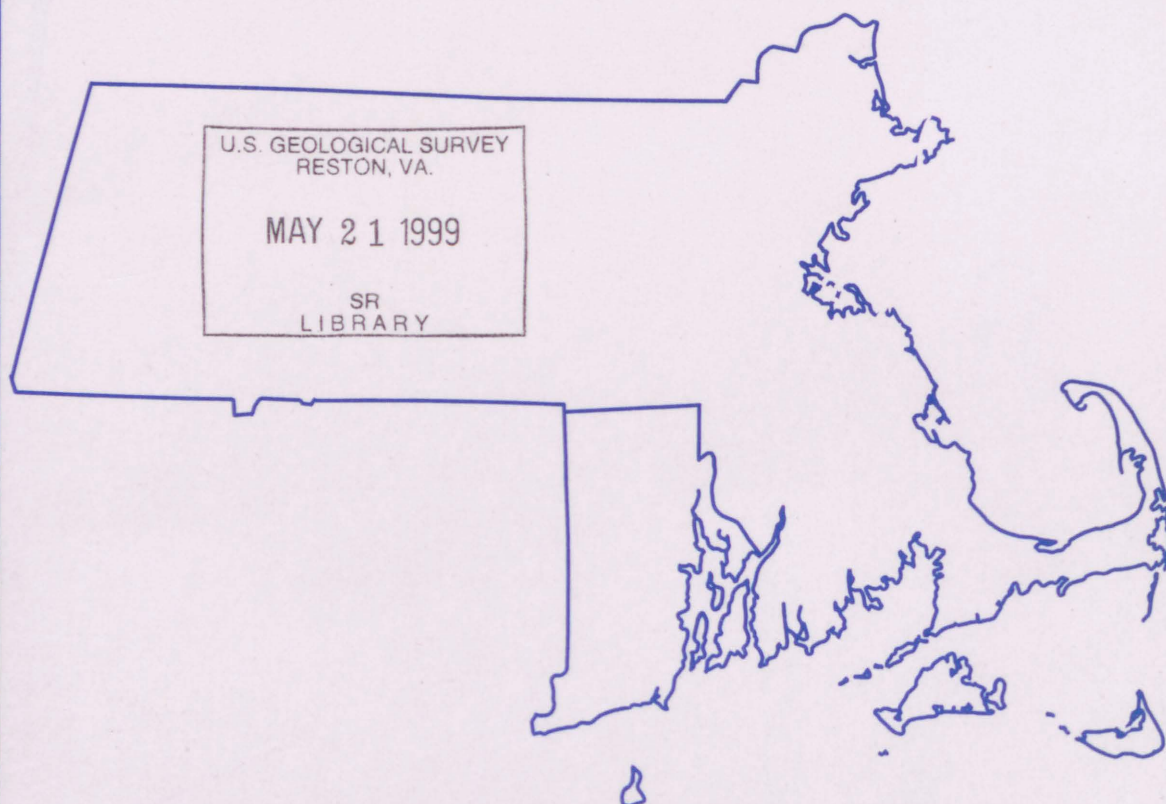




Water Resources Data Massachusetts and Rhode Island Water Year 1996



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-96-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

CALENDAR FOR WATER YEAR 1996

1995

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	11	12	13	14	15	16	17	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						

1996

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
7	8	9	10	11	12	13	4	5	6	7	8	9	10	3	4	5	6	7	8	9
14	15	16	17	18	19	20	11	12	13	14	15	16	17	10	11	12	13	14	15	16
21	22	23	24	25	26	27	18	19	20	21	22	23	24	17	18	19	20	21	22	23
28	29	30	31				25	26	27	28	29			24	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				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	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					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
22	23	24	25	26	27		18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					



Water Resources Data Massachusetts and Rhode Island Water Year 1996

By R.S. Socolow, Domenic Murino, Jr., R.G. Casey, and L.R. Ramsbey



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-96-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Gordon P. Eaton, Director

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Water Resources Division
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Marlborough, MA 01752

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:

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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.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE May 1997		3. REPORT TYPE AND DATES COVERED Annual--Oct. 1, 1995 to Sept. 30, 1996	
4. TITLE AND SUBTITLE Water Resources Data for Massachusetts and Rhode Island, Water Year 1996				5. FUNDING NUMBERS	
6. AUTHOR(S) R.S. Socolow, Domenic Murino, Jr., R.G. Casey, and L.R. Ramsbey					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division 28 Lord Road, Suite 280 Marlborough, MA 01752				8. PERFORMING ORGANIZATION REPORT NUMBER USGS-WDR-MA-RI-96-1	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Geological Survey, Water Resources Division 28 Lord Road, Suite 280 Marlborough, MA 01752				10. SPONSORING / MONITORING AGENCY REPORT NUMBER USGS-WDR-MA-RI-96-1	
11. SUPPLEMENTARY NOTES Prepared in cooperation with the States of Massachusetts and Rhode Island and with other agencies.					
12a. DISTRIBUTION / AVAILABILITY STATEMENT No restriction on distribution. This report may be purchased from National Technical Information Service, Springfield, Virginia 22161				12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) Water resources data for the 1996 water year for Massachusetts and Rhode Island consists of records of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 88 gaging stations, monthend contents of 4 lakes and reservoirs, water quality at 16 gaging stations, and water levels for 143 observation wells. Data also are included for 35 low-flow partial-record stations. Miscellaneous hydrologic data were collected at various sites that were not a part of the systematic data-collection program and are published as miscellaneous discharge measurements. A few pertinent stations in bordering States are also included in this report. These data 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.					
14. SUBJECT TERMS *Massachusetts, *Rhode Island, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analysis, Sediments, Water temperatures, Sampling sites, Water levels and analyses.				15. NUMBER OF PAGES 367	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT		20. LIMITATION OF ABSTRACT	

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(p) precipitation; (s) sediment; (t) water temperature)

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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 ²)	Period of Record
MERRIMACK RIVER BASIN			
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
IPSWICH RIVER BASIN			
Maple Meadow Brook at Wilmington, Mass.	01101300	4.04	1963-74
CHARLES RIVER BASIN			
Charles River at Millis, Mass.	01103305	84.0	1974-80
NEPONSET RIVER BASIN			
Mine Brook at Walpole, Mass.	01104850	6.00	1967-68
BLACKS CREEK BASIN			
Furnace Brook at Quincy, Mass.	01105557	3.81	1973-80
WEYMOUTH FORE RIVER BASIN			
Town Brook at Quincy, Mass.	01105585	4.22	1972-86
BOUND BROOK BASIN			
Bound Brook near Cohasset, Mass.	01105660	4.86	1970-71
NORTH RIVER BASIN			
Indian Head Brook near Hanson, Mass.	01105700	4.30	1958-60
Pudding Brook at East Pembroke, Mass.	01105800	1.38	1958-62
EEL RIVER BASIN			
Eel River near Plymouth, Mass.	01105876	14.7	1970-71
HERRING RIVER BASIN			
Herring River at North Harwich, Mass.	01105880	9.4	1966-88

Discontinued surface-water discharge stations--Continued.

Station Number	Drainage Area (mi ²)	Period of Record	
RED BROOK BASIN			
Red Brook below Route 25 near Wareham, Mass.	01105885	9.14	1981-86
WEWEANTIC RIVER BASIN			
Weweantic River at South Wareham, Mass.	01105895	56.1	1970-71
WEST BRANCH WESTPORT RIVER BASIN			
Adamsville Brook at Adamsville, R.I.	01106000	8.01	1941-78, 1987
TAUNTON RIVER BASIN			
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
Taunton River near Bridgewater, Mass.	01108000	258	1930-76, 1985-88
Wading River at West Mansfield, Mass.	01108500	19.5	1954-86
PALMER RIVER BASIN			
West Branch Palmer River near Rehoboth, Mass.	01109200	4.35	1962-74
BLACKSTONE RIVER BASIN			
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
PAWTUXET RIVER BASIN			
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
ANNAQUATUCKET RIVER BASIN			
Annaquatucket River at Belleville, R.I.	01117100	6.4	1961-64
PAWCATUCK RIVER BASIN			
Beaver River at Kenyon, R.I.	01117472	11.7	1975-79
Meadow Brook near Carolina, R.I.	01117600	5.53	1965-74

Discontinued surface-water discharge stations--Continued.

Station Name	Station Number	Drainage Area (mi ²)	Period of Record
THAMES RIVER BASIN			
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
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
CONNECTICUT RIVER BASIN			
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
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
West Branch Swift River near Shutesbury, Mass.	01174565	12.6	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.	01174500	0.60	1962-94
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
HOUSATONIC RIVER BASIN			
Town Brook at Bridge Street at Lanesborough, Mass.	01197015	10.6	1980-83
Marsh Brook at Lenox, Mass.	01197300	2.12	1963-74
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
HUDSON RIVER BASIN			
Dry Brook at Adams, Mass.	01331400	7.67	1963-74
North Branch Hoosic River at North Adams, Mass.	01332000	40.9	1931-90

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 ²)	Type of record	Period of record (water years)
MERRIMACK RIVER BASIN				
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
NORTH RIVER BASIN				
Indian Head River at Hanover, Mass.	01105730	30.3	Temp., S.C.	1970-71
JONES RIVER BASIN				
Jones River at Kingston, Mass.	01105870	15.7	Temp., S.C.	1970-71
EEL RIVER BASIN				
Eel River near Plymouth, Mass.	01105876	14.7	Temp. S.C.	1970-71 1971
WEWEANTIC RIVER BASIN				
Weweantic River at South Wareham, Mass.	01105895	56.1	Temp., S.C.	1970-71
WEST BRANCH WESTPORT RIVER BASIN				
Adamsville Brook at Adamsville, Mass.	01106000	8.01	Temp., S.C.	1973-74
PALMER RIVER BASIN				
West Branch Palmer River near Rehoboth, Mass.	01109200	4.35	Temp., S.C.	1973-74
BLACKSTONE RIVER BASIN				
Blackstone River at Millville, Mass.	01111230*	263	Temp., S.C., pH, D.O.	1969-81
POTOWOMUT RIVER BASIN				
Hunt River near East Greenwich, R.I.	01117000	23.0	Temp., S.C.	1977-81

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS

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

Station Name	Station Number	Drainage Area (mi ²)	Type of record	Period of record (water years)
PAWCATUCK RIVER BASIN				
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
Beaver River at Kenyon, R.I.	01117472	11.7	Temp., S.C.	1979-80, 1982-83 1976-79
THAMES RIVER BASIN				
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
CONNECTICUT RIVER BASIN				
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
HOUSATONIC RIVER BASIN				
Housatonic River near Great Barrington, Mass.	01197500	282	Sed.	1979-80

Water Resources Data for Massachusetts and Rhode Island, 1996

By R.S. Socolow, Domenic Murino, Jr., R.G. Casey, and L.R. Ramsbey

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of 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 worldwide web (<http://mass1.er.usgs.gov/hydro.html>). 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 streamflow data from locations throughout the United States can be retrieved.

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 at 88 gaging stations; monthend contents of 4 lakes and reservoirs; water quality at 16 gaging stations; and water levels for 143 observation wells. Data also are included for 35 low-flow partial-record stations. Locations of these sites are shown in figures 1, 2, and 3. Miscellaneous hydrologic data were collected at various sites that were not involved in the systematic data-collection program and are published as miscellaneous discharge measurements and quality of ground water. A few pertinent stations (not included above) in bordering States are also included in this report. 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, Branch of Information Services, Box 25286, Denver Federal Center, Box 25425, Denver, CO 80225-0286.

Publications similar to this report are published annually by the Geological Survey 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-96-1." 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. Beginning with the 1990 water year, all water-data reports are also available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

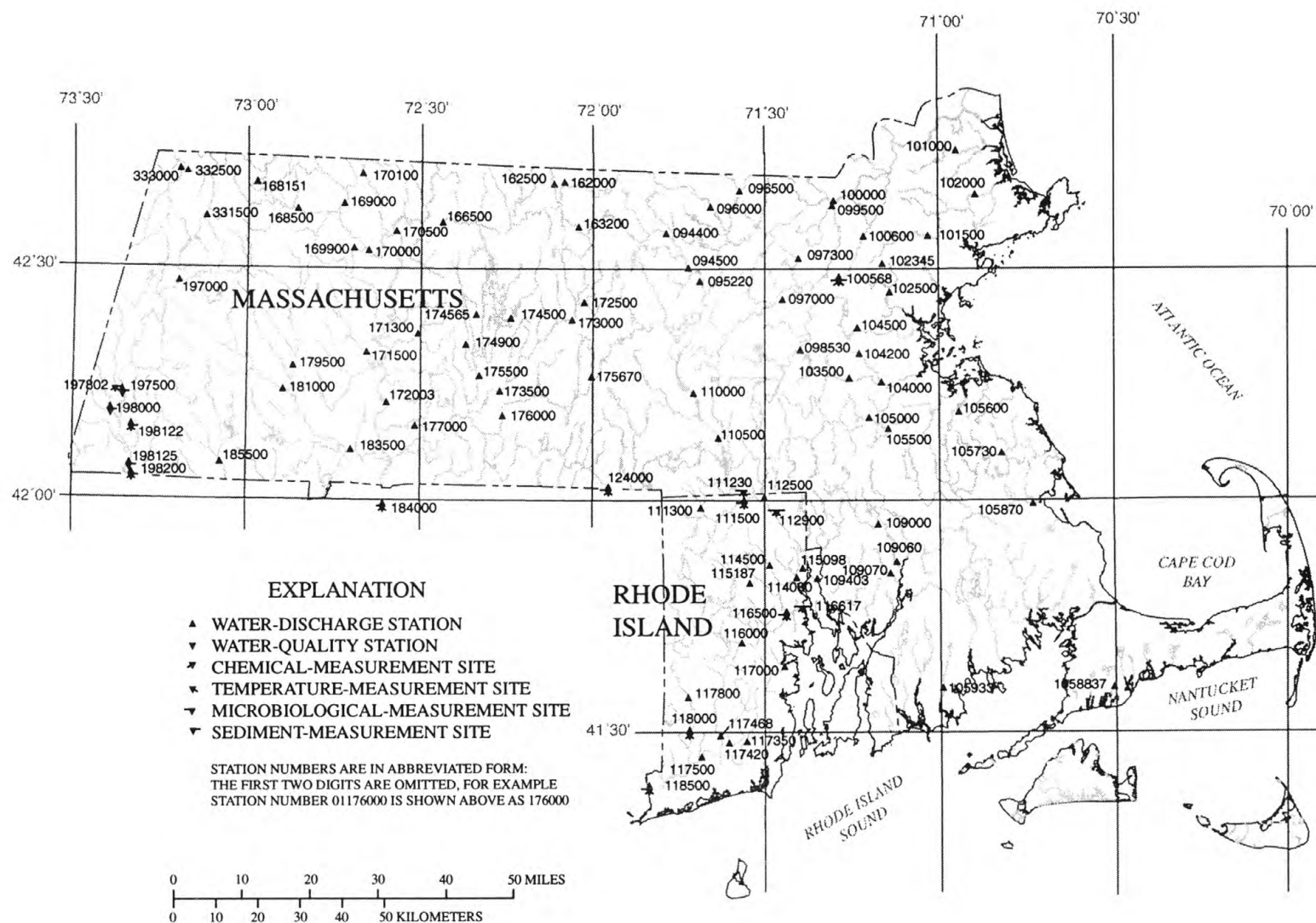


Figure 1. Location of gaging stations.

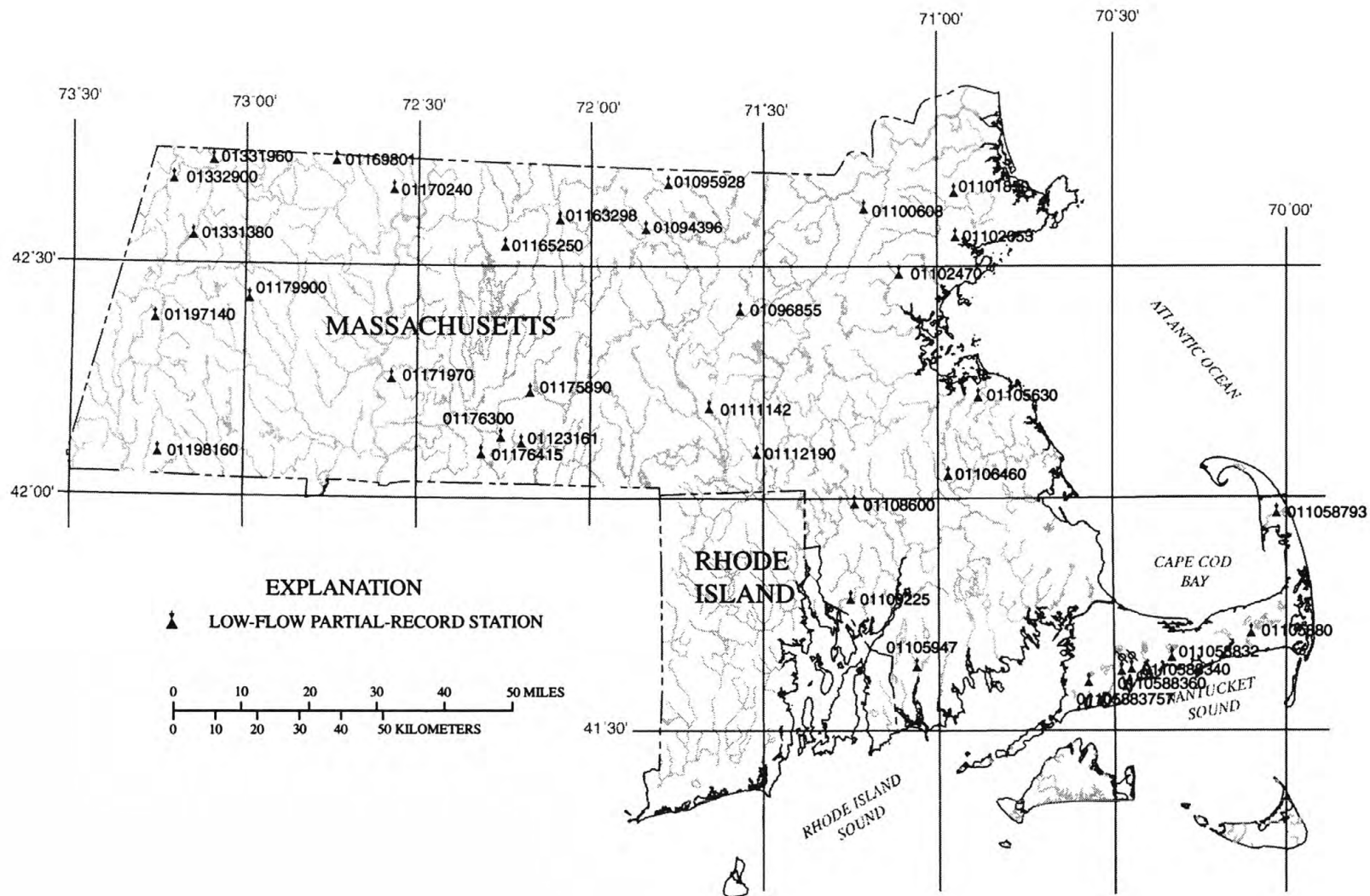
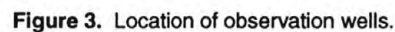


Figure 2. Location of low-flow partial-record stations.



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 (508) 490-5000. A limited number of CD-ROM discs will be available for sale by the U.S. Geological Survey, Branch of Information Services, Box 25286, Denver Federal Center, Box 25425, Denver, CO 80225-0286.

COOPERATION

The U.S. Geological Survey 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, R. Kendall, Commissioner, Division of Resource Conservation, R.H. Thibedeau, Director; Department of Environmental Protection, D.S. Greenbaum, Commissioner, Office of Watershed Management, B.M. Donahoe, Director; Metropolitan District Commission, M.I. Bhatti, Commissioner, Division of Watershed Management, J.M. McGinn, Director, Parks Engineering and Construction Division, F.D. Faucher, Director.

Rhode Island: State Water Resources Board, Roy Anderson, succeeded by D.J. Schatz, Chairman, M. Paul Sams, General Manager; Department of Environmental Management, Louise Durfee, succeeded by Michael Annarummo, Director, Division of Water Resources, E.S. Szymanski, Chief; Providence Water Supply Board, R.O. Rafanovic, Chief Engineer.

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

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Runoff for the 1996 water year was in the normal range in Rhode Island and eastern Massachusetts and was above normal (highest 25 percent of record) throughout central and western Massachusetts. The monthly and yearly discharges and median monthly and yearly discharges for the reference period 1961–90 for three index gaging stations are compared in figure 4. Maps showing monthly surface-water conditions during the 1996 water year in Massachusetts and Rhode Island are presented in figure 5. The maps show the area 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 contained in this report are provided with the tables of daily mean discharge.

Floods and Droughts

Peak discharges occurred about January 20–30 at gaging stations in western, south-central, and eastern Massachusetts and in northern Rhode Island during a series of three runoff events. Subsequent peak discharges occurred about April 16–18 at stations in central Massachusetts and southern Rhode Island. The recurrence interval of peaks for January 20–30 were in the 2 to 3 year range (peaks having a 1 in 2 to 1 in 3 chance of occurring in any given year) with two stations having 10-year recurrence intervals (Sevenmile River near Spencer, MA, and Sudbury River at Saxonville, MA). The recurrence interval of peaks for April 16–18 were in the 2 to 5 year range with one station having a 25-year recurrence interval (Millers River near Winchendon, MA), one station having a 15-year recurrence interval (Squannacook River near West Groton, MA), and two stations having 10-year recurrence intervals (North Nashua River at Fitchburg, MA, and North Nashua River near Leominster, MA). A few stations recorded peaks at other times of the year, notably October 21, and November 12, 1995, and September 18, 1996, in response to locally heavy precipitation.

Reservoir Storage

Monthend storage of Quabbin Reservoir in central Massachusetts ranged from 85 percent of usable capacity in October to 100 percent of usable capacity at the end of May. The monthend storage of Scituate Reservoir in central Rhode Island ranged from 70 percent of usable capacity in October to 106 percent of usable capacity in April.

Water Quality

Selected water-quality characteristics—dissolved-oxygen concentration, specific conductance, pH, and water temperature—measured at long-term surface-water sites in Massachusetts and Rhode Island indicated that all measured values were within the previously measured period-of-record extremes.

Ground-Water Levels

New high water levels for periods of record were measured at five wells in Massachusetts having 5 or more years of record—Chelmsford 384 (May 1987–) in April, Northbridge 54 (August 1984–) in April, Orange 63 (January 1985–) in April, Templeton 3 (December 1957–) in January, and Westhampton 20 (July 1987–) in May. A new low water level for period of record was measured at one well in Rhode Island having 5 or more years of record—Richmond 785 (October 1989–) in October.

During October through March, 89 new monthly high water levels and 14 new monthly low water levels were measured. During April through September, 109 new monthly high water levels and 82 new monthly low water levels were

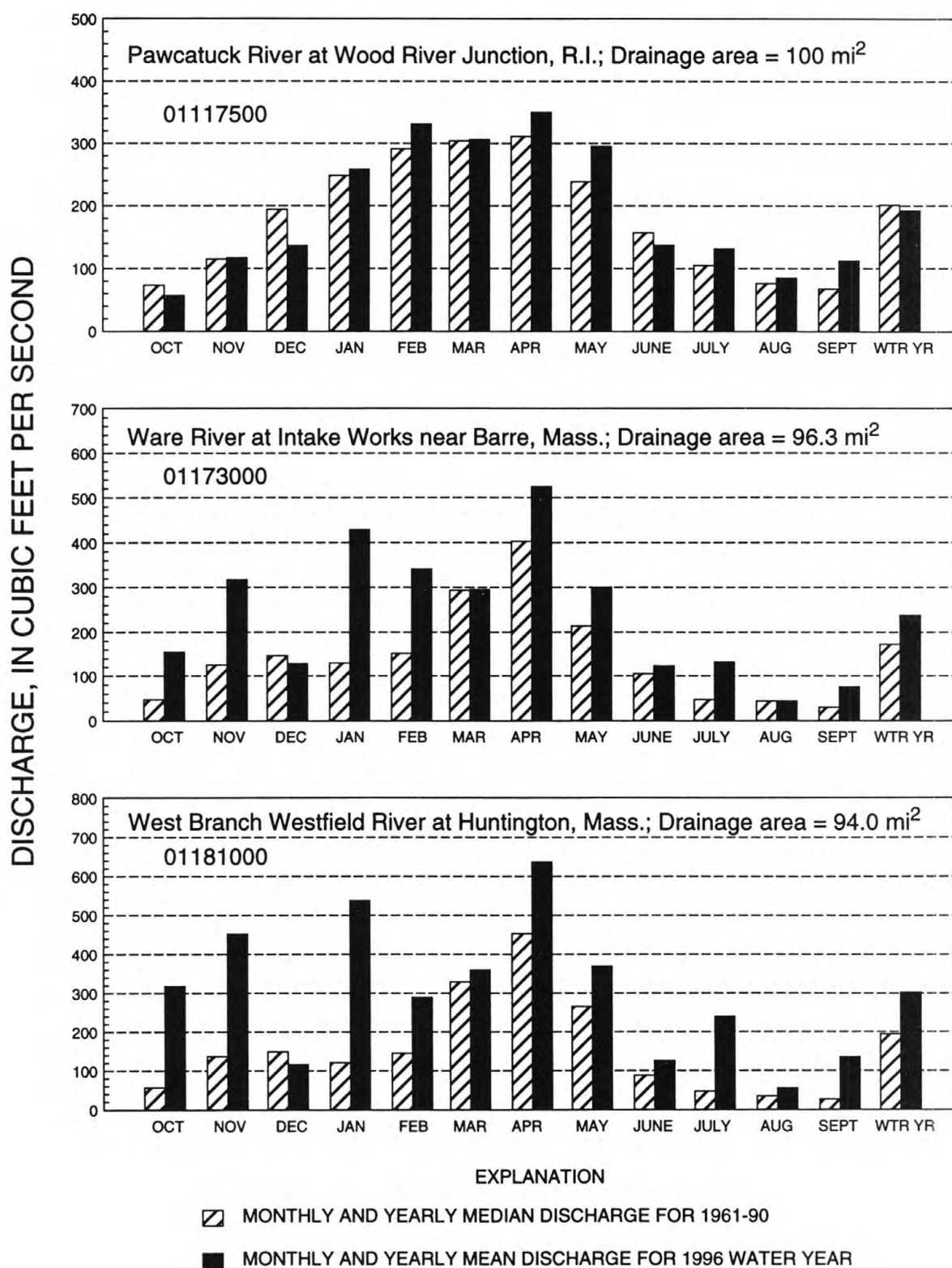


Figure 4. Comparison of discharge at three long-term index stations during the 1996 water year with median discharge for 1961-90.

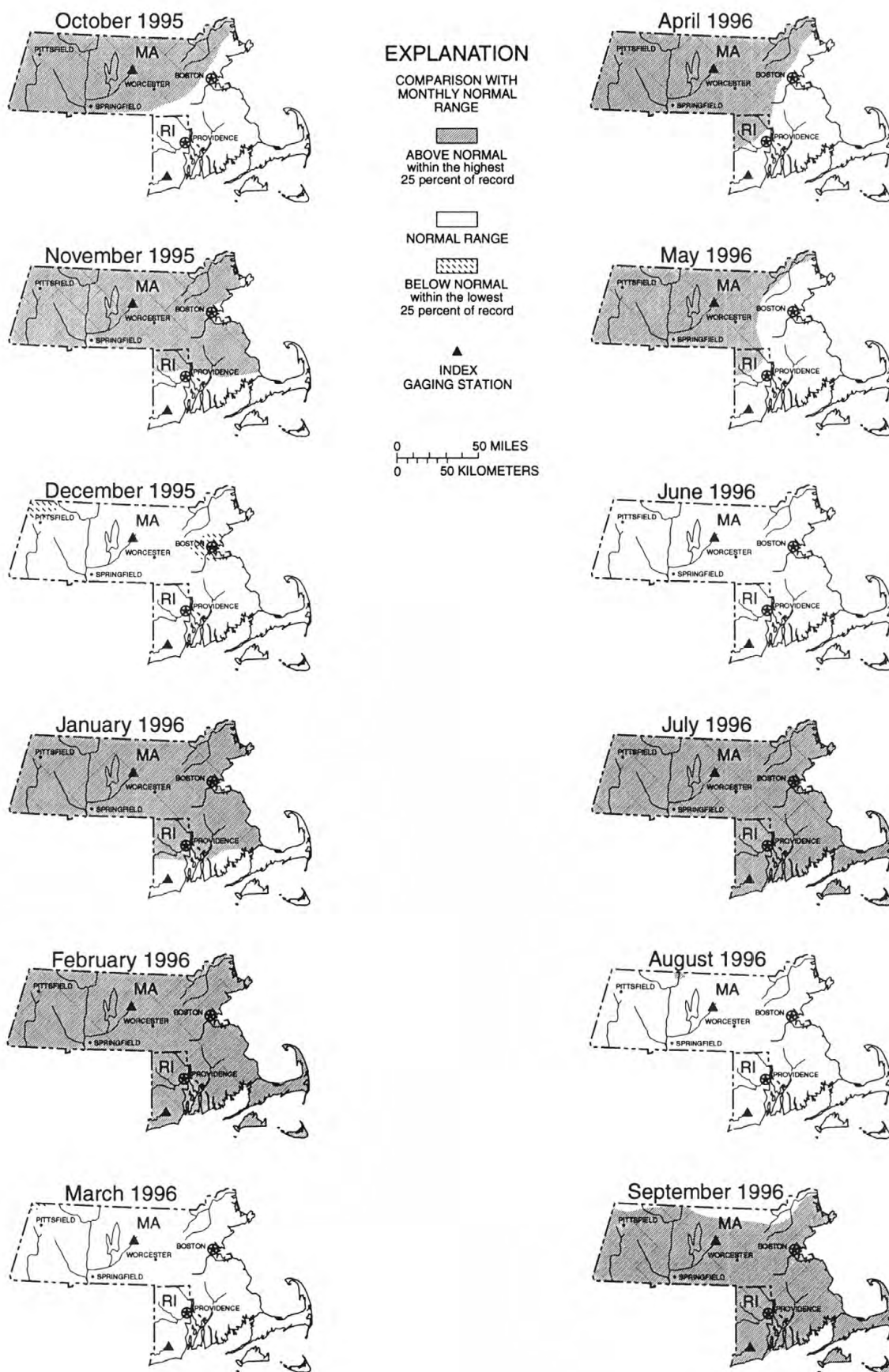


Figure 5. Monthly surface-water conditions during the 1996 water year in Massachusetts and Rhode Island.

measured. Wells with water level records starting before 1993 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 of three index observation wells in western and eastern Massachusetts and northern Rhode Island are shown in figure 6. Maps showing monthly ground-water conditions during the 1996 water year in Massachusetts and Rhode Island are presented in figure 7. The maps show the areas of normal, above-normal, or below-normal water levels for each month and are based on records of 99 Massachusetts wells and 29 Rhode Island wells having 5 or more years of record. Hydrographs plotted below each ground-water table contained in this report provide additional information on water-level trends. Ground-water-level data are also available on the Massachusetts-Rhode Island web pages at:

http://mass1.er.usgs.gov/current_cond/current_cond.html.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

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

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

Radiochemical programs 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.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1996 water year that began October 1, 1995, and ended September 30, 1996. 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 U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between continuous-record stations and other types of stations; therefore, the station number for a continuous-record station indicates downstream-order position in a list made up of all types of stations.

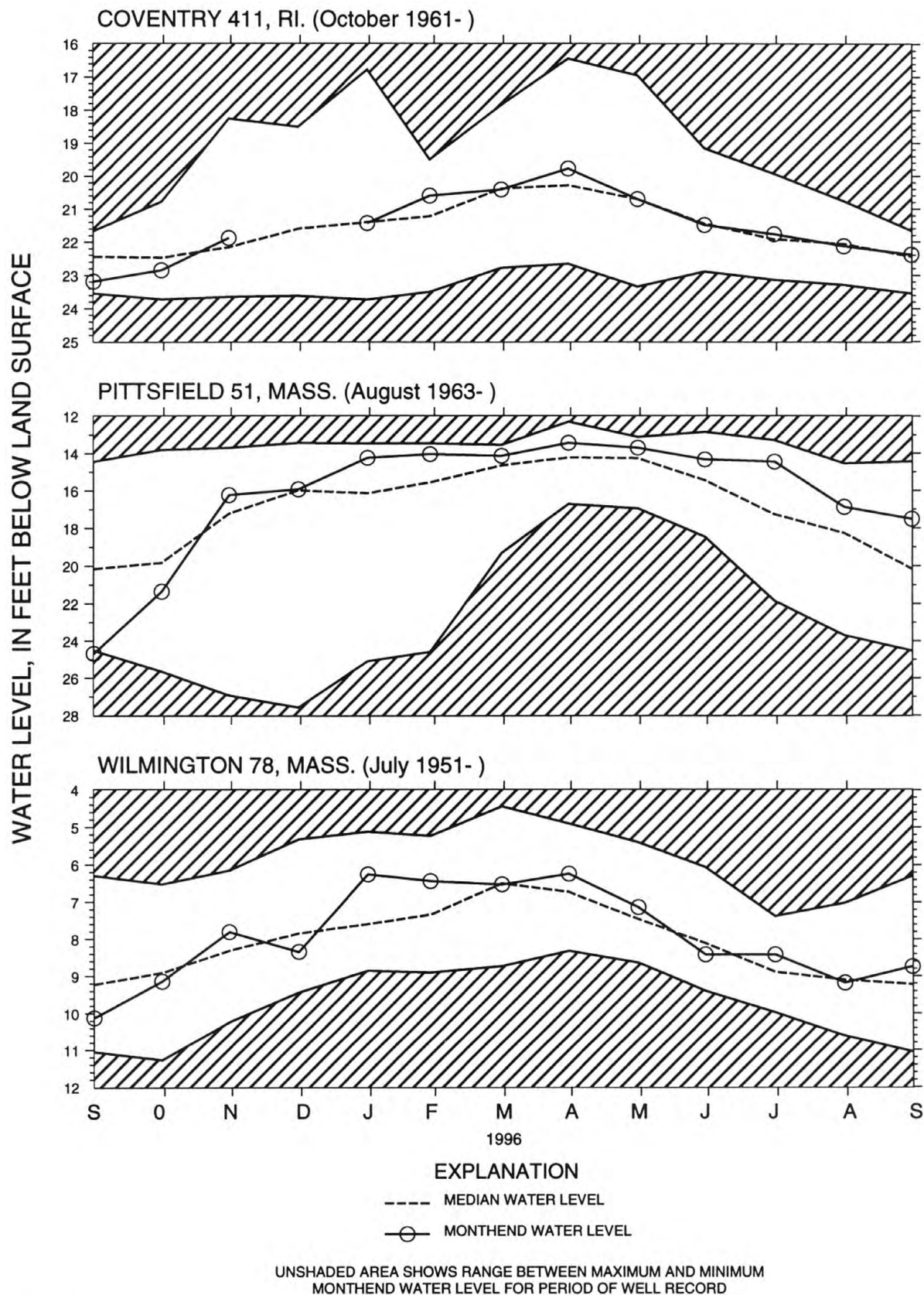


Figure 6. Comparison of monthly water levels in selected observation wells during the 1996 water year with average, maximum, and minimum monthly water levels for periods of record.

