---	---	---	---	---	---	---
MONTH	18.3	8.2	13.6	13.0	3.2	8.5	---	---	---	---	---	---

## PAWTUXET RIVER BASIN

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01115170 MOSWANSICUT STREAM NEAR NORTH SCITUATE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	2.6	2.1	2.4	4.4	3.5	3.9	21.9	12.5	16.7
2	---	---	---	2.6	2.5	2.5	4.6	3.2	3.8	23.1	13.1	17.6
3	---	---	---	2.7	2.5	2.5	6.0	3.7	4.6	23.2	15.2	18.9
4	---	---	---	2.6	2.3	2.5	7.6	3.9	5.3	22.8	16.1	19.4
5	---	---	---	2.4	1.8	2.2	10.6	4.7	6.2	19.4	11.8	16.4
6	---	---	---	2.2	2.0	2.2	6.4	5.2	5.7	13.5	4.1	9.4
7	---	---	---	2.3	2.1	2.2	8.5	5.1	6.4	19.5	.5	11.1
8	---	---	---	2.6	2.0	2.2	6.3	5.8	6.0	19.3	15.4	17.0
9	---	---	---	2.4	2.2	2.3	8.7	5.7	6.9	21.2	15.7	17.9
10	---	---	---	2.4	2.2	2.3	11.2	7.3	8.7	22.0	16.6	19.0
11	---	---	---	2.5	2.1	2.2	9.9	6.7	8.0	22.0	18.3	20.1
12	---	---	---	2.6	2.1	2.3	9.2	7.3	8.0	22.3	18.9	20.1
13	---	---	---	2.4	2.2	2.3	9.2	7.5	8.6	22.1	18.3	19.8
14	---	---	---	2.6	2.2	2.3	11.0	7.2	8.7	20.4	17.7	18.9
15	---	---	---	2.8	2.3	2.6	11.6	8.0	9.5	18.5	16.3	17.5
16	---	---	---	3.3	2.5	2.9	12.8	8.5	10.1	16.3	14.2	14.9
17	---	---	---	3.7	2.9	3.2	11.7	8.3	10.0	---	---	---
18	---	---	---	3.7	3.2	3.4	11.0	8.8	9.8	---	---	---
19	---	---	---	4.2	3.3	3.7	11.3	8.4	9.5	---	---	---
20	---	---	---	4.4	3.6	4.0	11.9	8.1	9.7	---	---	---
21	---	---	---	4.2	3.9	4.1	13.1	9.7	10.8	---	---	---
22	---	---	---	4.0	3.5	3.6	12.8	10.7	11.6	---	---	---
23	2.0	1.7	1.9	4.3	3.5	4.0	17.1	11.6	13.7	---	---	---
24	2.1	1.7	1.8	4.9	4.0	4.5	16.2	12.9	14.2	---	---	---
25	1.9	1.5	1.8	5.7	4.5	5.0	14.7	13.2	13.9	---	---	---
26	2.1	1.8	1.9	4.8	4.2	4.4	17.4	12.7	14.3	---	---	---
27	2.5	1.8	2.1	4.8	4.0	4.4	17.6	12.1	14.3	---	---	---
28	2.5	2.0	2.2	5.2	4.1	4.6	17.1	13.0	14.6	---	---	---
29	---	---	---	5.1	4.2	4.6	16.8	12.5	14.3	---	---	---
30	---	---	---	4.2	1.1	3.1	19.6	12.6	15.6	---	---	---
31	---	---	---	5.1	3.5	4.2	---	---	---	---	---	---
MONTH	---	---	---	5.7	1.1	3.2	19.6	3.2	9.6	---	---	---

## PAWTUXET RIVER BASIN

01115183 QUONAPAUG BROOK AT RT 116, NORTH SCITUATE, RI

LOCATION.--Lat 41°47'51", long 71°24'53", Providence County, Hydrologic Unit 01090004, on left bank 200 ft downstream from bridge on Elmdale Road, and 2.4 mi south of North Scituate

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good.

## EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,030  $\mu\text{S}/\text{cm}$ , Dec. 14; minimum, 47  $\mu\text{S}/\text{cm}$ , Mar. 21.

WATER TEMPERATURE: Maximum recorded, 22.2°C, May 4; minimum, -0.2°C, Jan. 21, Feb. 4, 5

## WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{S}/\text{CM}$  AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
				MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	156	150	153	133	128	130	167	116	121	96	93	94			
2	159	152	155	207	128	130	118	106	112	98	94	95			
3	162	155	158	131	129	130	124	109	113	96	95	95			
4	213	150	160	133	130	131	125	110	115	104	94	95			
5	162	154	158	131	130	131	121	107	112	96	93	95			
6	157	150	153	133	130	131	116	110	113	93	91	92			
7	150	146	148	134	131	132	120	112	115	116	92	94			
8	147	144	145	133	132	133	118	111	114	124	93	94			
9	149	146	146	134	132	133	118	112	115	106	92	95			
10	150	147	148	133	75	107	124	116	119	124	92	97			
11	152	148	150	122	111	114	118	110	112	125	93	98			
12	154	150	152	123	113	116	118	104	111	119	93	96			
13	156	151	154	118	115	116	126	113	117	124	95	100			
14	162	155	159	120	99	110	1030	113	256	124	94	97			
15	206	162	170	128	104	109	174	119	129	147	93	100			
16	176	168	171	130	114	123	306	113	137	103	98	99			
17	180	171	177	132	115	120	137	77	93	106	98	99			
18	177	96	158	134	118	123	87	82	84	123	98	100			
19	151	135	143	138	120	126	99	83	89	221	98	128			
20	150	146	148	129	122	124	90	82	85	112	103	107			
21	146	140	143	144	124	133	90	84	88	127	99	105			
22	142	134	140	144	128	140	95	86	89	107	97	103			
23	137	134	135	131	109	116	92	87	91	107	96	97			
24	138	134	136	122	113	116	95	91	92	109	95	96			
25	140	135	137	127	114	120	102	92	97	99	95	96			
26	143	136	139	443	92	132	112	101	102	98	96	97			
27	146	138	140	117	107	115	102	98	100	97	95	96			
28	141	137	139	118	114	116	107	98	100	96	95	95			
29	140	137	139	120	117	119	105	99	100	99	96	97			
30	140	132	136	141	115	119	102	95	97	311	89	120			
31	135	126	129	---	---	---	95	94	94	100	90	98			
MONTH	213	96	149	443	75	123	1030	77	110	311	89	99			

PAWTUXET RIVER BASIN

01115183 QUONAPAUG BROOK AT RT 116, NORTH SCITUATE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	100	94	97	70	64	67	86	76	81	116	110	114
2	122	92	95	70	66	69	93	86	89	117	112	115
3	121	93	94	74	70	72	99	91	93	117	114	115
4	103	96	98	75	70	73	109	95	97	134	114	116
5	104	90	97	72	70	72	102	98	100	117	113	116
6	190	89	99	72	69	70	105	101	102	117	108	113
7	98	96	97	71	66	70	108	105	106	117	108	113
8	97	94	95	74	62	71	107	94	98	118	109	114
9	96	92	94	75	73	74	104	99	102	119	110	116
10	166	90	97	78	73	75	107	101	104	119	113	117
11	178	111	135	80	72	75	106	103	104	120	114	118
12	168	104	122	82	72	76	105	100	102	121	117	119
13	169	99	116	73	64	67	107	104	105	121	115	119
14	167	97	106	67	62	64	109	104	106	120	114	117
15	---	---	---	67	62	63	110	104	107	119	116	117
16	---	---	---	70	62	66	110	105	107	120	116	118
17	---	---	---	69	62	65	108	106	106	121	117	120
18	---	---	---	66	60	63	108	105	106	---	---	---
19	---	---	---	68	59	66	110	106	108	---	---	---
20	---	---	---	70	65	68	111	105	108	---	---	---
21	---	---	---	70	47	66	112	107	109	---	---	---
22	---	---	e69	52	36	41	115	108	113	---	---	---
23	71	65	70	58	39	52	120	112	117	---	---	---
24	74	62	71	65	58	61	116	112	114	---	---	---
25	73	67	71	71	65	68	114	108	112	---	---	---
26	73	63	67	74	71	73	116	107	111	---	---	---
27	67	61	64	78	69	76	114	107	111	---	---	---
28	68	62	64	111	77	101	114	107	111	---	---	---
29	---	---	---	134	108	111	114	107	110	---	---	---
30	---	---	---	138	71	94	114	107	112	---	---	---
31	---	---	---	76	68	70	---	---	---	---	---	---
MONTH	---	---	---	138	36	71	120	76	105	---	---	---

e Estimated

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.6	8.9	10.9	8.9	6.8	7.9	3.1	0.9	2.0	-0.1	-0.2	-0.1
2	13.5	10.4	12.1	10.3	6.9	8.9	1.1	-1	.4	-1	-2	-1
3	14.7	11.1	13.1	10.2	7.1	8.5	.2	-1	.0	-1	-1	-1
4	14.2	11.5	13.2	10.4	7.1	8.7	.3	-1	.0	-1	-1	-1
5	13.1	12.7	12.8	8.7	6.4	7.9	.4	-2	.0	-1	-1	-1
6	13.8	12.2	13.2	8.4	5.6	7.0	.1	-1	-.1	-1	-2	-1
7	12.8	9.8	11.7	8.5	5.1	6.8	.2	-1	.0	-1	-1	-1
8	10.5	8.2	9.3	9.3	5.9	7.7	-1	-1	-.1	-1	-1	-1
9	8.2	6.7	7.5	9.4	6.0	8.3	.0	-2	-.1	-1	-2	-1
10	8.0	6.4	7.3	9.4	8.8	9.1	.0	-1	-.1	-1	-2	-1
11	10.4	7.1	8.8	9.6	9.0	9.3	.1	-1	.0	-1	-1	-1
12	10.4	6.9	8.9	10.4	8.3	9.3	.5	-2	.1	-1	-2	-1
13	11.1	7.7	9.7	9.0	8.2	8.6	.1	-2	-.1	-1	-2	-1
14	13.2	9.6	11.6	9.2	7.4	8.8	.1	-2	-.1	-1	-1	-1
15	13.9	11.2	12.7	7.8	5.8	6.8	.0	-2	-.1	-1	-2	-1
16	12.3	9.6	10.9	7.0	5.4	6.4	1.8	-1	.6	-1	-2	-1
17	11.4	9.4	10.4	7.9	4.3	6.5	6.6	1.4	4.8	-1	-2	-1
18	12.0	10.4	11.3	5.7	3.9	4.8	4.9	1.3	3.0	-1	-2	-1
19	12.8	8.9	11.2	5.3	2.1	4.0	2.2	.9	1.7	.0	-2	-1
20	11.4	8.1	9.8	4.4	2.0	3.2	1.6	-1	.8	-1	-2	-1
21	13.3	9.4	11.6	3.8	1.4	2.6	.3	-1	.1	-1	-2	-2
22	11.6	6.9	9.7	2.5	.1	1.3	.5	-2	.2	-1	-2	-1
23	9.7	6.1	7.8	1.0	-1	.3	.0	-2	-.1	-1	-2	-1
24	10.8	6.4	8.9	.3	-1	.0	.1	-2	-.1	-1	-2	-1
25	12.0	8.2	10.1	.3	-1	.0	.0	-2	-.1	-1	-2	-1
26	12.6	8.3	10.7	1.4	.0	.6	.0	-2	-.1	-1	-2	-1
27	12.8	9.7	11.4	4.1	1.4	3.4	.0	-2	-.1	-1	-1	-1
28	11.5	5.8	9.7	5.4	3.5	4.5	.0	-2	-.1	-1	-2	-1
29	5.8	4.0	5.0	4.7	3.1	3.8	-1	-1	-.1	-1	-2	-1
30	6.2	3.9	5.4	3.9	2.1	3.2	-1	-2	-.1	.0	-2	-1
31	7.6	6.0	7.0	---	---	---	-1	-1	-.1	-1	-2	-1
MONTH	14.7	3.9	10.1	10.4	-.1	5.6	6.6	-2	.4	.0	-2	-1



## PAWTUXET RIVER BASIN

01115183 QUONAPAUG BROOK AT RT 116, NORTH SCITUATE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	-0.1	-0.2	-0.1	0.4	-0.2	0.0	4.5	2.8	3.8	19.9	10.7	15.0
2	.0	-0.2	-0.1	.1	-0.1	-0.1	4.7	2.6	3.7	21.0	11.8	16.5
3	-0.1	-0.2	-0.1	.4	-0.1	.1	6.9	2.2	4.8	21.8	13.6	17.7
4	.0	-0.2	-0.1	.3	-0.2	.0	8.0	3.2	5.5	22.2	14.7	18.4
5	-0.1	-0.2	-0.1	.0	-0.2	-0.1	9.7	3.5	6.6	18.0	11.4	15.6
6	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	6.8	4.8	6.0	17.0	7.7	12.5
7	-0.1	-0.2	-0.1	-0.1	-0.2	-0.1	8.9	5.2	6.8	16.8	7.2	11.6
8	-0.1	-0.2	-0.1	.0	-0.1	-0.1	5.5	5.0	5.2	17.8	7.8	12.6
9	-0.1	-0.2	-0.1	.0	-0.1	-0.1	12.2	5.1	9.3	18.7	9.3	13.8
10	.0	-0.2	-0.1	.3	-0.2	.0	13.2	8.1	10.6	19.1	10.2	14.7
11	-0.1	-0.2	-0.1	.6	-0.2	.1	11.1	7.3	9.1	20.0	11.8	16.1
12	.0	-0.2	-0.1	.9	-0.2	.2	8.9	7.9	8.4	20.9	13.8	17.0
13	.1	-0.2	-0.1	.2	-0.1	.0	10.9	7.8	9.1	18.0	11.1	14.7
14	.0	-0.2	-0.1	.2	-0.1	.0	13.0	7.2	9.9	14.8	10.3	12.6
15	---	---	---	.5	-0.1	.1	13.3	6.8	10.1	12.9	10.3	11.6
16	---	---	---	1.2	-0.1	.5	13.2	7.4	10.1	11.0	9.8	10.6
17	---	---	---	1.7	.2	.9	9.8	6.8	8.4	12.8	9.8	11.4
18	---	---	---	1.4	.2	.8	9.4	5.0	7.3	---	---	---
19	---	---	---	3.0	.1	1.7	11.4	4.4	7.7	---	---	---
20	---	---	---	4.3	.7	2.8	13.0	4.7	9.2	---	---	---
21	---	---	---	3.2	2.0	2.8	13.8	8.8	11.3	---	---	---
22	---	---	e-0.1	2.5	1.6	1.9	18.4	10.6	14.5	---	---	---
23	.1	-0.2	-0.1	3.3	1.6	2.6	19.1	12.3	15.1	---	---	---
24	.1	-0.1	.0	4.6	2.0	3.5	20.3	12.3	16.0	---	---	---
25	.0	-0.2	-0.1	5.5	2.0	3.8	13.0	8.6	11.5	---	---	---
26	.4	-0.2	.0	3.5	.9	2.5	15.3	7.8	10.9	---	---	---
27	.4	-0.2	.0	3.6	.6	2.3	16.1	7.9	11.9	---	---	---
28	.6	-0.2	.0	6.1	1.4	3.7	16.3	7.4	11.7	---	---	---
29	---	---	---	5.4	1.9	4.0	15.6	6.7	10.8	---	---	---
30	---	---	---	3.6	3.0	3.4	16.9	7.1	12.6	---	---	---
31	---	---	---	5.0	3.0	4.3	---	---	---	---	---	---
MONTH	---	---	---	6.1	-0.2	1.3	20.3	2.2	9.3	---	---	---

e Estimated

PAWTUXET RIVER BASIN

01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI

LOCATION.--Lat 41°49'09", long 71°42'16", Providence County, Hydrologic Unit 01090004, on left bank 5 ft downstream from bridge on Rams Tail Road, 0.3 mi south of South Foster and 0.4 mi upstream from Barden Reservoir.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

WATER DISCHARGE RECORD

PERIOD OF RECORD.--Discharge: March 1994 to current year.  
Water-quality records: Water years, 2000, 2001.

GAGE.--Water-stage recorder. Elevation of gage is 355 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--7 years, 28.4 ft<sup>3</sup>/s, 28.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,110 ft<sup>3</sup>/s, June 17, 2001, gage height, 6.32 ft; maximum gage height, 6.37 ft, June 30, 1998; no flow part of each day, Sept. 8-13, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,110 ft<sup>3</sup>/s, June 17, gage height, 6.32 ft; minimum, 0.10 ft<sup>3</sup>/s, Aug. 29.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	5.1	14	e18	e30	e27	143	15	20	8.7	0.87	2.7
2	1.7	5.5	13	e17	e26	23	98	14	94	7.6	.70	2.1
3	1.8	5.4	e11	e16	e23	21	73	13	113	6.8	.58	1.8
4	1.2	5.2	e10	e15	e21	19	61	12	48	6.4	.78	1.7
5	1.2	4.8	e9.3	e14	e18	26	53	11	29	7.9	1.2	1.7
6	1.8	4.7	e8.4	e14	e25	e70	50	10	21	8.2	1.1	1.7
7	1.7	4.4	e8.9	e13	e21	e31	55	9.5	17	6.9	1.0	1.4
8	1.6	4.4	e8.4	e13	e19	e20	119	8.7	15	6.1	.80	1.1
9	1.5	4.3	e8.0	e13	e17	20	118	8.7	12	6.1	.63	.89
10	1.4	11	e8.2	e12	e27	21	77	8.4	9.7	6.7	.79	.74
11	1.4	23	8.6	e12	e48	e20	56	7.6	9.3	21	2.1	.65
12	1.3	16	11	e12	e43	24	53	6.7	28	16	4.3	.53
13	1.3	12	e11	e11	e31	61	54	6.1	20	12	59	.46
14	1.3	12	13	e11	e24	80	46	5.4	15	8.8	41	.77
15	1.3	28	17	e13	30	61	38	5.1	12	7.3	17	1.4
16	1.2	20	15	e17	33	67	34	5.4	9.9	6.2	9.9	1.0
17	1.2	14	139	e15	35	84	31	5.9	329	5.6	6.8	.85
18	1.5	12	242	e14	e29	100	32	5.8	347	5.9	5.4	.64
19	3.5	10	82	e16	e24	81	30	5.7	101	5.3	4.4	.56
20	3.4	8.9	59	e26	22	77	26	5.1	52	4.5	5.9	.53
21	3.8	8.3	44	e23	24	87	25	4.7	35	3.9	7.6	1.9
22	3.4	8.1	35	e20	e22	625	24	7.7	28	3.5	6.0	2.8
23	2.9	7.5	e31	e17	e21	294	22	16	28	2.8	4.6	2.2
24	2.6	7.0	e26	e15	e19	163	21	25	25	2.3	3.7	1.7
25	2.6	6.9	e22	e14	21	121	20	23	22	1.8	3.1	2.0
26	2.6	10	e19	e13	46	92	19	17	18	1.7	2.6	3.8
27	2.4	24	e18	e12	44	79	18	29	15	2.0	2.6	3.2
28	2.5	20	e17	e12	34	67	17	23	12	1.7	5.8	2.3
29	2.3	16	e15	e11	---	60	16	29	11	1.4	5.2	1.9
30	2.3	14	e16	e17	---	321	15	102	9.6	1.2	3.9	1.6
31	3.7	---	e19	e35	---	298	---	33	---	1.0	3.0	---
TOTAL	64.4	332.5	958.8	481	777	3140	1444	478.5	1505.5	187.3	212.35	46.62
MEAN	2.08	11.1	30.9	15.5	27.8	101	48.1	15.4	50.2	6.04	6.85	1.55
MAX	3.8	28	242	35	48	625	143	102	347	21	59	3.8
MIN	1.2	4.3	8.0	11	17	19	15	4.7	9.3	1.0	.58	.46
CFSM	.15	.81	2.26	1.13	2.03	7.39	3.51	1.13	3.66	.44	.50	.11
IN.	.17	.90	2.60	1.31	2.11	8.53	3.92	1.30	4.09	.51	.58	.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2001, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	13.6	19.6	35.2	47.2	44.1	61.1	48.8	27.3
MAX	46.9	32.7	103	71.4	59.5	101	79.2	52.4
(WY)	1997	1997	1997	1999	1998	2001	1997	1998
MIN	1.03	11.1	10.2	15.5	27.8	40.2	21.8	15.4
(WY)	1998	2001	1999	2001	2001	1995	1999	2001

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1994 - 2001

ANNUAL TOTAL	8781.77	9627.97	
ANNUAL MEAN	24.0	26.4	28.4
HIGHEST ANNUAL MEAN			37.2
LOWEST ANNUAL MEAN			19.3
HIGHEST DAILY MEAN	275	Apr 22	625
LOWEST DAILY MEAN	.62	Sep 13	.46
ANNUAL SEVEN-DAY MINIMUM	.68	Sep 8	.73
MAXIMUM PEAK FLOW			1110
MAXIMUM PEAK STAGE			6.32
INSTANTANEOUS LOW FLOW			.10
ANNUAL RUNOFF (CFSM)	1.75		1.93
ANNUAL RUNOFF (INCHES)	23.85		26.14
10 PERCENT EXCEEDS	58		59
50 PERCENT EXCEEDS	16		12
90 PERCENT EXCEEDS	1.5		1.4

e Estimated

## PAWTUXET RIVER BASIN

01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI--Continued

## WATER-QUALITY RECORDS

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 2000 to May 2001.

WATER TEMPERATURE: February 2000 to May 200.

INSTRUMENTATION.--Water-quality monitor since February 2000.

REMARKS.--Records good.

## EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 176  $\mu\text{S}/\text{cm}$ , Dec. 14; minimum, 40  $\mu\text{S}/\text{cm}$ , Mar. 22.

WATER TEMPERATURE: Maximum recorded, 23.5°C, May 4; minimum, -0.4°C, Dec. 3, 4.

## WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{CM}$  AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	76	71	73	74	73	73	69	65	68	47	46	47
2	76	74	75	74	72	74	68	58	63	48	46	47
3	76	73	74	77	74	76	69	58	63	48	47	48
4	77	74	76	78	76	77	70	60	64	49	48	48
5	77	75	76	79	77	78	70	59	65	51	47	48
6	76	73	74	79	78	79	68	60	63	48	47	47
7	76	73	74	80	78	79	70	61	65	65	47	48
8	75	72	74	79	78	79	66	62	64	62	46	47
9	72	71	72	80	79	80	64	61	63	52	46	47
10	72	71	72	79	66	73	66	63	65	57	47	48
11	74	72	72	79	74	78	67	62	65	62	47	48
12	75	72	73	79	77	78	67	56	62	49	47	48
13	77	72	75	77	75	76	67	58	63	50	48	49
14	82	77	79	75	63	72	176	60	91	49	48	49
15	80	78	79	71	64	68	68	61	65	54	47	49
16	80	77	78	71	71	71	85	66	74	52	48	49
17	80	77	78	71	70	71	75	47	58	49	49	49
18	78	74	76	72	70	71	53	51	52	51	49	50
19	76	71	73	72	70	71	63	50	52	60	46	50
20	72	69	71	72	71	71	56	45	49	55	46	51
21	72	69	71	71	69	71	50	44	48	57	52	53
22	73	71	72	70	64	67	51	44	48	54	52	53
23	74	72	73	72	61	67	49	45	47	55	51	53
24	76	73	75	73	61	67	50	46	47	53	50	51
25	77	74	76	74	63	69	50	45	48	52	50	51
26	79	75	77	151	56	75	52	44	50	52	51	51
27	81	77	78	72	58	67	52	48	50	52	50	51
28	80	75	77	72	69	70	55	50	51	62	50	52
29	78	75	76	71	69	70	54	50	51	53	51	52
30	79	76	78	70	67	69	53	47	49	82	45	53
31	77	74	75	---	---	---	48	46	47	57	47	53
MONTH	82	69	75	151	56	73	176	44	58	82	45	50

PAWTUXET RIVER BASIN

01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	52	51	52	69	57	63	50	47	48	83	68	73
2	53	51	52	65	59	62	52	50	51	84	69	71
3	54	52	53	70	61	66	53	51	52	81	70	72
4	55	52	53	69	58	64	54	52	53	83	71	74
5	56	52	53	60	54	57	67	52	54	84	71	74
6	56	51	52	62	52	54	69	54	58	81	69	72
7	57	52	52	99	51	75	76	54	60	82	68	72
8	55	49	53	99	51	69	80	51	59	82	69	72
9	55	52	54	96	50	67	60	54	56	84	70	74
10	63	52	55	75	53	59	60	55	57	84	72	74
11	57	54	56	102	53	70	60	55	57	86	73	76
12	58	55	57	103	55	68	60	55	56	86	74	76
13	61	57	58	116	63	87	61	56	58	87	74	77
14	63	58	61	117	57	93	63	58	60	86	74	76
15	64	56	61	69	57	64	64	58	61	86	72	74
16	72	56	62	120	61	76	64	59	62	85	71	73
17	70	55	61	103	58	70	62	60	61	83	71	72
18	61	52	58	112	60	86	62	59	60	---	---	---
19	67	58	61	106	57	63	64	60	62	---	---	---
20	78	60	66	96	55	58	66	61	63	---	---	---
21	71	57	64	109	51	59	68	62	64	---	---	---
22	75	57	59	92	40	43	68	63	66	---	---	---
23	68	57	61	47	42	45	68	65	66	---	---	---
24	66	61	63	48	45	47	69	66	67	---	---	---
25	84	57	66	50	47	48	68	64	67	---	---	---
26	77	61	67	50	48	49	68	63	65	---	---	---
27	75	61	69	52	47	50	71	64	67	---	---	---
28	73	57	65	54	51	52	73	65	67	---	---	---
29	---	---	---	57	52	53	70	63	66	---	---	---
30	---	---	---	56	40	48	82	65	68	---	---	---
31	---	---	---	47	45	46	---	---	---	---	---	---
MONTH	84	49	59	120	40	62	82	47	60	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.5	9.7	11.6	7.7	6.2	7.1	2.6	0.9	1.9	0.0	-0.1	0.0
2	14.8	12.1	13.4	9.2	6.8	8.4	1.3	-0.4	.5	.0	-0.1	.0
3	15.8	12.8	14.4	9.4	7.8	8.5	.9	-0.4	.1	.1	.0	.0
4	15.4	13.2	14.8	9.6	7.6	8.7	.9	-0.4	.1	.0	.0	.0
5	14.9	13.6	14.2	8.5	6.7	7.9	.9	-0.4	.2	.0	.0	.0
6	14.2	12.8	13.8	7.7	5.9	7.0	.5	-0.4	.0	.0	-0.1	.0
7	13.6	11.7	12.9	7.9	5.6	7.0	.7	-0.3	.1	.1	-0.1	.0
8	12.0	10.2	11.2	8.6	6.4	7.6	-0.1	-0.3	-0.2	.1	.0	.0
9	10.2	7.8	9.2	8.9	6.4	8.3	.0	-0.3	-0.2	.0	-0.1	.0
10	8.5	7.3	7.9	9.1	8.6	8.8	-0.1	-0.2	-0.2	.1	-0.1	.0
11	10.2	7.7	9.0	9.3	8.7	9.1	.3	-0.1	.1	.1	.0	.1
12	10.9	7.6	9.6	9.9	8.4	9.2	.8	-0.3	.3	.1	.1	.1
13	11.5	8.4	10.5	8.5	8.1	8.4	.4	-0.3	.0	.1	.0	.1
14	13.4	10.5	12.2	8.7	7.7	8.4	.2	-0.2	.0	.2	.1	.1
15	14.5	12.0	13.5	7.7	5.8	7.0	.6	-0.2	.1	.1	.1	.1
16	13.4	10.5	11.9	6.8	5.5	6.3	1.5	-0.1	.5	.2	.1	.1
17	11.9	10.2	11.2	7.7	4.6	6.5	5.5	1.5	4.1	.2	.0	.1
18	12.3	11.2	11.8	5.1	4.1	4.7	4.2	1.6	2.9	.2	.1	.1
19	12.5	9.9	11.5	4.9	2.7	4.0	2.5	1.3	2.1	.1	.1	.1
20	11.6	9.1	10.5	3.6	2.2	2.9	2.0	.1	1.2	.1	.0	.1
21	12.4	9.3	11.2	3.3	1.3	2.4	.8	-0.1	.5	.1	.0	.1
22	11.2	8.4	10.2	1.6	.3	.9	1.0	-0.2	.5	.2	.0	.1
23	9.8	7.6	8.7	1.4	-0.3	.6	.3	-0.2	.0	.2	.1	.2
24	10.1	7.3	9.1	1.1	-0.4	.2	.3	-0.2	.0	.2	.1	.2
25	11.2	8.5	10.2	.9	-0.3	.3	.2	-0.2	-0.1	.2	.1	.2
26	12.2	9.2	11.1	1.1	.1	.6	.0	-0.2	-0.1	.2	.1	.2
27	12.4	10.5	11.5	4.0	.9	3.0	.2	-0.2	-0.1	.2	.1	.2
28	11.3	7.2	10.0	4.4	3.0	3.8	.2	-0.2	-0.1	.2	.1	.2
29	7.2	4.2	5.8	3.9	2.8	3.4	.3	-0.2	-0.1	.2	.1	.2
30	5.4	4.0	4.9	3.3	2.0	2.9	.1	-0.1	.0	.2	.1	.2
31	6.3	5.2	6.0	---	---	---	.0	-0.1	.0	.2	.2	.2
MONTH	15.8	4.0	10.8	9.9	-0.4	5.5	5.5	-0.4	.5	.2	-0.1	.1

## PAWTUXET RIVER BASIN

01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.3	0.1	0.2	1.5	0.2	0.7	5.0	3.7	4.3	20.3	13.2	17.0
2	.3	.1	.2	.9	.2	.6	5.4	3.4	4.4	21.6	14.6	18.4
3	.3	.1	.2	2.1	.4	1.2	7.3	3.0	5.4	22.8	16.5	19.8
4	.4	.2	.3	1.9	.3	1.1	9.4	4.2	6.6	23.5	17.7	20.7
5	.4	.2	.3	.5	.2	.3	11.0	4.8	7.8	19.9	15.1	18.6
6	.3	.3	.3	.3	.2	.3	7.9	6.1	7.1	17.3	12.0	15.0
7	.4	.2	.3	.4	.2	.3	9.7	6.0	7.7	17.2	9.9	13.7
8	.4	.2	.3	.7	.2	.4	7.0	5.7	6.1	18.0	10.5	14.5
9	.6	.3	.4	.7	.2	.4	12.1	5.6	9.2	19.5	12.1	16.2
10	1.0	.2	.5	1.2	.2	.6	14.0	9.7	11.4	20.6	13.8	17.5
11	.3	.2	.3	2.2	.2	1.2	12.3	8.7	10.3	21.7	15.1	18.8
12	.4	.2	.3	3.7	.3	1.9	9.8	8.8	9.3	22.3	16.9	19.9
13	.7	.2	.4	1.5	.6	1.0	11.9	8.6	9.8	19.4	16.4	18.1
14	.8	.2	.6	2.3	.6	1.3	13.4	7.9	10.4	16.4	14.1	15.1
15	1.5	.3	1.0	3.6	.6	2.1	14.2	8.3	11.1	14.1	12.4	13.0
16	1.2	.3	.8	5.0	1.2	2.9	14.2	9.5	11.5	12.7	11.5	12.1
17	1.8	.3	.9	5.6	2.2	3.6	11.0	8.6	9.8	14.1	11.1	12.8
18	.8	.3	.4	4.3	1.8	2.9	10.4	7.1	8.8	---	---	---
19	.9	.4	.5	5.9	1.6	3.6	12.3	6.1	9.0	---	---	---
20	1.8	.4	1.3	7.3	2.2	4.5	13.8	6.4	10.3	---	---	---
21	2.8	.3	1.4	4.8	2.2	3.9	14.9	10.0	12.4	---	---	---
22	.9	.3	.4	2.7	1.7	2.3	19.3	12.1	15.7	---	---	---
23	.9	.3	.5	4.2	2.2	3.3	20.1	13.9	16.9	---	---	---
24	1.2	.3	.7	5.2	2.5	4.0	21.4	14.3	17.7	---	---	---
25	.9	.3	.5	6.3	2.4	4.3	15.2	11.1	13.5	---	---	---
26	2.2	.3	1.1	4.6	1.7	3.2	15.9	9.6	12.5	---	---	---
27	2.7	.3	1.4	5.4	1.4	3.3	16.9	9.3	13.3	---	---	---
28	2.5	.2	1.0	7.1	2.2	4.6	16.6	10.9	13.7	---	---	---
29	---	---	---	6.5	3.2	5.0	16.1	9.2	12.6	---	---	---
30	---	---	---	4.4	3.0	3.6	17.4	9.7	14.0	---	---	---
31	---	---	---	4.7	2.9	4.1	---	---	---	---	---	---
MONTH	2.8	.1	.6	7.3	.2	2.3	21.4	3.0	10.4	---	---	---

PAWTUXET RIVER BASIN

01115190 DOLLY COLE BROOK AT OLD DANIELSON PARK AT SOUTH FOSTER, RI

LOCATION.--Lat 41°49'20", long 71°42'03", Providence County, Hydrologic Unit 01090004, on right bank 1000 ft downstream from bridge on State Route 6, and at South Foster.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 2000 to May 2001.

WATER TEMPERATURE: February 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since February 2000.

REMARKS.--Records good.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 764 µS/cm, Dec. 14; minimum, 54 µS/cm, Jan. 3.

WATER TEMPERATURE: Maximum recorded, 23.6°C, May 4; minimum, -0.3°C, on many days during winter period.

WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE (µ/CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	116	112	114	99	93	97	79	75	77	76	71	73
2	117	112	114	99	97	98	81	74	77	77	63	70
3	115	112	114	97	94	96	82	74	78	76	54	70
4	114	112	113	94	92	93	87	76	82	76	69	73
5	115	113	113	92	90	91	88	80	84	80	60	73
6	115	109	112	92	91	92	88	81	84	76	74	75
7	109	106	108	94	92	93	90	81	85	80	72	75
8	106	104	105	94	92	93	86	81	83	77	73	75
9	106	104	105	93	92	93	84	67	78	149	74	77
10	106	105	106	102	83	91	82	58	73	76	71	73
11	108	82	99	106	101	104	90	82	88	77	68	73
12	94	83	88	104	90	95	93	81	87	78	73	75
13	102	94	98	92	90	91	85	74	81	77	71	75
14	109	99	104	95	88	91	764	79	122	78	75	76
15	103	95	98	98	90	92	88	78	83	127	74	80
16	107	103	106	92	91	91	108	78	85	83	76	79
17	108	103	106	93	92	92	114	67	97	81	76	78
18	104	95	102	94	93	94	77	67	71	83	64	76
19	103	93	100	95	88	94	84	66	68	89	77	82
20	112	103	108	88	78	83	89	66	70	88	73	79
21	114	109	112	79	73	75	74	64	69	82	67	73
22	112	108	110	76	73	74	87	70	73	77	65	70
23	112	107	108	75	72	73	73	66	69	75	73	74
24	110	105	107	75	68	72	76	65	70	75	73	74
25	111	104	107	77	65	72	72	67	69	76	73	74
26	107	102	104	226	73	91	73	67	71	77	73	75
27	104	100	102	91	77	84	78	72	74	78	74	76
28	101	98	99	77	70	72	77	73	75	80	74	76
29	101	98	100	75	70	71	81	70	76	80	74	76
30	102	98	100	76	72	74	79	73	76	131	76	87
31	99	92	95	---	---	---	78	72	74	90	76	81
MONTH	117	82	105	226	65	87	764	58	79	149	54	76

## PAWTUXET RIVER BASIN

01115190 DOLLY COLE BROOK AT OLD DANIELSON PARK AT SOUTH FOSTER, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	94	84	88	111	96	104	67	62	64	116	112	114
2	88	80	84	106	96	101	76	66	69	116	113	115
3	86	76	80	105	98	102	87	67	72	113	93	101
4	85	76	79	105	97	101	88	71	74	97	92	94
5	86	72	77	115	86	95	80	71	75	100	96	98
6	81	72	76	98	87	89	256	75	83	101	98	100
7	83	76	78	98	91	94	104	77	85	101	96	99
8	84	76	79	102	89	96	140	78	98	101	97	99
9	86	80	83	102	93	97	85	76	80	106	97	99
10	98	79	89	110	95	101	85	79	81	104	99	101
11	111	74	85	113	94	104	88	76	81	108	102	105
12	107	89	92	118	98	109	92	80	85	118	107	111
13	102	87	92	188	95	116	90	81	84	124	111	118
14	101	84	91	122	94	109	90	80	84	138	122	128
15	111	91	96	128	101	112	104	86	89	139	133	135
16	107	86	94	122	105	113	100	91	95	141	134	137
17	105	90	99	120	108	112	99	94	96	138	134	135
18	104	86	95	117	106	110	98	91	94	---	---	---
19	116	88	98	116	106	111	93	89	91	---	---	---
20	108	95	101	113	105	108	99	92	95	---	---	---
21	104	94	100	117	102	108	101	97	99	---	---	---
22	102	87	94	102	64	76	107	100	102	---	---	---
23	151	90	96	86	64	67	110	107	108	---	---	---
24	103	89	96	75	64	69	113	108	110	---	---	---
25	144	87	102	81	68	73	120	113	118	---	---	---
26	121	95	105	91	72	77	119	112	114	---	---	---
27	117	94	107	88	75	80	113	110	111	---	---	---
28	111	100	106	89	76	81	118	110	113	---	---	---
29	---	---	---	92	78	82	116	104	111	---	---	---
30	---	---	---	116	65	83	117	109	113	---	---	---
31	---	---	---	70	60	63	---	---	---	---	---	---
MONTH	151	72	92	188	60	95	256	62	92	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.7	8.5	10.7	7.9	6.3	7.1	4.1	2.2	2.6	0.1	-0.3	-0.2
2	13.9	10.6	12.1	9.4	6.5	8.1	2.2	1.1	1.7	.0	-.3	-.2
3	14.8	11.2	13.1	9.3	7.3	8.3	1.5	.4	1.0	.0	-.2	-.2
4	14.8	11.7	13.4	9.9	6.8	8.3	1.9	.2	1.0	.0	-.3	-.2
5	13.7	13.0	13.3	8.6	7.4	8.0	1.9	.4	1.1	.0	-.2	-.1
6	14.2	13.0	13.5	8.2	6.2	7.2	1.4	.4	.9	.1	-.2	-.1
7	13.4	11.1	12.4	8.5	5.4	7.0	1.3	.2	.7	.2	-.2	-.1
8	11.5	8.7	10.0	9.1	5.9	7.4	.4	.1	.2	.2	-.2	-.1
9	9.1	7.8	8.3	8.9	5.9	7.7	.7	-.3	.0	.2	-.2	.0
10	8.5	6.7	7.6	8.8	8.4	8.6	.3	-.2	-.1	.1	-.3	-.2
11	10.8	7.1	8.9	9.2	8.6	8.9	1.4	.3	.9	.0	-.2	-.1
12	10.9	7.2	9.3	9.9	8.5	9.1	2.6	.6	1.6	.2	-.3	-.1
13	11.6	7.2	9.5	8.7	8.3	8.5	.9	-.2	.5	.0	-.2	-.2
14	13.9	9.3	11.4	8.8	8.2	8.6	1.2	.1	.8	.0	-.2	-.1
15	14.6	11.1	12.7	8.5	6.8	7.6	1.2	.4	.8	.0	-.2	-.1
16	12.9	10.0	11.4	7.0	5.9	6.6	2.2	.5	1.1	.3	-.1	.0
17	11.5	9.5	10.5	7.8	6.3	7.0	5.4	2.0	3.6	.4	-.1	.1
18	11.9	10.5	11.2	6.3	4.9	5.5	3.8	2.2	3.2	.2	-.3	-.1
19	12.8	10.2	11.5	5.3	3.8	4.7	2.8	1.5	2.2	.2	.0	.1
20	11.7	7.7	9.8	5.0	3.7	4.2	2.4	.9	1.8	.1	-.2	-.1
21	13.2	8.7	10.8	4.0	2.8	3.4	1.3	.3	.9	-.2	-.3	-.2
22	11.8	8.3	10.3	3.1	2.0	2.5	1.2	.6	1.0	-.2	-.3	-.2
23	10.0	6.2	8.0	2.4	1.2	1.8	.6	-.1	.2	-.2	-.3	-.2
24	10.9	6.5	8.6	1.9	.3	1.1	.6	-.2	.2	-.1	-.3	-.2
25	12.1	8.1	9.9	1.8	.0	.9	.2	-.3	-.1	.1	-.2	-.1
26	12.5	8.2	10.3	2.5	1.0	1.8	.0	-.2	-.2	.1	-.3	-.2
27	12.1	9.6	10.9	3.2	1.8	2.5	.2	-.2	-.1	.1	-.2	-.1
28	11.8	7.8	10.4	4.1	2.8	3.6	.1	-.2	-.1	.3	-.3	-.1
29	7.8	5.0	6.0	4.2	3.1	3.6	.2	-.3	-.1	.0	-.3	-.2
30	6.2	4.4	5.4	3.7	2.9	3.3	.0	-.2	-.2	.0	-.2	-.1
31	7.1	5.6	6.5	---	---	---	-.1	-.2	-.2	.2	-.2	-.1
MONTH	14.8	4.4	10.2	9.9	.0	5.8	5.4	-.3	.9	.4	-.3	-.1

PAWTUXET RIVER BASIN

01115190 DOLLY COLE BROOK AT OLD DANIELSON PARK AT SOUTH FOSTER, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	0.3	-0.2	0.0	1.3	-0.1	0.6	4.5	3.5	3.9	19.7	14.0	16.9
2	.5	-.2	.1	.8	.0	.5	4.9	2.9	3.8	21.1	15.4	18.4
3	.4	-.3	-.1	1.1	.3	.8	7.0	2.5	4.6	23.2	17.3	20.1
4	.2	-.3	-.1	1.0	.3	.7	8.6	3.6	6.0	23.6	18.3	21.0
5	.1	-.3	-.2	.7	-.2	.0	10.5	4.7	7.5	22.5	18.5	20.1
6	-.2	-.2	-.2	-.2	-.3	-.2	8.6	6.2	7.3	18.5	15.1	16.5
7	.4	-.2	-.1	.2	-.2	-.1	9.3	6.3	7.7	17.0	11.8	14.5
8	.4	-.3	.0	.4	-.3	.0	8.6	5.8	6.7	17.7	11.8	14.8
9	.5	-.1	.2	.5	-.2	.1	12.4	6.1	8.6	19.1	13.2	16.2
10	.8	-.2	.4	1.0	-.1	.3	13.9	9.2	11.3	20.1	14.6	17.5
11	.2	-.3	-.2	1.5	-.2	.7	12.2	8.9	10.8	21.2	15.9	18.7
12	.1	-.2	-.1	1.8	.0	1.0	10.9	9.3	9.9	22.7	17.4	20.0
13	.6	-.2	.1	1.4	.2	.6	11.9	9.2	10.3	20.5	17.0	18.5
14	.6	-.3	.2	1.6	.0	.7	13.1	8.3	10.7	17.4	14.0	15.7
15	1.0	.3	.6	2.6	.0	1.1	13.8	8.8	11.3	15.2	13.0	13.9
16	.6	-.2	.3	3.9	.5	1.9	13.9	10.0	12.0	13.7	12.3	12.8
17	1.0	-.2	.5	4.6	1.3	2.6	12.7	9.6	10.8	14.1	11.6	12.8
18	.6	-.3	.1	3.5	1.6	2.4	10.6	8.6	9.6	---	---	---
19	.7	-.3	.2	5.2	1.0	2.8	11.8	7.1	9.4	---	---	---
20	1.5	.2	.9	6.1	1.2	3.4	13.0	7.6	10.4	---	---	---
21	1.6	.3	1.0	4.2	2.1	3.2	14.3	10.8	12.4	---	---	---
22	.6	-.3	.1	3.0	1.5	2.1	18.5	12.7	15.3	---	---	---
23	.8	-.2	.2	3.0	1.6	2.2	19.2	14.8	17.1	---	---	---
24	.9	-.3	.3	4.6	1.8	3.0	20.6	15.5	18.1	---	---	---
25	.5	-.2	.2	6.2	1.7	3.6	19.1	13.4	15.3	---	---	---
26	1.4	.4	.9	4.4	2.2	3.0	15.0	10.9	13.0	---	---	---
27	2.0	.0	.9	5.4	1.4	3.2	16.0	10.9	13.5	---	---	---
28	1.7	.1	.9	6.7	1.6	4.0	16.4	12.7	14.5	---	---	---
29	---	---	---	5.8	2.3	4.1	15.3	10.9	13.3	---	---	---
30	---	---	---	4.7	2.8	3.4	16.5	10.9	13.9	---	---	---
31	---	---	---	4.5	2.7	3.7	---	---	---	---	---	---
MONTH	2.0	-.3	.3	6.7	-.3	1.8	20.6	2.5	10.6	---	---	---







## PAWTUXET RIVER BASIN

01115265 HEMLOCK BROOK AT KING ROAD NEAR CLAYVILLE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	0.9	0.3	0.5	4.3	3.4	3.8	18.6	13.6	16.0
2	---	---	---	.6	.3	.4	4.7	2.9	3.8	20.7	15.0	17.8
3	---	---	---	.9	.4	.5	5.9	2.6	4.4	21.9	17.0	19.4
4	---	---	---	.8	.4	.5	7.2	3.9	5.6	23.0	18.4	20.6
5	---	---	---	.5	.3	.4	8.8	4.7	6.8	21.3	18.2	19.9
6	---	---	---	.4	.2	.3	8.0	6.3	6.8	18.5	15.2	16.8
7	---	---	---	.3	.2	.3	8.3	5.8	6.9	17.7	12.0	14.7
8	---	---	---	.4	.2	.3	7.6	5.3	6.1	18.2	12.0	14.9
9	---	---	---	.4	.3	.3	11.1	4.9	7.5	19.6	13.2	16.1
10	---	---	---	.7	.3	.4	12.9	9.5	11.1	20.2	14.4	17.1
11	---	---	---	1.0	.2	.5	12.0	9.1	10.5	21.8	16.1	18.7
12	---	---	---	1.3	.2	.6	10.3	8.8	9.3	23.0	17.7	20.0
13	---	---	---	.5	.2	.3	10.8	8.4	9.4	20.4	17.3	18.9
14	---	---	---	.5	.2	.3	12.0	8.2	10.0	18.0	15.1	16.5
15	---	---	---	.8	.2	.4	12.8	9.0	10.9	16.0	13.8	14.6
16	---	---	---	1.5	.2	.7	13.0	10.2	11.5	14.2	12.7	13.3
17	---	---	---	2.0	.5	1.1	11.4	9.4	10.2	14.2	12.0	13.0
18	---	---	---	1.7	.8	1.1	9.7	8.1	8.9	---	---	---
19	---	---	---	3.3	.4	1.8	10.9	6.7	8.6	---	---	---
20	---	---	---	4.5	.9	2.8	12.0	7.4	9.6	---	---	---
21	---	---	---	3.4	2.2	2.9	13.9	10.4	11.7	---	---	---
22	---	---	---	3.1	1.9	2.3	17.6	12.2	14.5	---	---	---
23	0.7	0.5	0.5	3.5	1.8	2.6	19.0	14.8	16.7	---	---	---
24	.7	.4	.5	4.8	2.2	3.5	20.3	15.5	17.6	---	---	---
25	.6	.5	.5	5.7	2.2	3.9	18.2	13.6	15.4	---	---	---
26	1.0	.5	.7	4.2	2.0	3.1	15.3	10.8	13.0	---	---	---
27	.9	.3	.5	3.7	.7	2.3	15.8	10.6	13.1	---	---	---
28	1.1	.3	.5	5.3	1.5	3.4	16.5	12.1	14.1	---	---	---
29	---	---	---	4.9	2.8	4.1	15.9	10.6	13.2	---	---	---
30	---	---	---	4.7	3.0	3.6	16.4	10.7	13.6	---	---	---
31	---	---	---	4.0	2.6	3.4	---	---	---	---	---	---
MONTH	---	---	---	5.7	.2	1.6	20.3	2.6	10.2	---	---	---

PAWTUXET RIVER BASIN

01115275 BEAR TREE BROOK NEAR CLAYVILLE, RI

LOCATION.--Lat 41°46'57", long 71°40'31", Providence County, Hydrologic Unit 01090004, on left bank 5 ft downstream from bridge on King Road, and 1.2 mi northeast of Foster Center.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 293  $\mu\text{S}/\text{cm}$ , Oct. 5; minimum, 52  $\mu\text{S}/\text{cm}$ , Mar. 22.

WATER TEMPERATURE: Maximum recorded, 15.9°C, May 4; minimum, -0.2°C, on many days during winter periods.

WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{CM AT } 25^\circ\text{C}$ ), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	279	263	273	250	222	238	235	215	224	198	184	189
2	281	268	276	262	250	256	244	235	240	198	175	185
3	287	273	280	267	259	263	254	226	242	201	177	186
4	289	280	285	272	261	267	256	228	244	205	177	191
5	293	264	279	272	265	268	253	234	246	208	178	194
6	266	242	251	272	263	266	250	240	246	204	191	201
7	260	240	249	270	264	267	255	235	246	209	197	203
8	268	259	262	270	267	269	246	238	242	211	192	203
9	270	265	268	272	268	269	248	216	236	207	204	206
10	270	267	269	269	129	188	250	217	232	204	182	193
11	278	270	273	195	145	173	249	231	241	213	182	200
12	280	272	276	223	195	212	231	214	222	214	183	205
13	281	273	277	234	223	230	248	218	234	208	183	195
14	291	278	283	240	135	208	246	173	205	218	194	209
15	290	283	286	192	134	162	220	182	204	216	177	195
16	286	268	281	218	192	208	231	161	225	196	181	192
17	272	255	265	229	218	223	161	56	85	200	192	198
18	274	201	270	237	229	234	139	65	106	209	190	203
19	219	148	179	245	236	239	158	139	153	210	140	189
20	245	219	229	251	243	246	157	137	145	177	141	163
21	260	244	253	252	245	248	174	157	167	178	155	169
22	262	257	259	258	252	255	177	174	176	200	168	182
23	264	259	261	263	258	260	181	166	175	203	174	187
24	267	261	264	270	240	257	190	168	181	211	180	194
25	272	264	267	273	233	255	185	167	175	212	191	204
26	275	267	270	263	123	208	182	172	178	214	184	201
27	274	268	271	183	127	156	199	181	188	215	202	212
28	273	265	270	211	183	198	194	182	187	216	206	213
29	278	271	275	227	211	219	204	181	191	219	185	204
30	276	265	272	229	213	220	200	161	183	219	118	186
31	265	218	232	---	---	---	193	177	188	154	122	144
MONTH	293	148	265	273	123	232	256	56	200	219	118	193

## PAWTUXET RIVER BASIN

01115275 BEAR TREE BROOK NEAR CLAYVILLE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	170	154	165	192	175	184	126	114	119	205	196	201
2	182	169	177	195	183	190	131	126	129	208	199	204
3	191	179	185	195	192	194	137	131	134	212	204	209
4	201	169	188	198	194	196	142	134	138	217	208	211
5	202	158	185	196	156	179	145	138	142	217	212	215
6	186	160	174	184	158	171	148	136	144	217	209	214
7	196	182	191	195	184	191	144	136	140	218	208	213
8	201	192	197	197	172	190	147	100	120	221	210	216
9	200	184	197	198	190	195	139	118	130	225	213	219
10	184	123	140	192	181	189	146	138	141	232	216	224
11	154	123	139	187	174	182	152	144	148	237	224	230
12	185	148	165	181	172	177	152	137	145	241	231	235
13	192	185	189	181	104	134	149	138	143	240	232	237
14	191	178	187	148	113	133	158	148	153	240	232	236
15	189	163	172	160	142	151	164	155	159	239	232	235
16	181	165	173	156	133	146	166	159	162	236	227	230
17	180	158	165	149	131	141	163	161	162	---	---	---
18	186	151	169	144	136	140	162	159	160	---	---	---
19	198	160	182	154	138	146	168	160	165	---	---	---
20	198	186	193	154	135	146	174	166	170	---	---	---
21	186	169	179	151	105	144	176	170	173	---	---	---
22	190	155	175	105	52	74	---	---	---	---	---	---
23	194	168	185	110	92	102	---	---	---	---	---	---
24	198	176	190	122	110	117	---	---	---	---	---	---
25	197	168	189	133	122	127	189	182	184	---	---	---
26	168	140	147	138	133	136	189	180	183	---	---	---
27	172	150	163	141	134	138	192	182	186	---	---	---
28	182	171	176	146	134	140	194	186	189	---	---	---
29	---	---	---	148	141	144	197	188	191	---	---	---
30	---	---	---	146	65	99	200	190	195	---	---	---
31	---	---	---	114	85	102	---	---	---	---	---	---
MONTH	202	123	176	198	52	152	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	11.9	8.8	10.3	9.0	7.6	8.2	4.5	3.2	4.0	1.5	0.4	0.8
2	12.4	10.1	11.2	10.0	7.6	8.8	3.2	1.6	2.5	1.1	-.1	.4
3	13.4	10.7	12.1	9.9	7.7	8.8	2.3	.3	1.3	1.2	-.1	.3
4	13.1	11.0	12.2	10.1	7.3	8.6	3.2	.3	1.5	1.6	-.1	.6
5	12.5	11.9	12.1	8.9	7.8	8.3	3.5	.7	2.2	1.8	-.1	.8
6	12.7	12.0	12.3	8.4	6.8	7.6	2.8	.9	1.6	2.6	.7	1.8
7	12.4	10.5	11.4	8.8	6.3	7.5	2.2	.6	1.3	2.6	.9	1.6
8	10.7	8.4	9.5	9.4	6.5	8.0	1.1	.8	.9	2.6	.5	1.5
9	8.9	8.0	8.3	9.4	6.6	8.2	1.5	-.2	.8	2.5	1.4	2.3
10	8.4	7.2	7.9	9.6	9.0	9.3	2.2	-.2	.4	1.4	-.1	.5
11	10.4	7.8	9.0	9.7	9.2	9.5	3.9	2.2	3.2	2.3	-.1	1.0
12	10.6	7.4	9.1	10.2	8.5	9.4	6.0	1.9	4.3	1.9	-.1	1.1
13	11.2	7.9	9.7	9.1	8.4	8.7	2.0	.3	1.3	1.0	-.2	.3
14	12.7	9.7	11.1	9.4	8.7	9.1	3.4	1.0	2.5	2.7	.2	1.4
15	13.4	11.3	12.2	9.1	6.8	7.7	3.1	1.8	2.4	2.4	.5	2.0
16	12.2	9.9	11.0	7.4	6.3	6.9	4.2	1.8	3.0	3.7	2.1	2.9
17	11.1	9.4	10.2	8.2	6.2	7.5	7.4	4.0	5.8	3.8	2.5	3.1
18	11.6	10.3	10.9	6.4	5.1	5.8	6.5	3.0	4.1	2.7	.6	2.0
19	11.9	9.9	11.1	6.2	4.3	5.4	4.0	2.4	3.2	3.3	2.5	2.9
20	10.9	7.9	9.5	5.6	3.4	4.5	3.8	2.0	3.0	2.9	1.4	2.4
21	12.6	9.4	10.9	5.1	3.8	4.4	2.7	1.1	2.0	1.4	-.2	.5
22	11.4	8.1	9.9	3.9	2.8	3.4	3.0	2.0	2.5	1.5	-.2	.4
23	9.5	6.3	7.9	3.0	1.7	2.4	2.0	.4	1.0	1.5	-.1	.4
24	10.7	7.3	8.9	2.2	.4	1.3	2.1	.2	1.2	2.3	-.1	.8
25	11.4	8.7	10.0	2.5	.0	1.2	1.6	-.1	.5	2.5	.5	1.3
26	11.8	8.4	10.1	4.9	1.8	3.3	.2	-.1	.1	2.0	.0	.9
27	11.9	9.6	10.7	6.1	4.3	5.2	1.3	.2	.7	2.9	.8	2.0
28	11.2	7.7	10.0	6.6	5.4	5.9	1.0	.2	.6	2.4	.9	1.7
29	7.7	5.6	6.4	6.1	4.8	5.3	1.5	.0	.6	2.0	-.2	.8
30	7.0	5.3	6.2	5.5	4.5	5.0	1.3	-.2	.4	2.7	.8	1.9
31	8.2	6.6	7.6	---	---	---	1.4	.5	1.0	3.7	2.1	2.8
MONTH	13.4	5.3	10.0	10.2	.0	6.5	7.4	-.2	1.9	3.8	-.2	1.4

PAWTUXET RIVER BASIN

01115275 BEAR TREE BROOK NEAR CLAYVILLE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.1	2.2	3.1	2.8	0.6	1.6	5.1	4.1	4.6	16.2	10.4	13.2
2	3.8	1.9	2.9	2.4	1.0	1.6	5.8	3.4	4.5	17.3	11.0	14.1
3	3.1	1.0	1.8	3.5	1.8	2.4	7.3	3.0	5.0	18.0	12.4	15.2
4	2.4	-1.1	1.2	3.1	1.8	2.4	8.2	3.5	5.8	18.5	13.3	15.9
5	2.3	-2.2	.9	2.1	-2.2	.8	9.5	3.9	6.6	16.6	13.3	14.8
6	2.1	-2.2	.9	1.3	-2.2	.6	7.1	4.9	6.1	14.4	10.2	12.2
7	3.2	1.6	2.2	2.4	1.2	1.7	8.3	5.4	6.7	13.9	7.6	10.7
8	3.3	1.2	2.3	2.8	.0	1.6	7.5	4.8	5.5	14.6	8.6	11.4
9	4.1	2.8	3.4	3.1	1.7	2.3	11.9	5.3	8.0	15.6	9.5	12.5
10	4.0	1.0	3.3	4.2	1.9	2.8	11.7	8.2	9.9	16.1	10.4	13.3
11	1.3	.1	.7	4.9	1.5	3.1	10.1	6.6	8.5	16.7	11.8	14.2
12	1.5	-2.2	.5	5.2	1.6	3.2	8.8	7.5	8.0	17.6	13.3	15.3
13	3.4	1.1	2.1	3.2	2.0	2.5	10.6	7.6	8.8	15.6	12.7	13.9
14	3.6	.8	2.4	4.3	1.9	2.9	11.5	6.8	9.1	13.1	10.5	11.9
15	3.8	2.5	3.3	5.1	1.9	3.5	11.8	6.6	9.3	11.9	10.2	11.0
16	3.3	1.2	2.3	6.2	2.5	4.2	11.5	7.7	9.6	11.1	10.2	10.5
17	3.4	.7	2.6	6.6	3.3	4.8	9.9	6.8	8.2	---	---	---
18	1.9	.0	.9	5.1	3.5	4.2	8.7	6.6	7.7	---	---	---
19	2.6	-2.2	1.3	6.4	2.2	4.2	10.3	5.0	7.6	---	---	---
20	4.7	2.0	3.2	6.8	2.5	4.7	11.7	5.3	8.4	---	---	---
21	4.0	.7	2.9	5.1	3.2	4.2	12.3	8.6	10.3	---	---	---
22	1.6	-1.1	.7	4.1	2.1	3.2	16.1	10.0	12.7	---	---	---
23	3.1	.0	1.5	5.3	3.1	4.1	16.2	11.0	13.5	---	---	---
24	2.7	.4	1.5	6.4	2.9	4.5	17.3	11.2	14.1	---	---	---
25	2.7	.2	1.8	6.8	2.4	4.5	15.1	10.0	11.3	---	---	---
26	3.7	2.0	2.8	4.6	2.4	3.4	12.9	7.5	10.0	---	---	---
27	4.1	1.3	2.6	5.6	1.6	3.4	13.6	7.4	10.4	---	---	---
28	3.2	1.3	2.1	6.7	2.0	4.2	13.7	9.1	11.1	---	---	---
29	---	---	---	6.0	2.6	4.4	13.0	6.9	9.9	---	---	---
30	---	---	---	5.0	3.3	3.6	14.2	7.4	10.8	---	---	---
31	---	---	---	5.7	3.2	4.4	---	---	---	---	---	---
MONTH	4.7	-2.2	2.0	6.8	-2.2	3.2	17.3	3.0	8.7	---	---	---

## PAWTUXET RIVER BASIN

01115280 CORK BROOK AT ROCKLAND SCITUATE RD NEAR CLAYVILLE, RI

LOCATION.--Lat 41°48'14", long 71°39'01", Providence County, Hydrologic Unit 01090004, on left bank 500 ft downstream from bridge on Rockland Scituate Rd., and 0.8 mi northeast of Crazy Corners.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 2000 to May 2001.

WATER TEMPERATURE: February 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since February 2000.

REMARKS.--Records good.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 193  $\mu\text{S}/\text{cm}$ , Dec. 30; minimum, 55  $\mu\text{S}/\text{cm}$ , Mar. 22.

WATER TEMPERATURE: Maximum recorded, 19.9°C, May 5; minimum, -0.2°C, on many days during winter period.

## WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{CM}$  AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	113	110	111	115	114	115	105	103	104	88	86	87
2	114	112	113	115	112	114	105	95	102	88	86	87
3	116	113	114	114	112	113	100	92	95	106	86	87
4	115	113	114	113	112	112	105	94	99	103	86	89
5	116	114	115	112	110	111	110	96	105	103	86	90
6	119	116	118	111	110	110	110	95	100	118	86	93
7	119	115	117	113	111	112	102	96	98	109	89	93
8	116	111	113	113	111	112	104	95	97	109	89	93
9	111	110	110	112	110	111	102	96	98	108	91	94
10	111	110	110	112	98	105	108	98	100	107	87	89
11	113	111	112	108	102	105	122	98	102	106	87	89
12	113	110	112	109	107	108	114	103	110	110	88	91
13	113	110	112	107	106	107	103	94	97	106	87	90
14	116	112	114	106	95	103	122	93	103	104	87	91
15	116	115	115	102	97	99	110	101	106	96	83	91
16	118	113	115	102	100	100	114	101	108	100	95	98
17	118	113	115	102	100	100	104	58	79	100	97	99
18	118	108	117	105	102	103	77	70	75	99	87	95
19	122	108	118	107	104	105	82	77	80	103	92	99
20	119	117	118	109	106	108	85	81	82	102	94	99
21	121	116	118	111	108	110	89	78	84	96	86	91
22	119	115	117	112	109	111	96	85	89	96	92	94
23	116	114	115	111	100	106	85	76	80	98	94	96
24	117	114	115	106	96	100	93	80	85	99	95	97
25	120	115	117	104	97	100	88	79	83	106	97	102
26	120	115	117	142	94	103	83	74	79	112	95	101
27	118	116	117	99	95	97	85	83	84	113	99	105
28	119	115	117	101	98	100	86	84	85	121	98	105
29	115	113	114	102	99	101	87	84	85	103	95	99
30	115	112	113	104	101	102	193	82	88	142	84	102
31	116	113	114	---	---	---	97	84	85	110	100	106
MONTH	122	108	115	142	94	106	193	58	92	142	83	95

PAWTUXET RIVER BASIN

01115280 CORK BROOK AT ROCKLAND SCITUATE RD NEAR CLAYVILLE, RI--Continued

SPECIFIC CONDUCTANCE (µ/CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	116	105	112	141	118	128	85	79	82	106	102	104
2	121	108	116	143	118	126	89	85	87	107	103	105
3	136	102	111	138	126	132	91	88	89	108	105	106
4	113	93	107	136	123	130	95	90	92	108	106	107
5	116	99	106	126	105	114	96	92	94	106	105	106
6	124	98	102	117	102	109	98	93	96	148	101	110
7	113	101	106	119	111	112	98	95	97	114	96	101
8	119	103	112	119	110	113	98	82	91	104	97	100
9	125	115	118	127	115	121	101	94	98	104	98	101
10	134	106	121	142	119	126	104	98	101	106	98	101
11	124	106	115	139	118	130	102	99	101	104	100	101
12	122	117	120	148	126	138	101	97	100	104	99	101
13	135	119	127	149	124	133	102	99	100	101	98	100
14	136	116	128	159	132	148	104	100	101	100	95	97
15	135	128	133	161	145	153	105	100	102	100	95	97
16	135	117	127	154	140	147	105	100	102	99	97	98
17	139	117	132	143	128	137	102	100	102	---	---	---
18	126	115	121	130	124	128	102	99	100	---	---	---
19	131	106	119	129	119	123	102	99	101	---	---	---
20	137	127	132	124	111	116	104	99	101	---	---	---
21	136	114	130	116	76	111	105	100	103	---	---	---
22	119	110	116	80	55	61	109	104	106	---	---	---
23	134	110	119	80	66	74	109	106	108	---	---	---
24	130	111	122	87	80	83	109	106	108	---	---	---
25	142	112	121	90	85	88	108	103	105	---	---	---
26	149	122	134	92	90	92	106	101	103	---	---	---
27	141	117	131	102	92	96	107	101	103	---	---	---
28	145	120	133	100	95	97	106	101	104	---	---	---
29	---	---	---	104	97	99	106	99	102	---	---	---
30	---	---	---	104	61	81	106	100	103	---	---	---
31	---	---	---	79	72	75	---	---	---	---	---	---
MONTH	149	93	120	161	55	114	109	79	99	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.6	10.1	11.4	8.7	7.1	7.8	3.8	2.2	3.0	0.0	-0.1	-0.1
2	13.1	10.8	12.0	10.0	7.3	8.8	2.2	.2	1.4	.0	-.1	-.1
3	14.4	12.0	13.2	10.1	8.2	9.1	.7	-.2	.2	.0	-.1	-.1
4	14.3	12.5	13.6	10.5	7.9	9.1	1.0	-.2	.4	.0	-.1	.0
5	13.8	12.8	13.1	9.1	7.7	8.6	2.0	-.1	1.0	.1	-.1	.0
6	13.6	12.8	13.1	8.5	6.6	7.6	1.2	-.2	.3	.4	.0	.2
7	13.2	11.5	12.2	8.9	6.1	7.6	.5	-.2	.0	.7	.2	.5
8	11.5	9.2	10.1	9.7	7.0	8.3	-.1	-.2	-.1	.8	.2	.5
9	9.3	7.5	8.1	9.4	6.9	8.4	.2	-.2	-.1	.9	.4	.7
10	7.8	6.7	7.3	9.7	8.9	9.3	.1	-.2	.0	.4	-.1	.1
11	9.7	7.1	8.4	9.8	9.4	9.6	1.5	.1	.4	.3	-.1	.1
12	10.6	8.0	9.5	10.6	8.9	9.6	4.5	.6	2.8	.5	-.1	.2
13	11.6	9.1	10.6	9.0	8.4	8.8	.6	-.2	.1	.2	-.2	.0
14	13.6	11.0	12.2	9.3	8.6	9.0	1.6	-.2	.6	.8	-.1	.3
15	14.2	12.5	13.3	9.0	6.6	7.7	1.5	.4	1.0	.9	-.1	.3
16	13.4	10.2	11.7	7.6	6.0	6.8	3.1	.4	1.4	1.3	.5	1.0
17	10.8	9.5	10.2	8.3	5.9	7.3	8.3	3.1	5.8	1.7	.9	1.3
18	11.4	10.3	10.9	6.0	4.4	5.4	5.4	2.5	3.8	1.1	-.1	.7
19	12.1	10.7	11.4	5.8	3.8	5.0	3.2	1.8	2.6	1.3	.5	1.0
20	11.4	9.3	10.5	5.2	2.9	4.0	2.8	.9	2.1	1.1	.1	.9
21	13.0	10.2	11.6	4.5	2.6	3.5	1.7	.2	1.0	.1	-.2	-.2
22	12.3	9.3	10.9	2.8	1.3	2.1	1.9	.6	1.3	.1	-.2	-.1
23	10.0	7.8	9.0	1.9	.3	1.0	.6	-.2	.0	.1	-.2	-.1
24	11.0	8.4	9.7	.8	-.2	.2	.8	-.2	.2	.3	-.2	.0
25	12.3	9.9	11.1	.3	-.2	.1	.4	-.2	-.1	1.0	.0	.4
26	12.8	9.9	11.4	4.0	.1	1.6	-.1	-.2	-.2	.8	-.2	.3
27	12.6	10.8	11.8	6.0	4.0	5.0	.0	-.2	-.1	1.4	.1	.7
28	12.2	8.6	11.1	5.9	4.3	5.1	.0	-.2	-.1	1.4	.1	.7
29	8.6	5.7	6.8	5.3	3.8	4.5	.0	-.2	-.1	.5	-.2	.1
30	6.6	5.2	5.9	4.5	3.3	4.0	-.1	-.2	-.1	.8	-.1	.2
31	7.7	6.1	7.1	---	---	---	.0	-.1	-.1	2.0	.7	1.2
MONTH	14.4	5.2	10.6	10.6	-.2	6.2	8.3	-.2	.9	2.0	-.2	.3



## PAWTUXET RIVER BASIN

01115280 CORK BROOK AT ROCKLAND SCITUATE RD NEAR CLAYVILLE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.6	0.6	1.4	1.6	-0.2	0.3	4.6	3.5	4.0	18.2	11.4	14.5
2	2.6	.4	1.4	1.0	-.2	.3	5.0	2.8	3.9	19.2	12.5	15.8
3	1.6	-.2	.5	2.1	.3	1.0	7.2	2.4	4.6	19.9	14.1	17.0
4	.6	-.2	.1	1.8	.2	.9	8.4	3.1	5.5	19.8	15.2	17.4
5	.8	-.2	.0	.6	-.2	-.1	10.2	3.6	6.5	17.8	14.1	15.9
6	-.1	-.2	-.2	-.2	-.2	-.2	8.5	4.8	6.1	14.1	10.9	12.5
7	.8	-.2	.2	-.1	-.2	-.2	8.9	5.1	6.6	13.6	7.4	10.5
8	1.6	-.2	.7	.4	-.2	.0	6.5	4.6	5.3	14.6	8.7	11.5
9	2.0	.9	1.5	1.2	.2	.6	11.8	5.1	7.9	15.7	10.0	12.7
10	2.2	-.1	1.4	2.4	.5	1.1	12.3	8.3	9.9	16.0	10.6	13.4
11	.5	-.2	-.1	3.6	.0	1.5	10.9	6.9	8.8	17.4	12.8	15.0
12	.0	-.2	-.2	4.1	.2	1.8	8.7	7.7	8.2	18.4	14.1	16.1
13	1.6	-.2	.6	1.2	.5	.8	10.9	7.6	8.8	16.5	13.3	14.5
14	2.1	-.1	1.1	2.4	.4	1.1	12.6	6.7	9.2	13.4	10.8	12.3
15	2.5	.8	1.7	3.5	.3	1.7	13.1	6.6	9.6	12.3	10.4	11.3
16	2.0	.0	.9	4.9	.9	2.4	12.6	7.6	9.8	11.4	10.2	10.6
17	2.5	-.2	1.3	4.9	1.4	2.7	9.7	6.8	8.3	---	---	---
18	.4	-.2	.0	3.6	1.5	2.2	9.2	6.4	7.7	---	---	---
19	.8	-.2	.2	5.3	.9	2.7	11.3	4.7	7.6	---	---	---
20	2.9	.4	1.5	6.1	1.4	3.4	12.8	5.0	8.5	---	---	---
21	3.7	-.2	1.6	3.9	2.2	3.0	13.6	8.7	10.6	---	---	---
22	.2	-.2	-.1	3.0	1.2	2.3	17.7	10.4	13.4	---	---	---
23	.9	-.2	.2	4.3	2.2	3.2	18.2	11.7	14.4	---	---	---
24	1.4	-.2	.5	5.4	2.3	3.8	19.4	11.8	15.2	---	---	---
25	.9	-.2	.3	6.3	2.0	3.8	15.3	10.3	11.9	---	---	---
26	2.5	.4	1.2	4.3	1.9	2.8	14.5	7.8	10.6	---	---	---
27	3.1	.0	1.2	5.2	.9	2.7	15.1	7.6	11.1	---	---	---
28	2.6	-.2	.9	6.6	1.4	3.6	15.3	9.6	11.9	---	---	---
29	---	---	---	5.8	2.1	3.9	14.6	7.1	10.6	---	---	---
30	---	---	---	4.2	2.9	3.3	16.2	7.6	11.8	---	---	---
31	---	---	---	4.8	2.7	3.8	---	---	---	---	---	---
MONTH	3.7	-.2	.7	6.6	-.2	1.9	19.4	2.4	8.9	---	---	---

PAWTUXET RIVER BASIN

01115297 WILBUR HOLLOW BROOK AT OLD PLAINFIELD PIKE NEAR CLAYVILLE, RI

LOCATION.--Lat 41°45'53", long 71°38'10", Providence County, Hydrologic Unit 01090004, on left bank 500 ft downstream from bridge on Old Plainfield Pike, and 2.2 mi southeast of Rockland.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good for temperature, fair for specific conductance.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 126 µS/cm, Oct. 14; minimum, 22 µS/cm, Mar. 22.