WATER RESOURCES DATA FOR MASSACHUSETTS AND RHODE ISLAND, 1996

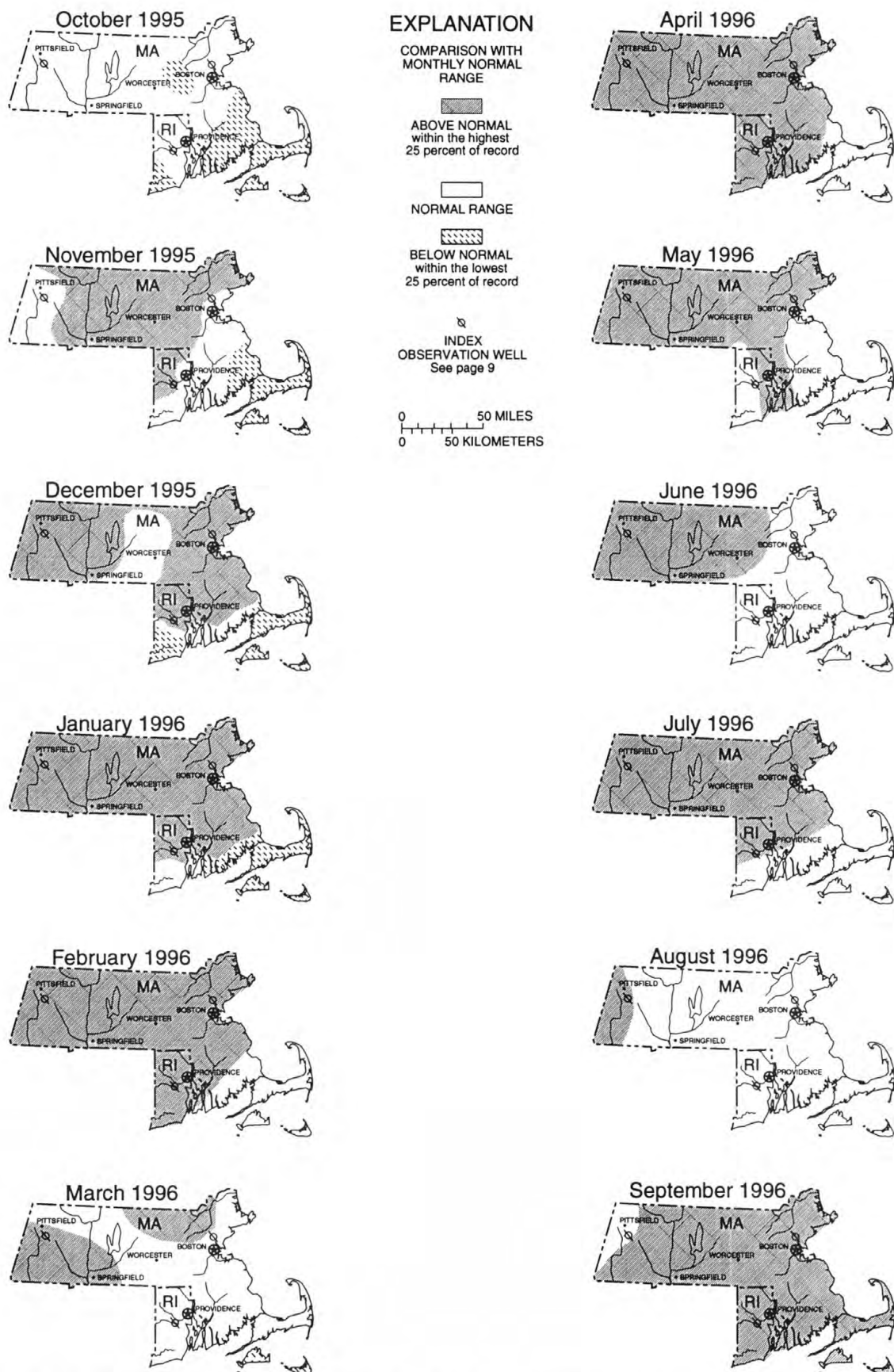


Figure 7. Monthly ground-water conditions during the 1996 water year in Massachusetts and Rhode Island.

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 8.)

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.

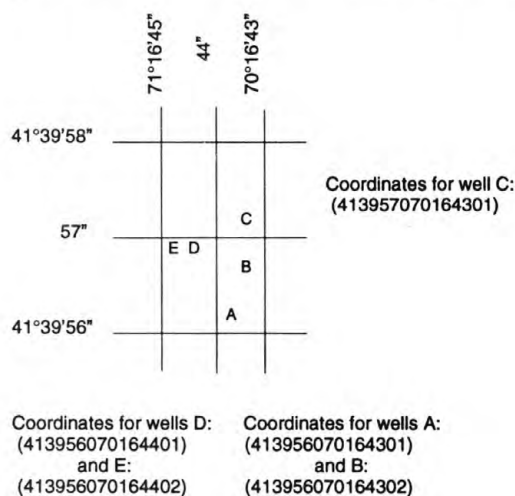


Figure 8.--System for numbering wells (latitude and longitude)

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 digital recorders that punch stage values on paper tapes or with electronic recorders that log data at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey 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) step-backwater techniques.

Daily mean discharge is computed by applying the daily mean stage (gage height) to the stage-discharge rating table or by applying each recorded stage in the day to the rating table and computing the mean from the sum of the individual discharges. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may 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 five 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; a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration; and a hydrograph of daily mean discharges for the current water year that includes the 10, 50, and 90 percent flow durations (PERCENT EXCEEDS) for the period of continuous gage record.

Station manuscript

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

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and

with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

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

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

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

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

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

the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

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

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

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

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

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

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

Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month; the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per

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

Statistics of monthly mean data

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

Summary statistics

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

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter

symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

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

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

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/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 (508) 490-5000.

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 onsite 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 onsite 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. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS 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 which 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. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have

a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, 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 Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1.

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

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 Geological Survey 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 U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to insure the most recent updates. The surface-water-quality records for 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

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. Locations of the observation wells in this network in Massachusetts and Rhode Island are shown in figure 2.

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 steel tape or from the graph or punched tape of a 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 elevation 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 U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

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

ACCESS TO WATSTORE DATA

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

develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Data Storage and Retrieval System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia, and consists of related files and data bases.

- * Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.

- * Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.

- * Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow and gage-height values at surface-water sites.

- * Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface and ground water.

- * Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on

Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

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 ft³ or about 326,000 gallons or 1,233 m³.

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.

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, non-spore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°. 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° plus or minus 1.0° 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° plus or minus 0.2° 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° plus or minus 1.0° on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

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 micro-organisms, 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° 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° 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.

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.

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.

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 (ft³/s) is the rate of discharge representing a volume of 1 ft³ passing a given point during 1 second and is equivalent to 7.48 gal/s or 448.8 gal/min or 0.02832 m³/s.

Cubic feet per second per square mile [(ft³/s)/mi²] 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.

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 which 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-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 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.

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 (CaCO_3).

Hydrologic Bench-Mark Network, is a network of 57 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 the activities of man.

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 groundwater observation well.

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.

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 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.

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.

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 Stream Quality Accounting Network (NASQAN), is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

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.

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, 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 one-third of the study units and ultimately will be conducted in 60 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments

and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

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.

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.

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.

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

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).

Milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and milligrams of carbon per volume per unit time [$\text{mg C}/(\text{m}^3 \cdot \text{time})$] for phytoplankton are units for expressing primary productivity. They define 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.

Milligrams of oxygen per area per unit time [$\text{mg O}_2/(\text{m}^2 \cdot \text{time})$] for periphyton and macrophytes and milligrams of oxygen per volume per unit time [$\text{mg O}_2/(\text{m}^3 \cdot \text{time})$] for phytoplankton are the units for expressing primary productivity. They define 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.

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.

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.

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 both 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 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) x discharge (ft^3/s) x 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 which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. 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°. 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.

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 Survey 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.

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, 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 sub-

stances. 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.

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

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

PUBLICATIONS OF TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L.M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.
- 6-A6. A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

Remarks Codes

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

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

Dissolved Trace-Element Concentrations

NOTE.-- Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (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 mi².

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 fair. Flow regulated by mills and reservoirs upstream. Flow affected by diversions for municipal use. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--24 years, 122 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,510 ft³/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 ft³/s, Sept. 11, 12, 1995; minimum daily, 2.7 ft³/s, Sept. 5, 1995.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2345	1,440	6.10	Jan. 27	2230	2,560	7.31
Nov. 15	0730	1,110	5.69	Apr. 16	2030	*2,840	*7.59
Jan. 19	2330	1,810	6.53	July 13	2000	1,530	6.20
Jan. 24	2400	1,480	6.14				

Minimum discharge, 4.1 ft³/s, Oct. 1; minimum daily, 4.7 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	144	107	54	235	202	163	367	61	35	36	10
2	5.8	293	107	55	201	182	315	283	57	27	35	8.8
3	8.2	330	96	e55	184	177	281	235	67	21	32	11
4	13	234	99	e54	171	163	217	278	98	29	36	9.5
5	30	177	102	e54	e145	148	185	343	83	26	39	10
6	184	146	105	e52	e135	156	169	296	66	19	33	10
7	66	146	95	e52	e130	151	170	273	55	16	27	14
8	40	233	85	e54	131	154	194	220	54	24	22	18
9	28	185	82	e56	145	140	187	187	174	51	19	11
10	23	147	e92	e58	137	126	228	199	124	56	18	13
11	20	132	e78	e56	148	122	232	223	115	36	16	12
12	52	628	e75	e57	142	121	315	456	96	25	15	10
13	50	378	e73	e58	e110	132	364	361	78	574	14	14
14	33	304	e69	e60	e100	152	480	258	73	667	13	13
15	174	896	e73	e60	101	196	410	211	58	265	12	12
16	96	478	e72	e58	100	249	1370	195	48	166	41	11
17	62	304	e70	e70	e100	206	1600	253	41	108	22	27
18	48	236	e68	e95	96	183	698	211	35	75	16	276
19	40	241	e66	589	86	176	431	190	31	63	14	172
20	35	228	e65	1150	83	379	332	165	42	57	12	90
21	309	205	e64	466	303	348	279	159	43	41	13	62
22	932	183	e63	299	620	286	244	141	37	37	14	66
23	356	161	e63	230	470	234	303	120	37	45	13	126
24	203	144	62	507	446	197	301	107	31	56	14	85
25	141	131	e59	1020	405	193	238	91	33	45	12	69
26	116	124	61	452	317	250	211	81	31	51	12	51
27	89	116	60	913	261	255	201	74	22	51	12	42
28	390	114	57	1470	258	215	161	70	20	39	12	40
29	418	128	e53	584	251	191	198	64	18	32	11	105
30	246	112	54	392	---	176	345	74	27	32	12	84
31	176	---	54	295	---	167	---	71	---	30	11	---
TOTAL	4388.7	7278	2329	9425	6011	6027	10822	6256	1755	2799	608	1482.3
MEAN	142	243	75.1	304	207	194	361	202	58.5	90.3	19.6	49.4
MAX	932	896	107	1470	620	379	1600	456	174	667	41	276
MIN	4.7	112	53	52	83	121	161	64	18	16	11	8.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1996, BY WATER YEAR (WY)

	MEAN	77.9	122	139	138	140	231	245	146	89.7	46.9	49.6	43.8
MAX	182	243	284	304	294	528	600	277	368	90.3	137	121	
(WY)	1976	1996	1974	1996	1984	1983	1987	1984	1982	1996	1991	1991	
MIN	24.7	31.3	43.6	24.6	34.6	84.1	84.1	63.2	30.4	13.9	11.0	8.33	
(WY)	1981	1979	1981	1981	1980	1989	1985	1985	1993	1993	1995	1995	

MERRIMACK RIVER BASIN

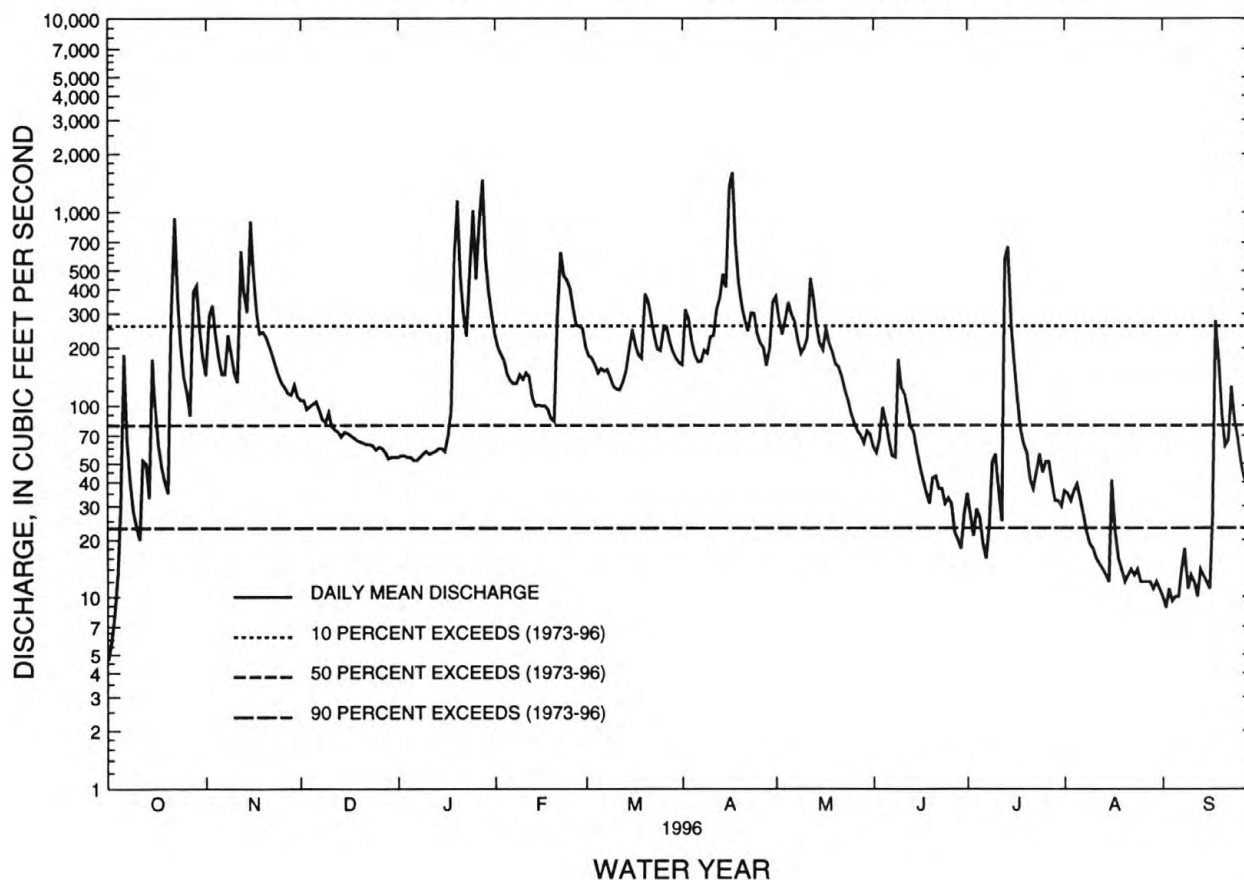
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01094400 NORTH NASHUA RIVER AT FITCHBURG, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1973 - 1996	
ANNUAL TOTAL	35394.0		59181.0		122	
ANNUAL MEAN	97.0		162		169	
HIGHEST ANNUAL MEAN					59.5	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	932	Oct 22	1600	Apr 17	2830	Apr 5 1987
LOWEST DAILY MEAN	2.7	Sep 5	4.7	Oct 1	2.7	Sep 5 1995
ANNUAL SEVEN-DAY MINIMUM	4.3	Aug 31	10	Aug 31	4.3	Aug 31 1995
INSTANTANEOUS PEAK FLOW			2840	Apr 16	3510	Apr 5 1987
INSTANTANEOUS PEAK STAGE			7.59	Apr 16	9.25	Apr 5 1987
INSTANTANEOUS LOW FLOW			4.1	Oct 1	1.5	Sep 11 1995
10 PERCENT EXCEEDS	206		346		259	
50 PERCENT EXCEEDS	74		98		79	
90 PERCENT EXCEEDS	7.6		16		23	

e Estimated

NORTH NASHUA RIVER AT FITCHBURG, MA 01094400



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

PERIOD OF RECORD.--Discharge: September 1935 to current year.

Water-quality records: Water years 1955, 1958.

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Regulation at low flow by mills upstream. Flow includes diversion to basin for municipal supplies: for Fitchburg, from Mare Meadow Reservoir since 1955; for Leominster, from Wachusett Reservoir since 1966 and from the Southeast Well Field since 1958.

AVERAGE DISCHARGE.--61 years, 199 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s, Mar. 18, 1936, gage height, 20.53 ft, from floodmarks, by computation of peak flow over dam; minimum, 11 ft³/s, Aug. 29, 1948; minimum daily, 22 ft³/s, Sept. 27, 1936, Sept. 2, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 22	0200	1,900	4.69	Jan. 25	--	e1,500	--
Nov. 12	0815	1,490	4.13	Jan. 28	--	e2,500	--
Nov. 15	--	e1,800	--	Apr. 17	0130	*5,140	*7.76
Jan. 20	--	e2,000	--	July 13	2215	2,360	5.00

Minimum discharge, 21 ft³/s, Oct. 2; minimum daily, 27 ft³/s, Oct. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	212	175	101	e420	e400	277	698	137	90	81	39
2	27	456	180	104	e370	e340	542	580	127	69	77	37
3	29	554	161	105	e340	e320	502	466	142	63	72	39
4	40	364	165	114	e320	e300	376	482	207	66	73	41
5	64	267	167	100	e280	265	313	653	168	65	76	38
6	461	219	176	91	e260	278	280	560	142	57	70	39
7	132	220	163	95	e240	266	275	528	124	52	64	41
8	79	369	148	93	e250	274	332	434	120	73	59	88
9	60	285	138	115	e265	e240	323	365	278	138	56	51
10	51	222	157	112	e260	225	398	361	231	112	54	49
11	48	197	134	106	e255	219	434	402	201	82	51	45
12	64	1010	124	100	e250	224	547	870	171	66	49	42
13	70	649	126	118	e210	242	659	723	148	783	49	45
14	56	477	115	116	e190	278	826	525	140	1350	48	51
15	277	1480	140	111	e180	376	791	417	117	505	46	49
16	135	890	138	98	e180	509	1870	363	102	324	65	45
17	93	523	139	124	e180	410	3770	472	92	216	57	73
18	75	386	131	175	e170	361	2060	400	84	173	49	e600
19	66	398	125	e590	e160	338	1480	354	78	139	45	312
20	58	381	131	e1700	e150	749	1070	310	97	117	45	180
21	383	345	126	e930	e600	701	751	283	96	95	44	139
22	1340	306	125	e560	e1100	566	513	262	93	82	45	142
23	542	265	118	420	e860	458	581	227	90	106	44	264
24	296	234	115	422	e800	376	587	205	79	131	55	174
25	208	209	111	e1400	e700	349	480	181	93	100	45	146
26	170	200	114	e840	e560	441	411	167	78	102	43	123
27	144	189	120	e920	e480	460	380	156	69	100	44	106
28	552	183	112	e2000	e470	383	324	150	64	82	44	104
29	672	196	104	e1400	e450	337	351	143	61	74	43	189
30	376	181	102	e750	---	307	721	157	68	70	42	163
31	260	---	101	e540	---	289	---	155	---	70	39	---
TOTAL	6855	11867	4181	14450	10950	11281	22224	12049	3697	5552	1674	3454
MEAN	221	396	135	466	378	364	741	389	123	179	54.0	115
MAX	1340	1480	180	2000	1100	749	3770	870	278	1350	81	600
MIN	27	181	101	91	150	219	275	143	61	52	39	37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1996, BY WATER YEAR (WY)

MEAN	112	175	203	212	224	377	420	244	159	90.1	81.7	88.3
MAX	606	485	520	466	534	1289	1126	503	642	392	286	595
(WY)	1956	1956	1987	1996	1970	1936	1987	1984	1982	1938	1938	1938
MIN	39.4	44.4	58.6	50.3	63.7	140	133	85.4	64.3	36.5	35.8	32.6
(WY)	1942	1950	1966	1981	1980	1965	1985	1965	1964	1993	1995	1995

MERRIMACK RIVER BASIN

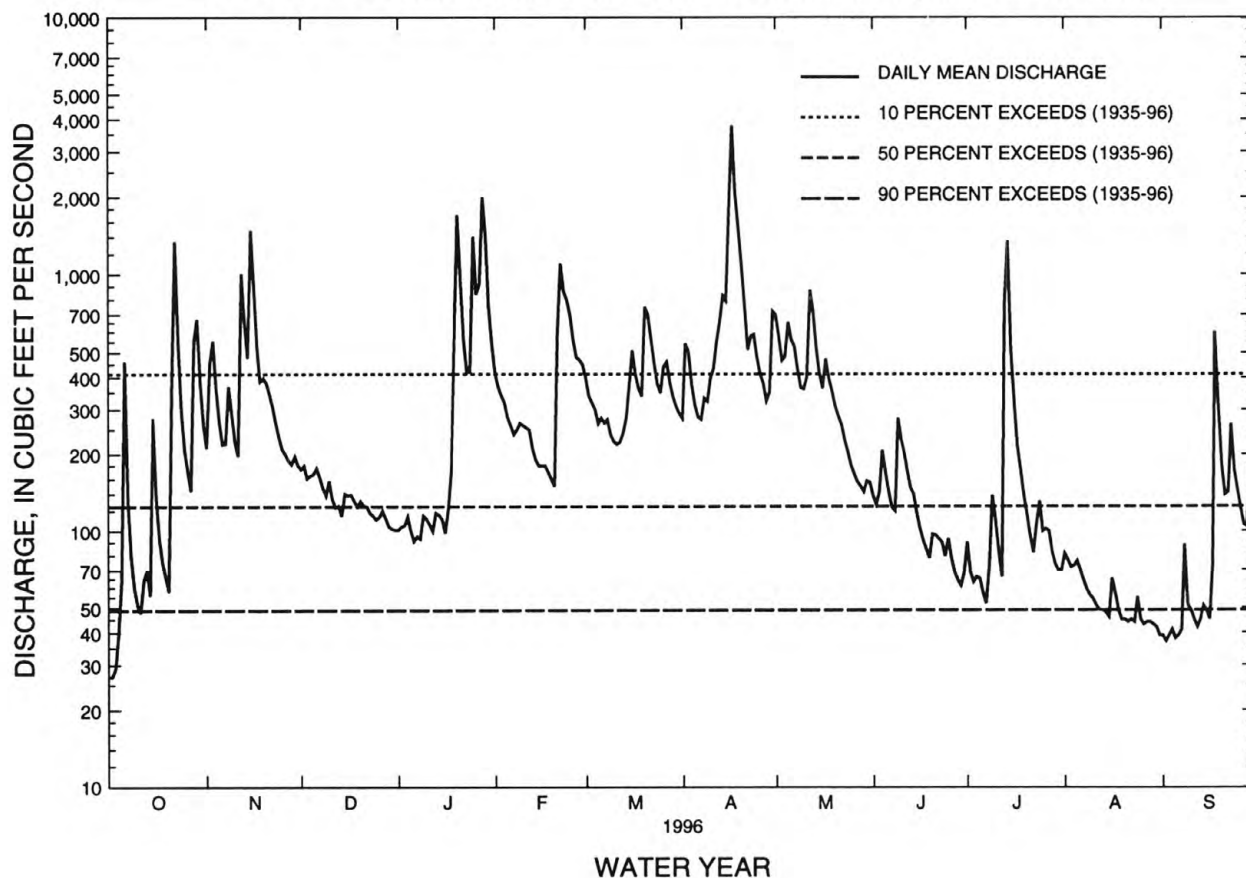
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01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1935 - 1996	
ANNUAL TOTAL	62117		108234		199	
ANNUAL MEAN	170		296		307	
HIGHEST ANNUAL MEAN					81.2	
LOWEST ANNUAL MEAN					1956	
HIGHEST DAILY MEAN	1480	Nov 15	3770	Apr 17	7530	Mar 18 1936
LOWEST DAILY MEAN	24	Sep 3	27	Oct 1	22	Sep 27 1936
ANNUAL SEVEN-DAY MINIMUM	25	Sep 2	39	Aug 31	24	Aug 28 1993
INSTANTANEOUS PEAK FLOW			5140	Apr 17	16300	Mar 18 1936
INSTANTANEOUS PEAK STAGE			7.76	Apr 17	20.53	Mar 18 1936
INSTANTANEOUS LOW FLOW			21	Oct 2	11	Aug 29 1948
10 PERCENT EXCEEDS	349		615		413	
50 PERCENT EXCEEDS	134		175		125	
90 PERCENT EXCEEDS	30		51		49	

e Estimated

NORTH NASHUA RIVER NEAR LEOMINSTER, MA 01094500



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.

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

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

AVERAGE DISCHARGE.--2 years, 57.2 ft³/s, 24.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 890 ft³/s, Jan. 28, 1996, gage height, 8.50 ft from rating curve extended above 340 ft³/s; minimum, 0.14 ft³/s, Sept. 11, 12, 13, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 22	1215	319	6.58	Jan. 28	0530	a*980	*8.50
Nov. 12	2200	350	6.69	Feb. 22	2100	420	6.85
Nov. 15	1745	381	6.82	Apr. 17	0315	a834	8.33
Jan. 20	1100	a752	8.07	July 14	0545	406	7.00
Jan. 25	0815	556	7.39				

a From rating curve extended above 340 ft³/s.

Minimum discharge, 1.0 ft³/s, Sept. 6, 7.

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	45	52	32	130	119	75	170	29	9.5	15	2.2
2	1.4	71	58	e31	118	102	112	142	24	8.7	17	2.0
3	1.3	130	52	e31	105	95	126	109	24	7.2	16	1.9
4	1.6	97	56	e33	e91	85	100	108	46	7.7	17	1.5
5	3.0	68	59	e32	e80	80	86	114	42	7.1	14	1.4
6	58	53	59	e30	83	92	77	105	30	5.5	11	1.2
7	41	50	62	e29	80	87	74	111	24	4.6	8.8	1.5
8	19	95	55	e35	80	78	82	92	21	3.6	7.3	3.4
9	11	86	48	e36	85	76	87	79	25	5.4	6.5	3.1
10	8.5	60	55	e35	85	e71	101	77	29	12	5.7	3.1
11	6.5	51	48	e34	83	68	107	86	38	6.9	4.7	2.6
12	5.0	206	44	e33	88	68	140	154	31	5.0	4.2	2.2
13	4.4	252	42	e34	e67	72	175	164	25	82	4.6	2.3
14	4.1	150	42	e34	59	83	206	115	26	338	6.3	2.7
15	28	299	42	e33	60	101	204	89	22	146	7.2	2.4
16	30	272	41	e31	55	144	336	78	17	76	5.0	2.0
17	18	164	40	e35	56	124	708	114	15	45	3.9	3.2
18	12	120	39	54	52	107	410	104	13	29	3.2	127
19	9.2	110	38	130	48	100	233	86	12	22	2.8	151
20	7.0	115	40	630	48	180	171	74	19	20	2.6	62
21	29	102	39	390	95	208	142	64	25	15	2.5	31
22	256	91	38	185	366	164	122	62	21	12	2.4	20
23	148	80	36	134	344	135	125	53	19	14	2.3	58
24	67	71	36	153	251	113	124	46	16	42	5.1	50
25	44	64	36	478	234	104	110	40	16	28	6.7	33
26	29	61	35	290	186	116	95	36	15	26	6.0	24
27	21	58	34	282	154	123	88	33	12	28	13	18
28	80	56	34	742	147	107	79	31	9.8	21	9.2	15
29	178	55	33	419	148	92	82	29	8.3	15	5.2	20
30	99	52	32	239	---	83	170	32	8.4	13	3.4	26
31	61	---	32	172	---	77	---	38	---	12	2.5	---
TOTAL	1282.5	3184	1357	4856	3478	3254	4747	2635	662.5	1067.2	221.1	673.7
MEAN	41.4	106	43.8	157	120	105	158	85.0	22.1	34.4	7.13	22.5
MAX	256	299	62	742	366	208	708	170	46	338	17	151
MIN	1.3	45	32	29	48	68	74	29	8.3	3.6	2.3	1.2
CFSM	1.31	3.36	1.39	4.96	3.80	3.32	5.01	2.69	.70	1.09	.23	.71
IN.	1.51	3.75	1.60	5.72	4.09	3.83	5.59	3.10	.78	1.26	.26	.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

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MERRIMACK RIVER BASIN

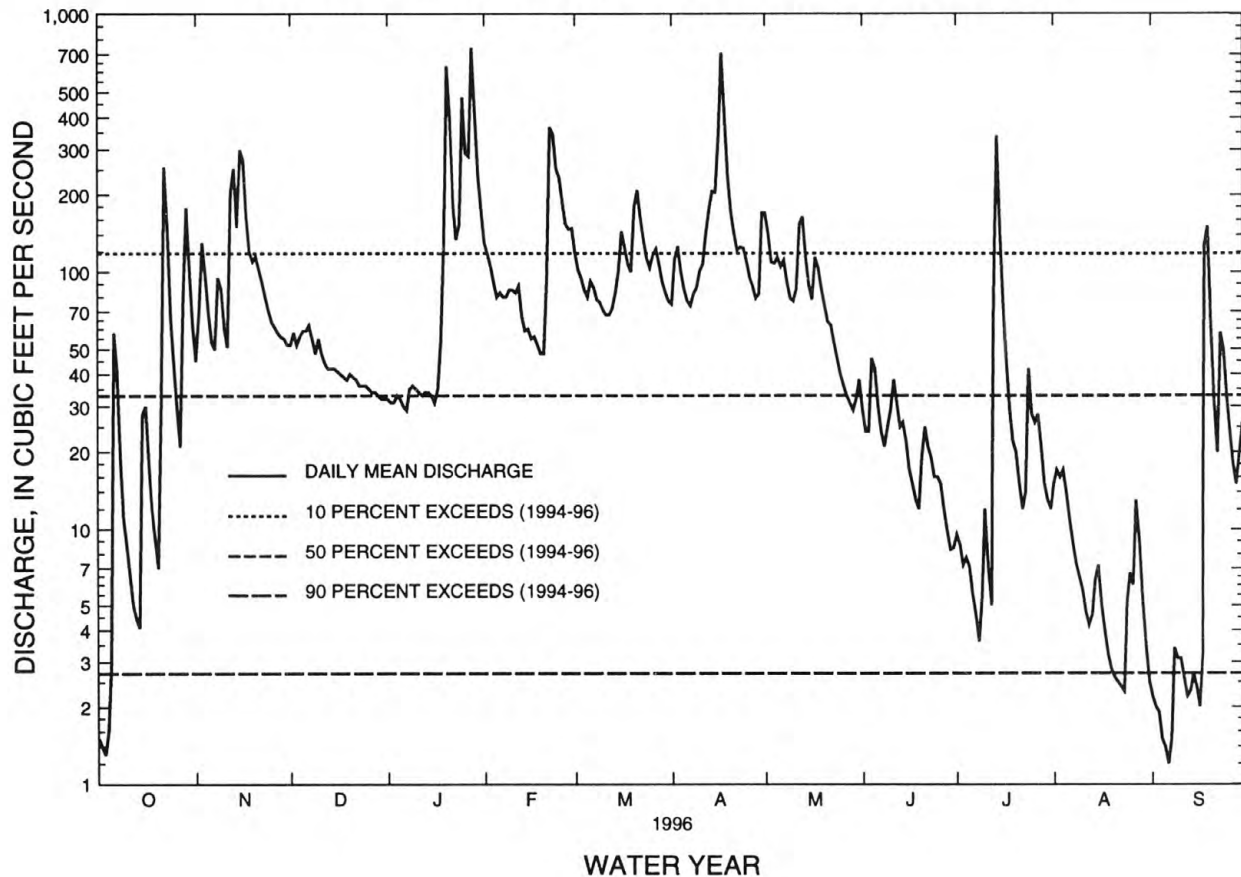
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01095220 STILLWATER RIVER NEAR STERLING, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1994 - 1996
ANNUAL TOTAL	15972.76	27418.0	
ANNUAL MEAN	43.8	74.9	57.2
HIGHEST ANNUAL MEAN			74.9
LOWEST ANNUAL MEAN			39.5
HIGHEST DAILY MEAN	420	742	742
LOWEST DAILY MEAN	.24	1.2	.24
ANNUAL SEVEN-DAY MINIMUM	.29	1.7	.29
INSTANTANEOUS PEAK FLOW		890	890
INSTANTANEOUS PEAK STAGE		8.50	8.50
INSTANTANEOUS LOW FLOW		1.0	.14
ANNUAL RUNOFF (CFSM)	1.38	2.37	1.81
ANNUAL RUNOFF (INCHES)	18.80	32.28	24.61
10 PERCENT EXCEEDS	94	164	118
50 PERCENT EXCEEDS	36	48	33
90 PERCENT EXCEEDS	1.4	4.6	2.7

e Estimated

STILLWATER RIVER NEAR STERLING, MA 01095220



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 mi², excludes 2.16 mi², above outlet of Ashby Reservoir.

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

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

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

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.16 mi² upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except for occasional periods of spill. Satellite gage-height tele-meter at station.

AVERAGE DISCHARGE.--47 years, 112 ft³/s, 23.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,220 ft³/s, Apr. 6, 1987, gage height, 8.16 ft; minimum daily, 2.0 ft³/s, Sept. 7, 1965.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	2345	1,080	5.53	Apr. 17	0915	*3,090	*7.46
Jan. 20	2130	965	5.34	July 14	1230	767	4.97
Jan. 28	1500	1,920	6.50				

Minimum discharge, 6.3 ft³/s, Oct. 4; minimum daily, 8.2 ft³/s, Oct. 1, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	103	108	63	281	281	182	435	85	33	31	11
2	8.4	132	110	63	e220	244	253	368	73	31	31	11
3	8.2	365	106	63	201	209	340	265	69	29	30	12
4	8.6	280	103	63	e170	e190	253	245	99	32	29	11
5	11	179	103	63	e145	162	205	317	110	34	28	10
6	72	136	103	60	e140	169	182	290	88	30	25	11
7	88	119	103	57	133	163	172	291	76	27	23	11
8	54	167	95	58	139	157	191	240	64	24	21	17
9	35	183	87	60	149	e155	201	200	90	24	20	15
10	27	137	89	62	160	e145	233	196	109	30	19	14
11	22	117	86	61	157	e135	252	249	101	30	18	13
12	19	279	78	60	167	136	313	394	88	26	17	12
13	17	588	74	60	141	145	353	461	71	105	17	13
14	16	343	70	63	122	169	391	310	65	635	17	14
15	31	666	73	63	113	209	466	232	62	334	17	13
16	49	798	78	59	e110	299	549	202	53	159	16	13
17	39	420	78	60	109	276	2340	251	48	103	16	14
18	30	282	77	75	105	235	882	254	44	75	15	83
19	26	248	76	135	e96	214	522	214	39	59	15	146
20	23	250	77	667	95	332	396	190	40	52	15	78
21	33	230	77	e700	136	489	327	160	43	43	14	46
22	348	203	77	e400	542	374	274	142	46	38	13	35
23	334	176	75	274	623	303	328	130	49	36	13	50
24	147	156	72	252	517	248	373	115	43	42	13	52
25	97	141	71	689	529	213	295	104	40	43	13	43
26	73	133	71	e560	449	260	239	95	38	38	13	36
27	60	128	71	e450	352	294	216	87	34	39	12	30
28	101	124	70	1440	329	248	196	82	32	37	12	26
29	312	117	68	825	349	218	185	78	30	32	12	29
30	207	112	65	468	---	197	361	82	29	29	11	38
31	131	---	64	346	---	187	---	94	---	28	11	---
TOTAL	2435.4	7312	2555	8319	6779	7056	11470	6773	1858	2277	557	907
MEAN	78.6	244	82.4	268	234	228	382	218	61.9	73.5	18.0	30.2
MAX	348	798	110	1440	623	489	2340	461	110	635	31	146
MIN	8.2	103	64	57	95	135	172	78	29	24	11	10
CFSM	1.23	3.83	1.29	4.21	3.67	3.57	6.00	3.43	.97	1.15	.28	.47
IN.	1.42	4.27	1.49	4.86	3.96	4.12	6.70	3.96	1.09	1.33	.33	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1996, BY WATER YEAR (WY)

	MEAN	51.9	101	121	122	130	225	276	147	78.9	37.0	29.5	31.6
MAX	296	304	301	323	328	554	654	343	315	84.7	98.8	245	
(WY)	1956	1956	1987	1956	1970	1983	1987	1954	1982	1951	1986	1954	
MIN	9.41	12.6	22.7	20.1	33.6	81.5	75.8	51.9	21.0	8.26	6.21	6.80	
(WY)	1965	1965	1966	1981	1980	1989	1985	1965	1965	1965	1966	1965	

MERRIMACK RIVER BASIN

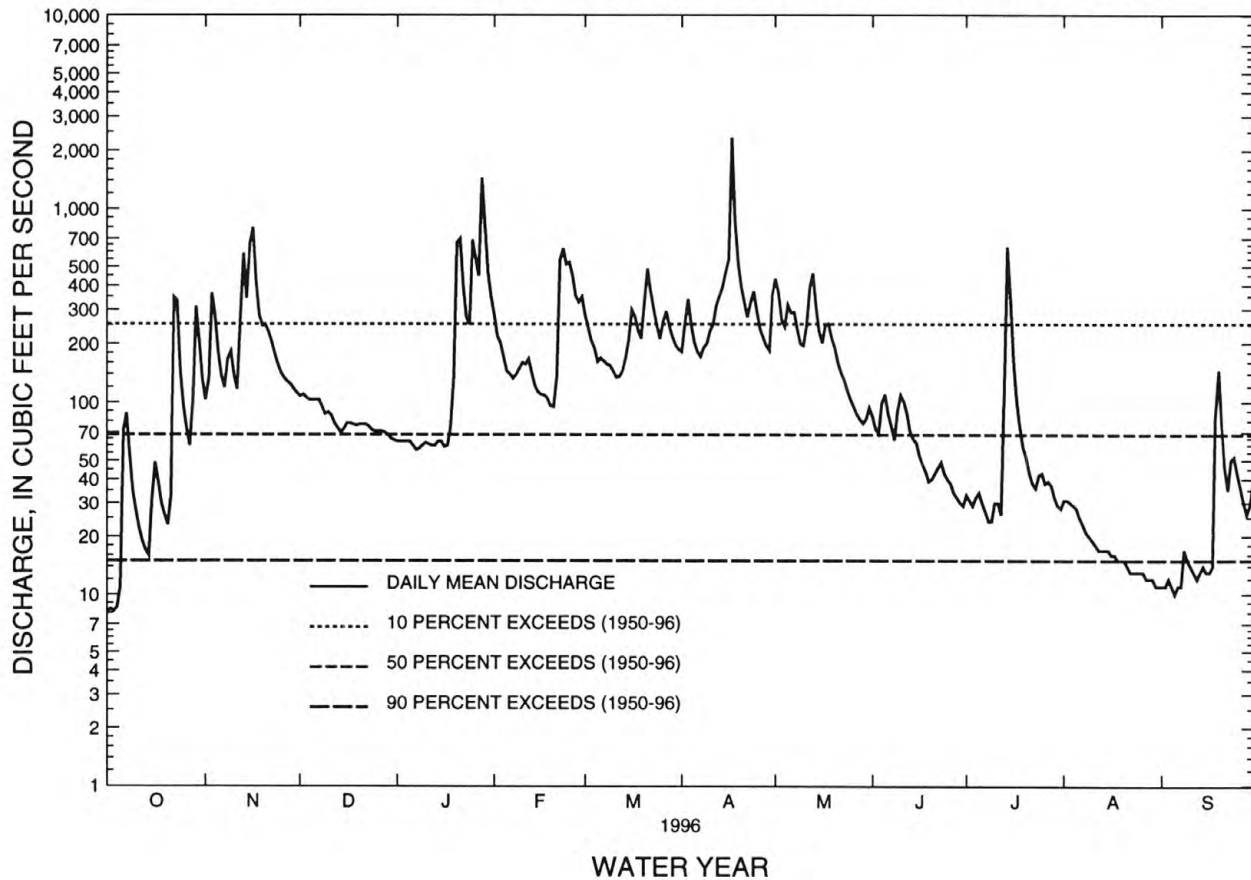
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01096000 SQUANNACOOK RIVER NEAR WEST GROTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1950 - 1996
ANNUAL TOTAL	34290.6	58298.4	
ANNUAL MEAN	93.9	159	112
HIGHEST ANNUAL MEAN			174 1956
LOWEST ANNUAL MEAN			35.9 1965
HIGHEST DAILY MEAN	798 Nov 16	2340 Apr 17	3420 Apr 6 1987
LOWEST DAILY MEAN	4.4 Sep 8	8.2 Oct 1	2.0 Sep 7 1965
ANNUAL SEVEN-DAY MINIMUM	5.0 Sep 3	11 Aug 30	4.3 Aug 28 1966
INSTANTANEOUS PEAK FLOW		3090 Apr 17	4220 Apr 6 1987
INSTANTANEOUS PEAK STAGE		7.46 Apr 17	8.16 Apr 6 1987
INSTANTANEOUS LOW FLOW		6.3 Oct 4	
ANNUAL RUNOFF (CFSM)	1.47	2.50	1.76
ANNUAL RUNOFF (INCHES)	20.03	34.05	23.96
10 PERCENT EXCEEDS	205	352	253
50 PERCENT EXCEEDS	77	95	68
90 PERCENT EXCEEDS	8.5	16	15

e Estimated

SQUANNACOOK RIVER NEAR WEST GROTON, MA 01096000



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.

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

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

AVERAGE DISCHARGE.--61 years, 580 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,980 ft³/s, Apr. 18, gage height, 10.26 ft; minimum daily, 34 ft³/s, Oct. 1.

MEAN	309	486	596	611	672	1132	1258	727	480	253	217	236
MAX	1356	1781	1535	1417	1544	3930	3676	1382	1976	1366	966	1671
(WY)	1956	1956	1987	1979	1970	1936	1987	1953	1982	1938	1938	1938
MIN	91.1	108	134	116	186	386	369	236	154	90.0	71.3	76.4
(WY)	1942	1965	1966	1981	1980	1989	1985	1965	1941	1966	1966	1995

MERRIMACK RIVER BASIN

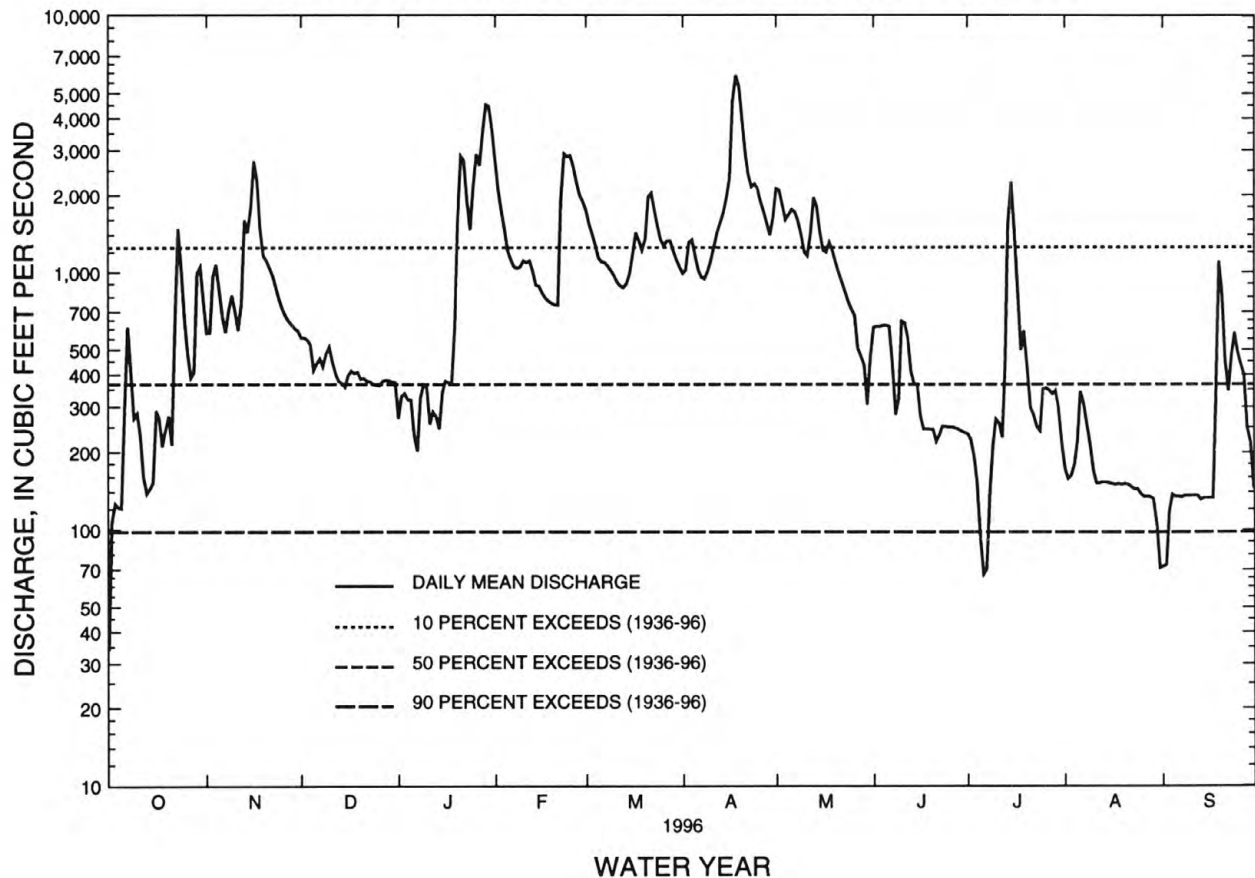
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01096500 NASHUA RIVER AT EAST PEPPERELL, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1936 - 1996	
ANNUAL TOTAL	168540.9		316372		580	
ANNUAL MEAN	462		864		969	
HIGHEST ANNUAL MEAN					214	
LOWEST ANNUAL MEAN					1956	
HIGHEST DAILY MEAN	2720	Nov 16	5890	Apr 18	19400	Mar 20 1936
LOWEST DAILY MEAN	6.6	Sep 1	34	Oct 1	1.1	Aug 13 1939
ANNUAL SEVEN-DAY MINIMUM	22	Sep 1	101	Aug 28	14	Aug 1 1965
INSTANTANEOUS PEAK FLOW			5980	Apr 18	20900	Mar 20 1936
INSTANTANEOUS PEAK STAGE			10.26	Apr 18	19.10	Mar 20 1936
INSTANTANEOUS LOW FLOW			34	Oct 1		
10 PERCENT EXCEEDS	985		1930		1250	
50 PERCENT EXCEEDS	392		568		367	
90 PERCENT EXCEEDS	38		144		98	

e Estimated

NASHUA RIVER AT EAST PEPPERELL, MA 01096500



MERRIMACK RIVER BASIN

01097000 ASSABET RIVER AT MAYNARD, MA

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

DRAINAGE AREA.--116 mi².

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

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

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

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

AVERAGE DISCHARGE.--55 years, 189 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s, Aug. 20, 1955, gage height, 8.94 ft; maximum gage height, 8.96 ft, Aug. 20, 1955 (backwater from debris); minimum daily, 0.20 ft³/s, Feb. 7, 1965.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,610 ft³/s, Jan. 29, gage height, 5.55 ft; minimum daily, 27 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	154	178	119	869	526	259	597	199	95	146	45
2	28	161	180	119	741	464	303	589	167	88	168	44
3	28	216	181	130	635	422	357	510	144	83	164	42
4	28	240	181	123	e595	377	344	463	157	80	150	41
5	30	217	178	e120	e505	353	297	451	169	77	133	40
6	237	184	179	e120	e430	360	264	435	152	73	122	39
7	336	156	175	e120	e400	367	254	432	133	71	105	39
8	303	193	164	e120	377	339	304	419	122	68	97	39
9	223	230	159	e120	372	343	339	374	144	67	91	34
10	137	214	179	e120	387	331	396	340	262	70	105	29
11	88	174	176	e120	389	305	445	329	291	67	102	42
12	68	210	154	133	387	298	528	383	238	59	98	47
13	56	300	140	130	339	306	572	435	198	210	90	48
14	54	342	128	133	289	330	579	417	178	635	84	54
15	80	519	129	139	267	375	570	356	165	749	78	51
16	87	642	134	147	256	456	640	313	136	663	74	46
17	85	629	137	139	245	497	1270	339	111	485	73	50
18	70	515	138	161	253	478	1490	374	89	340	73	281
19	59	433	e135	262	254	441	1280	357	81	255	67	490
20	46	387	e135	706	212	525	991	319	89	206	61	471
21	58	356	e140	894	298	623	785	283	131	168	55	352
22	238	320	145	919	900	618	676	258	162	141	54	249
23	319	284	139	787	1120	543	635	232	152	123	54	247
24	286	250	134	708	1010	480	597	207	130	190	54	246
25	207	226	e135	893	930	424	533	183	122	203	54	227
26	139	211	129	1000	834	383	461	167	119	202	56	196
27	87	200	127	968	723	352	409	156	114	208	55	172
28	129	193	126	1440	646	329	366	146	106	186	53	145
29	256	187	e120	1550	587	308	339	136	88	153	51	154
30	271	181	e120	1400	---	291	466	151	77	130	48	166
31	211	---	121	1120	---	274	---	188	---	107	46	---
TOTAL	4271	8524	4596	14960	15250	12518	16749	10339	4426	6252	2661	4126
MEAN	138	284	148	483	526	404	558	334	148	202	85.8	138
MAX	336	642	181	1550	1120	623	1490	597	291	749	168	490
MIN	27	154	120	119	212	274	254	136	77	59	46	29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1941	87.6	375	1956	9.92	1958
1942	152	542	1956	22.1	1950
1943	192	476	1987	35.6	1950
1944	219	670	1979	37.6	1966
1945	246	696	1970	72.5	1965
1946	404	776	1983	143	1989
1947	383	1052	1987	127	1966
1948	236	443	1954	114	1986
1949	149	788	1982	39.0	1949
1950	72.4	254	1959	11.6	1966
1951	62.3	561	1955	5.18	1966
1952	64.5	542	1954	5.00	1957

MERRIMACK RIVER BASIN

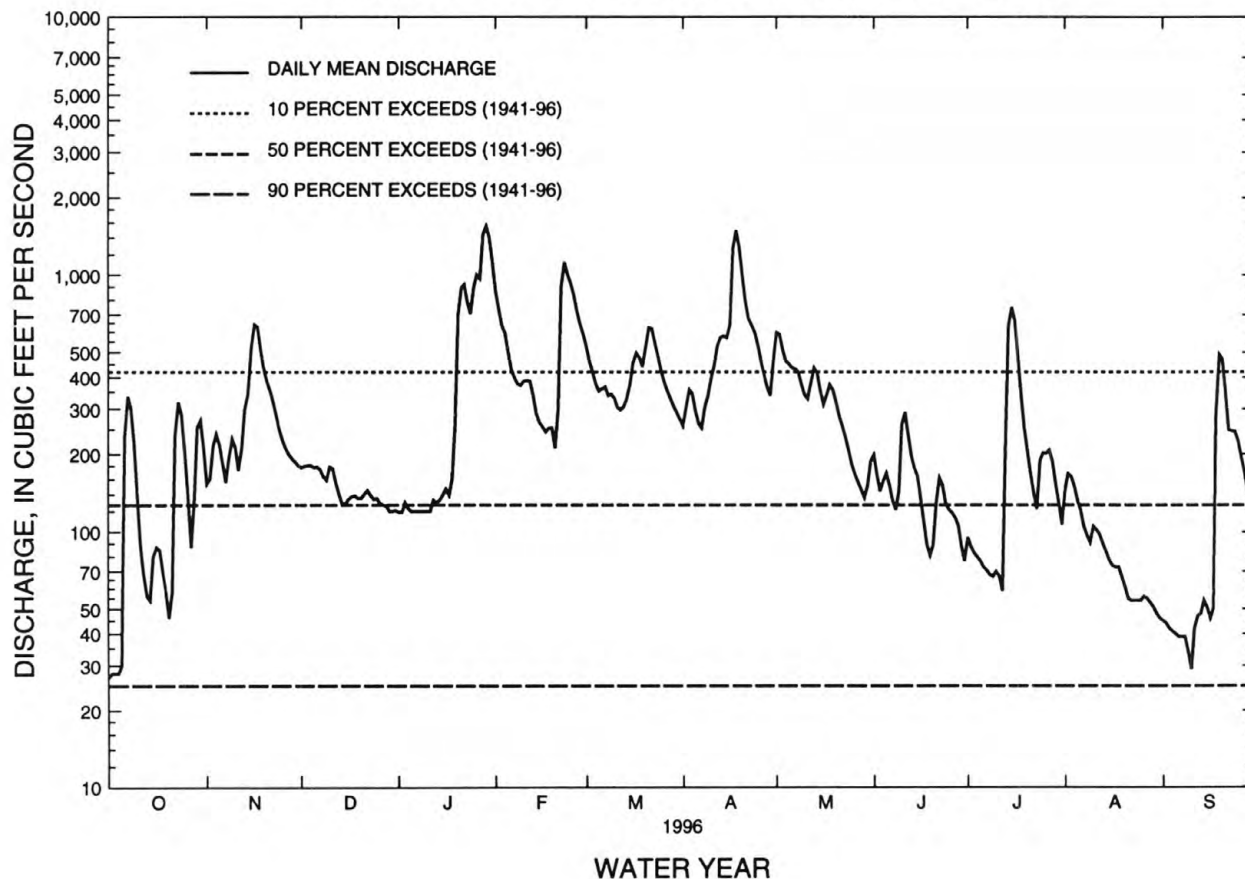
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01097000 ASSABET RIVER AT MAYNARD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	58388		104672		189	
ANNUAL MEAN	160		286		296	
HIGHEST ANNUAL MEAN					73.3	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	713	Mar 10	1550	Jan 29	3650	Aug 20 1955
LOWEST DAILY MEAN	13	Sep 15	27	Oct 1	.20	Feb 7 1965
ANNUAL SEVEN-DAY MINIMUM	14	Sep 10	37	Sep 4	1.0	Feb 2 1965
INSTANTANEOUS PEAK FLOW			1610	Jan 29	4250	Aug 20 1955
INSTANTANEOUS PEAK STAGE			5.55	Jan 29	8.96	Aug 20 1955
INSTANTANEOUS LOW FLOW			27	Oct 1		
10 PERCENT EXCEEDS	332		619		420	
50 PERCENT EXCEEDS	137		197		127	
90 PERCENT EXCEEDS	26		57		25	

e Estimated

ASSABET RIVER AT MAYNARD, MA 01097000



MERRIMACK RIVER BASIN

01097300 NASHOBA BROOK NEAR ACTON, MA

LOCATION.--Lat 42°30'39", long 71°24'25", Middlesex County, Hydrologic Unit 01070005, on right bank 1,500 ft downstream from dam at North Acton, 2.2 mi northeast of Acton, and 5 mi upstream from mouth.

DRAINAGE AREA.--12.8 mi².

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.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Backwater from beaver dam, June 26 to Sept. 30. Occasional regulation since 1967 by pond upstream.

AVERAGE DISCHARGE.--33 years, 20.6 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 679 ft³/s, Jan. 26, 1979, gage height, 5.57 ft; maximum gage height, 5.73 ft, Jan. 26, 1979 (ice jam); minimum discharge, 0.01 ft³/s, Sept. 4, 7, 8, 12, 13, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 210 ft³/s, Jan. 28; minimum, 0.49 ft³/s, Oct. 1, 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	12	16	9.1	e60	e40	24	58	13	e4.5	e15	e2.5
2	.65	15	17	e9.0	e50	e37	e28	49	10	e4.0	e10	e7.0
3	.86	e29	16	e8.6	e40	e35	e30	36	9.2	e3.5	e8.0	e14
4	1.5	e29	16	e8.4	e35	e33	e29	34	15	e4.5	e6.0	e8.0
5	2.4	e22	16	e8.4	e33	e31	26	41	16	e4.0	e5.0	e5.0
6	12	17	16	e8.2	e30	e30	24	41	12	e3.5	e4.5	e3.5
7	24	14	17	e8.0	e29	e27	22	43	9.8	e2.7	e4.0	e3.2
8	12	e22	14	e7.8	e28	25	25	37	8.4	e2.5	e3.7	e6.0
9	7.0	e29	12	e7.6	e28	24	31	30	7.6	e4.0	e3.5	e4.5
10	5.3	e23	14	e8.0	e29	24	40	28	7.7	e3.5	e5.0	e4.0
11	4.7	18	16	e9.5	e30	25	51	29	7.8	e3.3	e8.0	e3.5
12	3.8	e22	13	e17	e29	26	63	39	7.2	e3.0	e6.0	e3.0
13	3.5	e30	11	e25	e25	e27	60	49	7.0	e15	e4.5	e4.0
14	3.0	e35	9.5	e23	e23	e32	56	39	6.2	e50	e4.2	e5.0
15	6.5	e60	9.7	e20	e21	e45	57	31	5.4	e45	e4.0	e4.0
16	9.6	e100	10	e18	e20	e56	69	27	4.7	e25	e3.7	e3.5
17	6.6	e80	11	e20	e20	e54	160	33	4.2	e15	e3.5	e10
18	4.8	e60	11	e45	e19	e52	112	36	3.9	e10	e3.2	e30
19	4.1	e50	11	e90	e18	e50	74	30	3.6	e8.0	e3.0	e70
20	6.1	e40	12	e180	e16	e50	61	27	3.6	e7.0	e2.9	e45
21	9.8	e35	12	e120	e25	e90	54	24	4.2	e6.0	e2.8	e25
22	e24	e30	12	e70	e80	e88	47	20	4.3	e5.0	e2.7	e20
23	e30	27	11	e60	e70	e86	45	17	4.3	e6.0	e3.0	e15
24	19	24	11	e70	e75	e80	47	15	4.2	e10	e4.0	e18
25	12	21	11	e120	e77	e70	38	13	6.0	e9.0	e6.0	e13
26	8.9	20	10	e100	e60	e60	32	12	e7.0	e7.0	e4.5	e14
27	7.5	18	10	e130	e50	e50	29	11	e5.0	e6.5	e3.2	e12
28	12	17	9.9	e200	e45	e45	27	10	e4.5	e6.0	e3.0	e10
29	e28	17	9.5	e120	e42	e40	26	9.3	e4.0	e5.5	e3.0	e20
30	e24	16	9.2	e90	---	e35	43	12	e3.5	e5.0	e2.9	e30
31	16	---	9.1	e70	---	e30	---	18	---	e7.0	e2.7	---
TOTAL	310.27	932	382.9	1680.6	1107	1397	1430	898.3	209.3	291.0	145.5	412.7
MEAN	10.0	31.1	12.4	54.2	38.2	45.1	47.7	29.0	6.98	9.39	4.69	13.8
MAX	30	100	17	200	80	90	160	58	16	50	15	70
MIN	.65	12	9.1	7.6	16	24	22	9.3	3.5	2.5	2.7	2.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1963 - 1996, BY WATER YEAR (WY)

	MEAN	8.63	18.0	22.9	26.2	29.3	46.3	42.0	24.8	14.5	5.97	4.47	4.35
MAX	29.3	47.3	55.2	101	88.7	96.9	93.6	57.0	72.5	19.2	19.2	15.7	
(WY)	1976	1976	1987	1979	1976	1977	1987	1978	1982	1982	1991	1991	
MIN	.63	1.20	2.34	2.58	6.30	15.1	12.7	8.59	2.96	.68	.17	.27	
(WY)	1969	1966	1966	1966	1980	1989	1966	1965	1964	1966	1966	1965	

MERRIMACK RIVER BASIN

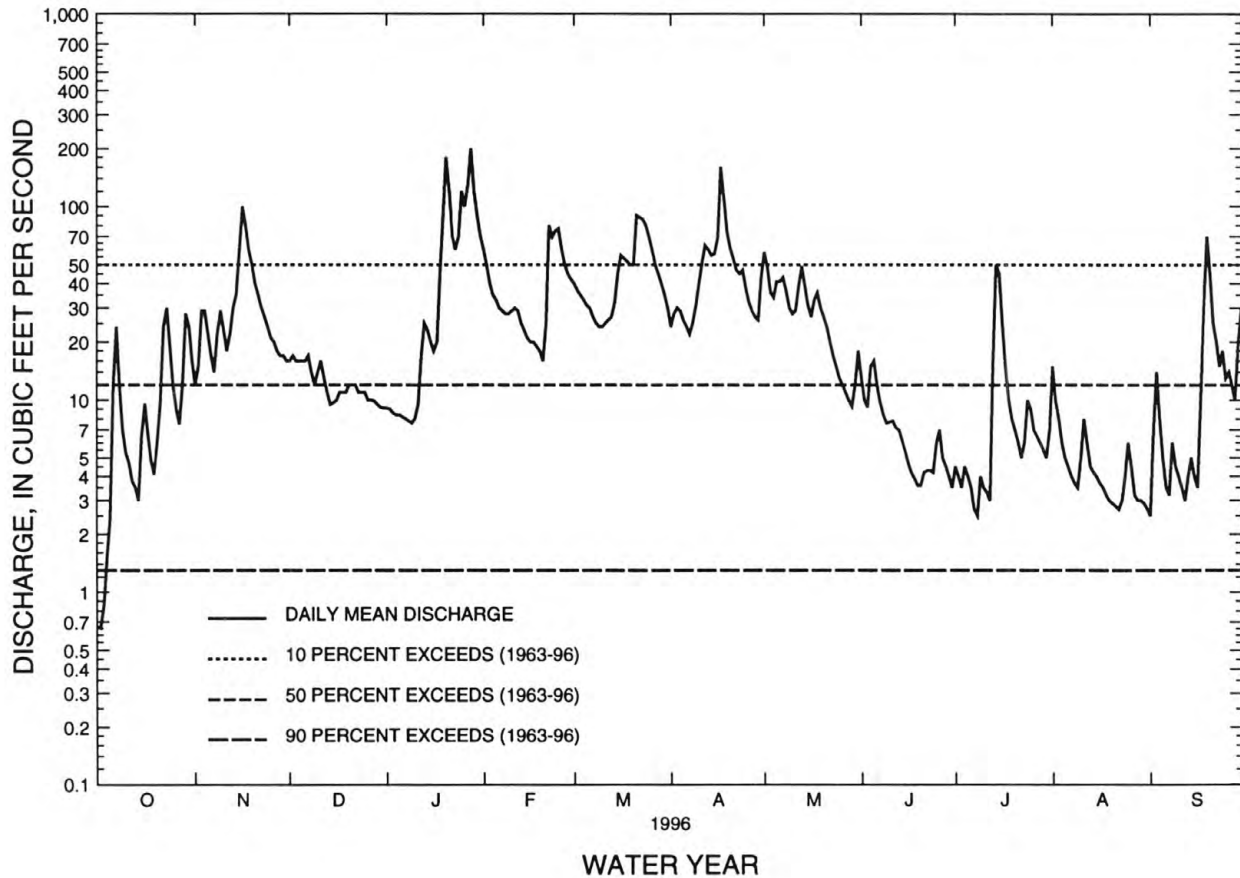
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01097300 NASHOBA BROOK NEAR ACTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1963 - 1996
ANNUAL TOTAL	5373.40	9196.57	
ANNUAL MEAN	14.7	25.1	20.6
HIGHEST ANNUAL MEAN			36.1
LOWEST ANNUAL MEAN			7.09
HIGHEST DAILY MEAN	110 Mar 10	200 Jan 28	560 Jan 26 1979
LOWEST DAILY MEAN	.01 Sep 8	.65 Oct 2	.01 Sep 8 1995
ANNUAL SEVEN-DAY MINIMUM	.02 Sep 3	3.0 Aug 17	.02 Sep 3 1995
INSTANTANEOUS PEAK FLOW		210 Jan 28	679 Jan 26 1979
INSTANTANEOUS PEAK STAGE			5.73 Jan 26 1979
INSTANTANEOUS LOW FLOW		.49 Oct 1	.01 Sep 4 1995
10 PERCENT EXCEEDS	33	60	50
50 PERCENT EXCEEDS	12	16	12
90 PERCENT EXCEEDS	.46	3.7	1.3

e Estimated

NASHOBA BROOK NEAR ACTON, MA 01097300



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 mi².

PERIOD OF RECORD.--November 1979 to current year.

Water-quality records: Water years 1994-95.

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

REMARKS.--Records good except those above 500 ft³/s and those for estimated daily discharges, which are fair. 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.--16 years (water years 1981-96), 196 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s, June 7, 1982, gage height, 13.30 ft; maximum gage height, 13.47 ft, Apr. 8, 1987; minimum daily, 6.0 ft³/s, June 26, 1993.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 893 ft³/s, Jan. 28, gage height, 10.42 ft; minimum daily, 7.9 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	222	221	140	641	433	216	483	145	49	122	18
2	8.0	253	225	142	592	419	273	451	138	42	102	18
3	8.0	240	218	155	557	410	253	428	144	40	96	18
4	9.7	231	198	152	515	380	228	442	166	38	91	16
5	24	219	183	147	480	380	214	420	157	33	86	16
6	288	210	192	e140	455	403	204	418	146	28	75	15
7	217	209	187	e145	429	404	204	414	133	25	64	17
8	185	234	181	e145	411	400	244	395	126	24	60	30
9	173	215	185	e155	415	383	252	391	133	42	56	20
10	161	171	205	157	414	369	325	397	137	40	85	20
11	133	164	187	146	418	364	373	386	141	26	76	18
12	87	252	176	149	416	350	421	440	145	23	75	17
13	86	213	170	172	363	334	459	397	162	299	79	36
14	81	235	170	154	314	350	468	317	157	427	75	45
15	137	483	174	151	296	368	451	283	157	373	66	29
16	99	439	169	146	282	368	577	211	150	407	61	23
17	86	400	173	155	279	356	779	233	147	361	58	48
18	82	366	169	167	265	345	760	218	142	307	53	333
19	79	346	167	309	253	331	691	206	137	265	50	322
20	76	321	181	613	243	388	606	193	149	251	46	269
21	130	305	176	506	292	385	554	183	149	229	27	228
22	244	300	172	473	582	369	514	178	141	191	19	200
23	173	284	166	453	586	342	512	160	130	134	20	193
24	223	274	165	465	583	314	481	130	110	154	40	113
25	214	265	165	596	566	294	446	100	98	128	34	120
26	204	260	165	604	512	281	421	93	67	127	25	156
27	208	254	149	640	466	264	402	82	52	121	22	147
28	265	242	145	875	456	249	378	57	45	111	25	140
29	259	225	143	830	464	240	382	38	40	107	24	185
30	240	221	141	781	---	232	448	140	38	102	20	137
31	232	---	140	709	---	223	---	166	---	94	19	---
TOTAL	4419.6	8053	5458	10572	12545	10728	12536	8450	3782	4598	1751	2947
MEAN	143	268	176	341	433	346	418	273	126	148	56.5	98.2
MAX	288	483	225	875	641	433	779	483	166	427	122	333
MIN	7.9	164	140	140	243	223	204	38	38	23	19	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1996, BY WATER YEAR (WY)

MEAN	106	183	248	220	255	335	374	209	166	73.0	90.8	69.3
MAX	346	385	485	471	480	757	920	340	739	148	192	147
(WY)	1990	1990	1993	1982	1990	1983	1987	1990	1982	1996	1989	1989
MIN	41.5	72.2	93.1	59.5	67.6	121	98.7	75.2	31.3	10.9	27.8	11.8
(WY)	1987	1985	1983	1981	1980	1985	1985	1986	1993	1993	1983	1995