WATER TEMPERATURE: Maximum recorded, 23.9°C, May 4; minimum, -0.2°C, on many days during winter periods.

WATER-QUALITY DATA, JANUARY TO SEPTEMBER 2000

SPECIFIC CONDUCTANCE (µ/CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	60	56	58	58	56	57	51	47	49	47	46	46
2	59	55	57	61	58	60	49	47	48	47	46	47
3	59	56	58	62	59	60	51	47	50	48	46	47
4	60	56	59	63	60	61	53	49	52	49	47	48
5	59	58	58	63	58	61	55	51	54	52	48	48
6	59	57	58	60	57	58	56	53	55	61	48	48
7	60	57	59	61	57	59	56	53	55	49	47	48
8	60	55	57	63	60	61	56	53	54	48	47	47
9	56	54	55	61	60	60	58	53	53	48	46	47
10	55	54	55	62	56	58	56	53	55	47	46	46
11	57	54	56	62	57	59	55	53	54	47	46	47
12	59	55	57	58	56	57	58	52	55	47	46	46
13	124	56	61	56	55	56	57	52	54	48	46	47
14	126	57	63	57	53	55	54	51	52	48	47	47
15	64	59	61	57	54	56	55	50	53	50	46	47
16	61	59	60	55	53	54	52	47	51	48	46	47
17	63	59	61	56	53	54	48	34	41	47	44	46
18	63	58	61	56	54	55	34	33	33	45	44	44
19	66	59	63	55	54	54	35	33	34	45	43	44
20	65	60	62	55	53	54	36	32	34	45	41	43
21	65	59	61	60	54	57	36	32	34	41	39	40
22	60	58	59	61	56	59	35	34	35	45	39	39
23	60	57	59	58	56	57	37	34	36	40	39	40
24	60	58	59	59	56	58	39	36	38	41	40	41
25	67	58	62	61	57	60	41	38	40	42	41	42
26	63	58	60	61	55	59	45	41	43	43	42	42
27	66	59	62	60	55	58	46	43	45	43	42	42
28	69	64	66	57	53	55	48	45	46	43	42	43
29	73	68	70	54	51	52	50	46	48	44	42	43
30	68	66	67	52	50	51	48	46	47	46	42	44
31	69	56	64	---	---	---	47	46	46	43	36	39
MONTH	126	54	60	63	50	57	58	32	47	61	36	45

## PAWTUXET RIVER BASIN

01115297 WILBUR HOLLOW BROOK AT OLD PLAINFIELD PIKE NEAR CLAYVILLE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	37	36	36	42	37	40	54	41	47	62	58	60
2	38	36	37	41	39	41	53	42	46	63	61	62
3	38	37	38	43	41	42	52	46	49	64	62	63
4	40	38	39	44	42	43	51	46	48	66	63	65
5	41	40	40	43	42	42	51	47	49	66	64	65
6	42	40	41	42	42	42	56	50	52	66	64	65
7	43	41	42	43	42	43	56	49	52	67	64	66
8	42	41	42	44	43	43	55	43	48	69	65	67
9	43	42	42	44	43	43	47	43	45	67	66	66
10	44	36	40	44	42	43	50	46	48	66	64	66
11	37	35	36	44	41	43	50	46	48	67	65	66
12	39	35	37	44	41	42	52	48	50	68	65	66
13	40	38	39	41	33	37	50	48	49	68	64	66
14	41	39	40	33	31	32	51	47	49	66	64	65
15	43	39	41	36	31	35	54	49	52	68	65	67
16	41	39	40	39	35	38	54	51	52	70	68	69
17	42	38	40	39	37	38	52	51	52	---	---	---
18	42	38	40	39	37	38	53	51	52	---	---	---
19	44	40	42	39	37	38	53	50	51	---	---	---
20	45	42	43	41	39	39	53	48	50	---	---	---
21	45	40	43	41	32	40	56	50	53	---	---	---
22	44	40	42	32	22	25	59	54	57	---	---	---
23	43	41	42	34	26	29	60	58	59	---	---	---
24	43	41	42	41	34	37	62	59	61	---	---	---
25	44	42	43	50	37	45	62	59	60	---	---	---
26	43	38	41	59	42	51	64	57	59	---	---	---
27	41	37	39	63	48	56	78	57	59	---	---	---
28	41	37	38	66	47	60	61	56	59	---	---	---
29	---	---	---	64	49	55	59	55	57	---	---	---
30	---	---	---	67	40	55	59	55	57	---	---	---
31	---	---	---	51	38	44	---	---	---	---	---	---
MONTH	45	35	40	67	22	42	78	41	52	---	---	---

## TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.9	9.3	11.6	7.6	6.2	7.1	3.2	1.8	2.3	0.0	-0.1	-0.1
2	13.7	10.2	12.1	9.3	6.8	8.4	2.3	1.0	1.7	.0	-.1	-.1
3	15.6	11.2	13.2	9.5	7.9	8.6	1.9	.9	1.3	.0	-.1	-.1
4	15.7	11.8	13.9	10.1	7.8	8.8	1.8	.8	1.3	.1	-.1	.0
5	13.4	12.9	13.1	8.8	7.3	8.1	1.9	1.0	1.5	.0	-.1	.0
6	13.9	12.4	13.3	8.6	6.6	7.5	2.0	.8	1.3	.0	-.1	.0
7	14.8	11.3	12.9	8.9	6.5	7.4	1.4	.6	1.0	.1	-.1	.0
8	13.5	10.1	11.5	9.1	6.6	7.8	.9	.3	.4	.0	-.1	.0
9	10.1	8.5	9.4	8.8	6.8	8.1	.9	.1	.3	.0	-.1	.0
10	9.8	7.8	8.7	8.8	8.0	8.4	.5	.1	.3	.0	-.1	-.1
11	11.3	7.7	9.4	8.9	8.6	8.7	1.0	.3	.7	.0	-.1	.0
12	12.8	7.7	10.1	9.6	8.5	9.0	1.9	.6	1.3	.1	-.1	.0
13	13.4	8.1	10.7	8.6	8.4	8.5	1.3	.3	.8	.1	-.1	.0
14	15.2	9.7	12.4	8.7	8.0	8.5	.7	.4	.6	.1	-.1	.0
15	14.4	11.4	12.9	8.0	6.2	7.3	.9	.3	.6	.0	-.2	-.1
16	12.0	10.1	11.0	6.8	5.9	6.4	1.3	.3	.8	.1	-.1	.0
17	12.2	10.0	11.1	8.1	5.7	6.7	4.0	1.2	2.6	.1	-.2	.0
18	11.9	10.9	11.4	5.9	4.5	5.2	2.5	1.2	2.0	.0	-.2	.0
19	12.8	10.2	11.5	5.2	3.8	4.4	1.8	.9	1.4	.1	-.1	.0
20	13.6	9.7	10.8	4.3	3.5	3.8	1.6	.2	1.0	-.1	-.2	-.1
21	14.6	9.6	11.7	4.1	3.0	3.5	.8	.1	.5	-.1	-.2	-.2
22	11.8	9.1	10.4	3.6	2.5	3.1	.4	.0	.3	-.1	-.2	-.2
23	11.2	7.8	9.2	3.4	2.0	2.6	.3	-.1	.1	.0	-.2	-.1
24	12.3	7.8	9.5	3.1	1.4	2.2	.4	-.1	.1	.0	-.2	-.1
25	12.1	8.6	10.2	2.4	1.4	1.8	.3	-.2	.0	.0	-.1	-.1
26	14.1	8.9	11.1	2.1	1.5	1.8	.4	-.2	.1	.0	-.1	-.1
27	12.5	9.7	11.1	2.7	1.6	2.3	.4	-.1	.1	.0	-.1	.0
28	12.5	8.3	10.5	2.8	2.0	2.5	.4	-.1	.1	.1	-.1	.0
29	8.3	6.1	7.3	2.8	2.2	2.6	.4	-.1	.2	.1	-.1	.0
30	6.8	5.8	6.2	2.6	2.1	2.4	.0	-.2	.0	.0	-.2	-.1
31	6.4	5.8	6.2	---	---	---	.0	-.1	-.1	.1	-.2	-.1
MONTH	15.7	5.8	10.8	10.1	1.4	5.8	4.0	-.2	.8	.1	-.2	-.1

PAWTUXET RIVER BASIN

01115297 WILBUR HOLLOW BROOK AT OLD PLAINFIELD PIKE NEAR CLAYVILLE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	0.2	-0.2	0.0	0.6	-0.2	0.2	4.8	3.4	4.2	20.4	13.8	16.8
2	.2	-.2	.0	.1	-.2	.0	4.9	3.2	4.0	21.4	15.3	18.3
3	.1	-.2	-.1	.3	-.1	.1	6.6	2.9	4.9	22.8	17.0	19.9
4	.1	-.2	-.1	.3	-.1	.1	8.3	4.1	6.2	23.9	18.5	21.1
5	.0	-.2	-.1	-.1	-.2	-.1	10.1	5.1	7.6	20.6	16.5	19.2
6	.0	-.2	-.1	-.1	-.2	-.2	7.7	6.3	7.1	18.3	13.6	16.2
7	.0	-.2	-.1	-.1	-.2	-.2	9.1	6.0	7.4	18.2	12.4	14.7
8	.0	-.2	-.1	.0	-.2	-.1	6.8	5.5	5.9	18.5	11.9	15.0
9	.2	-.1	.1	.0	-.2	-.1	11.8	5.4	9.2	19.9	12.6	15.8
10	.4	-.2	.0	.1	-.2	-.1	14.1	10.1	11.7	19.6	13.7	16.7
11	.1	-.2	-.1	.3	-.2	.0	11.8	9.3	10.5	21.9	15.4	18.5
12	.2	-.2	-.1	.7	-.2	.2	9.8	8.9	9.4	22.8	17.2	19.9
13	.2	-.2	.0	.2	-.2	.0	11.2	8.7	9.8	20.2	15.8	18.1
14	.2	-.2	.0	.4	-.1	.1	13.2	8.4	10.8	17.4	14.1	15.8
15	.3	-.2	.1	1.0	-.1	.6	13.8	9.1	11.5	14.7	13.2	14.0
16	.2	-.2	.0	2.4	.6	1.6	14.2	10.1	11.7	13.2	12.0	12.7
17	.6	-.2	.1	4.0	1.9	3.0	10.9	9.3	10.0	---	---	---
18	.3	-.2	.0	3.9	1.9	2.9	9.8	7.3	8.8	---	---	---
19	.4	-.2	.0	4.8	1.6	3.2	11.4	6.6	9.0	---	---	---
20	.5	-.1	.2	5.5	2.4	4.0	13.1	7.0	10.4	---	---	---
21	.8	-.2	.2	4.5	3.0	3.8	14.4	10.4	12.5	---	---	---
22	.3	-.2	.0	3.2	2.7	3.0	18.7	12.3	15.7	---	---	---
23	.0	-.2	-.1	4.4	2.6	3.6	19.9	14.7	17.1	---	---	---
24	.1	-.2	-.1	5.1	2.8	4.1	20.9	15.2	18.0	---	---	---
25	.0	-.2	-.1	6.1	2.6	4.3	16.0	12.3	14.4	---	---	---
26	.3	-.2	.0	4.5	1.8	3.2	15.5	11.3	13.1	---	---	---
27	.8	-.2	.2	4.8	1.4	3.1	16.1	10.8	13.6	---	---	---
28	.9	-.2	.2	6.1	2.3	4.3	16.5	11.8	13.9	---	---	---
29	---	---	---	5.8	3.3	4.7	15.9	10.8	13.2	---	---	---
30	---	---	---	4.4	3.1	3.7	17.1	11.0	14.4	---	---	---
31	---	---	---	5.1	3.1	4.4	---	---	---	---	---	---
MONTH	.9	-.2	.0	6.1	-.2	1.9	20.9	2.9	10.5	---	---	---

## PAWTUXET RIVER BASIN

01115500 PAWTUXET RIVER AT FISKEVILLE, RI

LOCATION.--Lat 41°43'58", long 71°33'01", Providence County, Hydrologic Unit 01090004, on left bank 500 ft downstream from Fairground Way, and at Fiskeville.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 2000 to May 2001.

WATER TEMPERATURE: January 2000 to May 2001.

INSTRUMENTATION.--Water-quality monitor since January 2000.

REMARKS.--Records good.

## EXTREMES FOR THE PERIOD OCTOBER 2000 TO MAY 2001.--

SPECIFIC CONDUCTANCE: Maximum recorded, 285  $\mu\text{S}/\text{cm}$ , Dec. 14; minimum, 73  $\mu\text{S}/\text{cm}$ , Mar. 31.

WATER TEMPERATURE: Maximum recorded, 20.0°C, May 1; minimum, -0.2°C, Dec. 6.

## WATER-QUALITY DATA, OCTOBER 2000 TO MAY 2001

SPECIFIC CONDUCTANCE ( $\mu\text{CM}$  AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	110	93	94	113	88	94	108	89	99	123	103	109
2	110	93	95	105	90	95	109	90	100	120	92	106
3	119	93	96	104	89	96	112	93	103	113	91	102
4	112	93	100	106	92	98	112	92	105	120	89	107
5	104	94	101	104	90	97	111	92	100	124	91	109
6	110	94	104	116	90	97	111	94	102	159	103	137
7	108	95	104	108	89	96	126	92	103	121	104	114
8	106	94	104	112	89	96	118	95	111	119	105	112
9	110	93	102	99	89	95	113	94	104	149	106	127
10	105	91	101	97	82	93	110	95	101	111	94	103
11	102	90	100	103	87	97	131	98	109	118	91	104
12	104	90	100	105	90	98	115	94	108	118	96	108
13	108	90	102	104	92	98	114	96	104	121	90	103
14	108	91	102	102	90	97	285	93	153	116	98	106
15	111	94	108	103	88	97	122	104	113	151	101	125
16	111	96	107	110	89	99	119	97	109	133	115	120
17	114	96	109	106	88	98	127	82	106	125	106	115
18	113	86	107	105	88	99	113	85	98	119	102	112
19	118	89	99	108	90	99	126	92	105	139	114	125
20	115	95	101	109	91	100	142	98	113	180	115	133
21	108	95	100	110	92	101	118	100	114	202	107	140
22	102	94	101	110	90	101	172	109	125	126	104	113
23	103	93	100	117	92	102	118	102	113	123	95	109
24	101	93	100	116	92	101	124	98	115	133	99	119
25	103	92	99	115	91	106	120	98	105	125	101	113
26	105	92	99	111	84	99	114	91	101	126	99	112
27	109	94	101	108	85	98	116	93	104	124	107	114
28	103	93	100	100	84	94	119	94	107	121	100	111
29	112	92	99	104	85	98	120	94	106	124	105	112
30	115	89	96	104	86	97	128	99	108	169	104	128
31	96	88	95	---	---	---	140	105	117	138	108	126
MONTH	119	86	101	117	82	98	285	82	108	202	89	115

## PAWTUXET RIVER BASIN

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01115500 PAWTUXET RIVER AT FISKEVILLE, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu$ /CM AT 25°C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	130	108	118	142	116	126	91	74	82	111	88	91
2	127	111	121	131	112	126	96	75	82	108	87	95
3	122	99	109	128	110	116	100	76	86	116	90	95
4	122	105	116	129	115	124	93	77	85	113	94	98
5	126	88	112	214	108	138	94	79	89	120	95	97
6	220	111	168	217	119	144	95	78	87	102	94	96
7	132	111	126	144	122	133	97	79	90	127	94	98
8	140	111	125	136	119	126	96	78	89	125	95	100
9	134	111	120	177	123	138	88	74	80	115	96	99
10	169	119	130	174	129	148	89	75	85	119	95	100
11	145	110	121	142	121	135	98	76	87	107	96	100
12	137	103	119	138	112	125	103	78	87	123	99	102
13	131	114	122	146	114	127	93	80	87	132	99	105
14	132	115	125	132	114	123	96	79	88	128	101	107
15	150	112	127	130	114	124	98	81	89	129	102	110
16	147	117	128	128	118	124	99	81	95	113	102	110
17	129	114	123	123	113	118	99	83	94	---	---	---
18	133	115	122	125	111	119	100	80	92	---	---	---
19	123	113	119	130	110	121	99	83	90	---	---	---
20	137	115	122	126	114	118	103	82	92	---	---	---
21	130	109	119	120	112	117	105	84	95	---	---	---
22	137	114	121	112	82	96	108	86	100	---	---	---
23	220	112	132	126	96	111	104	83	88	---	---	---
24	126	113	118	122	107	113	104	84	88	---	---	---
25	224	122	156	116	97	105	90	79	81	---	---	---
26	162	116	131	101	88	96	103	82	84	---	---	---
27	132	109	126	96	81	90	91	82	85	---	---	---
28	127	108	116	92	82	88	94	84	87	---	---	---
29	---	---	---	96	78	89	90	84	86	---	---	---
30	---	---	---	98	74	88	90	86	88	---	---	---
31	---	---	---	94	73	82	---	---	---	---	---	---
MONTH	224	88	125	217	73	117	108	74	88	---	---	---

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	15.2	12.7	13.9	9.7	8.4	9.0	5.7	4.3	5.0	1.6	0.1	0.6
2	16.2	13.9	15.0	10.9	8.9	10.0	4.3	2.7	3.7	1.4	.0	.4
3	16.6	14.3	15.5	11.6	10.1	10.7	2.9	1.9	2.3	1.4	-.1	.4
4	16.4	14.7	15.6	12.0	10.3	11.0	3.9	1.9	2.7	1.5	-.2	.5
5	15.8	14.9	15.3	11.1	9.9	10.6	4.2	2.5	3.2	1.5	-.1	.7
6	15.4	14.7	15.0	10.7	9.2	9.8	3.2	2.2	2.6	2.1	.9	1.3
7	15.3	13.7	14.5	10.5	8.7	9.5	3.1	2.1	2.5	2.3	.7	1.3
8	14.6	13.0	13.7	10.9	9.3	10.0	2.2	2.0	2.1	2.1	.8	1.4
9	13.1	11.1	12.1	10.9	9.4	10.3	2.7	1.5	1.9	2.1	.9	1.6
10	11.5	10.4	10.9	10.7	10.3	10.5	3.1	1.4	2.3	1.5	.2	.7
11	12.4	10.4	11.3	10.7	10.3	10.5	3.5	2.8	3.1	2.0	.0	.8
12	13.6	10.9	12.4	11.1	10.0	10.5	4.8	2.4	3.7	1.8	.2	.8
13	14.4	12.0	13.3	10.6	10.2	10.4	3.0	2.0	2.5	2.0	-.1	.8
14	15.7	13.2	14.3	10.5	10.0	10.3	3.1	2.3	2.7	2.4	.5	1.3
15	16.0	14.3	15.2	10.0	8.5	9.2	2.8	2.1	2.4	1.9	1.1	1.6
16	15.3	13.5	14.3	8.9	8.0	8.4	4.3	2.3	3.1	2.9	1.6	2.1
17	14.1	13.0	13.5	9.1	7.4	8.3	8.1	4.3	5.9	3.3	1.6	2.2
18	14.2	13.2	13.6	7.9	6.9	7.3	5.9	3.4	5.2	2.7	1.2	1.9
19	14.2	12.2	13.4	7.6	6.2	6.9	4.5	3.4	3.9	2.2	1.9	2.1
20	14.3	11.7	13.1	7.3	6.0	6.5	3.9	2.3	3.3	2.1	1.3	1.9
21	14.8	12.7	13.6	6.7	5.3	6.0	3.0	1.7	2.3	1.6	.3	1.0
22	14.1	12.5	13.3	5.5	4.1	4.8	3.1	2.1	2.6	1.4	-.2	.4
23	13.5	11.7	12.4	4.3	3.0	3.7	2.2	1.0	1.5	1.3	-.2	.5
24	13.4	11.4	12.3	3.7	2.5	3.0	2.5	.9	1.7	2.5	.4	1.1
25	13.9	11.9	12.8	3.9	2.4	3.1	1.6	.2	.9	2.2	.4	1.2
26	14.5	12.3	13.4	4.7	3.1	4.0	.6	-.2	.1	2.5	.5	1.2
27	14.5	13.1	13.8	6.2	4.7	5.5	1.2	.1	.5	2.5	.9	1.7
28	13.9	11.2	13.1	6.8	5.6	6.3	1.2	.2	.5	2.7	.9	1.5
29	11.2	8.8	10.0	7.0	5.8	6.3	1.4	.0	.6	2.7	.5	1.4
30	8.8	7.8	8.3	6.4	5.3	6.0	1.3	-.1	.8	2.3	1.0	1.7
31	8.6	7.8	8.3	---	---	---	1.4	.2	.8	3.1	1.5	2.1
MONTH	16.6	7.8	13.1	12.0	2.4	7.9	8.1	-.2	2.5	3.3	-.2	1.2

## PAWTUXET RIVER BASIN

01115500 PAWTUXET RIVER AT FISKEVILLE, RI--Continued

TEMPERATURE, WATER (DEG. C), OCTOBER 2000 TO MAY 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.6	1.6	2.3	3.6	1.5	2.2	4.3	3.9	4.1	16.8	13.6	14.9
2	3.2	1.6	2.4	3.0	1.5	2.1	4.6	3.8	4.1	17.9	14.8	16.1
3	2.6	.2	1.3	3.4	2.0	2.5	5.5	3.7	4.5	18.8	15.3	16.9
4	2.4	.3	1.3	3.3	2.0	2.6	6.0	4.0	4.8	20.0	16.7	18.2
5	2.1	-.2	.9	2.6	.0	1.5	7.0	4.2	5.5	18.4	16.1	17.6
6	2.4	.8	1.5	2.2	.8	1.5	5.7	4.8	5.3	17.0	14.0	15.6
7	2.7	.9	1.6	2.3	.9	1.5	6.8	5.0	5.8	16.1	13.4	14.5
8	3.0	1.5	2.1	4.0	.8	2.2	5.8	5.3	5.5	16.5	13.3	14.8
9	3.2	2.0	2.5	3.6	2.1	2.6	7.9	5.2	6.4	17.4	13.7	15.4
10	4.3	1.9	3.2	4.8	2.3	3.2	8.1	6.3	7.0	19.7	14.6	16.6
11	2.4	.2	1.4	5.7	2.2	3.4	8.1	5.7	6.8	20.0	15.4	17.4
12	1.9	-.2	.6	6.1	2.5	3.7	6.4	6.0	6.2	19.8	16.8	18.4
13	3.6	1.0	1.9	4.1	3.1	3.5	7.9	6.2	7.0	19.0	16.7	18.0
14	3.8	1.3	2.5	4.3	2.8	3.3	9.1	6.4	7.7	17.1	15.3	16.1
15	3.7	2.4	3.1	5.3	2.7	3.8	9.6	6.7	8.1	15.3	13.9	14.6
16	3.6	2.0	2.7	6.9	3.4	4.8	9.9	7.4	8.7	13.9	12.7	13.3
17	3.6	1.5	2.5	7.6	4.5	5.6	8.8	7.2	8.2	---	---	---
18	3.0	.8	1.5	6.6	4.5	5.4	8.4	7.5	8.0	---	---	---
19	3.0	.9	1.8	7.2	3.9	5.2	9.9	6.8	8.4	---	---	---
20	4.2	1.9	2.9	8.4	4.3	5.9	10.9	7.5	9.3	---	---	---
21	4.6	2.0	3.2	6.5	5.1	5.7	11.3	8.9	10.1	---	---	---
22	2.8	1.5	2.0	5.3	4.6	5.1	13.3	9.9	11.8	---	---	---
23	3.2	1.3	2.0	5.5	4.6	5.0	13.9	11.3	12.7	---	---	---
24	3.3	1.3	2.1	5.7	4.4	5.2	15.9	11.6	13.5	---	---	---
25	3.0	.9	1.9	5.9	3.8	4.9	14.0	11.0	11.8	---	---	---
26	3.8	2.3	3.0	4.5	3.3	3.8	12.7	10.3	11.4	---	---	---
27	4.2	2.0	2.8	4.9	2.9	3.8	13.2	11.0	12.1	---	---	---
28	4.1	2.0	2.8	5.5	3.2	4.2	14.3	12.0	12.8	---	---	---
29	---	---	---	5.0	3.4	4.2	13.9	11.5	12.5	---	---	---
30	---	---	---	4.4	4.0	4.2	14.6	11.6	13.2	---	---	---
31	---	---	---	4.5	3.9	4.2	---	---	---	---	---	---
MONTH	4.6	-.2	2.1	8.4	.0	3.8	15.9	3.7	8.4	---	---	---

PAWTUXET RIVER BASIN

01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI

LOCATION.--Lat 41°41'24", long 71°33'59", Kent County, Hydrologic Unit 01090004, on right bank 150 ft downstream from highway bridge at Washington and 0.9 mi upstream from outlet of Tiogue Lake.

DRAINAGE AREA.--63.8 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1940 to current year.  
Water-quality records: Water years 1955-1956, 1963.

GAGE.--Water-stage recorder. Datum of gage is 217.76 ft above sea level.

REMARKS.--Records good except those for estimated discharges, which are poor. Flow regulated by Flat River Reservoir 2 mi upstream, usable capacity, 250,000,000 ft<sup>3</sup>, and smaller reservoirs. Prior to May 1972, diversion from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years, 131 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft<sup>3</sup>/s, June 6, 1982, gage height, 5.30 ft; minimum daily, 2.8 ft<sup>3</sup>/s, Aug. 27, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 1,810 ft<sup>3</sup>/s, by computation of flow over dam just upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft<sup>3</sup>/s, Mar. 23, gage height, 3.90 ft; minimum, 30 ft<sup>3</sup>/s, Sept. 13-21.

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	60	44	184	161	109	163	756	107	157	102	41	35
2	60	43	180	158	105	163	558	106	199	96	40	33
3	60	43	177	156	110	154	450	103	338	87	40	33
4	58	44	175	156	161	86	379	99	317	85	46	32
5	59	44	159	153	165	81	334	94	239	88	44	31
6	60	44	123	153	169	86	306	89	186	93	43	31
7	59	44	121	151	167	83	299	78	157	90	42	31
8	48	44	118	150	164	83	338	57	142	84	40	31
9	45	45	118	131	163	83	389	64	126	82	39	33
10	45	63	115	75	175	92	370	70	112	79	40	33
11	45	63	115	70	171	148	330	71	107	83	41	31
12	44	53	107	69	166	150	306	70	269	85	43	31
13	44	51	77	69	163	172	314	67	353	84	63	31
14	43	55	81	69	163	171	301	65	271	80	66	32
15	42	61	79	75	166	166	275	65	205	76	66	32
16	42	56	77	76	165	166	260	62	166	73	61	30
17	42	54	126	74	168	180	235	60	220	67	54	30
18	43	53	136	73	164	250	188	61	639	46	53	30
19	51	53	113	78	163	247	181	62	594	44	43	30
20	46	54	111	83	163	245	180	60	395	44	60	30
21	45	56	104	79	163	249	184	58	278	44	102	37
22	44	70	101	77	160	558	208	67	219	44	103	39
23	43	71	104	76	160	1000	205	96	208	44	83	35
24	42	71	166	76	157	733	141	165	202	44	68	34
25	42	72	171	76	161	530	86	229	184	42	57	36
26	42	100	169	76	170	426	83	224	164	46	49	35
27	42	162	167	76	166	375	89	425	150	49	45	33
28	42	164	166	74	163	334	101	474	132	50	45	31
29	42	190	164	73	---	303	106	341	117	48	44	31
30	42	189	164	87	---	422	108	250	108	45	40	32
31	44	---	163	114	---	878	---	190	---	43	37	---
TOTAL	1466	2156	4131	3064	4440	8777	8060	4029	6954	2067	1638	973
MEAN	47.3	71.9	133	98.8	159	283	269	130	232	66.7	52.8	32.4
MAX	60	190	184	161	175	1000	756	474	639	102	103	39
MIN	42	43	77	69	105	81	83	57	107	42	37	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	72.3	104	158	170	182	227	214	150	112	63.9	61.0	63.9																																																	
MAX	216	354	422	489	327	434	595	294	444	136	168	240																																																	
(WY)	1956	1956	1987	1979	1970	1983	1983	1948	1982	1998	1979	1954																																																	
MIN	28.5	28.7	34.5	35.9	45.7	106	68.2	55.6	39.2	26.8	23.6	25.5																																																	
(WY)	1942	1966	1966	1966	1966	1944	1966	1992	1957	1995	1974	1995																																																	

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1941 - 2001

ANNUAL TOTAL	44489	47755	
ANNUAL MEAN	122	131	
HIGHEST ANNUAL MEAN			131
LOWEST ANNUAL MEAN			202
HIGHEST DAILY MEAN	693	1000	1680
LOWEST DAILY MEAN	39	30	2.8
ANNUAL SEVEN-DAY MINIMUM	40	31	9.3
MAXIMUM PEAK FLOW		1070	1980
MAXIMUM PEAK STAGE		3.90	5.30
INSTANTANEOUS LOW FLOW		30	
10 PERCENT EXCEEDS	213	270	263
50 PERCENT EXCEEDS	104	84	101
90 PERCENT EXCEEDS	43	40	29



## PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI

LOCATION.--Lat 41°45'03", long 71°26'44", Providence County, Hydrologic Unit 01090004, on left bank at Cranston, and 0.7 mi upstream from Pocasset River.

DRAINAGE AREA.--200 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1939 to current year.

REVISED RECORDS.--WSP 971: 1940-42. WSP 1381: 1940-41(M). WDR-MA-NH-RI-VT-73-1: 1972 (adjusted monthly and yearly figures only).

GAGE.--Water-stage recorder. Datum of gage is 8.00 ft above sea level.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by powerplants and by Scituate Reservoir 13 mi upstream, Flat River Reservoir, and other reservoirs, combined usable capacity, about 6,000,000,000 ft<sup>3</sup>. Diversion from Scituate Reservoir for municipal supply of Providence, East Providence, North Providence, Cranston, Greenville, Johnston, East Smithfield, Smithfield, Warwick, West Warwick, Coventry, East Greenwich, and West Greenwich. See table below for figures of diversion and monthend contents in Scituate Reservoir and five smaller reservoirs. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1941-current year), 351 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,440 ft<sup>3</sup>/s, June 7, 1982, gage height, 14.5 ft, from floodmark; minimum daily, 22 ft<sup>3</sup>/s, Sept. 4, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,120 ft<sup>3</sup>/s, Mar. 31, gage height, 11.86 ft, minimum, 58 ft<sup>3</sup>/s, Sept. 14, 15.

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	144	145	294	274	281	281	2700	260	307	234	79	80
2	148	143	283	268	261	e283	1840	258	564	240	77	77
3	136	140	274	255	238	279	1380	249	651	217	76	74
4	143	140	268	252	267	230	1120	240	585	209	99	76
5	142	137	263	251	295	225	968	230	460	222	81	75
6	144	138	218	265	329	260	876	220	375	223	78	73
7	139	136	205	250	318	232	851	211	321	206	76	72
8	132	127	204	243	293	217	1010	185	303	273	72	71
9	122	124	198	243	293	223	1150	182	270	230	69	70
10	118	362	189	183	396	240	1120	186	251	204	86	72
11	116	270	200	163	384	284	974	187	266	212	80	73
12	119	184	206	161	309	e380	934	185	810	216	91	83
13	113	167	174	158	298	543	935	178	627	205	304	83
14	110	189	216	158	286	519	839	174	525	184	147	66
15	108	221	197	208	308	495	732	166	403	176	110	68
16	108	178	177	197	319	510	665	161	343	168	99	78
17	115	166	692	185	339	483	603	156	647	164	91	75
18	123	155	953	185	287	513	539	166	1950	157	97	82
19	183	153	392	235	288	466	483	162	2220	143	83	85
20	142	153	e313	256	278	433	449	157	1440	135	215	80
21	115	150	242	222	286	441	432	152	961	118	290	128
22	113	149	226	196	278	2210	438	187	695	102	182	247
23	118	155	220	189	281	2040	445	244	634	97	149	112
24	125	153	261	187	273	1350	363	612	535	94	124	101
25	116	152	291	179	288	1000	300	488	469	92	104	134
26	115	320	289	179	390	959	265	398	387	107	99	86
27	110	413	291	175	338	1030	263	652	326	108	98	96
28	111	290	291	174	305	967	257	718	289	98	101	98
29	111	296	280	172	---	890	268	576	262	94	94	88
30	117	309	287	254	---	1530	263	413	248	89	87	88
31	146	---	286	325	---	2970	---	350	---	82	83	---
TOTAL	3902	5815	8880	6642	8506	22483	23462	8703	18124	5099	3521	2691
MEAN	126	194	286	214	304	725	782	281	604	164	114	89.7
MAX	183	413	953	325	396	2970	2700	718	2220	273	304	247
MIN	108	124	174	158	238	217	257	152	248	82	69	66
†	4267	4176	4405	4431	4683	5791	5596	5498	5598	5212	4948	4605
††	108	98.8	101	88.5	89.4	93.6	101	133	139	142	138	126

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

MEAN	191	282	399	457	486	603	603	391	284	172	174	179
MAX	667	1024	1344	1238	1085	1291	1788	848	1237	442	438	698
(WY)	1956	1956	1973	1979	1970	1983	1983	1998	1998	1998	1955	1954
MIN	70.5	82.6	94.0	100	158	239	140	160	93.0	74.9	82.4	83.2
(WY)	1958	1966	1966	1966	1966	1981	1966	1965	1957	1957	1966	1981

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1940 - 2001	
ANNUAL TOTAL	116512		117828			
ANNUAL MEAN	318		323		351	
HIGHEST ANNUAL MEAN					595	1973
LOWEST ANNUAL MEAN					126	1966
HIGHEST DAILY MEAN	2160	Apr 23	2970	Mar 31	5170	Jun 7 1982
LOWEST DAILY MEAN	102	Sep 8	66	Sep 14	22	Sep 4 1944
ANNUAL SEVEN-DAY MINIMUM	106	Sep 5	72	Sep 5	48	Aug 12 1985
MAXIMUM PEAK FLOW			3120	Mar 31	5440	Jun 7 1982
MAXIMUM PEAK STAGE			11.86	Mar 31	14.50	Jun 7 1982
INSTANTANEOUS LOW FLOW			58	Sep 14		
10 PERCENT EXCEEDS	547		651		747	
50 PERCENT EXCEEDS	247		220		244	
90 PERCENT EXCEEDS	120		88		101	

e Estimated

† Monthend contents, in millions of cubic feet (mcf), in Scituate Reservoir and five smaller reservoirs. Monthend contents on Sept. 30, 2000, 4,573 mcf.

†† Diversions, in cubic feet per second, for municipal supplies. Figures of diversions and monthend contents provided by Providence Water Supply Board.

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1961 to current year.

REMARKS.--Discharge computed by discharge measurements on the day of sampling. Instantaneous records are representative of the cross section while continuous records are based on point samples.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to September 1981.

WATER TEMPERATURE: November 1961 to September 1981.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 693 µS/cm, Mar. 11, 1980; minimum, 60 µS/cm, Jan. 25, 1979.

WATER TEMPERATURE: Maximum recorded, 30.0°C, July 1, 1964, Aug. 14, 1973; minimum, 0.0°C on many days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	DRAIN-AGE AREA (SQ. MI.) (81024)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATUR-ATION) (00301)	PH WATER WHOLE FIELD (STAND-ARD) (00400)	PH WATER WHOLE LAB (STAND-ARD) (00403)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (90095)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)
DATE	TEMPER-AIR (DEG C) (00020)	TEMPER-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)	ANC UNFLTRD LAB (MG/L AS CACO3) (90410)	ALKA-LINITY TOT IT (MG/L AS HCO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
APR 24...	0810	8.00	377	15	200.00	765	9.3	92	6.6	6.7	212	208
JUN 19...	0945	8.00	2,350	--	200.00	772	8.3	95	6.2	6.5	107	104
JUL 17...	0830	8.00	160	12	200.00	765	6.2	71	6.1	6.6	257	258
AUG 29...	0840	8.00	88	8	200.00	766	6.3	72	6.3	6.7	301	300
APR 24...	17.5	15.0	7.51	1.29	2.70	26.5	10	16	19	43.1	0.2	11.6
JUN 19...	25.0	22.5	--	--	--	--	--	8	10	--	--	--
JUL 17...	25.0	22.5	8.63	1.50	3.35	35.5	16	15	19	51.8	.2	14.1
AUG 29...	26.0	22.0	10.9	1.69	4.16	40.2	18	16	19	59.3	.2	17.7
DATE	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/ 100 ML) (31633)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)
APR 24...	<10	134	0.428	0.76	0.398	0.030	0.064	0.122	4.3	13	51	34
JUN 19...	--	--	.594	.60	.103	E.005	E.010	E.051	6.4	--	680	770
JUL 17...	<10	156	.305	.66	.731	.117	.144	.187	4.9	14	260	130
AUG 29...	11	180	E.044	.49	E.666	E.023	E.123	.307	5.0	11	270	150

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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)
APR 24...	37	90	0.08	0.2	<2	15.4	0.15	23	0.12	<0.8	0.28	1.7
JUN 19...	48	142	.09	.2	<2	10.7	.11	14	.04	<.8	.07	1.3
JUL 17...	18	59	.09	.3	<2	14.3	.08	31	.16	<.8	.30	2.8
AUG 29...	18	45	.15	.4	<2	16.4	.13	48	.11	<.8	.31	3.7

DATE	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
APR 24...	370	0.33	1.0	129	136	<0.01	1.7	3.00	<0.3	<0.2	41.6
JUN 19...	420	.43	.9	36.7	53	.01	.3	.39	E.2	<.2	23.6
JUL 17...	660	.49	1.3	84.8	95	<.01	2.8	3.85	E.2	<.2	45.8
AUG 29...	600	.91	1.6	102	106	<.01	3.7	2.90	.6	<.2	54.9

DATE	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)	PHENOLS TOTAL (UG/L) (32730)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)
APR 24...	0.20	E0.2	16	<16	0.03
JUN 19...	<.04	.2	7	--	.03
JUL 17...	<.04	.2	15	<16	.03
AUG 29...	<.04	E.2	19	<16	<.02

< Less than  
E Estimated

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI

WATER-QUALITY RECORDS

LOCATION.--Lat 41°46'03", long 71°24'21", Providence County, Hydrologic Unit 01090004, at Warwick Ave. Road Bridge at Pawtuxet, and 3.2 mi downstream from Cranston Sewage Treatment Plant.

PERIOD OF RECORD.--Water years 1979 to current year.

REMARKS.--Discharge computed by discharge measurements on the day of sampling. Instantaneous records are representative of the cross section.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, SATUR-ATION (00301)	PH WATER FIELD (STAND-ARD UNITS) (00400)	PH WATER LAB (STAND-ARD UNITS) (00403)	SPE-CIFIC CON-DUCT-ANCE LAB (90095)	SPE-CIFIC CON-DUCT-ANCE AIR (00095)	TEMPER-ATURE (DEG C) (00020)
APR											
24...	0945	534	12	763	8.8	87	7.5	6.7	255	250	19.4
JUN											
19...	1400	2,550	--	770	7.9	91	6.7	7.0	132	129	31.2
JUL											
17...	1245	208	10	766	5.9	67	6.3	6.9	288	290	22.5
AUG											
29...	1240	135	12	766	5.4	62	6.3	6.9	326	332	26.4

DATE	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)	ANC UNFLTRD TIT 4.5 LAB AS CACO3 (90410)	ALKA-LINITY 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)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)
APR												
24...	15.3	9.76	1.64	3.15	31.8	13	22	27	48.4	0.2	14.2	<10
JUN												
19...	23.0	--	--	--	--	--	10	12	--	--	--	--
JUL												
17...	22.0	11.7	1.90	1.49	38.1	21	22	27	54.3	.3	16.5	10
AUG												
29...	22.5	14.3	2.19	4.87	42.4	25	23	28	62.5	.3	20.5	<10

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	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)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L) (00340)	E COLI, MTEC MF WATER (COL/100 ML) (31633)	COLI-FORM, FECAL, UM-MF (COLS./100 ML) (31625)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)
APR												
24...	166	0.747	1.1	0.492	0.033	0.050	0.131	4.9	17	79	68	24
JUN												
19...	--	.156	1.1	.199	.011	E.013	.236	6.6	--	1,000	1,000	46
JUL												
17...	180	.180	.64	1.45	.119	.095	.150	5.0	23	440	270	21
AUG												
29...	194	E.056	.53	E1.50	E.055	E.279	.411	5.5	11	240	180	13

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	ARSENIC TOTAL (UG/L AS AS) (01002)	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, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
APR 24...	89	0.11	0.3	<2	18.4	0.12	32	0.12	<0.8	0.39	1.9	460
JUN 19...	174	.15	.3	<2	12.8	.18	23	.05	<.8	.11	1.8	500
JUL 17...	45	.13	.5	<2	17.1	.07	45	.09	<.8	.34	3.4	610
AUG 29...	33	.18	.7	<2	17.0	E.05	65	.08	<.8	.28	3.0	530
DATE	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	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)
APR 24...	0.27	1.1	156	162	<0.01	1.6	3.44	<0.3	<0.2	51.5	<0.04	0.3
JUN 19...	.59	.9	40.4	54	.01	.4	.73	E.3	<.2	29.0	.06	.4
JUL 17...	.73	1.4	99.8	107	<.01	2.7	3.01	E.3	<.2	55.1	<.04	.2
AUG 29...	.68	1.7	98.7	99	<.01	2.6	3.18	.9	<1.0	65.0	<.04	.4
DATE	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	PHENOLS TOTAL (UG/L) (32730)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	ALPHA- HCH-D6 SUR SCD 1325 BED MAT PERCENT (90504)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG) (39423)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	ISODRIN SUR SCD 1325 BED MAT PERCENT (90568)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)
APR 24...	15	<16	--	--	--	--	--	--	--	--	--	--
JUN 19...	8	--	--	--	--	--	--	--	--	--	--	--
JUL 17...	15	<16	--	--	--	--	--	--	--	--	--	--
AUG 29...	14	<16	<0.2	72.0	3	E0.2	<0.2	<0.2	<0.2	<0.2	64	<0.2
DATE	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG) (39481)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	BI- PHENYL, NONA- CHLORO- SUR SCD 1325 PERCENT (90575)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)			
APR 24...	--	--	--	--	--	--	--	--	--	--	--	0.02
JUN 19...	--	--	--	--	--	--	--	--	--	--	--	.04
JUL 17...	--	--	--	--	--	--	--	--	--	--	--	.03
AUG 29...	<2	<0.2	74.0	<0.5	0.7	<0.5	E5	<50	<.02			

< Less than  
E Estimated







PAWCATUCK RIVER BASIN

011173545 QUEEN RIVER, 1,400 FT UPSTREAM OF WILLIAMS REYNOLD ROAD, AT EXETER, RI

LOCATION.--Lat 41°33'57", long 71°32'51", Washington County, Hydrologic Unit 01090005, on left bank 1,400 ft upstream of William Reynolds Road, 0.7 mi upstream from Fisherville Brook, and 0.9 mi south of Exeter.

DRAINAGE AREA.--3.69 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to December 2001 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 155 ft above sea level, from topographic map.

REMARKS.--Records good except those greater than 100 ft<sup>3</sup>/s and those for estimated daily discharge, which are poor. Flow occasionally affected by upstream withdrawals, October to November 2000 and April to November 2001.

AVERAGE DISCHARGE.--2 years, 8.36 ft<sup>3</sup>/s, 30.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 277 ft<sup>3</sup>/s, Mar. 22, 2001, gage height, 3.55 ft, minimum, 0.22 ft<sup>3</sup>/s, Sept. 20, 2001.

EXTREMES FOR THE PERIOD OCTOBER 2000 TO DECEMBER 2001.--Maximum discharge, 277 ft<sup>3</sup>/s, Mar. 22, gage height, 3.55 ft, minimum, 0.22 ft<sup>3</sup>/s, Sept. 20.

REVISIONS. --Maximum discharge, 107 ft<sup>3</sup>/s, Apr. 22, 2000, gage height 2.99 ft, supersedes that published in 2000 Annual Water Data Report.

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	1.6	1.2	3.9	6.5	11	e8.9	38	6.4	6.3	4.9	1.8	0.97
2	1.6	1.4	3.2	6.2	9.0	8.3	32	6.5	22	5.3	1.6	.89
3	1.5	1.2	2.9	6.0	7.7	7.8	28	6.1	19	4.5	1.4	.50
4	1.3	1.6	e2.8	5.9	6.5	7.4	25	5.3	e12	4.7	2.3	.54
5	1.4	.86	e2.7	5.7	7.8	10	23	5.7	8.7	5.8	3.2	.43
6	1.7	.70	2.6	6.3	12	13	23	5.4	7.5	4.8	2.3	.57
7	1.6	.75	2.5	6.0	9.5	10	24	4.7	6.7	3.9	1.3	.57
8	1.4	.84	2.5	5.6	7.9	8.4	26	4.5	5.8	3.4	1.5	.39
9	1.3	.87	2.4	5.8	7.8	8.4	25	4.8	5.0	4.2	1.7	.41
10	1.2	8.9	2.3	5.4	21	9.2	23	4.2	5.2	3.6	.88	.47
11	1.2	7.5	2.7	5.1	e14	10	19	4.3	5.8	4.7	1.6	.40
12	1.1	3.4	2.9	e4.9	9.6	11	23	3.7	50	5.8	2.0	.38
13	.64	2.5	2.6	4.7	8.9	33	24	4.0	18	4.4	6.4	.36
14	1.1	3.3	5.7	4.6	8.8	25	19	3.7	12	3.7	3.6	.40
15	1.0	5.8	5.4	6.8	10	21	17	3.7	9.5	3.3	2.6	.37
16	.95	3.3	3.9	7.8	10	21	15	3.6	7.9	2.8	2.1	.34
17	1.0	2.6	29	6.4	12	21	14	3.2	28	2.5	1.8	.33
18	1.1	2.3	33	5.6	e9.4	20	15	3.7	51	3.2	1.6	.29
19	1.3	2.1	16	8.9	8.1	18	13	3.7	20	3.0	.96	.26
20	1.3	2.0	17	12	7.9	16	12	3.4	15	2.4	4.0	.25
21	1.2	1.8	13	8.0	8.2	19	12	3.1	12	1.7	5.3	1.6
22	1.2	1.7	11	6.3	7.4	159	11	5.6	11	2.2	3.2	16
23	1.1	1.6	10	5.7	7.3	68	10	10	14	1.9	2.3	4.8
24	1.1	1.6	9.1	5.5	6.8	44	9.9	33	12	1.2	2.1	2.4
25	1.1	1.5	8.4	5.3	12	36	9.3	28	10	1.7	1.7	2.1
26	.99	9.1	7.7	5.1	21	31	8.8	14	8.3	8.1	1.0	1.8
27	1.0	13	7.5	5.0	13	29	8.3	17	6.9	6.8	1.5	1.4
28	1.1	5.6	7.3	4.8	10	27	8.0	13	6.1	3.6	1.6	1.3
29	.79	4.0	6.9	4.6	---	24	7.4	10	5.3	2.8	1.3	1.2
30	.81	4.0	7.2	13	---	85	6.8	8.1	5.3	2.2	1.0	1.2
31	1.0	---	7.0	17	---	68	---	6.9	---	1.4	.62	---
TOTAL	36.68	97.02	241.1	206.5	284.6	877.4	529.5	239.3	406.3	114.5	66.26	42.92
MEAN	1.18	3.23	7.78	6.66	10.2	28.3	17.6	7.72	13.5	3.69	2.14	1.43
MAX	1.7	13	33	17	21	159	38	33	51	8.1	6.4	16
MIN	.64	.70	2.3	4.6	6.5	7.4	6.8	3.1	5.0	1.2	.62	.25
MED	1.1	2.0	5.7	5.8	9.2	20	16	5.3	9.8	3.6	1.7	.52
AC-FT	73	192	478	410	565	1740	1050	475	806	227	131	85
CFSM	.32	.88	2.11	1.81	2.75	7.67	4.78	2.09	3.67	1.00	.58	.39
IN.	.37	.98	2.43	2.08	2.87	8.85	5.34	2.41	4.10	1.15	.67	.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2001, BY WATER YEAR (WY)

	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
MEAN	2.83	4.72	6.87	7.04	10.2	22.3	18.2	9.62	11.4	2.92	2.47	1.98
MAX	4.47	6.20	7.78	7.41	10.2	28.3	18.8	11.5	13.5	3.69	2.80	2.52
(WY)	2000	2000	2001	2000	2000	2001	2000	2000	2001	2001	2000	2000
MIN	1.18	3.23	5.97	6.66	10.2	16.4	17.6	7.72	9.16	2.14	2.14	1.43
(WY)	2001	2001	2000	2001	2001	2000	2001	2001	2000	2000	2001	2000

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 2000 - 2001

ANNUAL TOTAL		2833.86		3142.08								
ANNUAL MEAN		7.74		8.61						8.36		
HIGHEST ANNUAL MEAN										8.61		2001
LOWEST ANNUAL MEAN										8.11		2000
HIGHEST DAILY MEAN			83	Apr 22		159	Mar 22		159	Mar 22	2001	
LOWEST DAILY MEAN			.64	Oct 13		.25	Sep 20		.25	Sep 20	2001	
ANNUAL SEVEN-DAY MINIMUM			.97	Oct 25		.32	Sep 14		.32	Sep 14	2001	
MAXIMUM PEAK FLOW						277	Mar 22		277	Mar 22	2001	
MAXIMUM PEAK STAGE						3.55	Mar 22		3.55	Mar 22	2001	
INSTANTANEOUS LOW FLOW						.22	Sep 20		.22	Sep 20	2001	
ANNUAL RUNOFF (AC-FT)			5620			6230			6060			
ANNUAL RUNOFF (CFSM)			2.10			2.33			2.27			
ANNUAL RUNOFF (INCHES)			28.57			31.68			30.78			
10 PERCENT EXCEEDS			16			21			18			
50 PERCENT EXCEEDS			5.1			5.3			5.3			
90 PERCENT EXCEEDS			1.3			1.0			1.3			

e Estimated

PAWCATUCK RIVER BASIN

011173545 QUEEN RIVER, 1,400 FT UPSTREAM OF WILLIAMS REYNOLD ROAD, AT EXETER, RI--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	0.85	1.1	---	---	---	---	---	---	---	---	---
2	2.4	.85	1.0	---	---	---	---	---	---	---	---	---
3	1.7	.84	.93	---	---	---	---	---	---	---	---	---
4	1.4	.76	.91	---	---	---	---	---	---	---	---	---
5	1.3	.83	e.92	---	---	---	---	---	---	---	---	---
6	1.5	.79	---	---	---	---	---	---	---	---	---	---
7	1.3	.78	---	---	---	---	---	---	---	---	---	---
8	1.1	.66	---	---	---	---	---	---	---	---	---	---
9	.98	.31	---	---	---	---	---	---	---	---	---	---
10	1.0	.40	---	---	---	---	---	---	---	---	---	---
11	1.1	.66	---	---	---	---	---	---	---	---	---	---
12	.87	.61	---	---	---	---	---	---	---	---	---	---
13	.82	e.39	---	---	---	---	---	---	---	---	---	---
14	.96	.39	---	---	---	---	---	---	---	---	---	---
15	.98	.63	---	---	---	---	---	---	---	---	---	---
16	.95	.61	---	---	---	---	---	---	---	---	---	---
17	1.5	.56	---	---	---	---	---	---	---	---	---	---
18	1.3	.59	---	---	---	---	---	---	---	---	---	---
19	1.2	.64	---	---	---	---	---	---	---	---	---	---
20	1.2	.72	---	---	---	---	---	---	---	---	---	---
21	1.2	.65	---	---	---	---	---	---	---	---	---	---
22	.97	.65	---	---	---	---	---	---	---	---	---	---
23	1.0	.64	---	---	---	---	---	---	---	---	---	---
24	1.1	.67	---	---	---	---	---	---	---	---	---	---
25	1.2	.82	---	---	---	---	---	---	---	---	---	---
26	.93	1.7	---	---	---	---	---	---	---	---	---	---
27	.84	1.4	---	---	---	---	---	---	---	---	---	---
28	.88	1.2	---	---	---	---	---	---	---	---	---	---
29	.89	1.1	---	---	---	---	---	---	---	---	---	---
30	.74	1.1	---	---	---	---	---	---	---	---	---	---
31	.73	---	---	---	---	---	---	---	---	---	---	---
TOTAL	36.84	22.80	---	---	---	---	---	---	---	---	---	---
MEAN	1.19	.76	---	---	---	---	---	---	---	---	---	---
MAX	2.8	1.7	---	---	---	---	---	---	---	---	---	---
MIN	.73	.31	---	---	---	---	---	---	---	---	---	---
MED	1.1	.67	---	---	---	---	---	---	---	---	---	---
AC-FT	.73	.45	---	---	---	---	---	---	---	---	---	---
CFSM	.32	.21	---	---	---	---	---	---	---	---	---	---
IN.	.37	.23	---	---	---	---	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	2.28	3.42	7.01	7.04	10.2	22.3	18.2	9.62	11.4	2.92	2.47	1.98
MAX	4.47	6.20	8.04	7.41	10.2	28.3	18.8	11.5	13.5	3.69	2.80	2.52
(WY)	2000	2000	2001	2000	2000	2001	2000	2000	2001	2001	2000	2000
MIN	1.18	.76	5.97	6.66	10.2	16.4	17.6	7.72	9.16	2.14	2.14	1.43
(WY)	2001	2002	2000	2001	2001	2000	2001	2001	2000	2000	2001	2001

SUMMARY STATISTICS

WATER YEARS 2000 - 2002

ANNUAL MEAN	8.37
HIGHEST ANNUAL MEAN	8.64
LOWEST ANNUAL MEAN	8.11
HIGHEST DAILY MEAN	159
LOWEST DAILY MEAN	.25
ANNUAL SEVEN-DAY MINIMUM	.32
ANNUAL RUNOFF (AC-FT)	6070
ANNUAL RUNOFF (CFSM)	2.27
ANNUAL RUNOFF (INCHES)	30.83
10 PERCENT EXCEEDS	17
50 PERCENT EXCEEDS	4.9
90 PERCENT EXCEEDS	1.0

e Estimated

PAWCATUCK RIVER BASIN

01117370 QUEEN RIVER AT LIBERTY ROAD AT LIBERTY, RI

LOCATION.--Lat 41°32'20", long 71°34'09", Washington County, Hydrologic Unit 01090005, on left bank 2ft downstream from bridge on Liberty Road, at Liberty, RI.

DRAINAGE AREA.--19.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1998 to current year..

GAGE.--Water-stage recorder. Datum of gage is 120 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharge and those for discharges greater than 500 ft<sup>3</sup>/s, which are poor.

AVERAGE DISCHARGE.--3 years, 35.9 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 779 ft<sup>3</sup>/s, Mar. 22, 2001, gage height, 5.55 ft<sup>3</sup>/s; mininum, 1.6 ft<sup>3</sup>/s, Aug. 4, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 779 ft<sup>3</sup>/s, Mar. 22, gage height, 5.55 ft; minimum, 3.1 ft<sup>3</sup>/s, Sept. 19, 20.

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	8.4	9.5	19	29	53	46	221	36	30	29	13	8.0
2	8.2	8.8	16	27	44	43	156	36	61	30	12	7.5
3	7.4	7.7	14	25	38	40	134	34	89	28	11	6.8
4	6.9	7.2	13	25	33	38	121	32	56	28	14	5.9
5	6.6	7.6	12	24	34	46	111	31	43	32	19	5.8
6	8.9	5.9	11	26	52	64	106	29	37	29	15	5.3
7	8.8	5.3	11	26	46	57	113	29	33	26	12	5.4
8	8.5	6.1	10	24	39	47	114	27	30	24	11	5.1
9	7.6	6.3	9.5	25	36	45	118	27	27	26	10	4.5
10	7.1	25	9.4	23	61	48	110	26	26	24	9.6	4.3
11	6.9	49	11	21	63	50	97	25	26	26	11	4.0
12	6.9	27	13	20	e40	52	101	24	141	33	13	3.7
13	6.4	18	12	20	42	101	112	23	99	28	34	3.7
14	6.2	16	19	19	40	123	95	22	55	24	27	4.0
15	6.5	28	26	25	45	101	83	22	44	22	18	4.8
16	8.1	23	20	32	46	95	76	22	38	20	15	4.1
17	6.8	17	69	28	51	92	71	21	56	19	13	4.2
18	7.0	13	122	24	45	90	71	22	192	21	12	3.6
19	9.2	11	78	28	39	82	66	21	115	20	10	3.3
20	9.7	10	69	48	39	75	61	20	71	18	19	3.2
21	9.3	9.9	59	38	39	76	58	19	57	16	33	12
22	8.2	9.1	50	30	36	355	57	27	52	15	22	58
23	7.6	7.9	45	26	36	477	55	42	56	15	16	35
24	7.4	7.3	40	25	34	234	52	95	52	14	14	18
25	6.7	6.6	37	23	39	168	48	110	49	13	12	14
26	6.1	20	34	22	92	141	46	71	43	34	10	14
27	5.9	58	33	22	69	132	43	70	38	42	10	12
28	5.1	34	32	21	53	138	42	60	34	24	10	9.9
29	4.7	22	29	20	---	117	39	49	31	19	9.7	8.7
30	6.6	19	30	30	---	191	38	40	31	16	8.9	8.0
31	8.9	---	32	66	---	399	---	33	---	13	8.0	---
TOTAL	228.6	495.2	984.9	842	1284	3763	2615	1145	1712	728	452.2	286.8
MEAN	7.37	16.5	31.8	27.2	45.9	121	87.2	36.9	57.1	23.5	14.6	9.56
MAX	9.7	58	122	66	92	477	221	110	192	42	34	58
MIN	4.7	5.3	9.4	19	33	38	38	19	26	13	8.0	3.2
CFSM	.39	.86	1.66	1.42	2.40	6.36	4.56	1.93	2.99	1.23	.76	.50
IN.	.45	.96	1.92	1.64	2.50	7.33	5.09	2.23	3.33	1.42	.88	.56

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

	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
MEAN	14.9	21.5	24.3	38.9	55.6	91.4	67.1	40.6	38.4	14.8	11.6	13.6
MAX	25.5	32.8	31.8	54.3	73.2	121	87.2	51.0	57.1	23.5	16.5	18.0
(WY)	2000	2000	2001	1999	1999	2001	2001	2000	2001	2001	2000	1999
MIN	7.37	15.1	10.2	27.2	45.9	73.2	38.8	33.9	16.0	5.70	3.78	9.56
(WY)	2001	1999	1999	2001	2001	2000	1999	1999	1999	1999	1999	2001

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1999 - 2001

ANNUAL TOTAL	12951.3	14536.7	
ANNUAL MEAN	35.4	39.8	35.9
HIGHEST ANNUAL MEAN			39.8
LOWEST ANNUAL MEAN			29.8
HIGHEST DAILY MEAN	165	Apr 23	477
LOWEST DAILY MEAN	4.7	Oct 29	3.2
ANNUAL SEVEN-DAY MINIMUM	6.1	Oct 24	3.9
MAXIMUM PEAK FLOW			779
MAXIMUM PEAK STAGE			5.55
INSTANTANEOUS LOW FLOW			3.1
ANNUAL RUNOFF (CFSM)	1.85		2.09
ANNUAL RUNOFF (INCHES)	25.22		28.31
10 PERCENT EXCEEDS	70		75
50 PERCENT EXCEEDS	27		26
90 PERCENT EXCEEDS	8.1		6.9

e Estimated

PAWCATUCK RIVER BASIN

01117410 USQUEPAUG RIVER AT RT. 138, AT USQUEPAUG, RI

LOCATION.--Lat 41°30'09", long 71°36'30", Washington County, Hydrologic Unit 01090005, on right bank on upstream side of bridge on State Route 138, 700 ft downstream from Glen Rock Reservoir, and 0.1 mi south of Usquepaug.

DRAINAGE AREA.--32.8 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1999 to September 2000.

GAGE.--Water-stage recorder. Datum of gage is 110 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Flow occasionally affected by upstream withdrawals.

EXTREMES FOR THE PERIOD JULY 1999 TO SEPTEMBER 2000.--Maximum discharge, 370 ft<sup>3</sup>/s, Apr. 23, 2000, gage height, 5.79 ft, minimum, 4.2 ft<sup>3</sup>/s, Aug. 5, 1999.