MERRIMACK RIVER BASIN

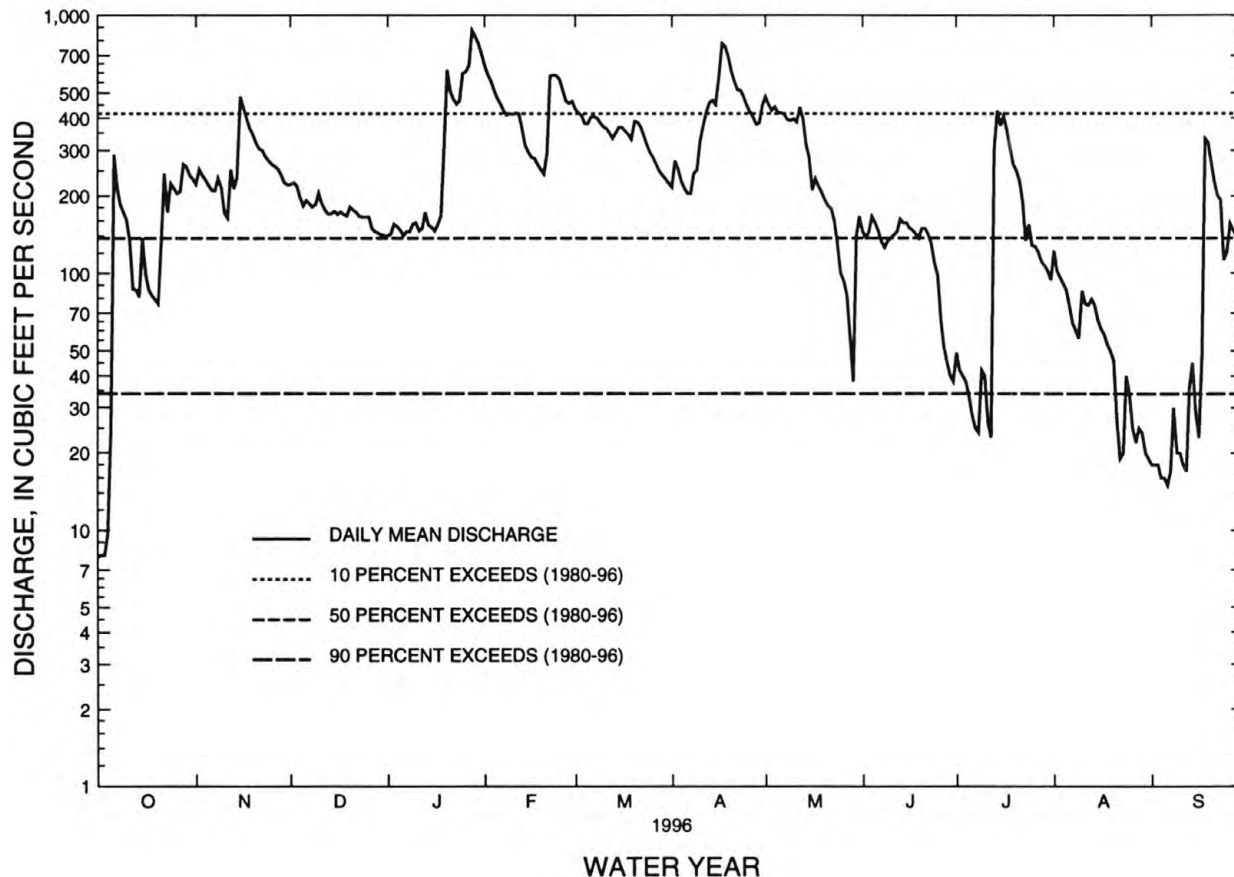
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01098530 SUDBURY RIVER AT SAXONVILLE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1980 - 1996	
ANNUAL TOTAL	59064.7		85839.6		196	
ANNUAL MEAN	162		235		253	1984
HIGHEST ANNUAL MEAN					96.6	1985
LOWEST ANNUAL MEAN					2250	Jun 7 1982
HIGHEST DAILY MEAN	528	Jan 2	875	Jan 28	6.0	Jun 26 1993
LOWEST DAILY MEAN	6.6	Sep 21	7.9	Oct 1	7.4	Sep 10 1995
ANNUAL SEVEN-DAY MINIMUM	7.4	Sep 10	17	Sep 1	2420	Jun 7 1982
INSTANTANEOUS PEAK FLOW			893	Jan 28	13.47	Apr 8 1987
INSTANTANEOUS PEAK STAGE			10.42	Jan 28		
INSTANTANEOUS LOW FLOW			7.7	Oct 1		
10 PERCENT EXCEEDS	320		457		416	
50 PERCENT EXCEEDS	156		191		137	
90 PERCENT EXCEEDS	9.1		37		34	

e Estimated

SUDBURY RIVER AT SAXONVILLE, MA 01098530



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 mi²; net above gage, 307 mi² - diversion as needed from 92.6 mi² 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. Low flow regulated by mills upstream. Daily discharge includes undiverted water from 92.6 mi² in basins of Sudbury River and Lake Cochituate. Prior to December 1961, diversion upstream for use of city of Lowell. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--60 years, 644 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft³/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 ft³/s, Sept. 29, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,940 ft³/s, Jan. 31; gage height, 7.85 ft; minimum daily, 60 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	656	787	456	2790	1870	1040	1640	577	225	446	107
2	62	695	761	455	2690	1800	1050	1660	575	223	475	100
3	60	735	735	415	2490	1710	1040	1650	561	220	431	118
4	60	727	724	352	2220	1610	1040	1660	572	213	443	111
5	66	724	705	e460	2150	1560	1030	1640	568	205	403	94
6	308	707	692	e460	2030	1440	1010	1600	552	179	375	100
7	427	690	672	e425	1860	1390	968	1590	545	121	330	94
8	521	735	644	421	1700	1250	972	1540	521	180	309	100
9	532	723	623	437	1620	1290	996	1470	467	167	262	100
10	508	714	641	416	1570	1280	1060	1430	490	130	250	114
11	454	706	627	422	1540	1250	1170	1380	517	186	252	107
12	401	804	593	434	1500	1230	1290	1430	542	160	254	100
13	354	779	562	436	1410	1210	1360	1420	537	498	249	110
14	294	796	529	394	1350	1210	1460	1400	512	951	243	121
15	338	1090	484	432	1260	1240	1540	1360	488	993	238	150
16	325	1180	527	433	1160	1300	1730	1310	472	1070	216	179
17	323	1260	489	440	1100	1350	2130	1300	426	1110	209	155
18	301	1320	517	462	1060	1380	2280	1240	390	1080	197	427
19	269	1340	509	596	1010	1380	2520	1210	386	1010	183	725
20	243	1300	499	993	967	1490	2610	1150	350	928	162	808
21	266	1260	495	1150	985	1560	2560	1100	375	846	164	866
22	499	1220	509	1310	1240	1600	2420	1030	401	763	149	868
23	556	1160	517	1470	1470	1600	2330	964	400	739	135	838
24	602	1090	515	1630	1800	1550	2170	891	398	747	130	815
25	605	1030	507	1920	1980	1510	2020	816	410	697	138	772
26	589	979	501	2000	2050	1450	1930	755	359	706	141	723
27	563	931	494	2140	2070	1360	1780	688	350	686	130	681
28	602	889	490	2660	2040	1290	1650	647	315	627	127	614
29	643	851	471	2790	1960	1220	1550	577	271	576	126	627
30	653	816	469	2900	---	1160	1580	558	234	541	129	577
31	660	---	462	2900	---	1100	---	576	---	500	115	---
TOTAL	12149	27907	17750	32209	49072	43640	48286	37682	13561	17277	7411	11301
MEAN	392	930	573	1039	1692	1408	1610	1216	452	557	239	377
MAX	660	1340	787	2900	2790	1870	2610	1660	577	1110	475	868
MIN	60	656	462	352	967	1100	968	558	234	121	115	94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1996, BY WATER YEAR (WY)

	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
MEAN	314	529	706	729	857	1259	1302	807	510	263	239	238	1257	1866	1587	1996	1856	2510	3149	1599	2502	1512	1403	1694	1956	1956	1984	1979	1970	1983	1987	1954	1982	1938	1955	1954	38.3	86.9	133	150	230	479	377	283	116	50.0	33.1	25.4	1942	1966	1966	1981	1980	1989	1966	1941	1964	1949	1966	1957

MERRIMACK RIVER BASIN

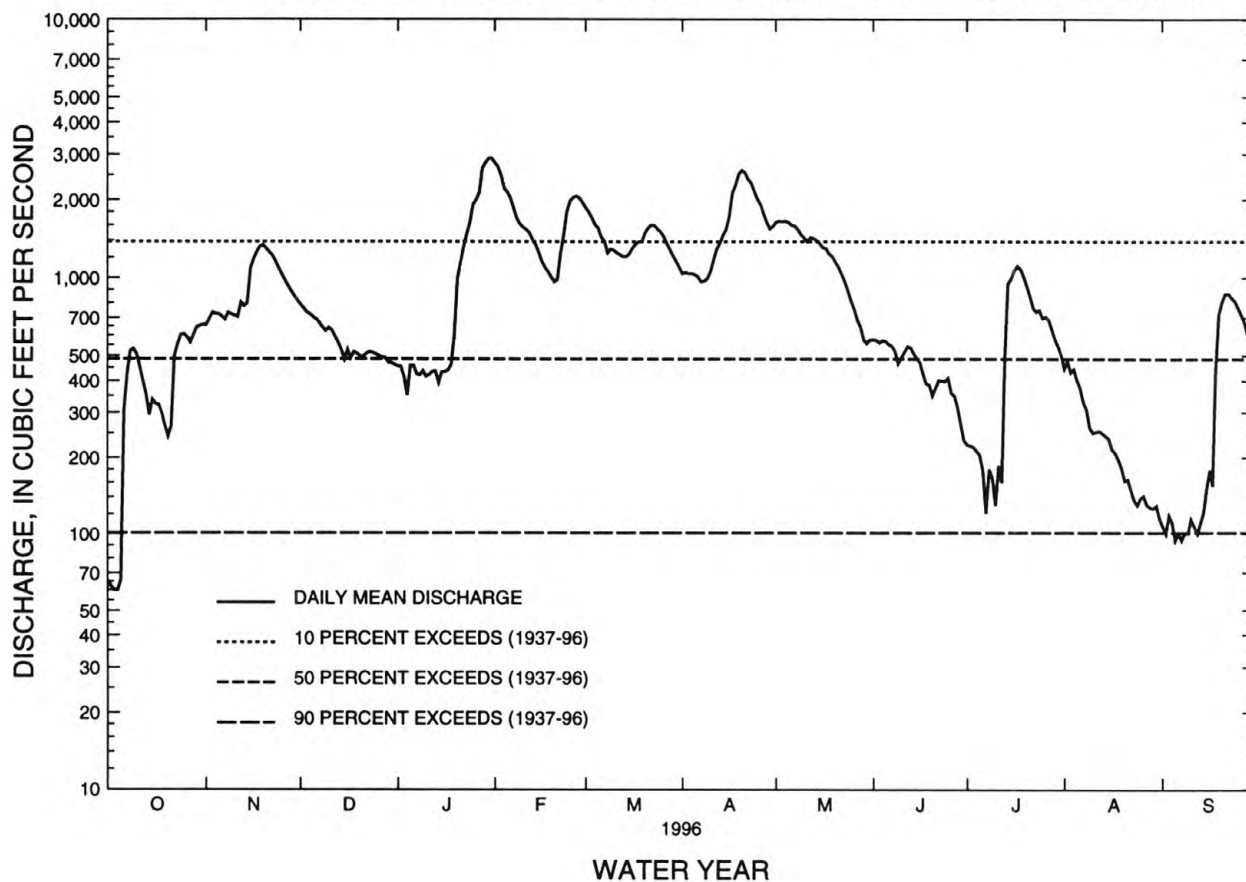
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01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1937 - 1996	
ANNUAL TOTAL	204224		318245		645	
ANNUAL MEAN	560		870		1112	
HIGHEST ANNUAL MEAN					242	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	1520	Jan 24	2900	Jan 30	5340	Jan 28 1979
LOWEST DAILY MEAN	22	Sep 9	60	Oct 3	4.0	Sep 29 1957
ANNUAL SEVEN-DAY MINIMUM	23	Sep 9	101	Sep 5	16	Sep 26 1957
INSTANTANEOUS PEAK FLOW			2940	Jan 31	5410	Jan 28 1979
INSTANTANEOUS PEAK STAGE			7.85	Jan 31	9.60	Jan 28 1979
INSTANTANEOUS LOW FLOW			45	Oct 5		
10 PERCENT EXCEEDS	1220		1670		1380	
50 PERCENT EXCEEDS	522		691		486	
90 PERCENT EXCEEDS	66		166		101	

e Estimated

CONCORD RIVER BL RIVER MEADOW BR, AT LOWELL, MA 01099500



MERRIMACK RIVER BASIN

01100000 MERRIMACK RIVER BELOW CONCORD RIVER AT LOWELL, MA

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 mi²; net above gage, 4,425 mi² - excludes 210 mi² for use of Boston metropolitan district and city of Worcester.

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

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 good except those for estimated daily discharges, which are fair. Daily discharge includes water released from 210 mi² in basins of Sudbury and Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnepesaukee, Winnisquam, and other lakes and reservoirs upstream. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--73 years, 7,665 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft³/s, Mar. 20, 1936, gage height, 68.4 ft, from floodmarks; minimum daily, 199 ft³/s, Sept. 23, 1923.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 54,800 ft³/s, Apr. 18; gage height, 53.05 ft; minimum daily, 847 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	874	20300	8200	5390	28300	19100	11400	27500	7720	4450	4740	1290
2	894	16700	8760	5330	23000	17400	11400	31100	7140	4070	4660	1150
3	944	16900	8270	4960	18800	15300	12600	31800	7000	4280	4850	2070
4	847	18600	8250	4210	16000	14000	13500	30600	7140	3410	4710	1750
5	1680	17600	7900	e4800	13500	13300	13000	28100	6320	4120	6200	2480
6	3860	15000	6190	e5800	e12500	11900	12000	26700	7080	5670	3370	1900
7	4790	12800	7760	e4800	e12000	11700	11100	24800	5580	6120	2870	1190
8	5140	12400	6970	e4700	11800	11200	11000	22000	6210	4730	3490	1430
9	4380	13100	6410	e5400	11900	10500	11500	19500	6080	4110	2950	1450
10	3500	13500	6880	e5000	12200	10600	12100	18000	7450	4100	3200	1280
11	3300	12500	6580	e5100	11000	10500	13400	18900	7410	3720	2950	1260
12	2470	12400	6300	e5100	11300	9990	14400	25600	7440	3320	2750	1220
13	2610	21000	6240	e4800	9520	10100	15400	37600	7130	5740	2840	1290
14	2510	29800	5850	5440	e9100	10200	16500	39000	6440	11800	2560	1190
15	3860	31000	6100	e5200	e8500	10600	18900	34100	7260	22000	2510	1200
16	4210	32100	6400	e5000	e8000	12100	21600	27800	7380	22900	2280	1610
17	4770	31900	6540	e4700	e7700	13300	42900	23800	5610	21100	1820	2720
18	3620	27800	6450	e4800	e7800	13400	52600	21600	3860	18300	2350	3310
19	3380	22800	5870	7130	e7700	12600	44800	20000	4050	14000	2140	3800
20	3070	19600	5960	13600	8030	13200	39100	19600	3710	13100	1870	3850
21	3330	17300	6680	29200	9500	16700	34900	20000	3780	11300	1710	3230
22	6210	15500	5910	33400	13700	17800	32800	18300	4050	10600	1550	3710
23	17400	14000	6160	27100	21300	17100	33900	16000	4370	10000	1510	3030
24	23300	13300	6140	22800	26400	15800	35200	13800	5480	8370	1510	3170
25	16300	12400	5900	24100	28500	13900	36300	12300	6100	6610	1450	3240
26	11500	11700	5760	26500	29300	13100	35600	10800	5220	4310	1440	3180
27	7610	10000	5680	27800	26300	13900	33300	9480	5150	5960	1350	2650
28	10800	10600	5630	36200	22500	14800	30400	8790	4810	8590	1300	2050
29	18000	10300	5290	42500	20300	14300	29500	8020	4200	7820	1330	2530
30	26900	9190	5350	39700	---	13100	28000	6770	3850	6750	1240	2090
31	23200	---	5490	33800	---	12100	---	7000	---	5590	1280	---
TOTAL	225259	522090	201870	454360	446450	413590	729100	659360	175020	266940	80780	66320
MEAN	7266	17400	6512	14660	15390	13340	24300	21270	5834	8611	2606	2211
MAX	26900	32100	8760	42500	29300	19100	52600	39000	7720	22900	6200	3850
MIN	847	9190	5290	4210	7700	9990	11000	6770	3710	3320	1240	1150

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1996, BY WATER YEAR (WY)

	MEAN	4081	6589	7548	7076	7466	12840	19350	11700	6209	3361	2836	2968
MAX	12730	17690	19530	18530	18400	45780	37440	24770	23660	14520	11110	19650	
(WY)	1978	1928	1984	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	

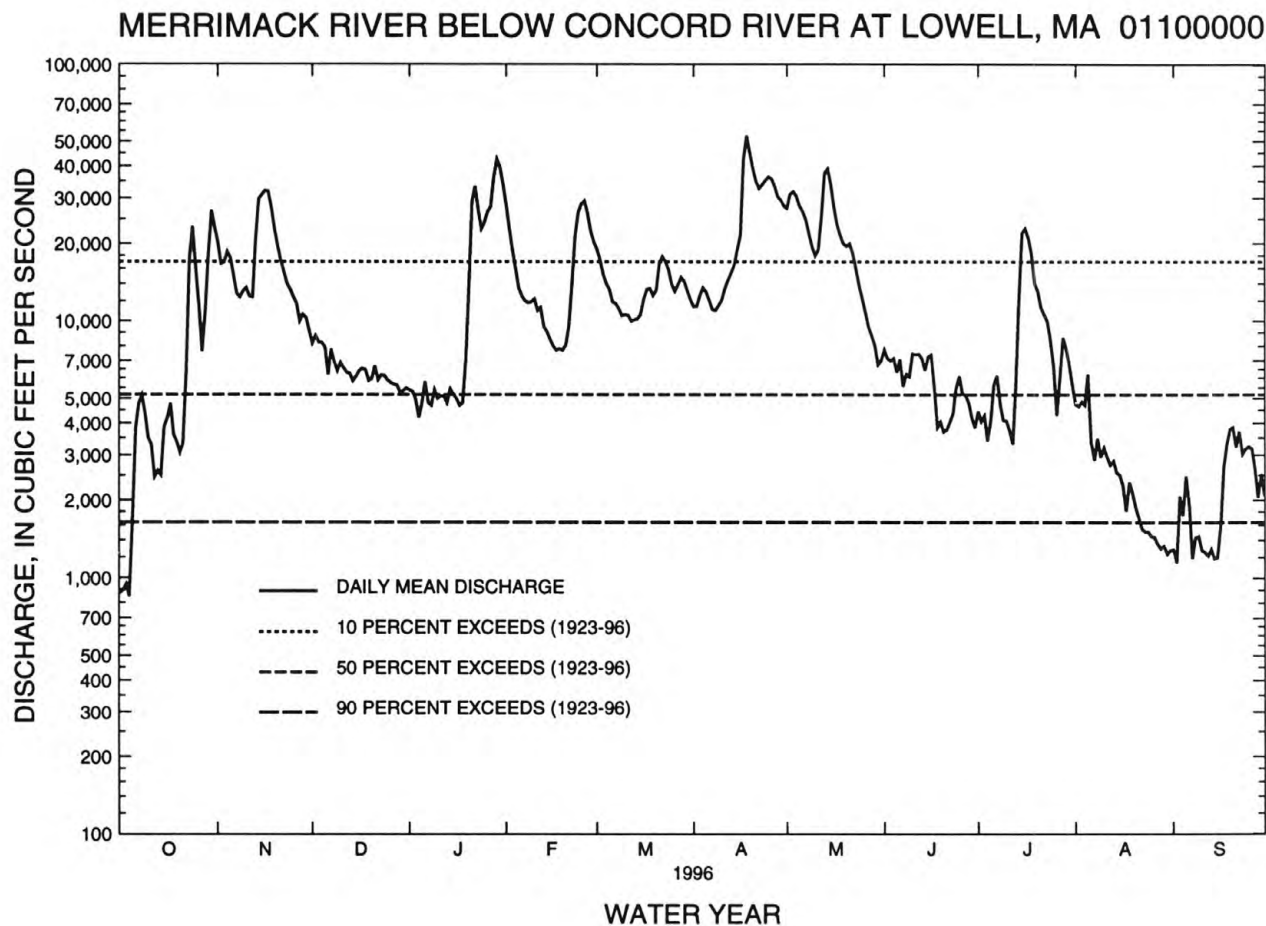
MERRIMACK RIVER BASIN

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

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1923 - 1996	
ANNUAL TOTAL	2526867		4241139		7666	
ANNUAL MEAN	6923		11590		12490	
HIGHEST ANNUAL MEAN					3068	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	32100	Nov 16	52600	Apr 18	161000	Mar 20 1936
LOWEST DAILY MEAN	507	Sep 16	847	Oct 4	199	Sep 23 1923
ANNUAL SEVEN-DAY MINIMUM	581	Sep 12	1270	Sep 9	581	Sep 12 1995
INSTANTANEOUS PEAK FLOW			54800	Apr 18	173000	Mar 20 1936
INSTANTANEOUS PEAK STAGE			53.05	Apr 18	68.40	Mar 20 1936
INSTANTANEOUS LOW FLOW			413	Aug 24		
10 PERCENT EXCEEDS	15600		27800		17000	
50 PERCENT EXCEEDS	5910		7860		5160	
90 PERCENT EXCEEDS	1040		2240		1640	

e Estimated



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 Air Force Base, and 1.6 mi south of Bedford.

DRAINAGE AREA.--2.09 mi².

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

REMARKS.--Records fair except those above 100 ft³/s, which are poor.

AVERAGE DISCHARGE.--1 year, 4.62 ft³/s, 30.05 in/yr.

EXTREMES FOR PERIOD OCTOBER 1995 TO SEPTEMBER 1996.--Peak discharge greater than base discharge of 150 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	1945	4.49	197	July 13	1645	5.34	344
July 9	0435	3.85	194	Sept. 18	0820	*6.03	*365

Minimum discharge, 0.76 ft³/s, Oct. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.93	2.2	2.5	1.9	4.7	4.6	3.6	6.2	2.4	1.9	3.0	1.4
2	.88	9.6	2.2	2.0	4.5	4.5	9.0	4.0	2.3	1.6	2.5	2.2
3	.84	3.4	2.4	2.1	4.4	4.7	4.0	4.5	3.6	1.7	2.3	1.6
4	3.4	2.8	2.3	1.9	4.1	4.1	3.5	5.1	2.7	1.8	2.1	1.4
5	10	2.5	2.2	1.8	3.9	4.9	3.2	3.9	2.4	1.6	2.0	1.4
6	23	2.4	2.3	1.6	3.8	5.5	3.1	5.4	2.3	1.4	1.9	1.4
7	1.7	7.2	2.1	1.6	3.8	4.4	3.7	3.9	2.2	1.5	1.9	5.5
8	1.4	5.2	2.1	1.7	4.2	4.4	6.1	3.6	2.7	1.5	1.8	3.3
9	1.4	2.8	3.8	1.7	6.8	4.1	4.4	3.4	2.2	16	1.8	1.6
10	1.5	2.6	3.5	1.6	4.4	4.0	7.4	4.2	2.3	2.2	4.8	1.9
11	1.5	2.6	2.2	1.6	5.0	4.3	10	4.4	2.1	1.8	1.8	1.5
12	1.5	16	2.1	1.7	4.1	4.6	7.1	7.2	2.0	1.7	1.6	1.6
13	1.4	3.4	2.0	2.0	3.6	5.1	5.8	3.8	1.9	81	1.9	5.9
14	1.4	16	2.0	1.9	3.5	6.0	7.4	3.4	1.8	16	1.7	1.9
15	5.8	27	2.0	1.8	3.5	7.9	5.0	3.3	1.8	4.7	1.6	1.8
16	1.5	4.2	2.0	1.6	3.4	8.0	35	5.8	1.8	4.7	1.6	1.7
17	1.7	2.9	2.1	2.7	3.5	6.7	14	5.5	1.8	3.7	1.6	6.7
18	1.7	2.6	2.0	2.7	3.4	6.0	7.3	3.7	1.7	3.3	1.5	72
19	1.7	3.0	2.0	39	3.2	6.3	5.8	3.4	1.7	3.5	1.5	6.3
20	1.7	2.4	2.1	18	3.6	17	5.3	3.3	2.8	3.4	1.5	3.1
21	22	2.4	2.1	5.1	15	7.1	4.9	3.6	3.3	3.1	1.5	2.8
22	5.7	2.2	2.1	4.4	e13	5.7	4.5	3.0	2.0	2.8	1.4	4.7
23	2.4	2.1	2.0	4.1	e7.0	5.0	6.5	2.9	1.8	13	1.7	3.7
24	2.0	2.1	2.0	16	e8.0	4.7	4.4	2.8	1.6	3.8	2.9	2.8
25	2.0	2.0	2.0	9.1	e17	4.7	4.0	2.7	4.5	3.0	1.6	3.2
26	1.9	2.0	2.0	5.0	e7.0	4.8	4.0	2.6	1.6	7.3	1.4	2.7
27	1.9	2.1	2.0	37	e5.5	4.2	3.7	2.6	1.6	3.0	1.4	2.8
28	9.8	2.0	2.0	21	5.7	4.0	3.4	2.6	1.9	2.6	1.8	2.7
29	2.7	2.2	1.9	7.1	5.0	4.0	11	2.5	1.7	2.5	1.5	8.7
30	2.3	2.1	1.9	6.0	---	3.7	5.4	6.2	2.8	2.5	e1.7	3.3
31	2.2	---	1.9	5.3	---	3.6	---	3.3	---	6.6	1.4	---
TOTAL	119.85	142.0	67.8	211.0	164.6	168.6	202.5	122.8	67.3	205.2	58.7	161.6
MEAN	3.87	4.73	2.19	6.81	5.68	5.44	6.75	3.96	2.24	6.62	1.89	5.39
MAX	23	27	3.8	39	17	17	35	7.2	4.5	81	4.8	72
MIN	.84	2.0	1.9	1.6	3.2	3.6	3.1	2.5	1.6	1.4	1.4	1.4
CFSM	1.85	2.26	1.05	3.26	2.72	2.60	3.23	1.90	1.07	3.17	.91	2.58
IN.	2.13	2.53	1.21	3.76	2.93	3.00	3.60	2.19	1.20	3.65	1.04	2.88

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MERRIMACK RIVER BASIN

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

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1995 - 1996

ANNUAL TOTAL	1691.95		
ANNUAL MEAN	4.62	4.62	
HIGHEST ANNUAL MEAN		4.62	1996
LOWEST ANNUAL MEAN		4.62	1996
HIGHEST DAILY MEAN	81	81	Jul 13 1996
LOWEST DAILY MEAN	.84	.84	Oct 3 1995
ANNUAL SEVEN-DAY MINIMUM	1.4	1.4	Oct 8 1995
INSTANTANEOUS PEAK FLOW	365	365	Sep 18 1996
INSTANTANEOUS PEAK STAGE	6.03	6.03	Sep 18 1996
INSTANTANEOUS LOW FLOW	.76	.76	Oct 3 1995
ANNUAL RUNOFF (CFSM)	2.21	2.21	
ANNUAL RUNOFF (INCHES)	30.12	30.05	
10 PERCENT EXCEEDS	7.2	7.2	
50 PERCENT EXCEEDS	2.8	2.8	
90 PERCENT EXCEEDS	1.6	1.6	

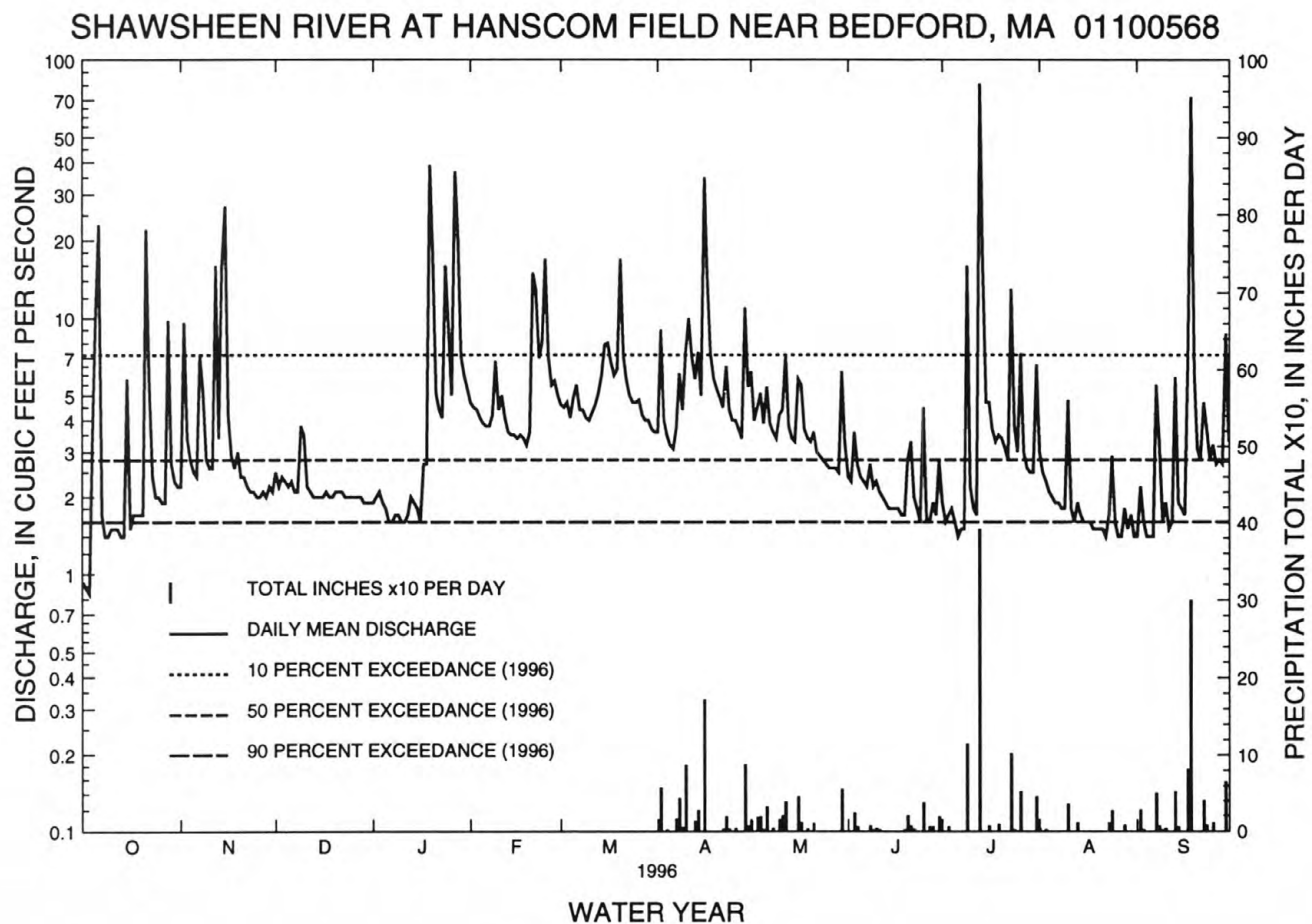
e Estimated

PRECIPITATION TOTAL (INCHES/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY SUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	.00	.13	.00	.00	.03	.00
2	---	---	---	---	---	---	.57	.00	.00	.00	.00	.27
3	---	---	---	---	---	---	.00	.17	.23	.05	.01	.01
4	---	---	---	---	---	---	.01	.18	.05	.00	.00	.00
5	---	---	---	---	---	---	.00	.01	.00	.00	.00	.00
6	---	---	---	---	---	---	.00	.31	.00	.00	.00	.00
7	---	---	---	---	---	---	.15	.00	.00	.00	.00	.50
8	---	---	---	---	---	---	.43	.03	.06	.00	.00	.06
9	---	---	---	---	---	---	.04	.00	.01	1.14	.00	.01
10	---	---	---	---	---	---	.86	.14	.03	.00	.35	.03
11	---	---	---	---	---	---	.00	.19	.01	.00	.00	.00
12	---	---	---	---	---	---	.00	.38	.00	.00	.00	.00
13	---	---	---	---	---	---	.12	.00	.00	3.91	.10	.52
14	---	---	---	---	---	---	.26	.00	.00	.00	.00	.05
15	---	---	---	---	---	---	.00	.00	.00	.00	.00	.00
16	---	---	---	---	---	---	1.71	.45	.00	.06	.00	.00
17	---	---	---	---	---	---	.00	.10	.00	.00	.00	.81
18	---	---	---	---	---	---	.00	.00	.00	.00	.00	2.99
19	---	---	---	---	---	---	.00	.02	.01	.08	.00	.00
20	---	---	---	---	---	---	.00	.00	.19	.00	.00	.00
21	---	---	---	---	---	---	.00	.09	.06	.00	.00	.00
22	---	---	---	---	---	---	.02	.00	.02	.00	.00	.40
23	---	---	---	---	---	---	.18	.00	.00	1.01	.10	.07
24	---	---	---	---	---	---	.02	.00	.00	.01	.26	.00
25	---	---	---	---	---	---	.00	.00	.37	.00	.00	.10
26	---	---	---	---	---	---	.03	.00	.00	.52	.00	.00
27	---	---	---	---	---	---	.00	.00	.05	.00	.00	.00
28	---	---	---	---	---	---	.00	.00	.05	.00	.07	.00
29	---	---	---	---	---	---	.87	.00	.00	.00	.00	.65
30	---	---	---	---	---	.00	.06	.55	.18	.00	.00	.00
31	---	---	---	---	---	.00	---	.00	---	.45	.00	---
TOTAL	---	---	---	---	---	---	5.33	2.75	1.32	7.23	0.92	6.47

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



MERRIMACK RIVER BASIN

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--September 1995 to September 1996.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300) (00301)	COLI- FORM, DIS- SOLVED (COLS. PER 100 ML) (31501)	
SEP 26...	1015	1.5	178	5.7	15.5	15.0	2.3	761	8.8	87	14280
DATE	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM AD- SORP- TION (MG/L PERCENT RATIO) (00932) (00931)	SODIUM AD- SORP- TION (MG/L AS K) (00935)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)
SEP 26...	K2100	8800	32	10	1.7	17	52	1	2.2	19	0
DATE	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	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)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
SEP 26...	0	12	32	<0.10	4.9	102	91	0.270	<0.010	0.270	0.060
DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
SEP 26...	0.08	0.24	0.30	<0.20	0.57	0.040	0.010	0.020	240	2	12

MERRIMACK RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
SEP 26...	<0.50	30	<1	<1.0	<1	<5.0	<3.0	3	<10	760	230
DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)
SEP 26...	3	<10	<4	190	180	<0.10	<1	<10	2	<10	<1
DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)	
SEP 26...	<1	<1.0	59	<6	30	18	3.5	<1	7	47	

MERRIMACK RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./100 ML) (31625)	HARD-NESS TOTAL (MG/L AS CAC03) (00900)	
APR 16...	1015	52	143	6.7	4.5	6.0	31	741	11.4	94	560	19	
SEP 04...	1100	1.7	410	6.8	26.5	18.0	1.4	762	7.0	74	410	74	
DATE		CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	SODIUM AD-SORP-TION RATIO PERCENT (00932)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3 CO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	HY-DROXIDE WATER DIS IT FIELD (MG/L AS OH) (71834)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3 AS SO4) (39086)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	
APR 16...	6.0	0.86	17	65	2	1.0	11	0	0	9	6.5	29	
SEP 04...	23	4.1	46	56	2	4.2	29	0	0	24	24	81	
DATE		FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	NITRO-GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO-GEN, AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
APR 16...	<0.10	2.2	44	70	0.250	<0.010	0.250	0.110	0.14	0.59	0.70	0.20	
SEP 04...	0.30	12	227	213	0.800	0.030	0.830	0.110	0.14	0.19	0.30	0.20	
DATE		NITRO-GEN, TOTAL (MG/L AS N) (00600)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	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)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	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)
APR 16...	0.95	0.210	<0.010	<0.010	50	<1.0	<1	7.0	<1.0	<1.0	<1.0	<1.0	
SEP 04...	1.1	0.020	<0.010	0.010	17	<1.0	3	26	<1.0	<1.0	<1.0	<1.0	

MERRIMACK RIVER BASIN

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	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)	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)
APR 16...	2.0	140	1.0	71	<0.10	<1.0	1.0	<1	<1.0	29	<1.0	5.8
SEP 04...	1.0	440	<1.0	232	<0.10	<1.0	3.0	<1	<1.0	7.0	<1.0	2.9
DATE	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L) (00556)	DI- CHLORO- BROMO- METHANE TOTAL (UG/L) (32101)	CARBON- TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	1,2-DI- CHLORO- ETHANE TOTAL (UG/L) (32103)	BROMO- FORM TOTAL (UG/L) (32104)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- FORM TOTAL (UG/L) (32106)	TOLUENE TOTAL (UG/L) (34010)	BENZENE TOTAL (UG/L) (34030)	CHLORO- BENZENE TOTAL (UG/L) (34301)	ETHYL- BENZENE TOTAL (UG/L) (34371)
APR 16...	2.2	<1	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
SEP 04...	0.20	<1	0.200	<0.200	<0.200	<0.200	<0.200	1.60	<0.200	<0.200	<0.200	<0.200
DATE	METHYL- ENE CHLO- RIDE TOTAL (UG/L) (34423)	TETRA- CHLORO- ETHYL- ENE TOTAL (UG/L) (34475)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	1,1-DI- CHLORO- ETHANE TOTAL (UG/L) (34496)	1,1-DI- CHLORO- ETHYL- ENE TOTAL (UG/L) (34501)	1,1,1- TRI- CHLORO- ETHANE TOTAL (UG/L) (34506)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34536)	1,2-DI- CHLORO- PROPANE TOTAL (UG/L) (34541)	1,2- TRANSDI CHLORO- ETHENE TOTAL (UG/L) (34546)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (UG/L) (34571)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)
APR 16...	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
SEP 04...	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.200	<0.200	<0.200	<0.200	<0.200	<0.200
DATE	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	CIS-1,2 -DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	STYRENE TOTAL (UG/L) (77128)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	METHYL TERT- BUTYL ETHER WAT UNF REC (UG/L) (78032)	XYLENE WATER UNFLTRD REC (UG/L) (81551)	ETHANE 12DICL SURROG VOC UNFLTRD REC (99832)	TOLUENE D8 SURROG VOC UNFLTRD REC (99833)	BENZENE 14BRFL- SURROG VOC UNFLTRD REC (99834)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
APR 16...	<0.200	0.400	<0.200	<0.200	<0.200	0.500	<0.200	114	100	97.0	223	68
SEP 04...	<0.200	1.10	1.60	<0.200	<0.200	0.600	<0.200	114	106	97.0	7	25



Hydrologic Technician Charles Leighton measures flash flood, July 13, 1996, at Shawsheen River at Hanscom Field near Bedford, Massachusetts.