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	15	17	43	54	94	81	370	71	67	53	23	17
2	14	16	38	51	77	73	266	70	132	54	22	15
3	14	15	35	48	68	69	232	67	188	49	21	15
4	13	14	32	48	59	65	214	63	136	48	27	14
5	13	14	31	46	60	73	200	62	97	58	30	13
6	14	14	31	50	90	105	192	59	80	52	27	13
7	15	13	29	50	84	102	202	57	71	45	25	13
8	14	13	29	47	71	84	206	54	64	43	20	13
9	13	13	28	48	65	77	210	53	58	44	18	13
10	13	45	27	46	97	81	201	51	56	40	18	12
11	13	77	30	43	110	86	183	48	56	42	19	12
12	13	49	33	42	80	88	183	47	206	55	23	11
13	13	35	31	40	73	177	200	45	209	49	69	10
14	13	35	47	39	70	230	183	44	126	42	53	11
15	13	52	56	47	77	188	158	42	94	38	35	13
16	13	43	46	60	78	167	146	41	93	34	27	12
17	13	35	139	54	85	159	139	40	122	33	24	11
18	14	31	229	48	77	152	137	40	280	35	23	11
19	17	28	167	53	66	139	132	39	238	33	20	9.9
20	16	27	131	84	65	124	122	38	155	31	32	10
21	16	25	109	70	65	123	115	36	117	28	54	20
22	15	24	92	57	61	463	112	50	99	26	39	94
23	14	23	81	51	60	540	107	78	109	26	29	74
24	14	21	73	48	57	381	102	167	104	24	27	35
25	14	21	68	45	67	273	94	218	94	23	23	28
26	14	47	60	e43	168	235	89	158	80	57	21	26
27	14	103	60	42	130	222	84	190	70	81	20	22
28	13	69	58	41	96	210	82	151	63	46	20	19
29	13	47	55	39	---	209	78	118	59	34	19	17
30	13	44	56	55	---	314	75	95	55	30	17	16
31	16	---	59	109	---	465	---	76	---	26	16	---
TOTAL	432	1010	2003	1598	2250	5755	4814	2368	3378	1279	841	599.9
MEAN	13.9	33.7	64.6	51.5	80.4	186	160	76.4	113	41.3	27.1	20.0
MAX	17	103	229	109	168	540	370	218	280	81	69	94
MIN	13	13	27	39	57	65	75	36	55	23	16	9.9
CFSM	.43	1.03	1.97	1.57	2.45	5.67	4.90	2.33	3.44	1.26	.83	.61
IN.	.49	1.15	2.28	1.82	2.56	6.54	5.47	2.69	3.84	1.45	.96	.68

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

	1999	2000	2001	1999	2000	2001	1999	2000	2001	1999	2000	2001
MEAN	30.3	45.2	59.3	55.1	81.3	156	147	80.7	92.8	34.1	21.8	26.0
MAX	46.6	56.8	64.6	58.6	82.2	186	160	85.1	113	41.3	30.7	32.4
(WY)	2000	2000	2001	2000	2000	2001	2001	2000	2001	2001	2000	1999
MIN	13.9	33.7	54.0	51.5	80.4	127	133	76.4	73.0	27.0	7.62	20.0
(WY)	2001	2001	2000	2001	2001	2000	2000	2001	2000	2000	1999	2001

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1999 - 2001

ANNUAL TOTAL	22962	26327.9	
ANNUAL MEAN	62.7	72.1	69.3
HIGHEST ANNUAL MEAN			72.1
LOWEST ANNUAL MEAN			66.5
HIGHEST DAILY MEAN	354	Apr 23	540
LOWEST DAILY MEAN	13	Oct 4	9.9
ANNUAL SEVEN-DAY MINIMUM	13	Oct 9	11
MAXIMUM PEAK FLOW			584
MAXIMUM PEAK STAGE			6.71
INSTANTANEOUS LOW FLOW			9.4
ANNUAL RUNOFF (CFSM)	1.92	2.20	2.12
ANNUAL RUNOFF (INCHES)	26.08	29.91	28.76
10 PERCENT EXCEEDS	120	167	136
50 PERCENT EXCEEDS	47	50	47
90 PERCENT EXCEEDS	15	14	13

e Estimated

## PAWCATUCK RIVER BASIN

01117410 USQUEPAUG RIVER AT RT. 138, AT USQUEPAUG, RI--Continued

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	12	13	---	---	---	---	---	---	---	---	---
2	31	13	12	---	---	---	---	---	---	---	---	---
3	23	13	11	---	---	---	---	---	---	---	---	---
4	20	13	11	---	---	---	---	---	---	---	---	---
5	17	13	e11	---	---	---	---	---	---	---	---	---
6	16	13	---	---	---	---	---	---	---	---	---	---
7	15	12	---	---	---	---	---	---	---	---	---	---
8	14	12	---	---	---	---	---	---	---	---	---	---
9	14	12	---	---	---	---	---	---	---	---	---	---
10	14	11	---	---	---	---	---	---	---	---	---	---
11	14	12	---	---	---	---	---	---	---	---	---	---
12	14	12	---	---	---	---	---	---	---	---	---	---
13	14	11	---	---	---	---	---	---	---	---	---	---
14	13	11	---	---	---	---	---	---	---	---	---	---
15	15	11	---	---	---	---	---	---	---	---	---	---
16	15	11	---	---	---	---	---	---	---	---	---	---
17	19	11	---	---	---	---	---	---	---	---	---	---
18	18	10	---	---	---	---	---	---	---	---	---	---
19	16	11	---	---	---	---	---	---	---	---	---	---
20	17	11	---	---	---	---	---	---	---	---	---	---
21	15	11	---	---	---	---	---	---	---	---	---	---
22	15	11	---	---	---	---	---	---	---	---	---	---
23	15	10	---	---	---	---	---	---	---	---	---	---
24	15	10	---	---	---	---	---	---	---	---	---	---
25	14	11	---	---	---	---	---	---	---	---	---	---
26	14	18	---	---	---	---	---	---	---	---	---	---
27	14	16	---	---	---	---	---	---	---	---	---	---
28	13	14	---	---	---	---	---	---	---	---	---	---
29	13	13	---	---	---	---	---	---	---	---	---	---
30	13	13	---	---	---	---	---	---	---	---	---	---
31	12	---	---	---	---	---	---	---	---	---	---	---
TOTAL	502	362	---	---	---	---	---	---	---	---	---	---
MEAN	16.2	12.1	---	---	---	---	---	---	---	---	---	---
MAX	31	18	---	---	---	---	---	---	---	---	---	---
MIN	12	10	---	---	---	---	---	---	---	---	---	---
CFSM	.49	.37	---	---	---	---	---	---	---	---	---	---
IN.	.57	.41	---	---	---	---	---	---	---	---	---	---

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

MEAN	25.7	34.4	59.3	55.1	81.3	156	147	80.7	92.8	34.1	21.8	26.0
MAX	46.6	56.8	64.6	58.6	82.2	186	160	85.1	113	41.3	30.7	32.4
(WY)	2000	2000	2001	2000	2000	2001	2001	2000	2001	2001	2000	1999
MIN	14.2	12.1	54.0	51.5	80.4	127	133	76.4	73.0	27.0	7.62	20.0
(WY)	2001	2002	2000	2001	2001	2000	2000	2001	2000	2000	1999	2001

## SUMMARY STATISTICS

## WATER YEARS 1999 - 2002

ANNUAL MEAN	69.3	
HIGHEST ANNUAL MEAN	72.2	2001
LOWEST ANNUAL MEAN	66.5	2000
HIGHEST DAILY MEAN	540	Mar 23 2001
LOWEST DAILY MEAN	4.4	Aug 5 1999
ANNUAL SEVEN-DAY MINIMUM	4.8	Aug 1 1999
MAXIMUM PEAK FLOW	370	Apr 23 2000
MAXIMUM PEAK STAGE	5.79	Apr 23 2000
INSTANTANEOUS LOW FLOW	4.2	Aug 5 1999
ANNUAL RUNOFF (CFSM)	2.12	
ANNUAL RUNOFF (INCHES)	28.77	
10 PERCENT EXCEEDS	130	
50 PERCENT EXCEEDS	44	
90 PERCENT EXCEEDS	12	

e Estimated

## PAWCATUCK RIVER BASIN

187

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°28'36", long 71°36'19", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of Heaton Orchard Bridge on State Highway 2 in South Kingstown, 1.2 mi upstream from Chickasheen Brook, 1.8 mi south of Usquepaug, and 2.6 mi west of West Kingston.

DRAINAGE AREA.--36.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: February 1958 to July 1960 in Rhode Island Water Resources Board Geologic Bulletin 13. December 1974 to current year.

Water-quality records: Water years 1975-83.

GAGE.--Water-stage recorder. Datum of gage is 81.28 ft above sea level (State of Rhode Island benchmark).

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Flow affected at times by irrigation upstream.

AVERAGE DISCHARGE.--27 years (water years 1959, 1976 to current year), 77.0 ft<sup>3</sup>/s, 28.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft<sup>3</sup>/s, June 6, 1982, gage height, 9.23 ft; no flow part of Sept. 13, 1995. Instantaneous maximum and minimum discharges not available prior to Dec. 5, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 820 ft<sup>3</sup>/s, Mar. 23, gage height, 7.79 ft; minimum, 5.6 ft<sup>3</sup>/s, Sept. 19.

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	22	24	55	66	119	98	574	84	78	58	30	22
2	20	21	48	61	95	82	380	81	106	59	29	19
3	20	18	41	e58	78	75	297	78	197	53	27	18
4	19	16	35	55	65	69	263	73	185	52	33	16
5	18	16	32	e51	63	74	242	71	133	63	36	15
6	21	15	31	55	94	106	228	68	99	59	35	13
7	22	14	28	55	99	123	233	65	84	51	32	13
8	20	13	26	52	83	104	237	63	74	48	28	13
9	19	14	25	53	72	89	250	61	66	49	25	12
10	19	41	23	51	99	89	240	59	63	45	25	12
11	19	95	28	46	124	95	223	56	61	46	28	11
12	19	68	35	44	101	99	211	54	143	58	31	8.7
13	19	48	29	e37	84	161	228	53	242	54	71	7.9
14	19	42	47	37	77	272	222	51	189	47	66	8.8
15	20	65	67	46	82	245	196	50	124	42	45	11
16	20	56	56	66	85	210	175	48	106	39	38	10
17	21	47	110	61	91	194	164	48	109	38	34	8.7
18	20	38	221	53	87	185	160	47	255	40	33	8.2
19	23	31	237	56	73	174	154	46	311	38	30	6.5
20	22	28	186	92	68	159	145	46	224	36	39	7.1
21	21	25	153	82	69	148	136	43	156	34	61	15
22	21	22	127	e69	64	427	130	52	123	32	50	85
23	19	19	107	e58	61	783	125	82	118	32	39	96
24	19	16	93	52	59	605	120	135	119	31	36	31
25	20	15	84	48	67	388	113	232	112	29	32	24
26	19	36	73	45	151	300	106	216	96	51	29	23
27	18	112	71	41	175	269	100	203	81	93	26	20
28	18	96	68	39	132	250	97	197	71	56	27	16
29	17	63	64	34	---	246	92	155	65	42	25	15
30	17	55	65	51	---	312	88	121	60	37	21	14
31	22	---	69	118	---	625	---	94	---	33	21	---
TOTAL	613	1169	2334	1732	2517	7056	5929	2732	3850	1445	1082	579.9
MEAN	19.8	39.0	75.3	55.9	89.9	228	198	88.1	128	46.6	34.9	19.3
MAX	23	112	237	118	175	783	574	232	311	93	71	96
MIN	17	13	23	34	59	69	88	43	60	29	21	6.5
CFSM	.55	1.08	2.09	1.55	2.49	6.31	5.47	2.44	3.55	1.29	.97	.54
IN.	.63	1.20	2.41	1.78	2.59	7.27	6.11	2.82	3.97	1.49	1.11	.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)
1958	36.3	85.7	12.1	1990
1959	59.5	150	20.8	1990
1960	85.2	212	21.1	1987
1961	103	266	16.9	1981
1962	109	180	39.1	1981
1963	137	250	56.2	1980
1964	137	335	46.3	1981
1965	95.2	179	45.5	1985
1966	71.9	276	30.4	1981
1967	35.9	80.1	13.3	1994
1968	30.0	56.1	10.6	1994
1969	26.4	75.7	7.40	1999
1970		1985		1980

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1958 - 2001

ANNUAL TOTAL	25445	31038.9	
ANNUAL MEAN	69.5	85.0	77.0
HIGHEST ANNUAL MEAN			110
LOWEST ANNUAL MEAN			30.6
HIGHEST DAILY MEAN	373	Apr 23	783 Mar 23
LOWEST DAILY MEAN	13	Nov 8	6.5 Sep 19
ANNUAL SEVEN-DAY MINIMUM	15	Nov 3	8.6 Sep 14
MAXIMUM PEAK FLOW			820 Mar 23
MAXIMUM PEAK STAGE			7.79 Mar 23
INSTANTANEOUS LOW FLOW			5.6 Sep 19
ANNUAL RUNOFF (CFSM)	1.93	2.36	2.13
ANNUAL RUNOFF (INCHES)	26.22	31.98	28.97
10 PERCENT EXCEEDS	134	199	160
50 PERCENT EXCEEDS	54	56	58
90 PERCENT EXCEEDS	20	19	18

e Estimated

PAWCATUCK RIVER BASIN

01117468 BEAVER RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°29'33", long 71°37'43", Washington County, Hydrologic Unit 01090005, on right bank 10 ft downstream from Beaver River Bridge on State Highway 138 in Richmond, 1.2 mi southwest of Usquepaug, 3.3 mi north of Kenyon, and 3.6 mi upstream from mouth.

DRAINAGE AREA.--8.87 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: December 1974 to current year.  
Water-quality records: Water years 1979-83.

REVISED RECORDS.--WDR MA-RI-79-1: 1978. WDR MA-RI-81-1: 1978-80 (P).

GAGE.--Water-stage recorder. Datum of gage is 107.68 ft above sea level.

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

AVERAGE DISCHARGE.--26 years (water years 1976 to current year), 21.4 ft<sup>3</sup>/s, 32.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 370 ft<sup>3</sup>/s, June 6, 1982, gage height, 3.83 ft; minimum, 1.1 ft<sup>3</sup>/s, Sept. 7, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 238 ft<sup>3</sup>/s, Mar. 22, gage height, 3.42 ft; minimum, 3.1 ft<sup>3</sup>/s, Sept. 19.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	5.4	13	20	27	27	97	24	34	21	7.8	5.9
2	5.6	5.2	11	e17	24	25	83	23	60	23	7.2	5.5
3	5.5	5.0	11	e16	22	24	75	22	70	19	6.8	5.2
4	5.3	4.9	10	e16	19	23	68	21	46	18	8.5	5.1
5	5.2	4.7	9.6	e16	20	25	62	20	39	21	9.3	4.8
6	5.5	4.6	9.5	18	28	35	60	19	35	20	10	4.6
7	5.6	4.4	9.1	17	26	32	63	19	32	17	9.0	4.5
8	5.3	4.4	8.8	16	22	27	64	18	30	16	7.8	4.4
9	5.3	4.4	8.7	16	21	26	63	18	28	15	7.1	4.2
10	5.3	13	e8.4	16	30	27	59	18	26	14	6.9	4.1
11	4.9	14	9.2	e15	30	28	52	17	25	15	7.1	3.9
12	4.9	11	9.9	14	e25	28	55	17	86	16	7.7	3.8
13	4.7	8.9	9.1	e13	23	57	57	16	51	16	25	3.7
14	4.8	9.9	15	13	23	62	48	15	38	16	16	3.9
15	4.6	14	17	17	26	50	44	15	33	14	12	4.1
16	4.7	11	14	19	26	48	43	14	30	12	9.6	3.9
17	4.7	9.4	45	18	29	47	40	14	42	12	8.2	3.8
18	4.9	8.2	67	16	25	44	39	14	78	11	7.3	3.7
19	5.6	7.4	44	18	22	41	37	14	47	11	6.8	3.6
20	5.5	7.0	43	26	22	39	35	13	40	10	10	3.6
21	5.6	6.7	35	e21	22	41	33	13	39	9.6	16	7.3
22	5.4	6.5	31	e18	21	177	33	17	36	8.9	13	24
23	5.1	6.2	29	e16	20	128	32	24	39	8.4	9.8	13
24	4.9	6.1	26	16	20	95	30	48	36	8.2	8.8	8.9
25	4.7	6.0	25	15	25	82	29	50	32	7.8	7.6	7.6
26	4.6	15	e22	15	55	73	28	34	28	20	7.0	7.1
27	4.6	29	22	14	37	70	27	103	26	18	6.8	6.3
28	4.5	18	21	13	31	65	26	64	26	13	6.6	5.6
29	4.3	14	19	13	---	59	25	49	23	11	6.5	5.3
30	4.2	14	20	19	---	117	24	41	22	9.6	5.9	5.4
31	5.0	---	21	32	---	150	---	36	---	8.5	5.8	---
TOTAL	156.5	278.3	643.3	529	721	1772	1431	830	1177	440.0	283.9	176.8
MEAN	5.05	9.28	20.8	17.1	25.8	57.2	47.7	26.8	39.2	14.2	9.16	5.89
MAX	5.7	29	67	32	55	177	97	103	86	23	25	24
MIN	4.2	4.4	8.4	13	19	23	24	13	22	7.8	5.8	3.6
CFSM	.57	1.05	2.34	1.92	2.90	6.44	5.38	3.02	4.42	1.60	1.03	.66
IN.	.66	1.17	2.70	2.22	3.02	7.43	6.00	3.48	4.94	1.85	1.19	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	8.87	25.5	3.01	1990	16.4	43.5	4.59	1990	24.2	60.8	4.43	1987
					28.5	74.0	3.17	1979	25.8	46.2	3.17	1981
					29.0	62.9	11.5	1982	37.1	62.9	18.9	1985
					37.1	102	13.9	1983	37.7	48.3	13.7	1985
					27.7	82.1	9.02	1979	21.7	82.1	3.70	1982
					21.7	23.9	2.21	1982	10.3	16.4	2.21	1994
					8.05	16.4	2.21	1998	6.92	16.4	1.90	1989
					6.92	25.2	1.90	1989	6.92	25.2	1.90	1985
					1.90	1.90	1.90	1985	1.90	1.90	1.90	1985

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1975 - 2001

ANNUAL TOTAL		7294.1		8438.8								
ANNUAL MEAN		19.9		23.1						21.4		
HIGHEST ANNUAL MEAN										30.4		1983
LOWEST ANNUAL MEAN										8.67		1981
HIGHEST DAILY MEAN				98	Apr 22	177	Mar 22		324		Jun 6	1982
LOWEST DAILY MEAN				4.2	Oct 30	3.6	Sep 19		1.2		Sep 7	1993
ANNUAL SEVEN-DAY MINIMUM				4.5	Oct 24	3.8	Sep 14		1.3		Sep 1	1993
MAXIMUM PEAK FLOW						238	Mar 22		370		Jun 6	1982
MAXIMUM PEAK STAGE						3.42	Mar 22		3.83		Jun 6	1982
INSTANTANEOUS LOW FLOW						3.1	Sep 19		1.1		Sep 7	1993
ANNUAL RUNOFF (CFSM)				2.25		2.61			2.41			
ANNUAL RUNOFF (INCHES)				30.59		35.39			32.74			
10 PERCENT EXCEEDS				38		49			43			
50 PERCENT EXCEEDS				15		17			17			
90 PERCENT EXCEEDS				5.5		4.9			4.3			

e Estimated

PAWCATUCK RIVER BASIN

01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI

LOCATION.--Lat 41°26'42", long 71°40'53", Washington County, Hydrologic Unit 01090005, on right bank 10 ft downstream from bridge on Alton-Carolina road, 0.8 mi northeast of Wood River Junction, 1.5 mi southwest of Carolina, and 2.9 mi upstream from Wood River.

DRAINAGE AREA.--100 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to current year. October and November 1940, monthly discharge only, published in WSP 1301. Prior to October 1943, published as Charles River at Wood River Junction.

REVISED RECORDS.--WSP 1051: Drainage area. WSP 1201: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 43.86 ft above sea level. Prior to June 19, 1984, at site 10 ft upstream at same datum. Satellite gage-height telemeter at station.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Occasional regulation by fish hatchery on White Brook. Prior to 1972, occasional regulation at low flow by powerplant and mills upstream; regulation greater prior to 1969. Annual mean discharge for period of record shown in summary statistics does not include the 1941 water year.

AVERAGE DISCHARGE.--60 years, 196 ft<sup>3</sup>/s, 26.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft<sup>3</sup>/s, June 7, 1982, gage height, 8.75 ft; minimum, 7.4 ft<sup>3</sup>/s, Oct. 10, 1947; minimum daily, 15 ft<sup>3</sup>/s, Oct. 11, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft<sup>3</sup>/s, Apr. 1, gage height, 5.99 ft; minimum, 40 ft<sup>3</sup>/s, Sept. 19.

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	87	58	138	177	293	308	1100	232	305	168	90	64
2	84	58	129	170	280	272	1060	225	340	166	83	61
3	82	58	119	157	251	251	945	220	439	156	80	58
4	80	57	113	157	224	237	826	211	460	148	82	58
5	77	55	111	150	211	240	723	204	418	162	90	56
6	76	55	109	160	250	288	641	195	359	161	88	52
7	75	55	105	161	283	346	609	187	306	148	82	51
8	73	54	101	158	278	346	604	178	270	139	77	50
9	70	54	100	160	258	332	619	174	241	136	73	50
10	68	95	95	158	282	316	618	170	220	131	e67	50
11	66	145	103	148	308	313	584	165	204	138	e80	48
12	64	155	110	145	279	317	556	158	267	143	e102	44
13	63	127	106	136	267	449	555	154	359	141	e212	44
14	63	112	135	135	251	646	539	148	390	131	e191	46
15	62	122	171	147	251	667	506	146	347	124	119	49
16	61	123	166	173	250	630	464	140	277	114	97	47
17	61	113	224	179	262	566	428	136	279	108	89	45
18	61	101	372	172	249	515	412	137	419	107	84	43
19	65	93	426	175	231	470	395	135	499	105	77	42
20	64	88	444	227	222	432	377	132	508	101	101	42
21	63	86	395	229	218	406	363	129	425	95	114	58
22	62	83	353	204	205	687	351	150	349	93	117	134
23	60	80	309	193	196	983	339	194	306	88	98	162
24	59	75	266	188	194	1060	326	321	291	84	91	140
25	58	73	240	176	206	1010	307	443	279	82	83	96
26	57	104	209	167	340	901	291	492	261	126	77	83
27	57	176	198	161	373	784	277	578	234	177	74	74
28	56	199	190	156	355	684	264	566	209	167	73	71
29	53	174	181	150	---	605	252	497	189	129	70	65
30	53	147	178	173	---	701	242	417	175	110	67	62
31	57	---	184	263	---	1010	---	356	---	98	64	---
TOTAL	2037	2975	6080	5305	7267	16772	15573	7590	9625	3976	2892	1945
MEAN	65.7	99.2	196	171	260	541	519	245	321	128	93.3	64.8
MAX	87	199	444	263	373	1060	1100	578	508	177	212	162
MIN	53	54	95	135	194	237	242	129	175	82	64	42
CFSM	.66	.99	1.96	1.71	2.60	5.41	5.19	2.45	3.21	1.28	.93	.65
IN.	.76	1.11	2.26	1.97	2.70	6.24	5.79	2.82	3.58	1.48	1.08	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	88.2	143	208	245	275	351	339	254	184	99.9	85.1	78.9																																																		
MAX	332	471	543	655	453	598	908	464	718	249	275	374																																																		
(WY)	1956	1956	1987	1979	1970	1953	1983	1983	1982	1984	1946	1954																																																		
MIN	31.1	42.2	49.8	51.8	104	145	124	130	82.3	38.2	28.8	29.5																																																		
(WY)	1950	1966	1966	1981	1944	1981	1985	1981	1957	1957	1999	1980																																																		

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1941 - 2001
ANNUAL TOTAL	73301	82037	
ANNUAL MEAN	200	225	196
HIGHEST ANNUAL MEAN			311
LOWEST ANNUAL MEAN			84.4
HIGHEST DAILY MEAN	928	Apr 24	1830
LOWEST DAILY MEAN	53	Oct 29	15
ANNUAL SEVEN-DAY MINIMUM	55	Nov 3	45
MAXIMUM PEAK FLOW			1120
MAXIMUM PEAK STAGE		5.99	Apr 1
INSTANTANEOUS LOW FLOW		40	Sep 19
ANNUAL RUNOFF (CFSM)	2.00	2.25	1.96
ANNUAL RUNOFF (INCHES)	27.27	30.52	26.66
10 PERCENT EXCEEDS	382	479	397
50 PERCENT EXCEEDS	146	161	155
90 PERCENT EXCEEDS	72	60	50

e Estimated



PAWCATUCK RIVER BASIN

01117800 WOOD RIVER NEAR ARCADIA, RI

LOCATION.--Lat 41°34'26", long 71°43'16", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of bridge on Ten Rod Road, 1.8 mi northwest of Arcadia, and 4.5 mi north of Hope Valley.

DRAINAGE AREA.--35.2 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: January 1964 to September 1981, October 1982 to current year.  
Water-quality records: Water years 1967-74.

GAGE.--Water-stage recorder. Datum of gage is 118.20 ft above sea level (Rhode Island State Board of Public Roads bench-mark). Prior to Oct. 1, 1985, datum erroneously published as 137.97 ft above sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--36 years (water years 1965-81, 1983-current year), 76.5 ft<sup>3</sup>/s, 29.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 896 ft<sup>3</sup>/s, Mar. 18, 1968, gage height, 8.64 ft; minimum, 4.1 ft<sup>3</sup>/s, Sept. 1, 1995.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 6, 1982, reached a discharge of 1,010 ft<sup>3</sup>/s, gage height, 8.97 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 482 ft<sup>3</sup>/s, Mar. 30, gage height, 6.56 ft; minimum, 10 ft<sup>3</sup>/s, Oct. 16, 18, 27.

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	16	14	42	53	90	92	349	74	76	72	30	25
2	15	14	38	50	89	84	258	71	140	69	28	26
3	15	14	33	48	85	78	210	68	171	65	29	22
4	14	13	31	48	76	74	185	65	135	66	45	20
5	15	13	29	47	75	77	170	62	116	73	43	19
6	17	13	27	51	82	90	162	59	101	76	37	18
7	17	13	27	49	76	80	170	57	90	68	31	17
8	15	12	30	47	70	74	176	56	81	65	29	17
9	14	12	28	48	67	74	176	56	74	64	26	17
10	14	31	26	45	89	78	172	54	68	60	27	17
11	14	38	27	45	93	80	154	51	66	70	29	15
12	14	31	28	44	87	82	160	49	239	72	37	14
13	14	28	27	42	83	136	164	47	155	61	80	14
14	13	40	35	41	78	158	146	44	125	55	62	15
15	13	58	41	49	83	150	133	43	110	52	46	17
16	13	42	36	56	84	152	126	43	97	46	38	16
17	14	36	130	54	95	156	120	43	162	47	33	14
18	11	31	230	53	87	159	122	42	383	47	31	14
19	21	27	182	58	80	149	115	44	298	44	29	13
20	18	25	160	75	77	140	110	41	203	41	51	12
21	16	23	127	69	78	140	107	40	158	39	85	23
22	17	24	110	64	73	395	105	53	137	37	60	29
23	15	20	96	59	71	406	100	74	131	35	45	25
24	14	20	84	57	68	293	97	111	121	34	40	20
25	13	18	72	53	73	224	92	128	114	32	34	23
26	16	35	67	50	111	192	87	109	104	47	31	27
27	11	70	63	48	108	180	84	224	94	50	29	23
28	12	54	60	47	102	165	81	153	86	39	30	26
29	12	46	56	44	---	153	78	123	80	35	27	29
30	12	45	57	59	---	281	76	102	76	33	25	24
31	14	---	57	95	---	446	---	85	---	31	23	---
TOTAL	449	860	2056	1648	2330	5038	4285	2271	3991	1625	1190	591
MEAN	14.5	28.7	66.3	53.2	83.2	163	143	73.3	133	52.4	38.4	19.7
MAX	21	70	230	95	111	446	349	224	383	76	85	29
MIN	11	12	26	41	67	74	76	40	66	31	23	12
CFSM	.41	.81	1.88	1.51	2.36	4.62	4.06	2.08	3.78	1.49	1.09	.56
IN.	.47	.91	2.17	1.74	2.46	5.32	4.53	2.40	4.22	1.72	1.26	.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2001, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001		
MEAN	36.1	64.2	96.3	102	109	137	132	91.6	62.3	33.2	29.3	23.8																												
MAX	112	163	229	310	187	256	320	153	182	89.3	90.0	55.1																												
(WY)	1990	1973	1973	1979	1970	1972	1983	1979	1998	1998	1979	1979																												
MIN	11.6	11.2	15.5	19.0	43.6	76.3	44.2	48.7	25.4	11.4	8.86	7.05																												
(WY)	1998	1966	1966	1966	1980	1985	1966	1986	1999	1999	1995	1980																												

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1964 - 2001		
ANNUAL TOTAL	24263		26334				
ANNUAL MEAN	66.3		72.1		76.5		
HIGHEST ANNUAL MEAN					114		
LOWEST ANNUAL MEAN					33.3		
HIGHEST DAILY MEAN	294		446		826		
LOWEST DAILY MEAN	11		11		4.2		
ANNUAL SEVEN-DAY MINIMUM	13		13		4.2		
MAXIMUM PEAK FLOW			482		896		
MAXIMUM PEAK STAGE			6.56		8.64		
INSTANTANEOUS LOW FLOW			10		4.1		
ANNUAL RUNOFF (CFSM)	1.88		2.05		2.17		
ANNUAL RUNOFF (INCHES)	25.64		27.83		29.52		
10 PERCENT EXCEEDS	130		154		157		
50 PERCENT EXCEEDS	55		54		58		
90 PERCENT EXCEEDS	15		15		15		



PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.  
 WATER TEMPERATURE: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1977.

REMARKS.--Temperature records good; Specific Conductance records fair, except those for estimated values, which are poor. Interruptions in the record are due to malfunctions of the instrument. Extremes for period of daily record and current year are for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 298  $\mu$ S/cm, Feb. 12, 1988; minimum, 21  $\mu$ S/cm, Jan. 23, 1979.  
 WATER TEMPERATURE: Maximum recorded, 29.5°C, July 24, 1987, July 26, 27, 28, 1989; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 182  $\mu$ S/cm, Jan. 15; minimum, 53  $\mu$ S/cm, Apr. 11.  
 WATER TEMPERATURE: Maximum recorded, 26.2°C, Aug. 9; minimum, 0.1°C, Jan. 23.

SPECIFIC CONDUCTANCE ( $\mu$ S/CM AT 25°C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	111	93	105	142	129	135	79	77	77	91	84	86
2	110	107	109	129	122	124	81	79	79	89	84	86
3	117	110	113	122	120	121	85	81	83	93	85	89
4	117	114	115	125	121	123	89	83	86	95	88	91
5	117	114	115	124	118	121	92	88	90	105	85	90
6	116	109	e112	118	114	115	91	88	89	177	90	e132
7	114	110	112	115	114	114	91	87	88	101	90	94
8	111	107	109	115	114	114	114	91	95	102	89	92
9	107	97	103	115	113	114	93	88	91	121	97	106
10	102	97	98	115	106	e112	92	85	89	97	89	92
11	110	98	104	109	97	101	109	92	103	95	87	90
12	109	94	98	102	98	99	110	107	109	94	87	91
13	100	96	98	105	102	104	107	103	106	92	85	88
14	106	99	102	108	98	e103	178	101	e131	93	86	90
15	111	105	107	108	94	99	104	97	101	182	90	e122
16	118	111	115	94	92	93	97	93	95	115	99	107
17	119	114	117	95	93	95	105	72	88	99	95	97
18	148	118	e133	96	95	95	74	58	66	97	93	96
19	---	---	---	95	94	95	58	56	57	120	97	105
20	---	---	---	96	94	95	61	56	58	111	98	102
21	---	---	---	103	96	100	60	57	58	115	90	102
22	---	---	---	104	100	102	77	60	64	102	85	91
23	169	165	167	102	99	100	64	61	63	93	88	91
24	167	164	166	99	98	99	66	63	65	97	89	92
25	168	163	166	100	96	98	68	65	66	96	89	92
26	168	165	e166	116	99	104	75	67	70	97	89	93
27	165	158	e162	105	89	94	76	72	75	98	93	96
28	158	148	152	89	87	88	77	75	76	100	94	96
29	148	146	147	87	77	e83	79	75	77	98	92	95
30	149	146	148	82	76	78	156	78	95	180	93	115
31	149	142	e147	---	---	---	129	86	96	108	93	100
MONTH	---	---	---	142	76	104	178	56	83	182	84	97

## PAWCATUCK RIVER BASIN

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01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SPECIFIC CONDUCTANCE ( $\mu\text{S}/\text{CM}$  AT  $25^\circ\text{C}$ ), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	93	88	90	90	88	89	68	65	66	111	105	107
2	90	86	89	91	89	90	72	68	70	112	110	112
3	96	84	88	92	90	91	75	71	73	112	110	111
4	88	82	85	94	91	92	78	75	76	114	111	113
5	170	80	99	152	93	126	82	78	80	115	113	e114
6	154	107	135	148	127	135	97	82	85	117	113	115
7	107	97	101	137	105	116	88	84	86	117	113	114
8	100	95	96	108	101	104	88	83	85	114	112	113
9	99	95	97	133	102	109	86	83	84	116	112	113
10	103	98	100	128	113	116	89	84	86	115	112	114
11	98	84	91	114	106	108	86	53	85	116	114	115
12	88	82	85	108	104	106	87	85	86	118	115	117
13	96	84	89	137	104	112	87	84	85	119	116	e117
14	90	86	88	106	88	94	94	85	88	118	116	e117
15	93	90	91	88	88	88	97	93	95	119	114	116
16	106	89	91	88	85	87	95	92	93	119	114	117
17	108	88	93	85	84	84	95	92	94	116	112	114
18	89	85	87	85	82	83	96	93	94	115	114	115
19	90	84	87	86	84	85	96	93	95	116	113	114
20	91	90	90	88	86	86	98	94	96	116	114	115
21	93	91	92	88	85	86	101	98	99	115	113	114
22	93	91	93	88	66	81	103	100	102	---	---	---
23	116	91	104	66	60	61	102	99	100	---	---	---
24	98	95	97	68	61	64	101	99	100	115	95	e106
25	161	97	124	75	68	72	102	100	101	100	90	95
26	153	99	110	81	75	77	103	100	101	91	78	89
27	99	92	94	77	73	75	103	99	101	92	79	e84
28	92	89	90	78	75	76	104	99	101	81	77	79
29	---	---	---	78	75	77	109	102	106	82	79	80
30	---	---	---	92	78	85	107	105	106	83	82	82
31	---	---	---	79	65	69	---	---	---	91	83	86
MONTH	170	80	96	152	60	91	109	53	91	---	---	---
DAY	JUNE			JULY			AUGUST			SEPTEMBER		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	89	87	88	92	91	e92	117	112	114	118	114	e115
2	89	81	e85	94	92	93	117	114	e115	119	116	117
3	81	72	74	94	93	94	118	114	e116	118	112	114
4	76	74	75	95	93	e94	116	111	e114	113	109	110
5	79	76	77	95	92	94	112	110	111	111	108	110
6	83	79	81	96	94	94	113	111	e111	114	111	111
7	91	83	85	109	93	94	---	---	---	116	113	114
8	91	88	89	96	93	e94	---	---	---	118	115	117
9	91	89	90	97	95	e96	---	---	---	120	118	118
10	94	91	92	99	95	98	---	---	---	---	---	---
11	96	90	e95	99	96	e97	---	---	---	---	---	---
12	91	76	e82	97	87	e92	---	---	---	124	123	e123
13	76	73	74	97	88	93	116	97	e109	127	123	e125
14	77	75	76	99	97	98	109	102	e104	---	---	---
15	81	77	79	100	98	99	109	105	107	127	124	126
16	84	81	82	103	99	100	119	108	110	127	123	125
17	88	71	e82	104	100	e102	112	108	110	124	122	123
18	77	57	64	104	103	103	114	111	113	123	122	122
19	57	56	56	105	102	104	116	113	114	123	122	123
20	60	56	58	107	104	105	---	---	---	124	123	123
21	66	60	63	109	104	106	112	97	102	127	114	e121
22	71	65	68	112	108	110	104	97	101	129	113	e121
23	75	71	73	113	110	e111	105	102	104	124	116	120
24	79	74	e76	---	---	---	107	104	106	127	115	e124
25	84	78	80	---	---	---	108	106	107	---	---	---
26	97	81	83	---	---	---	111	106	108	124	115	119
27	85	83	84	119	108	110	111	109	110	126	114	116
28	87	85	85	113	108	110	114	110	112	134	126	130
29	88	85	87	117	112	114	113	109	111	133	127	130
30	101	88	90	117	115	116	114	111	113	128	118	123
31	---	---	---	116	112	114	117	114	114	---	---	---
MONTH	101	56	79	---	---	---	---	---	---	---	---	---

e Estimated

## PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	14.0	11.2	12.6	8.6	7.7	8.2	4.4	3.5	4.0	1.1	0.4	0.7
2	14.5	12.0	13.2	9.1	7.4	8.4	3.5	2.3	3.1	1.0	.3	.6
3	15.7	13.2	14.4	9.2	8.1	8.8	2.6	1.6	2.1	.9	.2	.4
4	15.3	13.5	14.5	9.8	8.3	9.1	2.5	1.3	1.8	1.0	.1	.5
5	15.0	14.4	14.6	9.5	8.7	9.0	2.6	1.3	1.9	.9	.1	.5
6	15.3	14.5	14.8	9.1	7.9	8.6	2.3	1.5	1.9	1.2	.6	.9
7	15.2	13.7	14.6	9.0	7.7	8.5	2.5	1.5	2.0	1.4	.6	.9
8	14.6	12.7	13.5	9.2	7.9	8.7	1.6	1.4	1.5	1.4	.8	1.1
9	13.3	11.4	12.3	9.5	8.3	9.0	1.7	.9	1.4	1.6	1.0	1.3
10	12.1	10.2	11.2	9.6	9.3	9.5	1.8	.7	1.3	1.2	.5	.9
11	12.7	9.7	11.2	9.8	9.4	9.6	1.9	1.7	1.8	1.4	.3	.7
12	12.6	10.3	11.5	10.5	9.4	9.9	3.2	1.3	2.3	1.3	.3	.8
13	12.9	10.4	11.6	9.8	9.4	9.6	2.0	.9	1.5	1.3	.2	.6
14	13.1	11.2	12.2	9.8	9.4	9.6	2.9	1.8	2.3	1.3	.3	.8
15	13.8	11.6	12.7	9.4	8.1	8.6	2.7	1.9	2.2	1.3	.8	1.1
16	13.0	11.7	12.2	8.2	7.5	7.8	3.4	2.2	2.6	2.0	1.1	1.5
17	12.5	11.1	11.8	8.4	7.0	7.7	6.0	3.4	4.7	2.3	1.4	1.8
18	12.8	11.8	12.3	7.3	6.4	6.8	6.0	4.0	5.0	2.1	1.1	1.6
19	13.7	12.1	12.8	6.9	5.8	6.5	4.0	3.2	3.4	2.0	1.7	1.8
20	13.3	11.4	12.2	6.1	4.9	5.5	3.3	2.4	3.0	1.9	1.4	1.7
21	13.2	11.1	12.0	5.5	4.0	4.7	2.4	1.6	1.9	1.4	.3	.9
22	12.7	11.2	11.9	4.3	3.1	3.7	1.9	1.4	1.7	1.1	.1	.5
23	12.0	10.0	11.0	3.6	2.6	3.1	1.5	.8	1.1	1.0	.1	.5
24	11.4	9.2	10.4	2.8	1.9	2.4	1.4	.6	1.0	1.3	.1	.6
25	11.6	9.6	10.7	2.7	1.2	2.0	1.0	.4	.7	1.4	.4	.8
26	11.9	10.3	11.2	3.6	2.0	2.7	1.0	.3	.6	1.5	.3	.8
27	12.2	10.9	11.6	3.9	2.9	3.4	1.2	.5	.8	1.5	.7	1.0
28	12.2	10.6	11.8	4.9	3.8	4.4	1.1	.6	.7	1.8	.7	1.1
29	10.6	8.3	9.0	7.8	4.4	4.9	1.3	.5	.8	1.7	.5	1.0
30	8.3	7.5	7.9	4.9	4.2	4.7	1.0	.6	.9	1.6	.6	1.1
31	8.4	7.7	8.0	---	---	---	1.1	.5	.8	2.1	1.0	1.5
MONTH	15.7	7.5	12.0	10.5	1.2	6.8	6.0	.3	2.0	2.3	.1	1.0

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.3	1.3	1.7	3.0	1.9	2.3	5.4	5.0	5.2	16.1	13.4	14.6
2	2.5	1.5	1.9	2.4	1.7	2.0	5.3	4.6	5.0	18.1	13.9	15.7
3	2.2	1.0	1.5	2.5	1.8	2.1	5.9	4.7	5.4	19.8	16.0	17.5
4	1.6	.5	1.0	2.5	1.9	2.1	6.9	5.6	6.2	21.1	17.6	19.1
5	1.2	.3	.7	2.0	.6	1.5	8.2	5.9	7.0	20.3	18.4	19.5
6	1.6	.5	.9	1.2	.8	.9	8.2	7.5	7.7	18.8	16.0	17.6
7	2.3	1.0	1.5	1.7	1.0	1.3	8.8	7.3	8.0	17.2	13.9	15.3
8	2.2	1.2	1.6	2.4	1.0	1.7	8.5	7.2	7.9	16.5	13.1	14.6
9	2.5	1.6	2.0	2.5	1.7	2.0	10.1	7.1	8.5	17.2	13.7	15.2
10	3.9	2.4	3.1	3.5	1.9	2.6	12.4	10.1	11.2	18.6	14.6	16.3
11	2.6	.5	1.6	4.2	2.3	3.1	11.5	7.2	10.9	19.6	15.8	17.5
12	1.6	.3	.8	4.8	2.7	3.6	10.3	9.9	10.0	20.7	17.1	18.5
13	2.2	.8	1.4	3.7	3.1	3.5	10.7	9.9	10.2	20.4	17.8	18.8
14	2.6	1.2	1.9	3.1	2.5	2.8	11.8	9.9	10.8	18.3	16.5	17.4
15	3.1	2.3	2.7	3.7	2.5	3.1	12.6	10.5	11.5	16.6	15.0	15.6
16	2.9	2.2	2.5	5.2	3.6	4.4	12.8	11.3	11.8	15.0	13.3	14.1
17	3.3	2.0	2.6	6.3	4.9	5.5	11.6	10.4	11.1	14.4	12.7	13.5
18	2.4	1.1	1.6	5.9	4.8	5.5	10.6	9.6	10.1	14.1	13.0	13.4
19	2.4	.8	1.5	5.8	4.2	5.0	11.0	8.7	9.7	16.7	13.3	14.8
20	3.3	1.6	2.3	6.4	4.7	5.5	11.6	9.1	10.3	18.1	14.6	16.1
21	4.4	2.5	3.2	5.7	5.1	5.4	12.8	10.7	11.6	17.3	15.4	16.3
22	2.7	1.3	2.1	5.7	5.1	5.3	15.2	12.1	13.6	16.6	15.4	15.9
23	2.6	1.2	1.7	5.2	4.8	5.0	17.1	14.6	15.6	15.4	14.7	14.9
24	2.9	1.2	2.0	5.5	4.3	5.0	17.7	15.1	16.3	15.2	14.6	14.8
25	2.5	1.8	2.1	5.9	4.6	5.4	16.6	14.3	15.6	15.2	14.5	14.8
26	3.5	2.4	2.8	5.6	4.6	5.1	15.1	12.8	13.7	16.2	14.7	15.4
27	3.2	2.1	2.7	5.2	3.7	4.5	15.1	11.9	13.3	17.1	15.8	16.3
28	3.6	2.3	2.8	6.1	4.2	5.1	15.5	12.7	13.9	17.1	16.4	16.7
29	---	---	---	6.0	5.1	5.6	15.4	12.2	13.6	16.7	15.6	16.3
30	---	---	---	5.6	5.0	5.4	15.5	11.9	13.5	17.4	16.0	16.6
31	---	---	---	5.3	4.5	5.0	---	---	---	16.6	15.0	15.7
MONTH	4.4	.3	1.9	6.4	.6	3.8	17.7	4.6	10.6	21.1	12.7	16.1



PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI

LOCATION.--Lat 41°23'01", long 71°50'01", Washington County, Hydrologic Unit 01090005, on left bank at Westerly, 2.1 mi downstream from Shunock River.

DRAINAGE AREA.--295 mi<sup>2</sup>.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1940 to current year.

REVISED RECORDS.--WSP 1051: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.76 ft below sea level.

REMARKS.--Records good, many days are adjusted for tidal backwater, which lasts as much as 4 hours during times of high tide. Diurnal fluctuation at low flow prior to 1962 by mills upstream; regulation much greater prior to 1958. Diversion upstream for municipal supply of Westerly.

AVERAGE DISCHARGE.--60 years (water years 1942--current year), 578 ft<sup>3</sup>/s, 26.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,070 ft<sup>3</sup>/s, June 6, 1982, gage height, 12.86 ft; minimum daily, 25 ft<sup>3</sup>/s, Aug. 17, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 3,150 ft<sup>3</sup>/s, by computation of flow over dam 1.5 mi upstream. Maximum discharge since 1886 occurred in November 1927 and was possibly more than twice that in March 1936. Maximum stage since at least 1635, 15.0 ft Sept. 21, 1938, due to hurricane tidal wave.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,380 ft<sup>3</sup>/s, Mar. 31, gage height, 8.54 ft; minimum, 86 ft<sup>3</sup>/s, Sept. 20.

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	198	109	470	519	899	883	3270	571	978	496	252	158
2	187	111	428	483	846	786	3080	550	1170	489	232	152
3	179	114	386	458	770	713	2780	528	1730	462	217	146
4	174	117	353	432	686	659	2410	516	1730	430	216	145
5	168	120	329	415	637	656	2080	505	1500	464	254	138
6	168	134	313	426	743	808	1830	485	1220	485	260	125
7	166	136	299	441	806	888	1730	465	1000	453	239	117
8	162	129	287	428	772	848	1680	447	850	418	211	116
9	155	108	276	427	713	811	1720	435	741	406	191	115
10	152	169	261	424	776	819	1750	428	664	388	175	118
11	146	373	271	402	897	835	1650	417	614	382	180	112
12	147	402	283	383	818	842	1540	401	859	405	199	103
13	151	352	280	371	743	1290	1540	386	1270	408	447	96
14	150	328	338	361	705	1880	1480	369	1280	380	546	93
15	150	483	512	390	689	1830	1370	355	1080	345	460	101
16	145	461	519	497	698	1710	1260	350	908	324	341	102
17	142	402	787	511	732	1580	1130	344	995	302	275	98
18	168	350	1610	490	724	1440	1070	340	2120	301	244	93
19	192	301	1640	497	658	1330	1020	344	2070	296	218	89
20	193	273	1550	680	619	1220	957	337	1910	281	259	86
21	186	252	1380	710	605	1150	902	322	1620	266	368	100
22	174	228	1170	620	580	2370	869	363	1280	249	433	234
23	164	223	973	568	553	2920	830	529	1040	241	368	311
24	151	217	839	539	535	2890	782	857	920	230	301	284
25	140	205	740	507	561	2710	739	1210	861	225	266	246
26	133	262	639	478	1020	2460	705	1300	788	316	232	221
27	125	590	623	454	1140	2160	667	2100	700	499	209	195
28	122	638	562	435	1000	1900	640	2200	625	472	201	164
29	115	561	527	411	---	1660	618	1950	562	386	190	137
30	108	491	511	459	---	2100	591	1560	521	318	173	135
31	108	---	525	803	---	3310	---	1210	---	275	162	---
TOTAL	4819	8639	19681	15019	20925	47458	42690	22174	33606	11392	8319	4330
MEAN	155	288	635	484	747	1531	1423	715	1120	367	268	144
MAX	198	638	1640	803	1140	3310	3270	2200	2120	499	546	311
MIN	108	108	261	361	535	656	591	322	521	225	162	86
CFSM	.53	.98	2.15	1.64	2.53	5.19	4.82	2.42	3.80	1.25	.91	.49
IN.	.61	1.09	2.48	1.89	2.64	5.98	5.38	2.80	4.24	1.44	1.05	.55

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 2001, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
1941	258	447	656	752	822	1054	991	716	510	265	234	218
1942	1186	1450	1789	2151	1377	1775	2603	1274	2246	642	763	1233
1943	1956	1956	1987	1979	1982	1994	1983	1948	1982	1959	1946	1954
1944	87.2	93.2	115	131	325	495	371	325	210	98.5	71.9	65.7
1945	1950	1966	1966	1981	1980	1981	1966	1986	1942	1957	1999	1964

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR
ANNUAL TOTAL	208174	239052				
ANNUAL MEAN	569	655				
HIGHEST ANNUAL MEAN			578		871	1973
LOWEST ANNUAL MEAN					251	1981
HIGHEST DAILY MEAN	2490	3310	6220	6220	Jun 6 1982	
LOWEST DAILY MEAN	108	86	25	25	Aug 17 1941	
ANNUAL SEVEN-DAY MINIMUM	112	95	47	47	Sep 2 1995	
MAXIMUM PEAK FLOW		3380	7070	7070	Jun 6 1982	
MAXIMUM PEAK STAGE		8.54	12.86	12.86	Jun 6 1982	
INSTANTANEOUS LOW FLOW		86			Sep 20	
ANNUAL RUNOFF (CFSM)	1.93	2.22			1.96	
ANNUAL RUNOFF (INCHES)	26.25	30.14			26.64	
10 PERCENT EXCEEDS	1150	1570	1200	1200		
50 PERCENT EXCEEDS	438	459	450	450		
90 PERCENT EXCEEDS	166	144	127	127		







PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	PHENOLS TOTAL (UG/L) (32730)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351)
NOV 20...	0.39	<1.0	4	0.08	11	<16	3	2.2	81	--	--
MAR 15...	.24	<1.0	4	.03	6.6	E8	5	25	46	--	--
JUN 27...	.35	<.2	4	.08	9.6	--	8	15	93	--	--
AUG 13...	.09	<.2	2	.04	6.8	--	12	16	72	--	--
SEP 19...	--	--	--	--	--	--	--	--	--	<0.2	<3

DATE	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403)	ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389)	P,P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363)	P,P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368)	P,P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373)	METH- OXY- CHLOR, TOT. IN BOTTOM MATH. (UG/KG) (39481)
NOV 20...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 27...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 19...	<0.2	<0.2	<0.2	<0.2	<0.2	<5	<50	<0.2	<0.5	<0.2	<0.5	<2

K Results based on colony count outside the acceptance range (non-ideal colony count).

## CONNECTICUT RIVER BASIN

01162000 MILLERS RIVER NEAR WINCHENDON, MA

LOCATION.--Lat 42°41'03", long 72°05'02", Worcester County, Hydrologic Unit 01080202, on right bank 10 ft downstream from Nolan Bridge, 0.3 mi downstream from Tarbell Brook, 2 mi west of Winchendon, and at mile 32.8.

DRAINAGE AREA.--81.8 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: June 1916 to current year. March to May 1917, monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1957, 1965-66, 1994-95.

REVISED RECORDS.--WSP 451: 1916. WSP 1051: 1919, 1920-21(M), 1922-24, 1928(M), 1933-34.  
WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Oct. 6, 1933. Datum of gage is 826.66 ft above sea level. Prior to July 27, 1916, nonrecording gage at bridge at same datum.

REMARKS.--Records poor except those for the period April 29 to July 21, which are fair. Flow affected for most of year by backwater from beaver dam located approximately 0.5 mi downstream from gage. Flow regulated by powerplant and by Lake Monomonac and other reservoirs upstream, by waste-water treatment plant 500 ft upstream, and infrequent backwater from U. S. Army Corps of Engineers Flood-Control Project at Birch Hill Dam.

AVERAGE DISCHARGE.--85 years, 145 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft<sup>3</sup>/s, Sept. 22, 1938, gage height, 21.55 ft, from floodmarks, from rating curve extended above 2,000 ft<sup>3</sup>/s, on basis of computation of peak flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft<sup>3</sup>/s (estimated), Apr. 14; gage height, unknown, maximum gage height, 11.06 ft, Apr. 17 (backwater from Birch Hill Dam); minimum, 10 ft<sup>3</sup>/s, Aug. 28.

REVISIONS.--For 1996 water year: Maximum discharge, 1,840 ft<sup>3</sup>/s, Jan. 29, 1996, gage height, 10.13 ft, maximum gage height, 12.06 ft (backwater from Birch Hill Dam); daily mean discharges for the period Apr. 16-27, 1996, monthly total and mean discharge and maximum daily mean discharge for April 1996, and 1996 water year total and mean discharge are given below. These figures supersede those published in the report for 1996.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996  
DAILY MEAN VALUES

APR 16	e660	APR 18	e680	APR 20	e360	APR 22	e290	APR 24	e310	APR 26	e260
17	e910	19	e500	21	e310	23	e300	25	e280	27	e250

TOTAL	10330	MEAN	344	MAX	910
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## SUMMARY STATISTICS

ANNUAL TOTAL	74546	ANNUAL MEAN	204
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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	e45	e70	e125	e130	146	e70	e260	294	62	92	e20	e17
2	e43	e66	e120	e125	142	e66	e230	218	123	241	e19	e15
3	e42	e62	e115	e120	129	e64	e220	178	307	197	e22	e14
4	e40	e60	e110	e115	e110	e66	e230	144	385	168	e30	e13
5	e36	e62	e100	e110	e100	72	e250	120	345	167	e45	e14
6	e100	e64	e95	e105	e110	e90	e280	99	282	212	e40	e13
7	e150	e70	e90	e100	e120	e110	e310	89	189	150	e35	e12
8	e160	e70	e85	e96	e110	e95	e350	77	132	117	e30	e14
9	e140	e80	e80	e92	e100	e85	e460	68	98	111	e26	e16
10	e120	e100	e75	e88	e110	e80	e550	65	75	92	e22	e15
11	e100	e150	e72	e84	e120	e75	e650	56	68	74	e21	e14
12	e90	e130	e68	e82	e110	e70	e850	47	112	65	e20	e13
13	e80	e120	e64	e78	e105	e68	e1200	45	116	57	e19	e14
14	e75	e150	e62	e76	e95	e75	e1250	45	90	51	e18	e14
15	e70	e170	e62	e74	e105	e80	e1100	42	71	49	e17	e14
16	e65	e160	e60	e72	e100	e90	e990	41	61	44	e16	e13
17	e80	e150	235	e70	e95	e100	e900	43	119	46	e15	e12
18	e100	e130	452	e68	e90	e110	e800	42	209	47	e17	e11
19	e170	e120	391	e66	e85	e130	e750	38	165	43	e17	e10
20	e200	e110	355	e65	e80	142	e720	36	126	42	e15	e20
21	e180	e100	340	e64	e76	158	e720	34	105	40	e18	e40
22	e160	e98	292	e62	e72	e200	e760	39	102	e38	e17	e52
23	e140	e96	e260	e61	e70	e270	e800	48	96	e34	e15	e45
24	e120	e94	e240	e60	e68	e380	e730	57	101	e30	e13	e40
25	e110	e90	e220	e60	e70	e390	e600	57	89	e25	e12	e38
26	e95	e80	e200	e58	e90	e340	e550	50	72	e30	e12	e70
27	e85	e120	e180	e56	e80	e320	e500	51	61	e33	e11	e64
28	e76	e140	e170	e54	e75	e290	e450	60	52	e30	e10	e60
29	e72	e135	e160	e52	---	e280	388	83	43	e28	e10	e50
30	e70	e130	e150	e60	---	e260	338	78	37	e30	e11	e40
31	e74	---	e140	106	---	e250	---	68	---	e23	e10	---
TOTAL	3088	3177	5168	2509	2763	4876	18186	2412	3893	2406	603	777
MEAN	99.6	106	167	80.9	98.7	157	606	77.8	130	77.6	19.5	25.9
MAX	200	170	452	130	146	390	1250	294	385	241	45	70
MIN	36	60	60	52	68	64	220	34	37	23	10	10

CONNECTICUT RIVER BASIN

01162000 MILLERS RIVER NEAR WINCHENDON, MA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2001, BY WATER YEAR (WY)

MEAN	95.9	119	142	141	137	261	377	180	114	61.5	51.7	65.9
MAX	520	416	500	385	400	931	788	412	515	261	249	752
(WY)	1956	1956	1997	1996	1976	1936	1960	1967	1984	1938	1928	1938
MIN	11.6	15.7	30.7	13.3	24.4	39.0	83.3	44.7	14.1	8.17	8.24	5.75
(WY)	1948	1979	1979	1981	1980	1965	1999	1999	1964	1965	1965	1964

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1916 - 2001	
ANNUAL TOTAL	61560		49858			
ANNUAL MEAN	168		137		145	
HIGHEST ANNUAL MEAN					238	
LOWEST ANNUAL MEAN					38.5	
HIGHEST DAILY MEAN	614	Apr 24	1250	Apr 14	6130	Sep 22 1938
LOWEST DAILY MEAN	18	Sep 12	10	Aug 28	3.1	Oct 4 1930
ANNUAL SEVEN-DAY MINIMUM	22	Sep 8	11	Aug 25	4.5	Sep 24 1939
MAXIMUM PEAK FLOW			e1280	Apr 14	8500	Sep 22 1938
MAXIMUM PEAK STAGE			11.06	Apr 17	21.55	Sep 22 1938
INSTANTANEOUS LOW FLOW			10	Aug 28	.00	Sep 20 1918
10 PERCENT EXCEEDS	391		293		336	
50 PERCENT EXCEEDS	126		80		89	
90 PERCENT EXCEEDS	37		18		19	

e Estimated



CONNECTICUT RIVER BASIN

01163200 OTTER RIVER AT OTTER RIVER, MA

LOCATION.--Lat 42°35'18", long 72°02'29", Worcester County, Hydrologic Unit 01080202, on right bank at upstream side of Turner Street Bridge, 0.2 mi upstream from Bailey Brook, 0.8 mi southeast of Otter River, and 2 mi northwest of Gardner.

DRAINAGE AREA.--34.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: December 1964 to current year.

Water-quality records: Water year 1965-69, 1994.

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

GAGE.--Water-stage recorder. Elevation of gage is 900 ft above sea level from topographic map.

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

AVERAGE DISCHARGE.--36 years (water years 1966-present), 62.9 ft<sup>3</sup>/s, 25.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 948 ft<sup>3</sup>/s, Mar. 7, 1979, gage height, 5.02 ft; minimum, 2.0 ft<sup>3</sup>/s, Sept. 5, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 711 ft<sup>3</sup>/s, June 18, gage height, 4.42 ft; minimum, 2.4 ft<sup>3</sup>/s, Aug. 31.

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	21	21	52	e37	48	39	140	76	46	102	7.6	3.9
2	20	22	47	e35	49	35	125	83	64	184	7.5	3.9
3	20	22	41	e33	46	31	111	71	111	146	9.6	3.4
4	17	21	37	e32	43	30	100	63	118	94	43	3.2
5	18	21	35	e32	33	29	117	53	93	73	54	3.6
6	44	22	30	e33	e46	46	142	48	71	76	28	3.4
7	65	24	25	e32	45	43	176	45	54	52	21	3.6
8	55	22	23	e31	39	38	226	41	40	43	16	3.7
9	42	22	21	e31	38	36	263	37	33	42	11	10
10	34	38	20	e31	54	36	429	38	28	36	9.4	5.9
11	29	63	19	e30	e70	36	572	34	27	48	8.5	5.8
12	26	62	26	e29	e66	34	565	29	66	38	7.2	4.2
13	24	52	28	e30	51	39	560	26	61	25	7.4	3.8
14	23	45	28	e29	48	51	570	23	51	16	8.3	4.3
15	21	80	28	e28	56	52	528	23	43	13	7.5	5.6
16	20	78	26	e28	56	58	465	22	38	11	6.3	6.0
17	22	59	102	28	50	62	405	25	154	15	8.1	4.8
18	23	48	277	26	e48	66	330	23	638	22	13	4.6
19	47	43	238	26	45	66	281	26	587	22	9.5	15
20	e45	39	151	27	38	69	232	24	338	20	16	12
21	e44	35	111	e27	37	74	202	20	203	47	21	26
22	34	33	79	e26	e35	180	197	20	145	90	11	31
23	28	31	71	27	33	286	204	30	124	31	8.2	19
24	25	28	56	25	32	284	186	46	100	11	5.4	12
25	23	27	e50	24	31	262	165	41	82	9.9	8.8	20
26	23	31	e42	24	43	232	139	37	67	18	5.6	32
27	21	49	40	23	46	193	126	36	58	21	4.1	24
28	20	52	38	23	42	166	105	38	46	17	3.8	18
29	18	55	36	22	---	147	91	52	38	51	3.6	15
30	18	54	34	26	---	110	81	49	39	25	3.4	13
31	21	---	42	39	---	156	---	45	---	10	3.1	---
TOTAL	891	1199	1853	894	1268	2986	7833	1224	3563	1408.9	376.9	320.7
MEAN	28.7	40.0	59.8	28.8	45.3	96.3	261	39.5	119	45.4	12.2	10.7
MAX	65	80	277	39	70	286	572	83	638	184	54	32
MIN	17	21	19	22	31	29	81	20	27	9.9	3.1	3.2
CFSM	.84	1.17	1.75	.85	1.33	2.82	7.66	1.16	3.48	1.33	.36	.31
IN.	.97	1.31	2.02	.98	1.38	3.26	8.55	1.34	3.89	1.54	.41	.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2001, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	
MEAN	41.3	58.0	67.9	62.9	66.9	111	130	73.8	54.8	27.2	25.4	25.0																				
MAX	117	123	200	149	153	223	279	139	155	58.2	87.5	85.5																				
(WY)	1980	1996	1997	1979	1976	1979	1987	1984	1998	1967	1991	1991																				
MIN	8.27	14.7	18.1	9.64	17.3	38.4	45.0	27.6	9.22	8.20	4.44	5.48																				
(WY)	1969	1979	1965	1981	1977	1965	1985	1965	1999	1966	1966	1995																				

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1965 - 2001

ANNUAL TOTAL	24555	23817.5	
ANNUAL MEAN	67.1	65.3	62.9
HIGHEST ANNUAL MEAN			90.0
LOWEST ANNUAL MEAN			30.2
HIGHEST DAILY MEAN	379	Apr 23	638 Jun 18
LOWEST DAILY MEAN	10	Sep 9	3.1 Aug 31
ANNUAL SEVEN-DAY MINIMUM	11	Sep 6	3.5 Aug 29
MAXIMUM PEAK FLOW			711 Jun 18
MAXIMUM PEAK STAGE			4.42 Jun 18
INSTANTANEOUS LOW FLOW			2.4 Aug 31
ANNUAL RUNOFF (CFSM)	1.97	1.91	2.0
ANNUAL RUNOFF (INCHES)	26.79	25.98	1.84
10 PERCENT EXCEEDS	130	149	137
50 PERCENT EXCEEDS	47	36	41
90 PERCENT EXCEEDS	20	9.5	11

e Estimated



CONNECTICUT RIVER BASIN

01168500 DEERFIELD RIVER AT CHARLEMONT, MA

LOCATION.--Lat 42°37'33", long 72°51'20", Franklin County, Hydrologic Unit 01080203, on left bank 0.8 mi east of Charlemont, 2.5 mi downstream from Chickley River, and at mile 24.5.

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

PERIOD OF RECORD.--Discharge: June 1913 to current year.  
Water-quality records: Water years 1954-55, 1958, 1967-69, 1995.

REVISED RECORDS.--WSP 781: 1915(M). WSP 1301: 1918(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 517.36 ft above sea level.

REMARKS--Records good except those for estimated daily discharge, discharges between Jan. 26 and Apr. 5, and those above 1,000 ft<sup>3</sup>/s, which are fair. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants upstream. Telephone and satellite gage-height telemeter at station. Measurements of water temperature and air temperature were made during the year.

AVERAGE DISCHARGE.--88 years, 902 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 20.17 ft, from floodmarks, from rating curve extended above 31,000 ft<sup>3</sup>/s on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft and 20.17 ft; minimum daily, 5 ft<sup>3</sup>/s, June 17, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,870 ft<sup>3</sup>/s, Dec. 17, gage height, 7.83 ft; minimum daily, 103 ft<sup>3</sup>/s, Sept. 3.

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	320	658	840	818	830	735	632	1900	884	1050	225	268
2	265	715	1090	1320	902	410	589	2100	2330	793	363	238
3	276	480	499	1340	847	516	495	1930	5010	536	515	103
4	448	459	600	1180	1050	473	587	1550	4490	421	337	223
5	395	410	643	1150	849	824	693	1410	2570	602	248	280
6	743	384	817	925	1020	744	901	979	1550	627	472	209
7	683	607	1100	394	774	782	893	476	884	349	509	229
8	680	e650	1140	1030	787	649	1680	513	637	305	591	215
9	333	e760	1020	718	1110	806	2150	561	627	690	618	220
10	780	947	710	1120	1130	545	3010	560	454	576	603	247
11	785	903	803	1090	926	799	2650	503	576	533	383	227
12	782	556	517	877	818	758	2910	393	1000	359	271	212
13	666	508	906	1070	976	806	3290	320	997	269	381	259
14	362	870	818	701	876	733	3240	202	610	293	366	227
15	314	1250	735	744	1140	299	2550	294	591	271	239	213
16	455	1050	517	808	1210	270	2380	268	639	441	286	210
17	e1050	1070	3730	663	1210	237	2060	248	1030	383	278	229
18	e1200	1180	3130	732	775	386	1980	268	1100	450	325	246
19	e1350	867	1540	905	690	812	1880	278	1080	329	275	222
20	950	920	1060	745	728	913	2130	271	864	262	220	279
21	741	900	941	496	621	593	2640	211	710	252	269	321
22	471	858	1110	835	854	1110	4400	301	429	311	217	244
23	486	662	1030	778	1050	1020	4770	504	458	551	237	132
24	461	455	877	972	811	834	5090	1300	350	531	216	193
25	485	614	993	844	589	683	4660	1380	314	523	270	1130
26	643	715	1430	995	812	680	3100	843	548	505	237	665
27	829	603	816	602	1020	667	2800	1820	411	584	226	322
28	475	843	1210	291	852	695	2570	1890	472	311	175	266
29	445	605	695	440	---	746	2180	1510	492	260	233	271
30	747	717	977	473	---	869	1830	1160	720	222	214	254
31	795	---	902	753	---	607	---	801	---	205	252	---
TOTAL	19415	22216	33196	25809	25257	21001	70740	26744	32827	13794	10051	8354
MEAN	626	741	1071	833	902	677	2358	863	1094	445	324	278
MAX	1350	1250	3730	1340	1210	1110	5090	2100	5010	1050	618	1130
MIN	265	384	499	291	589	237	495	202	314	205	175	103

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2001, BY WATER YEAR (WY)

	606	838	991	995	989	1375	1857	1127	659	453	459	480
MEAN	606	838	991	995	989	1375	1857	1127	659	453	459	480
MAX	2766	2123	2026	2092	2450	3642	4106	2889	1820	1611	1886	2404
(WY)	1956	1956	1928	1978	1981	1921	1914	1943	1998	1915	1976	1938
MIN	90.8	177	133	363	268	429	529	280	188	78.1	131	74.0
(WY)	1915	1915	1915	1914	1919	1931	1995	1995	1941	1962	1964	1953

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1913 - 2001

ANNUAL TOTAL	404264	309404	
ANNUAL MEAN	1105	848	902
HIGHEST ANNUAL MEAN			1364
LOWEST ANNUAL MEAN			455
HIGHEST DAILY MEAN	10800	Jul 16	31100
LOWEST DAILY MEAN	220	Sep 25	5.0
ANNUAL SEVEN-DAY MINIMUM	278	Sep 25	34
MAXIMUM PEAK FLOW			8870
MAXIMUM PEAK STAGE		7.83	Dec 17
INSTANTANEOUS LOW FLOW		95	Aug 26
10 PERCENT EXCEEDS	1670	1540	1690
50 PERCENT EXCEEDS	990	680	686
90 PERCENT EXCEEDS	474	248	189

e Estimated



CONNECTICUT RIVER BASIN

01169000 NORTH RIVER AT SHATTUCKVILLE, MA

LOCATION.--Lat 42°38'18", long 72°43'32", Franklin County, Hydrologic Unit 01080203, on right bank in Shattuckville, 1.2 mi south of Griswoldville, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--89.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1939 to current year. October and November 1939 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1957, 1967-69, 1994-95.

REVISED RECORDS.--WSP 1111: 1945(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 458.36 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diurnal fluctuation at times caused by mill upstream; because storage capacity is small, daily flows are not affected appreciably. Prior to 1950, greater regulation by mill. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--62 years, 188 ft<sup>3</sup>/s, 28.63 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft<sup>3</sup>/s, Apr. 5, 1987, gage height, 11.19 ft, from rating curve extended above 2,900 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 9.55 ft and 11.19 ft; minimum daily, 5.1 ft<sup>3</sup>/s, Oct. 3, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,370 ft<sup>3</sup>/s, Dec. 17, gage height, 8.01 ft; minimum, 6.4 ft<sup>3</sup>/s, Sept. 1-7.

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	68	86	146	e174	134	e88	161	367	151	201	34	e60
2	67	83	123	e156	e108	e80	149	350	931	210	31	e30
3	65	79	e88	e142	e91	78	148	296	2220	99	28	e22
4	62	77	e103	e140	e84	76	164	244	950	79	28	e24
5	64	75	e105	e133	e85	81	200	203	500	80	28	e20
6	368	74	e97	e122	e85	71	239	175	350	80	28	e18
7	221	73	e89	e109	e85	88	303	157	269	65	26	e15
8	144	72	e85	e106	e85	e80	531	144	219	62	24	14
9	115	71	e83	e106	e87	79	703	135	183	96	22	16
10	103	295	e83	e100	e109	80	1190	126	160	72	22	17
11	98	309	94	e96	e131	e76	1110	111	175	72	35	30
12	94	187	116	e95	e148	81	1260	104	386	63	31	24
13	86	147	e108	e94	e135	83	1580	102	225	56	39	19
14	81	192	93	e91	e122	87	1590	89	170	52	32	23
15	76	405	101	91	e115	85	1320	84	141	49	26	27
16	80	225	e92	91	e113	98	1160	82	125	46	23	21
17	104	180	1920	91	e109	110	1020	82	159	60	22	18
18	284	153	996	e86	e102	118	903	79	156	67	23	17
19	413	137	426	87	e98	106	746	79	113	51	22	16
20	212	127	322	85	e95	114	782	72	97	45	20	18
21	162	123	e232	e84	e88	136	1050	67	91	40	20	268
22	134	116	e197	e79	e82	409	1980	105	89	37	19	95
23	118	106	e181	e77	e82	384	1830	325	99	34	17	53
24	111	96	e148	e76	e82	273	1630	549	124	32	16	38
25	106	109	e135	e76	e85	230	1110	421	93	30	15	519
26	102	154	e124	e75	e86	198	687	330	79	59	14	259
27	96	274	e127	e74	e87	182	582	636	70	65	14	96
28	91	207	e131	e73	e88	167	518	377	63	43	15	64
29	88	170	e142	e72	---	161	423	270	59	36	12	54
30	88	159	e152	e74	---	161	373	206	57	32	11	47
31	90	---	e167	149	---	179	---	181	---	30	11	---
TOTAL	3991	4561	7006	3104	2801	4239	25442	6548	8504	2043	708	1942
MEAN	129	152	226	100	100	137	848	211	283	65.9	22.8	64.7
MAX	413	405	1920	174	148	409	1980	636	2220	210	39	519
MIN	62	71	83	72	82	71	148	67	57	30	11	14
CFSM	1.45	1.71	2.54	1.13	1.12	1.54	9.53	2.37	3.19	.74	.26	.73
IN.	1.67	1.91	2.93	1.30	1.17	1.77	10.63	2.74	3.55	.85	.30	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	MEAN	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	101	174	180	149	158	337	565	273	141	69.4	51.9	56.1																																																			
MAX	832	468	522	398	801	866	1076	772	417	316	285	306																																																			
(WY)	1956	1956	1974	1978	1981	1953	1969	1984	1973	2000	2000	1960																																																			
MIN	11.8	25.4	47.3	24.2	23.7	46.2	169	85.3	28.4	17.5	12.5	9.00																																																			
(WY)	1965	1965	1999	1981	1940	1940	1981	1986	1965	1962	1956	1953																																																			

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1940 - 2001	
ANNUAL TOTAL	90712		70889			
ANNUAL MEAN	248		194		188	
HIGHEST ANNUAL MEAN					299	
LOWEST ANNUAL MEAN					79.9	
HIGHEST DAILY MEAN	3890	Jul 16	2220	Jun 3	8740	Oct 15 1955
LOWEST DAILY MEAN	42	Jul 14	11	Aug 30	5.1	Oct 3 1948
ANNUAL SEVEN-DAY MINIMUM	57	Sep 6	13	Aug 25	6.3	Sep 1 1953
MAXIMUM PEAK FLOW			5370	Dec 17	14200	Apr 5 1987
MAXIMUM PEAK STAGE			8.01	Dec 17	11.19	Apr 5 1987
INSTANTANEOUS LOW FLOW			6.4	Sep 1		
ANNUAL RUNOFF (CFSM)	2.78		2.18		2.11	
ANNUAL RUNOFF (INCHES)	37.92		29.63		28.63	
10 PERCENT EXCEEDS	462		394		428	
50 PERCENT EXCEEDS	168		96		94	
90 PERCENT EXCEEDS	73		26		21	

e Estimated

CONNECTICUT RIVER BASIN

01169900 SOUTH RIVER NEAR CONWAY, MA

LOCATION.--Lat 42°32'31", long 72°41'39", Franklin County, Hydrologic Unit 01080203, on left bank at upstream side of Reeds Bridge just off Bardwell Road, 2.2 mi north of Conway, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--24.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: June 1966 to current year.  
Water-quality records: Water years 1967-69, 1994-95.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1968-70(P), 1971(M), 1972(P). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 460 ft above sea level, from topographic map. Prior to Oct. 7, 1970, at downstream side of bridge at same site and datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diurnal fluctuation by small power-plant upstream since April 1982.

AVERAGE DISCHARGE.--35 years, 53.4 ft<sup>3</sup>/s, 30.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft<sup>3</sup>/s, Apr. 4, 1987, gage height, 10.16 ft, minimum, 2.1 ft<sup>3</sup>/s (estimated), Sept. 13, 1995, but may have been lower earlier in the month.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,390 ft<sup>3</sup>/s, Dec. 17, gage height, 7.51 ft; minimum, 2.5 ft<sup>3</sup>/s, Sept. 20.

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	16	18	41	e50	e46	e29	76	76	e40	39	e7.8	e20
2	15	17	35	e47	e40	e28	72	70	e254	33	e7.0	e9.0
3	15	16	e33	e45	e34	e27	74	65	e431	21	e7.0	e6.0
4	14	16	e33	e44	e32	e26	84	61	e174	19	e7.0	e5.0
5	17	15	e32	e43	e31	e26	99	56	109	29	e7.0	e4.4
6	88	15	e31	e42	e30	e28	110	49	93	47	e6.5	e4.0
7	41	15	e30	e40	e30	e35	144	48	79	23	e6.0	3.3
8	28	15	e29	e39	e29	e30	376	44	68	21	e5.4	3.2
9	24	14	e28	e37	e31	e28	379	41	58	53	e5.0	3.1
10	22	64	e27	e36	e34	e30	582	41	48	27	e6.0	4.4
11	21	60	e26	e35	e40	e29	477	37	54	31	e7.0	11
12	19	34	e25	e34	e50	e28	540	34	109	22	e8.0	5.1
13	18	27	e24	e34	e47	e31	599	31	58	18	e9.0	4.1
14	17	41	e23	e33	e44	e30	540	26	47	17	e7.0	7.1
15	16	71	e27	e33	e42	e31	457	25	41	15	e6.0	6.4
16	17	38	93	e32	e43	e33	391	25	37	14	e5.4	4.7
17	25	32	743	e32	e41	e33	319	25	90	19	e5.0	4.1
18	41	28	176	e31	e39	e35	275	24	59	20	e5.2	3.9
19	53	27	82	e31	e38	37	232	25	41	18	e5.0	3.7
20	30	25	68	e30	e37	41	227	22	34	14	e4.5	3.6
21	25	25	e60	e30	e35	45	284	20	32	12	e4.7	e6.0
22	22	24	e55	e29	e33	518	385	42	31	11	e4.4	e19
23	21	22	e50	e28	e31	217	298	e108	33	9.8	e4.0	e10
24	20	34	e48	e27	e29	130	214	e158	40	9.5	e3.8	e7.8
25	20	57	e46	e27	e29	106	151	e108	30	8.9	e3.5	e69
26	19	73	e44	e26	e31	89	127	e121	25	24	e3.5	e31
27	19	69	e43	e26	e30	79	111	e174	22	e16	e3.5	e15
28	18	44	e42	e25	e30	74	100	e113	19	e11	e3.4	e11
29	17	36	e42	e25	---	70	89	e77	18	e9.6	e3.2	e8.9
30	18	43	e44	e27	---	71	83	e57	20	e8.8	e3.0	e7.5
31	18	---	e45	e50	---	82	---	e48	---	e8.3	e3.0	---
TOTAL	754	1015	2125	1068	1006	2096	7895	1851	2194	628.9	166.8	301.3
MEAN	24.3	33.8	68.5	34.5	35.9	67.6	263	59.7	73.1	20.3	5.38	10.0
MAX	88	73	743	50	50	518	599	174	431	53	9.0	69
MIN	14	14	23	25	29	26	72	20	18	8.3	3.0	3.1
CFSM	1.01	1.40	2.84	1.43	1.49	2.81	10.9	2.48	3.03	.84	.22	.42
IN.	1.16	1.57	3.28	1.65	1.55	3.24	12.19	2.86	3.39	.97	.26	.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2001, BY WATER YEAR (WY)

MEAN	29.5	49.8	53.7	47.7	52.2	96.7	131	72.4	48.2	22.5	18.4	18.6
MAX	85.5	142	142	135	163	183	263	171	144	80.7	91.9	101
(WY)	1976	1996	1974	1996	1981	1999	2001	1984	1982	2000	2000	1999
MIN	6.22	11.0	12.6	7.27	14.1	32.3	32.6	23.5	12.6	5.92	4.45	4.17
(WY)	1983	1983	1999	1981	1980	1967	1985	1995	1985	1991	1999	1995

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1966 - 2001

ANNUAL TOTAL	25551	21101.0										
ANNUAL MEAN	69.8	57.8								53.4		
HIGHEST ANNUAL MEAN										82.6		1996
LOWEST ANNUAL MEAN										21.5		1985
HIGHEST DAILY MEAN	891	Jul 16	743	Dec 17	1570	Jun 6	1982					
LOWEST DAILY MEAN	11	Jul 14	3.0	Aug 30	1.6	Aug 8	1999					
ANNUAL SEVEN-DAY MINIMUM	14	Jul 9	3.3	Aug 25	2.0	Aug 5	1999					
MAXIMUM PEAK FLOW			2390	Dec 17	5750	Apr 4	1987					
MAXIMUM PEAK STAGE			7.51	Dec 17	10.16	Apr 4	1987					
ANNUAL RUNOFF (CFSM)	2.90		2.40		2.21							
ANNUAL RUNOFF (INCHES)	39.44		32.57		30.09							
10 PERCENT EXCEEDS	126		108		112							
50 PERCENT EXCEEDS	46		31		30							
90 PERCENT EXCEEDS	19		6.0		7.2							

e Estimated

CONNECTICUT RIVER BASIN

01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA

LOCATION.--Lat 42°32'09", long 72°39'14", Franklin County, Hydrologic Unit 01080203, on right bank 0.4 mi downstream from South River, 1.2 mi west of West Deerfield, 2.5 mi west of Deerfield, and 9.2 mi upstream from mouth.

DRAINAGE AREA.--557 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: March to November 1904, January 1905, March to December 1905, October 1940 to current year, published as "at Deerfield" 1904-5.  
Water-quality records: June 1994.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area. WDR MA-RI-92-1: 1991.

GAGE.--Water-stage recorder. Elevation of gage is 155 ft above sea level, from topographic map. Prior to Dec. 16, 1905, nonrecording gage at site 1.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated since 1913 by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--61 years (water years 1941-2001), 1,318 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,700 ft<sup>3</sup>/s, Apr. 5, 1987, gage height, 17.71 ft; minimum daily, 28 ft<sup>3</sup>/s, July 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,900 ft<sup>3</sup>/s, Dec. 17, gage height, 9.43; minimum daily, 265 ft<sup>3</sup>/s, Sept. 19.

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	402	e773	1090	1060	1140	1070	1090	2560	1290	1360	290	307
2	389	904	1510	1440	1260	721	1040	2800	3600	1580	380	316
3	377	630	762	1900	1110	706	924	2590	9270	754	506	304
4	543	662	936	2030	1410	571	1080	2180	6730	696	604	285
5	556	520	913	1770	1330	1010	1250	1890	3850	816	367	282
6	1350	516	1040	1580	1360	1010	1580	1540	2370	834	458	282
7	1150	615	1400	842	1070	1150	1900	780	1510	639	601	278
8	924	695	1360	1360	1100	979	3300	815	1140	452	690	279
9	620	717	1290	1240	1470	968	4170	813	971	850	767	278
10	943	1300	957	1340	1490	922	6430	821	941	826	688	286
11	987	1720	1030	1770	1220	971	5600	856	927	772	623	305
12	977	1030	881	1520	1200	981	6150	518	1670	683	320	294
13	937	848	1080	1640	1430	1110	6780	574	1520	372	457	289
14	498	1110	1050	1340	1260	1150	6960	481	1010	393	441	314
15	418	2080	1000	1140	1600	557	5460	424	887	357	365	341
16	582	1570	899	1340	1630	543	4910	422	922	506	357	324
17	955	1470	7450	860	1510	524	4160	465	1480	604	336	297
18	1040	1610	5670	979	1060	650	3850	402	1550	664	336	278
19	2160	1140	2520	1130	996	1090	3400	396	1420	521	377	265
20	1450	1260	1850	1030	1040	1330	3580	395	1080	335	345	286
21	1000	1220	1400	852	949	990	4500	403	1060	380	299	1120
22	744	1150	1620	1050	949	2900	7370	465	707	362	297	344
23	668	1060	1440	1250	1430	2160	8030	1200	667	682	295	321
24	647	679	1500	1380	1130	1760	7560	2140	708	679	293	301
25	723	848	1680	1070	970	1230	7170	2350	527	631	290	1620
26	733	1020	1980	1300	960	1290	4580	1560	637	698	286	1500
27	982	1210	1610	892	1310	1140	3950	2920	682	859	277	413
28	692	1340	1560	520	1180	1040	3690	2800	591	486	279	374
29	613	1090	1130	590	---	1280	3070	2350	582	349	272	404
30	851	1080	1170	719	---	1370	2640	1710	821	318	287	325
31	967	---	1220	1040	---	1160	---	1230	---	298	285	---
TOTAL	25878	31867	50998	37974	34564	34333	126174	40850	51120	19756	12468	12612
MEAN	835	1062	1645	1225	1234	1108	4206	1318	1704	637	402	420
MAX	2160	2080	7450	2030	1630	2900	8030	2920	9270	1580	767	1620
MIN	377	516	762	520	949	524	924	395	527	298	272	265

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2001, BY WATER YEAR (WY)

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	842	1216	1444	1414	1443	2118	2935	1704	975	587	570	608																																																																																						
MAX	4632	3302	3156	2801	3890	4771	5320	4094	2693	1955	2142	2112																																																																																						
(WY)	1956	1956	1997	1978	1981	1953	1993	1984	1998	2000	1976	1905																																																																																						
MIN	228	244	385	622	693	1083	928	484	307	119	167	94.5																																																																																						
(WY)	1983	1965	1965	1965	1944	1962	1995	1995	1964	1962	1964	1953																																																																																						

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1904 - 2001

ANNUAL TOTAL	609441	478594	
ANNUAL MEAN	1665	1311	1318
HIGHEST ANNUAL MEAN			1840
LOWEST ANNUAL MEAN			629
HIGHEST DAILY MEAN	11900	Jul 16	9270
LOWEST DAILY MEAN	377	Oct 3	265
ANNUAL SEVEN-DAY MINIMUM	416	Sep 27	281
MAXIMUM PEAK FLOW			19900
MAXIMUM PEAK STAGE			9.43
INSTANTANEOUS LOW FLOW			199
10 PERCENT EXCEEDS	2540		2430
50 PERCENT EXCEEDS	1500		981
90 PERCENT EXCEEDS	707		325
			270

e Estimated



CONNECTICUT RIVER BASIN

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA

LOCATION.--Lat 42°34'43" (revised), long 72°34'30", Franklin County, Hydrologic Unit 01080201, on left bank 75 ft downstream from railroad bridge at Montague City, 1,000 ft downstream from Deerfield River, and at mile 119.0.

DRAINAGE AREA.--7,860 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: March 1904 to current year. Prior to October 1929, published as "at Sunderland." Records published for both sites October 1929 to September 1932. Water-quality records: Water years 1994-95.

REVISED RECORDS.--WSP 471: 1904-17. WSP 741: 1930-32. WSP 781: 1928(M). WSP 1051: 1905, 1909-10, 1912-14, 1920, 1922-23, 1925-26, 1928, drainage area at Sunderland. WSP 1301: 1905(M), 1914-19(M), 1930-31(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 99.87 ft above sea level. Prior to Oct. 1, 1917, nonrecording gage; Oct. 1, 1917, to Oct. 8, 1921, water-stage recorder used for low stages, nonrecording gage otherwise; and Oct. 9, 1921, to Sept. 30, 1932, water-stage recorder; all at site 9 mi downstream at datum 1.00 ft lower. Since Oct. 1, 1929, water-stage recorder at present site and datum.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, and other reservoirs, combined usable capacity, about 43,400,000,000 ft<sup>3</sup>. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--97 years, 13,970 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236,000 ft<sup>3</sup>/s, Mar. 19, 1936, gage height, 49.2 ft, from floodmarks; minimum daily, 215 ft<sup>3</sup>/s, Aug. 31, Sept. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 93,200 ft<sup>3</sup>/s, Apr. 24, gage height, 30.62 ft; minimum daily, 1,440 ft<sup>3</sup>/s, Aug. 26.

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

Table with columns for DAY (1-31), MONTH (OCT-SEP), and DISCHARGE (CUBIC FEET PER SECOND). Includes summary rows for TOTAL, MEAN, MAX, and MIN for each month.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2001, BY WATER YEAR (WY). Table with columns for MEAN, MAX, MIN and rows for each month (OCT-SEP).

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR, FOR 2001 WATER YEAR, WATER YEARS 1904 - 2001. Table with columns for ANNUAL TOTAL, ANNUAL MEAN, HIGHEST ANNUAL MEAN, LOWEST ANNUAL MEAN, HIGHEST DAILY MEAN, LOWEST DAILY MEAN, ANNUAL SEVEN-DAY MINIMUM, MAXIMUM PEAK FLOW, MAXIMUM PEAK STAGE, INSTANTANEOUS LOW FLOW, and 10, 50, 90 PERCENT EXCEEDS.

e Estimated

CONNECTICUT RIVER BASIN

01171500 MILL RIVER AT NORTHAMPTON, MA

LOCATION.--Lat 42°19'05", long 72°39'21", Hampshire County, Hydrologic Unit 01080201, on right bank at Northampton 3.5 mi upstream from mouth.

DRAINAGE AREA.--54.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1938 to current year. October 1938 monthly discharge only, published in WSP 1301. Water-quality records: Water years 1957-59, 1971, 1973, 1994.

REVISED RECORDS.--WSP 921: 1940. WSP 1231: 1940-42(M), 1944-45(M), 1948(M), 1949.

GAGE.--Water-stage recorder and concrete control. Elevation of gage is 140 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow regulated by mill upstream.

AVERAGE DISCHARGE.--62 years, 99.1 ft<sup>3</sup>/s, 24.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 11.78 ft, from rating curve extended above 3,700 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum, 2.2 ft<sup>3</sup>/s, Oct. 1, 1950; minimum daily, 4.2 ft<sup>3</sup>/s, Aug. 21, 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft<sup>3</sup>/s, Dec. 17, gage height, 6.70 ft; minimum, 3.9 ft<sup>3</sup>/s, Aug. 25, 26.

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

1	32	e35	64	e88	e60	e54	237	88	79	49	11	5.8
2	33	e33	56	e76	e54	e47	203	80	302	49	10	6.4
3	33	e32	48	e70	e49	e54	196	76	595	35	10	5.2
4	31	e31	e46	e64	e47	e46	214	70	343	31	14	7.6
5	34	32	e44	e60	e60	e48	257	64	198	36	18	11
6	129	32	e42	e56	e90	157	298	59	145	35	15	7.0
7	79	32	e40	e55	e66	86	378	56	116	28	13	5.6
8	54	30	e39	e54	e45	54	774	55	97	27	11	4.9
9	47	30	e37	e53	e52	53	713	52	86	37	8.9	4.6
10	43	87	e42	e54	e65	57	902	49	76	54	8.3	6.7
11	41	96	49	e56	e88	55	666	47	78	81	8.1	15
12	36	61	55	e49	e72	55	718	46	136	44	8.4	10
13	37	49	53	e44	e58	69	675	41	92	32	14	6.4
14	46	55	84	e40	e64	82	614	39	74	29	13	15
15	45	120	49	e45	e72	80	505	37	65	26	12	15
16	46	71	49	e52	e62	86	437	36	60	25	9.4	9.3
17	41	58	801	e49	e56	93	359	37	189	28	7.8	7.5
18	55	51	501	e46	e68	100	307	37	141	30	7.6	7.3
19	99	48	206	e42	e58	101	256	37	80	24	7.1	6.8
20	63	46	160	e39	e52	111	229	35	63	21	6.9	9.0
21	52	44	135	e42	e50	128	234	38	58	18	7.2	196
22	46	43	121	e48	e52	942	247	80	56	17	7.0	64
23	43	41	111	e56	e56	604	226	199	65	15	6.0	30
24	43	39	e95	e47	e50	421	190	337	73	15	5.8	22
25	41	42	e84	e43	e54	328	153	262	57	13	4.8	88
26	42	70	e74	e39	e62	265	135	273	46	22	4.7	77
27	e41	133	e68	e37	e70	222	124	414	40	25	4.7	38
28	e38	81	e64	e36	e60	197	110	202	34	17	5.1	28
29	e36	66	e60	e38	---	187	99	137	32	16	5.0	24
30	e35	65	e58	e42	---	272	93	106	35	15	4.5	19
31	e37	---	e68	e52	---	291	---	90	---	12	4.5	---
TOTAL	1478	1653	3403	1572	1692	5345	10549	3179	3511	906	272.8	752.1
MEAN	47.7	55.1	110	50.7	60.4	172	352	103	117	29.2	8.80	25.1
MAX	129	133	801	88	90	942	902	414	595	81	18	196
MIN	31	30	37	36	45	46	93	35	32	12	4.5	4.6
CFSM	.88	1.02	2.03	.94	1.12	3.19	6.51	1.90	2.17	.54	.16	.46
IN.	1.02	1.14	2.34	1.08	1.17	3.68	7.27	2.19	2.42	.62	.19	.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2001, BY WATER YEAR (WY)

MEAN	55.6	88.5	99.9	92.2	104	195	234	132	79.3	39.8	35.3	36.0
MAX	456	334	307	287	338	475	478	326	300	146	254	215
(WY)	1956	1956	1997	1978	1981	1953	1993	1984	1982	2000	1955	1999
MIN	8.52	13.2	23.9	15.5	24.1	63.9	53.5	45.9	15.9	9.13	4.96	5.48
(WY)	1965	1965	1947	1981	1940	1989	1985	1985	1964	1957	1957	1957

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1939 - 2001
ANNUAL TOTAL	46598	34312.9	
ANNUAL MEAN	127	94.0	99.1
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			39.1
HIGHEST DAILY MEAN	1300	942	3870
LOWEST DAILY MEAN	25	4.5	3.8
ANNUAL SEVEN-DAY MINIMUM	31	4.8	4.3
MAXIMUM PEAK FLOW		2280	6300
MAXIMUM PEAK STAGE		6.70	11.78
INSTANTANEOUS LOW FLOW		3.9	2.2
ANNUAL RUNOFF (CFSM)	2.36	1.74	1.83
ANNUAL RUNOFF (INCHES)	32.10	23.64	24.93
10 PERCENT EXCEEDS	244	224	220
50 PERCENT EXCEEDS	82	52	57
90 PERCENT EXCEEDS	39	10	14

e Estimated

CONNECTICUT RIVER BASIN

01172003 CONNECTICUT RIVER BELOW HOLYOKE DAM AT HOLYOKE, MA

LOCATION.--Lat 42°12'36", long 72°35'44", Hampden County, Hydrologic Unit 01080201, on right bank, 2,200 ft downstream from dam of Holyoke Water Power Co. in Holyoke, MA. and at mile 86.

DRAINAGE AREA.--8,309 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 43.276 ft above sea level.

REMARKS.--Records good. Flow regulated by powerplants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, and other reservoirs, combined usable capacity, about 47 billion ft<sup>3</sup>. Records do not include water diverted around gage by Holyoke Water Power Company for industrial use. Telephone gage-height telemeter at this station.

AVERAGE DISCHARGE.--16 years (water years 1985--current year), 12,320 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft<sup>3</sup>/s, June 1, 1984, gage height, 25.62 ft; minimum daily, 519 ft<sup>3</sup>/s, Sept. 30, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1854, 244,000 ft<sup>3</sup>/s, Mar. 20, 1936, gage height, 35.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 89,100 ft<sup>3</sup>/s, Apr. 24, gage height, 18.12 ft; minimum daily, 465 ft<sup>3</sup>/s, Aug. 12.

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	1100	2110	6580	7770	6460	5640	11000	42400	10000	4220	1550	2790
2	1300	3850	8760	7660	6350	5180	9330	40200	10200	7300	1020	2550
3	2360	2100	7710	8430	6090	4600	8280	39100	26900	5920	762	1470
4	3780	877	7810	10800	7160	3030	6840	35600	41000	5960	774	1350
5	2820	1040	6780	10200	5550	3550	7860	34200	37000	5800	957	2020
6	3980	3320	6530	9380	4160	6310	10700	26300	30600	8110	1640	1840
7	3700	4280	6630	7100	7310	3620	14500	20600	22100	6520	3740	2530
8	5550	4820	7110	7460	6430	4990	19000	18600	16900	3240	2790	1520
9	4210	5510	5600	7700	7300	6450	25000	13400	12000	5560	2570	1230
10	3920	7450	4940	7080	8190	4920	38400	10800	9370	7400	4210	2190
11	4820	10000	4170	9210	6050	2840	46900	10200	8480	7120	2490	2110
12	4830	9130	3350	8700	5350	5430	49600	11700	11900	4830	465	1260
13	4170	9670	5780	7160	6390	6280	55200	10400	17000	3630	969	1680
14	4260	9150	6970	7830	7680	6800	68500	8780	15600	3010	3120	2420
15	1290	10200	5960	8040	7900	5280	75100	10500	11400	2920	1200	1080
16	2260	10800	4570	7480	7890	3320	73200	9690	7770	4440	1570	1080
17	4340	11200	8770	5430	8340	6280	66500	7620	8000	7120	1730	1190
18	3400	12000	52200	6550	6400	4720	61500	4950	9430	6740	2170	2470
19	8400	11200	67900	6440	5230	5890	54400	5610	9590	5650	663	1860
20	8580	9310	54700	5720	5000	6050	50100	6890	8120	5630	1270	1390
21	6760	8930	40700	3520	6000	6710	47300	6600	8180	3490	1580	3250
22	7710	7790	33000	4260	6810	13200	54000	8150	6700	3480	1070	3530
23	6930	6170	26100	6160	7260	16500	76800	8500	4010	3900	520	3130
24	7410	4720	16900	6300	6310	17300	86900	9480	4520	5600	842	2310
25	6080	4630	14000	6030	6140	17400	86300	8550	4660	5840	1770	3460
26	8450	4270	10800	5950	5650	15300	82800	7340	5840	4960	517	6370
27	10100	6090	8250	7040	4930	13700	80500	9510	3830	3110	1470	4680
28	5220	8960	9470	6300	5210	11600	78400	9900	2420	1180	2130	4510
29	4550	9910	9810	4120	---	11200	70500	11000	2130	1290	1040	4630
30	3500	8450	7260	5470	---	12900	57700	8840	2270	900	1000	2720
31	5670	---	8040	6180	---	13500	---	10700	---	1350	1290	---
TOTAL	151450	207937	467150	217470	179540	250490	1473110	466110	367920	146220	48889	74620
MEAN	4885	6931	15070	7015	6412	8080	49100	15040	12260	4717	1577	2487
MAX	10100	12000	67900	10800	8340	17400	86900	42400	41000	8110	4210	6370
MIN	1100	877	3350	3520	4160	2840	6840	4950	2130	900	465	1080

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	9047	11720	11490	10430	9779	18150	34680	17500	10590	6341	5477	4886						
MAX	16340	25800	27410	23660	21890	34660	58300	40670	31100	16930	14780	13840						
(WY)	1991	1996	1997	1996	1984	1990	1993	1996	1984	1996	1990	1999						
MIN	1512	3540	5787	4760	4250	8080	10270	7366	4056	2578	1577	1378						
(WY)	1985	1985	1985	1989	1987	2001	1995	1987	1999	1991	2001	1984						

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1984 - 2001

ANNUAL TOTAL	5236578	4050906		
ANNUAL MEAN	14310	11100	12320	
HIGHEST ANNUAL MEAN			19030	1996
LOWEST ANNUAL MEAN			6580	1985
HIGHEST DAILY MEAN	68200	Apr 6	86900	Apr 24 1984
LOWEST DAILY MEAN	877	Nov 4	465	Aug 12 2001
ANNUAL SEVEN-DAY MINIMUM	1780	Sep 6	1040	Jul 30 1984
MAXIMUM PEAK FLOW			89100	Apr 24 1984
MAXIMUM PEAK STAGE			18.12	Apr 24 1984
INSTANTANEOUS LOW FLOW			387	Aug 20 1995
10 PERCENT EXCEEDS	33500	26200	27400	
50 PERCENT EXCEEDS	9620	6370	8120	
90 PERCENT EXCEEDS	3540	1560	2960	

CONNECTICUT RIVER BASIN

01172500 WARE RIVER NEAR BARRE, MA

LOCATION.--Lat 42°25'34" (revised), long 72°01'30" Worcester County, Hydrologic Unit 01080204, on left bank 700 ft downstream from Barre Falls Reservoir, 1.6 mi upstream from Burnshirt River, 4 mi east of Barre, and at mile 33.3.

DRAINAGE AREA.--55.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: July 1946 to current year.  
Water-quality records: Water years 1957, 1994.

REVISED RECORDS.--WDR MA-RI-84-1: Drainage area. WDR MA-RI-89-1: 1984-88.

GAGE.--Water-stage recorder. Elevation of gage is 745 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to August 1955, slight regulation at low flow at times by Long Pond. Flow regulated by Barre Falls Reservoir (see table below for monthend contents) since 1958. Diversion at times since 1955 from 6.5 mi<sup>2</sup> upstream of station for municipal supply of Fitchburg. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--55 years, 95.5 ft<sup>3</sup>/s, 23.54 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft<sup>3</sup>/s, Oct. 16, 1955, gage height, 6.31 ft; no flow part of each day Sept. 3-8, 13, 1996; minimum daily discharge, 0.1 ft<sup>3</sup>/s, Sept. 8, 11, 1995. Maximum discharge since construction of Barre Falls Reservoir in 1958, 1,630 ft<sup>3</sup>/s, Apr. 13, 1987, gage height, 5.56 ft; maximum gage height, 5.62 ft, Mar. 14, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,120 ft<sup>3</sup>/s, Apr. 20, gage height, 5.14 ft; minimum daily, 1.8 ft<sup>3</sup>/s, Sept. 13.

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	16	28	73	44	75	68	349	88	60	585	8.0	5.0
2	14	31	e63	44	63	45	279	79	68	339	7.0	4.3
3	14	28	e54	44	40	38	260	71	91	112	7.1	3.5
4	13	25	e49	52	e41	39	238	66	97	84	12	3.7
5	13	26	e43	46	59	49	243	61	100	69	26	3.8
6	36	27	e41	41	65	61	273	60	177	64	27	3.4
7	36	26	e21	41	65	69	292	54	125	60	17	3.1
8	32	24	15	59	65	68	157	49	65	54	12	2.7
9	30	21	13	70	57	62	59	46	52	50	10	2.3
10	27	40	14	69	53	56	20	43	44	51	8.5	2.3
11	24	68	26	62	e53	56	32	61	38	66	7.7	2.2
12	22	85	32	49	e63	66	494	87	74	74	10	1.9
13	20	78	32	e35	75	69	765	71	74	62	18	1.8
14	22	69	32	23	85	68	753	54	64	66	25	3.7
15	23	86	43	24	74	75	774	44	51	64	19	4.9
16	20	86	52	34	73	78	878	40	41	47	16	4.1
17	21	78	46	50	74	79	970	49	41	41	14	3.2
18	21	67	133	53	e74	80	1030	48	13	58	15	2.7
19	33	60	445	43	e73	89	1040	39	168	62	12	2.4
20	31	53	340	39	61	92	1060	34	271	52	11	2.4
21	30	48	174	40	57	101	908	28	208	43	16	14
22	35	45	131	75	e57	42	355	39	327	28	13	15
23	30	41	96	69	52	309	259	51	338	20	15	10
24	27	e36	79	41	50	291	231	57	321	16	17	7.9
25	25	e32	76	55	50	299	204	56	317	14	13	31
26	24	40	62	43	58	476	180	53	305	16	10	51
27	28	59	69	32	71	545	148	52	110	18	8.6	39
28	47	71	65	33	83	582	122	e47	59	17	7.2	25
29	33	79	47	e32	---	591	107	e94	48	13	5.9	24
30	29	79	43	44	---	495	97	79	178	10	4.7	39
31	28	---	43	62	---	355	---	74	---	8.7	4.8	---
TOTAL	804	1536	2452	1448	1766	5393	12577	1774	3925	2263.7	397.5	319.3
MEAN	25.9	51.2	79.1	46.7	63.1	174	419	57.2	131	73.0	12.8	10.6
MAX	47	86	445	75	85	591	1060	94	338	585	27	51
MIN	13	21	13	23	40	38	20	28	13	8.7	4.7	1.8
(+)	2.4	3.8	30.8	30.3	19.6	41.8	3.4	3.0	3.2	1.8	1.6	2.3
MEAN††	26.1	51.7	89.2	46.5	58.6	182	404	57.1	131	72.6	12.7	10.9
CFSM††	0.47	0.94	1.62	0.84	1.06	3.30	7.34	1.04	2.38	1.32	0.23	0.20
IN††	0.55	1.05	1.87	0.97	1.11	3.81	8.19	1.19	2.65	1.52	0.27	0.22



CONNECTICUT RIVER BASIN

01172500 WARE RIVER NEAR BARRE, MA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2001, BY WATER YEAR (WY)

MEAN	52.9	81.9	102	103	110	180	233	121	75.8	33.0	29.0	26.2
MAX	275	233	327	285	274	365	559	257	368	102	169	205
(WY)	1956	1956	1997	1979	1996	1983	1987	1989	1984	1998	1955	1954
MIN	4.17	6.78	13.1	8.14	18.0	69.3	77.4	39.1	9.37	4.45	1.97	2.00
(WY)	1965	1965	1966	1981	1977	1967	1985	1999	1999	1999	1965	1953

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1946 - 2001	
ANNUAL TOTAL	35101.0		34655.5			
ANNUAL MEAN	95.9		94.9		95.5	
ADJUSTED ANNUAL MEAN††	95.8		95.2		95.5	
HIGHEST ANNUAL MEAN					157	
LOWEST ANNUAL MEAN					29.5	
HIGHEST DAILY MEAN	690	Apr 26	1060	Apr 20	1520	Oct 16 1955
LOWEST DAILY MEAN	6.6	Sep 12	1.8	Sep 13	.10	Sep 8 1995
ANNUAL SEVEN-DAY MINIMUM	8.3	Sep 6	2.3	Sep 7	.11	Sep 6 1995
MAXIMUM PEAK FLOW			1120	Apr 20	1890	Oct 16 1955
MAXIMUM PEAK STAGE			5.14	Apr 20	6.31	Oct 16 1955
INSTANTANEOUS LOW FLOW			1.1	Jun 18		
ADJUSTED RUNOFF (CFSM)††	1.74		1.73		1.73	
ADJUSTED RUNOFF (INCHES)††	23.68		23.40		23.54	
10 PERCENT EXCEEDS	201		249		220	
50 PERCENT EXCEEDS	60		49		60	
90 PERCENT EXCEEDS	19		10		7.4	

e Estimated

† Monthend contents, in millions of cubic feet (mcf), in Barre Falls Reservoir. Records furnished by U.S. Army Corps of Engineers. Monthend contents on Sept. 30, 2000, 2.4 mcf.

†† Adjusted for change in contents in Barre Falls Reservoir.

Note.--Except as footnoted, all statistics are based on unadjusted daily and monthly mean discharges.

CONNECTICUT RIVER BASIN

01173000 WARE RIVER AT INTAKE WORKS NEAR BARRE, MA

LOCATION.--Lat 42°23'26", long 72°03'39", Worcester County, Hydrologic Unit 01080204, on right bank above diversion dam at Ware River intake works, 2.7 mi downstream from Burnshirt River, 3 mi southeast of Barre, and at mile 29.1.

DRAINAGE AREA.--96.3 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1977, published as Ware River at Coldbrook.

REVISED RECORDS.--WSP 1031: 1944. WDR MA-RI-84-1: Drainage area.

GAGE.--Venturi meters and water-stage recorder. Datum of gage is 5.65 ft below sea level. Prior to Feb. 1, 1936, water-stage recorder at site 0.2 mi downstream at datum 631.91 ft above sea level.

REMARKS.--Records good. Figures of discharge include diversion as needed for Boston metropolitan district during period Oct. 15 to June 14 of each year and at other times for emergency flood-control purposes as authorized by U.S. Army Corps of Engineers; diversion began in March 1931. Flow regulated by Barre Falls Reservoir 4.3 mi upstream (see table with station 01172500) since 1958. Diversion at times since 1955 from 6.5 mi<sup>2</sup> upstream for municipal supply of Fitchburg.

COOPERATION.--Computations of daily discharge made in cooperation with Water Division, Metropolitan District Commission, which collected gage-height and venturi-meter records.

AVERAGE DISCHARGE.--73 years, 169 ft<sup>3</sup>/s, 23.83 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 664.28 ft, by computation of flow over dam; minimum daily, 0.46 ft<sup>3</sup>/s, Sept. 15, 1987, caused by unusual regulation. Maximum daily discharge since construction of Barre Falls Reservoir in 1958, 1,590 ft<sup>3</sup>/s, Apr. 14, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,230 ft<sup>3</sup>/s, Apr. 13; minimum daily, 11 ft<sup>3</sup>/s, Sept. 12.

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	30	39	105	107	129	137	476	166	97	132	16	15
2	27	40	92	99	133	124	403	155	147	158	14	14
3	26	40	75	96	105	91	378	143	222	149	12	14
4	24	36	67	101	90	79	361	136	220	122	18	14
5	25	36	61	102	105	95	391	136	181	104	27	14
6	48	39	58	93	121	115	460	136	215	101	26	14
7	68	39	56	79	118	126	541	120	171	83	30	13
8	56	38	56	106	113	121	491	107	109	76	27	12
9	50	34	56	123	113	116	487	102	89	70	23	12
10	45	53	56	119	114	106	601	95	69	75	20	18
11	40	101	50	114	114	106	559	122	67	90	18	12
12	36	118	58	90	119	117	1050	132	121	93	18	11
13	33	115	60	74	130	127	1230	108	126	77	21	11
14	32	101	62	62	136	135	1190	92	100	80	25	12
15	35	135	70	62	139	141	1120	78	82	75	26	14
16	33	133	76	69	143	143	1170	75	68	59	26	14
17	33	121	240	87	145	165	1170	85	357	58	26	13
18	33	105	355	92	145	163	1210	79	357	73	25	12
19	51	90	507	85	145	173	1210	73	309	75	26	11
20	53	79	398	77	128	178	1160	70	499	44	25	12
21	49	70	258	73	116	205	1030	59	480	51	25	16
22	47	65	205	97	111	318	481	71	464	45	25	20
23	46	60	174	112	97	601	418	93	459	30	25	20
24	41	53	165	81	96	565	369	105	425	27	25	21
25	38	48	147	90	107	515	324	107	420	26	25	49
26	35	55	146	73	124	610	280	99	374	26	24	68
27	37	92	127	71	134	643	244	99	179	29	22	49
28	48	105	135	65	136	641	216	105	109	29	19	36
29	46	111	124	61	---	643	195	138	81	26	16	33
30	39	111	121	82	---	595	175	132	86	22	15	45
31	40	---	112	116	---	513	---	117	---	18	15	---
TOTAL	1244	2262	4272	2758	3406	8407	19390	3335	6683	2123	685	619
MEAN	40.1	75.4	138	89.0	122	271	646	108	223	68.5	22.1	20.6
MAX	68	135	507	123	145	643	1230	166	499	158	30	68
MIN	24	34	50	61	90	79	175	59	67	18	12	11
MEAN++	40.2	75.9	148	88.8	117	279	631	107	223	68.1	22.0	20.9
CFSM++	0.42	0.79	1.54	0.92	1.21	2.90	6.55	1.11	2.32	0.71	0.23	0.22
INCHES++	0.48	0.88	1.77	1.06	1.27	3.35	7.32	1.29	2.58	0.82	0.26	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2001, BY WATER YEAR (WY)

	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	87.8	136	171	179	180	326	408	217	140	68.4	53.8	64.1																																																														
MAX	465	445	570	499	488	1066	963	438	503	337	319	893																																																														
(WY)	1956	1956	1997	1979	1976	1936	1940	1989	1984	1938	1955	1938																																																														
MIN	7.86	13.9	29.1	17.2	37.5	118	129	73.8	18.2	9.00	4.94	6.12																																																														
(WY)	1965	1965	1966	1981	1980	1940	1985	1999	1999	1999	1999	1995																																																														

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR					FOR 2001 WATER YEAR			WATER YEARS 1928 - 2001				
ANNUAL TOTAL	59919					55184							
ANNUAL MEAN	164					151			169				
ANNUAL++	164					151							
HIGHEST ANNUAL MEAN									277				
LOWEST ANNUAL MEAN									56.4				
HIGHEST DAILY MEAN	882					Apr 26			1230				
LOWEST DAILY MEAN	17					Sep 12			11				
ANNUAL SEVEN-DAY MINIMUM	20					Sep 6			12				
MAXIMUM PEAK FLOW									14000				
MAXIMUM PEAK STAGE									664.28				
ANNUAL RUNOFF (CFSM)++	1.70					1.57			1.75				
ANNUAL RUNOFF (INCHES)++	23.13					21.32			23.83				
10 PERCENT EXCEEDS	363					400			385				
50 PERCENT EXCEEDS	110					91			110				
90 PERCENT EXCEEDS	36					21			20				

++ Adjusted for change in contents in Barre Falls Reservoir (see station 01172500 for monthend contents).  
Note.--Except as footnoted, all statistics are based on unadjusted daily and monthly mean data.

CONNECTICUT RIVER BASIN

01173500 WARE RIVER AT GIBBS CROSSING, MA

LOCATION.--Lat 42°14'10", long 72°16'23", Hampshire County, Hydrologic Unit 01080204, on right bank 0.5 mi upstream from Gibbs Crossing, 1.8 mi upstream from Beaver Brook, 2.5 mi southwest of Ware, and 8.8 mi upstream from mouth.

DRAINAGE AREA.--197 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: August 1912 to current year.

Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 1031: 1944.

WSP 1301: 1914(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 379.79 ft above sea level. Prior to Mar. 1, 1930, at site 0.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion at times: Since March 1931 from 96.3 mi<sup>2</sup> for supply of Boston metropolitan district and since 1955 from 6.5 mi<sup>2</sup> for municipal supply of Fitchburg. Flow regulated by mills upstream and by Barre Falls Reservoir (see station 01172500) since 1958. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--18 years (water years 1913-30), 313 ft<sup>3</sup>/s, 21.36 in/yr; 71 years (water years 1931-2001), affected by diversion and storage, 294 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 18.2 ft, from floodmarks, from rating curve extended above 4,600 ft<sup>3</sup>/s on basis of contracted-opening measurement at gage height 12.83 ft and slope-area measurement at gage height 18.2 ft; minimum, 4.2 ft<sup>3</sup>/s, Aug. 24, 1995; minimum daily, 6.0 ft<sup>3</sup>/s, Oct. 4, 1914. Maximum discharge since construction of Barre Falls Reservoir in 1958, 5,050 ft<sup>3</sup>/s, Mar. 6, 1979, gage height, 7.94 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,650 ft<sup>3</sup>/s, Apr. 10, gage height, 5.79 ft; minimum daily, 27 ft<sup>3</sup>/s, Sept. 13.

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	99	106	251	e310	283	e257	1310	337	192	216	61	61
2	97	96	213	e260	242	e220	1060	315	233	280	68	57
3	81	89	197	e230	e160	201	921	286	471	256	105	56
4	61	103	e145	207	e180	187	955	290	517	234	132	58
5	65	101	e130	199	e170	211	1040	260	423	213	93	60
6	134	93	e120	221	e150	222	1240	245	327	212	92	59
7	196	91	e115	181	e210	e225	1480	222	333	189	87	55
8	166	100	e110	154	e200	e226	1960	217	262	167	83	49
9	139	104	e105	202	e180	244	2090	200	205	177	84	45
10	131	147	e100	264	e220	227	2400	183	179	191	80	47
11	114	291	99	e210	e260	e211	2130	180	144	236	75	53
12	156	281	e123	e180	e290	e224	1780	189	186	206	88	48
13	107	242	e154	e150	e247	272	1760	225	231	199	90	27
14	98	249	142	144	e297	311	1730	195	216	154	144	60
15	91	324	e118	150	e354	308	1530	173	178	156	127	58
16	82	345	e145	148	e324	342	1240	150	149	154	73	36
17	78	279	423	147	e296	355	1140	144	782	141	85	33
18	107	251	1200	161	e270	402	1090	157	1760	137	101	35
19	134	219	853	181	e260	405	1080	161	813	143	106	35
20	108	204	e640	179	269	437	971	150	591	144	85	36
21	129	171	e530	e162	e240	493	892	136	831	131	68	60
22	142	154	e400	e142	e210	1180	712	132	692	94	94	88
23	117	134	e310	185	e190	1690	695	172	640	109	87	62
24	102	151	e240	e170	e180	1600	725	222	612	106	84	52
25	98	120	e390	e155	e200	1370	645	239	579	80	78	74
26	99	125	e340	e150	e271	1170	576	219	535	84	77	129
27	96	212	e280	e145	e293	1160	498	202	486	97	76	122
28	91	251	e230	141	e288	1120	426	202	259	88	73	74
29	102	231	e210	144	---	1100	385	205	206	59	70	106
30	108	250	e230	146	---	1490	352	235	166	92	65	49
31	94	---	e280	215	---	1650	---	203	---	56	62	---
TOTAL	3422	5514	8823	5633	6734	19510	34813	6446	13198	4801	2693	1784
MEAN	110	184	285	182	240	629	1160	208	440	155	86.9	59.5
MAX	196	345	1200	310	354	1690	2400	337	1760	280	144	129
MIN	61	89	99	141	150	187	352	132	144	56	61	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2001, BY WATER YEAR (WY)

	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	
MEAN	168	253	304	329	327	524	601	374	255	141	122	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	136	
MAX	750	922	1295	794	802	1838	1394	830	746	714	890	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707
(WY)	1956	1956	1997	1996	1976	1936	1956	1996	1984	1938	1955	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938	1938
MIN	29.0	39.0	68.5	29.6	77.7	210	231	167	60.4	30.9	16.0	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
(WY)	1965	1965	1966	1981	1980	1989	1966	1965	1999	1999	1999	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953	1953

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1931 - 2001	
ANNUAL TOTAL	132961		113371			
ANNUAL MEAN	363		311		294	
HIGHEST ANNUAL MEAN					581	1938
LOWEST ANNUAL MEAN					107	1965
HIGHEST DAILY MEAN		2300	Apr 22	2400	Apr 10	16700
LOWEST DAILY MEAN		56	Sep 11	27	Sep 13	7.0
ANNUAL SEVEN-DAY MINIMUM		73	Sep 5	41	Sep 13	9.4
MAXIMUM PEAK FLOW				2650	Apr 10	22700
MAXIMUM PEAK STAGE				5.79	Apr 10	18.20
INSTANTANEOUS LOW FLOW				26	Sep 13	4.2
10 PERCENT EXCEEDS		841		794		615
50 PERCENT EXCEEDS		250		185		215
90 PERCENT EXCEEDS		99		74		48

e Estimated

CONNECTICUT RIVER BASIN

01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA

LOCATION.--Lat 42°23'36", long 72°14'21", Worcester County, Hydrologic Unit 01080204, on left bank 100 ft above spillway of regulating dam and 4.6 mi northwest of Hardwick.

DRAINAGE AREA.--43.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: January 1937 to current year. Published as "near Dana" January 1937 to September 1939. Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Concrete spillway since Mar. 12, 1940. Datum of gage is 504.70 ft above sea level.

REMARKS.--Records fair. No flow at times during several years. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--64 years, 71.9 ft<sup>3</sup>/s, 22.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft<sup>3</sup>/s, Sept. 21, 1938, average of slope-area and contracted-opening measurements; maximum gage height since construction of concrete spillway in 1940; 22.49 ft, June 25, 1944; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 684 ft<sup>3</sup>/s, Apr. 10, gage height, 20.71 ft; minimum, no flow, Sept. 1-21.

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	20	19	73	53	77	37	191	58	38	19	2.9	0.07
2	19	18	58	47	73	36	157	55	60	20	2.5	.00
3	18	18	47	42	67	33	142	52	196	19	8.0	.00
4	16	18	47	42	52	31	140	48	297	18	37	.00
5	17	17	48	43	63	38	160	44	198	22	38	.00
6	40	18	44	50	82	55	202	37	114	26	27	.00
7	65	18	38	51	74	47	274	33	77	22	19	.00
8	61	20	33	48	61	39	387	31	57	21	15	.00
9	46	22	32	52	66	37	465	31	43	23	12	.00
10	38	40	30	44	79	39	632	31	35	20	9.0	.00
11	35	74	38	41	70	35	620	29	37	20	7.5	.00
12	30	74	52	45	60	34	556	27	73	18	6.7	.00
13	26	64	41	39	60	45	533	26	81	16	9.1	.00
14	21	71	50	39	56	56	521	22	66	15	11	.00
15	19	92	51	44	65	58	444	21	49	15	8.1	.00
16	19	95	45	47	65	60	364	20	38	13	6.1	.00
17	23	74	167	52	65	64	298	20	63	14	5.3	.00
18	30	60	369	44	51	68	250	20	133	16	4.9	.00
19	49	56	271	49	44	69	206	22	101	13	4.1	.00
20	49	51	194	53	42	70	176	20	73	11	3.7	.00
21	44	46	135	52	39	77	159	19	59	9.9	3.8	.20
22	29	41	114	43	33	140	153	21	46	8.4	2.9	1.3
23	24	38	89	40	34	238	146	28	42	7.3	2.2	1.8
24	23	33	74	40	32	223	135	48	39	6.6	1.8	1.5
25	24	31	61	44	37	205	118	54	34	6.4	1.0	5.2
26	23	42	45	41	48	178	101	47	29	7.3	.59	7.0
27	22	71	47	42	50	151	89	50	24	7.2	.42	5.0
28	22	81	46	44	44	131	80	53	21	6.0	.37	4.6
29	16	80	43	37	---	121	70	74	17	5.1	.23	3.8
30	16	78	47	46	---	180	62	63	16	4.4	.11	2.5
31	18	---	56	66	---	228	---	49	---	3.4	.05	---
TOTAL	902	1460	2485	1420	1589	2823	7831	1153	2156	433.0	250.37	32.97
MEAN	29.1	48.7	80.2	45.8	56.8	91.1	261	37.2	71.9	14.0	8.08	1.10
MAX	65	95	369	66	82	238	632	74	297	26	38	7.0
MIN	16	17	30	37	32	31	62	19	16	3.4	.05	.00
CFSM	.67	1.11	1.83	1.05	1.30	2.08	5.97	.85	1.64	.32	.18	.03
IN.	.77	1.24	2.12	1.21	1.35	2.40	6.67	.98	1.84	.37	.21	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 2001, BY WATER YEAR (WY)

	MEAN	38.9	63.1	76.6	81.2	81.3	135	162	91.1	59.5	28.9	23.0	26.0
MAX	155	177	264	240	207	266	420	189	175	179	127	390	
(WY)	1980	1956	1997	1999	1984	1979	1940	1984	1984	1938	1955	1938	
MIN	2.55	6.93	19.9	5.30	18.5	48.2	34.8	30.5	6.87	3.23	.000	.000	
(WY)	1965	1965	1981	1981	1940	1965	1985	1985	1999	1949	1999	1995	

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1937 - 2001

ANNUAL TOTAL	27497	22535.34	
ANNUAL MEAN	75.1	61.7	71.9
HIGHEST ANNUAL MEAN			123
LOWEST ANNUAL MEAN			22.8
HIGHEST DAILY MEAN	431	Apr 23	4690
LOWEST DAILY MEAN	10	Sep 12	.00
ANNUAL SEVEN-DAY MINIMUM	13	Sep 6	.00
MAXIMUM PEAK FLOW			6780
MAXIMUM PEAK STAGE			22.49
INSTANTANEOUS LOW FLOW			.00
ANNUAL RUNOFF (CFSM)	1.72	1.41	1.65
ANNUAL RUNOFF (INCHES)	23.41	19.18	22.36
10 PERCENT EXCEEDS	158	141	163
50 PERCENT EXCEEDS	56	40	45
90 PERCENT EXCEEDS	17	2.9	6.8

CONNECTICUT RIVER BASIN

01174565 WEST BRANCH SWIFT RIVER NEAR SHUTESBURY, MA

LOCATION.--Lat 42°27'18", long 72°22'56", Franklin County, Hydrologic Unit 01080204, on left bank 800 ft downstream from State Highway 202 and 1.4 mi east of Shutesbury.

DRAINAGE AREA.--12.6 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1983 to September 1985, April 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 540 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and those for discharges greater than 500 ft<sup>3</sup>/s, which are poor.

AVERAGE DISCHARGE.--7 years (water years, 1985, 1996--current year) 23.1 ft<sup>3</sup>/s, 24.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft<sup>3</sup>/s, Sept. 17, 1999, gage height, 5.96 ft, from rating curve extended above 310 ft<sup>3</sup>/s on basis of slope-area measurement at gage height 4.28 ft; minimum, about 0.35 ft<sup>3</sup>/s, mid-September 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 338 ft<sup>3</sup>/s, Dec. 17, gage height, 3.34 ft; minimum, 0.60 ft<sup>3</sup>/s, Sept. 2, 3, 8-10.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.8	14	10	18	e10	36	20	9.7	9.9	2.2	0.88
2	5.5	5.7	12	e9.8	15	9.3	32	19	25	9.2	2.2	.73
3	5.4	5.6	e10	e9.6	e12	8.3	31	18	109	7.0	4.0	.73
4	5.1	5.6	e9.2	e9.2	e11	7.7	34	16	50	6.6	4.5	1.1
5	5.3	5.5	e8.6	8.9	e28	16	41	15	28	11	3.3	1.1
6	16	5.3	e8.2	8.7	76	56	53	14	19	13	2.9	.89
7	17	5.2	e8.0	7.8	26	22	71	13	15	9.9	2.4	.85
8	12	5.2	7.7	7.5	12	10	110	13	13	8.3	2.1	.78
9	8.7	5.2	7.3	e7.3	13	9.3	132	12	11	8.7	1.9	.73
10	7.4	11	e7.0	e7.2	e18	10	193	11	9.2	7.3	1.8	.94
11	6.9	14	e7.2	e7.1	e19	9.8	162	10	11	7.2	1.6	2.0
12	6.5	11	e8.0	e7.0	e16	9.9	160	9.8	27	6.5	1.5	1.4
13	6.2	9.5	e8.5	e7.2	e13	12	156	9.0	18	5.9	1.8	1.2
14	6.2	12	e8.7	e7.4	e12	15	158	8.1	13	5.7	3.2	2.1
15	5.9	26	8.8	7.6	18	15	134	7.8	11	5.8	3.5	2.0
16	6.2	20	8.9	8.3	15	17	114	7.8	9.0	5.0	2.6	1.3
17	7.1	16	115	9.7	e13	18	97	8.1	18	5.8	2.2	1.1
18	9.5	13	121	11	e14	19	81	7.8	20	5.7	2.1	1.0
19	17	11	49	11	e12	18	69	7.8	13	4.7	1.8	.95
20	13	10	e32	11	11	20	61	7.1	9.7	4.2	1.7	.96
21	11	9.7	e26	e11	e11	23	63	6.4	8.4	3.9	1.6	14
22	8.9	8.8	e22	e12	e10	72	67	7.9	7.5	3.6	1.5	6.3
23	7.4	7.9	e20	e12	10	101	62	11	17	3.4	1.4	3.7
24	7.0	e7.5	e18	10	9.0	76	49	17	37	3.2	1.3	2.7
25	6.7	e7.2	e17	9.6	11	56	38	24	21	3.0	1.1	4.6
26	6.4	e7.2	e15	e9.2	16	43	31	19	14	4.4	1.0	4.9
27	6.4	22	e14	8.7	14	36	27	25	10	4.1	1.0	3.3
28	6.1	20	e13	8.2	e11	32	25	20	8.4	3.1	1.0	2.6
29	5.2	17	12	e7.6	---	30	23	20	7.1	2.9	.96	2.3
30	5.2	15	11	10	---	37	21	15	6.8	2.6	.84	1.9
31	6.0	---	12	17	---	41	---	11	---	2.5	.90	---
TOTAL	248.7	324.9	639.1	288.6	464.0	859.3	2331	410.6	575.8	184.1	61.90	69.04
MEAN	8.02	10.8	20.6	9.31	16.6	27.7	77.7	13.2	19.2	5.94	2.00	2.30
MAX	17	26	121	17	76	101	193	25	109	13	4.5	14
MIN	5.1	5.2	7.0	7.0	9.0	7.7	21	6.4	6.8	2.5	.84	.73
CFSM	.64	.86	1.64	.74	1.32	2.20	6.17	1.05	1.52	.47	.16	.18
IN.	.73	.96	1.89	.85	1.37	2.54	6.88	1.21	1.70	.54	.18	.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2001, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	13.4	20.1	27.6	28.0	33.4	42.6	43.2	29.3	25.0	10.1	6.42	9.67						
MAX	29.5	39.2	75.3	51.0	70.6	60.1	83.0	78.1	52.8	24.3	29.3	52.9						
(WY)	2000	1996	1997	1996	1984	1999	1984	1984	1998	1996	2000	1999						
MIN	2.58	6.98	7.19	9.31	13.6	27.7	15.3	10.5	3.73	1.98	2.00	1.02						
(WY)	1985	1999	1999	2001	1985	2001	1985	1985	1999	1999	2001	1998						

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1984 - 2001

ANNUAL TOTAL	9455.8	6457.04	
ANNUAL MEAN	25.8	17.7	23.1
HIGHEST ANNUAL MEAN			33.0
LOWEST ANNUAL MEAN			11.3
HIGHEST DAILY MEAN	315	Jun 6	193
LOWEST DAILY MEAN	5.0	Sep 12	.73
ANNUAL SEVEN-DAY MINIMUM	5.4	Nov 3	.86
MAXIMUM PEAK FLOW			338
MAXIMUM PEAK STAGE			3.34
INSTANTANEOUS LOW FLOW			.60
ANNUAL RUNOFF (CFSM)	2.05		1.40
ANNUAL RUNOFF (INCHES)	27.92		19.06
10 PERCENT EXCEEDS	53		36
50 PERCENT EXCEEDS	17		9.7
90 PERCENT EXCEEDS	6.9		2.0

e Estimated

CONNECTICUT RIVER BASIN

01175500 SWIFT RIVER AT WEST WARE, MA

LOCATION.--Lat 42°16'04", long 72°19'59", Hampshire County, Hydrologic Unit 01080204, on left bank at West Ware, 1.4 mi downstream from Quabbin Reservoir, 3.5 mi east of Belchertown, and 8.0 mi upstream from mouth.  
 DRAINAGE AREA.--189 mi<sup>2</sup>, includes 1.6 mi<sup>2</sup> drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 mi<sup>2</sup>.  
 PERIOD OF RECORD.--Discharge: July 1910 to September 1912 (twice-daily gage heights and corresponding discharge), October 1912 to current year.  
 Water-quality records: Water years 1952-54.  
 REVISED RECORDS.--WSP 451: 1916. WSP 871: 1919. WSP 1031: 1944 (changes in reservoir contents and adjusted figures only). WSP 1301: 1925(M). WDR MA-RI-84-1: Drainage area.  
 GAGE.--Water-stage recorder. Datum of gage is 365.18 ft above sea level. Prior to Aug. 25, 1912, nonrecording gage at site 400 ft upstream at same datum.  
 REMARKS.--Records good, except those greater than 200 ft<sup>3</sup>/s, which are fair. Flow regulated since August 1939 by Quabbin Reservoir, usable capacity, 53.8 billion ft<sup>3</sup>, (See table below for monthend contents). Diversion from Ware River to Quabbin Reservoir since 1940, from Quabbin Reservoir to Wachusett Reservoir since 1941, from Quabbin Reservoir to Chicopee Valley aqueduct since 1950, and from Quabbin Reservoir to city of Worcester at times since 1966.  
 AVERAGE DISCHARGE.--27 years (water years 1913-39) prior to completion of Quabbin Reservoir, 314 ft<sup>3</sup>/s, 22.56 in/yr; 62 years (water years 1940-current year), affected by storage and diversions, 95.8 ft<sup>3</sup>/s.  
 EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft<sup>3</sup>/s, Mar. 19, 1936, gage height, 15.00 ft; minimum daily, 9.1 ft<sup>3</sup>/s, Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 3,070 ft<sup>3</sup>/s, June 1, 1984, gage height, 11.58 ft.  
 EXTREMES FOR CURRENT YEAR.--Maximum discharge, 223 ft<sup>3</sup>/s, Aug. 3, gage height, 3.17 ft; minimum daily, 27 ft<sup>3</sup>/s, Nov. 19, 21-23.

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	93	32	32	31	31	31	38	99	64	191	116	115
2	103	32	32	31	31	31	38	100	70	190	114	114
3	121	33	32	31	31	31	38	100	83	146	128	114
4	123	32	32	31	31	31	38	100	89	120	121	114
5	68	32	32	31	31	32	39	103	89	74	117	114
6	32	50	32	31	31	32	39	103	90	45	116	114
7	29	47	32	31	30	31	39	101	89	40	116	114
8	29	30	32	31	30	31	44	99	89	38	77	114
9	29	30	32	31	31	31	41	99	87	67	79	114
10	30	32	32	31	32	32	40	100	84	67	112	114
11	29	30	32	31	31	32	38	99	84	46	112	114
12	28	29	32	31	31	31	39	99	90	43	113	114
13	28	29	32	31	31	32	37	103	91	41	114	114
14	28	30	32	31	31	32	36	99	89	39	114	115
15	28	30	32	31	32	32	36	98	88	38	113	114
16	77	29	32	30	31	32	36	95	84	37	114	114
17	83	28	38	31	31	33	40	90	104	37	115	114
18	31	28	36	31	31	33	49	84	101	36	115	114
19	32	27	33	31	31	33	53	81	94	35	115	113
20	32	28	33	31	31	33	61	78	93	33	116	113
21	32	27	33	31	31	34	69	73	101	32	116	117
22	32	27	33	31	31	44	78	74	97	31	116	114
23	32	27	32	31	31	38	83	75	95	33	116	114
24	32	29	32	31	31	37	87	75	96	36	116	114
25	33	32	32	31	32	36	91	75	93	36	116	116
26	33	33	32	31	32	35	93	73	90	37	116	116
27	32	33	32	31	32	34	94	75	85	89	116	69
28	31	32	32	30	31	34	98	72	83	122	116	38
29	32	32	32	30	---	34	97	69	149	122	115	38
30	53	33	31	31	---	46	98	69	191	114	114	37
31	51	---	32	31	---	40	---	68	---	120	115	---
TOTAL	1446	943	1005	958	871	1048	1707	2728	2832	2135	3509	3153
MEAN	46.6	31.4	32.4	30.9	31.1	33.8	56.9	88.0	94.4	68.9	113	105
MAX	123	50	38	31	32	46	98	103	191	191	128	117
MIN	28	27	31	30	30	31	36	68	64	31	77	37
†	50691	50080	50220	49889	49829	50982	53844	53556	53546	52553	51303	50240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2001, BY WATER YEAR (WY)

	1940	1945	1950	1955	1960	1965	1970	1975	1980	1984		
MEAN	71.3	76.5	72.9	72.4	77.9	83.9	170	163	126	76.6	79.1	79.5
MAX	222	858	656	572	467	511	1099	775	1192	301	149	139
(WY)	1956	1956	1997	1997	1997	1997	1953	1953	1984	1948	1961	1963
MIN	30.3	31.3	28.0	27.5	27.6	27.7	26.2	27.4	28.6	31.2	30.7	30.3
(WY)	1945	1945	1995	1995	1995	1995	1995	1995	1945	1944	1944	1990

SUMMARY STATISTICS

	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 1940 - 2001
ANNUAL TOTAL	14504	22335	14504	22335	14504
ANNUAL MEAN	39.6	61.2	39.6	61.2	39.6
HIGHEST ANNUAL MEAN					369
LOWEST ANNUAL MEAN					30.7
HIGHEST DAILY MEAN	123	191	123	191	3040
LOWEST DAILY MEAN	27	27	27	27	9.1
ANNUAL SEVEN-DAY MINIMUM	27	27	27	27	24
MAXIMUM PEAK FLOW		223		223	3070
MAXIMUM PEAK STAGE		3.17		3.17	11.58
INSTANTANEOUS LOW FLOW		27		27	27
10 PERCENT EXCEEDS	64	114	64	114	148
50 PERCENT EXCEEDS	33	38	33	38	45
90 PERCENT EXCEEDS	30	31	30	31	32

† Monthend contents, in millions of cubic feet (mcf) in Quabbin Reservoir. Records furnished by Watershed Management Division of Metropolitan District Commission.



CONNECTICUT RIVER BASIN

01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA

LOCATION.--Lat 42°10'56", long 72°15'51", Hampden County, Hydrologic Unit 01080204, on right bank 10 ft upstream from abandoned highway bridge site at West Brimfield, 0.9 mi upstream from Blodgett Mill Brook, 3.5 mi northeast of Palmer, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--150 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: August 1909 to July 1912 (twice-daily gage heights and corresponding discharges), August 1912 to current year.