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 mi².

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 poor. Diversion upstream at times each year since 1973 for municipal supply of Burlington; see table below for figures of diversion.

AVERAGE DISCHARGE.--32 years (water years 1965-96), 58.6 ft³/s.

EXTREMES FOR PERIOD OF RECORD.-Maximum discharge, 1,660 ft³/s, Jan. 26, 1979, gage height, 9.85 ft, mean of recorded surge; 10.00 ft, maximum recorded surge; and about 10.4 ft in river, based on outside gage readings at slightly lower stages. Minimum discharge, 0.70 ft³/s, Aug. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 21	unknown	e*520	--	Apr. 17	1515	411	6.05
Jan. 28	2045	455	6.24	July 15	0545	329	5.56

e Estimated

Minimum discharge, 3.6 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	30	35	21	142	89	55	120	64	14	36	7.5
2	4.3	38	42	21	116	79	65	120	40	13	43	7.9
3	4.0	70	47	e22	113	72	84	98	26	11	39	13
4	4.1	83	47	e24	e110	e71	89	84	33	11	32	12
5	8.0	81	47	22	e94	66	68	85	34	9.4	27	9.9
6	51	57	45	e18	82	64	51	88	33	8.0	22	8.6
7	106	33	45	16	72	71	45	91	30	6.6	19	7.8
8	112	57	40	16	69	e71	54	87	27	7.1	18	14
9	76	77	33	16	74	e66	69	76	27	17	17	17
10	27	81	e53	18	85	e64	90	67	27	36	26	13
11	11	61	e67	20	93	e68	126	66	28	35	25	11
12	6.7	61	63	18	96	e66	169	75	26	23	19	9.9
13	7.4	89	42	18	e92	68	169	94	24	52	17	11
14	8.6	105	24	20	e82	75	143	96	23	212	18	20
15	20	156	24	24	64	87	135	78	21	306	17	19
16	26	269	25	24	54	106	143	62	20	198	15	12
17	11	215	26	24	51	134	356	73	18	110	15	9.2
18	7.5	148	27	30	49	127	301	87	17	66	14	61
19	5.5	110	25	62	46	114	188	87	15	40	14	241
20	4.4	92	24	e240	46	122	144	73	9.6	31	13	242
21	6.5	82	28	e480	58	183	123	59	15	26	13	145
22	71	73	26	e330	131	163	109	51	28	21	12	78
23	125	63	25	205	198	132	102	42	23	25	13	52
24	119	54	25	163	176	111	95	35	18	58	15	42
25	87	45	27	204	179	98	89	30	31	67	20	38
26	42	41	27	238	165	88	80	26	32	70	15	31
27	22	39	23	194	136	82	70	24	20	83	11	23
28	31	37	22	370	116	75	63	22	17	74	8.8	17
29	64	36	24	372	104	70	58	21	15	56	9.2	25
30	68	36	24	234	---	66	78	33	12	37	8.7	35
31	52	---	20	171	---	61	---	60	---	28	8.0	---
TOTAL	1192.5	2419	1052	3635	2893	2809	3411	2110	753.6	1751.1	579.7	1232.8
MEAN	38.5	80.6	33.9	117	99.8	90.6	114	68.1	25.1	56.5	18.7	41.1
MAX	125	269	67	480	198	183	356	120	64	306	43	242
MIN	4.0	30	20	16	46	61	45	21	9.6	6.6	8.0	7.5
(+)	5.57	7.66	2.26	2.93	0	3.50	8.26	10.7	5.39	5.41	0	7.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

MEAN	29.7	54.7	66.8	73.2	81.8	117	102	63.1	45.6	25.0	22.6	21.7
MAX	95.3	128	153	289	208	279	269	130	251	72.4	56.9	56.4
(WY)	1976	1976	1987	1979	1984	1983	1987	1967	1982	1973	1976	1991
MIN	6.22	7.82	13.6	9.70	12.4	41.8	38.3	29.5	13.0	3.81	1.74	4.46
(WY)	1969	1966	1966	1980	1980	1989	1966	1985	1964	1965	1966	1965

MERRIMACK RIVER BASIN

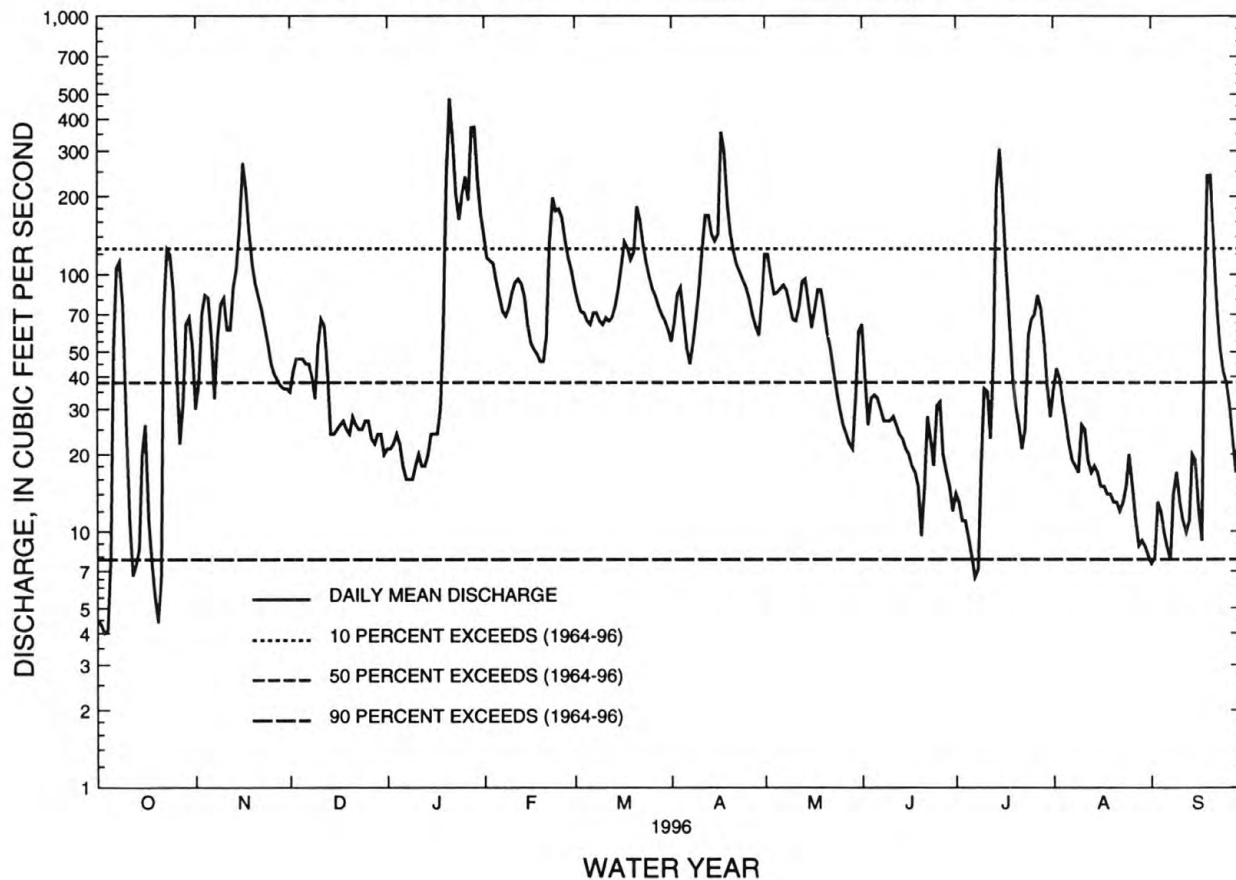
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01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1964 - 1996
ANNUAL TOTAL	15583.38	23838.7	
ANNUAL MEAN	42.7	65.1	58.6
HIGHEST ANNUAL MEAN			107 1984
LOWEST ANNUAL MEAN			28.2 1966
HIGHEST DAILY MEAN	269 Nov 16	480 Jan 21	1580 Jan 26 1979
LOWEST DAILY MEAN	.95 Sep 3	4.0 Oct 3	.80 Jul 3 1993
ANNUAL SEVEN-DAY MINIMUM	1.0 Sep 2	8.7 Aug 27	1.0 Sep 2 1995
INSTANTANEOUS PEAK FLOW		520 Jan 20	1660 Jan 26 1979
INSTANTANEOUS PEAK STAGE		6.50 Jan 20	9.85 Jan 26 1979
INSTANTANEOUS LOW FLOW		3.6 Oct 3	.70 Aug 19 1983
10 PERCENT EXCEEDS	88	142	126
50 PERCENT EXCEEDS	36	45	38
90 PERCENT EXCEEDS	3.5	12	7.8

e Estimated

SHAWSHEEN RIVER NEAR WILMINGTON, MA 01100600



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.

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

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

AVERAGE DISCHARGE.--51 years, 36.8 ft³/s, 23.46 in/yr.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 204 ft³/s, Jan. 29, gage height, 3.75 ft; minimum daily, 0.09 ft³/s, Oct. 12-14.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.16	6.3	37	21	e150	97	59	75	21	3.2	16	.77
2	e.14	11	37	21	133	88	59	74	20	2.8	15	.81
3	e.14	14	35	21	115	81	57	71	19	2.5	13	2.4
4	e.13	15	34	21	e100	75	55	69	18	4.3	12	2.1
5	e.13	14	33	21	e90	67	52	67	18	7.2	10	1.8
6	e.63	15	34	20	e80	63	49	66	16	7.5	7.4	1.4
7	e.24	16	33	22	e74	57	47	66	14	6.5	5.9	1.1
8	e.15	27	32	24	68	49	49	64	13	5.1	5.2	1.5
9	e.10	28	32	23	66	e49	50	61	13	4.3	6.5	1.8
10	e.10	27	42	21	65	e48	57	59	13	4.0	7.7	2.1
11	e.10	27	44	20	66	48	67	59	12	2.9	6.4	2.0
12	e.09	34	41	20	e66	47	77	62	11	2.3	5.2	1.8
13	e.09	36	37	23	e62	47	84	63	10	22	4.7	2.5
14	e.09	39	35	23	e56	49	88	63	10	46	4.2	3.2
15	e.61	85	35	23	53	54	88	61	9.6	63	3.5	2.8
16	e.64	112	34	23	e49	61	99	58	8.9	64	3.0	2.5
17	e.61	124	34	24	46	65	128	62	8.2	55	2.6	4.7
18	e.45	121	33	25	44	70	145	63	7.2	47	2.2	31
19	e.45	116	31	33	41	77	142	64	6.3	41	2.0	58
20	.28	107	31	46	39	95	132	62	5.7	34	1.7	77
21	1.3	97	30	49	47	112	122	58	5.5	26	1.6	77
22	8.2	88	29	53	69	119	111	54	5.3	21	1.5	72
23	7.3	79	28	61	95	114	111	49	5.4	19	1.4	68
24	6.6	71	28	82	114	106	107	44	5.2	23	1.4	61
25	5.4	63	27	111	124	98	102	39	6.3	22	1.3	54
26	4.4	55	26	121	126	94	95	35	6.6	24	1.2	46
27	4.0	49	25	136	119	86	88	32	5.6	25	1.1	40
28	7.0	44	25	184	113	79	81	29	4.9	23	1.0	37
29	12	41	23	201	105	73	75	26	3.8	21	.99	35
30	13	39	23	188	---	67	75	23	3.1	19	.94	32
31	8.5	---	22	171	---	63	---	23	---	17	.89	---
TOTAL	83.03	1600.3	990	1832	2375	2298	2551	1701	305.6	664.6	147.52	723.28
MEAN	2.68	53.3	31.9	59.1	81.9	74.1	85.0	54.9	10.2	21.4	4.76	24.1
MAX	13	124	44	201	150	119	145	75	21	64	16	77
MIN	.09	6.3	22	20	39	47	47	23	3.1	2.3	.89	.77
CFSM	.13	2.50	1.50	2.77	3.84	3.48	3.99	2.58	.48	1.01	.22	1.13
IN.	.15	2.79	1.73	3.20	4.15	4.01	4.46	2.97	.53	1.16	.26	1.23

MEAN	13.2	29.7	41.4	43.0	50.7	85.1	83.6	49.2	26.5	8.67	5.65	6.54
MAX	123	87.3	117	116	122	226	249	151	138	39.6	18.0	65.8
(WY)	1963	1973	1984	1958	1976	1983	1987	1983	1982	1972	1982	1954
MIN	.18	.92	1.74	2.98	5.25	33.6	25.2	19.1	4.25	.59	.13	.12
(WY)	1958	1966	1966	1966	1980	1989	1985	1985	1964	1995	1995	1995

PARKER RIVER BASIN

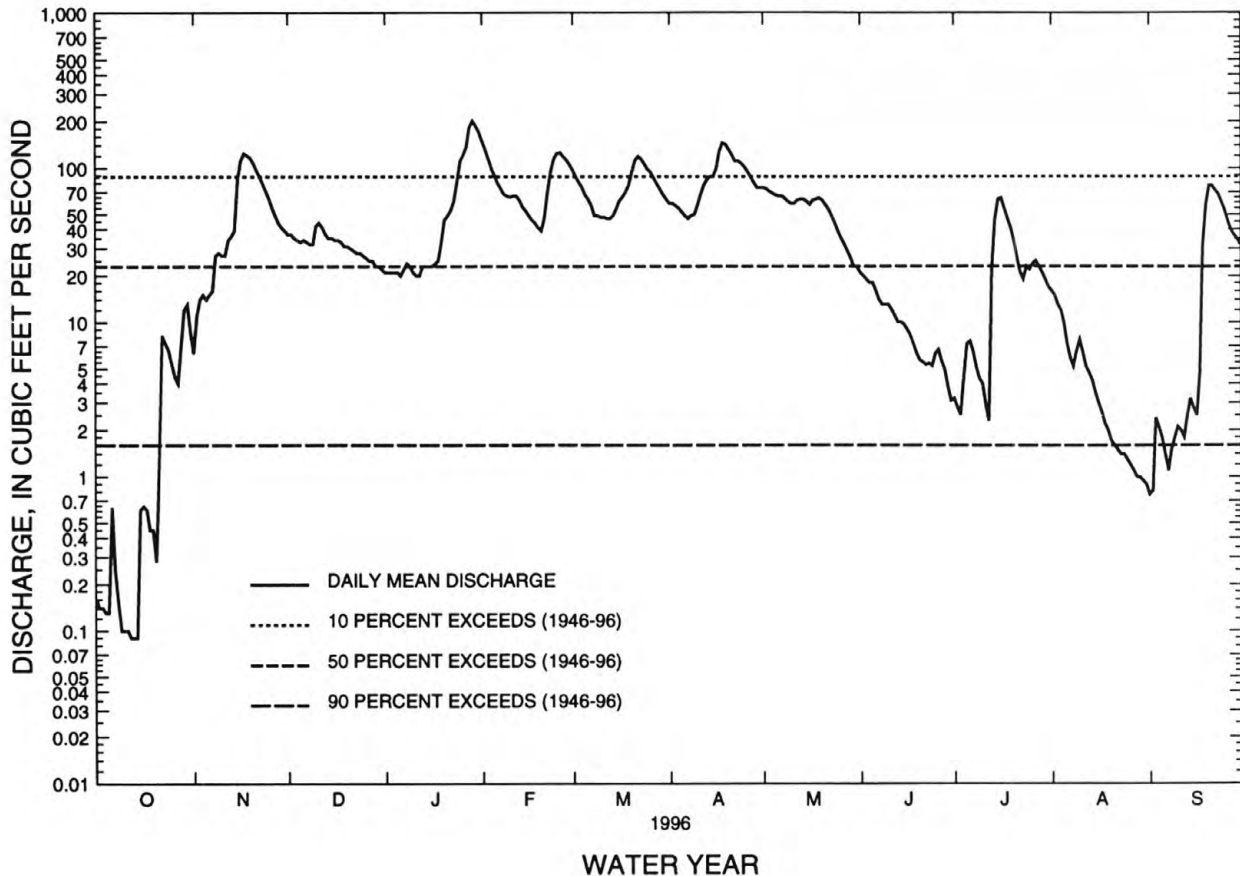
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01101000 PARKER RIVER AT BYFIELD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1946 - 1996
ANNUAL TOTAL	10372.60	15271.33	
ANNUAL MEAN	28.4	41.7	36.7
HIGHEST ANNUAL MEAN			64.8
LOWEST ANNUAL MEAN			13.2
HIGHEST DAILY MEAN	124 Nov 17	201 Jan 29	779 Apr 7 1987
LOWEST DAILY MEAN	.04 Sep 3	.09 Oct 12	.04 Sep 3 1995
ANNUAL SEVEN-DAY MINIMUM	.04 Sep 2	.10 Oct 8	.04 Sep 2 1995
INSTANTANEOUS PEAK FLOW		204 Jan 29	790 Apr 7 1987
INSTANTANEOUS PEAK STAGE		3.75 Jan 29	7.35 Apr 7 1987
INSTANTANEOUS LOW FLOW		.09 Oct 12	
ANNUAL RUNOFF (CFSM)	1.33	1.96	1.72
ANNUAL RUNOFF (INCHES)	18.12	26.67	23.43
10 PERCENT EXCEEDS	77	98	88
50 PERCENT EXCEEDS	25	32	23
90 PERCENT EXCEEDS	.11	1.6	1.6

e Estimated

PARKER RIVER AT BYFIELD, MA 01101000



IPSWICH RIVER BASIN

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA

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 mi².

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

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, which are poor. Diversions upstream for municipal supply of Reading, Lynn, and Peabody. Occasional regulation by mill upstream.

AVERAGE DISCHARGE.--58 years, 63.2 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft³/s, Apr. 7, 1987, gage height, 7.51 ft; minimum, 0.1 ft³/s, Sept. 24, Oct. 1, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 436 ft³/s, Jan. 28, gage height, 5.66 ft; minimum, 0.89 ft³/s, Oct. 1-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	42	72	20	275	162	94	124	42	10	35	1.6
2	.89	50	71	20	e250	145	97	116	38	9.6	34	2.4
3	.89	69	67	16	e220	130	99	108	35	8.6	28	9.3
4	1.3	64	64	16	e190	118	93	112	39	8.2	25	7.7
5	2.2	60	49	17	e170	111	89	121	38	7.2	22	5.3
6	27	58	47	14	e150	107	85	121	35	6.0	19	3.7
7	28	57	46	12	e140	101	82	128	31	5.1	18	3.2
8	13	82	42	12	e135	90	89	120	28	4.6	16	4.0
9	9.3	84	41	10	e130	90	101	112	27	5.2	15	5.1
10	9.0	76	61	10	e128	92	113	108	26	5.5	16	3.9
11	8.7	73	59	10	e130	87	151	106	25	4.1	15	3.2
12	8.3	90	47	11	e130	87	182	119	22	3.5	13	3.2
13	6.6	97	40	17	e120	91	180	121	20	32	12	3.5
14	3.5	96	34	20	e110	100	186	111	19	106	12	4.4
15	4.8	207	43	22	e100	112	187	103	17	74	11	4.6
16	11	203	29	31	e96	133	217	99	15	62	9.9	5.0
17	9.1	188	29	47	e90	140	334	116	14	59	9.3	8.6
18	6.8	184	30	50	e85	144	307	114	13	52	8.6	57
19	4.4	182	30	68	e82	142	288	107	11	44	7.9	90
20	3.9	171	29	150	e78	196	261	103	11	43	7.0	63
21	9.7	156	28	165	e100	218	231	98	11	37	6.2	59
22	48	142	29	151	e130	202	200	92	11	29	5.1	60
23	41	127	28	147	e170	189	187	83	11	28	4.6	63
24	31	114	28	177	e200	172	171	74	10	45	4.7	58
25	30	103	28	285	234	158	154	65	16	38	4.6	53
26	31	95	27	278	221	146	140	59	16	37	4.1	48
27	31	89	26	277	207	135	130	54	13	49	3.1	41
28	39	83	25	421	196	124	118	50	12	41	2.7	35
29	56	79	23	386	183	116	110	46	11	37	2.6	39
30	50	75	21	353	---	108	124	45	10	34	2.1	39
31	44	---	21	324	---	101	---	47	---	31	1.9	---
TOTAL	570.27	3196	1214	3537	4450	4047	4800	2982	627	955.6	375.4	783.7
MEAN	18.4	107	39.2	114	153	131	160	96.2	20.9	30.8	12.1	26.1
MAX	56	207	72	421	275	218	334	128	42	106	35	90
MIN	.89	42	21	10	78	87	82	45	10	3.5	1.9	1.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

	MEAN	26.8	51.2	68.6	70.4	84.3	151	141	81.1	44.7	18.7	12.9	15.1
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	.55	1.28	1.05	1.07	9.66	36.3	29.6	18.5	7.36	.74	.64	.26	
(WY)	1958	1966	1966	1966	1980	1989	1985	1965	1966	1966	1957	1957	

IPSWICH RIVER BASIN

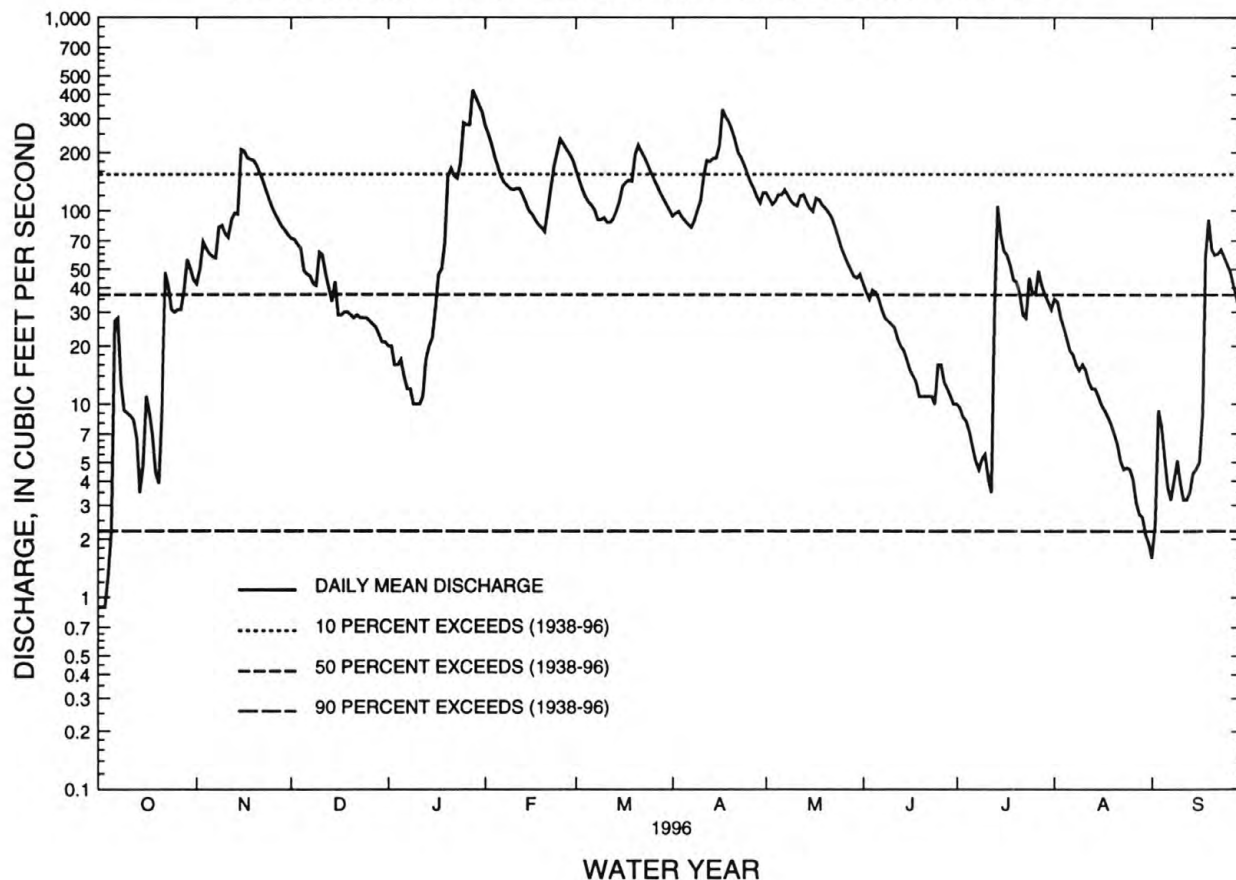
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01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1938 - 1996
ANNUAL TOTAL	18677.47	27537.97	
ANNUAL MEAN	51.2	75.2	63.2
HIGHEST ANNUAL MEAN			121 1984
LOWEST ANNUAL MEAN			18.6 1966
HIGHEST DAILY MEAN	211 Jan 21	421 Jan 28	995 Apr 7 1987
LOWEST DAILY MEAN	.22 Sep 1	.89 Oct 1	.10 Sep 24 1957
ANNUAL SEVEN-DAY MINIMUM	.23 Sep 1	2.3 Aug 27	.15 Sep 21 1957
INSTANTANEOUS PEAK FLOW		436 Jan 28	1010 Apr 7 1987
INSTANTANEOUS PEAK STAGE		5.66 Jan 28	7.51 Apr 7 1987
INSTANTANEOUS LOW FLOW		.89 Oct 1	.10 Sep 24 1957
10 PERCENT EXCEEDS	127	182	154
50 PERCENT EXCEEDS	41	49	37
90 PERCENT EXCEEDS	.91	5.2	2.2

e Estimated

IPSWICH RIVER AT SOUTH MIDDLETON, MA 01101500



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 mi².

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 discharges, which are fair. Diversions upstream for municipal supply of Reading, Lynn, Peabody, Danvers, Salem, and Beverly. Some regulation by reservoirs upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--66 years, 187 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft³/s, Apr. 8, 1987, gage height, 9.43 ft; minimum, 0.34 ft³/s, Sept. 20, 1978.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft³/s, Jan. 30, gage height, 5.66 ft; minimum, 4.6 ft³/s, June 18; minimum daily, 6.2 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	89	172	58	955	539	305	351	131	32	85	9.5
2	6.9	92	161	71	808	494	295	344	123	31	82	10
3	6.2	100	148	68	697	451	284	338	118	29	78	21
4	6.8	108	141	e65	604	401	275	333	114	28	75	24
5	13	113	133	e64	528	380	268	329	110	25	70	24
6	39	117	128	e66	472	359	260	327	105	21	67	23
7	59	121	118	e70	424	319	249	329	100	21	60	19
8	68	133	106	e68	387	248	248	328	94	19	55	18
9	70	135	94	e66	369	252	248	322	88	18	49	17
10	61	140	113	e66	364	277	269	320	84	17	45	18
11	46	146	114	e68	364	286	307	314	80	16	43	18
12	36	162	119	e70	369	287	364	318	76	15	42	18
13	30	171	116	80	351	289	437	323	69	32	41	19
14	27	190	101	84	318	297	496	330	63	75	38	21
15	31	368	88	90	292	307	516	331	59	95	35	22
16	33	475	81	94	271	325	558	318	55	109	33	22
17	32	572	77	99	252	344	717	323	50	129	30	24
18	31	591	75	105	237	364	868	323	31	140	27	68
19	28	561	72	126	225	378	910	326	30	132	24	102
20	26	514	66	176	216	427	830	322	33	120	22	130
21	39	470	66	208	230	497	721	311	32	107	20	165
22	62	430	71	263	302	576	625	296	31	97	18	190
23	81	389	72	357	383	591	575	276	32	92	17	194
24	91	347	74	470	507	549	528	256	33	93	16	179
25	94	310	73	620	593	506	490	235	38	92	15	164
26	88	277	71	667	632	469	454	213	40	93	15	150
27	76	249	68	735	647	433	416	194	39	93	14	140
28	71	224	66	965	629	400	379	177	37	92	13	130
29	77	204	62	1090	585	370	353	161	33	90	12	139
30	85	185	59	1150	---	344	349	148	31	89	11	121
31	89	---	54	1100	---	323	---	139	---	86	10	---
TOTAL	1510.8	7983	2959	9279	13011	12082	13594	8955	1959	2128	1162	2199.5
MEAN	48.7	266	95.5	299	449	390	453	289	65.3	68.6	37.5	73.3
MAX	94	591	172	1150	955	591	910	351	131	140	85	194
MIN	6.2	89	54	58	216	248	248	139	30	15	10	9.5

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1996, BY WATER YEAR (WY)

MEAN	70.2	134	190	210	240	451	436	240	141	56.2	36.8	42.5
MAX	687	525	590	566	627	1158	1233	833	821	518	356	390
(WY)	1963	1933	1984	1958	1984	1983	1987	1954	1982	1938	1938	1954
MIN	4.80	6.87	11.5	14.4	16.4	75.0	97.1	86.9	25.6	5.75	2.13	1.76
(WY)	1966	1966	1966	1966	1980	1989	1985	1985	1976	1957	1965	1965

IPSWICH RIVER BASIN

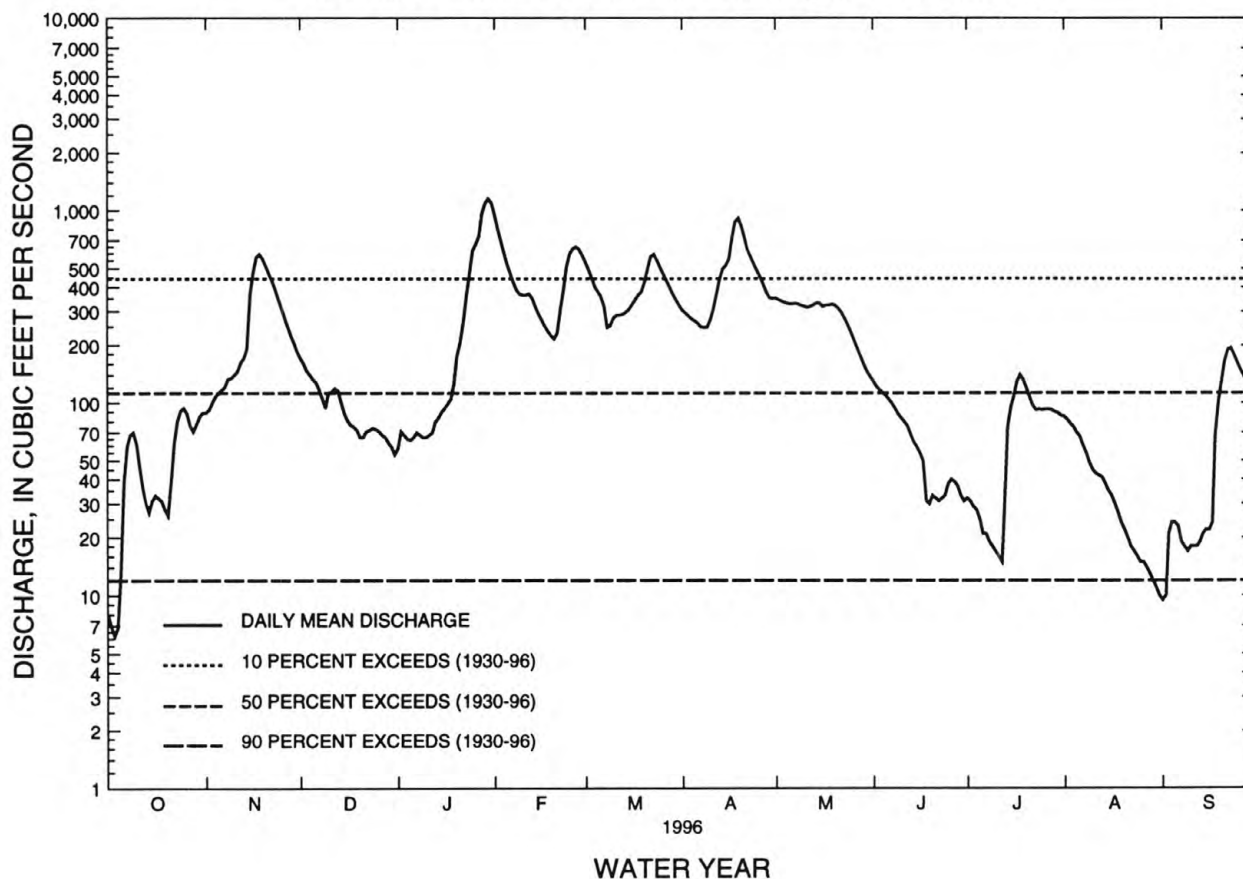
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01102000 IPSWICH RIVER NEAR IPSWICH, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1930 - 1996	
ANNUAL TOTAL	53020.0		76822.3		187	
ANNUAL MEAN	145		210		351	1984
HIGHEST ANNUAL MEAN					57.7	1966
LOWEST ANNUAL MEAN					3520	Apr 8 1987
HIGHEST DAILY MEAN	622	Jan 23	1150	Jan 30	.59	Sep 21 1978
LOWEST DAILY MEAN	1.2	Sep 15	6.2	Oct 3	.94	Aug 21 1965
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 10	11	Aug 27	3550	Apr 8 1987
INSTANTANEOUS PEAK FLOW			1170	Jan 30	9.43	Apr 8 1987
INSTANTANEOUS PEAK STAGE			5.65	Jan 30	.34	Sep 20 1978
INSTANTANEOUS LOW FLOW			4.6	Jun 18	443	
10 PERCENT EXCEEDS	382		506		113	
50 PERCENT EXCEEDS	101		118		12	
90 PERCENT EXCEEDS	6.2		22			

e Estimated

IPSWICH RIVER NEAR IPSWICH, MA 01102000



SAUGUS RIVER BASIN

01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA

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 mi².

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 poor. There is evidence of seasonal regulation by ponds upstream.