Water-quality records: Water years 1953, 1967, 1969-70, 1972-74.

REVISED RECORDS.--WSP 451: 1916. WSP 1301: 1918(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 390 ft above sea level, from topographic map. Prior to Aug. 19, 1912, nonrecording gage, and Aug. 19, 1912, to Oct. 31, 1955, water-stage recorder, at several sites 0.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at low flow caused by mill upstream prior to 1956; regulation much greater prior to 1938. High flow slightly affected by retarding reservoirs since 1965. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--89 years water years 1913-current year, 248 ft<sup>3</sup>/s, 22.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 15.36 ft, from floodmarks, present site and datum, from rating curve extended above 2,700 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 6.6 ft<sup>3</sup>/s, Sept. 28, 29, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft<sup>3</sup>/s, Apr.12, gage height, 6.48 ft ; minimum, 15 ft<sup>3</sup>/s, Sept. 13.

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	57	54	149	e180	e180	e200	1250	294	116	133	42	27
2	55	52	138	e200	e180	e180	1190	265	141	126	40	24
3	53	61	e120	e210	e150	e170	1130	236	171	115	50	24
4	49	71	e110	e190	e130	e160	1100	231	182	109	68	24
5	52	75	e100	e170	e160	e150	1080	209	177	106	65	23
6	85	77	e94	e150	e190	e140	1090	192	164	101	56	21
7	80	85	e90	e140	e210	e150	1150	179	152	91	50	20
8	76	86	e88	e150	e230	e190	1320	166	137	88	45	19
9	73	87	e84	e160	e220	e180	1410	154	120	89	42	18
10	73	126	e82	e140	e200	e170	1500	144	107	107	40	18
11	82	154	e90	e130	e180	e160	1520	136	103	157	38	17
12	75	157	e100	e120	e220	e170	1520	135	111	129	43	16
13	74	165	114	e110	e240	e210	1500	131	104	114	48	15
14	75	173	129	e100	e220	e250	1400	116	98	105	50	20
15	72	188	121	e100	e190	e230	1330	104	89	97	48	20
16	70	186	123	e110	e180	e240	1240	101	81	90	43	18
17	70	185	257	e120	e180	e270	1150	100	449	90	44	18
18	70	176	361	e130	e170	e320	1020	98	523	89	54	17
19	74	174	378	e140	e190	e350	891	95	376	84	48	16
20	71	167	391	e140	e170	e340	813	94	340	77	63	16
21	72	158	406	e130	e160	e440	740	91	359	71	45	27
22	69	146	381	e150	e140	833	667	95	311	65	41	28
23	68	137	e310	e170	e130	1020	614	111	273	61	38	33
24	70	160	e260	e160	e150	1070	570	145	249	58	37	31
25	68	155	e230	e140	e180	1090	512	157	226	54	35	36
26	67	145	e210	e130	e210	1090	475	145	188	53	33	46
27	65	147	e190	e120	e220	1060	430	159	161	54	31	46
28	63	147	e170	e110	e210	1010	382	155	140	49	30	47
29	50	143	e160	e130	---	959	349	143	125	48	28	47
30	54	150	e150	e150	---	1180	319	134	119	47	26	45
31	56	---	e170	e170	---	1320	---	120	---	45	26	---
TOTAL	2088	3987	5756	4450	5190	15302	29662	4635	5892	2702	1347	777
MEAN	67.4	133	186	144	185	494	989	150	196	87.2	43.5	25.9
MAX	85	188	406	210	240	1320	1520	294	523	157	68	47
MIN	49	52	82	100	130	140	319	91	81	45	26	15
CFSM	.45	.89	1.24	.96	1.24	3.29	6.59	1.00	1.31	.58	.29	.17
IN.	.52	.99	1.43	1.10	1.29	3.79	7.36	1.15	1.46	.67	.33	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2001, BY WATER YEAR (WY)

MEAN	128	189	252	275	282	490	550	315	190	103	104	104
MAX	607	693	911	821	748	1399	1352	573	789	524	1440	1369
(WY)	1956	1956	1997	1979	1970	1936	1940	1943	1984	1938	1955	1938
MIN	11.9	26.9	48.5	46.6	65.2	169	173	108	35.2	17.6	12.8	12.0
(WY)	1958	1950	1931	1981	1977	1989	1915	1930	1999	1965	1957	1957

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1912 - 2001

ANNUAL TOTAL		92476				81788						
ANNUAL MEAN		253				224				248		
HIGHEST ANNUAL MEAN										430		1938
LOWEST ANNUAL MEAN										104		1965
HIGHEST DAILY MEAN			1140	Apr 22		1520	Apr 11		7800	Sep 21	1938	
LOWEST DAILY MEAN			35	Sep 11		15	Sep 13		4.6	Oct 17	1997	
ANNUAL SEVEN-DAY MINIMUM			36	Sep 8		18	Sep 7		6.3	Oct 13	1997	
MAXIMUM PEAK FLOW						1540	Apr 12		12800	Aug 19	1955	
MAXIMUM PEAK STAGE						6.48	Apr 12		15.36	Aug 19	1955	
INSTANTANEOUS LOW FLOW						15	Sep 13					
ANNUAL RUNOFF (CFSM)		1.68				1.49				1.65		
ANNUAL RUNOFF (INCHES)		22.93				20.28				22.48		
10 PERCENT EXCEEDS		541				490			552			
50 PERCENT EXCEEDS		160				131			167			
90 PERCENT EXCEEDS		59				40			40			

e Estimated



CONNECTICUT RIVER BASIN

01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA

LOCATION.--Lat 42°09'38", long 72°30'52", Hampden County, Hydrologic Unit 01080204, on left bank 1,000 ft downstream from West Street Bridge at Indian Orchard, 1.1 mi upstream from Fuller Brook, and 7.2 mi upstream from mouth.

DRAINAGE AREA.--689 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: August 1928 to current year. Published as "at Bircham Bend" prior to November 1938. Water-quality records: Water years 1953, 1957, 1994.

REVISED RECORDS.--WSP 1231: 1934. WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 125 ft above sea level, from topographic map. Prior to Nov. 1, 1938, water-stage recorder at site 1.8 mi downstream at different datum.

REMARKS.--Records good. Diversion since 1941 from 186 mi<sup>2</sup> in Swift River basin and at times since 1931 from 97 mi<sup>2</sup> in Ware River basin for Boston metropolitan district; since 1950, for Chicopee; since 1952, for South Hadley; at times since 1966 for Worcester; at times since 1955 from 6.5 mi<sup>2</sup> in Ware River basin for Fitchburg. Diversion from Ludlow Reservoir for Springfield and, prior to 1952, for Chicopee. Flow regulated by powerplants upstream, by Quabbin Reservoir 21 mi upstream on Swift River since 1939, by Barre Falls Reservoir on Ware River since 1958, by Conant Brook Reservoir since 1966, and by smaller reservoirs. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--73 years, 912 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft<sup>3</sup>/s, Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 ft<sup>3</sup>/s, several times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,160 ft<sup>3</sup>/s, Mar. 31, gage height, 9.19 ft; minimum daily, 208 ft<sup>3</sup>/s, Sept. 13.

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	370	250	539	578	607	645	3550	999	512	721	302	245
2	368	277	522	627	601	625	3090	959	661	789	282	250
3	316	240	458	651	551	624	2780	854	939	761	283	235
4	363	276	416	547	384	534	2680	783	1130	627	726	220
5	330	267	366	479	541	521	2720	786	1020	632	556	244
6	425	284	374	475	440	481	2900	680	922	545	389	237
7	442	296	342	472	547	585	3230	730	763	504	375	220
8	439	311	325	449	534	683	4080	692	735	444	407	223
9	370	276	327	454	600	633	4490	700	549	439	319	217
10	386	466	286	557	680	609	4440	624	540	516	214	223
11	285	585	331	631	653	575	4310	545	499	751	319	221
12	341	608	343	463	678	582	3940	558	539	571	328	224
13	341	582	362	462	705	699	3680	594	518	532	367	208
14	318	558	363	415	642	870	3440	591	577	489	319	259
15	266	663	384	406	705	785	3160	501	502	400	467	289
16	293	744	365	377	805	833	2850	460	485	386	331	242
17	358	707	671	376	787	941	2660	499	1650	421	306	219
18	305	607	2120	394	673	1050	2480	425	3460	407	463	213
19	385	500	1750	432	646	1270	2310	456	2140	383	400	208
20	341	521	1540	461	667	1170	2200	445	1350	312	397	212
21	301	487	1340	449	693	1310	2070	450	1740	368	343	366
22	347	419	1120	531	575	2770	1910	482	1540	325	319	361
23	315	397	902	576	509	3710	1640	556	1330	304	323	313
24	284	371	772	502	603	3460	1720	690	1210	297	302	302
25	302	356	746	440	584	3200	1620	812	1140	281	283	319
26	296	392	769	434	722	2870	1430	825	1080	258	272	370
27	273	517	551	397	748	2660	1350	837	950	267	273	421
28	260	568	554	385	747	2520	1190	722	742	318	261	380
29	250	532	517	389	---	2460	1110	704	544	340	273	220
30	287	541	504	400	---	3350	1030	620	584	318	258	215
31	292	---	524	501	---	4590	---	609	---	316	285	---
TOTAL	10249	13598	20483	14710	17627	47615	80060	20188	30351	14022	10742	7876
MEAN	331	453	661	475	630	1536	2669	651	1012	452	347	263
MAX	442	744	2120	651	805	4590	4490	999	3460	789	726	421
MIN	250	240	286	376	384	481	1030	425	485	258	214	208

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2001, BY WATER YEAR (WY)

	528	729	895	978	1007	1595	1826	1184	815	481	447	479
MEAN	528	729	895	978	1007	1595	1826	1184	815	481	447	479
MAX	1953	3022	3207	2447	2374	5993	4117	2680	3519	2458	3719	5474
(WY)	1956	1956	1997	1937	1976	1936	1933	1953	1984	1938	1955	1938
MIN	131	154	241	191	332	634	636	471	229	159	176	160
(WY)	1942	1966	1966	1981	1931	1989	1966	1965	1964	1966	1949	1953

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	WATER YEARS 1928 - 2001
ANNUAL TOTAL	331823	287521	
ANNUAL MEAN	907	788	912
HIGHEST ANNUAL MEAN			1952
LOWEST ANNUAL MEAN			376
HIGHEST DAILY MEAN	4270	Apr 22	37000
LOWEST DAILY MEAN	229	Sep 11	16
ANNUAL SEVEN-DAY MINIMUM	265	Oct 28	96
MAXIMUM PEAK FLOW		5160	45200
MAXIMUM PEAK STAGE		9.19	.00
INSTANTANEOUS LOW FLOW		71	
10 PERCENT EXCEEDS	1880	1740	1860
50 PERCENT EXCEEDS	666	516	656
90 PERCENT EXCEEDS	316	275	220

## CONNECTICUT RIVER BASIN

223

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA

LOCATION.--Lat 42°17'16", long 72°51'53", Hampshire County, Hydrologic Unit 01080206, on left bank at Knightville, 0.2 mi downstream from Knightville Dam, 0.2 mi upstream from Sykes Brook, 2.4 mi upstream from Middle branch, 3.5 mi north of Huntington, and at mile 29.7.

DRAINAGE AREA.--161 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: August 1909 to September 1990, October 1995 to current year.  
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 415: 1909-12. WSP 1001: 1941-43. WSP 1231: 1910, 1912, 1913(M), 1914-15, 1916-19(M), 1921-23(M), 1925-27(M), 1929-33(M), 1935(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Dec. 20, 1940. Datum of gage is 461.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Jan. 11, 1936, nonrecording gage at site 0.5 mi upstream at different datum. Jan. 11, 1935, to May 20, 1940, water-stage recorder at site 700 ft upstream at datum 10.57 ft higher. May 21 to Dec. 19, 1940, nonrecording gage at site 700 ft upstream at datum 18.75 ft higher.

REMARKS.--Records good. Flow regulated by Knightville reservoir since 1941. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--87 years (water years 1910-90, 1996-current year), 333 ft<sup>3</sup>/s, 28.09 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 29.58 ft, from floodmarks, site and datum then in use, from rating curve extended above 3,800 ft<sup>3</sup>/s on basis of slope-area measurements at gage heights 24.07 ft and 29.58 ft; minimum, 0.1 ft<sup>3</sup>/s, Apr. 3, 1965; minimum daily, 1.1 ft<sup>3</sup>/s, Apr. 2, 1965. Maximum discharge since construction of Knightville Reservoir in 1941, 6,660 ft<sup>3</sup>/s, Mar. 21, 1945, gage height, 7.45 ft.

EXTREMES FOR CURRENT YEAR.-- Maximum discharge, 3,570 ft<sup>3</sup>/s, Apr. 14, gage height, 7.34 ft; minimum 6.6 ft<sup>3</sup>/s, Mar. 27, 31; minimum daily, 17 ft<sup>3</sup>/s, Sept. 10.

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	132	154	260	157	232	191	462	438	287	231	56	20
2	131	148	220	163	232	188	348	403	868	251	50	37
3	130	143	155	164	226	184	330	354	2850	164	45	33
4	124	139	111	164	214	178	352	317	2110	134	52	28
5	125	135	153	224	117	172	418	282	1000	128	160	30
6	509	132	165	243	84	119	512	252	599	184	147	27
7	488	129	148	232	86	85	649	229	450	162	101	23
8	294	127	134	257	142	91	1080	214	361	124	76	20
9	226	125	136	271	198	94	1770	202	301	140	58	19
10	198	354	132	313	199	96	2590	194	258	159	46	17
11	188	546	137	276	218	148	3020	178	239	269	40	47
12	171	344	158	223	266	192	2470	164	474	177	38	53
13	162	264	195	137	287	190	2460	155	348	133	48	37
14	155	257	165	72	283	190	3040	143	264	115	48	36
15	147	612	161	44	278	191	2370	133	218	105	40	55
16	144	393	158	150	283	235	2050	128	191	93	35	48
17	178	303	187	193	314	259	1600	90	281	89	31	38
18	209	258	960	193	319	257	1470	127	381	113	30	34
19	619	233	2620	190	295	257	1190	128	237	106	28	31
20	367	214	1760	188	230	256	843	125	188	93	28	29
21	271	206	542	186	194	286	1040	111	169	83	27	491
22	229	197	381	183	198	303	1230	168	160	74	26	385
23	206	180	701	143	190	994	1580	373	159	67	24	193
24	197	144	426	113	190	1340	1120	819	284	61	23	119
25	190	141	271	113	187	1250	2410	755	203	56	22	530
26	182	207	118	116	187	1070	2610	574	158	59	20	678
27	173	447	121	116	193	462	864	1130	135	154	20	269
28	163	393	160	116	194	448	653	966	114	113	19	168
29	148	320	159	173	---	565	538	775	101	88	19	119
30	148	271	147	239	---	93	473	464	99	73	18	103
31	155	---	150	227	---	581	---	349	---	63	18	---
TOTAL	6759	7516	11291	5579	6036	10965	41542	10740	13487	3861	1393	3717
MEAN	218	251	364	180	216	354	1385	346	450	125	44.9	124
MAX	619	612	2620	313	319	1340	3040	1130	2850	269	160	678
MIN	124	125	111	44	84	85	330	90	99	56	18	17
(+)	0.3	1.9	41.2	36.3	31.5	36.3	2.0	2.5	0.3	0.3	0.1	0.2
MEAN††	218	251	379	178	213	355	1372	347	449	124	44.9	124
CFSM††	1.35	1.56	2.35	1.10	1.32	2.20	8.52	2.16	2.79	0.77	0.28	0.77
IN.††	1.56	1.74	2.71	1.28	1.38	2.55	9.51	2.48	3.11	0.89	0.32	0.86

## CONNECTICUT RIVER BASIN

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA--Continued

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2001, BY WATER YEAR (WY)

MEAN	182	306	306	298	290	618	938	443	259	130	108	126
MAX	1394	1155	989	1305	1001	2050	1853	912	1158	494	745	986
(WY)	1956	1956	1974	1949	1984	1936	1987	1972	1984	1972	1955	1938
MIN	18.3	36.4	68.5	44.7	65.0	158	283	143	41.1	20.7	15.7	14.8
(WY)	1965	1965	1915	1981	1920	1940	1985	1986	1964	1913	1913	1953

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1909 - 2001	
ANNUAL TOTAL	152272		122886			
ANNUAL MEAN	416		337		333	
ANNUAL MEAN††	416		337		333	
HIGHEST ANNUAL MEAN					538	
LOWEST ANNUAL MEAN					137	
HIGHEST DAILY MEAN	3240	Jun 9	3040	Apr 14	13400	Mar 18 1936
LOWEST DAILY MEAN	81	Sep 11	17	Sep 10	1.1	Apr 2 1965
ANNUAL SEVEN-DAY MINIMUM	104	Jul 9	19	Aug 26	8.9	Aug 29 1953
MAXIMUM PEAK FLOW			3570		37900	
MAXIMUM PEAK STAGE			7.34		29.58	
INSTANTANEOUS LOW FLOW			6.6		2.07	
ANNUAL RUNOFF (CFSM)††	2.59		2.10		28.09	
ANNUAL RUNOFF (INCHES)††	35.20		28.39		807	
10 PERCENT EXCEEDS	811		723		167	
50 PERCENT EXCEEDS	274		187		35	
90 PERCENT EXCEEDS	136		45			

† Monthend contents, in millions of cubic feet (mcf), in Knightville Reservoir; records furnished by U.S. Army Corps of Engineers. Monthend contents on Sept. 30, 2000, 0.3 mcf.

†† Adjusted for change in contents in Knightville Reservoir.

Note.--Except as footnoted, all statistics are based on unadjusted daily and monthly mean discharges.



CONNECTICUT RIVER BASIN

01183500 WESTFIELD RIVER NEAR WESTFIELD, MA

LOCATION.--Lat 42°06'24", long 72°41'58", Hampden County, Hydrologic Unit 01080206, on left bank 0.7 mi downstream from Great Brook, 3 mi east of Westfield, and 8.1 mi upstream from mouth.

DRAINAGE AREA.--497 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: June 1914 to current year.  
Water Quality: Water years 1952-53, 1957, 1967-74, 1994.

REVISED RECORDS.--WSP 601: 1924(M). WSP 756: Drainage area. WSP 1051: 1919-21(M), 1925(M). WSP 1231: 1915-16(M), 1920.

GAGE.--Water-stage recorder. Datum of gage is 98.25 ft above sea level. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Flow regulated by Borden Brook Reservoir, Cobble Mountain Reservoir since 1931, Knightville Reservoir since 1941, and Littleville Lake since 1965. High flow slightly affected by retarding reservoirs since 1963. Diversion from Little River for municipal supply of Springfield. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--87 years, 936 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,300 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 34.2 ft, from floodmarks, from rating curve extended above 18,000 ft<sup>3</sup>/s on basis of computations of flow over dam at gage heights 27.20 ft, 29.40 ft, and 34.2 ft; minimum, 9 ft<sup>3</sup>/s, Oct. 2, 1921; minimum daily, 40 ft<sup>3</sup>/s, Dec. 28, 29, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,050 ft<sup>3</sup>/s, Apr. 14, gage height, 11.69 ft; minimum, 76 ft<sup>3</sup>/s, Sept. 10; minimum daily, 80 ft<sup>3</sup>/s, Sept. 10.

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	351	363	671	531	708	580	2060	1050	940	567	122	91
2	342	360	587	583	681	586	1760	1180	1660	552	118	91
3	325	353	454	623	608	558	1420	1110	5560	461	112	105
4	320	346	394	624	505	507	1490	879	4980	351	186	112
5	336	356	387	592	531	489	1640	724	3140	359	209	100
6	802	308	433	644	448	492	1890	642	2230	362	317	107
7	1140	345	369	583	486	495	2140	584	1580	389	227	104
8	732	316	348	573	449	462	4080	547	1170	309	279	98
9	571	309	345	633	582	466	4780	518	941	298	339	98
10	488	531	315	653	763	483	7120	492	775	321	273	80
11	444	1250	379	713	850	447	7240	454	684	453	172	83
12	417	865	412	599	762	528	7300	417	953	427	126	105
13	399	670	394	562	793	644	7230	380	924	325	137	133
14	378	602	421	370	755	719	8010	357	774	280	140	161
15	362	1160	428	358	814	725	6110	332	616	260	131	209
16	352	967	396	399	808	766	4920	321	527	223	119	122
17	398	745	2380	560	779	857	4390	312	896	202	121	138
18	460	635	3630	526	735	926	3930	255	1180	235	133	125
19	1160	576	3910	572	694	914	3010	366	746	230	114	120
20	898	530	3950	552	668	928	2670	300	559	201	113	120
21	668	501	1790	494	598	1040	2630	289	535	198	110	820
22	559	481	786	466	554	3860	3160	427	486	155	104	871
23	497	449	1410	446	597	4130	3780	1110	484	154	98	438
24	455	383	1150	430	564	3560	2820	2170	807	220	89	290
25	431	355	795	439	550	3080	3800	2240	666	387	84	505
26	419	460	686	410	656	2650	4000	2030	505	249	81	1640
27	400	964	560	412	651	1830	2200	3740	423	216	82	849
28	380	888	525	377	622	1520	1570	2740	366	201	87	507
29	366	779	590	e440	---	1650	1290	2130	316	158	87	398
30	355	702	503	527	---	2510	1140	1510	293	145	85	342
31	361	---	536	640	---	2800	---	1150	---	130	85	---
TOTAL	15566	17549	29934	16331	18211	41202	109580	30756	35716	9018	4480	8962
MEAN	502	585	966	527	650	1329	3653	992	1191	291	145	299
MAX	1160	1250	3950	713	850	4130	8010	3740	5560	567	339	1640
MIN	320	308	315	358	448	447	1140	255	293	130	81	80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2001, BY WATER YEAR (WY)

	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	528	831	908	888	900	1693	2319	1227	751	407	387	400																																																																												
MAX	4587	3344	2623	2635	2663	5064	5225	2630	2792	1738	3237	2938																																																																												
(WY)	1956	1928	1997	1949	1984	1936	1993	1989	1982	1972	1955	1938																																																																												
MIN	96.7	140	206	155	215	597	586	408	186	118	91.2	85.0																																																																												
(WY)	1965	1965	1915	1981	1920	1941	1985	1985	1964	1962	1957	1995																																																																												

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR	FOR 2000 CALENDAR YEAR	FOR 2001 WATER YEAR
ANNUAL TOTAL	409507	337305						
ANNUAL MEAN	1119	924						
HIGHEST ANNUAL MEAN								
LOWEST ANNUAL MEAN								
HIGHEST DAILY MEAN	7620	Jun 7	8010	Apr 14	37400	Aug 19	1955	
LOWEST DAILY MEAN	256	Sep 12	80	Sep 10	40	Dec 28	1914	
ANNUAL SEVEN-DAY MINIMUM	314	Jul 9	84	Aug 25	50	Sep 3	1995	
MAXIMUM PEAK FLOW			9050	Apr 14	70300	Aug 19	1955	
MAXIMUM PEAK STAGE			11.69	Apr 14	34.20	Aug 19	1955	
INSTANTANEOUS LOW FLOW			76	Sep 10	9.0	Oct 2	1921	
10 PERCENT EXCEEDS	2180		2230		2140			
50 PERCENT EXCEEDS	852		507		549			
90 PERCENT EXCEEDS	368		131		160			

e Estimated

CONNECTICUT RIVER BASIN

01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA

LOCATION.--Lat 42°04'45", long 73°04'24", Berkshire County, Hydrologic Unit 01080207, on left bank 5 ft downstream from highway bridge, 0.3 mi downstream from Clam River, 1 mi south of New Boston, and at mile 65.0.

DRAINAGE AREA.--91.7 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1913 to current year. Prior to October 1948, published as Farmington River near New Boston.

REVISED RECORDS.--WSP 641: 1924(M). WSP 781: 1928(M). WSP 1231: 1914. WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 758.21 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by Otis Reservoir 7.0 mi upstream on Fall River. High flow slightly affected by retarding reservoirs since 1966. Satellite and telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--88 years, 184 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,300 ft<sup>3</sup>/s, Aug. 19, 1955, gage height, 14.06 ft, from rating curve extended above 9,600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum daily, 2.4 ft<sup>3</sup>/s, Aug. 20, 21, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,840 ft<sup>3</sup>/s, Dec. 17, gage height, 6.26 ft, minimum daily, 5.3 ft<sup>3</sup>/s, Sept.3,9.

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	50	166	100	e170	174	110	434	112	108	72	11	6.4
2	47	155	85	e130	130	103	370	102	423	57	10	5.6
3	44	152	111	e120	e110	85	320	95	1150	47	9.3	5.3
4	42	148	e98	e110	e140	76	289	89	757	42	17	5.5
5	48	147	e94	e100	e170	83	282	83	452	53	25	6.3
6	238	145	e90	e92	e150	118	343	74	304	70	18	6.7
7	137	145	e85	e88	e140	109	448	69	220	52	14	5.8
8	107	146	e90	e84	e130	86	668	67	164	48	12	5.4
9	84	146	e100	e80	e120	81	957	65	133	46	10	5.3
10	72	217	113	e78	e140	83	1410	60	107	40	14	6.1
11	67	269	106	e76	e160	82	1270	56	97	43	33	10
12	62	248	98	e74	e140	79	1240	52	112	41	24	7.3
13	96	220	88	e76	e110	105	1350	48	98	35	22	6.2
14	247	231	110	e80	e96	166	1410	41	84	33	19	14
15	206	278	104	e88	e110	153	1150	38	72	30	16	15
16	46	240	103	e110	e120	157	989	35	62	28	28	11
17	52	217	947	e94	e110	167	832	36	101	27	20	9.1
18	79	199	938	e88	e100	176	717	35	99	26	12	8.0
19	158	185	602	e80	e96	163	644	38	74	25	11	7.4
20	170	174	449	e86	94	169	509	35	65	22	10	9.3
21	293	169	359	e96	87	190	400	32	71	20	10	242
22	277	166	314	e110	e140	716	433	60	64	19	9.3	131
23	223	158	270	e94	e120	682	448	124	77	16	8.7	82
24	198	150	e220	e86	e110	525	387	170	152	15	8.7	58
25	196	149	e180	e78	148	445	306	170	104	13	7.7	275
26	192	175	e160	e74	196	410	248	257	83	16	7.2	308
27	190	223	e140	e70	143	363	202	601	65	18	7.4	167
28	182	215	e130	e86	99	325	165	429	53	15	7.7	97
29	174	203	e120	109	---	298	141	299	47	13	7.4	75
30	176	181	e150	136	---	462	124	211	42	12	6.8	59
31	178	---	e210	217	---	506	---	147	---	11	6.6	---
TOTAL	4331	5617	6764	3060	3583	7273	18486	3730	5440	1005	422.8	1649.7
MEAN	140	187	218	98.7	128	235	616	120	181	32.4	13.6	55.0
MAX	293	278	947	217	196	716	1410	601	1150	72	33	308
MIN	42	145	85	70	87	76	124	32	42	11	6.6	5.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2001, BY WATER YEAR (WY)

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	142	210	197	181	165	303	407	217	130	81.1	85.5	89.7																																																																													
MAX	774	817	563	529	608	947	934	627	479	290	1002	644																																																																													
(WY)	1956	1928	1997	1996	1981	1936	1993	1984	1982	1945	1955	1938																																																																													
MIN	19.9	27.0	31.1	20.1	34.7	88.5	96.1	61.6	23.9	9.26	5.68	8.81																																																																													
(WY)	1915	1915	1918	1981	1980	1965	1985	1941	1964	1962	1957	1995																																																																													

SUMMARY STATISTICS

FOR 2000 CALENDAR YEAR

FOR 2001 WATER YEAR

WATER YEARS 1913 - 2001

ANNUAL TOTAL	70338	61361.5	
ANNUAL MEAN	192	168	184
HIGHEST ANNUAL MEAN			341
LOWEST ANNUAL MEAN			66.1
HIGHEST DAILY MEAN	1800	Jun 7	16100
LOWEST DAILY MEAN	27	Sep 1	2.4
ANNUAL SEVEN-DAY MINIMUM	37	Aug 26	3.1
MAXIMUM PEAK FLOW			1840
MAXIMUM PEAK STAGE			6.26
INSTANTANEOUS LOW FLOW			4.9
10 PERCENT EXCEEDS	357	377	400
50 PERCENT EXCEEDS	148	101	115
90 PERCENT EXCEEDS	59	12	26

e Estimated

## HOUSATONIC RIVER BASIN

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA

LOCATION.--Lat 42°28'10", long 73°11'49", Berkshire County, Hydrologic Unit 01100005, on right bank 250 ft downstream from Hubbard Avenue Bridge at Coltsville, 1.2 mi upstream from Unkamet Brook, and 2 mi northeast of Pittsfield. Prior to Nov. 8, 1994, at site 200 ft upstream.

DRAINAGE AREA.--57.6 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: March 1936 to current year. Prior to October 1945, published as Housatonic River at Coltsville.  
Water-quality records: Water years 1963-65.

REVISED RECORDS.--WSP 851: 1936(M). WDR MA-RI-82-1: 1976-77, 1979-80. WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 993.49 ft above sea level. Prior to Nov. 8, 1994, at site 200 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharge, which are fair. Flow regulated by powerplants upstream and, since 1949, by Cleveland Brook Reservoir, usable capacity, 214,000,000 ft<sup>3</sup>, 5.4 mi upstream; regulation greater prior to 1955. Diversion upstream from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 107 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 10.80 ft, from rating curve extended above 2,300 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum daily, 4.4 ft<sup>3</sup>/s, Aug. 15, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1755, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,120 ft<sup>3</sup>/s, Dec. 17, gage height, 4.60 ft; minimum daily, 13 ft<sup>3</sup>/s, Aug. 25, 26, Sept. 3, 7-9.

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	45	60	69	e52	76	62	90	114	102	74	20	20
2	45	55	59	e52	57	61	84	100	408	57	21	14
3	51	52	48	55	e45	59	80	74	847	43	22	13
4	53	52	45	54	e41	56	85	67	653	36	28	16
5	54	51	e45	53	e45	55	103	61	302	36	42	15
6	216	52	e45	52	56	62	147	55	184	66	27	14
7	183	50	e44	50	61	67	206	52	128	57	22	13
8	97	51	e44	49	56	61	448	50	88	44	22	13
9	85	47	e44	50	65	60	598	48	76	39	21	13
10	71	112	e45	46	133	61	934	48	70	63	21	18
11	65	149	e46	47	127	57	911	44	70	115	20	29
12	71	94	e46	45	108	56	878	44	117	68	26	23
13	73	69	46	42	92	64	1010	42	91	48	26	20
14	51	74	45	43	81	74	1150	38	67	39	23	27
15	48	154	43	43	129	66	917	39	52	35	20	25
16	54	117	42	46	115	65	783	37	46	33	18	20
17	58	85	738	43	92	71	633	36	78	39	18	18
18	119	66	808	42	73	76	525	35	89	41	18	16
19	252	59	303	42	70	68	451	35	62	36	17	15
20	139	55	205	42	73	71	394	34	47	34	17	19
21	99	55	161	42	72	84	472	32	43	31	17	148
22	82	57	e126	44	62	289	703	44	41	33	14	87
23	77	52	e94	40	66	279	775	69	45	27	14	43
24	81	46	e77	49	61	223	573	83	59	24	14	28
25	78	43	e66	76	63	184	422	103	50	23	13	241
26	76	58	e58	81	82	149	279	141	42	46	13	248
27	75	110	e49	62	76	119	228	528	37	44	14	83
28	72	115	e47	50	66	100	177	307	34	33	15	45
29	71	88	e48	43	---	89	139	194	32	27	15	33
30	71	75	e49	59	---	92	123	153	43	23	15	26
31	68	---	e50	91	---	101	---	117	---	21	14	---
TOTAL	2680	2203	3635	1585	2143	2981	14318	2824	4003	1335	607	1343
MEAN	86.5	73.4	117	51.1	76.5	96.2	477	91.1	133	43.1	19.6	44.8
MAX	252	154	808	91	133	289	1150	528	847	115	42	248
MIN	45	43	42	40	41	55	80	32	32	21	13	13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 2001, BY WATER YEAR (WY)

MEAN	70.0	95.9	101	95.8	96.2	175	263	140	86.4	53.4	47.0	54.0
MAX	318	279	321	252	274	417	582	366	326	220	188	326
(WY)	1956	1956	1974	1949	1984	1979	1993	1984	1972	1945	1990	1938
MIN	19.9	19.1	31.2	15.5	16.0	50.4	66.3	37.8	25.4	12.9	14.9	14.3
(WY)	1965	1965	1981	1981	1980	1965	1985	1985	1964	1962	1980	1983

SUMMARY STATISTICS	FOR 2000 CALENDAR YEAR		FOR 2001 WATER YEAR		WATER YEARS 1936 - 2001	
ANNUAL TOTAL	48262		39657			
ANNUAL MEAN	132		109		107	
HIGHEST ANNUAL MEAN					163	
LOWEST ANNUAL MEAN					42.6	
HIGHEST DAILY MEAN	1890		Jun 7	1150	Apr 14	4460
LOWEST DAILY MEAN	29		Jan 23	13	Aug 25	4.4
ANNUAL SEVEN-DAY MINIMUM	32		Jan 21	14	Aug 22	9.5
MAXIMUM PEAK FLOW			2120		Dec 17	6400
MAXIMUM PEAK STAGE			4.60		Dec 17	10.80
INSTANTANEOUS LOW FLOW			11		Sep 3	
10 PERCENT EXCEEDS	262		210		232	
50 PERCENT EXCEEDS	84		56		60	
90 PERCENT EXCEEDS	42		21		23	

e Estimated





HUDSON RIVER BASIN

01331500 HOOSIC RIVER AT ADAMS, MA

LOCATION.--Lat 42°36'40", long 73°07'28", Berkshire County, Hydrologic Unit 02020003, on left bank at Adams, 500 ft downstream from Dry Brook, and 0.4 mi upstream from Pecks Brook.

DRAINAGE AREA.--46.7 mi<sup>2</sup>.

PERIOD OF RECORD.--Discharge: October 1931 to current year.  
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1971-72. WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 828.01 ft above sea level. Prior to Oct. 1, 1964, datum was 9.00 ft higher and Oct. 1, 1964, to May 29, 1974, 8.00 ft higher, at site 500 ft upstream.

REMARKS.--Records good. Diversion upstream for municipal supply of Adams. Some diurnal fluctuation by mill upstream prior to 1961. Flow regulated by Cheshire Reservoir 5.1 mi upstream.

AVERAGE DISCHARGE.--70 years, 89.9 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft<sup>3</sup>/s, Sept. 21, 1938, gage height, 9.25 ft, site and datum then in use, from rating curve extended above 1,100 ft<sup>3</sup>/s on basis of computation of peak flow over dam; minimum daily, 8.0 ft<sup>3</sup>/s, Aug. 31, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,160 ft<sup>3</sup>/s, Dec. 17, gage height, 8.18 ft; minimum, 15 ft<sup>3</sup>/s, Aug. 30, 31.

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	38	51	69	59	66	55	73	119	69	97	23	44
2	38	50	61	59	59	54	71	112	285	76	22	22
3	39	49	53	58	55	53	72	104	424	50	24	20
4	46	48	53	57	50	52	78	69	331	45	61	22
5	48	48	54	57	53	55	91	61	206	47	57	22
6	146	47	52	57	56	118	109	56	164	54	32	19
7	87	46	48	56	54	58	187	56	143	43	27	18
8	65	45	47	55	52	54	360	94	128	42	24	17
9	59	53	46	55	66	53	433	47	83	44	22	17
10	57	155	39	53	131	55	567	45	77	42	22	33
11	55	125	42	52	93	52	507	47	111	56	22	42
12	50	79	59	50	76	51	516	47	197	46	23	24
13	48	69	48	49	73	56	635	50	98	42	25	22
14	46	87	49	48	73	65	613	45	78	39	23	31
15	44	143	48	48	123	60	514	45	72	38	21	27
16	47	98	57	48	90	63	464	44	66	35	20	24
17	51	86	602	48	80	64	404	44	138	41	21	22
18	140	79	415	46	69	66	365	44	91	39	21	20
19	184	74	218	45	67	62	330	45	63	34	20	20
20	107	69	182	45	66	65	318	41	59	31	19	23
21	68	68	154	45	65	82	366	39	60	30	19	117
22	60	65	143	44	57	235	520	53	57	28	18	49
23	57	61	123	43	60	224	477	72	57	26	18	38
24	58	53	115	43	57	159	392	97	76	26	17	32
25	58	53	104	43	59	120	300	92	59	26	16	175
26	56	69	89	42	70	89	238	108	45	47	16	83
27	55	99	94	41	62	95	212	254	38	37	16	40
28	53	86	85	41	57	90	187	165	35	29	16	34
29	51	75	75	41	---	118	151	105	33	27	16	31
30	52	72	68	52	---	117	159	90	44	26	15	28
31	52	---	58	77	---	120	---	78	---	25	15	---
TOTAL	2015	2202	3350	1557	1939	2660	9709	2368	3387	1268	711	1116
MEAN	65.0	73.4	108	50.2	69.2	85.8	324	76.4	113	40.9	22.9	37.2
MAX	184	155	602	77	131	235	635	254	424	97	61	175
MIN	38	45	39	41	50	51	71	39	33	25	15	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2001, BY WATER YEAR (WY)

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
MEAN	53.1	78.3	86.4	86.6	84.0	149	216	118	71.7	49.2	41.9	45.2																																																										
MAX	217	213	190	211	263	474	523	268	203	212	170	286																																																										
(WY)	1956	1956	1974	1979	1981	1936	1940	1940	1972	1938	2000	1938																																																										
MIN	14.1	13.3	35.4	18.7	23.5	50.6	85.8	47.3	22.6	19.8	15.3	10.6																																																										
(WY)	1965	1965	1965	1981	1940	1965	1946	1985	1965	1991	1999	1980																																																										

SUMMARY STATISTICS FOR 2000 CALENDAR YEAR FOR 2001 WATER YEAR WATER YEARS 1932 - 2001

ANNUAL TOTAL	39623	32282	
ANNUAL MEAN	108	88.4	89.9
HIGHEST ANNUAL MEAN			130
LOWEST ANNUAL MEAN			41.2
HIGHEST DAILY MEAN	824	Aug 12	635
LOWEST DAILY MEAN	33	Feb 8	15
ANNUAL SEVEN-DAY MINIMUM	34	Feb 7	16
MAXIMUM PEAK FLOW			1160
MAXIMUM PEAK STAGE			8.18
INSTANTANEOUS LOW FLOW			15
10 PERCENT EXCEEDS	190		169
50 PERCENT EXCEEDS	86		56
90 PERCENT EXCEEDS	42		23





As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in a table of discharge measurements at low-flow partial-record stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a second table.

## Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (\*).

Discharge measurements made at miscellaneous sites October 2000 through September 2001

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
PAWTUXET RIVER BASIN						
01115110 Huntinghouse Brook	Regulating Reservoir	Lat 41°50'48", long 71°36'44", Providence County, at Elmdale Road, 1.6 mi northwest of North Scituate, RI.	6.31	1993-2000	3-22-01 6-01-01 6-28-01 7-23-01 8-31-01 9-24-01	416 13.5 4.01 .9 .9 .55
01115114 Rush Brook	do.	Lat 41°50'15", long 71°36'45", Providence County, near Elmdale Road, 1.5 mi northwest of North Scituate, RI.	6.31	1993-2000	12-28-00 6-01-01 6-29-01 7-23-01 8-31-01 9-24-01	3.97 6.87 1.36 .52 .53 .41
01115120 Unnamed Tributary	Scituate Reservoir	Lat 41°49'53", long 71°36'34", Providence County, at State Highway 6, 1.2 mi west of North Scituate, RI.	0.42	1994-2000	4-04-01 5-30-01 6-01-01 6-28-01 7-23-01 9-24-01	1.20 .96 .38 .14 0 0
01115170 Moswansicut Stream	Regulating Reservoir	Lat 41°50'27", long 71°35'06", Providence County, at State Highway 116, 0.6 mi northeast of North Scituate, RI.	--	1994-95, 2000	4-04-01 6-01-01 6-28-01 7-23-01 8-31-01 9-24-01	30.9 8.15 .18 .24 .28 .17
01115180 Brandy Brook	Scituate Reservoir	Lat 41°49'10", long 71°35'11", Providence County, at State Highway 116, 0.9 mi south of North Scituate, RI.	1.59	1993-2000	4-04-01 6-07-01 6-28-01 7-23-01 8-31-01 9-24-01	8.20 2.20 1.37 .63 .41 .41
01115183 Quonapaug Brook	do.	Lat 41°47'51", long 71°24'53", Providence County, at State Highway 116, 2.4 mi south of North Scituate, RI.	1.96	1993-2000	4-04-01 6-07-01 6-28-01 7-23-01 8-31-01 9-24-01	10.6 2.78 2.27 .41 .12 .13
01115184 Spruce Brook	do.	Lat 41°47'19", long 71°37'14", Providence County, 0.2 mi south of State Highway 14, 3.5 mi southwest of North Scituate, RI.	0.30	1994-2000	4-04-01 6-07-01 7-09-01 7-24-01 8-31-01 9-24-01	7.34 2.41 1.61 .46 .26 .40
01115185 Windsor Brook	Ponaganset River	Lat 41°50'10", long 71°43'23", Providence County, at Windsor Road, 1.3 mi northwest of South Foster, RI.	--	1993-94, 1999-2000	12-28-01 6-01-01 6-29-01 7-24-01 8-31-01 9-26-01	4.10 6.34 1.18 .23 .61 .71

See footnotes at end of table

## DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites October 2000 through September 2001--Continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<i>PAWTUXET RIVER BASIN--Continued</i>						
01115190 Dolly Cole Brook	Barden Reservoir	Lat 41°49'20", long 71°42'03", Providence County, at Old Danielson Pike at South Foster, RI.	5.07	1993-2000	3-23-01 6-01-01 6-29-01 7-24-01 8-31-01 9-26-01	120 9.66 2.33 .75 .87 .78
01115265 Hemlock Brook	do.	Lat 41°47'26", long 71°41'57", Providence County, at King Road, 1.2 mi northeast of Foster Center, RI.	--	1996-2000	4-04-01 6-07-01 6-28-01 7-24-01 8-31-01 9-24-01	34.2 11.6 5.70 .86 2.73 1.52
01115275 Bear Tree Brook	Westconnaug Stream	Lat 41°46'57", long 71°40'31", Providence County, at King Road, 1.2 mi northeast of Foster Center, RI.	.64	1994-95, 2000	12-28-01 4-04-01 6-29-01 7-24-01 8-31-01 9-24-01	0.82 3.22 1.15 .67 .54 .47
01115280 Cork Brook	Scituate Reservoir	Lat 41°48'14", long 71°39'01", Providence County, at Rockland Scituate Road, 0.8 mi northeast of Crazy Corners, RI.	1.91	1993-2000	4-04-01 6-07-01 7-09-01 7-24-01 8-31-01 9-24-01	6.04 2.12 1.52 .25 .22 .19
01115297 Wilbur Hollow Brook	Barden Reservoir	Lat 41°45'53", long 71°38'10", Providence County, at Old Plainfield Pike, 2.2 mi southeast of Rockland, RI.	4.45	1992-2000	4-04-01 6-07-01 6-29-01 7-24-01 8-31-01 9-24-01	19.4 6.93 4.07 1.13 1.05 1.52
01115500 Pawtuxet River	Narragansett Bay	Lat 41°43'58", long 71°33'01", Providence County, near Fairground Way, at Fiskeville, RI.	102	1915-25 <sup>a</sup> , 1986-87 <sup>c</sup> , 1996-2000	5-30-01 6-28-01 7-09-01 7-23-01 8-31-01 9-26-01	42.8 67.4 91.1 15.5 32.2 28.6
<i>PAWCATUCK RIVER BASIN</i>						
01117354 Queen River	Usquepaug River	Lat 41°34'43", long 71°32'37", Washington County, at bridge on State Route 102, 0.3 mi west of Exeter, RI.	2.80	2000	10-23-00 11-16-00 12-19-00 1-24-01 3-19-01 5-21-01 6-18-01 6-28-01 8-23-01 9-19-01 9-19-01	0.84 3.64 14.6 4.64 13.8 2.35 21.9 5.06 1.81 .11 .13
01117355 Queen River	do.	Lat 41°33'45", long 71°32'54", Washington County, at bridge on William Reynolds Road, 1.2 mi southwest of Exeter, RI. (Note: Drainage Area revised from 3.69 mi <sup>2</sup> )	3.75	1959-60, 1988-91, 1999-2000	10-23-00 11-16-00 12-19-00 1-25-01 3-20-01 5-22-01 5-29-01 5-31-01 6-29-01 8-24-01 9-20-01	.98 4.16 16.6 5.32 19.0 6.04 11.0 8.34 7.27 2.55 .42

See footnotes at end of table

Discharge measurements made at miscellaneous sites October 2000 through September 2001--Continued

Stream	Tributary to	Location	Drainage area (mi <sup>2</sup> )	Measured previously (water years)	Measurements	
					Date	Discharge (ft <sup>3</sup> /s)
<i>PAWCATUCK RIVER BASIN--Continued</i>						
01117360 Fisherville Brook	Queen River	Lat 41°33'51", long 71°33'54", Washington County, at bridge on Liberty Church Road, 1.7 mi southwest of Exeter, RI.	8.14	1959-60, 1988-91, 2000	10-23-00 11-16-00 12-19-00 1-25-01 3-20-01 5-21-01 6-28-01 8-23-01 9-19-01	2.46 7.28 31.0 11.2 32.7 8.14 17.1 6.66 1.43
01117367 Queens Fort Brook	do.	Lat 41°32'47", long 71°33'11", Washington County, 300 ft east of intersection Dawley Road and School Land Road, 1.2 mi northeast of Liberty, RI.	4.09	2000	10-23-00 11-17-00 12-18-00 1-25-01 3-21-01 5-21-01 5-29-01 5-31-01 6-18-01 6-28-01 8-24-01 9-19-01	.08 .15 .98 .43 3.58 .44 11.9 1.95 29.1 .85 .06 .02
01117368 Queen River	Usequepaug River	Lat 41°32'55", long 71°34'40", Washington County, at bridge on Dawley Road, 0.9 mi northeast of Liberty, RI.	18.4	2000	10-23-00 11-17-00 12-19-00 1-25-01 3-21-01 5-21-01 6-28-01 8-24-01 9-19-01	6.09 13.4 54.7 21.9 56.1 17.0 14.1 11.6 3.76
01117380 Locke Brook	Queen River	Lat 41°32'14", long 71°35'17", Washington County, at bridge on Mail Road, 0.8 mi west of Liberty, RI.	4.37	1959-60, 1988-91, 2000	10-23-00 11-17-00 12-19-00 1-25-01 3-20-01 5-21-01 6-28-01 8-23-01 9-19-01	1.95 5.03 15.9 7.31 15.9 4.78 9.86 4.14 1.44
01117390 Glen Rock Brook	Glen Rock Reservoir	Lat 41°30'59", long 71°36'23", Washington County, at culvert on Glen Rock Road, at Glen Rock, RI.	2.83	1989-91, 2000	10-23-00 11-17-00 12-19-00 1-24-01 3-21-01 5-22-01 6-18-01 6-29-01 8-23-01 9-20-01	0.90 2.58 10.8 4.57 8.90 3.41 17.4 3.84 .63 .48
01117400 Sherman Brook	Glen Rock Brook	Lat 41°31'04", long 71°36'18", Washington County, at culvert on Glen Rock Road, 0.1 mi north of Glen Rock, RI.	1.04	1966-74 <sup>b</sup> , 1989-91, 2000	10-23-00 11-17-00 12-19-00 1-24-01 3-21-01 5-22-01 6-29-01 8-23-01 9-19-01	0.45 1.36 5.16 2.51 3.08 1.70 1.31 0.64 0.14

<sup>a</sup> Operated as a continuous-record gaging station.<sup>b</sup> Operated as a crest-stage partial-record station and published as "Glen Rock Brook tributary."<sup>c</sup> Data not published in 1986-87 annual data report.







## SURFACE-WATER QUALITY AT MISCELLANEOUS SITES

DATE	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 TOTAL (MG/L AS C) (00680)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
01096544 STONY BROOK AT SCHOOL STREET AT CHELMSFORD, MA (LAT 42 37 04N LONG 071 24 08W)									
JUN									
13...	0.011	<0.020	0.028	5.4	6.0	5.7	0.8	200	195
JUL									
02...	.019	<.020	.049	7.4	9.6	2.2	1.6	780	235
24...	.009	<.020	.028	5.4	6.9	11.9	.7	100	137
AUG									
14...	.014	<.020	.035	6.2	7.6	7.4	1.4	400	288
SEP									
06...	.011	<.020	.023	4.8	5.9	--	--	200	169
14...	--	--	--	--	--	1.7	3.4	--	--
01096710 ASSABET RIVER AT ALLEN STREET AT NORTHBOROUGH, MA (LAT 42 19 46N LONG 071 37 48W)									
JUN									
06...	0.104	0.074	0.149	6.3	7.6	16.9	0.8	190	99.8
JUL									
03...	.132	.114	.185	6.8	7.3	.8	1.0	270	105
23...	.323	.313	.381	4.5	5.4	31.8	1.4	90	45.4
AUG									
13...	.149	.126	.198	5.1	6.2	19.9	3.3	60	111
SEP									
07...	.666	.655	.712	4.8	5.5	--	--	30	29.0
14...	--	--	--	--	--	27.6	2.3	--	--
01096720 ASSABET RIVER AT BOUNDARY ST. NR NORTHBOROUGH, MA (LAT 42 20 29N LONG 071 36 59W)									
JUN									
06...	0.093	0.067	0.145	6.4	--	--	1.4	210	87.3
JUL									
03...	.117	.100	.171	7.2	8.0	--	.8	300	90.8
23...	.272	.255	.300	4.6	5.4	--	.8	70	25.1
AUG									
13...	.147	.162	.184	5.2	6.1	--	1.9	70	87.1
SEP									
07...	.710	.710	.782	4.3	5.3	--	--	40	68.4
14...	--	--	--	--	--	--	1.8	--	--

SURFACE-WATER QUALITY AT MISCELLANEOUS SITES

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	TUR- BID- ITY FIELD WATER UNFLTRD (NTU) (61028)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	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)
011032058 CHARLES RIVER AT MAPLE ST. AT NORTH BELLINGHAM, MA (LAT 42 07 11N LONG 071 27 10W)												
JUN												
11...	1240	12	1.5	753	7.7	88	7.0	571	--	21.5	23.1	3.91
JUL												
04...	0900	42	3.0	757	5.6	62	6.6	416	20.6	19.6	16.7	2.82
25...	0900	8.8	2.8	752	6.7	84	7.0	624	28.0	25.5	22.8	3.66
AUG												
15...	0840	26	2.4	757	6.3	69	6.8	587	21.9	19.9	24.3	4.30
SEP												
13...	0850	6.1	2.9	758	7.2	77	7.3	782	15.4	18.5	27.8	5.72
01105504 EAST BRANCH NEPONSET AT CANTON JUNCTION, MA (LAT 42 09 31N LONG 071 09 19W)												
JUN												
07...	1240	26	4.7	756	8.1	90	7.3	25	20.9	20.7	11.2	3.02
JUL												
03...	0920	74	5.1	765	9.3	101	6.7	187	21.5	19.2	8.80	2.18
24...	0920	17	3.9	757	8.1	100	7.3	250	26.9	25.2	12.2	3.30
AUG												
14...	1500	59	5.3	757	8.4	96	6.7	192	23.5	21.9	9.69	2.58
SEP												
11...	0930	8.5	1.7	760	7.8	92	7.1	271	21.9	23.4	12.3	3.47
01106468 MATFIELD RIVER AT N CENTRAL ST AT E BRIDGEWATER, MA (LAT 42 02 01N LONG 070 58 21W)												
JUN												
07...	0930	47	4.9	757	7.3	76	6.8	494	24.0	17.0	20.2	3.70
JUL												
02...	1220	111	4.4	759	7.1	79	6.6	303	25.7	20.2	13.7	2.51
23...	1130	30	3.0	759	5.1	59	6.9	550	22.0	22.0	26.4	3.83
AUG												
14...	0950	98	3.1	758	6.3	70	6.5	261	22.8	20.7	11.6	2.50
SEP												
10...	1200	24	.7	762	5.0	59	6.8	593	29.4	23.3	21.8	3.76
01112262 MILL RIVER AT SUMMER STREET NEAR BLACKSTONE, MA (LAT 42 02 27N LONG 071 30 56W)												
JUN												
11...	1610	18	1.8	754	7.5	80	6.6	243	21.5	18.0	9.07	2.06
JUL												
03...	1620	47	2.7	760	8.3	90	6.5	208	24.9	19.2	7.33	1.58
24...	1510	12	1.9	752	8.6	103	7.0	227	32.0	23.8	9.41	2.07
AUG												
13...	1650	41	4.6	754	8.4	94	6.6	166	27.5	20.4	7.62	1.70
SEP												
12...	1700	5.0	1.3	760	8.8	96	6.9	291	24.6	19.3	11.0	2.47

## SURFACE-WATER QUALITY AT MISCELLANEOUS SITES

DATE	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 SI02) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
011032058 CHARLES RIVER AT MAPLE ST. AT NORTH BELLINGHAM, MA (LAT 42 07 11N LONG 071 27 10W)												
JUN												
11...	5.28	75.7	132	E0.1	6.6	24.4	332	0.057	0.47	0.59	2.19	0.037
JUL												
04...	3.60	56.2	89.9	<.2	5.1	20.1	245	E.036	.47	.55	.449	.008
25...	6.97	84.8	142	E.1	2.9	24.2	311	E.036	.40	.47	2.38	.015
AUG												
15...	9.10	78.2	119	E.1	5.1	36.4	333	E.038	.58	.64	1.75	.015
SEP												
13...	10.0	106	150	E.1	2.0	52.6	408	E.039	.46	.59	2.28	.009
01105504 EAST BRANCH NEPONSET AT CANTON JUNCTION, MA (LAT 42 09 31N LONG 071 09 19W)												
JUN												
07...	1.48	27.5	50.6	E0.1	7.1	8.1	145	0.073	0.35	0.49	0.414	0.011
JUL												
03...	1.32	21.6	37.4	<.2	6.2	6.6	128	.041	.50	.61	.167	.007
24...	1.61	29.3	53.7	E.1	7.3	7.4	137	E.032	.33	.39	.231	E.004
AUG												
14...	1.55	20.8	34.7	<.2	7.7	12.3	119	E.035	.41	.59	.215	.006
SEP												
11...	1.91	30.1	56.8	E.1	5.6	7.9	145	.059	.32	.44	.232	E.003
01106468 MATFIELD RIVER AT N CENTRAL ST AT E BRIDGEWATER, MA (LAT 42 02 01N LONG 070 58 21W)												
JUN												
07...	4.88	60.0	102	0.2	7.7	20.1	285	.558	1.1	1.3	2.85	0.181
JUL												
02...	3.02	37.6	60.9	<.2	6.5	12.0	192	.472	1.1	1.2	1.68	.193
23...	8.41	66.0	101	E.1	7.8	24.6	306	2.37	3.2	3.2	4.93	.408
AUG												
14...	2.97	31.5	47.0	<.2	6.5	18.1	151	.438	.98	1.2	.856	.080
SEP												
10...	10.6	71.1	101	E.2	7.3	29.7	323	2.54	3.7	3.8	6.67	.436
01112262 MILL RIVER AT SUMMER STREET NEAR BLACKSTONE, MA (LAT 42 02 27N LONG 071 30 56W)												
JUN												
11...	2.02	32.4	56.2	<0.2	8.3	7.7	148	0.061	0.36	0.49	0.750	0.008
JUL												
03...	1.72	27.2	46.7	<.2	8.6	5.8	138	E.036	.42	.50	.316	.008
24...	2.46	30.4	50.7	<.2	9.6	7.1	132	<.040	.23	.29	1.04	E.004
AUG												
13...	2.41	19.1	30.5	<.2	8.9	9.4	101	<.040	.31	.51	.565	.006
SEP												
12...	3.31	35.7	59.2	<.2	6.8	9.1	146	<.040	.24	.28	1.43	E.004

SURFACE-WATER QUALITY AT MISCELLANEOUS SITES

DATE	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-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 TOTAL (MG/L AS C) (00680)	CHLOR-A PERI-PHYTON CHROMO-GRAPHIC FLUOROM (MG/M2) (70957)	CHLOR-A PHYTO-PLANK-TON CHROMO FLUOROM (UG/L) (70953)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)
011032058 CHARLES RIVER AT MAPLE ST. AT NORTH BELLINGHAM, MA (LAT 42 07 11N LONG 071 27 10W)									
JUN									
11...	0.018	<0.020	0.047	5.2	5.8	5.7	0.9	170	172
JUL									
04...	.016	<.020	.050	8.1	9.5	2.6	.9	370	63.0
25...	.017	<.020	.037	4.7	5.9	3.8	.7	120	52.3
AUG									
15...	.025	E.015	.045	7.2	8.5	4.4	1.5	180	44.1
SEP									
13...	.015	<.020	.036	5.0	7.1	1.6	7.3	70	41.0
01105504 EAST BRANCH NEPONSET AT CANTON JUNCTION, MA (LAT 42 09 31N LONG 071 09 19W)									
JUN									
07...	0.014	<0.020	0.035	6.0	7.7	12.6	2.0	430	161
JUL									
03...	.027	<.020	.047	8.9	11	3.2	1.2	480	122
24...	.013	<.020	.039	5.1	6.9	2.9	15.6	470	152
AUG									
14...	.017	E.011	.046	6.4	8.3	.5	1.8	370	141
SEP									
11...	.009	<.020	.026	4.8	6.2	.6	.8	290	218
01106468 MATFIELD RIVER AT N CENTRAL ST AT E BRIDGEWATER,MA (LAT 42 02 01N LONG 070 58 21W)									
JUN									
07...	0.076	0.049	0.174	5.9	7.8	45.3	0.7	130	211
JUL									
02...	.058	.021	.109	7.7	9.4	18.8	1.3	290	69.8
23...	.284	.247	.322	6.7	8.3	43.2	.8	70	23.2
AUG									
14...	.156	.133	.198	6.6	7.9	49.9	1.2	280	88.6
SEP									
10...	.899	.812	.905	7.1	9.2	23.2	1.9	50	58.6
01112262 MILL RIVER AT SUMMER STREET NEAR BLACKSTONE, MA (LAT 42 02 27N LONG 071 30 56W)									
JUN									
11...	0.033	E0.010	0.065	5.5	6.1	16.3	0.5	480	47.2
JUL									
03...	.024	<.020	.050	8.3	10	4.5	.8	520	33.0
24...	.021	<.020	.044	4.2	5.7	17.0	.5	250	18.4
AUG									
13...	.015	<.020	.050	6.1	7.3	6.4	3.0	210	27.2
SEP									
12...	.014	<.020	.035	2.9	4.0	--	.3	60	18.5

< Less than  
E Estimated

## GROUND-WATER LEVELS IN MASSACHUSETTS

## BARNSTABLE COUNTY

413956070164301. Barnstable well A1W 230.

LOCATION.--Lat 41°39'56", long 70°16'43", Barnstable County, Hydrologic Unit 01090002, 50 ft west of Mary Dunn Road at Hyannis Airport and 0.3 mi north of intersection of Willow Street and State Highway 28 in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 35.8 ft, screened 32.8 to 35.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 43.23 ft above sea level. Measuring point: Top of casing, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.51 ft below land-surface datum, May 20, 1987; lowest measured, 26.59 ft below land-surface datum, Oct. 21, 1991.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	25.70	DEC 21	25.73	FEB 26	25.40	APR 24	23.37	JUN 22	23.99	AUG 21	24.95
NOV 21	25.73	FEB 01	25.09	MAR 28	24.77	MAY 25	23.60	JUL 20	24.37	SEP 21	25.18
WATER YEAR 2001		HIGHEST	23.37	APR 24, 2001		LOWEST	25.73	NOV 21, 2000		DEC 21, 2000	

414154070165001. Barnstable well A1W 247.

LOCATION.--Lat 41°41'54", long 70°16'50", Barnstable County, Hydrologic Unit 01090002, 30 ft east of Mary Dunn Road and 0.2 mi south of State Highway 6A in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 52 ft, screened 49 to 52 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 44.52 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.52 ft below land-surface datum, Apr. 22, 1997; lowest measured, 28.64 ft below land-surface datum, Oct. 25, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	26.18	DEC 21	26.62	FEB 26	26.49	APR 24	25.05	JUN 22	25.22	AUG 21	25.80
NOV 21	26.38	JAN 25	26.73	MAR 28	26.21	MAY 25	25.08	JUL 20	25.48	SEP 25	26.13
WATER YEAR 2001		HIGHEST	25.05	APR 24, 2001		LOWEST	26.73	JAN 25, 2001			

414129070361401. Bourne well BHW 198.

LOCATION.--Lat 41°41'29", long 70°36'14", Barnstable County, Hydrologic Unit 01090002, 50 ft west of County Road and 0.3 mi south of Pocasset Road in Bourne.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 50 ft, screened 47 to 50 ft; new well drilled at same location August 1990, diameter 2.0 in., depth 50 ft, screened 40-50 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 55.56 ft above sea level. Measuring point: Top of casing, 1.65 ft above land-surface datum; prior to August 1990, 2.47 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.73 ft below land-surface datum, Mar. 24, 1998; lowest measured, 36.17 ft below land-surface datum, Oct. 25, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	34.48	DEC 21	34.66	FEB 22	34.17	APR 23	33.64	JUN 19	32.74	AUG 21	33.56
NOV 28	34.57	JAN 26	34.49	MAR 23	33.64	MAY 25	32.31	JUL 27	33.27	SEP 27	33.97
WATER YEAR 2001		HIGHEST	32.31	MAY 25, 2001		LOWEST	34.66	DEC 21, 2000			

## BARNSTABLE COUNTY--Continued

414518070020301. Brewster well BMW 21.

LOCATION.--Lat 41°45'18", long 70°02'03", Barnstable County, Hydrologic Unit 01090002, about 50 ft north of Nook Road, 0.1 mi south of Cliff Pond, 0.3 mi east of Silas Road, and at Nickerson State Park in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.5 in., depth 25 ft, screened 22 to 25 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 36.97 ft above sea level. Measuring point: Top of casing, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land-surface datum, Apr. 25, 1974; lowest measured, 13.34 ft below land-surface datum, Oct. 25, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	12.80	DEC 21	12.97	FEB 27	12.93	APR 23	11.78	JUN 21	11.51	AUG 21	11.66
NOV 28	12.93	JAN 29	13.00	MAR 28	12.46	MAY 29	11.55	JUL 23	11.68		
WATER YEAR 2001	HIGHEST	11.51	JUN 21, 2001	LOWEST	13.00	JAN 29, 2001					

414630070014901. Brewster well BMW 22.

LOCATION.--Lat 41°46'30", long 70°01'49", Barnstable County, Hydrologic Unit 01090002, 50 ft east of entrance to Nickerson State Park and 50 ft south of State Highway 6A in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 52 ft, screened 49 to 52 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 50.45 ft above sea level. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.13 ft below land-surface datum, May 26, 1983; lowest measured, 33.60 ft below land-surface datum, Jan. 31, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	33.15	DEC 21	33.43	FEB 22	33.17	APR 23	31.31	JUN 21	31.54	AUG 21	32.15
NOV 28	33.33	JAN 29	33.37	MAR 28	32.70	MAY 29	31.33	JUL 23	31.87		
WATER YEAR 2001	HIGHEST	31.31	APR 23, 2001	LOWEST	33.43	DEC 21, 2000					

414100070011101. Chatham well CGW 138.

LOCATION.--Lat 41°41'00", long 70°01'11", Barnstable County, Hydrologic Unit 01090002, 50 ft east of State Highway 137 and 300 ft north of State Highway 28 in Chatham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 44 ft, screened 41 to 44 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 35.28 ft above sea level. Measuring point: Top of casing, 4.77 ft above land-surface datum; prior to June 1980, 3.80 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.94 ft below land-surface datum, Apr. 25, 1983; lowest measured, 26.38 ft below land-surface datum, Sept. 25, 1980.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	25.40	DEC 21	25.37	FEB 27	24.82	APR 28	24.40	JUN 21	23.65	AUG 21	24.58
NOV 28	25.39	JAN 29	25.14	MAR 28	24.40	MAY 29	23.40	JUL 23	24.13		
WATER YEAR 2001	HIGHEST	23.40	MAY 29, 2001	LOWEST	25.40	OCT 24, 2000					

GROUND-WATER LEVELS IN MASSACHUSETTS

BARNSTABLE COUNTY--Continued

413525070291904. Mashpee well MIW 29.

LOCATION.--Lat 41°35'25", long 70°29'19", Barnstable County, Hydrologic Unit 01090002, 20 ft west of dirt road, 0.8 mi north of intersection of Great Hay Road and dirt road which is 0.12 mi northeast of intersection of Red Brook Road and Great Hay Road in Mashpee.  
Owner: Town of Mashpee.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Hydraulic-rotary drilled observation water-table well, diameter 2.0 in., depth 40.0 ft, screened 37.0 to 40.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 15.78 above sea level. Measuring point: Top of steel coupling, 1.36 ft above land-surface datum.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.62 ft below land-surface datum, Apr. 22 1987; lowest measured, 10.03 ft below land-surface datum, Oct. 24, 1980.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	9.44	DEC 21	9.55	FEB 22	9.24	APR 25	7.12	JUN 19	7.61	AUG 23	8.56
NOV 28	9.60	JAN 26	9.53	MAR 23	8.47	MAY 25	7.33	JUL 27	8.28	SEP 27	9.24
WATER YEAR 2001	HIGHEST	7.12	APR 25, 2001	LOWEST	9.60	NOV 28, 2000					

414418070241601. Sandwich well SDW 252.

LOCATION.--Lat 41°44'18", long 70°24'16", Barnstable County, Hydrologic Unit 01090002, 0.5 mi north of State Highway 6A and 15 ft east of Private Road in Sandwich.  
Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 57 ft, screened 55 to 57 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 53.47 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.88 ft below land-surface datum, Apr. 25, 1983; lowest measured, 48.23 ft below land-surface datum, Oct. 25, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	47.87	DEC 21	47.95	FEB 22	47.84	APR 25	46.97	JUN 19	47.21	AUG 23	47.65
NOV 28	47.71	JAN 26	47.89	MAR 23	47.52	MAY 25	47.08	JUL 27	47.52	SEP 27	47.71
WATER YEAR 2001	HIGHEST	46.97	APR 25, 2001	LOWEST	47.95	DEC 21, 2000					

414124070265901. Sandwich well SDW 253.

LOCATION.--Lat 41°41'24", long 70°26'59", Barnstable County, Hydrologic Unit 01090002, 800 ft west of Stowe Road and 50 ft south of Farmersville Road in Sandwich.  
Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 70 ft, screened 67 to 70 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 111.20 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.78 ft below land-surface datum, July 30, 1973; lowest measured, 55.05 ft below land-surface datum, Feb. 28, 1967.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	51.55	DEC 21	51.91	FEB 22	52.23	APR 25	50.93	JUN 19	51.01	AUG 23	51.48
NOV 28	51.80	JAN 26	52.08	MAR 23	51.93	MAY 25	50.87	JUL 27	51.44	SEP 27	52.03
WATER YEAR 2001	HIGHEST	50.87	MAY 25, 2001	LOWEST	52.23	FEB 22, 2001					

## BARNSTABLE COUNTY--Continued

420239070062001. Truro well TSW 1.

LOCATION.--Lat 42°02'39", long 70°06'20", Barnstable County, Hydrologic Unit 01090002, near old pumping station about 200 ft north of State Highway 6A and 1.2 mi northwest of North Truro.