AVERAGE DISCHARGE.--2 years, 23.8 ft³/s, 13.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 262 ft³/s, Jan. 28, 1996, gage height, 4.49 ft; minimum, about 0.60 ft³/s, Sept. 5, 6, 1995.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	1745	201	4.19	Jan. 28	0715	*262	*4.49
Jan. 20	0815	234	4.36	Apr. 17	0600	211	4.24
Jan. 25	1100	161	3.95				

Minimum discharge, about 1.5 ft³/s about Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.7	8.9	39	11	92	57	37	57	12	4.9	15	2.7
2	e1.6	23	41	10	89	54	44	45	11	4.3	11	7.6
3	e1.5	35	35	11	76	53	43	41	11	3.9	7.3	15
4	e3.0	22	28	e12	e71	e50	40	46	13	5.3	6.3	6.9
5	e20	16	26	e12	e58	45	38	46	12	4.9	5.6	4.3
6	e80	14	27	e11	e49	45	25	46	10	3.6	5.1	3.6
7	e40	13	29	e10	e43	40	19	48	8.6	3.2	4.7	3.3
8	e25	36	28	e10	41	35	27	42	7.8	3.0	4.4	6.2
9	e15	29	22	11	45	e36	30	40	7.5	5.1	4.0	4.5
10	e9.0	19	52	12	44	e35	47	40	7.7	5.0	7.4	3.9
11	e7.0	16	37	12	45	e34	94	44	7.6	3.8	5.7	3.7
12	e5.5	41	e23	e20	44	36	82	58	6.9	3.2	4.2	3.5
13	e4.5	46	19	e30	e33	37	59	53	6.4	50	4.2	4.2
14	e4.0	31	16	e27	e32	43	73	47	6.0	73	4.3	4.7
15	e20	174	16	e23	32	53	73	44	5.5	31	4.0	4.1
16	e10	148	17	e22	e31	64	105	36	5.1	15	3.7	3.6
17	e7.0	105	17	23	30	63	181	48	4.8	11	3.5	6.1
18	e5.0	92	16	29	e28	62	118	45	4.6	9.4	3.3	67
19	e4.0	93	15	82	e27	62	94	44	4.4	8.2	3.1	62
20	e35	75	15	211	28	107	85	40	4.8	7.5	3.0	27
21	e10	57	e15	116	41	103	72	36	5.3	6.2	3.0	15
22	e45	51	14	82	96	100	51	32	5.2	5.4	2.9	14
23	e25	39	13	69	76	92	48	30	5.4	7.8	3.1	17
24	13	25	13	78	89	77	41	26	4.7	12	4.9	13
25	9.7	21	12	143	91	66	34	18	8.3	9.0	4.9	14
26	8.3	19	12	106	76	61	31	14	6.8	7.6	3.6	12
27	7.5	18	12	127	69	56	28	12	5.1	7.2	3.2	9.8
28	15	17	11	232	67	50	24	11	4.9	6.2	3.1	21
29	24	25	11	152	63	45	28	11	4.5	5.5	3.1	35
30	15	37	11	125	---	43	66	15	4.1	5.1	3.0	24
31	10	---	11	111	---	40	---	16	---	6.7	2.8	---
TOTAL	481.3	1345.9	653	1930	1606	1744	1737	1131	211.0	334.0	147.4	418.7
MEAN	15.5	44.9	21.1	62.3	55.4	56.3	57.9	36.5	7.03	10.8	4.75	14.0
MAX	80	174	52	232	96	107	181	58	13	73	15	67
MIN	1.5	8.9	11	10	27	34	19	11	4.1	3.0	2.8	2.7
CFSM	.67	1.93	.90	2.67	2.38	2.41	2.48	1.57	.30	.46	.20	.60
IN.	.77	2.15	1.04	3.08	2.56	2.78	2.77	1.81	.34	.53	.24	.67

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 1996, BY WATER YEAR (WY)

	1993	1994	1995	1996
MEAN	10.9	31.2	30.6	50.6
MAX	15.5	44.9	40.2	62.3
(WY)	1996	1996	1995	1996
MIN	6.22	17.5	21.1	38.9
(WY)	1995	1995	1996	1995

SAUGUS RIVER BASIN

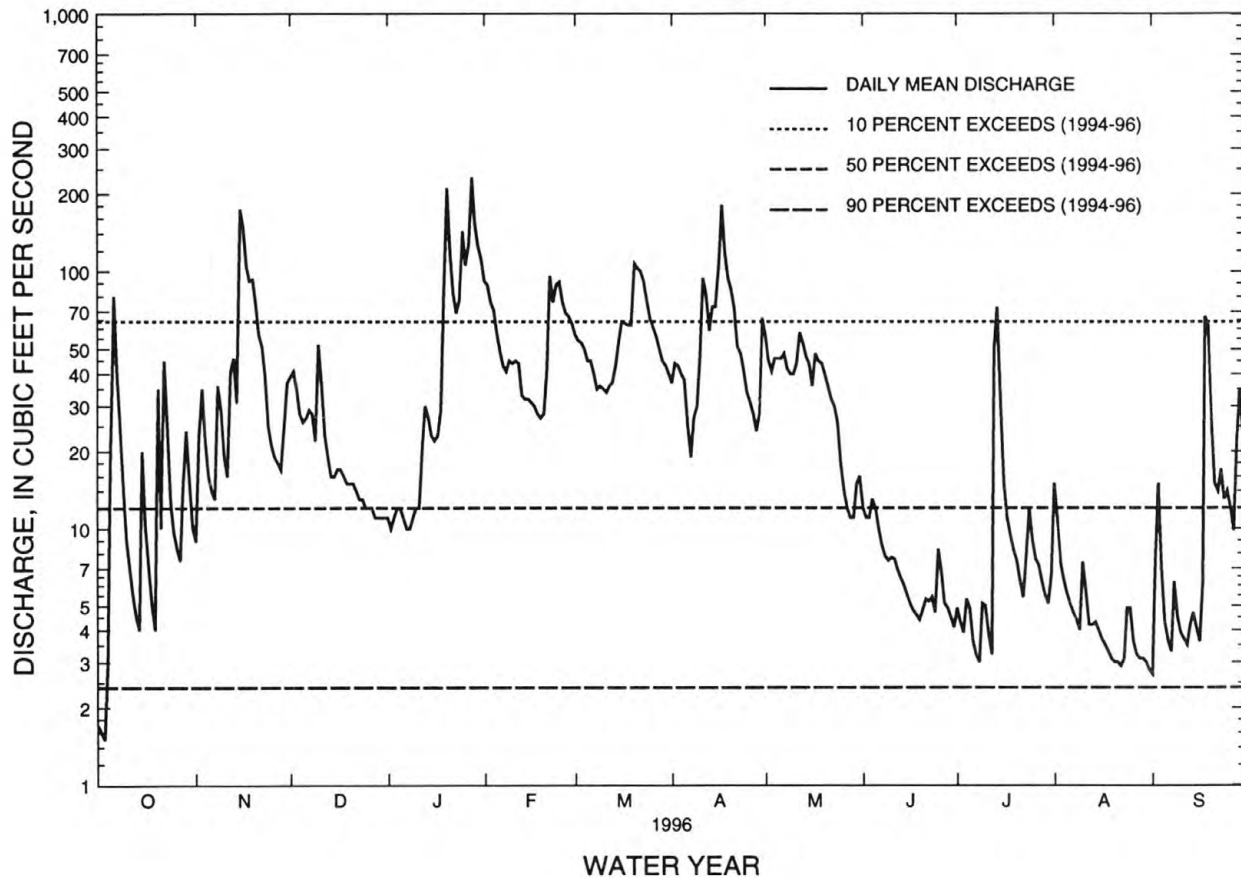
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01102345 SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1993 - 1996
ANNUAL TOTAL	6176.54	11739.3	
ANNUAL MEAN	16.9	32.1	23.8
HIGHEST ANNUAL MEAN			32.1 1996
LOWEST ANNUAL MEAN			15.5 1995
HIGHEST DAILY MEAN	174 Nov 15	232 Jan 28	232 Jan 28 1996
LOWEST DAILY MEAN	.60 Sep 5	1.5 Oct 3	.60 Sep 5 1995
ANNUAL SEVEN-DAY MINIMUM	.62 Sep 2	3.1 Aug 26	.62 Sep 2 1995
INSTANTANEOUS PEAK FLOW		253 Jan 28	253 Jan 28 1996
INSTANTANEOUS PEAK STAGE		4.49 Jan 28	4.49 Jan 28 1996
INSTANTANEOUS LOW FLOW		1.5 Oct 3	.06 Sep 5 1995
ANNUAL RUNOFF (CFSM)	.73	1.38	1.02
ANNUAL RUNOFF (INCHES)	9.86	18.74	13.88
10 PERCENT EXCEEDS	36	76	64
50 PERCENT EXCEEDS	12	20	12
90 PERCENT EXCEEDS	1.5	4.1	2.4

e Estimated

SAUGUS RIVER AT SAUGUS IRONWORKS AT SAUGUS, MA 01102345



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.

PERIOD OF RECORD.--Discharge: April 1939 to current year.

Water-quality records: Water year 1958-59, 1973.

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.

AVERAGE DISCHARGE.--57 years, 29.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft³/s, Jan. 25, 1979, gage height, 15.46 ft, from rating curve extended above 400 ft³/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 ft³/s, Oct. 10, 1950.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 323 ft³/s, Sept. 18, gage height, 12.54 ft; minimum, 1.2 ft³/s, Sept. 3; minimum daily, 2.6 ft³/s, Oct. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	15	24	12	75	41	32	64	20	8.1	34	9.5
2	2.8	44	24	12	60	38	49	51	16	6.6	16	9.2
3	2.6	38	22	13	57	37	42	45	17	6.4	12	18
4	4.4	25	23	13	50	35	36	50	19	9.0	10	8.7
5	14	17	21	12	45	35	33	49	16	6.7	8.8	6.1
6	126	14	21	10	42	41	32	51	15	5.3	7.7	4.9
7	52	20	20	10	39	38	31	49	13	4.8	7.1	4.9
8	23	59	18	11	38	37	45	43	12	4.6	6.6	13
9	13	32	30	11	47	34	45	38	12	15	5.9	6.4
10	9.1	21	57	12	44	31	63	38	11	12	17	5.5
11	7.2	17	37	12	46	31	82	31	11	6.6	8.7	4.8
12	6.1	50	28	12	42	33	90	55	10	11	6.8	4.4
13	5.5	44	23	29	35	35	76	44	9.6	141	7.1	8.3
14	5.1	59	20	25	32	41	78	36	9.1	144	6.8	9.5
15	24	203	21	23	30	49	70	32	8.5	59	6.1	6.3
16	11	128	20	19	29	59	140	33	7.8	34	5.7	5.1
17	7.3	90	20	24	28	54	212	61	7.4	22	5.1	17
18	5.7	66	19	33	27	50	144	45	7.2	16	4.7	176
19	5.0	58	18	117	25	48	109	38	7.0	13	4.4	101
20	5.0	50	19	221	26	105	84	34	9.4	12	4.1	39
21	24	44	18	146	52	85	73	32	15	9.7	4.0	23
22	69	39	17	102	102	69	65	30	13	8.2	4.0	20
23	34	35	17	77	76	59	69	26	10	18	5.2	28
24	22	32	16	87	82	52	62	24	8.1	36	12	18
25	16	29	15	120	76	48	54	22	22	20	6.4	21
26	14	28	15	95	61	45	49	21	15	21	4.7	15
27	9.2	26	14	129	52	42	46	19	9.7	20	3.9	12
28	38	25	14	233	48	40	41	18	11	14	5.1	11
29	32	24	13	157	45	38	48	17	7.5	11	5.1	31
30	18	24	13	115	---	36	73	32	6.8	9.0	4.0	18
31	15	---	13	91	---	34	---	29	---	18	3.4	---
TOTAL	622.9	1356	650	1983	1411	1420	2073	1157	356.1	722.0	242.4	654.6
MEAN	20.1	45.2	21.0	64.0	48.7	45.8	69.1	37.3	11.9	23.3	7.82	21.8
MAX	126	203	57	233	102	105	212	64	22	144	34	176
MIN	2.6	14	13	10	25	31	31	17	6.8	4.6	3.4	4.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

MEAN	12.7	23.6	31.3	36.9	40.9	64.4	53.8	33.2	21.2	9.85	9.88	9.96
MAX	104	102	95.7	169	104	167	175	134	159	40.4	79.4	78.2
(WY)	1963	1956	1970	1979	1984	1983	1987	1954	1982	1959	1955	1954
MIN	.48	.59	.63	2.34	4.39	19.2	12.4	11.3	3.02	.69	.62	.49
(WY)	1942	1942	1942	1966	1980	1989	1966	1965	1957	1950	1957	1957

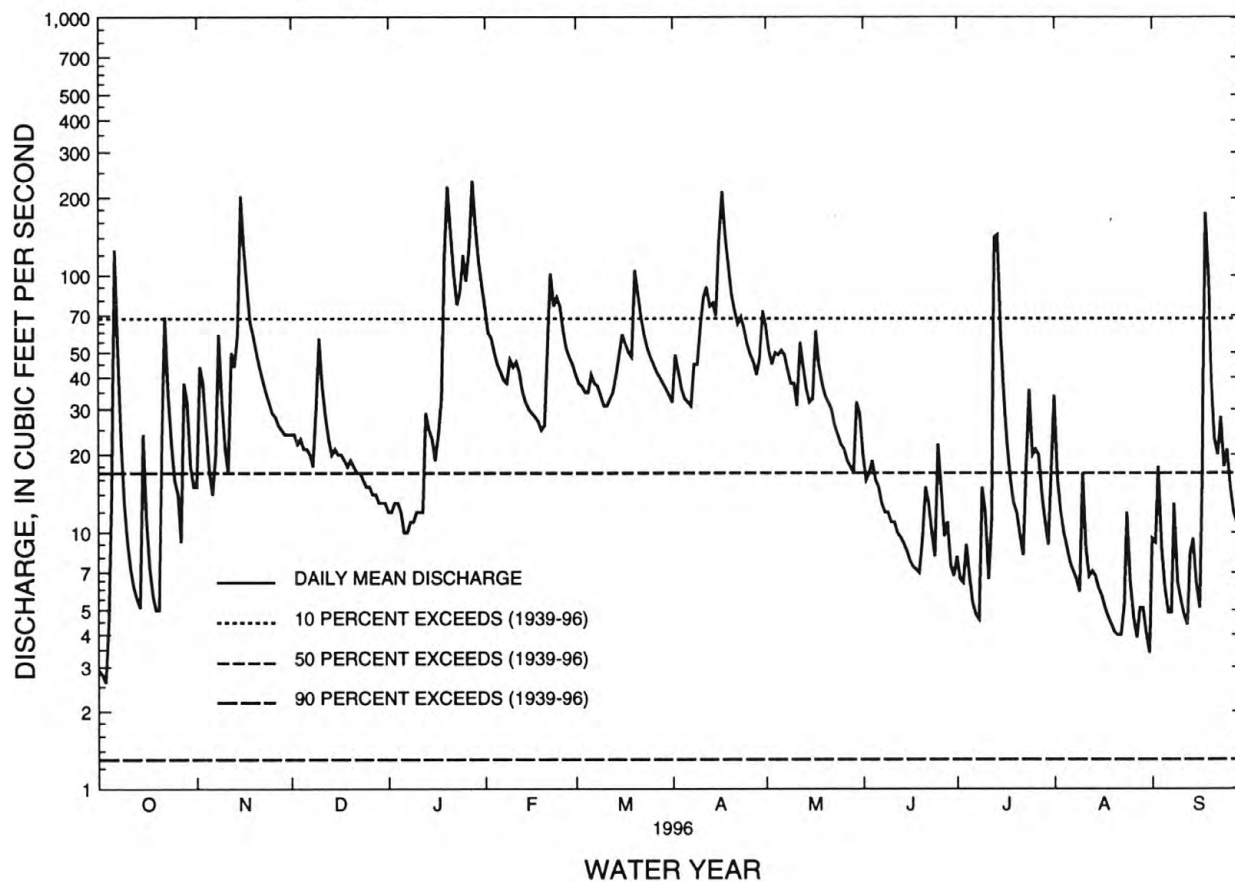
MYSTIC RIVER BASIN

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01102500 ABERJONA RIVER AT WINCHESTER, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1939 - 1996	
ANNUAL TOTAL	8391.7		12648.0		29.0	
ANNUAL MEAN	23.0		34.6		58.3	1984
HIGHEST ANNUAL MEAN					8.23	1966
LOWEST ANNUAL MEAN					951	Jan 26 1979
HIGHEST DAILY MEAN	203	Nov 15	233	Jan 28	.25	Oct 10 1950
LOWEST DAILY MEAN	1.1	Sep 3	2.6	Oct 3	.31	Dec 6 1941
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 3	4.5	Aug 17	1330	Jan 25 1979
INSTANTANEOUS PEAK FLOW			323	Sep 18	15.46	Jan 25 1979
INSTANTANEOUS PEAK STAGE			12.54	Sep 18	.00	Oct 10 1950
INSTANTANEOUS LOW FLOW			1.2	Sep 3	68	
10 PERCENT EXCEEDS	48		75		17	
50 PERCENT EXCEEDS	18		23		1.3	
90 PERCENT EXCEEDS	2.6		6.2			

ABERJONA RIVER AT WINCHESTER, MA 01102500



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 mi².

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 discharges, which are fair. Flow affected by diversions to and from basin for municipal supplies. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--59 years, 304 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s, Aug. 23, 1955, gage height, 9.24 ft and Mar. 22, 1968, gage height, 8.72 ft; minimum, 0.5 ft³/s, Oct. 24, 1952 (caused by unusual regulation); minimum daily, 0.9 ft³/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 ft³/s, by computation of flow over dam at site 0.2 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s, Jan. 28; gage height, 5.10 ft; minimum 18 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	186	267	152	1250	659	370	538	289	129	112	60
2	22	190	258	151	1130	619	377	541	294	113	109	60
3	20	205	253	129	1040	577	373	553	288	107	108	58
4	20	220	251	140	918	527	383	572	282	108	104	53
5	27	223	246	e160	890	490	389	554	269	104	96	50
6	129	214	243	e155	802	485	383	544	259	99	87	48
7	156	199	236	e150	706	471	373	530	244	91	79	47
8	196	233	225	e150	613	426	392	507	220	84	75	52
9	209	238	218	e150	578	469	402	485	209	79	72	51
10	193	248	220	e150	561	469	458	481	219	77	97	53
11	152	252	210	e160	558	451	523	471	226	69	100	53
12	111	302	193	e170	555	441	601	491	213	62	103	53
13	86	297	189	219	533	432	641	480	193	215	106	56
14	71	338	167	229	537	439	687	486	169	409	109	58
15	86	553	158	232	475	460	706	467	149	445	107	58
16	88	564	171	246	438	496	788	446	132	502	100	57
17	94	604	171	253	393	522	965	463	119	516	92	74
18	91	616	171	273	386	546	1010	447	110	500	83	266
19	80	612	169	391	373	555	1090	447	104	469	73	352
20	69	569	143	747	358	610	1110	442	102	416	66	382
21	81	550	164	812	385	622	1060	429	108	350	60	372
22	180	525	180	955	501	630	965	411	122	284	56	374
23	226	506	184	1060	567	628	899	388	126	226	52	365
24	263	454	178	1140	683	610	810	365	120	197	58	320
25	276	410	171	1220	763	587	723	338	139	177	59	284
26	263	373	169	1150	786	553	662	307	161	167	58	246
27	226	343	166	1150	786	516	608	277	175	159	57	217
28	214	317	163	1330	765	483	554	248	174	146	64	192
29	204	298	159	1300	712	452	522	216	158	131	71	199
30	204	280	154	1340	---	422	537	240	134	116	69	189
31	202	---	154	1320	---	395	---	278	---	108	65	---
TOTAL	4262	10919	6001	17184	19042	16042	19361	13442	5507	6655	2547	4699
MEAN	137	364	194	554	657	517	645	434	184	215	82.2	157
MAX	276	616	267	1340	1250	659	1110	572	294	516	112	382
MIN	20	186	143	129	358	395	370	216	102	62	52	47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1996, BY WATER YEAR (WY)

MEAN	137	251	341	368	428	618	585	357	230	124	117	101
MAX	600	892	838	1180	998	1171	1474	746	1129	1060	956	640
(WY)	1956	1956	1973	1979	1970	1983	1987	1954	1982	1938	1955	1954
MIN	13.4	33.1	54.6	45.3	86.7	227	169	138	67.2	19.5	9.01	7.78
(WY)	1958	1966	1966	1981	1980	1985	1966	1986	1957	1957	1957	1957

CHARLES RIVER BASIN

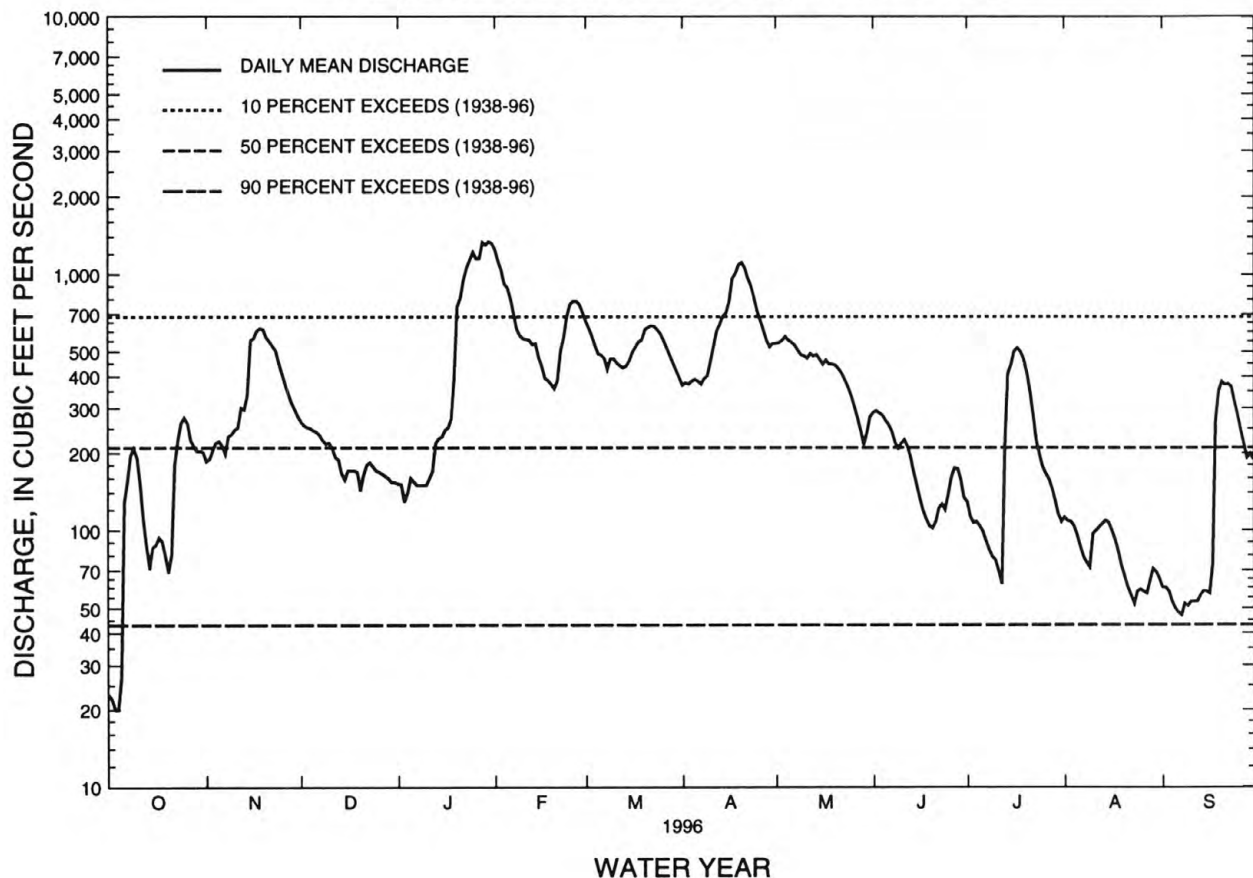
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01103500 CHARLES RIVER AT DOVER, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1938 - 1996	
ANNUAL TOTAL	74664.4		125661		304	
ANNUAL MEAN	205		343		496	
HIGHEST ANNUAL MEAN					117	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	616	Nov 18	1340	Jan 30	3190	Mar 22 1968
LOWEST DAILY MEAN	3.8	Sep 16	20	Oct 3	.90	Oct 24 1952
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep 10	51	Sep 4	4.3	Sep 10 1995
INSTANTANEOUS PEAK FLOW			1360	Jan 28	3220	Aug 23 1955
INSTANTANEOUS PEAK STAGE			5.10	Jan 28	9.24	Aug 23 1955
INSTANTANEOUS LOW FLOW			18	Oct 3	.50	Oct 24 1952
10 PERCENT EXCEEDS	467		684		684	
50 PERCENT EXCEEDS	188		249		210	
90 PERCENT EXCEEDS	23		71		43	

e Estimated

CHARLES RIVER AT DOVER, MA 01103500



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 discharges, which are poor. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park.

AVERAGE DISCHARGE.--65 years, 76.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/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, 477 ft³/s, Jan. 30, gage height, 84.35 ft; minimum, 0.41 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.53	17	41	4.8	431	148	40	123	e15	3.6	10	2.2
2	.48	18	42	4.6	397	131	47	122	e12	6.4	14	2.7
3	.61	19	33	4.9	400	119	41	120	e14	6.7	12	2.4
4	.75	20	39	4.8	370	103	37	128	e15	13	9.7	2.8
5	3.7	17	65	5.6	317	73	34	123	e15	11	8.2	2.4
6	40	15	68	3.5	302	70	32	126	e13	7.6	9.7	2.1
7	30	25	61	2.4	219	85	28	122	e11	4.9	7.5	3.2
8	26	41	53	3.4	163	96	40	98	e9.0	3.1	5.7	4.2
9	25	35	47	4.4	143	91	47	77	e8.0	3.1	7.1	2.5
10	25	35	53	5.7	129	79	71	69	e8.0	6.0	11	2.8
11	29	32	38	7.9	117	74	92	66	e7.0	4.4	7.2	2.5
12	18	60	33	7.1	107	68	127	74	e6.0	3.2	6.7	2.6
13	11	50	32	16	139	57	140	69	e5.0	53	12	3.2
14	5.8	69	26	18	125	55	152	64	e4.4	121	11	3.8
15	7.0	207	19	20	98	63	158	59	e3.7	104	9.3	2.9
16	7.6	193	20	22	79	80	197	51	e3.3	113	7.2	2.2
17	13	178	20	24	64	83	285	61	2.8	116	5.3	8.2
18	10	174	19	25	51	87	286	51	2.5	112	3.8	132
19	9.4	169	18	43	46	89	310	46	2.4	98	3.1	137
20	6.6	155	14	209	45	110	325	43	2.4	84	3.7	104
21	8.7	122	13	224	56	117	323	38	4.0	57	3.4	95
22	26	102	16	228	97	114	291	e33	3.6	41	3.3	86
23	35	93	17	271	98	112	263	e31	2.9	51	2.9	83
24	56	77	16	316	122	107	233	e27	2.2	44	3.8	64
25	59	57	13	372	162	94	190	e22	4.6	32	2.6	50
26	54	43	11	377	213	86	153	e18	9.2	25	2.2	32
27	40	35	9.0	360	210	73	135	e14	10	19	2.6	19
28	34	38	8.3	424	186	64	112	e11	8.9	13	3.2	9.3
29	25	33	7.1	418	172	72	99	e10	6.1	11	4.0	11
30	25	32	6.2	439	---	63	99	e14	3.6	12	3.6	11
31	24	---	5.4	449	---	51	---	e16	---	9.2	2.8	---
TOTAL	656.17	2161	863.0	4314.1	5058	2714	4387	1926	214.6	1188.2	198.6	886.0
MEAN	21.2	72.0	27.8	139	174	87.5	146	62.1	7.15	38.3	6.41	29.5
MAX	59	207	68	449	431	148	325	128	15	121	14	137
MIN	.48	15	5.4	2.4	45	51	28	10	2.2	3.1	2.2	2.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1996, BY WATER YEAR (WY)

	MEAN	25.7	57.3	85.0	97.2	113	175	159	88.6	53.0	21.9	22.0	20.4
MAX	182	308	285	287	360	490	437	253	328	339	306	189	
(WY)	1956	1956	1973	1976	1970	1936	1987	1954	1982	1938	1955	1954	
MIN	.000	.61	.43	.14	.14	.54	26.5	.000	.000	.061	.000	.097	
(WY)	1942	1959	1959	1959	1959	1959	1966	1960	1955	1957	1949	1943	

CHARLES RIVER BASIN

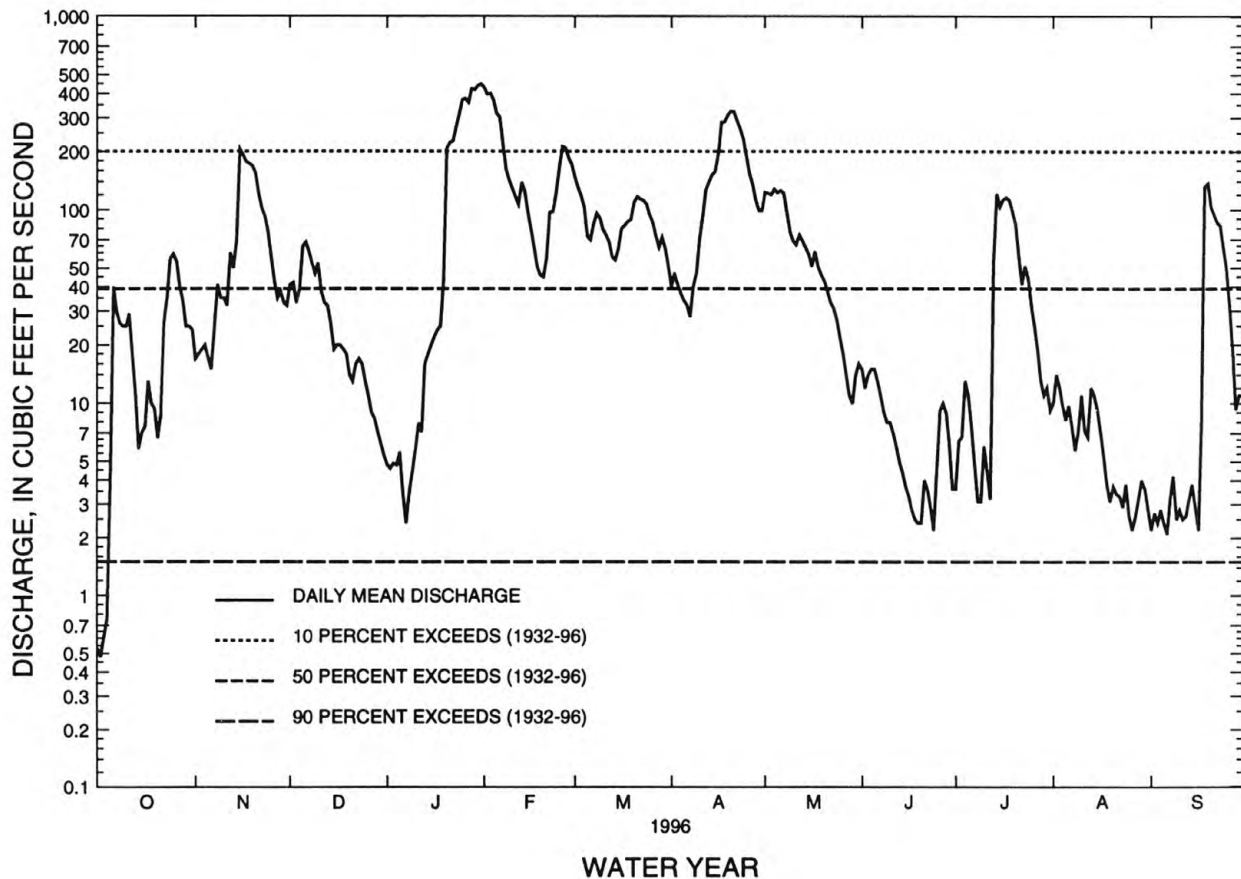
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01104000 MOTHER BROOK AT DEDHAM, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1932 - 1996
ANNUAL TOTAL	10245.87	24566.67	
ANNUAL MEAN	28.1	67.1	76.3
HIGHEST ANNUAL MEAN			149 1938
LOWEST ANNUAL MEAN			20.6 1960
HIGHEST DAILY MEAN	207 Nov 15	449 Jan 31	1010 Mar 21 1968
LOWEST DAILY MEAN	.34 Jul 20	.48 Oct 2	.00 Sep 12 1941
ANNUAL SEVEN-DAY MINIMUM	.36 Aug 28	2.5 Aug 31	.00 Sep 12 1941
INSTANTANEOUS PEAK FLOW		477 Jan 30	1040 Mar 21 1968
INSTANTANEOUS PEAK STAGE		84.35 Jan 30	92.90 Aug 24 1955
INSTANTANEOUS LOW FLOW		.41 Oct 2	.00 Sep 12 1941
10 PERCENT EXCEEDS	70	173	201
50 PERCENT EXCEEDS	17	32	39
90 PERCENT EXCEEDS	.51	3.3	1.5

e Estimated

MOTHER BROOK AT DEDHAM, MA 01104000



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 mi².

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 except those for estimated daily discharges, which are fair. 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.--37 years, 283 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft³/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 ft³/s, Aug. 24, 31, Sept. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft³/s, Jan. 30, gage height, 4.81 ft; minimum, 17 ft³/s, Oct. 2; minimum daily, 25 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	204	249	158	957	651	409	509	273	115	97	52
2	26	227	247	158	910	616	424	515	281	109	97	49
3	25	229	247	146	742	583	415	523	263	87	103	43
4	27	230	184	139	618	540	413	544	271	94	102	41
5	40	240	189	148	596	516	421	536	235	101	80	43
6	180	195	200	e150	e580	483	421	536	226	101	75	48
7	165	203	201	e150	545	462	418	528	229	94	75	41
8	182	260	196	e155	573	385	435	510	216	89	60	56
9	203	235	199	e150	569	415	452	501	209	71	59	48
10	175	243	215	e150	553	443	498	502	224	76	93	49
11	155	258	197	148	555	451	573	503	259	78	92	47
12	116	323	182	149	456	461	635	522	261	63	76	48
13	96	326	172	200	431	461	649	514	244	228	85	48
14	88	308	164	204	432	473	673	510	233	410	85	55
15	124	565	153	215	437	495	691	500	186	387	87	58
16	88	573	161	223	428	527	775	488	166	416	89	49
17	88	541	165	245	399	559	885	518	144	420	84	73
18	91	546	165	272	369	575	882	498	131	426	76	389
19	88	541	163	425	359	587	897	489	127	426	52	430
20	85	523	155	787	363	657	908	483	89	395	49	359
21	113	508	155	788	412	667	895	472	112	353	45	341
22	213	498	169	802	553	659	861	459	144	247	43	342
23	190	488	178	852	575	650	835	403	140	212	42	346
24	218	451	177	935	653	638	760	386	136	198	53	323
25	225	413	172	1020	708	629	707	368	119	171	56	307
26	239	383	170	983	716	597	655	348	135	165	39	273
27	239	331	169	992	698	565	600	318	172	159	37	244
28	262	311	166	1080	698	491	561	196	181	152	40	224
29	252	304	162	1070	682	473	546	188	176	120	47	244
30	230	254	160	1060	---	450	496	218	157	112	53	195
31	217	---	159	1010	---	429	---	260	---	112	54	---
TOTAL	4474	10711	5641	14964	16567	16588	18790	13845	5739	6187	2125	4865
MEAN	144	357	182	483	571	535	626	447	191	200	68.5	162
MAX	262	573	249	1080	957	667	908	544	281	426	103	430
MIN	25	195	153	139	359	385	409	188	89	63	37	41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1996, BY WATER YEAR (WY)

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
MEAN	144	242	326	339	394	550	547	334	226	110	104	92.7
MAX	468	561	687	1018	766	1048	1223	575	951	280	430	253
(WY)	1991	1990	1987	1979	1970	1983	1987	1972	1982	1972	1990	1961
MIN	23.2	34.0	52.6	43.8	95.7	211	154	124	67.3	29.2	13.0	14.9
(WY)	1966	1966	1966	1981	1980	1985	1985	1986	1964	1965	1965	1965

CHARLES RIVER BASIN

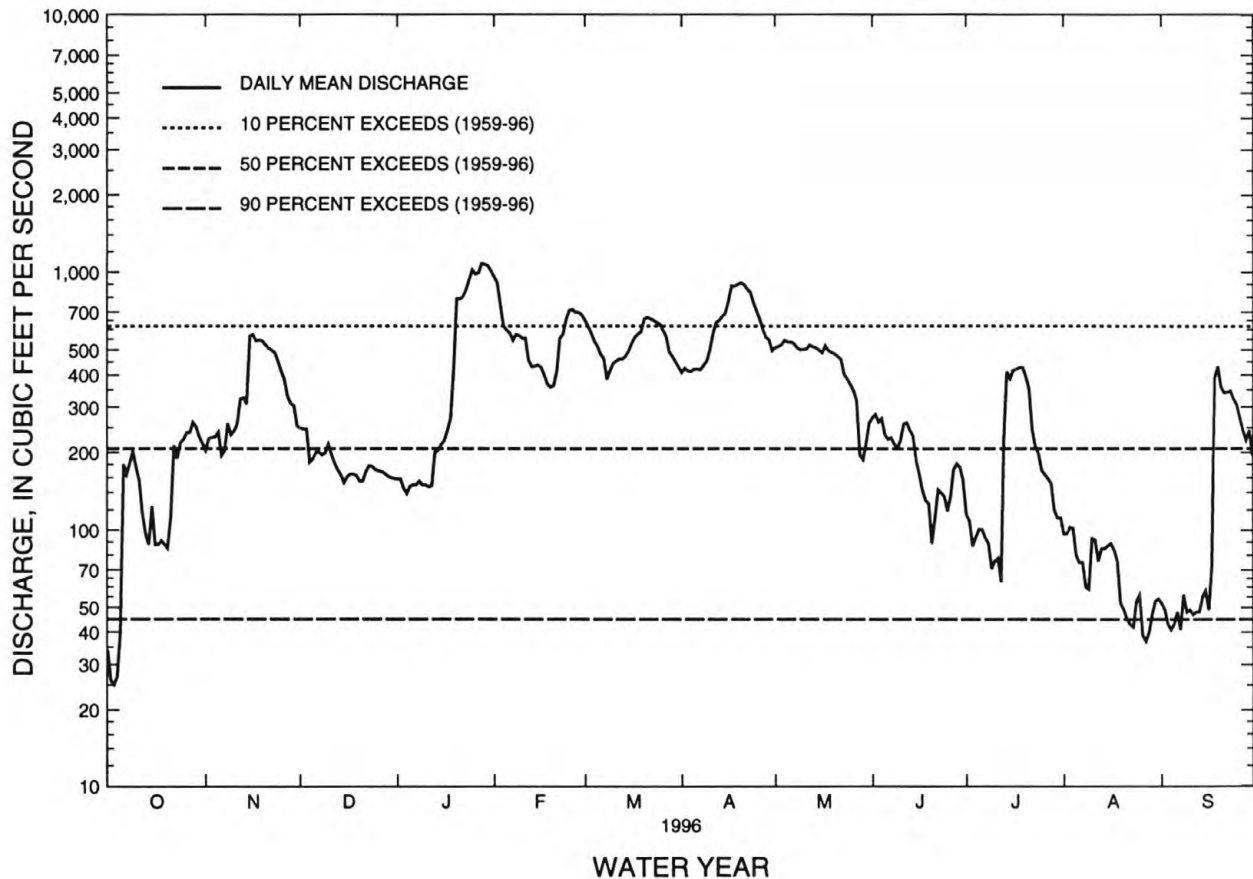
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01104200 CHARLES RIVER AT WELLESLEY, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1959 - 1996	
ANNUAL TOTAL	79053.8		120496		283	
ANNUAL MEAN	217		329		458	
HIGHEST ANNUAL MEAN					108	
LOWEST ANNUAL MEAN					1.0	
HIGHEST DAILY MEAN	623	Jan 21	1080	Jan 28	2330	Mar 22 1968
LOWEST DAILY MEAN	7.7	Sep 16	25	Oct 3	4.1	Aug 24 1965
ANNUAL SEVEN-DAY MINIMUM	12	Sep 11	44	Aug 22	6.20	Aug 20 1965
INSTANTANEOUS PEAK FLOW			1140	Jan 30	2410	Mar 21 1968
INSTANTANEOUS PEAK STAGE			4.81	Jan 30	6.20	Mar 21 1968
INSTANTANEOUS LOW FLOW			17	Oct 2	.00	Sep 15 1959
10 PERCENT EXCEEDS	496		654		617	
50 PERCENT EXCEEDS	184		244		207	
90 PERCENT EXCEEDS	32		62		45	

e Estimated

CHARLES RIVER AT WELLESLEY, MA 01104200



CHARLES RIVER BASIN

01104500 CHARLES RIVER AT WALTHAM, MA

LOCATION.--Lat 42°22'20", long 71°14'03", Middlesex County, Hydrologic Unit 01090001, on right bank 800 ft downstream from Moody Street Bridge in Waltham and 0.3 mi upstream from Beaver Brook.

DRAINAGE AREA.--227 mi², excludes 23.6 mi² drained by Stony Brook, from which flow is diverted for municipal supply of Cambridge.

PERIOD OF RECORD.--Discharge: October 1903 to October 1909 (figures of average weekly discharge, equivalent to records of unadjusted discharge at present site), August 1931 to current year.
Water-quality records: Water years 1953, 1959, 1968-70.

REVISED RECORDS.--WSP 781: 1933(M). WSP 851: Drainage area. WSP 971: 1942.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft above sea level. Prior to July 10, 1904, at dam 700 ft upstream and July 10, 1904, to Oct. 2, 1909, at dam 0.7 mi downstream at different datums; discharge computed from flow over dam and through wheels and gates of Boston Manufacturing Co. and Waltham Bleachery, respectively.

REMARKS.--Records good. Flow affected by diversion to Mother Brook (station 01104000), diversions to and from basin for municipal supplies, and at times by water released from Stony Brook Reservoir. Prior to 1960, some regulation by mills upstream. Low flow completely regulated by Boston Edison Co. powerplant prior to 1954. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years (water years 1932-96), 306 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,150 ft³/s, Feb. 3, 1976, gage height, 6.54 ft, caused by release of water stored behind ice jam upstream; minimum, 0.1 ft³/s, Oct. 1, 12, 1943; minimum daily, 0.2 ft³/s, Oct. 4, 1943.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since 1886, that of Feb. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft³/s, Jan. 27, gage height, 4.01 ft; minimum, 28 ft³/s, Oct. 3, 4, 5; minimum daily, 29 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	238	288	187	1070	701	488	586	325	177	175	100
2	36	279	287	187	1010	669	526	581	319	132	136	103
3	30	290	287	177	841	638	509	576	316	136	145	103
4	29	260	258	171	692	586	493	603	313	117	145	79
5	38	260	212	175	645	563	491	588	295	126	135	81
6	272	257	235	176	640	559	487	590	259	129	116	79
7	205	245	236	175	596	533	487	585	260	124	118	73
8	195	343	230	184	609	461	527	557	253	120	111	98
9	211	290	240	179	618	448	534	541	241	119	94	93
10	208	276	268	179	603	483	607	536	241	94	133	88
11	177	288	238	173	606	494	676	536	251	93	140	85
12	154	405	221	179	553	501	762	589	256	88	134	80
13	120	376	210	232	464	508	772	565	250	354	128	88
14	110	382	203	237	483	525	796	544	224	526	143	90
15	149	662	196	247	475	550	797	531	201	467	139	93
16	124	649	191	255	474	591	963	485	182	448	144	89
17	92	583	198	274	449	617	1150	561	169	469	140	118
18	105	569	196	306	418	630	1090	542	157	458	131	629
19	99	567	193	458	405	637	1050	523	146	464	114	609
20	98	548	194	886	407	749	1030	514	131	443	86	496
21	146	529	183	857	458	770	1000	477	127	410	88	432
22	291	519	194	865	642	758	951	499	172	345	83	425
23	229	507	205	907	657	733	939	462	168	277	85	449
24	220	485	207	999	733	708	856	426	167	292	108	408
25	276	456	204	1160	783	692	784	410	192	237	111	397
26	255	428	200	1110	787	661	715	391	156	223	95	360
27	260	393	197	1140	756	620	659	370	185	211	75	322
28	313	355	195	1390	753	573	612	301	202	199	82	301
29	295	352	191	1310	728	529	596	218	202	180	87	340
30	258	316	188	1240	---	526	618	288	190	154	95	292
31	244	---	188	1160	---	507	---	327	---	165	100	---
TOTAL	5276	12107	6733	17175	18355	18520	21965	15302	6550	7777	3616	7000
MEAN	170	404	217	554	633	597	732	494	218	251	117	233
MAX	313	662	288	1390	1070	770	1150	603	325	526	175	629
MIN	29	238	183	171	405	448	487	218	127	88	75	73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1996, BY WATER YEAR (WY)

MEAN	145	251	334	364	404	623	607	358	232	127	118	114
MAX	634	1031	834	1173	946	1398	1446	798	1346	915	873	616
(WY)	1956	1956	1984	1979	1970	1983	1987	1954	1982	1938	1955	1954
MIN	24.5	38.7	62.7	58.4	111	236	181	135	56.5	26.7	14.6	19.6
(WY)	1942	1932	1966	1981	1980	1985	1985	1932	1932	1949	1949	1957

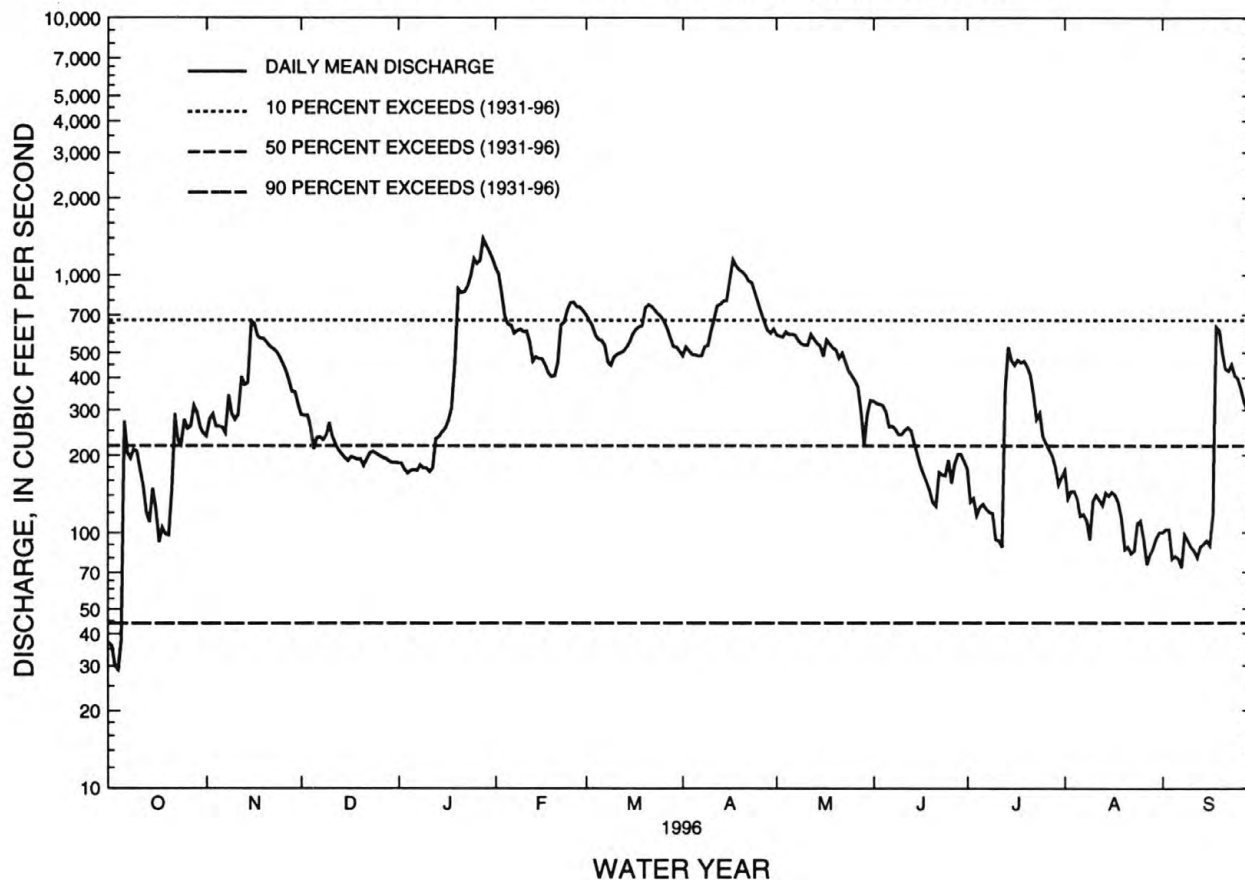
CHARLES RIVER BASIN

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01104500 CHARLES RIVER AT WALTHAM, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1931 - 1996	
ANNUAL TOTAL	83785		140376		306	
ANNUAL MEAN	230		384		558	
HIGHEST ANNUAL MEAN					129	
LOWEST ANNUAL MEAN					2940	
HIGHEST DAILY MEAN	662	Nov 15	1390	Jan 28	1984	
LOWEST DAILY MEAN	11	Sep 15	29	Oct 4	1966	
ANNUAL SEVEN-DAY MINIMUM	12	Sep 10	84	Sep 4	Jan 26	1979
INSTANTANEOUS PEAK FLOW			1430	Jan 27	Oct 4	1943
INSTANTANEOUS PEAK STAGE			4.01	Jan 27	Sep 30	1943
INSTANTANEOUS LOW FLOW			28	Oct 3	Feb 3	1976
10 PERCENT EXCEEDS	496		738		6.54	Feb 3
50 PERCENT EXCEEDS	204		292		6.10	Feb 3
90 PERCENT EXCEEDS	37		102		44	Oct 1

CHARLES RIVER AT WALTHAM, MA 01104500



NEPONSET RIVER BASIN

01105000 NEPONSET RIVER AT NORWOOD, MA

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 mi².

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.

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 discharges, 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.--57 years, 55.1 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft³/s, Aug. 19, 1955, gage height, 14.65 ft, from floodmarks; minimum daily, 1.4 ft³/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, 373 ft³/s, Jan. 19, gage height, 8.06 ft, minimum daily, 5.4 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	37	55	31	166	108	71	128	63	32	24	18
2	5.5	50	58	31	155	104	88	114	50	23	23	9.4
3	5.4	55	53	34	138	104	86	102	47	23	20	11
4	5.5	53	54	35	128	93	79	99	48	24	18	8.1
5	16	45	51	e30	114	91	72	95	48	26	17	6.9
6	111	38	51	29	105	105	69	103	44	22	17	7.1
7	75	43	49	29	98	110	69	106	38	19	15	11
8	44	76	45	32	97	102	91	99	42	17	12	20
9	27	69	46	31	112	98	99	90	50	16	12	20
10	18	57	58	31	119	92	131	88	45	14	42	17
11	15	47	52	30	114	86	155	89	41	13	38	15
12	13	92	43	35	116	85	178	103	39	16	16	14
13	11	83	37	61	95	87	171	98	33	119	26	18
14	10	92	35	e80	81	93	158	85	30	178	27	15
15	32	204	36	e78	75	105	146	77	27	142	22	14
16	24	181	36	e74	71	126	218	75	24	94	18	11
17	19	136	36	e80	70	126	307	98	22	68	12	17
18	14	114	36	e92	67	118	237	95	19	56	7.6	142
19	13	107	36	167	62	113	213	85	18	48	12	122
20	12	102	38	e340	61	144	190	77	24	43	11	85
21	35	94	38	e210	91	144	174	76	26	35	9.7	60
22	82	87	36	184	e200	131	154	87	26	28	9.3	47
23	68	81	35	180	171	119	142	81	25	31	9.2	48
24	50	74	34	e200	169	111	130	67	22	39	21	42
25	37	69	34	e230	169	103	115	58	54	33	20	43
26	29	65	33	175	150	98	107	53	39	29	15	36
27	28	61	33	222	130	90	101	49	29	27	12	32
28	57	61	33	e290	126	84	93	45	24	24	11	29
29	64	60	32	e220	119	80	97	41	21	21	12	56
30	56	57	31	190	---	77	122	63	21	20	10	49
31	43	---	30	175	---	74	---	74	---	21	11	---
TOTAL	1025.1	2390	1274	3626	3369	3201	4063	2600	1039	1301	529.8	1023.5
MEAN	33.1	79.7	41.1	117	116	103	135	83.9	34.6	42.0	17.1	34.1
MAX	111	204	58	340	200	144	307	128	63	178	42	142
MIN	5.4	37	30	29	61	74	69	41	18	13	7.6	6.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	MEAN	26.8	47.0	62.3	69.5	77.1	111	101	62.4	39.3	20.6	23.8	21.5
MAX	126	187	187	224	188	236	284	146	213	79.3	226	87.7	
(WY)	1956	1956	1987	1979	1970	1983	1987	1954	1982	1959	1955	1954	
MIN	6.01	5.88	7.78	5.35	13.4	45.3	31.8	21.2	8.71	5.64	4.30	5.94	
(WY)	1958	1966	1966	1981	1980	1985	1966	1986	1981	1995	1981	1980	

NEPONSET RIVER BASIN

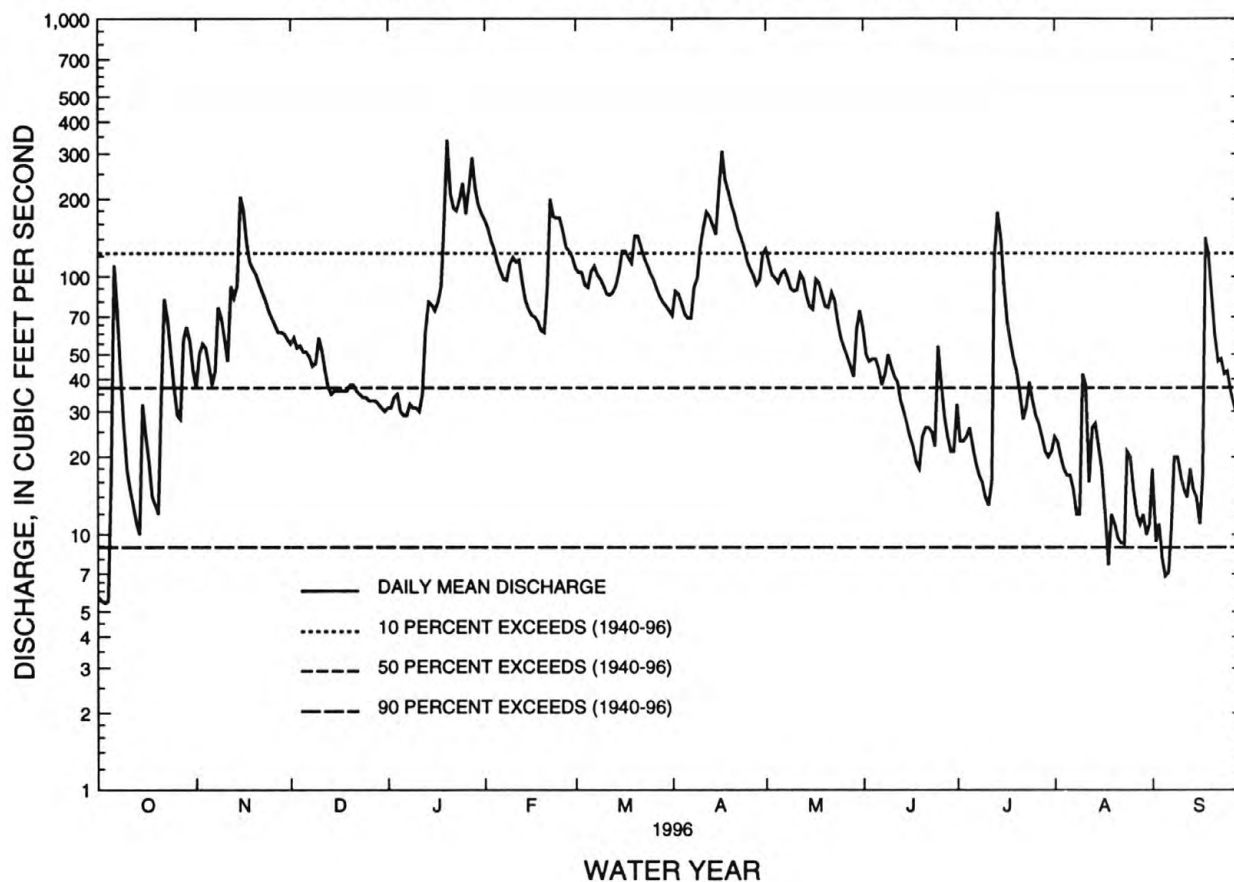
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01105000 NEPONSET RIVER AT NORWOOD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	13848.7		25441.4		55.1	
ANNUAL MEAN	37.9		69.5		106	
HIGHEST ANNUAL MEAN					21.7	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	204	Nov 15	340	Jan 20	1260	Aug 20 1955
LOWEST DAILY MEAN	2.4	Aug 2	5.4	Oct 3	1.4	Oct 20 1963
ANNUAL SEVEN-DAY MINIMUM	2.9	Jul 18	10	Aug 17	2.9	Jul 18 1995
INSTANTANEOUS PEAK FLOW			373	Jan 19	1490	Aug 19 1955
INSTANTANEOUS PEAK STAGE			8.06	Jan 19	14.65	Aug 19 1955
INSTANTANEOUS LOW FLOW			5.3	Oct 2		
10 PERCENT EXCEEDS	81		144		123	
50 PERCENT EXCEEDS	33		53		37	
90 PERCENT EXCEEDS	4.4		15		8.9	

e Estimated

NEPONSET RIVER AT NORWOOD, MA 01105000



LOCATION.--Lat 42°09'16", long 71°08'47", Norfolk County, Hydrologic Unit 01090001, on right bank 100 ft downstream from Washington Street Bridge at Canton, 200 ft downstream from Forge Pond Dam, and 900 ft downstream from Massapoag Brook.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 428 ft³/s, Jan. 20, gage height, 3.82 ft; minimum daily, 3.2 ft³/s, Oct. 3.

MEAN	28.5	48.2	64.1	68.3	71.5	93.4	86.2	52.9	33.9	17.8	22.1	21.3
MAX	100	161	159	177	132	177	210	142	154	55.8	203	76.2
(WY)	1963	1956	1993	1979	1970	1968	1987	1954	1982	1973	1955	1954
MIN	6.42	8.35	9.78	10.6	20.1	40.8	20.7	20.2	8.62	4.46	3.64	4.42
(WY)	1966	1966	1966	1966	1980	1985	1966	1965	1964	1965	1957	1957

NEPONSET RIVER BASIN

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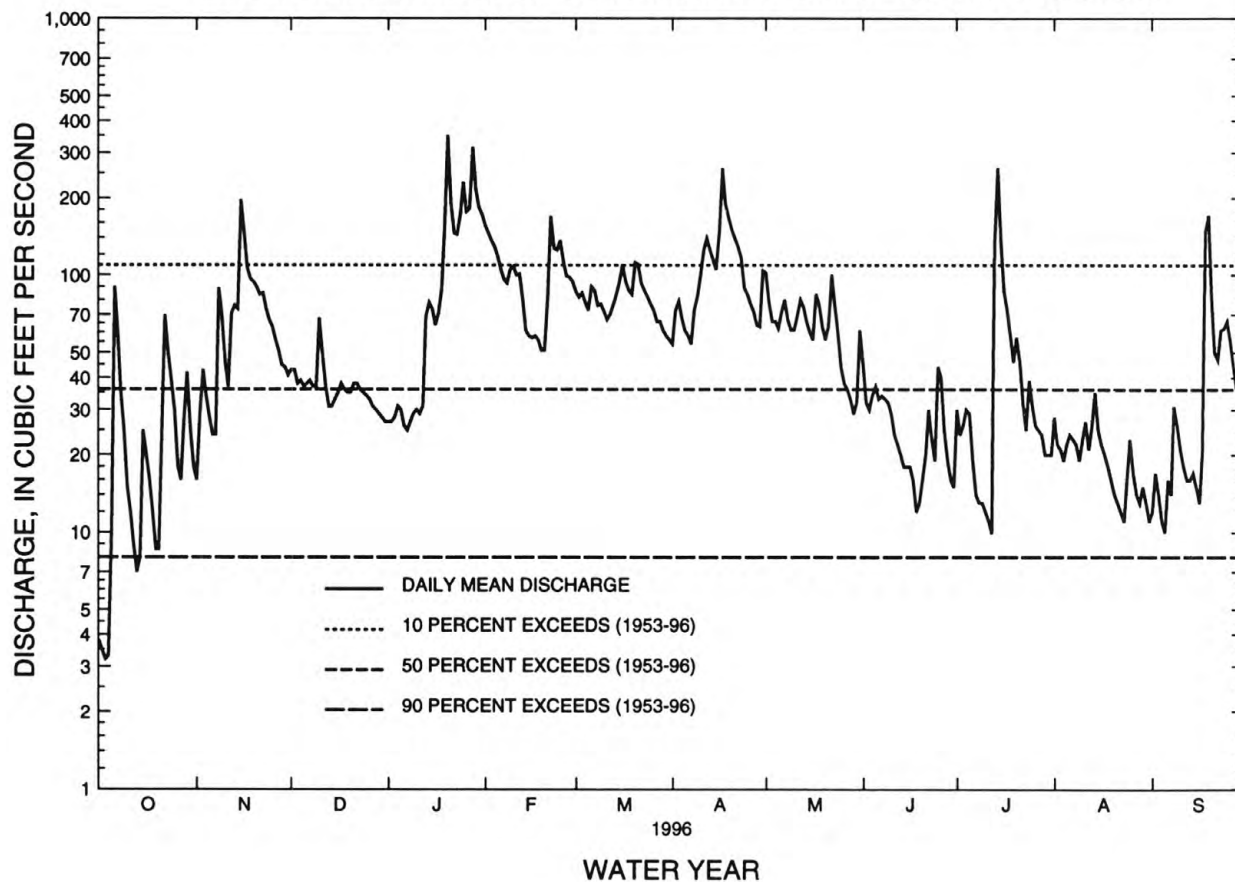
01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MA--Continued

SUMMARY STATISTICS

	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1953 - 1996	
ANNUAL TOTAL	12259.1		21834.9		50.6	
ANNUAL MEAN	33.6		59.7		78.9	
HIGHEST ANNUAL MEAN					18.6	
LOWEST ANNUAL MEAN					1360	
HIGHEST DAILY MEAN	197	Nov 15	351	Jan 20	1360	Aug 19 1955
LOWEST DAILY MEAN	2.7	Sep 9	3.2	Oct 3	.60	Jul 7 1957
ANNUAL SEVEN-DAY MINIMUM	2.8	Sep 5	13	Aug 30	2.5	Sep 7 1993
INSTANTANEOUS PEAK FLOW			428	Jan 20	1790	Aug 19 1955
INSTANTANEOUS PEAK STAGE			3.82	Jan 20	8.18	Aug 19 1955
10 PERCENT EXCEEDS	70		125		109	
50 PERCENT EXCEEDS	29		44		36	
90 PERCENT EXCEEDS	4.0		15		8.0	

e Estimated

EAST BRANCH NEPONSET RIVER AT CANTON, MA 01105500



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, 100 ft 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 mi², revised.

PERIOD OF RECORD.--Discharge: May 1966 to current year.
Water-quality records: Water years 1967-68.

GAGE.--Water-stage recorder. Elevation of gage is 70 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--30 years, 9.10 ft³/s, 27.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 590 ft³/s, May 31, 1984, gage height, 5.02 ft; maximum gage height, 5.35 ft, Feb. 15, 1971 (ice jam); minimum discharge, 0.05 ft³/s, Sept. 10-13, 15, 16, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	0045	116	3.81	July 13	--	b255	--
Jan. 19	2030	a*304	*4.72	Sept. 18	--	b259	--
Jan. 28	0830	113	3.79				

a From rating curve extended above 140 ft³/s.

b Estimated

Minimum discharge, 0.14 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.19	2.9	4.2	e2.9	14	8.0	4.2	18	5.6	4.9	e2.8	.55
2	.19	7.4	5.5	e3.0	9.6	7.0	12	11	4.6	3.2	e2.2	3.0
3	.17	7.0	4.9	e3.1	e9.4	e6.6	8.5	8.6	5.0	5.4	e1.6	5.7
4	.16	5.6	5.6	e3.2	e9.0	e6.4	6.0	8.5	5.6	4.9	1.3	2.5
5	3.8	4.0	4.8	e2.9	e8.2	e6.2	4.9	7.4	5.0	4.1	1.0	1.6
6	34	3.3	4.8	e2.8	e7.0	e8.0	4.5	16	4.2	3.0	.80	1.3
7	14	7.1	3.9	e2.8	e6.4	e10	5.1	15	3.7	2.4	.71	1.2
8	4.3	29	3.2	e2.9	e6.2	e9.6	12	10	3.5	2.1	.72	9.0
9	2.6	14	6.7	e3.0	e7.4	e8.6	15	8.5	3.4	2.0	.62	5.1
10	2.0	6.3	16	e2.8	e9.0	e8.0	26	8.0	4.2	1.8	1.2	3.6
11	1.3	4.6	8.1	e2.8	e10	e7.2	40	8.7	3.8	1.5	.91	e2.6
12	1.1	19	e5.8	e5.0	e11	7.4	48	12	3.4	1.4	.59	e1.7
13	.91	14	e4.2	e7.0	e8.0	8.6	35	9.6	3.1	e20	4.1	e2.0
14	.89	20	e3.6	e10	e6.4	12	24	7.5	2.9	e56	3.6	e2.5
15	8.0	86	3.4	e8.2	e5.6	18	18	6.8	2.6	e30	2.0	e2.1
16	3.4	39	3.4	e7.4	e5.2	28	35	7.3	2.3	e15	1.4	e1.8
17	2.2	16	3.4	e10	e5.0	22	62	21	2.2	e7.0	1.1	e5.0
18	1.4	10	3.3	e15	e5.0	16	29	14	2.1	e4.0	.84	e150
19	1.2	9.1	3.3	e86	e5.0	14	16	9.2	2.1	e2.5	.71	78
20	1.2	11	e3.5	209	5.2	31	12	7.6	3.2	e1.9	.58	20
21	8.0	8.3	e3.8	62	23	25	10	13	4.6	e1.7	.51	11
22	18	6.5	e3.4	33	63	15	8.9	31	4.7	e1.4	.49	8.9
23	7.8	5.5	3.3	22	35	11	9.0	13	3.9	e1.8	.49	12
24	4.0	4.8	3.3	31	34	8.3	8.1	8.5	2.9	e2.3	2.4	8.9
25	2.8	4.3	3.2	61	35	7.2	7.0	6.7	15	e2.9	1.4	10
26	2.2	4.0	3.2	30	19	6.9	6.4	5.8	7.1	e1.6	.79	8.1
27	1.9	3.7	3.1	35	13	5.9	6.5	5.2	4.0	e1.0	.57	6.7
28	6.8	3.6	3.0	94	12	5.2	5.8	4.8	3.3	e.80	1.1	6.1
29	6.9	3.8	e2.8	40	10	5.0	11	4.3	2.8	e.60	1.4	9.3
30	4.6	3.4	e2.7	23	---	4.8	25	8.4	2.4	e.50	.83	7.4
31	3.7	---	e2.8	17	---	4.5	---	7.9	---	e.45	.62	---
TOTAL	149.71	363.2	136.2	842.8	396.6	341.4	514.9	323.3	123.2	188.15	39.38	392.65
MEAN	4.83	12.1	4.39	27.2	13.7	11.0	17.2	10.4	4.11	6.07	1.27	13.1
MAX	34	86	16	209	63	31	62	31	15	56	4.1	158
MIN	.16	2.9	2.7	2.8	5.0	4.5	4.2	4.3	2.1	.45	.49	.55
CFSM	1.07	2.69	.98	6.04	3.04	2.45	3.81	2.32	.91	1.35	.28	2.91
IN.	1.24	3.00	1.13	6.97	3.28	2.82	4.26	2.67	1.02	1.56	.33	3.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	MEAN	4.41	10.0	12.9	12.3	12.8	17.5	13.7	9.52	6.96	2.66	3.08	3.40
MAX	10.9	24.7	30.9	30.8	26.0	51.5	38.6	21.6	46.2	7.78	8.99	13.1	
(WY)	1990	1992	1970	1979	1984	1983	1987	1967	1982	1988	1990	1996	
MIN	1.20	2.80	2.77	2.16	2.86	6.25	4.95	4.11	1.17	.54	.50	.18	
(WY)	1969	1985	1981	1981	1980	1981	1985	1986	1976	1991	1971	1980	

WEYMOUTH BACK RIVER BASIN

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01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

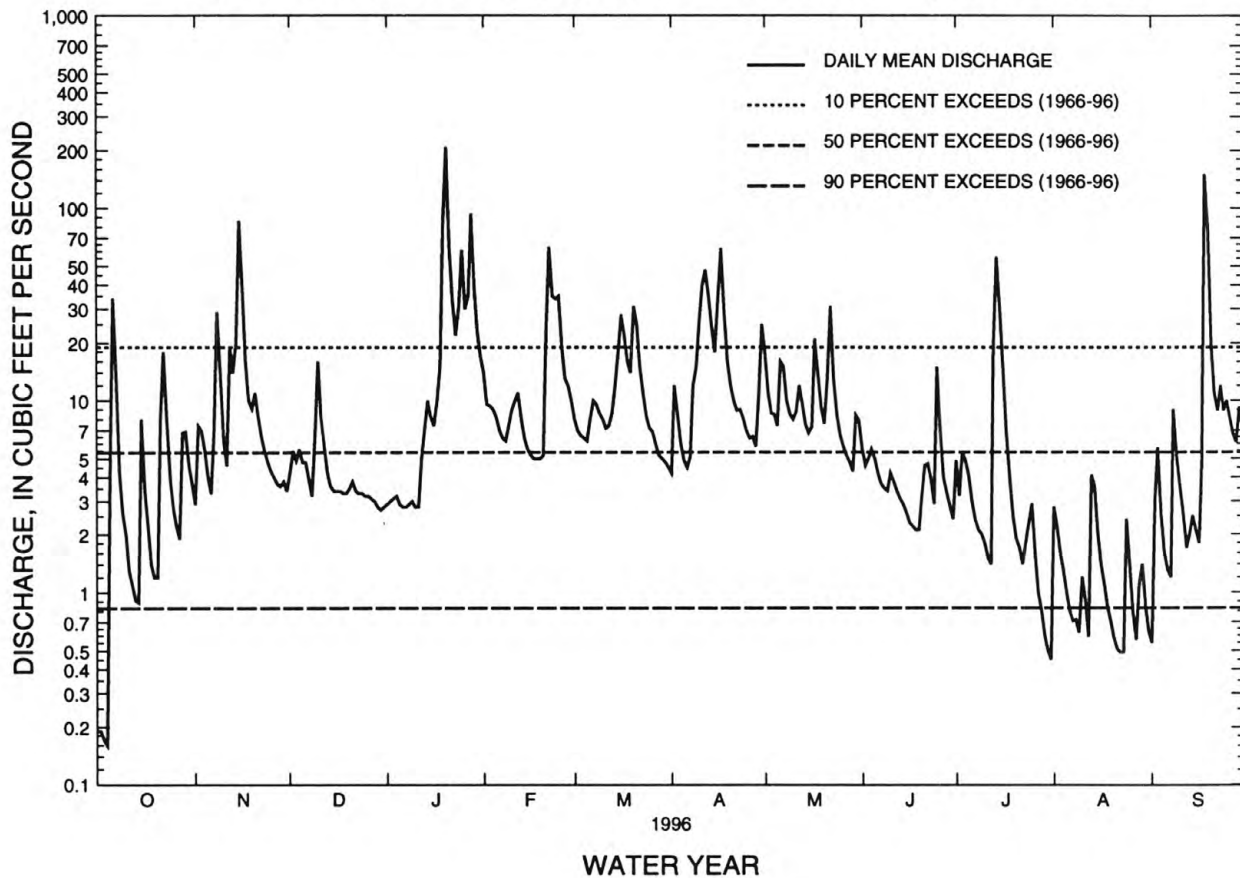
FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	2002.53	3801.49	
ANNUAL MEAN	5.49	10.4	9.10
HIGHEST ANNUAL MEAN			14.4
LOWEST ANNUAL MEAN			3.91
HIGHEST DAILY MEAN	86	209	361
LOWEST DAILY MEAN	.05	.16	.05
ANNUAL SEVEN-DAY MINIMUM	.06	.67	.06
INSTANTANEOUS PEAK FLOW		304	590
INSTANTANEOUS PEAK STAGE		4.72	5.35
INSTANTANEOUS LOW FLOW		.14	.05
ANNUAL RUNOFF (CFSM)	1.22	2.31	2.02
ANNUAL RUNOFF (INCHES)	16.55	31.43	27.47
10 PERCENT EXCEEDS	11	23	19
50 PERCENT EXCEEDS	4.0	5.2	5.4
90 PERCENT EXCEEDS	.20	1.3	.83

e Estimated

OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA 01105600



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.