Owner: Town of Provincetown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in., depth 68 ft, cased to 68 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 16.80 ft above sea level. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping, barometric pressure, and tide.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, Mar. 23, 1983; lowest measured, 12.10 ft below land-surface datum, Sept. 11, 1954.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	11.08	DEC 21	10.82	FEB 27	10.81	APR 23	10.42	JUN 21	10.80	AUG 22	10.94
NOV 28	10.65	JAN 29	10.65	MAR 28	10.45	MAY 29	10.65	JUL 23	10.81		
WATER YEAR 2001	HIGHEST	10.42	APR 23, 2001	LOWEST	11.08	OCT 24, 2000					

420206070045901. Truro well TSW 89.

LOCATION.--Lat 42°02'06", long 70°04'59", Barnstable County, Hydrologic Unit 01090002, 300 ft west of U.S. Highway 6 and 50 ft north of Highland Road in Truro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 27.7 ft, screened 24.7 to 27.7 ft; new well drilled at same location November 1989, diameter 2.0 in., depth 21.7 ft, screened 16.7 to 21.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 16.60 ft above sea level. Measuring point: Top of casing, at land-surface datum; prior to November 1989, 0.22 ft above land-surface datum.

PERIOD OF RECORD.--September 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.20 ft below land-surface datum, Apr. 25, 1983; lowest measured, 12.96 ft below land-surface datum, Sept. 28, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	12.52	DEC 21	12.30	MAR 28	11.75	MAY 29	11.69	JUL 23	12.26	AUG 22	12.42
NOV 28	12.25	FEB 27	12.08	APR 23	11.28	JUN 21	11.90				
WATER YEAR 2001	HIGHEST	11.28	APR 23, 2001	LOWEST	12.52	OCT 24, 2000					

415353069585401. Wellfleet well WNW 17.

LOCATION.--Lat 41°53'53", long 69°58'54", Barnstable County, Hydrologic Unit 01090002, about 150 ft east of old pumping station and 45 ft west of road to the public beach at Cape Cod National Seashore in Wellfleet.

Owner: Cape Cod National Seashore.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in., depth 42 ft, screen information not available.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 19.10 ft above sea level. Measuring point: Top of casing, 1.24 ft above land-surface datum, 1.13 ft prior to June 1992.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft below land-surface datum, June 27, 1967; lowest measured, 12.75 ft below land-surface datum, Jan. 31, 1967.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	11.84	DEC 21	12.12	FEB 27	11.83	APR 23	10.16	JUN 21	10.47	AUG 22	11.16
NOV 28	12.03	JAN 29	12.11	MAR 28	11.47	MAY 29	10.19	JUL 23	10.81		
WATER YEAR 2001	HIGHEST	10.16	APR 23, 2001	LOWEST	12.12	DEC 21, 2000					



GROUND-WATER LEVELS IN MASSACHUSETTS

BERKSHIRE COUNTY

421550073025101. Becket well A3W 12.

LOCATION.--Lat 42°15'50", long 73°02'51", Berkshire County, Hydrologic Unit 01080206, at edge of Bonny Rigg Restaurant parking lot, 30 ft north of Route 20 and 0.2 mi east of Route 8.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 35 ft, screened 25 to 35 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1285 ft above sea level. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.36 ft below land-surface datum, Apr. 24, 1996; lowest measured, 4.62 ft below land-surface datum, Aug. 23, 1988, July 24, 1991.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	3.14	DEC 26	3.18	FEB 21	3.31	APR 27	3.01	JUN 26	3.11	AUG 21	3.42
NOV 27	2.94	JAN 22	3.32	MAR 28	2.97	MAY 22	3.24	JUL 20	3.40	SEP 26	2.47
WATER YEAR 2001	HIGHEST	2.47	SEP 26, 2001	LOWEST	3.42	AUG 21, 2001					

423503073075401. Cheshire well CJW 2.

LOCATION.--Lat 42°35'03", long 73°07'54", Berkshire County, Hydrologic Unit 02020003, at intersection of Wells and Jenks Roads 2.3 mi northeast of Cheshire.

Owner: Private owner.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 22 ft, cased with stone to 22 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,210 ft, above sea level. Measuring point: Inside rim of concrete well top, 1.0 ft above land-surface datum.

REMARKS.--Water level may be affected by nearby pumping during summer period.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft below land-surface datum, Jan. 19, 1952; lowest measured, 19.83 ft below land-surface datum, Aug. 24, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	5.13	DEC 26	5.58	FEB 21	6.05	APR 27	2.14	JUN 25	3.82	AUG 20	7.91
NOV 28	5.31	JAN 23	8.27	MAR 27	2.74	MAY 22	6.46	JUL 19	5.89	SEP 25	7.50
WATER YEAR 2001	HIGHEST	2.14	APR 27, 2001	LOWEST	8.27	JAN 23, 2001					

421316073212801. Great Barrington well GMW 2.

LOCATION.--Lat 42°13'16", long 73°21'28", Berkshire County, Hydrologic Unit 01100005, 30 ft west of State Highway 41 and 1.5 mi north of intersection of State Highway 41 and U.S. Highway 7 in Great Barrington.

Owner: Private owner.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 15 ft, cased with stone to 15 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 732 ft above sea level. Measuring point: Top of stone curbing, east side of well, 1.12 ft above land-surface datum. Prior to July 25, 1978, measured at land-surface datum.

REMARKS.--Water level affected by stream.

PERIOD OF RECORD.--June 1951 to current year. Continuous graphic recorder January 1968 to August 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.99 ft below land-surface datum, Apr. 21, 1983; lowest measured, 14.97 ft below land-surface datum, Nov. 20, 1964.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	11.26	JAN 22	10.33	MAR 28	7.98	MAY 23	11.36	JUL 20	12.01	SEP 25	12.02
NOV 28	11.31	FEB 21	9.32	APR 27	8.98	JUN 25	10.82	AUG 20	12.23		
WATER YEAR 2001	HIGHEST	7.98	MAR 28, 2001	LOWEST	12.23	AUG 20, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

BERKSHIRE COUNTY--Continued

420912073043001. Otis well OTW 7.

LOCATION.--Lat 42°09'12", long 73°04'30", Berkshire County, Hydrologic Unit 01080207, about 400 ft south of Hawley Road and 15 ft west of State Highway 8 in Otis.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 17.5 ft, screened 15.5 to 17.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,145 ft above sea level. Measuring point: Top of casing, 4.12 ft above land-surface datum.

REMARKS.--Water levels affected by Minor Brook and Farmington River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.55 ft below land-surface datum, Apr. 21, 1983; lowest measured, 10.16 ft below land-surface datum, Sept. 21, 1983.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	8.97	DEC 26	7.98	FEB 21	8.58	APR 25	6.87	JUN 26	8.63	AUG 21	9.91
NOV 27	8.77	JAN 22	9.04	MAR 28	6.72	MAY 22	8.70	JUL 20	9.36	SEP 26	8.88
WATER YEAR 2001	HIGHEST	6.72	MAR 28, 2001	LOWEST	9.91	AUG 21, 2001					

422745073112001. Pittsfield well PTW 51.

LOCATION.--Lat 42°27'45", long 73°11'20", Berkshire County, Hydrologic Unit 01100005, 30 ft east of Hubbard Ave. and about 100 ft north of Barton Brook in Pittsfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 31.5 ft, screened 26.5 to 31.5 ft.

Prior to July 1986, augered observation water-table well, diameter 1.25 in., depth 31.5 ft, screened 29.5 to 31.5 ft.

INSTRUMENTATION.--Monthly measurement with groundwater electric tape by USGS personnel. Digital recorder (60-min punch) July 1986 to current year.

DATUM.--Elevation of land-surface datum is 1,050 ft above sea level. Measuring point: Top of casing in base of aluminum shelter, 1.83 ft above land-surface datum; prior to July 1986, top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft below land-surface datum, Apr. 25, 1969; lowest measured, 27.57 ft below land-surface datum, Dec. 11, 1964

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	15.84	16.15	15.77	16.52	16.45	e15.68	13.87	15.03	15.35	17.62	20.32
2	---	15.86	16.18	15.78	16.54	16.49	15.69	13.92	14.94	15.41	17.72	20.40
3	---	15.89	16.21	15.79	16.57	16.54	15.70	13.97	14.73	15.47	17.81	20.48
4	15.59	15.91	16.19	15.84	16.56	16.58	15.69	14.01	14.53	15.53	17.82	20.57
5	15.63	15.93	16.17	15.88	16.55	16.57	15.64	14.06	14.48	15.61	17.83	20.64
6	15.56	15.96	16.21	15.94	16.59	16.59	15.55	14.13	14.48	15.67	17.94	20.73
7	15.55	15.98	16.23	16.00	16.64	16.65	15.45	14.18	14.48	15.73	18.04	20.82
8	15.57	16.00	16.27	16.03	16.67	16.68	15.19	14.23	14.50	15.80	18.14	20.91
9	15.59	16.02	16.31	16.06	16.62	16.69	14.83	14.27	14.54	15.87	18.23	20.93
10	15.60	15.96	16.34	16.10	16.44	16.71	14.50	14.33	14.57	15.93	18.33	---
11	15.64	15.95	16.34	16.13	16.33	16.73	14.22	14.38	14.60	15.86	18.43	---
12	15.67	15.96	16.31	16.18	16.27	16.75	13.99	14.43	14.60	15.88	18.47	---
13	15.68	15.98	16.39	16.20	16.27	16.71	13.77	14.50	14.65	15.94	18.48	---
14	15.70	15.97	16.37	16.23	16.29	16.69	13.57	14.56	14.68	16.00	18.60	---
15	15.72	15.93	16.42	16.25	16.20	16.73	13.46	14.62	14.71	16.07	18.70	---
16	15.74	15.96	16.42	16.27	16.22	16.72	13.38	14.70	14.74	16.15	18.80	---
17	15.73	15.97	16.22	16.31	16.24	16.68	13.35	14.77	14.73	16.19	18.90	---
18	15.69	16.02	15.96	16.33	16.26	16.63	13.34	14.83	14.73	16.25	19.00	---
19	15.59	16.04	15.85	16.33	16.26	16.62	13.39	14.89	14.75	e16.36	19.10	---
20	15.61	16.04	15.82	16.36	16.28	16.59	13.42	14.99	14.78	16.47	19.19	---
21	15.62	16.06	15.80	16.39	16.32	16.50	13.42	15.08	14.82	16.57	19.29	---
22	15.67	16.09	15.72	16.42	16.32	16.21	13.42	15.14	14.84	16.68	19.39	---
23	15.69	16.13	15.71	16.41	16.34	15.86	13.45	15.17	14.90	16.79	19.48	---
24	15.69	16.15	15.67	16.44	16.42	15.76	13.48	15.19	14.93	16.90	19.58	---
25	15.72	16.15	15.69	16.47	16.41	15.73	13.58	15.21	14.96	17.02	19.68	e21.73
26	15.74	16.09	15.69	16.50	16.42	15.68	13.63	15.21	15.00	17.05	19.77	21.64
27	15.74	16.06	15.66	16.51	16.46	15.66	13.65	15.03	15.06	17.02	19.87	21.55
28	15.75	16.10	15.67	16.56	16.47	15.67	13.73	14.96	15.13	17.17	19.97	21.62
29	15.77	16.11	15.71	16.58	---	15.68	13.80	14.95	15.22	17.29	20.07	21.70
30	15.79	16.11	15.70	16.55	---	15.65	13.82	14.96	15.30	17.40	20.16	21.75
31	15.82	---	15.73	16.46	---	15.67	---	14.99	---	17.51	20.25	---
MEAN	---	16.01	16.04	16.23	16.41	16.35	14.19	14.63	14.78	16.29	18.86	---
LOW	---	16.15	16.42	16.58	16.67	16.75	15.70	15.21	15.30	17.51	20.25	---
HIGH	---	15.84	15.66	15.77	16.20	15.65	13.34	13.87	14.48	15.35	17.62	--
WTR YR 2001	HIGH 13.32	APR 17, 18	LOW 21.77	SEPT 30								

e Estimated

GROUND-WATER LEVELS IN MASSACHUSETTS

BERKSHIRE COUNTY--Continued

420351073193602. Sheffield well SJW 58.

LOCATION.--Lat 42°03'51", long 73°19'36", Berkshire County, Hydrologic Unit 01100005, about 100 ft east of U.S. Highway 7 and 30 ft north of Hewins Road in Sheffield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well with sand point, diameter 2.0 in., depth 32 ft, screened 27 to 32 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 680 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--October 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.02 ft below land-surface datum, June 23, 1990; lowest measured, 16.03 ft below land-surface datum, Oct. 19, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	13.63	DEC 26	13.66	FEB 21	14.30	APR 27	12.47	JUN 25	12.97	AUG 21	13.90
NOV 28	13.94	JAN 22	14.06	MAR 27	13.44	MAY 22	13.01	JUL 20	13.31	SEP 25	14.45
WATER YEAR 2001	HIGHEST	12.47	APR 27, 2001	LOWEST	14.45	SEP 25, 2001					

BRISTOL COUNTY

415447071155301. Attleboro well ATW 83.

LOCATION.--Lat 41°54'47", long 71°15'53", Bristol County, Hydrologic Unit 01090004, about 150 ft north of parking lot and 200 ft west of dirt road at Bristol County Nursing Home in Attleboro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 20.6 ft, screened 18.6 to 20.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 145 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Jan. 27, 1978; lowest measured, 5.34 ft below land-surface datum, Aug. 30, 1999.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	4.28	DEC 28	3.52	FEB 23	3.56	APR 27	3.52	JUN 27	3.81	AUG 31	4.41
NOV 28	3.75	JAN 24	3.83	MAR 28	2.87	MAY 22	4.08	JUL 26	4.42	SEP 27	4.20
WATER YEAR 2001	HIGHEST	2.87	MAR 28, 2001	LOWEST	4.42	JUL 26, 2001					

414705071045301. Freetown well F3W 23.

LOCATION.--Lat 41°47'05", long 71°04'53", Bristol County, Hydrologic Unit 01090004, about 300 ft west of State Highway 24 and 200 ft north of State Highway 79 in Freetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 42 ft, screened 40 to 42 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 38 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Water level affected by tide.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.72 ft below land-surface datum, Apr. 22, 1983; lowest measured, 15.70 ft below land-surface datum, Jan. 29, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	14.98	DEC 29	15.08	FEB 23	14.70	APR 27	12.75	JUN 27	13.26	AUG 29	13.77
NOV 30	15.14	JAN 24	15.02	MAR 28	13.27	MAY 22	13.34	JUL 31	13.81	SEP 27	14.21
WATER YEAR 2001	HIGHEST	12.75	APR 27, 2001	LOWEST	15.14	NOV 30, 2000					

## GROUND-WATER LEVELS IN MASSACHUSETTS

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## BRISTOL COUNTY--Continued

414025070572801. New Bedford well NGW 116.

LOCATION.--Lat 41°40'25", long 70°57'28", Bristol County, Hydrologic Unit 01090002, New Bedford Municipal Airport, 30 ft east of control tower building in New Bedford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 27.3 ft, screened 25.3 to 27.3 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 65 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.31 ft below land-surface datum, Mar. 26, 1969; lowest measured, 5.20 ft below land-surface datum, July 24, 1964.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	4.44	DEC 29	4.05	FEB 23	4.07	APR 27	4.04	JUN 27	3.86	AUG 29	4.23
NOV 30	3.88	JAN 24	3.96	MAR 28	3.49	MAY 22	4.49	JUL 31	4.00	SEP 27	4.21
WATER YEAR 2001	HIGHEST	3.49	MAR 28, 2001	LOWEST	4.49	MAY 22, 2001					

415812071111101. Norton well N4W 37.

LOCATION.--Lat 41°58'12", long 71°11'11", Bristol County, Hydrologic Unit 01090004, at Wheaton College, 250 ft northeast of observatory in Norton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 19.4 ft, screened 17.4 to 19.4 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 105 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft below land-surface datum, Dec. 29, 1969; lowest measured, 11.39 ft below land-surface datum, Sept. 24, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	8.95	DEC 28	5.72	FEB 23	5.94	APR 27	5.98	JUN 27	6.02	AUG 29	7.43
NOV 28	7.25	JAN 24	7.12	MAR 28	3.76	MAY 22	8.02	JUL 26	7.80	SEP 27	6.96
WATER YEAR 2001	HIGHEST	3.76	MAR 28, 2001	LOWEST	8.95	OCT 30, 2000					

414714071175901. Seekonk well SHW 275.

LOCATION.--Lat 41°47'14", long 71°17'59", Bristol County, Hydrologic Unit 01090004, middle of median strip of Interstate Highway 195 and 1.1 mi west of Palmer River in Seekonk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 14.4 ft, screened 12.4 to 14.4 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 21 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.02 ft below land-surface datum, Dec. 20, 1986; lowest measured, 8.02 ft below land-surface datum, Sept. 26, 1980.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	6.51	DEC 29	5.72	FEB 22	5.71	APR 27	5.68	JUN 27	5.88	AUG 31	6.50
NOV 30	5.70	JAN 24	5.54	MAR 28	5.36	MAY 24	5.44	JUL 26	6.60	SEP 27	5.99
WATER YEAR 2001	HIGHEST	5.36	MAR 28, 2001	LOWEST	6.60	JUL 26, 2001					

## GROUND-WATER LEVELS IN MASSACHUSETTS

## BRISTOL COUNTY--Continued

415457071060101. Taunton well TAW 337.

LOCATION.--Lat 41°54'57", long 71°06'01", Bristol County, Hydrologic Unit 01090004, Taunton State Hospital, about 200 ft west of Mill River and about 300 ft east of Danforth Street in Taunton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 20 ft, screened 18 to 20 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 50 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water levels affected by Mill River.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft below land-surface datum, Dec. 29, 1969; lowest measured, 12.43 ft below land-surface datum, Oct. 22, 1988.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.92	DEC 28	9.32	FEB 23	8.84	APR 27	7.95	JUN 27	8.98	AUG 29	9.74
NOV 28	9.59	JAN 24	9.13	MAR 28	6.99	MAY 22	8.87	JUL 26	9.50	SEP 27	9.82
WATER YEAR 2001	HIGHEST	6.99	MAR 28, 2001	LOWEST	9.92	OCT 31, 2000					

## DUKES COUNTY

412346070353403. Edgartown well ENW 52.

LOCATION.--Lat 41°23'46", long 70°35'34", Dukes County, Hydrologic Unit 01090002, 0.5 mi west of Airport Road and 0.6 mi north of West Tisbury Road in Edgartown.

Owner: Martha's Vineyard State Forest.

AQUIFER.--Glacial sand, gravel and cobbles of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in., depth 64 ft, screened 61 to 64 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 34 ft above sea level. Measuring point: Top of casing, 0.02 ft below land-surface datum.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.93 ft below land-surface datum, May 24 and June 27, 1987; lowest measured, 20.51 ft below land-surface datum, Feb. 26, 1981.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	18.05	DEC 26	18.96	FEB 26	19.81	APR 25	17.54	JUN 29	17.13	AUG 28	17.63
NOV 27	18.49	JAN 26	19.45	MAR 26	19.67	MAY 29	16.92	JUL 30	17.29	SEP 28	18.14
WATER YEAR 2001	HIGHEST	16.92	MAY 29, 2001	LOWEST	19.81	FEB 26, 2001					

## ESSEX COUNTY

423641071102501. Andover well AJW 462.

LOCATION.--Lat 42°36'41", long 71°10'25", Essex County, Hydrologic Unit 01070002, about 1,200 ft south of Shawsheen River, and 30 ft west of Interstate Highway 93 in Andover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 32.5 ft, screened 30.5 to 32.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 110 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Water level affected by nearby construction starting about January 1993 to about January 1995.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.72 ft below land-surface datum, June 20, 1984; lowest measured, 22.56 ft below land-surface datum, July 28, 1994.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	15.95	DEC 29	15.49	FEB 21	15.75	APR 25	14.24	JUN 19	15.02	AUG 28	15.40
NOV 28	15.62	JAN 23	15.77	MAR 27	13.81	MAY 24	14.89	JUL 27	15.39	SEP 26	16.12
WATER YEAR 2001	HIGHEST	13.81	MAR 27, 2001	LOWEST	16.12	SEP 26, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

ESSEX COUNTY--Continued

424322070592401. Georgetown well GCW 168.

LOCATION.--Lat 42°43'22", long 70°59'24", Essex County, Hydrologic Unit 01090001, 18 ft south of State Highway 133 and 25 ft east of Winter Street at Murca Park in Georgetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 21 ft, screened 19 to 21 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 80 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.27 ft below land-surface datum, Mar. 27, 2001; lowest measured, 6.65 ft below land-surface datum, Sept. 22, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	5.01	DEC 29	4.31	FEB 21	4.29	APR 26	3.84	JUN 19	4.39	AUG 28	5.85
NOV 28	4.05	JAN 23	4.55	MAR 27	2.27	MAY 24	4.62	JUL 27	5.49	SEP 26	6.16
WATER YEAR 2001		HIGHEST	2.27	MAR 27, 2001		LOWEST	6.16	SEP 26, 2001			

424841071004101. Haverhill well HLW 23.

LOCATION.--Lat 42°48'41", long 71°00'41", Essex County, Hydrologic Unit 01070002, about 50 ft north of Amesbury Line Road and 0.9 mi south of State Highway 110 in Haverhill.

Owner: Private owner.

AQUIFER.--Glacial sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in., depth 15.1 ft, cased with tile to 15.1 ft, open end.

INSTRUMENTATION.--Monthly measurement with electric tape by observer. Continuous graphic recorder October 1960 to September 1982, digital recorder (60-minute punch) October 1984 to current year.

DATUM.--Elevation of land-surface datum is 105 ft above sea level. Measuring point: Top edge of hole in base of steel recorder shelter, 1.71 ft above land-surface datum, 1.65 ft prior to June 8, 1995.

PERIOD OF RECORD.--October 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.96 ft below land-surface datum, Apr. 7, 8, 1987; lowest, 15.02 ft below land-surface datum, Feb. 2, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.58	13.85	13.18	12.66	13.09	12.96	8.38	8.58	---	11.59	12.75	13.52
2	13.60	13.85	13.18	12.67	13.05	12.96	8.27	8.64	---	11.62	12.78	13.54
3	13.62	13.86	13.18	12.68	13.02	12.98	8.25	8.72	---	11.66	12.82	13.57
4	13.63	13.87	13.18	12.69	13.03	13.01	8.21	8.78	---	11.70	12.84	13.58
5	13.64	13.88	13.18	12.71	13.03	13.02	8.12	8.85	---	11.74	12.85	13.60
6	13.66	13.88	13.18	12.73	13.04	13.04	8.01	8.94	---	11.78	12.86	13.61
7	13.66	13.88	13.18	12.75	13.07	13.07	7.96	9.01	---	11.82	12.89	13.64
8	13.67	13.88	13.18	12.77	13.09	13.09	7.89	9.07	---	11.86	12.92	13.66
9	13.68	13.88	13.20	12.79	13.10	13.11	7.81	9.12	---	11.89	12.96	13.68
10	13.69	13.88	13.21	12.81	13.08	13.12	7.73	9.18	---	11.93	12.98	13.70
11	13.70	13.82	13.21	12.83	13.00	13.13	7.69	9.24	---	11.97	13.02	13.73
12	13.72	13.74	13.23	12.85	12.97	13.14	7.64	9.31	---	12.01	13.04	13.75
13	13.73	13.66	13.25	12.88	12.95	13.12	7.56	9.39	---	12.05	13.05	13.77
14	13.74	13.58	13.26	12.89	12.95	13.02	7.54	9.46	---	12.09	13.07	13.79
15	13.76	13.51	13.28	12.91	12.94	12.93	7.56	9.51	---	12.13	13.10	13.80
16	13.78	13.44	13.30	12.92	12.93	12.83	7.61	9.59	---	12.17	13.13	13.82
17	13.78	13.37	13.24	12.94	12.93	12.73	7.69	9.66	---	12.21	13.16	13.84
18	13.80	13.32	13.03	12.96	12.94	12.63	7.75	9.73	---	12.25	13.18	13.85
19	13.78	13.29	12.88	12.98	12.96	12.53	7.85	9.79	m11.12	12.29	13.21	13.88
20	13.74	13.26	12.78	13.00	12.98	12.42	7.92	9.87	11.17	12.33	13.24	13.90
21	13.73	13.24	12.72	13.01	13.00	12.30	7.97	9.94	11.23	12.36	13.27	13.91
22	13.74	13.22	12.67	13.03	13.02	11.67	8.01	10.00	11.26	12.40	13.29	13.92
23	13.75	13.22	12.65	13.05	13.04	10.15	8.08	10.07	11.30	12.44	13.31	13.93
24	13.77	13.22	12.63	13.06	13.06	9.41	8.11	m10.13	11.34	12.48	13.33	13.95
25	13.79	13.22	12.62	13.07	13.07	9.11	8.20	---	11.37	12.52	13.36	13.97
26	13.80	13.22	12.61	13.09	13.06	8.98	8.27	---	11.39	12.54	13.39	14.00
27	13.81	13.20	12.61	13.10	13.01	8.92	8.32	---	11.43	12.57	13.41	14.05
28	13.82	13.18	12.61	13.12	12.98	8.90	8.39	---	11.47	12.61	13.44	14.06
29	13.83	13.18	12.63	13.14	---	8.88	8.47	---	11.51	12.65	13.47	14.07
30	13.84	13.17	12.64	13.15	---	8.80	8.52	---	11.55	12.69	13.49	14.08
31	13.85	---	12.64	13.14	---	8.57	---	---	---	12.72	13.51	---
MEAN	13.73	13.53	12.98	12.92	13.01	11.76	7.99	---	---	12.16	13.13	13.81
LOW	13.85	13.88	13.30	13.15	13.10	13.14	8.52	---	---	12.72	13.51	14.08
HIGH	13.58	13.17	12.61	12.66	12.93	8.57	7.54	---	---	11.59	12.75	13.52

WTR YR 2001 HIGH 7.53 APR 14 LOW 14.08 SEPT 30

m Measured

## GROUND-WATER LEVELS IN MASSACHUSETTS

## ESSEX COUNTY--Continued

424520070562401. Newbury well NIW 27.

LOCATION.--Lat 42°45'20", long 70°56'24", Essex County, Hydrologic Unit 01090001, about 300 ft east of Interstate Highway 95 and 100 ft north of Central Street in Newbury.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 31 in., depth 19.8 ft, cased with tile to 19.8 ft, open end.

INSTRUMENTATION.--Monthly measurement with electric tape by observer. Continuous graphic recorder January 1967 to September 1982, digital recorder (60-minute punch) October 1984 to current year.

DATUM.--Elevation of land-surface datum is 55 ft above sea level. Measuring point: Top edge of hole in base of steel recorder shelter, 2.15 ft above land-surface datum. Prior to October 1978, 2.0 ft above land-surface datum; October 1978 to Sept. 18, 1990, 1.95 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.94 ft below land-surface datum, Oct. 21, 1996; lowest, 12.68 ft below land-surface datum, Nov. 24, 1965.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.92	9.04	6.47	5.17	6.55	5.82	1.49	3.69	---	7.94	9.46	10.46
2	8.96	9.03	6.47	5.25	6.42	5.92	1.55	3.79	---	7.94	9.51	10.50
3	8.99	9.02	6.49	5.31	6.43	6.02	1.62	3.90	6.78	7.99	9.56	10.54
4	9.03	9.00	6.49	5.35	6.54	6.14	1.68	4.00	6.79	8.02	9.59	10.57
5	9.08	8.97	6.48	5.41	6.60	6.21	1.70	4.10	6.84	8.05	9.59	10.61
6	9.09	8.92	6.51	5.46	6.61	6.24	1.71	4.23	6.89	8.07	9.62	10.65
7	9.09	8.86	6.54	5.54	6.67	6.33	1.80	4.34	6.95	8.08	9.63	10.69
8	9.10	8.80	6.61	5.62	6.69	6.41	1.78	4.42	7.00	8.08	9.66	10.72
9	9.13	8.76	6.67	5.68	6.68	6.46	1.77	4.50	7.07	8.09	9.70	10.76
10	9.15	8.69	6.76	5.75	6.36	6.44	1.87	4.59	7.15	8.15	9.74	10.81
11	9.17	8.30	6.81	5.82	5.88	6.44	2.01	4.68	7.24	8.20	9.79	10.84
12	9.21	7.64	6.82	5.90	5.89	6.39	1.87	4.78	7.23	8.26	9.83	10.88
13	9.25	7.18	6.93	5.98	5.96	6.09	1.78	4.89	7.26	8.33	9.83	10.92
14	9.28	6.99	6.98	6.05	6.00	5.48	1.94	4.99	7.32	8.39	9.84	10.96
15	9.31	6.79	7.02	6.12	5.89	5.11	2.08	5.09	7.36	8.46	9.86	11.00
16	9.36	6.56	7.07	6.16	5.82	4.75	2.16	5.19	7.42	8.53	9.88	11.03
17	9.38	6.39	6.81	6.22	5.81	4.53	2.25	5.28	7.47	8.60	9.90	11.06
18	9.39	6.36	5.56	6.30	5.88	4.32	2.28	5.38	7.41	8.65	9.93	11.09
19	9.30	6.37	4.93	6.35	5.94	4.07	2.45	5.49	7.45	8.71	9.96	11.12
20	9.16	6.41	4.84	6.40	5.99	3.60	2.57	5.62	7.47	8.76	10.00	11.16
21	9.05	6.45	4.86	6.43	5.98	3.32	2.67	5.76	7.51	8.82	10.03	11.19
22	9.01	6.52	4.86	6.52	6.02	1.86	2.73	5.89	7.55	8.88	10.06	11.22
23	9.00	6.60	4.89	6.58	6.05	1.70	2.83	5.98	7.57	8.94	10.10	11.24
24	8.98	6.70	4.94	6.62	6.13	1.75	2.88	6.08	7.62	9.01	10.14	11.26
25	8.96	6.78	4.97	6.67	6.19	1.78	3.02	6.17	7.65	9.07	10.18	11.28
26	8.97	6.81	5.02	6.74	5.91	1.79	3.15	6.26	7.70	9.14	10.22	11.30
27	8.98	6.71	5.06	6.78	5.73	1.81	3.22	6.33	7.76	9.20	10.26	11.30
28	8.98	6.64	5.12	6.86	5.75	1.87	3.35	6.37	7.81	9.25	10.30	11.31
29	9.01	6.57	5.19	6.94	---	1.93	3.50	6.44	7.86	9.30	10.34	11.33
30	9.04	6.50	5.26	6.95	---	1.59	3.60	m6.53	7.90	9.35	10.38	11.34
31	9.06	---	5.13	6.75	---	1.44	---	---	---	9.41	10.42	---
MEAN	9.11	7.48	5.95	6.12	6.16	4.31	2.31	---	---	8.57	9.91	10.97
LOW	9.39	9.04	7.07	6.95	6.69	6.46	3.60	---	---	9.41	10.42	11.34
HIGH	8.92	6.36	4.84	5.17	5.73	1.44	1.49	---	---	7.94	9.46	10.46

WTR YR 2001 HIGH 1.22 MAR 30 LOW 11.34 SEPT 30

m Measured

## ESSEX COUNTY--Continued

423845070542501. Topsfield well TQW 1.

LOCATION.--Lat 42°38'45", long 70°54'25", Essex County, Hydrologic Unit 01090001, 0.7 mi south of Ipswich Road and 120 ft west of Hamilton Road in Topsfield.

Owner: Private owner.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 22.0 ft, cased with stone to 22.0 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 130 ft above sea level. Measuring point: Top edge of steel rim in concrete cover, 0.6 ft above land-surface datum.

PERIOD OF RECORD.--February 1936 to October 1947, April 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.22 ft below land-surface datum, Mar. 23, 1983; lowest measured, 17.52 ft below land-surface datum, Jan. 27, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	14.12	DEC 29	9.28	FEB 21	9.90	APR 26	10.19	JUN 19	12.60	AUG 28	14.45
NOV 28	11.60	JAN 23	10.97	MAR 27	6.85	MAY 24	12.05	JUL 27	13.39	SEP 26	15.12
WATER YEAR 2001		HIGHEST	6.85	MAR 27, 2001		LOWEST	15.12	SEP 26, 2001			

423505070491702. Wenham well WPW 76.

LOCATION.--Lat 42°35'05", long 70°49'17", Essex County, Hydrologic Unit 01090001, 45 ft west of State Highway 128 and 120 ft of Grapevine Road in Wenham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 22.0 ft, screened 20.0 to 22.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 60 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.39 ft below land-surface datum, Jan. 26, 1978; lowest measured, 4.65 ft below land-surface datum, Aug. 30, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.92	DEC 29	2.46	FEB 21	2.44	APR 26	2.42	JUN 19	3.68	AUG 28	3.56
NOV 28	2.08	JAN 23	2.62	MAR 27	1.03	MAY 24	2.91	JUL 27	3.33	SEP 25	3.87
WATER YEAR 2001		HIGHEST	1.03	MAR 27, 2001		LOWEST	3.87	SEP 25, 2001			

## FRANKLIN COUNTY

423809072435601. Colrain well CSW 8.

LOCATION.--Lat 42°38'09", long 72°43'56", Franklin County, Hydrologic Unit 01080203, 15 ft east of State Highway 112 and 100 ft north of North River Bridge in Colrain.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 32.3 ft, screened 30.3 to 32.3 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 460 ft above sea level. Measuring point: Top of casing, 1.97 ft above land-surface datum, 1.66 ft prior to October 1995.

REMARKS.--Water levels affected by North River.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.68 ft below land-surface datum, Apr. 21, 1983 (revised); lowest measured, 23.48 ft below land-surface datum, Jan. 31, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	19.74	DEC 27	19.52	FEB 21	19.87	APR 27	15.68	JUN 25	17.98	AUG 20	20.45
NOV 28	19.94	JAN 23	19.41	MAR 27	18.40	MAY 24	17.34	JUL 19	18.73	SEP 25	21.01
WATER YEAR 2001		HIGHEST	15.68	APR 27, 2001		LOWEST	21.01	SEP 25, 2001			



GROUND-WATER LEVELS IN MASSACHUSETTS

FRANKLIN COUNTY--Continued

423310072355801. Deerfield well DFW 44.

LOCATION.--Lat 42°33'10", long 72°35'58", Franklin County, Hydrologic Unit 01080203, 1.2 mi south of Deerfield River Bridge and 15 ft east of U.S. Highway 5 in Deerfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 27.6 ft, screened 25.6 to 27.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 140 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.42 ft below land-surface datum, May 29, 1979; lowest measured, 6.16 ft below land-surface datum, Sept. 25, 1980.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	2.67	DEC 27	2.54	FEB 22	2.60	APR 26	2.55	JUN 25	2.59	AUG 20	5.05
NOV 28	2.36	JAN 23	2.61	MAR 27	2.17	MAY 24	2.36	JUL 19	3.05	SEP 25	3.08
WATER YEAR 2001	HIGHEST	2.17	MAR 27, 2001	LOWEST	5.05	AUG 20, 2001					

423339072524101. Hawley well HMW 8.

LOCATION.--Lat 42°33'39", long 72°52'41", Franklin County, Hydrologic Unit 01080206, in state forest parking area on west side of Plainfield Road opposite East Cemetery.

Owner: State Forest.

AQUIFER.--Glacial till and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 17 ft, screened 7 to 17 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1700 ft above sea level. Measuring point: Top of casing, 4.18 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.48 ft below land-surface datum, Apr. 25, 1996; lowest measured, 6.92 ft below land-surface datum, Sept. 27, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	3.82	DEC 27	3.78	FEB 21	3.86	MAY 24	3.24	JUL 19	3.73	SEP 25	3.92
NOV 28	3.75	JAN 23	4.26	APR 25	2.55	JUN 25	3.18	AUG 20	4.76		
WATER YEAR 2001	HIGHEST	2.55	APR 25, 2001	LOWEST	4.76	AUG 20, 2001					

423441072170701. Orange well ORW 63.

LOCATION.--Lat 42°34'41", long 72°17'07", Franklin County, Hydrologic Unit 01080202, at Orange Airport, 100 ft along and 50 ft northwest of main entrance road to airport, off East River Street in Orange.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 20.6 ft, screened 18.6 to 20.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 530 ft above sea level. Measuring point: Top of casing, 3.75 ft above land-surface datum, 3.45 ft prior to May 1992.

PERIOD OF RECORD.--January 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.81 ft below land-surface datum, Apr. 25, 1996; lowest measured, 8.57 ft below land-surface datum, Sept. 28, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	7.58	DEC 27	7.70	FEB 20	8.16	APR 25	5.15	JUN 25	6.60	AUG 20	7.77
NOV 27	7.79	JAN 23	8.06	MAR 27	7.17	MAY 21	6.15	JUL 19	6.93	SEP 25	8.32
WATER YEAR 2001	HIGHEST	5.15	APR 25, 2001	LOWEST	8.32	SEP 25, 2001					

## FRANKLIN COUNTY--Continued

422607072324401. Sunderland well S6W 7.

LOCATION.--Lat 42°26'07", long 72°32'44", Franklin County, Hydrologic Unit 01080201, about 100 ft east of State Highway 116 and 30 ft north of Russellville Brook in Sunderland.

Owner: Sunderland Water Department.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in., depth 54 ft, cased to 54 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 210 ft above sea level. Measuring point: Top of casing, at land-surface datum.

REMARKS.--Water level affected by pumping and nearby Russellville Brook.

PERIOD OF RECORD.--November 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.25 ft below land-surface datum, Apr. 24, 1984; lowest measured, 23.26 ft below land-surface datum, Feb. 24, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	15.52	DEC 27	14.12	FEB 21	16.79	APR 25	8.13	JUN 25	12.23	AUG 20	15.20
NOV 28	16.47	JAN 23	15.51	MAR 27	12.68	MAY 21	11.91	JUL 19	13.74	SEP 25	17.03
WATER YEAR 2001	HIGHEST	8.13	APR 25, 2001	LOWEST	17.03	SEP 25, 2001					

42259072332402. Sunderland well S6W 68.

LOCATION.--Lat 42°25'59", long 72°33'24", Franklin County, Hydrologic Unit 01080201, about 175 ft east of North Plain Road and 500 ft north of Plum Tree Road in Sunderland.

Owner: Private owner.

AQUIFER.--Glacial lacustrine deposits of late Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 1.25 in., depth 28 ft, screened 25 to 28 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 160 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land-surface datum, Oct. 22, 1989, May 21, 1990; lowest measured, 5.00 ft below land-surface datum, Aug. 23, Sept. 22, 1985.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	3.44	DEC 27	2.78	FEB 22	3.52	APR 25	1.95	JUN 25	2.75	AUG 20	4.15
NOV 28	3.15	JAN 23	3.52	MAR 27	1.66	MAY 21	3.04	JUL 19	3.47	SEP 25	4.04
WATER YEAR 2001	HIGHEST	1.66	MAR 27, 2001	LOWEST	4.15	AUG 20, 2001					

## HAMPDEN COUNTY

42128072585301. Blandford well BEW 9.

LOCATION.--Lat 42°12'28", long 72°58'53", Hampden County, Hydrologic Unit 01080206, 10 ft west of Blair Road and 0.25 mi south of intersection with North Blandford Road.

Owner: Springfield Water Department.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1140 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.53 ft below land-surface datum, May 25, 1999; lowest measured, 4.60 ft below land-surface datum, Aug. 24, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	2.31	DEC 26	2.04	FEB 21	2.31	APR 27	1.97	JUN 26	1.77	AUG 21	2.40
NOV 27	1.83	JAN 22	2.34	MAR 28	1.82	MAY 22	1.81	JUL 20	2.14	SEP 26	1.73
WATER YEAR 2001	HIGHEST	1.73	SEP 26, 2001	LOWEST	2.40	AUG 21, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPDEN COUNTY--Continued

421012072324501. Chicopee well CMW 95.

LOCATION.--Lat 42°10'12", long 72°32'45", Hampden County, Hydrologic Unit 01080204, in Chicopee Memorial State Park, 100 ft east of check-in house on north side of road in Chicopee.

Owner: Commonwealth of Massachusetts.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0-inch PVC, depth 34.0 ft, screened 30.0 to 34.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 200 ft above sea level. Measuring point: Top of casing, 3.48 ft above land-surface datum, 3.0 ft prior to October 1995.

PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.40 ft below land-surface datum, Aug. 21, 1984; lowest measured, 23.62 ft below land-surface datum, Mar. 22, 1989.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	21.81	DEC 26	22.35	FEB 22	22.78	APR 25	20.50	JUN 25	21.17	AUG 20	21.77
NOV 27	22.12	JAN 23	22.55	MAR 27	22.47	MAY 21	20.85	JUL 19	21.56	SEP 25	22.21
WATER YEAR 2001	HIGHEST	20.50	APR 25, 2001	LOWEST	22.78	FEB 22, 2001					

420357072511601. Granville well GLW 5.

LOCATION.--Lat 42°03'57", long 72°51'16", Hampden County, Hydrologic Unit 01080206, near Granville Public School, 275 ft south of State Highway 57 and 0.2 mi west of Sodom Street in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 67.7 ft, screened 65.7 to 67.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 675 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.06 ft below land-surface datum, June 21, 1983; lowest, 37.20 ft below land-surface datum, Jan. 24, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	33.46	DEC 26	34.05	FEB 21	34.57	APR 27	32.57	JUN 26	31.86	AUG 21	32.92
NOV 27	33.84	JAN 22	34.33	MAR 28	34.35	MAY 22	32.29	JUL 20	32.24	SEP 26	33.75
WATER YEAR 2001	HIGHEST	31.86	JUN 26, 2001	LOWEST	34.57	FEB 21, 2001					

420259072581701. Granville well GLW 6.

LOCATION.--Lat 42°02'59", long 72°58'17", Hampden County, Hydrologic Unit 01080207, at Granville State Forest, 20 ft west of West Hartland Road and 0.9 mi north of state boundary in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 20.8 ft, screened 18.8 to 20.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,160 ft above sea level. Measuring point: Top of casing, 2.78 ft above land-surface datum, 2.5 ft prior to October 1995.

REMARKS.--Water levels affected by Halfway Brook.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.49 ft below land-surface datum, Apr. 26, 1972; lowest measured, 8.50 ft below land-surface datum, Aug. 23, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	6.61	DEC 26	4.71	FEB 21	5.69	APR 27	3.70	JUN 26	3.97	AUG 21	7.51
NOV 27	5.55	JAN 22	5.81	MAR 28	3.20	MAY 22	6.45	JUL 20	6.52	SEP 24	5.65
WATER YEAR 2001	HIGHEST	3.20	MAR 28, 2001	LOWEST	7.51	AUG 21, 2001					

## HAMPDEN COUNTY--Continued

421240072490201. Montgomery well M7W 19.

LOCATION.--Lat 42°12'40", long 72°49'02", Hampden County, Hydrologic Unit 01080206, at corner of Russell Road and road to cemetery, about 500 ft south of intersection of Main Road and Russell Road.

Owner: Westfield Water Department.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 18 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1060 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.33 ft above land-surface datum, Feb. 25, 1998; lowest measured, 4.31 ft below land-surface datum, Sept. 21, 1993

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	2.13	DEC 26	1.59	FEB 21	1.92	APR 25	0.09	JUN 26	1.12	AUG 21	2.74
NOV 27	1.90	JAN 22	1.85	MAR 28	1.00	MAY 22	.95	JUL 20	1.83	SEP 26	2.31
WATER YEAR 2001	HIGHEST	0.09	APR 25, 2001	LOWEST	2.74	AUG 21, 2001					

420430072491201. Southwick well SVW 95.

LOCATION.--Lat 42°04'30", long 72°49'12", Hampden County, Hydrologic Unit 01080206, in garden 100 ft north of Route 57 and about 600 ft west of intersection with Loomis Street.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 37 ft, screened 27 to 37 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 270 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum, 3.0 ft prior to October 1995.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.66 ft below land-surface datum, July 24, 1989; lowest measured, 5.88 ft below land-surface datum, Aug. 24, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	4.51	DEC 26	4.61	FEB 21	5.31	APR 27	2.72	JUN 26	3.05	AUG 21	4.65
NOV 27	4.58	JAN 22	5.21	MAR 28	3.18	MAY 22	3.20	JUL 20	4.12	SEP 26	5.20
WATER YEAR 2001	HIGHEST	2.72	APR 27, 2001	LOWEST	5.31	FEB 21, 2001					

420646072420101. Westfield well WVW 62.

LOCATION.--Lat 42°06'46", long 72°42'01", Hampden County, Hydrologic Unit 01080206, at Western Massachusetts Hospital about 200 ft east of East Mountain Road and 0.4 mi north of U.S. Highway 20 in Westfield.

Owner: Commonwealth of Massachusetts.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in., depth 22 ft, casing information not available.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 210 ft above sea level. Measuring point: Top of casing, 3.5 ft above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.70 ft below land-surface datum, Oct. 29, 1975; lowest measured, well dry, Sept. 22, 1983, Nov. 21, 1983.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	9.06	DEC 26	8.73	FEB 21	9.42	APR 26	5.32	JUN 26	6.54	AUG 21	8.46
NOV 27	9.25	JAN 22	9.48	MAR 28	5.92	MAY 22	6.80	JUL 20	7.66	SEP 26	9.25
WATER YEAR 2001	HIGHEST	5.32	APR 26, 2001	LOWEST	9.48	JAN 22, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPDEN COUNTY--Continued

420924072422602. Westfield well WVW 152.

LOCATION.--Lat 42°09'24", long 72°42'26", Hampden County, Hydrologic Unit 01080206, about 100 ft south of Owen District Road, 0.4 mi west of intersection of Owen District Road and Mountain Road at East Mountain Country Club, 0.4 mi east of Barnes Municipal Airport.  
Owner: City of Westfield.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.0 in., depth 16 ft, screened 6 to 16 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 215.69 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.43 ft below land-surface datum, Feb. 20, 1997; lowest measured, 4.72 ft below land-surface datum, Dec. 21, 1986, Jan. 24, 1987.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	3.13	DEC 26	3.00	FEB 21	3.11	APR 26	2.55	JUN 26	2.90	AUG 21	3.20
NOV 27	2.85	JAN 22	3.19	MAR 28	2.50	MAY 25	2.42	JUL 20	3.19	SEP 26	3.03
WATER YEAR 2001	HIGHEST	2.42	MAY 25, 2001	LOWEST	3.20	AUG 21, 2001					

420905072254001. Wilbraham well XJW 55.

LOCATION.--Lat 42°09'05", long 72°25'40", Hampden County, Hydrologic Unit 01080204, 45 ft south of U.S. Highway 20 and 0.1 mi west of North Main Street in Wilbraham.  
Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 62.5 ft, screened 60.5 to 62.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 255 ft above sea level. Measuring point: Top of casing, 1.07 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.15 ft below land-surface datum, Jan. 2, 1997; lowest measured, 45.44 ft below land-surface datum, Jan. 24, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	42.35	DEC 26	43.29	MAR 27	41.39	MAY 21	36.80	JUL 19	38.68	SEP 25	42.27
NOV 27	43.26	JAN 23	43.81	APR 25	32.27	JUN 25	38.23	AUG 20	40.78		
WATER YEAR 2001	HIGHEST	32.27	APR 25, 2001	LOWEST	43.81	JAN 23, 2001					

HAMPSHIRE COUNTY

422733072532601. Cummington well CYW 13.

LOCATION.--Lat 42°27'33", long 72°53'26", Hampshire County, Hydrologic Unit 01080206, at end of dirt road between lumber yard and elementary school in Cummington center.  
Owner: Town of Cummington.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 39 ft, screened 29 to 39 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 988 ft above sea level. Measuring point: Top of casing, 3.59 ft above land-surface datum, 3.0 ft prior to October 1995.

PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.10 ft below land-surface datum, Apr. 21, 1993; lowest measured, 6.52 ft below land-surface datum, Sept. 23, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	5.27	DEC 27	4.62	FEB 21	5.02	APR 27	2.84	JUN 25	4.78	AUG 20	6.06
NOV 28	4.96	JAN 23	5.23	MAR 27	4.05	MAY 24	4.69	JUL 19	5.44	SEP 25	5.49
WATER YEAR 2001	HIGHEST	2.84	APR 27, 2001	LOWEST	6.06	AUG 20, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPSHIRE COUNTY--Continued

421355072322001. Granby well GWK 68.

LOCATION.--Lat 42°13'55", long 72°32'20", Hampshire County, Hydrologic Unit 01080201, about 15 ft east of Morgan Street, 0.3 mi south of East Street, and 2.0 mi southwest of Granby.

Owner: Holyoke Water Power Co.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in., depth 18 ft, screened 16 to 18 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 239.17 ft above sea level. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--April 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.25 ft below land-surface datum, Apr. 21, 1983; lowest measured, 11.17 ft below land-surface datum, Nov. 25, 1964.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	8.71	DEC 27	8.07	FEB 22	8.42	APR 25	5.28	JUN 25	7.09	AUG 20	9.13
NOV 28	8.85	JAN 23	8.38	MAR 27	6.76	MAY 21	6.73	JUL 19	7.94	SEP 25	9.63
WATER YEAR 2001	HIGHEST	5.28	APR 25, 2001	LOWEST	9.63	SEP 25, 2001					

422103072241102. Pelham well PDW 23.

LOCATION.--Lat 42°21'03", long 72°24'11", Hampshire County, Hydrologic Unit 01080204, at Knight's Corner, 50 ft east of U.S. Highway 202 and 75 ft south of small pond in Pelham.

Owner: Massachusetts Department of Public Works.

AQUIFER.--Bedrock.

WELL CHARACTERISTICS.--Air-percussion observation water-table well, diameter 6.0 in., depth 740 ft, cased to 740 ft, open end.

INSTRUMENTATION.--Monthly measurement with electric tape by USGS personnel. Continuous graphic recorder October 1981 to December 1983, April 1986 to October 1991; digital recorder (60-minute punch) October 1991 to current year.

DATUM.--Elevation of land-surface datum is 939 ft above sea level. Measuring point: Top of hole in base of aluminum recorder shelter, 1.53 ft above land-surface datum, 1.60 ft prior to November 1995.

REMARKS.--Water levels affected by unknown pumping, regulation, or construction.

PERIOD OF RECORD.--October 1981 to October 1991; digital recorder (60-minute punch) October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.44 ft below land-surface datum, Apr. 7, 1982; lowest, 24.04 ft below land-surface datum, May 5, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.60	14.97	14.95	14.62	14.96	14.63	13.93	14.26	15.63	16.07	17.17	17.82
2	15.57	14.95	15.02	14.64	15.00	14.57	13.87	14.30	15.57	16.18	17.20	17.86
3	15.54	14.98	15.05	14.63	15.01	14.61	13.83	14.34	15.45	16.32	17.18	17.98
4	15.60	15.03	15.06	14.63	15.15	14.65	13.92	14.41	15.43	16.36	17.10	18.05
5	15.64	15.03	15.02	14.58	15.08	14.58	13.93	14.47	15.47	16.36	17.08	18.06
6	15.59	15.04	14.98	14.55	14.86	14.41	13.84	14.58	15.60	16.37	17.15	18.10
7	15.56	15.06	14.90	14.59	14.93	14.42	13.76	14.74	15.58	16.44	17.15	18.09
8	15.52	15.07	14.89	14.74	14.96	14.46	13.76	14.78	15.55	16.45	17.16	18.09
9	15.45	15.04	14.91	14.72	14.94	14.52	13.68	14.88	15.54	16.47	17.24	18.14
10	15.49	14.96	14.98	14.70	14.81	14.50	13.60	14.90	15.53	16.47	17.34	18.25
11	15.44	14.97	15.01	14.74	14.86	14.63	13.55	14.94	15.56	16.46	17.39	18.26
12	15.44	15.05	14.92	14.75	14.93	14.65	13.48	15.01	15.62	16.56	17.43	18.26
13	15.42	15.04	14.98	14.75	14.93	14.56	13.43	15.13	15.74	16.59	17.41	18.21
14	15.33	15.03	14.92	14.79	14.88	14.47	13.40	15.19	15.78	16.60	17.40	18.16
15	15.30	14.96	14.89	14.78	14.76	14.48	13.42	15.21	15.82	16.70	17.42	18.09
16	15.29	14.94	14.90	14.76	14.82	14.57	13.39	15.31	15.85	16.72	17.42	18.02
17	15.24	14.94	14.86	14.75	14.74	14.60	13.36	15.35	15.94	16.70	17.41	18.02
18	15.14	14.95	14.75	14.75	14.73	14.67	13.34	15.37	15.93	16.70	17.42	17.99
19	15.08	14.93	14.73	14.72	14.78	14.72	13.38	15.39	15.94	16.75	17.51	18.06
20	15.17	14.94	14.71	14.70	14.82	14.80	13.45	15.58	15.90	16.72	17.52	18.03
21	15.12	15.24	14.73	14.79	14.76	14.72	13.49	15.69	15.85	16.64	17.50	17.92
22	15.13	15.31	14.69	14.89	14.82	14.50	13.52	15.72	15.82	16.58	17.50	17.80
23	15.15	15.28	14.76	14.91	14.75	14.36	13.65	15.78	15.78	16.58	17.49	17.72
24	15.09	15.25	14.79	14.84	14.75	14.29	13.73	15.76	15.82	16.64	17.49	17.65
25	15.08	15.21	14.72	14.81	14.82	14.32	13.77	15.71	15.83	16.72	17.52	17.56
26	15.04	15.16	14.68	14.88	14.71	14.31	13.79	15.66	15.93	16.88	17.56	17.47
27	15.01	15.02	14.69	14.88	14.69	14.26	13.81	15.56	15.96	16.96	17.70	17.42
28	14.95	15.04	14.66	15.10	14.68	14.19	13.89	15.49	15.95	17.03	17.76	17.40
29	14.91	15.00	14.63	15.22	---	14.16	14.12	15.44	15.96	17.12	17.80	17.39
30	14.91	14.96	14.59	15.10	---	14.11	14.21	15.52	15.97	17.17	17.83	17.39
31	14.97	---	14.56	14.96	---	13.98	---	15.59	---	17.18	17.84	---
MEAN	15.28	15.05	14.84	14.78	14.85	14.47	13.68	15.16	15.74	16.63	17.42	17.91
LOW	15.64	15.31	15.06	15.22	15.15	14.80	14.21	15.78	15.97	17.18	17.84	18.26
HIGH	14.91	14.93	14.56	14.55	14.68	13.98	13.34	14.26	15.43	16.07	17.08	17.39

WTR YR 2001 HIGH 13.33 APR 18, LOW 18.26 SEPT 11

## GROUND-WATER LEVELS IN MASSACHUSETTS

## HAMPSHIRE COUNTY--Continued

422103072241103. Pelham well PDW 24.

LOCATION.--Lat 42°21'03", long 72°24'11", Hampshire County, Hydrologic Unit 01080204, at Knight's Corner, 50 ft east of U.S. Highway 202 and 75 ft south of small pond in Pelham.

Owner: Massachusetts Department of Public Works.

AQUIFER.--Glacial sand and till of the Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., PVC, depth 25.0 ft, screened 21.0 to 25.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 940 ft above sea level. Measuring point: Top of casing, 3.86 ft above land-surface datum, 3.0 ft prior to October 1995.

PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft below land-surface datum, Mar. 29, 1994; lowest water level measured, 7.84 ft below land-surface datum, Aug. 23, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	4.72	NOV 27	4.51	DEC 27	4.44	JAN 23	4.79	FEB 20	4.11	MAR 27	2.71
APR 25	3.10	MAY 21	4.54	JUN 25	4.29	JUL 19	5.40	AUG 20	6.71	SEP 25	6.97
WATER YEAR 2001	HIGHEST	2.71	MAR 27, 2001	LOWEST	6.97	SEP 25, 2001					

421627072201701. Ware well WEW 43.

LOCATION.--Lat 42°16'27", long 72°20'17", Hampshire County, Hydrologic Unit 01080204, 30 ft north of State Highway 9 and 200 ft east of Swift River in Ware.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 27.2 ft, screened 25.2 to 27.2 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 380 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

REMARKS.--Water levels affected by Swift River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1975, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.08 ft below land-surface datum, Apr. 28, 1997; lowest measured, 11.51 ft below land-surface datum, Jan. 20, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.66	DEC 27	8.50	FEB 20	8.59	APR 25	7.51	JUN 25	7.71	AUG 20	8.22
NOV 27	8.71	JAN 23	8.66	MAR 27	7.98	MAY 21	7.94	JUL 19	8.55	SEP 25	8.45
WATER YEAR 2001	HIGHEST	7.51	APR 25, 2001	LOWEST	8.71	NOV 27, 2000					

421923072451001. Westhampton well WXW 20.

LOCATION.--Lat 42°20'28", long 72°48'24", Hampshire County, Hydrologic Unit 01080206, 20 ft north of Northwest Road and 0.75 mi west of intersection of Kings Road and Northwest Road, 4 mi northwest of Westhampton.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 42 ft, screened 32 to 42 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1175 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--July 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.17 ft below land-surface datum, May 29, 1996; lowest measured, 17.59 ft below land-surface datum, Nov. 21, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	13.34	DEC 26	14.37	FEB 21	14.49	APR 25	6.91	JUN 26	8.02	AUG 21	13.06
NOV 27	14.63	JAN 22	13.89	MAR 28	14.31	MAY 22	7.09	JUL 20	10.28	SEP 26	15.40
WATER YEAR 2001	HIGHEST	6.91	APR 25, 2001	LOWEST	15.40	SEP 26, 2001					

## MIDDLESEX COUNTY

422812071244401. Acton well ACW 158.

LOCATION.--Lat 42°28'12", long 71°24'44", Middlesex County, Hydrologic Unit 01070005, 30 ft north of State Highway 2 and 150 ft east of Wetherbee Street in Acton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 33.8 ft, screened 31.8 to 33.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 153 ft above sea level. Measuring point: Top of PVC casing in base of steel shelter, 3.60 ft above land-surface datum. Prior to August 2000, top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.98 ft below land-surface datum, Apr. 23, 1987; lowest measured, 21.86 ft below land-surface datum, Jan. 26, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	19.48	DEC 29	19.08	FEB 21	19.20	APR 23	17.18	JUN 19	17.84	AUG 30	18.92
NOV 27	19.43	JAN 22	19.18	MAR 28	17.81	MAY 23	17.46	JUL 26	18.20	SEP 25	19.53
WATER YEAR 2001	HIGHEST	17.18	APR 23, 2001	LOWEST	19.53	SEP 25, 2001					

423349071134101. Billerica well BCW 363.

LOCATION.--Lat 42°33'49", long 71°13'41", Middlesex County, Hydrologic Unit 01070002, 20 ft south of Baldwin Road and 50 ft west of Westminster Road in Billerica.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 15.5 ft, cased with stone to 15.5 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 166 ft above sea level. Measuring point: Top of pipe on wooden cover, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.73 ft below land-surface datum, Apr. 1, 1993; lowest measured, dry Aug. 24, Sept. 22, Oct. 25, 1983.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	12.33	DEC 29	9.14	FEB 21	9.10	APR 23	3.70	JUN 20	9.41	AUG 31	11.45
NOV 28	10.29	JAN 23	9.79	MAR 27	1.98	MAY 24	9.20	JUL 26	10.29		
WATER YEAR 2001	HIGHEST	1.98	MAR 27, 2001	LOWEST	12.33	OCT 25, 2000					

423546071190701.--Chelmsford well CHW 384.

LOCATION.--Lat 42°35'46", long 71°19'07", Middlesex County, Hydrologic Unit 0107000, 25 ft east of U.S. Highway 3 and 0.4 mi north of State Highway 129 in Chelmsford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 42.0 ft, screened 40.0 to 42.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 125 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

PERIOD OF RECORD.--May 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.02 ft below land-surface datum, Mar. 28, 2001; lowest measured, 17.31 ft below land-surface datum, Sept. 26, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	16.15	DEC 29	15.28	FEB 21	15.45	APR 23	14.20	JUN 20	14.75	AUG 31	15.75
NOV 28	15.38	JAN 23	15.63	MAR 28	14.02	MAY 24	15.15	JUL 26	15.51	SEP 26	16.08
WATER YEAR 2001	HIGHEST	14.02	MAR 28, 2001	LOWEST	16.15	OCT 23, 2000					



GROUND-WATER LEVELS IN MASSACHUSETTS

MIDDLESEX COUNTY--Continued

422637071202701. Concord well CTW 165.

LOCATION.--Lat 42°26'37", long 71°20'27", Middlesex County, Hydrologic Unit 01070005, 30 ft south of State Highway 2 and 0.1 mi west of State Highway 126 in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 66.7 ft, screened 64.7 to 66.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 199.26 ft (revised) above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum, 2.0 ft prior to October 1991.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.50 ft below land-surface datum, July 20, 1984; lowest measured, 47.10 ft below land-surface datum, Feb. 28, 1967.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	42.19	DEC 29	42.90	FEB 21	43.40	APR 23	41.44	JUN 19	40.70	AUG 30	41.28
NOV 27	42.52	JAN 24	43.65	MAR 28	43.16	MAY 23	40.78	JUL 26	40.83	SEP 26	41.70
WATER YEAR 2001	HIGHEST	40.70	JUN 19, 2001	LOWEST	43.65	JAN 24, 2001					

422650071214402. Concord well CTW 167.

LOCATION.--Lat 42°26'50", long 71°21'44", Middlesex County, Hydrologic Unit 01070005, 10 ft south of State Highway 2 and 10 ft west of Sudbury Road in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 24.8 ft, screened 21.8 to 24.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 135 ft above sea level. Measuring point: Top of casing, 3.3 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.47 ft below land-surface datum, Apr. 21, 1984; lowest measured, 10.60 ft below land-surface datum, Aug. 27, 1999.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.28	DEC 29	8.53	FEB 21	8.51	APR 23	6.24	JUN 19	7.58	AUG 30	9.16
NOV 27	9.12	JAN 22	9.08	MAR 28	5.89	MAY 23	7.78	JUL 26	8.37	SEP 26	10.00
WATER YEAR 2001	HIGHEST	5.89	MAR 28, 2001	LOWEST	10.28	OCT 23, 2000					

422627071154002. Lexington well LTW 104.

LOCATION.--Lat 42°26'27", long 71°15'40", Middlesex County, Hydrologic Unit 01090001, at The Commonwealth of Massachusetts Department of Public Works maintenance depot, 0.2 mi west of State Highway 128 and 500 ft south of State Highway 2A in Lexington.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 20.7 ft, screened 18.7 to 20.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 180 ft above sea level. Measuring point: Top of casing, 4.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.72 ft below land-surface datum, Apr. 1, 1993; lowest measured, 4.35 ft below land-surface datum, Aug. 26, 1975.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.37	DEC 29	2.31	FEB 21	1.45	APR 23	2.10	JUN 19	1.45	AUG 30	3.12
NOV 27	1.62	JAN 22	2.06	MAR 28	1.20	MAY 23	2.79	JUL 26	2.99	SEP 26	3.13
WATER YEAR 2001	HIGHEST	1.20	MAR 28, 2001	LOWEST	3.13	SEP 26, 2001					

## MIDDLESEX COUNTY--Continued

424055071435301. Townsend well TRW 13.

LOCATION.--Lat 42°40'55", long 71°43'43", Middlesex County, Hydrologic Unit 01070004, 15 ft south of Dudley Road and 15 ft north of Turnpike Road in Townsend.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 32.9 ft, screened 30.9 to 32.9 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 313 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.55 ft below land-surface datum, Apr. 24, 1987; lowest measured, 17.41 ft below land-surface datum, Jan. 26, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	13.49	DEC 29	13.53	FEB 21	13.82	APR 25	11.06	JUN 19	11.47	AUG 30	13.48
NOV 28	13.71	JAN 23	13.72	MAR 27	12.98	MAY 23	11.28	JUL 26	12.45	SEP 26	13.98
WATER YEAR 2001	HIGHEST	11.06	APR 25, 2001	LOWEST	13.98	SEP 26, 2001					

423115071032001. Wakefield well WAW 38.

LOCATION.--Lat 42°31'15", long 71°03'20", Middlesex County, Hydrologic Unit 01090001, 75 ft north of State Highway 128 and 0.4 mi southeast of Saugus River in Wakefield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 25.5 ft, screened 23.5 to 25.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 80 ft above sea level. Measuring point: Top of plywood floor in base of steel shelter, 3.54 ft above land-surface datum; prior to July 2001, top of casing, 3.45 ft above land-surface datum, 3.0 ft prior to June 1994.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.92 ft below land-surface datum, Oct. 29, 1996; lowest measured, 9.99 ft below land-surface datum, Sept. 22, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	7.20	DEC 29	5.93	FEB 21	6.13	APR 25	6.03	JUN 19	6.39	AUG 28	7.15
NOV 28	5.87	JAN 23	6.45	MAR 27	4.75	MAY 24	6.97	JUL 26	7.01	SEP 25	7.87
WATER YEAR 2001	HIGHEST	4.75	MAR 27, 2001	LOWEST	7.87	SEP 25, 2001					

421852071220501. Wayland well WKW 2.

LOCATION.--Lat 42°18'52", long 71°22'05", Middlesex County, Hydrologic Unit 01070005, 0.25 mi west of State Highway 27 and 100 ft south of State Highway 30, at Cochituate State Park in Wayland.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 33.0 ft, screened 31.0 to 33.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 157.75 ft above sea level. Measuring point: Top of casing, 2.76 ft above land-surface datum, 4.0 ft prior to April 1993.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.96 ft below land-surface datum, Mar. 27, 1972; lowest measured, 18.10 below land-surface datum, Sept. 26, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	15.77	DEC 26	16.29	FEB 22	16.57	APR 28	15.06	JUN 25	15.72	AUG 30	16.87
NOV 27	16.34	JAN 22	16.73	MAR 28	15.06	MAY 23	15.76	JUL 26	16.36	SEP 25	17.14
WATER YEAR 2001	HIGHEST	15.06	MAR 28, 2001	APR 28, 2001	LOWEST	17.14	SEP 25, 2001				

GROUND-WATER LEVELS IN MASSACHUSETTS

MIDDLESEX COUNTY--Continued

423401071093801. Wilmington well XMW 78.

LOCATION.--Lat 42°34'01", long 71°09'38", Middlesex County, Hydrologic Unit 01090001, at building formerly known as Whitefield Public School in Wilmington, about 30 ft west of State Highway 62, and 0.3 mi north of Concord Street. Owner: Town of Wilmington.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 42 in., depth 12 ft, cased with stone to 12 ft, open end.

INSTRUMENTATION.--Monthly measurement with electric tape by observer. Continuous graphic recorder March 1958 to September 1982, digital recorder (60-minute punch) October 1984 to current year.

DATUM.--Elevation of land-surface datum is 95 ft above sea level. Measuring point: Top edge of hole in base of steel recorder shelter, 0.27 ft above land-surface datum, 0.42 ft prior to May 1991.

PERIOD OF RECORD.--July 1951 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.12 ft below land-surface datum, Mar. 30, 2001; lowest, 11.27 ft below land-surface datum, Oct. 30, 1957.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.14	9.14	8.16	---	8.34	7.93	4.29	5.98	7.71	7.72	8.56	8.65
2	9.15	9.12	8.16	---	8.34	7.93	4.32	6.05	7.67	7.64	8.59	8.69
3	9.16	9.11	8.15	---	8.35	7.95	4.37	6.11	7.67	7.69	8.56	8.72
4	9.17	9.10	8.14	---	8.37	7.98	4.44	6.17	7.72	7.69	8.41	8.73
5	9.19	9.09	8.14	---	8.36	7.97	4.48	6.25	7.75	7.69	8.49	8.73
6	9.18	9.07	8.15	---	8.35	7.97	4.49	6.33	7.79	7.71	8.50	8.77
7	9.17	9.04	8.15	---	8.37	8.02	4.57	6.39	7.82	7.74	8.52	8.79
8	9.18	9.02	8.19	---	8.38	8.04	4.60	6.45	7.85	7.76	8.56	8.82
9	9.19	9.01	8.23	---	8.35	8.04	4.57	6.51	7.88	7.79	8.60	8.84
10	9.19	8.86	8.26	---	8.22	8.02	4.64	6.56	7.91	7.84	8.55	8.87
11	9.20	8.74	8.28	---	8.18	8.01	4.71	6.62	7.95	7.88	8.54	8.89
12	9.21	8.71	8.29	---	8.18	7.98	4.74	6.69	7.97	7.93	8.20	8.92
13	9.22	8.64	8.35	---	8.16	7.86	4.75	6.76	7.99	7.97	8.16	8.94
14	9.23	8.56	8.35	---	8.13	7.71	4.81	6.82	8.01	8.00	8.16	8.96
15	9.24	8.42	8.39	---	8.03	7.66	4.87	6.88	8.04	8.04	8.14	8.98
16	9.26	8.38	8.40	---	8.04	7.56	4.89	6.94	8.07	8.07	8.13	9.00
17	9.27	8.34	7.90	---	8.03	7.47	4.98	7.00	7.81	8.10	8.13	9.02
18	9.27	8.30	7.89	---	8.03	7.39	5.07	7.05	7.68	8.13	8.15	9.04
19	9.18	8.27	7.90	---	8.03	7.32	5.17	7.10	7.74	8.15	8.18	9.07
20	9.16	8.23	7.84	---	8.01	7.24	5.25	7.17	7.75	8.17	8.22	9.09
21	9.15	8.21	7.79	---	7.99	7.13	5.32	7.22	7.76	8.19	8.26	9.10
22	9.15	8.20	7.74	---	7.99	5.65	5.38	7.28	7.76	8.22	8.30	9.10
23	9.16	8.21	7.71	m8.37	7.99	5.28	5.45	7.32	7.78	8.26	8.34	9.11
24	9.15	8.23	7.68	8.37	8.01	5.12	5.50	7.37	7.82	8.29	8.37	9.13
25	9.15	8.25	7.67	8.39	8.01	5.00	5.59	7.42	7.86	8.33	8.41	9.14
26	9.15	8.20	7.66	8.41	7.96	4.93	5.66	7.47	7.89	8.36	8.44	9.15
27	9.15	8.13	7.66	8.42	7.92	4.90	5.71	7.50	7.92	8.40	8.48	9.16
28	9.16	8.16	7.67	8.44	7.92	4.90	5.79	7.54	7.95	8.43	8.51	9.17
29	9.17	8.16	m7.72	8.46	---	4.92	5.87	7.58	7.99	8.46	8.55	9.18
30	9.19	8.16	---	8.45	---	4.70	5.92	7.62	7.95	8.49	8.59	9.19
31	9.18	---	---	8.36	---	4.36	---	7.66	---	8.52	8.62	---
MEAN	9.18	8.57	---	---	8.14	6.87	5.01	6.90	7.85	8.05	8.39	8.97
LOW	9.27	9.14	---	---	8.38	8.04	5.92	7.66	8.07	8.52	8.62	9.19
HIGH	9.14	8.13	---	---	7.92	4.36	4.29	5.98	7.67	7.64	8.13	8.65

WTR YR 2001 HIGH 4.12 MAR 30 LOW 9.27 OCT 17, 18  
m Measured

422819071065701. Winchester well XOW 14.

LOCATION.--Lat 42°28'19", long 71°06'57", Middlesex County, Hydrologic Unit 01090001, at 220 Forest Street and 100 ft north of Forest Street in Winchester. Owner: Private owner.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 17.0 ft, cased with stone to 17.0 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 116.29 ft above sea level. Measuring point: Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--July 1940 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.03 ft below land-surface datum, Mar. 26, 1969; lowest measured, 15.60 ft below land-surface datum, Oct. 31, 1957.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	10.46	DEC 29	8.79	FEB 21	9.37	APR 30	10.15	JUN 20	8.17	AUG 28	11.96
NOV 27	9.22	JAN 23	11.27	MAR 27	5.58	MAY 30	11.86	JUL 26	11.18	SEP 25	13.14
WATER YEAR 2001	HIGHEST	5.58	MAR 27, 2001	LOWEST	13.14	SEP 25, 2001					

## NANTUCKET COUNTY

41155070021901. Nantucket well NBW 228.

LOCATION.--Lat 41°15'55", long 70°02'19", Nantucket County, Hydrologic Unit 01090002, 165 ft south of Milestone Road and 300 ft east of Madequecham Valley Brook in Nantucket.

Owner: Nantucket Conservation Foundation.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 35.6 ft, screened 32.6 to 35.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 39 ft above sea level. Measuring point: Top of casing, 2.34 ft above land-surface datum, 0.7 ft prior to November 1994.

PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.51 ft below land-surface datum, July 28, 1997; lowest measured, 27.90 ft below land-surface datum, Feb. 23, 1981.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	25.45	DEC 21	26.11	MAR 23	26.02	MAY 24	24.42	JUL 26	24.26	SEP 28	24.92
NOV 28	25.84	FEB 27	26.27	APR 26	25.31	JUN 26	24.10	AUG 30	24.57		
WATER YEAR 2001		HIGHEST	24.10	JUN 26, 2001		LOWEST	26.27	FEB 27, 2001			

## NORFOLK COUNTY

421250071090901. Dedham well DDW 231.

LOCATION.--Lat 42°12'50", long 71°09'09", Norfolk County, Hydrologic Unit 01090001, 50 ft south of State Highway 128 and 0.3 mi west of University Avenue in Dedham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 21.9 ft, screened 19.9 to 21.9 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 65 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum. Prior to July 17, 1978, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.45 ft below land-surface datum, Mar. 28, 1978; lowest measured, 15.95 ft below land-surface datum, Oct. 28, 1997.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	12.58	DEC 26	5.88	FEB 22	6.04	APR 28	3.33	JUN 25	7.38	AUG 30	11.47
NOV 27	10.20	JAN 22	7.21	MAR 28	3.33	MAY 29	8.28	JUL 23	9.26	SEP 25	12.80
WATER YEAR 2001		HIGHEST	3.33	MAR 28, 2001		APR 28, 2001		LOWEST	12.80	SEP 25, 2001	

421435071165701. Dover well DVW 10.

LOCATION.--Lat 42°14'35", long 71°16'57", Norfolk County, Hydrologic Unit 01090001, at Dover Public School about 400 ft southwest of and about 400 ft west of Center Street in Dover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 54 ft, screened 52 to 54 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 160 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.95 ft below land-surface datum, Apr. 20, 1987; lowest measured, 36.87 ft below land-surface datum, Jan. 21, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	34.41	DEC 26	34.08	FEB 22	34.01	APR 28	31.98	JUN 25	32.27	AUG 30	33.57
NOV 27	34.54	JAN 22	34.07	MAR 28	31.98	MAY 29	32.14	JUL 23	32.70	SEP 25	34.06
WATER YEAR 2001		HIGHEST	31.98	MAR 28, 2001		APR 28, 2001		LOWEST	34.54	NOV 27, 2000	

GROUND-WATER LEVELS IN MASSACHUSETTS

NORFOLK COUNTY--Continued

420432071151201. Foxborough well FXW 3.

LOCATION.--Lat 42°04'32", long 71°15'12", Norfolk County, Hydrologic Unit 01090004, at Foxborough State Hospital, near railroad tracks, 100 ft east of driveway, and 250 ft north of Chestnut Street in Foxborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 32 ft, screened 30 to 32 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 290 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.24 ft below land-surface datum, Mar. 25, 1968; lowest measured, 21.42 ft below land-surface datum, Dec. 28, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	20.54	NOV 28	19.88	DEC 28	19.10	JAN 24	19.31	FEB 23	18.96	MAR 28	17.83
APR 27	18.25	MAY 22	18.82	JUN 25	18.60	JUL 26	19.17	AUG 29	19.63	SEP 26	20.17
WATER YEAR 2001	HIGHEST	17.83	MAR 28, 2001	LOWEST	20.54	OCT 30, 2000					

420717071221301 KINGSBURY POND NEAR NORFOLK, MA

LOCATION.--Lat 42°07'17", long 71°22'13", Norfolk County, Hydrologic Unit 01090001, on southeast corner of pond, 150 ft northwest of Miller Street, 2.3 mi west of Norfolk.

DRAINAGE AREA.--Not Determined

PERIOD OF RECORD.--Elevation: November 2000 to September 2001.

GAGE.--Water-stage recorder. Elevation of gage is 137.68 ft above National Geodetic Vertical Datum (NGVD) of 1929.

REMARKS.--Records not rated.

EXTREMES FOR THE PERIOD NOVEMBER 2000 TO SEPTEMBER 2001.--Maximum elevation, 132.67 ft, June 17, 2001; minimum, 128.08 ft., Dec. 12-14.

ELEVATION, IN FEET ABOVE NGVD OF 1929, NOVEMBER 2000 TO SEPTEMBER 2001

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	128.29	128.26	128.13	128.17	129.85	132.30	132.32	132.50	131.66	130.48
2	---	---	128.27	128.24	128.12	128.17	129.93	132.34	132.37	132.49	131.62	130.42
3	---	---	128.24	128.23	128.11	128.17	130.02	132.36	132.42	132.45	131.58	130.36
4	---	---	128.22	128.21	128.10	128.17	130.10	132.39	132.42	132.42	131.56	130.30
5	---	---	128.21	128.21	128.12	128.22	130.19	132.41	132.42	132.43	131.52	130.25
6	---	---	128.19	128.21	128.21	128.38	130.29	132.41	132.41	132.44	131.48	130.19
7	---	---	128.17	128.20	128.19	128.41	130.40	132.42	132.39	132.40	131.43	130.14
8	---	---	128.15	128.19	128.18	128.40	130.54	132.42	132.38	132.38	131.38	130.09
9	---	---	128.14	128.20	128.18	128.41	130.66	132.42	132.35	132.36	131.34	130.03
10	---	---	128.12	128.19	128.19	128.44	130.76	132.42	132.32	132.37	131.30	129.98
11	---	---	128.11	128.17	128.18	128.44	130.86	132.42	132.31	132.42	131.28	129.93
12	---	---	128.10	128.16	128.17	128.44	130.97	132.42	132.36	132.39	131.27	129.87
13	---	---	128.08	128.15	128.16	128.51	131.08	132.41	132.33	132.36	131.31	129.81
14	---	---	128.12	128.13	128.15	128.55	131.17	132.39	132.30	132.32	131.29	129.80
15	---	---	128.12	128.15	128.15	128.55	131.26	132.37	132.27	132.29	131.24	129.75
16	---	---	128.11	128.15	128.15	128.56	131.35	132.36	132.23	132.25	131.19	129.69
17	---	---	128.24	128.15	128.16	128.57	131.44	132.35	132.40	132.23	131.14	129.64
18	---	---	128.36	128.14	128.15	128.60	131.54	132.33	132.65	132.21	131.10	129.59
19	---	---	128.35	128.14	128.14	128.61	131.61	132.32	132.62	132.17	131.04	129.54
20	---	---	128.38	128.17	128.14	128.62	131.69	132.30	132.59	132.14	131.02	129.50
21	---	---	128.37	128.20	128.14	128.64	131.77	132.27	132.57	132.10	131.00	129.49
22	---	---	128.35	128.19	128.13	128.91	131.84	132.27	132.54	132.06	130.95	129.48
23	---	---	128.33	128.18	128.14	129.02	131.91	132.27	132.52	132.02	130.89	129.45
24	---	---	128.32	128.17	128.13	129.06	131.98	132.33	132.50	131.98	130.84	129.40
25	---	---	128.30	128.16	128.15	129.10	132.04	132.35	132.48	131.95	130.78	129.37
26	---	---	128.28	128.15	128.17	129.14	132.09	132.33	132.46	131.92	130.73	129.34
27	---	---	128.26	128.13	128.17	129.24	132.15	132.38	132.43	131.89	130.69	129.29
28	---	---	128.25	128.12	128.17	129.31	132.19	132.37	132.39	131.84	130.69	129.24
29	---	128.32	128.23	128.11	---	129.36	132.23	132.36	132.36	131.79	130.64	129.18
30	---	128.31	128.24	128.11	---	129.57	132.27	132.36	132.35	131.75	130.58	129.13
31	---	---	128.27	128.14	---	129.77	---	132.33	---	131.71	130.53	---
MEAN	---	---	128.23	128.17	128.15	128.69	131.21	132.36	132.42	132.19	131.13	129.76
MAX	---	---	128.38	128.26	128.21	129.77	132.27	132.42	132.65	132.50	131.66	130.48
MIN	---	---	128.08	128.11	128.10	128.17	129.85	132.27	132.23	131.71	130.53	129.13

## NORFOLK COUNTY--Continued

420545071174001. Norfolk well NNW 27.

LOCATION.--Lat 42°05'45", long 71°17'40", Norfolk County, Hydrologic Unit 01090001, 15 ft northwest of State Highway 1A and 0.1 mi northeast of Valley Street in Norfolk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 18.4 ft, screened 16.4 to 18.4 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 160 ft above sea level. Measuring point: Top of plywood on floor of steel shelter; prior to August 2001, top of casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.20 ft below land-surface datum, Dec. 20, 1986, and Apr. 20, 1987; lowest measured, 7.99 ft below land-surface datum, July 30, 1997.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	6.01	DEC 28	4.90	FEB 23	5.17	APR 27	5.61	JUN 25	5.15	AUG 29	6.19
NOV 28	5.34	JAN 26	5.54	MAR 28	3.94	MAY 22	5.53	JUL 26	6.46	SEP 26	7.23
WATER YEAR 2001	HIGHEST	3.94	MAR 28, 2001	LOWEST	7.23	SEP 26, 2001					

420954070564501. Weymouth well XGW 2.

LOCATION.--Lat 42°09'54", long 70°56'45", Norfolk County, Hydrologic Unit 01090001, 40 ft south of main gate guard house at U.S. Naval Air Station at Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 30 ft, screened 28 to 30 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 180 ft above sea level. Measuring point: Top of casing, 0.45 ft above land-surface datum, 3.0 ft prior to November 1989.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.57 ft below land-surface datum, Apr. 2, 1993; lowest measured, 22.63 ft below land-surface datum, Nov. 21, 1980.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	16.78	DEC 26	10.67	MAR 28	5.33	MAY 25	10.43	JUL 23	12.25	SEP 25	17.00
NOV 27	15.03	FEB 22	9.27	APR 26	7.24	JUN 25	11.35	AUG 30	15.03		
WATER YEAR 2001	HIGHEST	5.33	MAR 28, 2001	LOWEST	17.00	SEP 25, 2001					

421147070571901. Weymouth well XGW 3.

LOCATION.--Lat 42°11'47", long 70°57'19", Norfolk County, Hydrologic Unit 01090001, about 100 ft east of State Highway 18 and about 600 ft off State Highway 3 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 22.3 ft, screened 20.3 to 22.3 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 90 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.91 ft below land-surface datum, Jan. 27, 1978; lowest measured, 18.10 ft below land-surface datum, Sept. 27, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	5.61	DEC 26	6.08	MAR 28	3.70	MAY 25	5.70	JUL 23	6.02	SEP 25	6.26
NOV 27	4.68	FEB 22	4.78	APR 26	4.63	JUN 25	5.09	AUG 30	6.92		
WATER YEAR 2001	HIGHEST	3.70	MAR 28, 2001	LOWEST	6.92	AUG 30, 2001					

## GROUND-WATER LEVELS IN MASSACHUSETTS

## NORFOLK COUNTY--Continued

421120070562801. Weymouth well XGW 4.

LOCATION.--Lat 42°11'20", long 70°56'28", Norfolk County, Hydrologic Unit 01090001, at median strip of State Highway 3 and 0.8 mi south of State Highway 18 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 22.6 ft, screened 20.6 to 22.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 90 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 4.39 ft below land-surface datum, Apr. 2, 1993; lowest measured, 10.45 ft below land-surface datum, Sept. 27, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	7.41	DEC 26	4.52	MAR 28	5.03	MAY 25	7.59	JUL 23	7.33	SEP 25	7.32
NOV 27	6.19	FEB 22	6.29	APR 26	6.22	JUN 25	6.73	AUG 30	7.48		
WATER YEAR 2001	HIGHEST	4.52	DEC 26, 2000	LOWEST	7.59	MAY 25, 2001					

## PLYMOUTH COUNTY

420321070433502. Duxbury well D4W 79.

LOCATION.--Lat 42°03'21", long 70°43'35", Plymouth County, Hydrologic Unit 01090002, 30 ft west of State Highway 3 and about 300 ft north of State Highway 14 in Duxbury.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and silty clay of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 23.5 ft, screened 21.5 to 23.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 55 ft above sea level. Measuring point: Top of plywood floor in base of steel shelter; prior to August 2001, top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft below land-surface datum, Jan. 26, 1978; lowest measured, 10.68 ft below land-surface datum, Sept. 28, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	8.90	DEC 26	7.65	MAR 29	6.84	MAY 24	8.19	JUL 31	8.97	SEP 26	9.29
NOV 29	8.20	FEB 22	7.73	APR 24	7.48	JUN 25	8.18	AUG 28	8.87		
WATER YEAR 2001	HIGHEST	6.84	MAR 29, 2001	LOWEST	9.29	SEP 26, 2001					

420317070432901. Duxbury well D4W 80.

LOCATION.--Lat 42°03'17", long 70°43'29", Plymouth County, Hydrologic Unit 01090002, 78 ft south of State Highway 14 and 250 ft east of State Highway 3 in Duxbury.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Bedrock.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6.0 in., depth 181 ft, cased to 59 ft, open hole.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 65 ft above sea level. Measuring point: Top of hole in concrete cover, at land-surface datum.

PERIOD OF RECORD.--April 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.98 ft below land-surface datum, Feb. 26, 1998; lowest measured, 24.02 ft below land-surface datum, Sept. 28, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	22.23	DEC 26	20.88	FEB 22	20.91	APR 24	20.90	JUN 25	21.62	AUG 28	22.38
NOV 29	21.63	JAN 25	21.63	MAR 29	20.31	MAY 24	21.60	JUL 31	22.40	SEP 26	22.70
WATER YEAR 2001	HIGHEST	20.31	MAR 29, 2001	LOWEST	22.70	SEP 26, 2001					

## PLYMOUTH COUNTY--Continued

420056070575701. East Bridgewater well EBW 30.

LOCATION.--Lat 42°00'56", long 70°57'57", Plymouth County, Hydrologic Unit 01090004, about 100 ft north of State Highway 106 and 800 ft west of State Highway 18 in East Bridgewater.

Owner: East Bridgewater Medical Center.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 24 ft, cased with stone to 24 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 85 ft above sea level. Measuring point: Top of stone casing curb, 2.6 ft above land-surface datum.

PERIOD OF RECORD.--July 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.18 ft below land-surface datum, Feb. 26, 1998; lowest measured, 17.83 ft below land-surface datum, Dec. 28, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	13.91	DEC 21	13.41	FEB 21	9.82	APR 24	4.30	JUN 25	7.90	AUG 28	11.89
NOV 29	14.05	JAN 25	11.45	MAR 29	3.80	MAY 24	7.91	JUL 31	10.34	SEP 26	13.60
WATER YEAR 2001	HIGHEST	3.80	MAR 29, 2001	LOWEST	14.05	NOV 29, 2000					

420353070520301. Hanson well HGW 76.

LOCATION.--Lat 42°03'53", long 70°52'03", Plymouth County, Hydrologic Unit 01090002, 100 ft south of State Highway 14 and 150 ft west of town hall in Hanson.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 26.6 ft, screened 24.6 to 26.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 71 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Water level affected by Wampatuck Pond.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft below land-surface datum, Mar. 26, 1969; lowest measured, 6.53 ft below land-surface datum, Sept. 25, 1980.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	5.07	DEC 21	4.46	FEB 21	4.61	APR 27	4.27	JUN 25	4.53	AUG 28	4.95
NOV 29	4.68	JAN 25	4.70	MAR 29	3.70	MAY 24	4.42	JUL 31	5.05	SEP 26	4.86
WATER YEAR 2001	HIGHEST	3.70	MAR 29, 2001	LOWEST	5.07	OCT 30, 2000					



GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY--Continued

415228070554601. Lakeville well LKW 14.

LOCATION.--Lat 41°52'28", long 70°55'46", Plymouth County, Hydrologic Unit 01090004, 30 ft west of parking lot at Lakeville State Hospital in Lakeville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 41 ft, screened 39 to 41 ft.

INSTRUMENTATION.--Monthly measurement with electric tape by observer. Digital recorder (60-min punch) July 1986 to current year.

DATUM.--Elevation of land-surface datum is 105 ft above sea level. Measuring point: Top edge of hole in base of aluminum recorder shelter, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.56 ft below land-surface datum, May 13, 1998; lowest measured, 23.59 ft below land-surface datum, Oct. 26, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.86	17.67	17.87	17.05	17.25	16.32	11.95	11.58	12.80	13.09	15.08	16.35
2	16.88	17.70	17.87	17.03	17.22	16.31	11.62	11.64	12.76	13.18	15.14	16.41
3	16.91	17.72	17.85	17.01	17.20	16.32	11.42	11.71	12.73	13.25	15.20	16.44
4	16.94	17.73	17.82	16.99	17.17	16.32	11.28	11.76	12.74	13.28	15.25	16.48
5	16.97	17.75	17.79	16.97	17.09	16.29	11.18	11.84	12.73	13.32	15.29	16.52
6	16.98	17.78	17.79	16.96	17.06	16.28	11.11	11.93	12.72	13.39	15.34	16.57
7	17.01	17.80	17.78	16.97	17.03	16.27	11.13	11.99	12.72	13.46	15.40	16.62
8	17.04	17.82	17.79	16.96	16.99	16.24	11.08	12.04	12.75	13.51	15.46	16.67
9	17.06	17.83	17.81	16.96	16.93	16.19	11.02	12.09	12.81	13.56	15.52	16.71
10	17.08	17.84	17.82	16.98	16.88	16.14	11.02	12.14	12.88	13.62	15.58	16.76
11	17.11	17.87	17.82	16.99	16.85	16.10	11.03	12.21	12.96	13.68	15.64	16.82
12	17.15	17.88	17.82	17.03	16.80	16.06	10.97	12.27	13.00	13.75	15.67	16.88
13	17.18	17.89	17.88	17.05	16.74	15.97	10.92	12.35	13.07	13.82	15.70	e16.91
14	17.21	17.88	17.86	17.07	16.68	15.88	10.88	12.41	13.10	13.88	15.73	---
15	17.25	17.89	17.90	17.09	16.64	15.77	10.85	12.47	13.12	13.95	15.77	---
16	17.28	17.89	17.89	17.11	16.59	15.62	10.84	12.55	13.14	14.03	15.81	---
17	17.30	17.88	17.85	17.15	16.55	15.46	10.85	12.62	13.15	14.08	15.85	---
18	17.32	17.89	17.88	17.18	16.52	15.30	10.88	12.68	13.15	14.14	15.90	e17.12
19	17.34	17.89	17.84	17.18	16.49	15.15	11.00	12.73	13.04	14.20	15.94	17.18
20	17.37	17.86	17.76	17.21	16.45	15.01	11.04	12.82	12.90	14.26	15.98	17.22
21	17.40	17.86	17.70	17.21	16.43	14.86	11.05	12.89	12.82	14.33	16.01	17.26
22	17.43	17.86	17.60	17.24	16.41	14.63	11.03	12.94	12.75	14.41	16.04	17.28
23	17.46	17.88	17.52	17.22	16.39	14.29	11.11	13.00	12.70	14.48	16.08	17.32
24	17.48	17.89	17.43	17.20	16.39	13.88	11.10	13.05	12.68	14.55	16.10	17.37
25	17.51	17.89	17.36	17.21	16.36	13.52	11.24	13.07	12.69	14.63	16.13	17.40
26	17.54	17.88	17.30	17.22	16.35	13.26	11.31	13.03	12.74	14.70	16.16	17.43
27	17.56	17.88	17.24	17.20	16.35	13.07	11.32	12.96	12.79	14.76	16.18	17.46
28	17.58	17.90	17.19	17.23	16.33	12.94	11.41	12.90	12.86	14.82	16.21	17.50
29	17.60	17.89	17.15	17.25	---	12.85	11.50	12.85	12.97	14.88	16.25	17.53
30	17.63	17.87	17.10	17.22	---	12.70	11.53	12.81	13.03	14.94	16.29	17.56
31	17.65	---	17.07	17.23	---	12.36	---	12.80	---	15.01	16.31	---
MEAN	17.26	17.84	17.66	17.11	16.72	15.08	11.16	12.46	12.88	14.03	15.77	---
LOW	17.65	17.90	17.90	17.25	17.25	16.32	11.95	13.07	13.15	15.01	16.31	---
HIGH	16.86	17.67	17.07	16.96	16.33	12.36	10.84	11.58	12.68	13.09	15.08	---

WTR YR 2001 HIGH 10.82 APR 16, 18 LOW 17.90 NOV 15, 16, 18, 25, 28, 29, DEC 15, 16

e Estimated

415433070583302. Middleborough well MTW 82.

LOCATION.--Lat 41°54'33", long 70°58'33", Plymouth County, Hydrologic Unit 01090004, 15 ft southeast of southbound side of Interstate 495 and 435 ft southeast of Puddingshear Brook in Middleborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 26.5 ft, screened 24.5 to 26.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 45 ft above sea level. Measuring point: Top of casing, 3.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft below land-surface datum, Mar. 24, 1983; lowest measured, 17.58 ft below land-surface datum, Oct. 24, 1980.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	15.53	DEC 21	13.70	FEB 21	7.10	APR 24	3.77	JUN 25	9.63	AUG 28	14.99
NOV 29	15.12	JAN 25	11.14	MAR 29	2.53	MAY 24	7.48	JUL 31	13.12	SEP 26	16.16
WATER YEAR 2001	HIGHEST	2.53	MAR 29, 2001	LOWEST	16.16	SEP 26, 2001					

## GROUND-WATER LEVELS IN MASSACHUSETTS

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## PLYMOUTH COUNTY--Continued

415453070434901. Plymouth well PWW 22.

LOCATION.--Lat 41°54'53", long 70°43'49", Plymouth County, Hydrologic Unit 01090004, 10 ft from northeast corner of main building at Plymouth Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in., depth 42 ft, screened 40 to 42 ft; new well drilled at same location August 1990, diameter 2.0 in., depth 40 ft, screened 30-40 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 145 ft above sea level. Measuring point: Top of casing, at land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.82 ft below land-surface datum, May 26, 1958; lowest measured, 28.99 ft below land-surface datum, Jan. 28, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	23.44	DEC 28	24.81	FEB 21	24.95	APR 24	21.95	JUN 25	22.36	AUG 28	23.64
NOV 29	22.80	JAN 25	24.99	MAR 29	23.35	MAY 24	22.47	JUL 31	22.96	SEP 26	24.35
WATER YEAR 2001	HIGHEST	21.95	APR 24, 2001	LOWEST	24.99	JAN 25, 2001					

415217070393102. Plymouth well PWW 494.

LOCATION.--Lat 41°52'17", long 70°39'31", Plymouth County, Hydrologic Unit 01090002, in Myles Standish State Forest, in gravel pit 50 ft southeast of intersection of Lower College Pond Road and Crawford Road, approximately five miles northeast of South Carver.

Owner: Massachusetts Department of Environmental Management.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.5 in., depth 47 ft, screened 42 to 47 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 129 ft above sea level. Measuring point: Top of casing, 1.17 ft above land-surface datum.

PERIOD OF RECORD.--August 1985 to current year. Prior to April 1989, three random measurements.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.28 ft below land-surface datum, July 28, 1998; lowest measured, 33.23 ft below land-surface datum, Nov. 24, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	30.09	DEC 21	30.64	FEB 21	30.73	APR 24	28.25	JUN 25	28.19	AUG 28	28.77
NOV 28	30.42	JAN 25	30.76	MAR 29	29.28	MAY 24	28.30	JUL 31	28.48	SEP 26	29.19
WATER YEAR 2001	HIGHEST	28.19	JUN 25, 2001	LOWEST	30.76	JAN 25, 2001					

414518070435701. Wareham well WFW 51.

LOCATION.--Lat 41°45'18", long 70°43'57", Plymouth County, Hydrologic Unit 01090002, 50 ft east of U.S. Highway 6 and 100 ft north of Exxon service station in Wareham.

Owner: Private owner.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 9.65 ft, cased with tile to 9.65 ft, open end. Prior to September 1980, well depth was 12.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 21 ft above sea level. Measuring point: Top edge of tile casing, 2.3 ft above land-surface datum.

PERIOD OF RECORD.--July 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft below land-surface datum, Jan. 26, 1978; lowest measured, dry, several months in water years 1980-84.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31	9.78	DEC 21	9.31	FEB 21	8.54	APR 24	5.14	JUN 25	6.26	AUG 28	8.02
NOV 28	9.88	JAN 25	9.04	MAR 29	6.29	MAY 24	6.58	JUL 31	7.43	SEP 26	8.66
WATER YEAR 2001	HIGHEST	5.14	APR 24, 2001	LOWEST	9.88	NOV 28, 2000					

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY

422125071440101. Boylston well BKW 87.

LOCATION.--Lat 42°21'25", long 71°44'01", Worcester County, Hydrologic Unit 01070004, about 200 ft south of French Road and 30 ft west of State Route 70 in Boylston, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial till of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 12.2 ft, screened 2.2 to 12.2 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 475 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.84 ft below land-surface datum, Jan. 29, 1996; lowest measured, dry, July 26, Aug. 26, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	8.22	DEC 28	5.54	FEB 26	5.77	APR 25	5.25	JUN 26	7.08	AUG 23	9.75
NOV 28	6.04	JAN 29	7.44	MAR 26	1.34	MAY 29	8.07	JUL 25	8.81		
WATER YEAR 2001	HIGHEST	1.34	MAR 26, 2001	LOWEST	9.75	AUG 23, 2001					

422058072085501. Hardwick well HHW 1.

LOCATION.--Lat 42°20'58", long 72°08'55", Worcester County, Hydrologic Unit 01080204, 30 ft southeast of State Highway 32 and 0.6 mi southwest of Hardwick Road in Hardwick.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 33.2 ft, screened 31.2 to 33.2 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 580 ft above sea level. Measuring point: Top of casing, 3.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.17 ft below land-surface datum, Apr. 24, 2000; lowest measured, 17.77 ft below land-surface datum, Nov. 22, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	15.07	DEC 24	14.08	FEB 21	15.10	APR 24	10.97	JUN 26	12.92	AUG 26	15.26
NOV 22	15.07	JAN 23	15.17	MAR 27	9.52	MAY 22	13.97	JUL 24	14.59	SEP 25	15.68
WATER YEAR 2001	HIGHEST	9.52	MAR 27, 2001	LOWEST	15.68	SEP 25, 2001					

422020072145901. Hardwick well HHW 31.

LOCATION.--Lat 42°20'20", long 72°14'59", Worcester County, Hydrologic Unit 01080204, 5 ft north of Patrill Hollow Road and approximately 250 ft west of Muddy Brook in Hardwick.

Owner: Town of Hardwick.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 71.0 ft, screened 67.0 ft to 71.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 490 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.91 ft below land-surface datum, Apr. 5, 2001; lowest measured, 12.34 ft below land-surface datum, Nov. 21, 1997.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	11.18	DEC 27	11.02	FEB 20	11.04	APR 25	9.91	JUN 25	10.86	AUG 20	11.45
NOV 27	12.03	JAN 23	11.14	MAR 27	10.49	MAY 21	10.73	JUL 19	11.09	SEP 25	11.30
WATER YEAR 2001	HIGHEST	9.91	APR 25, 2001	LOWEST	12.03	NOV 27, 2000					

## WORCESTER COUNTY--Continued

422102071501401. Holden well HRW 169.

LOCATION.--Lat 42°21'02", long 71°50'14", Worcester County, Hydrologic Unit 01070004, about 50 ft west of intersection of Union and Malden Streets in Holden, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial till of pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well with well pipe inserted, diameter 2.0 in., depth 10.5 ft, screened 0.5 to 10.5 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 670 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.17 ft below land-surface datum, June 30, 1998; lowest measured, 7.97 ft below land-surface datum, Sept. 22, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	5.30	DEC 22	3.40	FEB 26	3.03	APR 25	0.70	JUN 26	2.00	AUG 23	5.15
NOV 27	4.75	JAN 29	4.73	MAR 26	.60	MAY 30	1.40	JUL 25	3.51	SEP 25	6.93
WATER YEAR 2001	HIGHEST	0.60	MAR 26, 2001	LOWEST	6.93	SEP 25, 2001					

420610071421402. Northbridge well NXW 54.

LOCATION.--Lat 42°06'10", long 71°42'14", Worcester County, Hydrologic Unit 01090003, about 100 ft northeast of the intersection of State Highway 146 and Main Street in Northbridge.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in., depth 12 ft, screened 10 to 12 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 370 ft above sea level. Measuring point: Top of casing, 2.87 ft above land-surface datum, 2.0 ft prior to September 1992.

PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.02 ft below land-surface datum, June 27, 1998; lowest measured, 5.14 ft below land-surface datum, Oct. 22, 1986.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.52	DEC 24	4.14	FEB 21	4.09	APR 24	3.57	JUN 26	3.87	AUG 26	4.42
NOV 22	4.43	JAN 23	4.40	MAR 27	3.29	MAY 22	3.96	JUL 24	4.14	SEP 25	4.60
WATER YEAR 2001	HIGHEST	3.29	MAR 27, 2001	LOWEST	4.60	SEP 25, 2001					

422906072124301. Petersham well PHW 16.

LOCATION.--Lat 42°29'06", long 72°12'43", Worcester County, Hydrologic Unit 01080204, 0.6 mi east of West Street Cemetery, 500 ft south of West Street, and 100 ft west of access road in Petersham.

Owner: Private owner.

AQUIFER.--Glacial sand and gravel of the Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0-inch PVC, depth 39.0 ft, screened 29.0 to 39.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 790 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.71 ft below land-surface datum, June 5, 1984; lowest measured, 16.53 ft below land-surface datum, Oct. 24, 1984.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	15.03	DEC 27	13.87	FEB 20	14.60	APR 25	6.76	JUN 25	13.80	AUG 20	15.42
NOV 27	14.64	JAN 23	14.19	MAR 27	12.89	MAY 21	13.30	JUL 19	14.67	SEP 25	16.11
WATER YEAR 2001	HIGHEST	6.76	APR 25, 2001	LOWEST	16.11	SEP 25, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

422636071503601. Princeton well PYW 64.

LOCATION.--Lat 42°26'36", long 71°50'36", Worcester County, Hydrologic Unit 01070004, on north side of State Rt 62 and about 100 ft east of Thomas Prince School in Princeton, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial sand and gravel of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 21.9 ft, screened 11.9 to 21.9 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 695 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.95 ft below land-surface datum, Jan. 29, 1996; lowest measured, dry, Aug. 28, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 27	17.08	JAN 29	17.66	MAR 26	10.40	MAY 30	17.10	JUL 25	17.56	AUG 23	18.47
DEC 22	15.97	FEB 26	16.88	APR 25	11.86	JUN 26	16.45				
WATER YEAR 2001		HIGHEST	10.40	MAR 26, 2001		LOWEST	18.47	AUG 23, 2001			

421851071312601. Southborough well SSW 12.

LOCATION.--Lat 42°18'51", long 71°31'26", Worcester County, Hydrologic Unit 01070005, 50 ft north of Overlook Drive circle, approximately .75 mile northeast of Southborough center.

Owner: Town of Southborough.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Drive-washed observation water-table well, diameter 1.25 in., depth 20 ft, screened 18 to 20 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 450 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum.

PERIOD OF RECORD.--July 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.84 ft below land-surface datum, Apr. 1, 1993; lowest measured, 15.74 ft below land-surface datum, Sept. 29, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	11.98	DEC 26	3.16	FEB 22	2.31	APR 23	3.56	JUN 25	4.84	AUG 31	11.83
NOV 27	9.44	JAN 22	5.68	MAR 28	1.71	MAY 23	7.25	JUL 26	8.92	SEP 27	13.81
WATER YEAR 2001		HIGHEST	1.71	MAR 28, 2001		LOWEST	13.81	SEP 27, 2001			

422805071480801. Sterling well SYW 1.

LOCATION.--Lat 42°28'05", long 71°48'08", Worcester County, Hydrologic Unit 01070004, 45 ft northeast of Justice Hill Road and 0.8 mi west of South Nelson Road in Sterling.

Owner: Private owner.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 15 ft, cased with stone to 15 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 710 ft above sea level. Measuring point: Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--May 1947 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.45 ft below land-surface datum, Feb. 25, 2000; dry, Nov. 28, 1964.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.46	DEC 24	2.77	FEB 21	2.66	APR 24	2.75	JUN 26	3.59	AUG 26	10.02
NOV 22	5.26	JAN 23	3.55	MAR 25	1.65	MAY 22	5.17	JUL 24	6.99	SEP 25	10.19
WATER YEAR 2001		HIGHEST	1.65	MAR 25, 2001		LOWEST	10.19	SEP 25, 2001			

## WORCESTER COUNTY--Continued

422520071483001. Sterling well SYW 177.

LOCATION.--Lat 42°25'20", long 71°48'30", Worcester County, Hydrologic Unit 01070004, 20 ft east of State Route 140 and 200 ft northwest of Fox Run Road in Sterling, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial sand and gravel of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 24.4 ft, screened 14.4 to 24.4 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 505 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.40 ft below land-surface datum, Jan. 29, 1996; lowest measured, 16.17 ft below land-surface datum, Sept. 29, 2000.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	15.24	DEC 22	14.24	FEB 26	14.60	APR 25	13.75	JUN 26	14.55	AUG 23	15.08
NOV 27	14.82	JAN 29	14.87	MAR 26	12.85	MAY 30	14.60	JUL 25	14.82	SEP 25	15.40
WATER YEAR 2001	HIGHEST	12.85	MAR 26, 2001	LOWEST	15.40	SEP 25, 2001					

23717072043101. Templeton well TMW 3.

LOCATION.--Lat 42°37'17", long 72°04'31", Worcester County, Hydrologic Unit 01080202, 60 ft east of U.S. Highway 202 and 0.2 mi south of Winchendon town line in Templeton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 14 ft, screened 12 to 14 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 900 ft above sea level. Measuring point: Top of casing, 4.2 ft above land-surface datum.

PERIOD OF RECORD.--December 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.99 ft below land-surface datum, Jan. 25, 1996; lowest measured, 5.10 ft below land-surface datum, Sept. 29, 1964.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	3.81	DEC 24	2.74	FEB 21	3.64	APR 24	2.73	JUN 26	3.88	AUG 26	4.43
NOV 22	3.73	JAN 23	3.82	MAR 27	2.78	MAY 22	3.71	JUL 24	4.03	SEP 25	4.30
WATER YEAR 2001	HIGHEST	2.73	APR 24, 2001	LOWEST	4.43	AUG 26, 2001					

420314071514001. Webster well WLW 1.

LOCATION.--Lat 42°03'14", long 71°51'40", Worcester County, Hydrologic Unit 01100001, 100 ft east of State Highway 52 and 100 ft south of Memorial Beach Drive in Webster.

Owner: Town of Webster.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in., depth 27.0 ft, cased to 27.0 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 500 ft above sea level. Measuring point: Top of casing, 3.4 ft above land-surface datum.

PERIOD OF RECORD.--September 1958 to November 1979, October 1981 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.28 ft below land-surface datum, Mar. 25, 1968; lowest measured, 17.90 ft below land-surface datum, Dec. 20, 1965.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	15.58	DEC 24	15.72	FEB 21	16.20	APR 24	13.11	JUN 26	13.20	AUG 26	14.35
NOV 22	16.54	JAN 23	16.66	MAR 27	14.05	MAY 22	14.08	JUL 24	13.94	SEP 25	15.25
WATER YEAR 2001	HIGHEST	13.11	APR 24, 2001	LOWEST	16.66	JAN 23, 2001					

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

422341071464901. West Boylston well WSW 26.

LOCATION.--Lat 42°23'41", long 71°46'49", Worcester County, Hydrologic Unit 01070004, 50 ft west of Prescott Street and about 0.2 mi south of Pleasant Street in West Boylston, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial sand and gravel of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 16.8 ft, screened 6.8 to 16.8 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 485 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.30 ft below land-surface datum, Jan. 29, 1996; lowest measured, 11.48 ft below land-surface datum, Oct. 27, 1997.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.08	DEC 22	5.18	FEB 26	5.84	APR 25	3.52	JUN 26	6.53	AUG 23	8.44
NOV 28	7.96	JAN 29	6.83	MAR 26	1.55	MAY 30	6.45	JUL 25	7.46	SEP 25	9.91
WATER YEAR 2001		HIGHEST	1.55	MAR 26, 2001		LOWEST	9.91	SEP 25, 2001			

422130071473601. West Boylston well WSW 27.

LOCATION.--Lat 42°21'30", long 71°47'36", Worcester County, Hydrologic Unit 01070004, 200 ft east of Prospect Street and about 500 ft south of Wachusett Country Club building in West Boylston, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial till of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 25.0 ft, screened 15.0 to 25.0 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 680 ft above sea level. Measuring point: Top of casing, 3.6 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.50 ft below land-surface datum, Jan. 29, 1996; lowest measured, 22.53 ft below land-surface datum, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	19.91	DEC 22	17.40	FEB 26	17.66	APR 25	15.16	JUN 26	16.82	AUG 23	19.37
NOV 27	19.10	JAN 29	19.86	MAR 26	12.10	MAY 30	18.36	JUL 25	18.23	SEP 25	20.54
WATER YEAR 2001		HIGHEST	12.10	MAR 26, 2001		LOWEST	20.54	SEP 25, 2001			

422334071444201. West Boylston well WSW 28.

LOCATION.--Lat 42°23'34", long 71°44'42", Worcester County, Hydrologic Unit 01070004, 15 ft southeast of State Route 110 and 1.9 mi northeast of intersection of State Routes 110 and 12 in West Boylston, MA.

Owner: Metropolitan District Commission.

AQUIFER.--Glacial sand and clay of pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 29.4 ft, screened 19.4 to 29.4 ft.

INSTRUMENTATION.--Monthly or more frequent measurements with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 525 ft above sea level. Measuring point: Top of casing, 2.6 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.50 ft below land-surface datum, June 30, 1997; lowest measured, 22.55 ft below land-surface datum, Aug. 26, 1999.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	17.06	NOV 28	12.66	DEC 22	10.70	JAN 29	13.37	FEB 26	11.25	MAR 26	7.68
APR 25	11.80	MAY 30	13.98	JUN 26	12.23	JUL 25	15.51	AUG 23	17.61	SEP 25	20.03
WATER YEAR 2001		HIGHEST	7.68	MAR 26, 2001		LOWEST	20.03	SEP 25, 2001			

## WORCESTER COUNTY--Continued

421410072081301. West Brookfield well WUW 2.

LOCATION.--Lat 42°14'10", long 72°08'13", Worcester County, Hydrologic Unit 01080204, about 50 ft north of State Highway 9 and about 500 ft south of State Highway 67 in West Brookfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in., depth 43.0 ft, screened 40 to 43 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 630 ft above sea level. Measuring point: Top of casing, 0.3 ft above land-surface datum.

PERIOD OF RECORD.--October 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.79 ft below land-surface datum, May 22, 1983; lowest measured, 23.63 ft below land-surface datum, Feb. 21, 1966.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	19.23	DEC 24	19.29	MAR 27	19.52	MAY 22	18.37	JUL 24	18.73	SEP 25	19.56
NOV 22	19.56	JAN 23	19.88	APR 24	18.33	JUN 26	18.47	AUG 26	19.13		
WATER YEAR 2001		HIGHEST	18.33	APR 24, 2001		LOWEST	19.88	JAN 23, 2001			

421522072113401. West Brookfield well WUW 10.

LOCATION.--Lat 42°15'22", long 72°11'34", Worcester County, Hydrologic Unit 01080204, 15 ft east of Coy Hill Road and 1,850 ft south of State Highway 9 in West Brookfield.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Brimfield schist.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.5 in., depth 64.5 ft, cased to 40 ft, open hole.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 833.23 ft above sea level. Measuring point: Top of casing, 2.85 ft above land-surface datum.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.32 ft below land-surface datum, Mar. 25, 1994; lowest measured, 12.63 ft below land-surface datum, Oct. 23, 1997.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.15	DEC 24	6.84	FEB 21	7.67	APR 24	2.27	JUN 26	4.63	AUG 26	8.97
NOV 22	8.54	JAN 23	8.21	MAR 27	2.59	MAY 22	5.80	JUL 24	7.38		
WATER YEAR 2001		HIGHEST	2.27	APR 24, 2001		LOWEST	9.15	OCT 27, 2000			

424204072015201. Winchendon well XNW 13.

LOCATION.--Lat 42°42'04", long 72°01'52", Worcester County, Hydrologic Unit 01080202, about 50 ft east of Forristall Road, 0.2 mi north of Elmwood Road, and 1.6 mi northeast of Winchendon.

Owner: Private owner.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 12 ft, cased with stone to 12 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 1,209.36 ft above sea level. Measuring point: Top of extension pipe, 3.8 ft above land-surface datum.

PERIOD OF RECORD.--October 1939 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.86 ft below land-surface datum, Mar. 20, 1948; lowest measured, 13.50 ft below land-surface datum, Nov. 19, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.36	DEC 24	5.17	FEB 21	6.11	APR 24	3.27	JUN 26	6.44	AUG 26	10.61
NOV 22	6.70	JAN 23	7.02	MAR 27	3.50	MAY 22	6.02	JUL 24	7.88	SEP 25	11.74
WATER YEAR 2001		HIGHEST	3.27	APR 24, 2001		LOWEST	11.74	SEP 25, 2001			



GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

421538071451301. Worcester well XSW 274.

LOCATION.--Lat 42°15'38", long 71°45'13", Worcester County, Hydrologic Unit 01090003, about 300 ft north of Hamilton Street and about 300 ft east of North Lake Avenue in Worcester.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in., depth 54.6 ft, screened 52.6 to 54.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 400 ft above sea level. Measuring point: Top of casing, 3.0 ft above land-surface datum.

REMARKS.--Water levels affected by Lake Quinsigamond.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.23 ft below land-surface datum, Mar. 27, 1972; lowest measured, 24.70 ft below land-surface datum, Oct. 26, 1983.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	23.86	DEC 24	23.44	FEB 21	23.53	APR 24	23.28	JUN 26	23.50	AUG 26	23.87
NOV 22	23.72	JAN 23	23.65	MAR 25	22.35	MAY 22	23.66	JUL 24	23.84	SEP 25	23.99
WATER YEAR 2001		HIGHEST	22.35	MAR 25, 2001		LOWEST	23.99	SEP 25, 2001			

## GROUND-WATER LEVELS IN RHODE ISLAND

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## KENT COUNTY

414223071453701. Coventry well COW 342.

LOCATION.--Lat 41°42'23", long 71°45'37", Kent County, Hydrologic Unit 01090004, town of Coventry, Plainfield Pike. (Rt. 14) 1/4 mile from intersection with Rt. 117.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 13.1 ft, cased with stone to 13.1 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 380 ft. Measuring point: Top of well casing, 0.29 ft above land-surface datum; 1.89 ft above land-surface datum prior to Aug. 24, 2000.

PERIOD OF RECORD.--October 1953 to December 1961, December 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.20 ft below land-surface datum, Dec. 22, 1992; lowest measured, 11.91 ft below land-surface datum, Aug. 24, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	10.88	DEC 26	9.04	FEB 22	8.89	APR 27	7.61	JUN 21	7.31	AUG 20	10.56
NOV 21	10.49	JAN 29	9.85	MAR 28	6.17	MAY 24	9.08	JUL 31	10.25	SEP 24	11.05
WATER YEAR 2001	HIGHEST	6.17	MAR 28, 2001	LOWEST	11.05	SEP 24, 2001					

414022071332801. Coventry well COW 411.

LOCATION.--Lat 41°40'22", long 71°33'28", Kent County, Hydrologic Unit 01090004, town of Coventry, about 75 ft west of house on Powhattan Avenue, 1.3 mi southeast of Washington.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 26 ft, cased with concrete to 26 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 260 ft. Measuring point: Hole in top of concrete cover, 1.24 ft above land-surface datum.

PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.43 ft below land-surface datum, Apr. 23, 1983; dry on Oct. 25, 1986.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	22.84	DEC 27	22.34	FEB 23	22.07	APR 27	19.48	JUN 21	19.83	AUG 20	22.00
NOV 21	23.00	JAN 29	22.59	MAR 28	19.77	MAY 24	21.04	JUL 31	21.48	SEP 26	22.51
WATER YEAR 2001	HIGHEST	19.48	APR 27, 2001	LOWEST	23.00	NOV 21, 2000					

414315071410701. Coventry well COW 466.

LOCATION.--Lat 41°43'15", long 71°41'07", Kent County, Hydrologic Unit 01090004, town of Coventry, Audubon Society, Parker Woodland. Maple Valley Road at Flat River.

Owner: Audobon Society.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 17.8 ft, cased to 7.6 ft, screened from 7.6 ft to 17.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 345 ft. Measuring point: Notch in PVC casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.91 ft below land-surface datum, Nov. 20, 1995; lowest measured, 5.35 ft below land-surface datum, Aug. 24, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.68	DEC 27	2.77	FEB 27	2.64	APR 23	2.69	JUN 27	2.81	AUG 29	3.95
NOV 22	3.11	JAN 22	2.85	MAR 19	2.45	MAY 29	2.67	JUL 25	4.20	SEP 24	4.36
WATER YEAR 2001	HIGHEST	2.45	MAR 19, 2001	LOWEST	4.36	SEP 24, 2001					

GROUND-WATER LEVELS IN RHODE ISLAND

KENT COUNTY--Continued

414106071223901. Warwick well WCW 59.

LOCATION.--Lat 41°41'06", long 71°22'39", Kent County, Hydrologic Unit 01090004, town of Warwick, Warwick Neck, Our Lady of Providence Seminary. Former Senator Aldrich mansion. Next to Rocky Point Amusement Park.

Owner: Our Lady of Providence Seminary.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 27.0 ft, cased with stone to 27.0 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 125 ft. Measuring point: Spray painted arrow on rock, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1949 to December 1955, November 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.46 ft below land-surface datum, Feb. 20, 1993; lowest measured, 24.77 ft below land-surface datum, Oct. 31, 1949.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	11.11	DEC 26	4.87	FEB 22	4.76	APR 27	4.87	JUN 21	4.63	AUG 20	11.63
NOV 21	9.99	JAN 29	4.99	MAR 28	4.46	MAY 24	6.04	JUL 31	9.70	SEP 24	13.92
WATER YEAR 2001	HIGHEST	4.46	MAR 28, 2001	LOWEST	13.92	SEP 24, 2001					

413907071465001. West Greenwich well GWG 181.

LOCATION.--Lat 41°39'07", long 71°46'50", Kent County, Hydrologic Unit 01090005, town of West Greenwich, about 50 ft from southeast corner of a house 1.3 mi north of intersection of Hazard and Muddy Brook Roads, and 1.8 mi northwest of West Greenwich Center.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 18.5 ft, lined with stone to 18.5 ft, shored.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 380 ft. Measuring point: Hole in top of concrete cover, 0.54 ft above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.15 ft below land-surface datum, Jan. 27, 1979; lowest measured, 17.78 ft below land-surface datum, Dec. 22, 1984.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	16.65	DEC 26	14.78	FEB 22	15.12	APR 27	14.88	JUN 21	13.72	AUG 20	16.33
NOV 21	16.51	JAN 29	16.02	MAR 28	13.34	MAY 24	15.89	JUL 31	16.13	SEP 24	16.58
WATER YEAR 2001	HIGHEST	13.34	MAR 28, 2001	LOWEST	16.65	OCT 26, 2000					

413645071332901. West Greenwich well GWG 206.

LOCATION.--Lat 41°36'45", long 71°33'29", Kent County, Hydrologic Unit 01090004, town of West Greenwich, Hopkins Hill Road.

Owner: Private owner.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 9.6 ft, cased with stone to 9.6 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 374.26 ft. Measuring point: Spray painted arrow on rock, 3.05 ft above land-surface datum.

PERIOD OF RECORD.--October 1955 to June 1960, January 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.85 ft below land-surface datum, Oct. 17, 1955; lowest measured, dry, Aug. 26, Sept. 22, Oct. 25, 1993, Sept. 27, 1995, Oct. 23, 1997.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	5.77	DEC 27	4.11	FEB 23	4.01	APR 27	3.94	JUN 21	3.82	AUG 20	5.18
NOV 21	5.23	JAN 29	4.28	MAR 28	3.64	MAY 24	3.86	JUL 31	5.03	SEP 26	5.32
WATER YEAR 2001	HIGHEST	3.64	MAR 28, 2001	LOWEST	5.77	OCT 27, 2000					

## GROUND-WATER LEVELS IN RHODE ISLAND

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## NEWPORT COUNTY

413220071115501. Little Compton well LTW 142.

LOCATION.--Lat 41°32'20", long 71°11'55", Newport County, Hydrologic Unit 01090004, town of Little Compton, East of Rt. 77 at intersection with Old Main Road.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 23.1 ft, cased to 12.9 ft, screened from 12.9 ft to 22.3 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 100 ft. Measuring point: Notch in PVC casing, 1.4 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.23 ft below land-surface datum, Jan. 22, 1996; lowest measured, dry, Aug. 25, Sept. 29, Oct. 26, Dec. 2, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	16.52	DEC 22	10.14	FEB 28	10.85	APR 26	9.32	JUN 28	12.93	AUG 28	16.90
NOV 28	17.23	JAN 22	10.65	MAR 19	6.42	MAY 30	15.82	JUL 26	16.74	SEP 26	18.43
WATER YEAR 2001		HIGHEST	6.42	MAR 19, 2001		LOWEST	18.43	SEP 26, 2001			

413325071152401. Portsmouth well POW 551.

LOCATION.--Lat 41°33'25", long 71°15'24", Newport County, Hydrologic Unit 01090004, town of Portsmouth, State police barracks, Portsmouth Terrace on East Main St. (Rt. 138); just south of Union St.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 51.9 ft, cased to 41.7 ft, screened from 41.7 ft to 51.1 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 245 ft. Measuring point: Notch in PVC casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.42 ft below land-surface datum, Mar. 21, 2000; lowest measured, dry, Sept. 29, Oct. 26, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	41.73	DEC 22	32.58	FEB 26	33.41	APR 25	31.05	JUN 26	37.15	AUG 30	44.61
NOV 24	43.64	JAN 22	35.46	MAR 19	25.48	MAY 30	40.72	JUL 25	42.77	SEP 25	46.62
WATER YEAR 2001		HIGHEST	25.48	MAR 19, 2001		LOWEST	46.62	SEP 25, 2001			

413442071093801. Tiverton well TIW 274.

LOCATION.--Lat 41°34'42", long 71°09'38", Newport County, Hydrologic Unit 01090004, town of Tiverton, 305 Lake Road.

Owner: Private owner.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 13.18 ft, cased with concrete to 13.18 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 160 ft. Measuring point: Spray painted arrow on cross beam, 1.90 ft above land-surface datum.

PERIOD OF RECORD.--December 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.44 ft below land-surface datum, Feb. 24, 1994; lowest measured, 13.61 ft below land-surface datum, June. 26, 2000.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	7.60	DEC 22	0.83	FEB 28	0.94	APR 26	1.82	JUL 26	5.70	SEP 27	8.29
NOV 28	3.16	JAN 22	1.11	MAR 19	1.09	MAY 30	1.92	AUG 28	7.02		
WATER YEAR 2001		HIGHEST	0.83	DEC 22, 2000		LOWEST	8.29	SEP 27, 2001			

## GROUND-WATER LEVELS IN RHODE ISLAND

## PROVIDENCE COUNTY

415710071402201. Burrillville well BUW 187.

LOCATION.--Lat 41°57'10", long 71°40'22", Providence County, Hydrologic Unit 01090003, town of Burrillville, 25 ft east of road and 75 ft southwest of a house 0.6 mi north of intersection of Harrisville and Lapham Farm Roads, and 0.9 mi south of Harrisville.

Owner: Brothers of the Sacred Heart.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 19.8 ft, lined with stone to 19.8 ft, shored.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 462 ft. Measuring point: Hole in top of concrete cover, 0.58 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.74 ft below land-surface datum, Apr. 23, 1983; lowest measured, 18.83 ft below land-surface datum, Nov. 3, 1970.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	16.67	DEC 26	15.85	FEB 22	15.55	APR 27	14.09	JUN 21	15.01	AUG 20	16.20
NOV 21	16.36	JAN 29	15.88	MAR 28	15.26	MAY 24	14.97	JUL 31	15.92	SEP 24	16.78
WATER YEAR 2001	HIGHEST	14.09	APR 27, 2001	LOWEST	16.78	SEP 24, 2001					

415546071474701. Burrillville well BUW 395.

LOCATION.--Lat 41°55'46", long 71°47'47", Providence County, Hydrologic Unit 01100001, town of Burrillville, Pulaski Memorial State Park, near southeast corner of parking area #3.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 17.7 ft, cased to 7.8 ft, screened from 7.8 ft to 17.2 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 575 ft. Measuring point: Notch in PVC casing, 1.1 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.04 ft below land-surface datum, Mar. 28, 1994; lowest measured, dry, Sept. 26, 1995.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	10.77	DEC 26	8.12	FEB 28	7.19	APR 23	6.12	JUN 25	6.54	AUG 30	9.93
NOV 27	10.14	JAN 25	8.20	MAR 26	5.22	MAY 30	7.68	JUL 27	10.66	SEP 26	10.96
WATER YEAR 2001	HIGHEST	5.22	MAR 26, 2001	LOWEST	10.96	SEP 26, 2001					

4158470711471401. Burrillville well BUW 396.

LOCATION.--Lat 41°58'47", long 71°47'14", Providence County, Hydrologic Unit 01100001, town of Burrillville, Buck Hill Road, 0.3 miles West of Wakefield Road; north side of road at turn-out, near stream. Near power-line pole #64.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 17.4 ft, cased to 7.2 ft, screened from 7.2 ft to 16.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 530 ft. Measuring point: Notch in PVC casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.32 ft below land-surface datum, Mar. 28, 1994; lowest measured, 7.65 ft below land-surface datum, Aug. 25, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	6.62	DEC 26	5.35	FEB 27	5.25	APR 24	5.01	JUN 26	5.41	AUG 30	5.66
NOV 24	6.12	JAN 24	5.60	MAR 27	4.15	MAY 30	5.87	JUL 27	5.80	SEP 26	5.46
WATER YEAR 2001	HIGHEST	4.15	MAR 27, 2001	LOWEST	6.62	OCT 24, 2000					

## GROUND-WATER LEVELS IN RHODE ISLAND

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## PROVIDENCE COUNTY--Continued

415606071462201. Burrillville well BUW 397.

LOCATION.--Lat 41°56'06", long 71°46'22", Providence County, Hydrologic Unit 01100001, town of Burrillville, Pulaski Memorial State Park, Center Trail, east of buw 395.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 25.6 ft, cased to 15.2 ft, screened from 15.2 ft to 24.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 705 ft. Measuring point: Notch in PVC casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.00 ft below land-surface datum, Mar. 28, 1994; lowest measured, dry, several times in water years 1993, 1998, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	23.30	DEC 26	23.64	FEB 27	18.50	APR 23	9.85	JUN 28	17.08	AUG 30	21.35
NOV 27	DRY	JAN 24	19.90	MAR 26	9.34	MAY 30	16.37	JUL 27	20.69	SEP 26	22.35
WATER YEAR 2001	HIGHEST	9.34	MAR 26, 2001	LOWEST	23.64	DEC 26, 2000					

415559071471201. Burrillville well BUW 398.

LOCATION.--Lat 41°55'59", long 71°47'12", Providence County, Hydrologic Unit 01100001, town of Burrillville, Pulaski Park, Center Trail.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 13.5 ft, cased to 3.3 ft, screened from 3.3 ft to 12.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 615 ft. Measuring point: Notch in PVC casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.65 ft below land-surface datum, Mar. 28, 1994; lowest measured, dry, several times in water year 1998.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	11.81	DEC 26	8.32	FEB 27	8.20	APR 23	6.76	JUN 28	7.90	AUG 30	10.92
NOV 27	11.29	JAN 24	8.66	MAR 26	3.34	MAY 30	8.70	JUL 27	9.42	SEP 26	12.30
WATER YEAR 2001	HIGHEST	3.34	MAR 26, 2001	LOWEST	12.30	SEP 26, 2001					

414448071323001. Cranston well CRW 439.

LOCATION.--Lat 41°44'48", long 71°32'30", Providence County, Hydrologic Unit 01090004, town of Cranston, J.L. Curran Park, west side of Laten Knight Road, 0.3 miles north of Hope Road.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 23.1 ft, cased to 12.9 ft, screened from 12.9 ft to 22.3 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 395 ft. Measuring point: Notch in PVC casing, 1.8 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.57 ft below land-surface datum, Mar. 24, 1998; lowest measured, dry, Oct. 26, Nov. 29, 1994.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	19.73	DEC 21	18.42	FEB 27	12.60	APR 23	6.25	JUN 27	12.10	AUG 29	18.69
NOV 22	19.88	JAN 23	15.37	MAR 19	11.04	MAY 29	12.75	JUL 25	16.14	SEP 24	19.44
WATER YEAR 2001	HIGHEST	6.25	APR 23, 2001	LOWEST	19.88	NOV 22, 2000					

GROUND-WATER LEVELS IN RHODE ISLAND

PROVIDENCE COUNTY--Continued

415626071254601. Cumberland well CUW 265.

LOCATION.--Lat 41°56'26", long 71°25'46", Providence County, Hydrologic Unit 01090003, town of Cumberland, at 27 Scott Street, 900 ft northeast of intersection of Scott Street and Mendon Road in Ashton.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 20 ft, lined with stone to 20 ft, shored.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 130 ft. Measuring point: Hole in wooden cover, 0.06 ft above land-surface datum.

PERIOD OF RECORD.--August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft below land-surface datum, Jan. 27, 1979; lowest measured, 17.20 ft below land-surface datum, Sept. 29, 1949.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	14.60	DEC 26	10.56	FEB 22	10.96	APR 27	11.81	JUN 21	11.39	AUG 20	13.85
NOV 21	12.93	JAN 29	11.76	MAR 28	9.57	MAY 21	13.14	JUL 31	13.92	SEP 24	14.99
WATER YEAR 2001	HIGHEST	9.57	MAR 28, 2001	LOWEST	14.99	SEP 24, 2001					

414420071422301. Foster well FOW 40.

LOCATION.--Lat 41°44'20", long 71°42'23", Providence County, Hydrologic Unit 01090004, town of Foster, Plainfield Pike..

Owner: Private owner.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 48 in., depth 15.4 ft, cased with stone to 15.4 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 630 ft. Measuring point: Spray painted arrow top of casing, 0.40 ft. above land-surface datum.

PERIOD OF RECORD.--July 1953 to February 1959, April 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.29 ft below land-surface datum, May 27, 1954; lowest measured, 13.97 ft below land-surface datum, Oct. 28, 1957.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	7.55	DEC 26	3.62	FEB 22	3.21	APR 27	4.60	JUN 21	3.64	AUG 20	9.34
NOV 21	5.55	JAN 29	4.45	MAR 28	3.10	MAY 24	6.52	JUL 31	8.87	SEP 24	10.40
WATER YEAR 2001	HIGHEST	3.10	MAR 28, 2001	LOWEST	10.40	SEP 24, 2001					

414357071405101. Foster well FOW 290.

LOCATION.--Lat 41°43'57", long 71°40'51", Providence County, Hydrologic Unit 01090004, town of Foster, Parker Woodland, Audobon Society. Pig Hill Road, 1 mile north of Maple Valley Road.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 15.4 ft, cased to 5.2 ft, screened from 5.2 ft to 14.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 345 ft. Measuring point: Notch in PVC casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.36 ft below land-surface datum, Mar. 28, 1994; lowest measured, dry, several times in water years 1993, 1994, and 1998.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	14.15	DEC 27	8.59	FEB 27	6.37	APR 23	4.25	JUN 27	5.69	AUG 29	11.89
NOV 22	13.82	JAN 22	8.14	MAR 19	4.95	MAY 29	5.84	JUL 25	8.89	SEP 24	14.00
WATER YEAR 2001	HIGHEST	4.25	APR 23, 2001	LOWEST	14.15	OCT 25, 2000					

## GROUND-WATER LEVELS IN RHODE ISLAND

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## PROVIDENCE COUNTY--Continued

415437071242201. Lincoln well LIW 84.

LOCATION.--Lat 41°54'37", long 71°24'22", Providence County, Hydrologic Unit 0190003, town of Lincoln, at north side of Maplehurst Farms building, and 800 ft west of Blackstone River bridge in Lonsdale.

Owner: Maplehurst Farms, Inc.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in., depth 107 ft, cased to 107 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 60 ft. Measuring point: Inside lower lip of 8-inch pipe, 3.32 ft above land-surface datum.

REMARKS.--Water level affected by Blackstone River floods.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, +0.97 ft above land-surface datum, Jan. 28, 1976, lowest measured, 7.36 ft below land-surface datum, Aug. 24, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.44	DEC 26	4.83	FEB 22	5.10	APR 27	4.62	JUN 21	3.36	AUG 20	5.25
NOV 21	5.35	JAN 29	5.56	MAR 28	2.17	MAY 24	4.94	JUL 31	5.49	SEP 24	5.67
WATER YEAR 2001		HIGHEST	2.17	MAR 28, 2001		LOWEST	5.67	SEP 24, 2001			

415948071325001 North Smithfield well NSW 21.

LOCATION.--Lat 41°59'48", long 71°32'50", Providence County, Hydrologic Unit 1090003, town of North Smithfield, 500 ft southwest of State Highway 146A, 900 ft west of intersection of State Highway 146A and Harkness Road at Branch Village.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug domestic water-table well, diameter 24 in., depth 16 ft, cased with tile to 16 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Land-surface datum is 238.68 ft above sea level. Measuring point: Hole in concrete cover at top of tile casing, 1.84 ft below land-surface datum.

REMARKS.--Well used for domestic supply; water levels affected by pumping, 1947-80.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.67 ft below land-surface datum, Mar. 26, 1969; lowest measured, 11.71 ft below land-surface datum, Oct. 28, 1957.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.49	DEC 26	7.57	FEB 22	6.60	APR 27	6.83	JUN 21	5.49	AUG 20	8.95
NOV 21	8.45	JAN 29	7.84	MAR 28	4.51	MAY 24	8.23	JUL 31	8.80	SEP 24	9.77
WATER YEAR 2001		HIGHEST	4.51	MAR 28, 2001		LOWEST	9.77	SEP 24, 2001			

414746071255601. Providence well PRW 48.

LOCATION.--Lat 41°47'46", long 71°25'56", Providence County, Hydrologic Unit 01090004, city of Providence, at 333 Adelaide Avenue, and 800 ft northwest of Adelaide and 800 ft west of Narragansett Avenues.

Owner: Gorham Division of Textron.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in., depth 124 ft, cased to 116 ft, screened 116 to 124 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Land-surface datum is 45.79 ft, above sea level. Measuring point: Top edge of hole in center of steel cover, 0.48 ft below land-surface datum.

REMARKS.--Water level affected by pumping from one or more nearby wells.

PERIOD OF RECORD.--December 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.78 ft below land-surface datum, Apr. 23, 1983; lowest measured, 10.22 ft below land-surface datum, Oct. 20, 1947.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.95	DEC 26	4.49	FEB 22	4.74	APR 27	3.84	JUN 21	3.65	AUG 20	4.46
NOV 21	4.97	JAN 29	4.83	MAR 28	3.89	MAY 24	3.97	JUL 31	4.48	SEP 24	4.69
WATER YEAR 2001		HIGHEST	3.65	JUN 21, 2001		LOWEST	4.97	NOV 21, 2000			



## GROUND-WATER LEVELS IN RHODE ISLAND

## WASHINGTON COUNTY

412214071394001. Charlestown well CHW 18.

LOCATION.--Lat 41°22'14", long 71°39'40", Washington County, Hydrologic Unit 01090005, town of Charlestown, 1,900 ft southeast of U.S. Highway 1, at former U.S. Navy Auxiliary Air Station.

Owner: U.S. General Services Administration.

AQUIFER.--Sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in., depth 32 ft, cased to 32 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 26 ft. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.09 ft below land-surface datum, Apr. 23, 1983; lowest measured, 21.63 ft below land-surface datum, Dec. 29, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	18.88	DEC 27	18.05	FEB 23	17.13	APR 27	13.70	JUN 21	15.92	AUG 20	18.42
NOV 21	19.67	JAN 29	18.14	MAR 28	13.68	MAY 24	16.31	JUL 31	17.61	SEP 26	19.53
WATER YEAR 2001	HIGHEST	13.68	MAR 28, 2001	LOWEST	19.67	NOV 21, 2000					

412434071422401. Charlestown well CHW 586.

LOCATION.--Lat 41°24'34", long 71°42'24", Washington County, Hydrologic Unit 01090005, town of Charlestown, Burlingame State Park, 0.7 mi from Buckeye Road on Clawson Trail.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 14.3 ft, cased to 4.1 ft, screened from 4.1 ft to 13.5 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 125 ft. Measuring point: Notch in PVC casing, 1.3 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.57 ft below land-surface datum, Nov. 28, 1994; lowest measured, dry, Aug. 26, 1999.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.34	DEC 28	3.73	FEB 28	3.54	APR 25	3.74	JUN 24	3.93	AUG 31	4.26
NOV 28	3.54	JAN 25	3.72	MAR 19	3.61	MAY 30	3.49	JUL 27	3.84		
WATER YEAR 2001	HIGHEST	3.49	MAY 30, 2001	LOWEST	5.34	OCT 26, 2000					

412424071423601. Charlestown well CHW 587.

LOCATION.--Lat 41°24'24", long 71°42'36", Washington County, Hydrologic Unit 01090005, town of Charlestown, Burligame State Park, 0.8 mi from Buckeye Brook Road on Mills Trail.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in., depth 12.5 ft, cased to 2.3 ft, screened from 2.3 ft to 11.7 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 90 ft. Measuring point: Notch in PVC casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft below land-surface datum, Mar. 24, 1999; lowest measured, 12.33 ft below land-surface datum, Aug. 22, 1997.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	11.19	DEC 28	5.39	FEB 28	7.03	APR 25	6.37	JUN 27	8.36	AUG 31	11.85
NOV 28	8.84	JAN 25	7.62	MAR 19	4.16	MAY 30	4.86	JUL 27	10.91		
WATER YEAR 2001	HIGHEST	4.16	MAR 19, 2001	LOWEST	11.85	AUG 31, 2001					

## WASHINGTON COUNTY--Continued

413423071431901. Exeter well EXW 6.

LOCATION.--Lat 41°34'23", long 71°43'19", Washington County, Hydrologic Unit 01090005, town of Exeter, in Arcadia State Forest, 150 ft west of Wood River, 250 ft south of Ten Rod Road, and 2.0 mi west of Millville.

Owner: State Dept. of Natural Resources.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in., depth 10 ft, cased with concrete to 10 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Land-surface datum is 132.80 ft above sea level. Measuring point: Hole in top of wooden cover, at land-surface datum.

REMARKS.--Water level affected by stage of nearby Wood River.

PERIOD OF RECORD.--December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft below land-surface datum, Jan. 27, 1979; lowest measured, 7.97 ft below land-surface datum, Sept. 26, 1981.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	6.79	DEC 26	5.61	FEB 22	5.50	APR 27	4.51	JUN 21	4.06	AUG 20	5.99
NOV 21	6.56	JAN 29	5.94	MAR 28	3.93	MAY 24	5.07	JUL 31	5.77	SEP 24	6.58
WATER YEAR 2001	HIGHEST	3.93	MAR 28, 2001	LOWEST	6.79	OCT 26, 2000					

413505071452801. Exeter well EXW 158.

LOCATION.--Lat 41°35'05", long 71°45'28", Washington County, Hydrologic Unit 01090005, town of Exeter, Escoheag Hill Road.

Owner: State of Rhode Island.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in., depth 18.3 ft, cased with stone to 18.3 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 315 ft. Measuring point: Spray painted arrow on rock, at land-surface datum.

PERIOD OF RECORD.--September 1953 to February 1959, November 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.85 ft below land-surface datum, Mar. 25, 1994; lowest measured, dry, several times during water years 1994 and 1998.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	15.32	DEC 26	7.14	FEB 22	6.28	APR 27	6.19	JUN 21	5.35	AUG 20	15.03
NOV 21	15.38	JAN 29	7.55	MAR 28	4.28	MAY 24	9.22	JUL 31	13.01	SEP 24	16.34
WATER YEAR 2001	HIGHEST	4.28	MAR 28, 2001	LOWEST	16.34	SEP 24, 2001					

413400071363101. Exeter well EXW 238.

LOCATION.--Lat 41°34'00", long 71°36'31", Washington County, Hydrologic Unit 01090005, town of Exeter, Tripps Corner Road.

Owner: Private owner.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in., depth 14.4 ft, cased with stone to 14.4 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 333.80 ft. Measuring point: Spray painted arrow on rock, at land-surface datum.

PERIOD OF RECORD.--October 1955 to June 1960, May 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.37 ft below land-surface datum Oct. 17, 1955; lowest measured, 13.61 ft below land-surface datum, July 22, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	12.68	DEC 27	11.83	FEB 23	11.95	APR 27	11.72	JUN 21	10.40	AUG 20	11.29
NOV 21	12.31	JAN 29	12.24	MAR 28	10.66	MAY 24	10.51	JUL 31	11.31	SEP 26	11.11
WATER YEAR 2001	HIGHEST	10.40	JUN 21, 2001	LOWEST	12.68	OCT 27, 2000					

GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

413135071314201. Exeter well EXW 278.

LOCATION.--Lat 41°31'35", long 71°31'42", Washington County, Hydrologic Unit 01090005, town of Exeter, Liberty Road 1.04 mi from Rt. 2.

Owner: Private owner.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 23.9 ft, cased with stone to 23.9 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 230.90 ft. Measuring point: Spray painted arrow top of casing, 1.20 ft. above land-surface datum.

PERIOD OF RECORD.--August 1954 to June 1960, March 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.06 ft below land-surface datum, May 29, 1991; lowest measured, dry, several times in water years 1993, 1994, and 1998.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	17.04	DEC 27	13.68	FEB 23	11.19	APR 27	8.45	JUN 21	8.21	AUG 20	16.46
NOV 21	18.55	JAN 29	13.67	MAR 28	5.79	MAY 24	12.27	JUL 31	14.76	SEP 26	19.43
WATER YEAR 2001	HIGHEST	5.79	MAR 28, 2001	LOWEST	19.43	SEP 26, 2001					

413358071433801. Exeter well EXW 475.

LOCATION.--Lat 41°33'58", long 71°43'38", Washington County, Hydrologic Unit 01090005, town of Exeter, 70 ft east of Mt. Tom Road, 50 ft north of Blitzkrieg Trail, and 2.4 mi northwest of Barberville.

Owner: State Department of Environmental Management.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, cased to 38 ft, screened 38 to 40 ft.

INSTRUMENTATION.--Continuous graphic recorder March 1981 to May 1988, digital recorder (60-min punch) June 1988 to current year.

DATUM.--Land-surface datum is 142.92 ft above sea level. Measuring point: Floor of recorder shelter, 3.38 ft above land-surface datum.

PERIOD OF RECORD.--March 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.58 ft below land-surface datum, Apr. 28, 29, 1983; lowest, 16.74 ft below land-surface datum, Oct. 19, 1981, Sept. 17, 1995.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15.72	16.12	15.96	14.85	14.81	14.47	12.31	12.21	13.13	12.32	13.64	14.69
2	15.73	16.13	15.94	14.83	14.80	14.46	12.18	12.25	13.10	12.39	13.69	14.72
3	15.74	16.15	15.93	14.82	14.79	14.45	12.09	12.30	13.00	12.44	13.73	14.75
4	15.76	16.16	15.92	14.81	14.78	14.45	12.03	12.34	12.98	12.47	13.76	14.78
5	15.78	16.17	15.91	14.80	14.76	14.44	11.97	12.39	12.96	12.49	13.81	14.81
6	15.79	16.18	15.91	14.79	14.75	14.42	11.92	12.45	12.95	12.54	13.85	14.85
7	15.80	16.19	15.90	14.79	14.75	14.41	11.89	12.50	12.95	12.59	13.89	14.88
8	15.81	16.21	15.90	14.79	14.75	14.40	11.85	12.54	12.96	12.62	13.93	14.92
9	15.83	16.21	15.90	14.79	14.74	14.39	11.79	12.58	12.98	12.65	13.98	14.95
10	15.84	16.22	15.90	14.80	14.72	14.38	11.77	12.62	13.01	12.69	14.03	14.98
11	15.85	16.20	15.90	14.79	14.71	14.37	11.77	12.67	13.04	12.73	14.07	15.02
12	15.87	16.19	15.90	14.80	14.70	14.36	11.73	12.72	12.90	12.76	14.11	15.05
13	15.89	16.19	15.91	14.81	14.68	14.30	11.69	12.77	12.83	12.80	14.12	15.09
14	15.90	16.19	15.90	14.81	14.67	14.20	11.67	12.82	12.81	12.84	14.14	15.13
15	15.91	16.15	15.89	14.81	14.65	14.15	11.67	12.86	12.79	12.89	14.18	15.15
16	15.93	16.12	15.88	14.81	14.64	14.10	11.67	12.92	12.77	12.94	14.22	15.19
17	15.95	16.10	15.82	14.81	14.63	14.04	11.68	12.97	12.73	12.98	14.25	15.22
18	15.96	16.10	15.65	14.83	14.62	13.98	11.69	13.03	12.54	13.02	14.29	15.25
19	15.96	16.09	15.50	14.82	14.61	13.93	11.76	13.07	12.42	13.07	14.33	15.29
20	15.97	16.09	15.38	14.80	14.60	13.88	11.80	13.13	12.33	13.11	14.36	15.32
21	15.99	16.09	15.29	14.79	14.59	13.83	11.83	13.18	12.29	13.16	14.35	15.35
22	16.00	16.10	15.21	14.80	14.59	13.64	11.84	13.22	12.26	13.20	14.37	15.36
23	16.01	16.11	15.14	14.79	14.58	13.40	11.88	13.25	12.23	13.25	14.40	15.38
24	16.02	16.12	15.08	14.79	14.59	13.23	11.90	13.27	12.22	13.30	14.43	15.41
25	16.03	16.14	15.03	14.80	14.58	13.10	11.97	13.28	12.22	13.35	14.47	15.43
26	16.05	16.13	14.99	14.82	14.53	12.99	12.01	13.29	12.23	13.39	14.49	15.45
27	16.07	16.07	14.95	14.82	14.51	12.91	12.04	13.17	12.23	13.42	14.52	15.47
28	16.08	16.03	14.92	14.85	14.49	12.85	12.09	13.10	12.24	13.47	14.55	15.49
29	16.09	16.00	14.90	14.87	---	12.80	12.15	13.09	12.28	13.51	14.59	15.52
30	16.10	15.98	14.87	14.87	---	12.69	12.17	13.09	12.29	13.55	14.63	15.54
31	16.11	---	14.85	14.82	---	12.48	---	13.10	---	13.59	14.66	---
MEAN	15.92	16.13	15.55	14.81	14.66	13.85	11.89	12.84	12.66	12.95	14.19	15.15
LOW	16.11	16.22	15.96	14.87	14.81	14.47	12.31	13.29	13.13	13.59	14.66	15.54
HIGH	15.72	15.98	14.85	14.79	14.49	12.48	11.67	12.21	12.22	12.32	13.64	14.69

WTR YR 2001 HIGH 11.67 APR 13-18 LOW 16.23 NOV 10

## GROUND-WATER LEVELS IN RHODE ISLAND

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## WASHINGTON COUNTY--Continued

413252071323601. Exeter well EXW 554.

LOCATION.--Lat 41°32'52", long 71°32'36", Washington County, hydrologic Unit 01090005, town of Exeter, about 1,500 ft south of fire station at Exeter State (Dr. Joseph H. Ladd) School. One half mile West of Rt. 2 on Dawley Rd. and approximately 100 ft north of center line of Dawley Rd.  
Owner: State Dept. of Public Welfare.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in, depth 25.1 ft, cased to 22.8 ft, screened from 22.8 ft to 24.8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Land-surface datum is 156.92 ft above sea level. Measuring point: Top of casing, 2.40 ft above land-surface datum.

REMARKS.--Replacement well for EXW16, which was influenced by parking lot runoff.

PERIOD OF RECORD.--December 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.03 ft below land-surface datum, Mar. 28, 2001; lowest measured, 12.20 ft below land-surface datum, Nov. 29, 1994.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.97	DEC 27	8.57	FEB 23	8.62	APR 27	8.91	JUN 21	9.09	SEP 26	10.54
NOV 21	10.04	JAN 29	9.07	MAR 28	7.03	MAY 24	9.43	JUL 31	10.13		
WATER YEAR 2001	HIGHEST	7.03	MAR 28, 2001	LOWEST	10.54	SEP 26, 2001					

413126071455501. Hopkinton well HOW 67.

LOCATION.--Lat 41°31'26", long 71°45'55", Washington County, Hydrologic Unit 01090005, town of Hopkinton, Beach Pond Road, Rt. 138.  
Owner: Rhode Island Boy Scouts.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 22.9 ft, cased with stone to 22.9 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 335 ft. Measuring point: Spray painted arrow on rock, 1.89 ft above land-surface datum.

PERIOD OF RECORD.--August 1953 to February 1959, November 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.55 ft below land-surface datum, Mar. 28, 2001; lowest measured, dry, Oct. 29, 1957.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	19.16	DEC 26	15.91	FEB 22	15.29	APR 27	11.69	JUN 21	10.07	AUG 20	13.26
NOV 21	19.15	JAN 29	17.09	MAR 28	9.55	MAY 24	15.16	JUL 31	17.04	SEP 24	19.86
WATER YEAR 2001	HIGHEST	9.55	MAR 28, 2001	LOWEST	19.86	SEP 24, 2001					

410947071344803. New Shoreham well NWH 258.

LOCATION.--Lat 41°09'47", long 71°34'48", Washington County, Hydrologic Unit 01090005, town of New Shoreham, Lakeside Drive near Indian Cemetary.

Owner: State of Rhode Island, D.O.T.

AQUIFER.--Till of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in, depth 19.0 ft, cased to 14.0 ft, screened from 14.0 ft to 19.0 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 120 ft. Measuring point: Notch in PVC casing, 0.85 ft above land-surface datum.

PERIOD OF RECORD.--August 1990 and September 1990, June 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.05 ft below land-surface datum, Mar. 29, 1993; lowest measured, 13.83 ft below land-surface datum, Nov. 21, 1993.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	12.61	DEC 30	12.68	FEB 14	11.70	MAR 24	10.77	MAY 23	11.10	JUL 27	12.18
NOV 30	12.98	JAN 19	12.42	28	11.48	APR 26	10.17	JUN 26	11.70	AUG 25	12.68
WATER YEAR 2001	HIGHEST	10.17	APR 26, 2001	LOWEST	12.98	NOV 30, 2000					



GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

412844071422802. Richmond well RIW 600.

LOCATION.--Lat 41°28'44", long 71°42'28", Washington County, Hydrologic Unit 01090005, town of Richmond, about 50 ft west of Hope Valley Road, and 1.5 mi northeast of Woodville.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 54 ft, cased to 49 ft, screened 49 to 54 ft.

INSTRUMENTATION.--Continuous graphic recorder September 1977 to May 1988, digital recorder (60 minute) June 1988 to current year.

DATUM.--Land-surface datum is 100.17 ft, above sea level. Measuring point: Floor of recorder shelter, 2.63 ft above land-surface datum.

PERIOD OF RECORD.--September 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.42 ft below land-surface datum, June 11, 1982; lowest, 35.94 ft below land-surface datum, Feb. 2, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.59	34.94	34.81	34.19	34.13	33.80	32.47	32.75	33.17	33.26	33.84	34.28
2	34.59	34.95	34.80	34.18	34.10	33.78	32.41	32.78	33.17	33.28	33.86	34.30
3	34.61	34.96	34.79	34.18	34.09	33.77	32.38	32.82	33.14	33.31	33.88	34.32
4	34.62	34.97	34.78	34.18	34.08	33.76	32.35	32.85	33.13	33.32	33.90	34.33
5	34.63	34.99	34.77	34.18	34.06	33.74	32.33	32.88	33.12	33.34	33.92	34.34
6	34.65	35.00	34.76	34.18	34.05	33.73	32.31	32.92	33.12	33.36	33.94	34.36
7	34.66	35.02	34.76	34.18	34.04	33.72	32.30	32.95	33.12	33.38	33.96	34.38
8	34.66	35.04	34.76	34.18	34.03	33.70	32.29	32.98	33.14	33.40	33.98	34.40
9	34.68	35.05	34.76	34.18	34.02	33.68	32.27	33.01	33.16	33.41	34.00	34.42
10	34.69	35.06	34.76	34.19	34.00	33.67	32.28	33.03	33.19	33.43	34.04	34.44
11	34.70	35.04	34.76	34.19	33.99	33.66	32.31	33.06	33.22	33.44	34.06	34.46
12	34.71	35.01	34.76	34.20	33.98	33.65	32.30	33.09	33.22	33.46	34.08	34.48
13	34.72	35.00	34.77	34.20	33.97	33.62	32.30	33.13	33.22	33.48	34.07	34.50
14	34.73	34.98	34.76	34.20	33.95	33.58	32.32	33.15	33.22	33.50	34.05	34.52
15	34.74	34.96	34.75	34.20	33.93	33.51	32.35	33.18	33.23	33.52	34.06	34.54
16	34.75	34.93	34.74	34.20	33.93	33.45	32.38	33.22	33.24	33.54	34.07	34.55
17	34.77	34.91	34.71	34.20	33.92	33.40	32.40	33.25	33.24	33.56	34.09	34.57
18	34.78	34.90	34.67	34.20	33.92	33.36	32.43	33.28	33.20	33.58	34.10	34.59
19	34.79	34.89	34.59	34.18	33.91	33.33	32.47	33.31	33.14	33.60	34.11	34.62
20	34.80	34.89	34.51	34.17	33.91	33.29	32.51	33.34	33.11	33.62	34.13	34.64
21	34.81	34.89	34.46	34.16	33.90	33.26	32.53	33.37	33.09	33.65	34.14	34.66
22	34.82	34.89	34.41	34.16	33.92	33.20	32.54	33.39	33.09	33.67	34.14	34.66
23	34.83	34.90	34.36	34.14	33.90	33.10	32.56	33.42	33.09	33.69	34.15	34.65
24	34.84	34.92	34.32	34.14	33.92	33.00	32.58	33.43	33.11	33.71	34.16	34.65
25	34.85	34.93	34.28	34.14	33.91	32.90	32.61	33.42	33.12	33.73	34.18	34.66
26	34.87	34.93	34.25	34.14	33.89	32.82	32.63	33.41	33.15	33.75	34.19	34.66
27	34.88	34.89	34.23	34.14	33.86	32.75	32.65	33.35	33.17	33.76	34.20	34.67
28	34.89	34.87	34.22	34.15	33.83	32.69	32.68	33.25	33.19	33.76	34.22	34.67
29	34.90	34.84	34.21	34.16	---	32.65	32.71	33.21	33.22	33.78	34.23	34.68
30	34.92	34.82	34.19	34.15	---	32.60	32.73	33.18	33.23	33.79	34.25	34.70
31	34.93	---	34.19	34.13	---	32.54	---	33.17	---	33.82	34.26	---
MEAN	34.76	34.95	34.58	34.17	33.97	33.35	32.45	33.15	33.17	33.55	34.07	34.52
LOW	34.93	35.06	34.81	34.20	34.13	33.80	32.73	33.43	33.24	33.82	34.26	34.70
HIGH	34.59	34.82	34.19	34.13	33.83	32.54	32.27	32.75	33.09	33.26	33.84	34.28

WTR YR 2001 HIGH 32.26 APR 9 LOW 35.06 NOV 9, 10

412718071415201. Richmond well RIW 785.

LOCATION.--Lat 41°27'18", long 71°41'52", Washington County, Hydrologic Unit 01090005, town of Richmond, about 50 ft west of Narragansett Trail, and 1.2 miles north of Wood River Junction.

Owner: Tuckahoe Turf Farms.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.0 in, depth 40.06 ft, cased to 34.21 ft, screened from 34.21 ft to 40.06 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey Personnel.

DATUM.--Elevation of land-surface datum is 85 ft. Measuring point: Top of casing, 0.65 ft above land-surface datum.

REMARKS.--Replacement well for RIW 231 which was destroyed.

PERIOD OF RECORD.--October 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.50 ft below land-surface datum, June 30, 1998 lowest measured, 26.58 ft below land-surface datum, Oct. 26, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	24.80	DEC 26	25.10	FEB 22	24.66	APR 27	21.92	JUN 21	21.55	AUG 20	22.68
NOV 21	25.34	JAN 29	25.07	MAR 28	23.47	MAY 24	22.24	JUL 31	22.22	SEP 24	23.72
WATER YEAR 2001	HIGHEST	21.55	JUN 21, 2001	LOWEST	25.34	NOV 21, 2000					

## GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

412918071321001. South Kingstown well SNW 6.

LOCATION.--Lat 41°29'18", long 71°32'10", Washington County, Hydrologic Unit 01090005, town of South Kingstown, at northwest corner of Mead Field at University of Rhode Island, and 0.9 mi northwest of Kingston.

Owner: University of Rhode Island.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 10 in, depth 34 ft, cased to 34 ft, open end.

INSTRUMENTATION.--Continuous graphic recorder July 1973 to May 1988, digital recorder (60 minute) June 1988 to current year.

DATUM.--Land-surface datum is 111.89 ft above sea level. Measuring point: Floor of recorder shelter, 0.04 ft above land-surface datum.

RECORD OF PERIOD.--November to December 1947, February 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.91 ft below land-surface datum, Apr. 25, 26, 1983; lowest, 15.06 ft below land-surface datum, Dec. 29, 1965.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.47	13.10	12.99	12.09	11.93	11.58	8.75	10.02	10.90	11.30	12.10	12.63
2	12.47	13.11	12.98	12.09	11.92	11.58	8.71	10.08	10.85	11.34	12.10	12.66
3	12.49	13.13	12.98	12.09	11.92	11.61	8.72	10.15	10.73	11.38	12.07	12.69
4	12.51	13.14	12.98	12.09	11.94	11.65	8.76	10.20	10.77	11.40	12.05	12.71
5	12.53	13.16	12.97	12.10	11.92	11.63	8.79	10.26	10.82	11.43	12.05	12.75
6	12.55	13.18	12.98	12.11	11.91	11.59	8.82	10.34	10.86	11.46	12.05	12.78
7	12.58	13.20	12.98	12.13	11.88	11.58	8.91	10.39	10.89	11.50	12.06	12.81
8	12.60	13.22	13.00	12.14	11.85	11.55	8.92	10.43	10.93	11.53	11.98	12.86
9	12.62	13.24	13.01	12.15	11.82	11.52	8.91	10.48	10.97	11.56	11.90	12.90
10	12.64	13.24	13.03	12.17	11.76	11.50	8.98	10.52	11.01	11.60	11.92	12.94
11	12.66	13.15	13.04	12.18	11.74	11.47	9.05	10.57	11.05	11.63	12.00	12.98
12	12.69	13.11	13.04	12.21	11.71	11.43	9.05	10.62	10.98	11.66	12.07	12.99
13	12.71	13.10	13.07	12.24	11.69	11.43	9.04	10.69	11.02	11.70	12.12	12.86
14	12.73	13.09	13.04	12.25	11.68	11.43	9.10	10.75	11.07	11.72	12.16	12.86
15	12.75	13.09	12.98	12.25	11.68	11.43	9.15	10.79	11.08	11.76	12.18	12.95
16	12.73	13.09	12.95	12.20	11.70	11.43	9.20	10.86	11.11	11.80	12.21	13.00
17	12.76	13.08	12.88	12.18	11.70	11.43	9.25	10.91	11.10	11.83	12.24	13.05
18	12.80	13.09	12.63	12.17	11.75	11.43	9.31	10.96	10.94	11.87	12.27	13.09
19	12.83	13.10	12.50	12.15	11.77	11.43	9.39	11.00	10.95	11.90	12.30	13.13
20	12.86	13.11	12.44	12.09	11.77	11.43	9.46	11.06	10.96	11.94	12.33	13.17
21	12.88	13.13	12.39	12.05	11.79	11.43	9.51	11.11	11.00	11.97	12.35	13.20
22	12.91	13.16	12.31	12.05	11.83	11.43	9.54	11.15	11.01	11.99	12.37	13.18
23	12.93	13.17	12.27	12.04	11.84	11.43	9.60	11.17	11.04	12.00	12.40	13.16
24	12.95	13.18	12.23	12.04	11.88	11.43	9.75	11.00	11.08	12.01	12.42	13.17
25	12.97	13.20	12.18	12.05	11.87	11.43	9.72	10.72	11.11	12.04	12.45	13.20
26	12.99	13.17	12.15	12.08	11.66	11.43	9.69	9.76	10.64	11.16	12.06	12.47
27	13.00	13.05	12.12	12.09	11.62	11.43	9.70	9.79	10.65	11.18	12.02	12.49
28	13.02	13.03	12.11	12.13	11.60	11.43	9.71	9.86	10.69	11.21	12.03	12.52
29	13.05	13.02	12.10	12.16	---	11.43	9.75	9.93	10.73	11.24	12.06	12.55
30	13.06	13.00	12.09	12.09	---	11.43	9.32	9.97	10.78	11.27	12.08	12.58
31	13.08	---	12.08	11.92	---	11.43	8.79	---	10.84	---	12.09	---
MEAN	12.77	13.13	12.66	12.12	11.79	11.43	10.65	9.25	10.66	11.01	11.76	12.24
LOW	13.08	13.24	13.07	12.25	11.94	11.65	9.97	11.17	11.27	12.09	12.60	13.32
HIGH	12.47	13.00	12.08	11.92	11.60	8.79	8.71	10.02	10.73	11.30	11.90	12.63

WTR YR 2001 HIGH 8.71 APR 2, 3 LOW 13.33 SEPT 30

## WASHINGTON COUNTY--Continued

412154071462901. Westerly well WEW 522.

LOCATION.--Lat 41°21'54", long 71°46'29", Washington County, Hydrologic Unit 01090005, town of Westerly, 350 ft northwest of intersection of Pound and Old Shore Roads and 1.0 mi north of Dunn Corner.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 16 ft, lined with stone to 16 ft, shored.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 45 ft. Measuring point: Southwest corner of stone casing, 0.91 ft above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land-surface datum, Apr. 23, 1983; lowest measured, 14.99 ft below land-surface datum, Aug. 25, 1999.

## WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	13.50	DEC 27	11.97	FEB 23	12.25	APR 27	11.55	JUN 21	12.04	AUG 20	13.64
NOV 21	13.11	JAN 29	12.43	MAR 28	10.78	MAY 24	12.60	JUL 31	13.24	SEP 26	14.00
WATER YEAR 2001	HIGHEST	10.78	MAR 28, 2001	LOWEST	14.00	SEP 26, 2001					



## GROUND-WATER QUALITY AT MISCELLANEOUS SITES

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
(NATIONAL WATER QUALITY ASSESSMENT PROGRAM)

Organic pesticide compounds, analyzed by NWQL Schedule 2001, and volatile organic compounds (VOCs), analyzed by NWQL Schedule 2020, are listed with laboratory reporting levels in the section "EXPLANATION OF RECORDS." Only pesticides and VOCs identified by the analyses (either as estimated values or values measured at or above the laboratory reporting level) for one or more samples are listed in the water-quality tables. Water-quality data presented in this table were collected by the New England Coastal Basins National Water-Quality Assessment Program (NAWQA) as part of two ground-water studies in unconsolidated, surficial (stratified-drift) aquifers and fractured-bedrock aquifers. Water-quality samples were collected from gravel-packed wells used to provide municipal drinking water and from bedrock wells used to provide domestic drinking water. attitude and longitudinal data, accurate to within a tenth of a second, are available for the wells, but are omitted from this table. Anyone interested in obtaining this locational data should contact the USGS Information Officer, NH/VT District, at dc\_nh@usgs.gov.

Remarks: STATE ID NO., Unique identification number assigned to each public-supply well by the State of Massachusetts; G/M, gallons per minute; --, no data; "E", estimated concentration; "<", less than; "M," presence verified, not quantified; --b, sample broken/spilled in shipment; 112SRFD, unconsolidated, surficial aquifers; BEDROCK, crystalline fractured-bedrock aquifers; BLS, below land surface.

LOCAL IDENT- I- FIER	STATE ID NO. OR USGS STATION ID NO.	TOWN	GEO- LOGIC UNIT	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO TOP OF SCREEN (FT BLS) (72015)	DEPTH TO BOTTOM OF SCREEN (FT BLS) (72016)
MASSACHUSETTS								
BRISTOL COUNTY								
MA-EMW 353	MA4088000-04G	Easton	112SRFD	09-05-01	0900	42.71	52	62
MA-N4W 232	MA4218000-06G	Norton	112SRFD	07-23-01	1100	33.87	54	66
MA-XBW 238	414046071051001	Westport	BEDROCK	10-30-00	1100	11.85	--	--
ESSEX COUNTY								
MA-CHW 580	MA3056002-04G	Chelmsford	112SRFD	08-07-01	0900	9.30	28	32
MA-EXW 11	MA3092000-01G	Essex	112SRFD	08-08-01	0900	13.28	32	39
MA-HCW 208	423609070490901	Hamilton	BEDROCK	10-11-00	1100	14.83	--	--
MA-IPW 340	MA3144000-04G	Ipswich	112SRFD	08-30-01	1100	--	--	58
MA-L6W 91	MA3164000-06G	Lynnfield	112SRFD	08-06-01	1100	19.70	60	63
MIDDLESEX COUNTY								
MA-AYW 43	MA2019001-03G	Ayer	112SRFD	09-18-01	1100	48.35	75	93
MA-N3W 234	MA3213000-07G	North Reading	112SRFD	07-17-01	0900	19.60	44	59
MA-WKW 95	MA3315000-04G	Wakefield	112SRFD	07-16-01	1100	27.86	32	47
MA-XRW 68	MA3347000-02G	Woburn	112SRFD	07-17-01	1400	14.70	26	54
NORFOLK COUNTY								
MA-CBW 119	MA3050000-10G	Canton	112SRFD	07-24-01	1100	16.90	33	43
MA-F2W 79	MA4101000-09G	Franklin	112SRFD	07-18-01	1100	14.30	24	30
PLYMOUTH COUNTY								
MA-CDW 153	415012070461101	Carver	BEDROCK	10-12-00	1100	28.08	--	--
MA-KGW 59	MA4145000-05G	Kingston	112SRFD	07-26-01	1100	35.67	63	72
MA-MFW 43	MA4169000-03G	Marion	112SRFD	07-25-01	0900	16.61	22	27
MA-PWW 411	MA4239000-06G	Plymouth	112SRFD	10-04-01	1100	14.60	124	166
MA-WFW 252	MA4310003-01G	Wareham	112SRFD	07-25-01	1500	36.50	44	60

GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
(NATIONAL WATER QUALITY ASSESSMENT PROGRAM)

LOCAL IDENTIFIER	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	SAMPLE FLOW RATE (G/M) (00059)	WELL YIELD (G/M) (00058)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	62	5.0	930	119	108	0.9	2.2	20	5.6	179
MA-N4W 232	07-23-01	66	7.5	600	74	144	.1	1.7	14	6.0	241
MA-XBW 238	10-30-00	300	--	--	189	85	1.2	4.9	46	5.6	126
ESSEX COUNTY											
MA-CHW 580	08-07-01	32	5.0	246	100	644	.7	.2	2	5.8	1,180
MA-EXW 11	08-08-01	39	5.0	350	50	120	.3	.1	1.5	5.7	182
MA-HCW 208	10-11-00	465	1.0	--	50	382	1.1	.1	0	8.3	852
MA-IPW 340	08-30-01	58	6.0	166	45	179	.1	3.8	35	6.7	289
MA-L6W 91	08-06-01	63	5.0	90	79.5	149	.6	.2	2	7.6	248
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	93	5.0	900	253	226	.1	2.9	26	6.4	397
MA-N3W 234	07-17-01	59	6.0	402	93	262	13	.3	2.8	6.8	442
MA-WKW 95	07-16-01	47	5.5	575	140	192	.1	4.9	44	6.3	316
MA-XRW 68	07-17-01	54	5.3	--	47.5	209	.3	3.0	27.1	6.0	372
NORFOLK COUNTY											
MA-CBW 119	07-24-01	43	5.0	139	55	134	.6	3.1	28	5.7	218
MA-F2W 79	07-18-01	29.5	5.0	309	273	182	.1	4.3	40	5.7	289
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	300	1.0	--	80	88	5.0	.3	2	8.9	135
MA-KGW 59	07-26-01	80	5.0	49	35	94	.3	6.2	56	5.9	169
MA-MFW 43	07-25-01	27	5.5	101	25	60	.7	4.9	45	5.2	95
MA-PWW 411	10-04-01	166	6.0	928	90	34	.1	1.1	10	6.1	62
MA-WFW 252	07-25-01	59.5	5.0	350	24	61	.1	6.7	59	5.5	106
LOCAL IDENTIFIER	DATE	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN GAS DISS. (MG/L AS N2) (00597)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	23.0	11.4	21.8	35.7	9.68	2.78	18.7	1.37	52.1	1.51
MA-N4W 232	07-23-01	32.0	10.1	22.0	47.6	12.6	3.86	26.0	1.64	53.9	.78
MA-XBW 238	10-30-00	4.5	12.3	20.4	36.2	9.78	2.84	8.9	.645	33.9	1.30
ESSEX COUNTY											
MA-CHW 580	08-07-01	31.0	12.4	23.1	95.1	30.5	4.50	186	8.31	79.7	6.63
MA-EXW 11	08-08-01	30.0	17.7	17.5	23.9	6.09	2.10	20.9	1.86	64.0	1.30
MA-HCW 208	10-11-00	14.0	11.5	25.8	121	33.0	9.44	81.1	3.20	58.3	3.98
MA-IPW 340	08-30-01	22.0	10.8	23.8	119	33.3	8.59	12.9	.517	19.0	1.23
MA-L6W 91	08-06-01	33.0	10.8	23.9	112	12.4	19.7	7.9	.326	13.1	2.07
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	25.0	10.7	21.0	91.6	28.5	4.89	38.3	1.74	47.0	2.18
MA-N3W 234	07-17-01	22.0	12.6	21.9	76.3	23.1	4.50	45.7	2.28	54.9	4.30
MA-WKW 95	07-16-01	24.0	10.2	21.4	101	29.2	6.85	22.0	.951	31.7	1.40
MA-XRW 68	07-17-01	24.0	10.6	21.9	68.8	21.2	3.81	41.4	2.17	55.7	2.40
NORFOLK COUNTY											
MA-CBW 119	07-24-01	31.0	10.4	21.9	48.9	12.7	4.12	22.2	1.38	49.3	.75
MA-F2W 79	07-18-01	22.0	11.5	20.6	55.5	17.2	3.03	29.7	1.74	52.9	1.74
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	14.0	13.4	21.4	34.3	10.2	2.16	12.8	.954	43.9	1.08
MA-KGW 59	07-26-01	24.0	10.5	20.8	29.2	6.70	3.02	18.4	1.48	56.4	1.31
MA-MFW 43	07-25-01	29.0	11.4	20.9	14.5	3.37	1.46	11.0	1.27	58.6	2.01
MA-PWW 411	10-04-01	23.0	11.7	19.8	8.45	1.64	1.06	6.8	1.02	61.5	.67
MA-WFW 252	07-25-01	22.0	9.8	19.9	19.9	3.68	2.58	11.0	1.08	53.3	.95

GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENTIFIER	DATE	ALKA-LINITY	BICAR-BONATE	CAR-BONATE	BROMIDE DIS-SOLVED	CHLO-RIDE, DIS-SOLVED	FLUO-RIDE, DIS-SOLVED	SILICA, DIS-SOLVED	SULFATE DIS-SOLVED	NITRO-GEN, AMMONIA DIS-SOLVED	NITRO-GEN, AMMONIA + ORGANIC DIS.
		WAT DIS FIELD MG/L AS CACO3 (39086)	WATER DIS IT FIELD MG/L AS HCO3 (00453)	WATER DIS IT FIELD MG/L AS CO3 (00452)		(MG/L AS BR) (71870)	(MG/L AS CL) (00940)	(MG/L AS F) (00950)	(MG/L AS SIO2) (00955)	(MG/L AS SO4) (00945)	(MG/L AS N) (00608)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	14	17	0	0.04	32.7	0.2	13.6	13.9	<0.040	<0.10
MA-N4W 232	07-23-01	16	18	0	.04	53.8	<.2	14.9	9.7	E.038	E.07
MA-XBW 238	10-30-00	22	26	0	.03	10.6	E.1	17.8	10.5	<.041	<.10
ESSEX COUNTY											
MA-CHW 580	08-07-01	23	28	0	.04	345	<.2	12.6	18.1	E.036	.12
MA-EXW 11	08-08-01	24	30	0	.23	37.8	E.1	11.7	2.4	.202	.65
MA-HCW 208	10-11-00	96	118	0	.46	133	.7	35.6	23.9	.075	.10
MA-IPW 340	08-30-01	82	100	0	.04	28.2	E.1	13.8	21.8	<.040	<.10
MA-L6W 91	08-06-01	78	94	0	.04	19.6	<.2	17.8	18.4	.044	E.08
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	44	54	0	.03	66.0	<.2	10.9	39.5	<.040	<.10
MA-N3W 234	07-17-01	57	70	0	.11	90.3	E.1	17.7	13.4	.698	.81
MA-WKW 95	07-16-01	48	58	0	.04	47.4	<.2	15.8	19.4	<.040	<.10
MA-XRW 68	07-17-01	25	31	0	.05	84.8	<.2	8.3	16.0	<.040	E.05
NORFOLK COUNTY											
MA-CBW 119	07-24-01	24	29	0	<.01	38.2	<.2	14.1	11.7	<.040	E.10
MA-F2W 79	07-18-01	25	30	0	.01	61.0	<.2	11.9	11.2	<.040	<.10
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	49	60	0	.03	8.0	E.1	16.3	5.8	<.041	<.10
MA-KGW 59	07-26-01	14	18	0	.03	30.9	<.2	14.3	9.7	<.040	<.10
MA-MFW 43	07-25-01	8	10	0	<.01	15.7	<.2	8.5	8.3	E.022	E.07
MA-PWW 411	10-04-01	12	14	0	.03	9.1	<.1	10.9	5.3	<.040	<.10
MA-WFW 252	07-25-01	8	10	0	.03	19.2	<.2	9.2	5.5	<.040	<.10
LOCAL IDENTIFIER	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)	CARBON DIOXIDE DIS-SOLVED (MG/L AS CO2) (00405)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C) (00681)	ALUM-INUM, DIS-SOLVED (MG/L AS AL) (01106)	ANTI-MONY, DIS-SOLVED (MG/L AS SB) (01095)	ARGON GAS (MG/L AS A) (82043)	ARSENIC DIS-SOLVED (MG/L AS AS) (01000)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	E0.934	<0.006	E0.008	<0.020	56	0.58	16	<0.05	0.710	<0.2
MA-N4W 232	07-23-01	.149	<.006	.012	E.009	42	1.2	7	E.03	.750	<.2
MA-XBW 238	10-30-00	2.57	<.006	.012	E.012	69	E.30	2	<.05	.528	<.2
ESSEX COUNTY											
MA-CHW 580	08-07-01	.989	<.006	.020	E.012	64	2.9	38	<.05	.730	1.4
MA-EXW 11	08-08-01	E.030	<.006	.133	.102	41	10	102	E.05	.595	10.0
MA-HCW 208	10-11-00	<.047	<.006	.011	E.013	1.9	E.23	<.1	<.05	.884	<.2
MA-IPW 340	08-30-01	E1.09	<.006	.028	E.018	24	E.28	<.1	<.05	.790	.2
MA-L6W 91	08-06-01	.533	<.006	.014	E.012	8	.42	<.1	<.05	.760	.8
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	.767	<.006	E.004	<.020	30	E.31	<.1	<.05	.740	.2
MA-N3W 234	07-17-01	.317	.007	.112	.071	43	2.7	3	<.05	.690	47.9
MA-WKW 95	07-16-01	2.51	E.003	.007	<.020	34	1.0	<.1	E.04	.740	.2
MA-XRW 68	07-17-01	.707	<.006	E.005	<.020	43	1.6	4	<.05	.730	<.2
NORFOLK COUNTY											
MA-CBW 119	07-24-01	1.18	<.006	.015	<.020	56	2.5	21	E.03	.735	<.2
MA-F2W 79	07-18-01	1.04	<.006	.015	<.020	50	.88	8	E.03	.720	<.2
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	<.047	<.006	.011	E.011	.4	.35	1	.94	.755	1.5
MA-KGW 59	07-26-01	.711	<.006	.026	E.016	44	E.28	1	<.05	.735	E.1
MA-MFW 43	07-25-01	.643	<.006	.022	E.009	36	1.7	107	<.05	.745	.2
MA-PWW 411	10-04-01	E.028	<.008	.013	<.020	25	E.20	1	<.05	.700	1.5
MA-WFW 252	07-25-01	.734	<.006	.012	<.020	32	.46	38	<.05	.720	<.2

## GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENTIFIER	DATE	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)	CHROMIUM, 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)	LITHIUM, DIS-SOLVED (UG/L AS LI) (01130)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	8.7	0.19	23	0.06	<0.8	0.03	2.9	<10	1.33	1.9
MA-N4W 232	07-23-01	13.6	.11	16	.07	E.5	4.85	1.9	650	.14	1.8
MA-XBW 238	10-30-00	<1.0	E.06	12	<.04	E.6	.03	16.5	<10	7.08	2.6
ESSEX COUNTY											
MA-CHW 580	08-07-01	83.4	E.04	32	.28	<.8	.80	2.2	10	.34	3.0
MA-EXW 11	08-08-01	17.1	.37	17	<.04	E.6	2.62	.7	6,910	.20	1.0
MA-HCW 208	10-11-00	82.6	<.06	53	.04	<.8	.08	.9	160	E.06	21.3
MA-IPW 340	08-30-01	4.1	<.06	15	E.02	<.8	.06	3.6	10	.19	2.2
MA-L6W 91	08-06-01	9.5	<.06	10	<.04	<.8	.17	.3	30	<.08	6.8
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	9.3	<.06	17	<.04	<.8	.14	22.7	40	.11	2.7
MA-N3W 234	07-17-01	15.6	<.06	23	.07	<.8	3.69	.5	7,710	<.08	3.6
MA-WKW 95	07-16-01	11.4	<.06	28	<.04	<.8	.07	1.2	<10	.46	1.0
MA-XRW 68	07-17-01	12.9	<.06	17	.04	<.8	.08	6.6	10	<.08	<.3
NORFOLK COUNTY											
MA-CBW 119	07-24-01	9.6	E.05	23	.04	E.6	.30	12.4	M	1.37	.5
MA-F2W 79	07-18-01	27.8	<.06	16	E.03	<.8	.09	10.0	<10	.24	.8
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	3.1	<.06	12	<.04	<.8	.05	.6	210	.17	4.0
MA-KGW 59	07-26-01	6.0	<.06	11	.06	<.8	.08	7.4	<10	.15	1.3
MA-MFW 43	07-25-01	26.9	.09	16	E.02	E.4	.52	2.8	400	.21	.5
MA-PWW 411	10-04-01	6.8	<.06	8	.06	E.7	.87	21.0	3,110	.14	E.3
MA-WFW 252	07-25-01	18.4	.10	8	E.02	<.8	.10	.6	<10	.20	.4
LOCAL IDENTIFIER	DATE	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS-SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS-SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)
BRISTOL COUNTY											
MA-EMW 353	09-05-01	18.5	E0.2	0.68	<0.3	<1.0	61.7	<0.04	<0.2	7	<0.007
MA-N4W 232	07-23-01	116	<.2	1.85	<.3	<1.0	104	<.04	.5	6	<.007
MA-XBW 238	10-30-00	3.1	<.2	.09	<.3	<1.0	39.7	<.04	<.2	6	<.007
ESSEX COUNTY											
MA-CHW 580	08-07-01	215	.2	3.37	<.3	<1.0	270	.08	<.2	3	<.007
MA-EXW 11	08-08-01	585	.6	3.09	<.3	<1.0	26.4	<.04	13.0	3	<.007
MA-HCW 208	10-11-00	74.7	3.0	.27	<.3	<1.0	224	<.04	<.2	<1	<.007
MA-IPW 340	08-30-01	39.7	.8	<.06	<.3	<1.0	84.1	<.04	<.2	15	<.007
MA-L6W 91	08-06-01	64.6	.4	.59	<.3	<1.0	42.8	<.04	.3	<1	<.007
MIDDLESEX COUNTY											
MA-AYW 43	09-18-01	119	<.2	.72	<.3	<1.0	160	<.04	<.2	1	<.007
MA-N3W 234	07-17-01	683	1.9	3.05	<.3	<1.0	135	<.04	E.2	2	<.007
MA-WKW 95	07-16-01	.2	.2	<.06	E.2	<1.0	106	.12	E.1	1	<.007
MA-XRW 68	07-17-01	57.7	E.1	<.06	<.3	<1.0	118	<.04	<.2	3	<.007
NORFOLK COUNTY											
MA-CBW 119	07-24-01	254	<.2	1.20	E.2	<1.0	83.9	<.04	.2	2	<.007
MA-F2W 79	07-18-01	61.9	E.2	<.06	<.3	<1.0	97.5	<.04	E.1	1	<.007
PLYMOUTH COUNTY											
MA-CDW 153	10-12-00	99.3	1.7	.28	<.3	<1.0	54.0	<.04	<.2	<1	<.007
MA-KGW 59	07-26-01	8.3	E.2	1.27	<.3	<1.0	50.8	<.04	<.2	3	<.007
MA-MFW 43	07-25-01	62.4	E.1	.41	<.3	<1.0	21.9	<.04	.4	1	--b
MA-PWW 411	10-04-01	148	E.1	.74	<.3	<1.0	15.9	<.04	<.2	2	<.007
MA-WFW 252	07-25-01	10.2	<.2	.18	<.3	<1.0	36.7	<.04	<.2	<1	<.007

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LOCAL IDENTIFIER	DATE	DEETHYL		METHANE GAS, DISS. (UG/L)	METO-LACHLOR WATER DISSOLV (UG/L)	P,P' DDE DISSOLV (UG/L)	PRO-METON, WATER, DISS, REC (UG/L)	SI-MAZINE, WATER, DISS, REC (UG/L)	TEBU-THIURON WATER FLTRD 0.7 U GF, REC (UG/L)	1,1,1-TRI-ETHANE TOTAL (UG/L)	1,1-DI-ETHANE TOTAL (UG/L)	BENZENE 124-TRI METHYL UNFILT RECOVER (UG/L)
		ATRA-ZINE, WATER, DISS, REC (UG/L)	(76994)									
BRISTOL COUNTY												
MA-EMW 353	09-05-01	<0.006	0	<0.013	<0.003	<0.015	<0.011	<0.016	E0.02	E0.03	<0.06	
MA-N4W 232	07-23-01	<.006	0	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
MA-XBW 238	10-30-00	E.002	0	<.013	<.003	<.015	<.011	<.016	E.01	<.04	<.06	
ESSEX COUNTY												
MA-CHW 580	08-07-01	<.006	2.1	<.013	<.003	.018	E.004	.176	.13	E.03	<.06	
MA-EXW 11	08-08-01	<.006	2,090	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
MA-HCW 208	10-11-00	<.006	9.8	<.013	E.001	<.015	<.011	<.016	<.03	<.04	<.06	
MA-IPW 340	08-30-01	<.006	0	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
MA-L6W 91	08-06-01	<.006	8.9	<.013	<.003	<.015	<.011	<.016	E.03	<.04	<.06	
MIDDLESEX COUNTY												
MA-AYW 43	09-18-01	<.006	0	<.013	<.003	<.015	E.006	<.016	<.03	<.04	E.02	
MA-N3W 234	07-17-01	<.006	857.6	<.013	<.003	<.015	<.011	<.016	<.03	E.02	<.06	
MA-WKW 95	07-16-01	<.006	0	<.013	<.003	<.015	E.011	<.016	E.10	<.04	<.06	
MA-XRW 68	07-17-01	<.006	0	E.003	<.003	<.015	.024	<.016	<.03	<.04	<.06	
NORFOLK COUNTY												
MA-CBW 119	07-24-01	<.006	0	<.013	<.003	<.015	<.011	<.016	E.03	<.04	<.06	
MA-F2W 79	07-18-01	<.006	0	<.013	<.003	<.015	<.011	<.016	E.03	<.04	<.06	
PLYMOUTH COUNTY												
MA-CDW 153	10-12-00	<.006	2	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
MA-KGW 59	07-26-01	<.006	0	<.013	<.003	<.015	<.011	<.016	E.01	<.04	<.06	
MA-MFW 43	07-25-01	--b	0	--b	--b	--b	--b	--b	<.03	<.04	E.01	
MA-PWW 411	10-04-01	<.006	2.5	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
MA-WFW 252	07-25-01	<.006	0	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
LOCAL IDENTIFIER	DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-FORM TOTAL (UG/L)	CIS-1,2-DI-ETHENE TOTAL (UG/L)	BROMO-CHLORO-METHANE TOTAL (UG/L)	DI-FLUORO-METHANE TOTAL (UG/L)	ETHER TERT-PENTYL UNFLTRD RECOVER (UG/L)	FREON-113 WATER REC (UG/L)	METHYL TERT-BUTYL ETHER WAT REC (UG/L)	TETRA-ETHYL-ENE TOTAL (UG/L)	TRI-ETHYL-ENE TOTAL (UG/L)	
BRISTOL COUNTY												
MA-EMW 353	09-05-01	<0.2	E0.03	<0.04	<0.05	<0.3	<0.1	<0.06	E0.1	<0.1	<0.04	
MA-N4W 232	07-23-01	<.2	E.05	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	
MA-XBW 238	10-30-00	<.2	E.02	<.04	<.05	<.3	<.1	<.06	<.2	M	<.04	
ESSEX COUNTY												
MA-CHW 580	08-07-01	<.2	E.09	<.04	<.05	E.1	E.1	<.06	.9	M	<.04	
MA-EXW 11	08-08-01	<.2	<.02	<.04	<.05	<.3	.3	<.06	1.2	<.1	<.04	
MA-HCW 208	10-11-00	<.2	<.02	E.04	<.05	<.3	<.1	<.06	<.2	<.1	E.01	
MA-IPW 340	08-30-01	<.2	E.02	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	
MA-L6W 91	08-06-01	<.2	E.07	<.04	<.05	<.3	<.1	<.06	E.1	M	<.04	
MIDDLESEX COUNTY												
MA-AYW 43	09-18-01	E.1	.56	<.04	.23	<.3	<.1	E.09	E.1	M	.26	
MA-N3W 234	07-17-01	<.2	E.04	<.04	<.05	<.3	.1	<.06	1.5	M	<.04	
MA-WKW 95	07-16-01	<.2	E.10	<.04	<.05	<.3	<.1	<.06	E.1	M	<.04	
MA-XRW 68	07-17-01	<.2	E.09	<.04	<.05	<.3	<.1	<.06	<.2	M	<.04	
NORFOLK COUNTY												
MA-CBW 119	07-24-01	<.2	.13	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	
MA-F2W 79	07-18-01	<.2	.12	<.04	<.05	<.3	<.1	<.06	.2	.2	<.04	
PLYMOUTH COUNTY												
MA-CDW 153	10-12-00	<.2	<.02	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	
MA-KGW 59	07-26-01	<.2	.29	<.04	<.05	<.3	<.1	<.06	.3	<.1	<.04	
MA-MFW 43	07-25-01	<.2	.30	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	
MA-PWW 411	10-04-01	<.2	.16	<.04	<.05	<.3	.4	<.06	1.1	<.1	<.04	
MA-WFW 252	07-25-01	<.2	.58	<.04	<.05	<.3	<.1	<.06	<.2	<.1	<.04	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENT- I- FIER	DATE	ALPHA RADIO- WATER DISS AS TH-230 (PCI/L) (04126)	GROSS BETA, DIS- SOLVED AS (PCI/L) CS-137) (03515)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	RADIUM 226, DIS- SOLVED AS (PCI/L) (09503)	RADIUM 228 DIS- SOLVED AS (PCI/L) (81366)	RA-224 WATER FLTRD (PCI/L) (50833)	RADON 222 TOTAL (PCI/L) (82303)	URANIUM NATURAL DIS- SOLVED (UG/L) AS U) (22703)
BRISTOL COUNTY										
MA-EMW 353	09-05-01	1.72	2.11	--	--	0.02	0.24	0.02	1,600	0.05
MA-N4W 232	07-23-01	.66	2.17	--	--	.07	.18	.08	574	.03
MA-XBW 238	10-30-00	<3.00	<4.00	-42.50	-7.34	M	.55	.18	22,400	.78
ESSEX COUNTY										
MA-CHW 580	08-07-01	2.89	8.77	--	--	.03	.74	M	991	1.92
MA-EXW 11	08-08-01	1.68	4.80	--	--	.05	.98	.10	466	.18
MA-HCW 208	10-11-00	3.60	10.6	-59.90	-9.21	.62	2.10	.41	2,020	E.01
MA-IPW 340	08-30-01	1.43	3.23	--	--	M	.57	.13	671	.33
MA-L6W 91	08-06-01	1.79	4.80	-52.04	-8.46	.07	.08	M	1,460	.97
MIDDLESEX COUNTY										
MA-AYW 43	09-18-01	1.69	6.06	--	--	.07	.12	.08	1,160	.15
MA-N3W 234	07-17-01	1.80	7.42	-46.45	-7.39	.18	.26	.04	3,000	.21
MA-WKW 95	07-16-01	1.32	3.48	-51.28	-8.04	.12	.40	.07	1,330	.39
MA-XRW 68	07-17-01	1.91	3.29	-49.57	-7.88	.07	.21	M	1,630	.04
NORFOLK COUNTY										
MA-CBW 119	07-24-01	1.42	3.12	--	--	.03	.59	.03	864	.04
MA-F2W 79	07-18-01	2.23	2.72	--	--	.07	.28	-0.41	1,080	.06
PLYMOUTH COUNTY										
MA-CDW 153	10-12-00	5.13	4.63	-48.40	-7.53	.53	1.00	.15	5,270	2.20
MA-KGW 59	07-26-01	1.40	3.00	--	--	.06	.53	.05	1,170	<.02
MA-MFW 43	07-25-01	2.38	3.89	--	--	.08	1.30	M	1,120	.03
MA-PWW 411	10-04-01	2.10	2.92	--	--	.02	.07	.09	540	<.02
MA-WFW 252	07-25-01	.98	2.26	-44.00	-7.34	M	.63	.04	311	<.02

GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENTIFIER	USEPA ID NO. OR USGS STATION ID NO.	TOWN	GEO-LOGIC UNIT	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH TO TOP OF SCREEN (FT BLS) (72015)	DEPTH TO BOTTOM OF SCREEN (FT BLS) (72016)
RHODE ISLAND								
PROVIDENCE COUNTY								
RI-BUW 399	RI2973130	Burrillville	112SRFD	10-03-01	1100	16.47	45	50
RI-SCW 530	414522071373601	Scituate	BEDROCK	11-01-00	1100	17.84	--	--
WASHINGTON COUNTY								
RI-SNW 1151	RI858422	South Kingston	112SRFD	10-15-01	1100	29	75	95
RI-SNW 1219	413024071334101	South Kingston	BEDROCK	10-31-00	1100	27.50	--	--
RI-WEW 585	RI1559512	Westerly	112SRFD	10-16-01	1100	26.33	57	72

LOCAL IDENTIFIER	DATE	DEPTH OF WELL, TOTAL (FEET) (72008)	SAMPLE FLOW RATE (G/M) (00059)	WELL YIELD (G/M) (00058)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	TUR-BID-ITY FIELD WATER UNFLTRD (NTU) (61028)	OXYGEN, DIS-SOLVED WATER (MG/L) (00300)	OXYGEN, (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	50.00	6	30	50	54	0.2	5.0	45	5.6	88
RI-SCW 530	11-01-00	200.00	--	--	500	200	.3	5.2	49	5.1	362
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	95.00	1	--	113	102	.1	2.5	24	6.0	169
RI-SNW 1219	10-31-00	400.00	--	--	150	110	1.0	4.2	38	6.6	179
RI-WEW 585	10-16-01	72.00	6.5	700	25	92	.1	5.0	47	5.9	143

LOCAL IDENTIFIER	DATE	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	NITROGEN GAS DISS. (MG/L AS N2) (00597)	HARDNESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS Mg) (00925)	SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM AD-SORPTION RATIO (00931)	SODIUM PERCENT (00932)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	23.0	11.1	20.5	16.1	4.82	0.960	8.7	0.944	51.9	1.18
RI-SCW 530	11-01-00	10.0	11.8	17.6	44.7	14.4	2.08	44.3	2.89	67.1	2.17
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	19.0	11.8	20.6	43.3	12.1	3.17	12.6	.837	37.3	2.31
RI-SNW 1219	10-31-00	5.5	11.2	20.7	51.2	14.5	3.62	12.1	.735	32.7	2.29
RI-WEW 585	10-16-01	19.0	12.6	19.5	34.9	9.57	2.65	12.8	.944	43.3	1.35

GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENTIFIER	DATE	ALKALINITY WATER FIELD MG/L AS CACO3 (39086)	BICARBONATE WATER FIELD MG/L AS HCO3 (00453)	CARBONATE WATER FIELD MG/L AS CO3 (00452)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	CHLORIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITROGEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	10	13	0	E0.02	13.4	<0.1	13.3	5.8	<0.040	E0.05
RI-SCW 530	11-01-00	8	10	0	.03	79.6	.4	13.4	10.1	<.041	<.10
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	21	26	0	.06	23.6	.5	16.1	12.1	<.040	<.10
RI-SNW 1219	10-31-00	36	43	0	.02	23.1	.3	19.1	8.7	<.041	<.10
RI-WEW 585	10-16-01	19	23	0	.03	19.5	E.1	13.2	10.4	<.040	<.10
LOCAL IDENTIFIER	DATE	NITROGEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOSPHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	CARBON DIOXIDE, DIS- SOLVED (MG/L AS CO2) (00405)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	ALUMINUM, DIS- SOLVED (MG/L AS AL) (01106)	ANTIMONY, DIS- SOLVED (MG/L AS SB) (01095)	ARGON GAS (MG/L AS A) (82043)	ARSENIC DIS- SOLVED (MG/L AS AS) (01000)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	0.718	<0.008	0.008	<0.020	34	0.40	12	<0.05	0.730	<0.2
RI-SCW 530	11-01-00	4.06	<.006	E.003	<.018	135	.47	360	<.05	.653	<.2
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	1.74	<.008	E.004	<.020	42	.48	19	<.05	.711	<.2
RI-SNW 1219	10-31-00	.388	<.006	E.005	<.018	22	E.24	<1	E.03	.743	<.2
RI-WEW 585	10-16-01	1.79	<.008	.008	<.020	44	.45	<1	E.03	.690	<.2
LOCAL IDENTIFIER	DATE	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYLLIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, DIS- SOLVED (UG/L AS B) (01020)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHROMIUM, 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)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	16.9	E0.03	9	E0.02	E0.4	0.25	6.6	390	0.47	0.6
RI-SCW 530	11-01-00	36.1	1.60	27	.37	<.8	.09	26.6	<10	12.9	3.1
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	13.9	.12	15	<.04	<.8	.02	8.5	20	1.97	8.3
RI-SNW 1219	10-31-00	7.6	<.06	9	<.04	<.8	.03	10.8	M	1.62	8.7
RI-WEW 585	10-16-01	26.7	<.06	27	E.02	<.8	.04	3.7	<10	.81	1.1
LOCAL IDENTIFIER	DATE	MANGANESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELENIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRONTIUM, DIS- SOLVED (UG/L AS SR) (01080)	THALLIUM, DIS- SOLVED (UG/L AS TL) (01057)	VANADIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	ATRAZINE, WATER, DISS, REC (UG/L) (39632)
PROVIDENCE COUNTY											
RI-BUW 399	10-03-01	43.1	E0.1	0.62	<0.3	<1.0	44.8	0.15	0.3	1	<0.007
RI-SCW 530	11-01-00	79.6	<.2	.49	.8	<1.0	54.5	.07	<.2	10	<.007
WASHINGTON COUNTY											
RI-SNW 1151	10-15-01	205	E.2	.66	<.3	<1.0	64.1	<.04	<.2	6	.112
RI-SNW 1219	10-31-00	4.2	.3	.10	E.2	<1.0	57.1	<.04	.4	2	<.007
RI-WEW 585	10-16-01	1.2	<.2	.17	.3	<1.0	68.7	<.04	<.2	21	<.007



GROUND-WATER QUALITY AT MISCELLANEOUS SITES--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO OCTOBER 2001  
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LOCAL IDENTIFIER	DATE	DEETHYL	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)	METHANE GAS, DISS. (UG/L)
		ATRA-ZINE, WATER, DISS, REC (04040)		AS CH4 (76994)	WATER DISSOLV (39415)	WATER DISSOLV (34653)	WATER DISS, REC (04037)	WATER DISS, REC (04035)	WATER DISS, REC (04035)	WATER DISS, REC (04035)	WATER DISS, REC (04035)	WATER DISS, REC (04035)
PROVIDENCE COUNTY												
RI-BUW 399	10-03-01	<0.006	0	<0.013	<0.003	<0.015	<0.011	<0.016	E0.04	<0.04	<0.06	
RI-SCW 530	11-01-00	<.006	2.1	<.013	<.003	<.015	E.003	<.016	<.03	<.04	<.06	
WASHINGTON COUNTY												
RI-SNW 1151	10-15-01	E.005	0	E.010	<.003	<.015	<.011	.020	<.03	<.04	<.06	
RI-SNW 1219	10-31-00	<.006	0	<.013	<.003	<.015	<.011	<.016	<.03	<.04	<.06	
RI-WEW 585	10-16-01	E.005	0	<.013	<.003	<.015	<.011	<.016	E.08	<.04	E.02	
LOCAL IDENTIFIER	DATE	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CHLORO-DI-BROMO-METHANE TOTAL (UG/L)	CIS-1,2-DI-ETHENE TOTAL (UG/L)	BROMO-DI-ETHENE TOTAL (UG/L)	DI-FLUORO-METHANE TOTAL (UG/L)	ETHER TERT-PENTYL METHYL UNFLTRD RECOVER (UG/L)	FREON-113 WATER UNFLTRD RECOVER (UG/L)	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L)	TETRA-CHLORO-ETHYLENE TOTAL (UG/L)	TRI-CHLORO-ETHYLENE TOTAL (UG/L)	
		(32105)	(32106)	(77093)	(32101)	(34668)	(50005)	(77652)	(78032)	(34475)	(39180)	
PROVIDENCE COUNTY												
RI-BUW 399	10-03-01	<0.2	0.22	<0.04	<0.05	<0.3	<0.1	<0.06	E0.1	E0.1	<0.04	
RI-SCW 530	11-01-00	<.2	.30	<.04	<.05	<.3	<.1	<.06	.3	M	<.04	
WASHINGTON COUNTY												
RI-SNW 1151	10-15-01	<.2	E.01	<.04	<.05	E.1	<.1	<.06	E.2	M	<.04	
RI-SNW 1219	10-31-00	<.2	E.07	<.04	<.05	<.3	<.1	<.06	<.2	M	<.04	
RI-WEW 585	10-16-01	<.2	E.06	<.04	<.05	<.2	<.1	<.06	.2	M	<.04	
LOCAL IDENTIFIER	DATE	ALPHA RADIO. WATER DISS AS (PCI/L)	GROSS BETA, DISSOLVED AS (PCI/L)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	RADIUM 226, DISSOLVED AS (PCI/L)	RADIUM 228, DISSOLVED AS (PCI/L)	RA-224 WATER FLTRD (PCI/L)	RADON 222 TOTAL (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)		
		(04126)	(03515)	(82082)	(82085)	(09503)	(81366)	(50833)	(82303)	(22703)		
PROVIDENCE COUNTY												
RI-BUW 399	10-03-01	0.55	1.23	-47.44	-8.00	0.04	0.23	0.03	568	0.03		
RI-SCW 530	11-01-00	5.22	<4.00	-41.80	-6.88	.30	1.37	1.18	3,380	.27		
WASHINGTON COUNTY												
RI-SNW 1151	10-15-01	1.87	3.43	--	--	.09	.48	M	2,540	.71		
RI-SNW 1219	10-31-00	7.52	<4.00	-44.20	-7.38	.24	.66	.08	8,230	4.36		
RI-WEW 585	10-16-01	1.27	2.56	--	--	.02	.38	.03	912	.02		

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## CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

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