Water-quality records: Water years 1970-71.

REMARKS.--Records good. Some regulation by mills and by Wampatuck, Indian Head, Maquan, and other ponds upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s, Mar. 18, 1968, gage height, 7.13 ft; minimum, 0.14 ft³/s, Sept. 26, 27, 1980; minimum daily, 0.18 ft³/s, Sept. 27, 29, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 310 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 15	2230	337	4.02	Jan. 28	1845	383	4.22
Jan. 20	1845	*720	*5.36	Sept. 19	0615	686	5.26

Minimum discharge, 3.4 ft³/s, Oct. 4; minimum daily, 3.6 ft³/s, Oct. 4.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	30	42	28	142	92	52	156	39	23	24	18
2	4.3	33	47	29	119	80	72	120	33	21	27	34
3	3.8	42	46	32	110	78	82	103	32	17	23	35
4	3.6	46	47	32	111	75	67	97	37	20	19	27
5	3.9	43	46	30	106	70	58	85	34	30	16	18
6	43	36	44	28	82	101	54	83	30	22	14	13
7	65	33	42	27	70	123	53	92	27	16	13	10
8	36	93	38	28	70	118	81	88	25	13	12	46
9	24	96	38	28	89	107	104	77	24	12	10	54
10	19	62	67	30	102	92	136	67	25	11	11	30
11	15	48	69	31	109	82	220	69	25	8.3	11	19
12	13	68	51	33	114	81	263	90	23	7.0	10	21
13	11	87	41	72	108	89	242	88	21	97	19	23
14	10	85	52	88	97	97	198	72	19	254	32	28
15	18	314	41	85	79	113	162	59	17	164	24	26
16	22	277	36	77	57	136	171	55	15	79	18	22
17	28	171	36	76	63	147	282	81	14	47	14	32
18	22	116	45	92	61	138	232	93	13	33	12	410
19	16	95	36	184	56	129	167	82	13	29	13	634
20	14	92	39	656	54	143	134	65	14	28	10	359
21	17	85	41	504	94	157	114	67	17	23	9.3	180
22	59	73	38	289	224	130	104	103	21	19	8.6	111
23	62	63	35	206	238	117	97	98	20	19	8.4	96
24	39	56	34	191	214	108	93	85	17	24	15	81
25	30	52	33	288	214	98	83	65	48	24	16	78
26	31	48	32	234	159	86	70	51	46	21	13	73
27	28	46	31	192	143	61	67	44	29	20	11	59
28	30	43	30	362	129	51	61	24	21	16	14	50
29	50	43	29	310	112	57	66	7.8	17	14	15	56
30	48	42	28	214	---	56	125	23	14	14	12	59
31	37	---	28	169	---	54	---	48	---	15	10	---
TOTAL	806.8	2418	1262	4645	3326	3066	3710	2337.8	730	1140.3	464.3	2702
MEAN	26.0	80.6	40.7	150	115	98.9	124	75.4	24.3	36.8	15.0	90.1
MAX	65	314	69	656	238	157	282	156	48	254	32	634
MIN	3.6	30	28	27	54	51	52	7.8	13	7.0	8.4	10
CFSM	.86	2.66	1.34	4.95	3.79	3.26	4.08	2.49	.80	1.21	.49	2.97
IN.	.99	2.97	1.55	5.70	4.08	3.76	4.55	2.87	.90	1.40	.57	3.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

MEAN	29.6	63.6	84.2	83.8	89.3	118	97.0	64.4	42.9	20.7	22.3	22.3
MAX	88.5	143	180	218	172	276	230	155	203	70.4	93.0	90.1
(WY)	1990	1973	1970	1979	1984	1983	1987	1967	1982	1973	1990	1996
MIN	7.36	18.0	16.4	11.4	19.4	54.9	34.1	26.1	11.4	5.68	2.02	1.13
(WY)	1972	1981	1981	1981	1980	1985	1985	1981	1976	1971	1966	1980

NORTH RIVER BASIN

87

01105730 INDIAN HEAD RIVER AT HANOVER, MA--Continued

SUMMARY STATISTICS

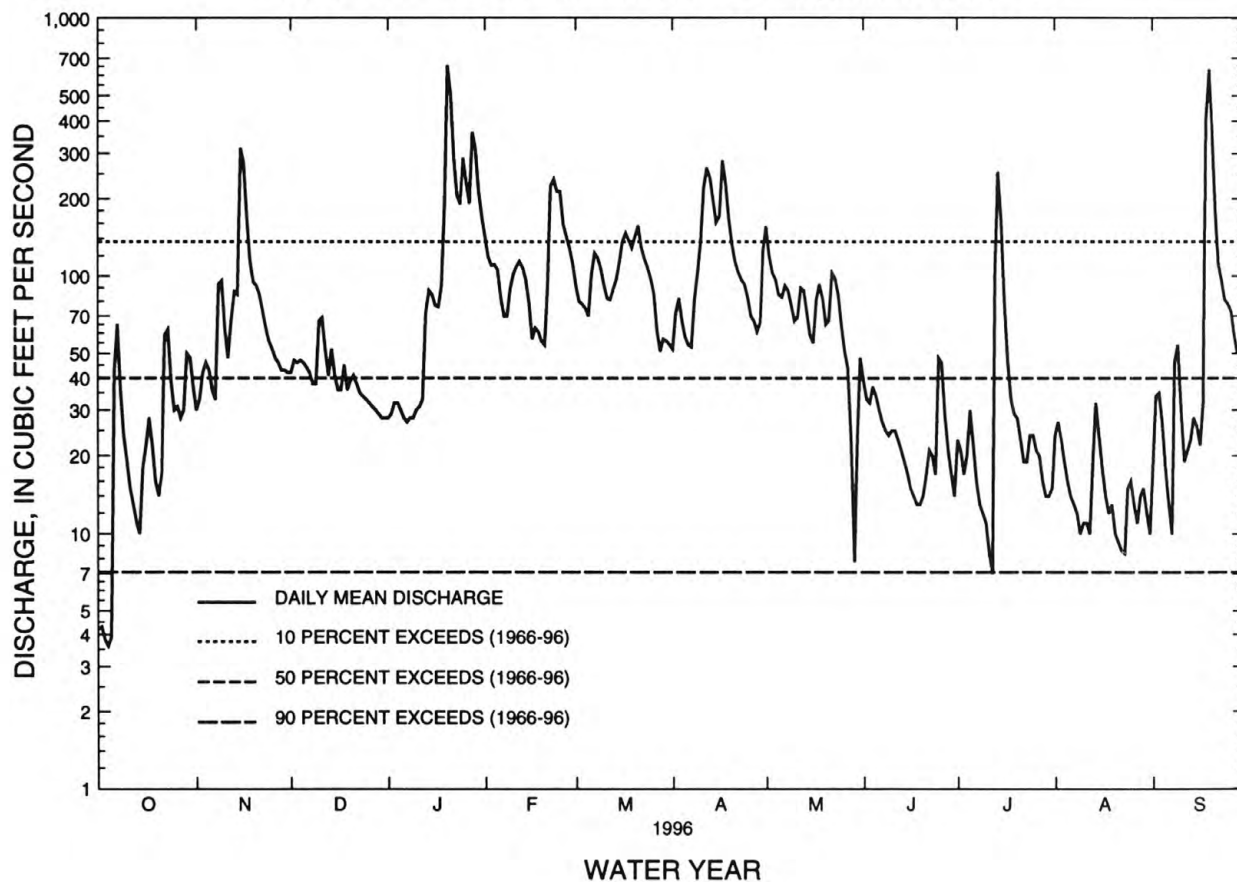
FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

ANNUAL TOTAL	15166.5	26608.2	61.4	
ANNUAL MEAN	41.6	72.7	88.9	1984
HIGHEST ANNUAL MEAN			27.6	1981
LOWEST ANNUAL MEAN			1260	Mar 19 1968
HIGHEST DAILY MEAN	314 Nov 15	656 Jan 20	.18	Sep 27 1980
LOWEST DAILY MEAN	1.3 Sep 13	3.6 Oct 4	.38	Sep 26 1980
ANNUAL SEVEN-DAY MINIMUM	1.8 Sep 10	11 Aug 17	1390	Mar 18 1968
INSTANTANEOUS PEAK FLOW		720 Jan 20	7.13	Mar 18 1968
INSTANTANEOUS PEAK STAGE		5.36 Jan 20	.14	Sep 26 1980
INSTANTANEOUS LOW FLOW		3.4 Oct 4	2.03	
ANNUAL RUNOFF (CFSM)	1.37	2.40	27.55	
ANNUAL RUNOFF (INCHES)	18.62	32.67	136	
10 PERCENT EXCEEDS	92	158	40	
50 PERCENT EXCEEDS	34	47	7.1	
90 PERCENT EXCEEDS	4.7	14		

INDIAN HEAD RIVER AT HANOVER, MA 01105730



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.

PERIOD OF RECORD.--Discharge: August 1966 to current year.
Water-quality records: Water years 1970-71.

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).

AVERAGE DISCHARGE.--30 years, 31.5 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 179 ft³/s, Jan. 20, gage height, 4.01 ft; maximum gage height, 4.34 ft, Dec. 20, backwater from tide; minimum daily, 3.0 ft³/s, Oct. 4.

MEAN	17.0	29.4	33.8	36.5	43.5	56.6	48.5	37.0	25.4	16.9	16.2	17.2
MAX	43.2	66.0	76.8	78.2	83.3	135	114	67.7	69.4	38.6	42.9	55.8
(WY)	1978	1973	1973	1979	1984	1983	1984	1967	1984	1984	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

JONES RIVER BASIN

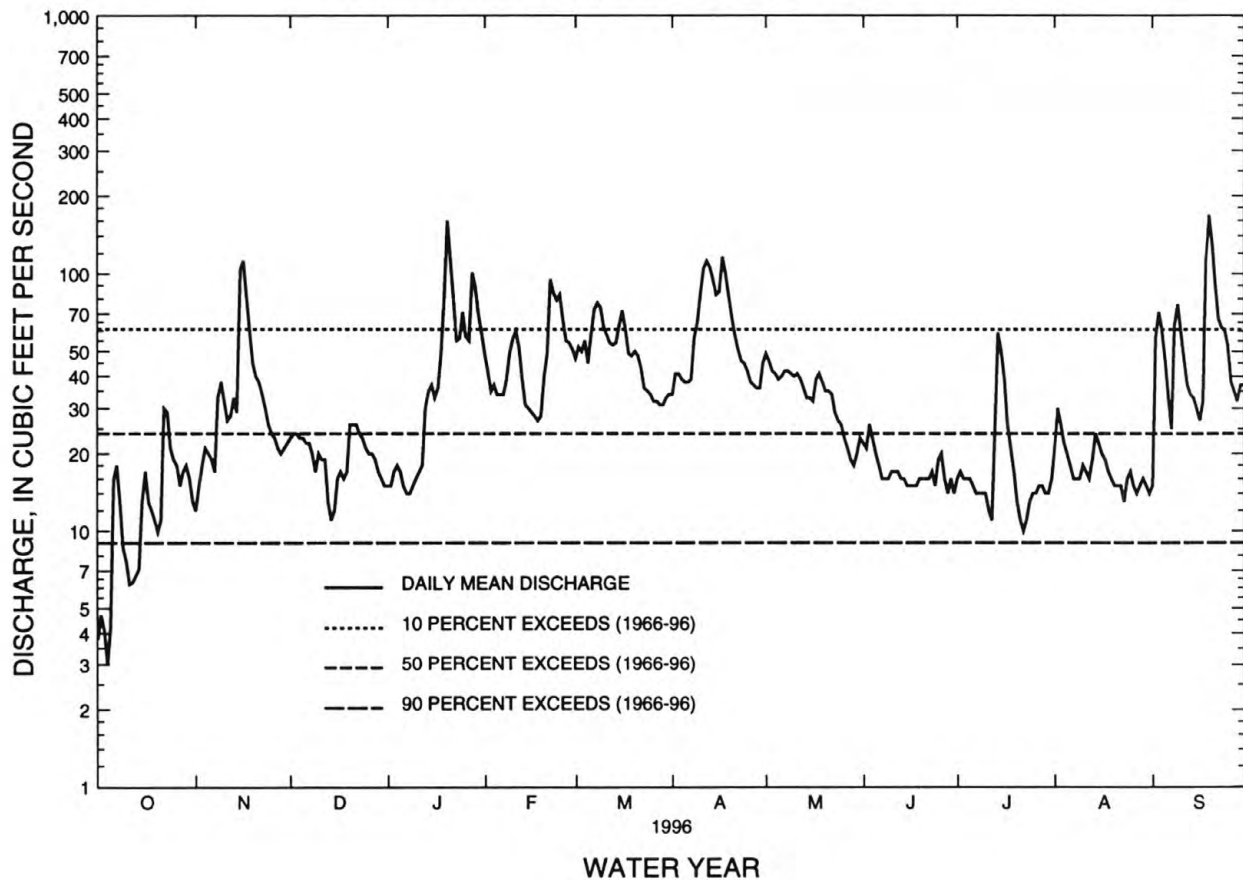
89

01105870 JONES RIVER AT KINGSTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1966 - 1996	
ANNUAL TOTAL	7909.5		12676.2		31.5	
ANNUAL MEAN	21.7		34.6		54.6	
HIGHEST ANNUAL MEAN					14.9	
LOWEST ANNUAL MEAN					527	
HIGHEST DAILY MEAN	112	Nov 16	168	Sep 19	527	Mar 19 1968
LOWEST DAILY MEAN	3.0	Oct 4	3.0	Oct 4	.59	Aug 11 1966
ANNUAL SEVEN-DAY MINIMUM	3.8	Sep 6	7.7	Oct 1	1.1	Aug 6 1966
INSTANTANEOUS PEAK FLOW			179	Jan 20	575	Mar 19 1968
INSTANTANEOUS PEAK STAGE			4.34	Dec 20	5.88	Feb 7 1978
INSTANTANEOUS LOW FLOW			2.9	Oct 4		
10 PERCENT EXCEEDS	41		67		61	
50 PERCENT EXCEEDS	20		26		24	
90 PERCENT EXCEEDS	5.1		14		9.0	

e Estimated

JONES RIVER AT KINGSTON, MA 01105870



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 mi², 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 except those for estimated daily discharges, which are fair. Flow at times includes overflow and leakage from Johns Pond. Occasional regulation by cranberry bog upstream. Occasional backwater from tidal surge.

AVERAGE DISCHARGE.--8 years, 14.7 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 41 ft³/s, Jan. 28, 1989, gage height, 2.87 ft; minimum, 5.7 ft³/s, Oct. 24, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 34 ft³/s, Apr. 29, gage height, 2.92 ft; minimum, 5.7 ft³/s, Oct. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	10	13	9.0	11	21	17	25	22	18	17	15
2	9.0	11	13	10	11	18	20	23	21	18	17	26
3	8.8	12	12	e24	12	18	19	23	21	18	16	24
4	8.8	11	12	25	12	16	18	23	22	18	16	21
5	10	10	11	17	12	15	18	22	21	17	15	18
6	16	9.8	12	12	12	18	17	23	20	17	15	17
7	14	11	12	12	12	19	18	22	20	16	15	17
8	12	18	11	e12	13	19	22	21	19	16	15	23
9	10	13	12	e12	14	15	22	21	19	17	15	23
10	9.6	11	13	12	14	16	24	22	19	17	14	20
11	9.3	11	12	12	14	15	23	22	19	16	14	19
12	9.2	14	11	17	14	15	21	23	18	16	14	19
13	9.1	12	11	19	13	15	20	23	18	18	17	20
14	9.1	14	11	15	13	15	19	23	18	19	18	22
15	11	27	7.6	13	13	15	19	23	17	18	16	21
16	10	18	7.3	13	13	15	21	23	17	18	16	19
17	9.2	14	7.2	14	e14	14	22	25	17	17	15	21
18	8.6	13	6.9	17	14	15	20	24	22	17	15	26
19	7.1	13	7.0	e17	14	20	19	24	22	17	15	25
20	6.5	13	e8.0	19	14	20	19	23	21	18	15	23
21	7.3	13	7.4	9.8	16	19	20	23	20	17	15	21
22	8.5	13	e6.8	8.1	19	16	21	23	20	17	14	20
23	6.2	12	e7.0	7.8	16	16	22	23	19	17	14	21
24	5.9	12	e7.3	8.6	17	16	23	23	19	16	15	20
25	11	12	7.4	8.4	17	15	23	23	19	13	16	20
26	11	13	7.8	7.6	16	15	24	23	18	13	15	20
27	17	12	8.3	8.9	22	15	24	23	18	15	15	19
28	17	12	8.4	12	19	16	24	22	18	15	16	19
29	13	12	8.6	8.3	17	16	25	22	18	14	16	21
30	11	13	8.7	9.6	---	16	28	23	18	15	15	21
31	12	---	8.8	10	---	16	---	23	---	15	15	---
TOTAL	316.2	389.8	296.5	400.1	418	510	632	709	580	513	476	621
MEAN	10.2	13.0	9.56	12.9	14.4	16.5	21.1	22.9	19.3	16.5	15.4	20.7
MAX	17	27	13	25	22	21	28	25	22	19	18	26
MIN	5.9	9.8	6.8	7.6	11	14	17	21	17	13	14	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1996, BY WATER YEAR (WY)

	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	11.9	13.6	12.6	13.8	13.4	15.6	18.8	18.3
MAX	14.6	14.9	16.0	18.5	18.0	20.5	29.9	24.5
(WY)	1993	1990	1993	1993	1993	1993	1993	1996
MIN	10.2	12.3	9.56	11.1	10.2	11.4	12.9	11.7
(WY)	1996	1994	1996	1991	1995	1989	1992	1995

QUASHNET RIVER BASIN

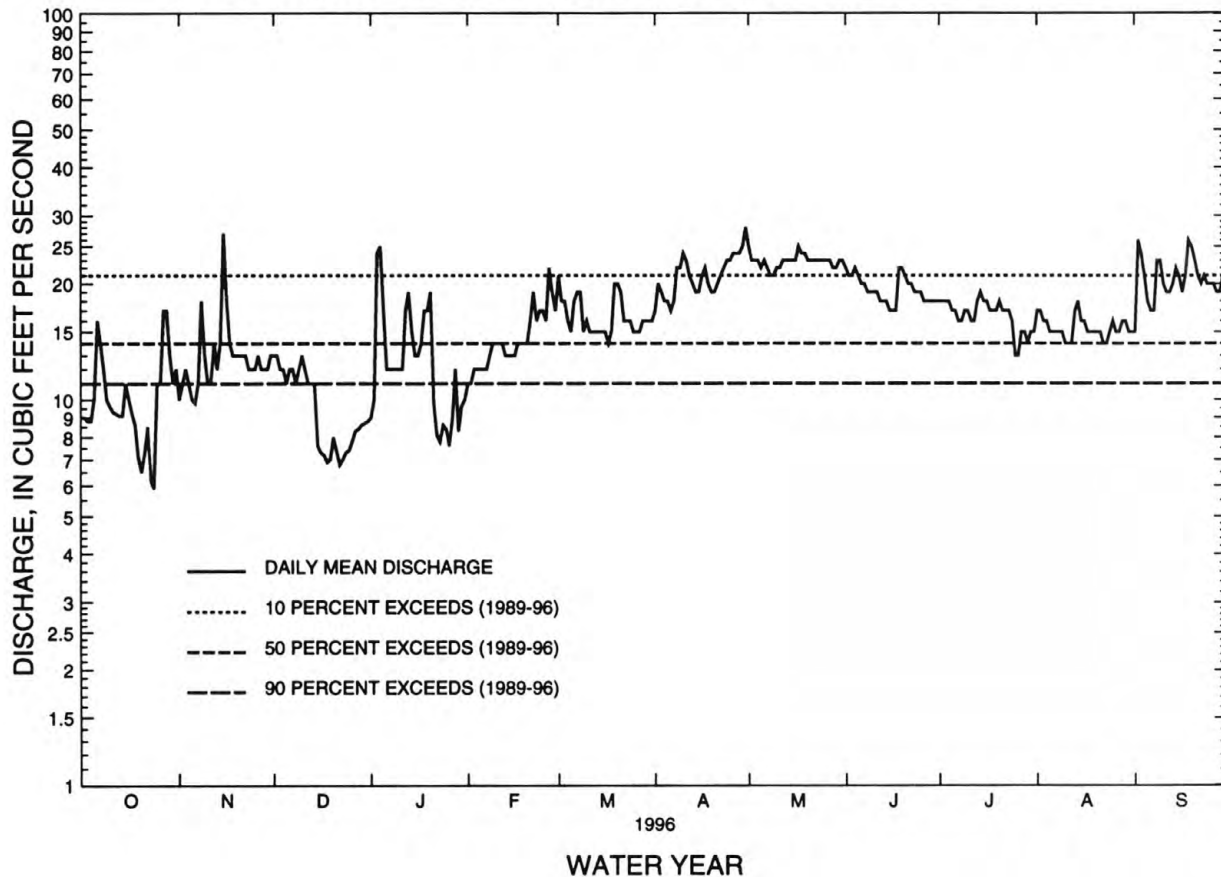
91

011058837 QUASHNET RIVER AT WAQUOIT VILLAGE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1989 - 1996
ANNUAL TOTAL	4326.5	5861.6	
ANNUAL MEAN	11.9	16.0	14.7
HIGHEST ANNUAL MEAN			18.2
LOWEST ANNUAL MEAN			12.4
HIGHEST DAILY MEAN	27 Nov 15	28 Apr 30	38 Jan 28 1989
LOWEST DAILY MEAN	5.9 Oct 24	5.9 Oct 24	5.9 Oct 24 1995
ANNUAL SEVEN-DAY MINIMUM	7.2 Oct 18	7.2 Oct 18	7.2 Oct 18 1995
INSTANTANEOUS PEAK FLOW		34 Apr 29	41 Aug 9 1992
INSTANTANEOUS PEAK STAGE		2.92 Apr 29	4.55 Aug 19 1991
INSTANTANEOUS LOW FLOW		5.7 Oct 24	5.7 Oct 24 1995
10 PERCENT EXCEEDS	14	23	21
50 PERCENT EXCEEDS	12	16	14
90 PERCENT EXCEEDS	9.1	9.1	11

e Estimated

QUASHNET RIVER AT WAQUOIT VILLAGE, MA 011058837



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.

PERIOD OF RECORD.--Discharge measurements made in water years 1972-74, 1991-92, October 1995 to September 1996.

REMARKS.--Records good.

AVERAGE DISCHARGE.--1 year, 51.3 ft³/s, 26.62 in/yr.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	0230	11.63	210	Mar. 8	1500	11.63	210
Jan. 20	1545	*12.03	*278	Sept. 20	1130	11.88	251

Minimum discharge, 0.62 ft³/s, Oct. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	14	40	19	105	77	27	83	50	3.7	24	4.8
2	1.9	23	49	19	89	68	50	76	32	4.1	41	39
3	.82	50	45	22	79	64	63	65	25	13	28	73
4	1.7	47	43	e25	69	63	56	65	35	36	17	69
5	6.2	40	39	e22	65	57	44	62	35	21	10	52
6	33	30	43	20	56	72	37	58	28	12	7.7	28
7	47	25	50	18	49	144	35	57	23	7.4	6.0	23
8	49	56	44	18	46	200	56	54	20	4.3	5.0	55
9	35	72	38	20	56	187	71	52	18	4.0	4.0	80
10	20	68	56	21	69	147	86	48	18	4.5	3.5	70
11	15	61	61	19	72	116	126	52	24	3.1	3.0	56
12	13	56	54	21	80	97	162	52	20	2.4	2.3	37
13	12	61	43	51	80	87	160	47	16	5.1	8.9	38
14	11	63	33	68	65	83	134	40	14	20	24	39
15	15	137	33	73	57	80	111	36	12	12	15	35
16	16	203	32	70	48	84	103	33	9.7	7.8	8.7	31
17	14	178	30	74	44	83	172	58	8.1	5.2	6.0	38
18	13	142	29	87	40	77	178	70	9.1	3.6	4.7	125
19	12	116	28	121	38	71	145	65	7.9	5.2	3.5	229
20	11	100	28	251	37	71	116	55	10	6.7	2.7	248
21	12	86	30	248	55	77	96	45	13	3.3	2.4	232
22	23	76	27	214	122	73	82	39	11	2.0	2.7	194
23	19	66	25	182	154	67	70	34	9.9	1.8	2.3	155
24	16	57	24	154	150	60	63	31	7.3	2.5	2.7	120
25	14	49	23	145	183	54	56	28	8.6	2.6	4.7	92
26	12	46	22	130	165	49	48	25	7.1	2.8	3.3	73
27	11	42	21	115	135	42	44	22	5.2	4.2	2.4	58
28	15	38	21	146	109	37	38	21	4.2	3.9	15	45
29	24	36	20	157	90	34	37	19	3.5	4.4	20	40
30	20	39	19	142	---	32	73	31	2.9	2.9	14	39
31	16	---	19	125	---	29	---	64	---	2.0	7.4	---
TOTAL	510.72	2077	1069	2797	2407	2482	2539	1487	487.5	213.5	301.9	2417.8
MEAN	16.5	69.2	34.5	90.2	83.0	80.1	84.6	48.0	16.2	6.89	9.74	80.6
MAX	49	203	61	251	183	200	178	83	50	36	41	248
MIN	.82	14	19	18	37	29	27	19	2.9	1.8	2.3	4.8
CFSM	.63	2.64	1.32	3.44	3.17	3.06	3.23	1.83	.62	.26	.37	3.08
IN.	.73	2.95	1.52	3.97	3.42	3.52	3.60	2.11	.69	.30	.43	3.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 1996, BY WATER YEAR (WY)

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SLOCUMS RIVER BASIN

93

01105933 PASKAMANSET RIVER NEAR SOUTH DARTMOUTH, MA--Continued

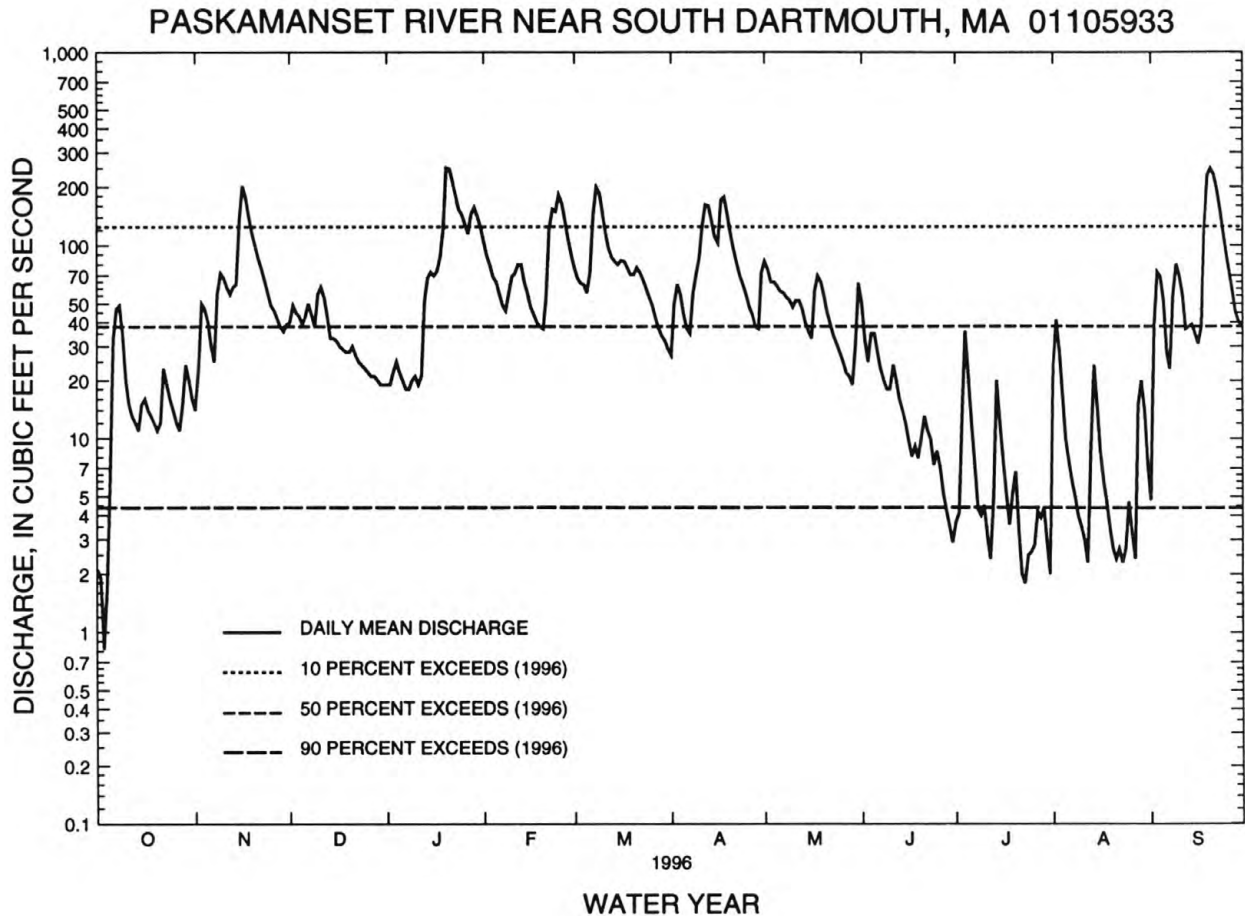
SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1995 - 1996

ANNUAL TOTAL	18789.42		
ANNUAL MEAN	51.3		51.3
HIGHEST ANNUAL MEAN			51.3 1996
LOWEST ANNUAL MEAN			51.3 1996
HIGHEST DAILY MEAN	251	Jan 20	251 Jan 20 1996
LOWEST DAILY MEAN	.82	Oct 3	.82 Oct 3 1995
ANNUAL SEVEN-DAY MINIMUM	2.7	Jul 21	2.7 Jul 21 1996
INSTANTANEOUS PEAK FLOW	278	Jan 20	278 Jan 20 1996
INSTANTANEOUS PEAK STAGE	8.43	Jan 20	8.43 Jan 20 1996
INSTANTANEOUS LOW FLOW	.62	Oct 3	.62 Oct 3 1995
ANNUAL RUNOFF (CFSM)	1.96		1.96
ANNUAL RUNOFF (INCHES)	26.68		26.62
10 PERCENT EXCEEDS	125		125
50 PERCENT EXCEEDS	38		38
90 PERCENT EXCEEDS	4.4		4.4

e Estimated



TAUNTON RIVER BASIN

01109000 WADING RIVER NEAR NORTON, MA

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 mi².

PERIOD OF RECORD.--Discharge: June 1925 to current year.

Water-quality records: Water year 1967-68.

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.--71 years, 73.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft³/s, Mar. 19, 1968, gage height, 11.47 ft; minimum, 0.3 ft³/s, Sept. 10, 1926.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	2015	*426	*8.53	Apr. 17	1415	371	8.24
Jan. 28	2030	385	8.32				

Minimum discharge, 2.7 ft³/s Oct. 1, 2-4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	35	65	37	218	144	83	155	76	17	23	13
2	2.8	43	67	37	198	128	91	151	64	17	26	13
3	2.7	55	66	38	e170	124	98	136	57	17	24	14
4	2.9	59	65	39	e150	118	92	130	60	18	22	9.4
5	3.8	55	62	e38	e135	115	86	125	62	18	20	7.4
6	24	51	63	e36	e125	135	81	120	59	18	18	6.8
7	52	47	64	35	e120	152	79	124	54	17	18	7.0
8	37	77	61	34	e115	136	92	121	51	14	16	16
9	20	95	59	32	126	e135	112	116	46	11	14	24
10	14	80	74	34	145	e130	139	109	43	9.3	13	23
11	12	71	77	36	146	120	175	106	43	7.6	12	23
12	10	80	66	39	152	117	201	125	36	6.3	11	21
13	9.3	94	57	54	e130	118	191	137	34	60	14	20
14	8.2	95	51	63	e110	124	173	117	31	200	23	18
15	14	192	49	75	104	137	163	103	27	184	24	18
16	19	234	50	80	101	157	188	94	24	140	21	15
17	17	182	51	81	98	157	345	115	22	111	17	16
18	14	157	51	91	e94	150	308	133	20	91	14	56
19	13	151	50	143	e92	145	254	121	17	73	12	110
20	12	146	50	376	85	154	229	109	17	60	10	100
21	13	133	e49	e330	111	161	209	100	20	48	9.1	79
22	36	119	51	e270	213	150	190	97	21	37	9.0	63
23	56	106	50	240	215	139	173	92	21	31	8.4	60
24	44	95	48	229	203	132	159	83	19	32	14	57
25	32	86	47	271	215	131	147	74	30	37	20	54
26	26	81	44	249	193	124	136	63	42	35	19	50
27	22	76	42	224	172	113	128	55	32	33	15	42
28	26	73	42	348	160	104	118	50	26	31	14	36
29	39	69	43	338	156	96	111	47	21	27	15	35
30	47	66	39	281	---	90	131	55	17	23	15	39
31	40	---	38	254	---	87	---	78	---	21	14	---
TOTAL	671.5	2903	1691	4432	4252	4023	4682	3241	1092	1444.2	504.5	1045.6
MEAN	21.7	96.8	54.5	143	147	130	156	105	36.4	46.6	16.3	34.9
MAX	56	234	77	376	218	161	345	155	76	200	26	110
MIN	2.7	35	38	32	85	87	79	47	17	6.3	8.4	6.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1996, BY WATER YEAR (WY)

	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
MEAN	29.7	61.0	91.3	99.8	106	154	135	82.4	50.9	24.0	22.0	21.1
MAX	143	210	257	353	232	354	323	227	222	225	175	106
(WY)	1956	1956	1946	1979	1970	1936	1987	1954	1984	1938	1955	1954
MIN	3.11	5.21	10.4	13.7	26.1	65.6	35.0	28.6	9.79	3.57	1.91	1.76
(WY)	1958	1958	1966	1981	1980	1985	1985	1965	1957	1957	1993	1930

TAUNTON RIVER BASIN

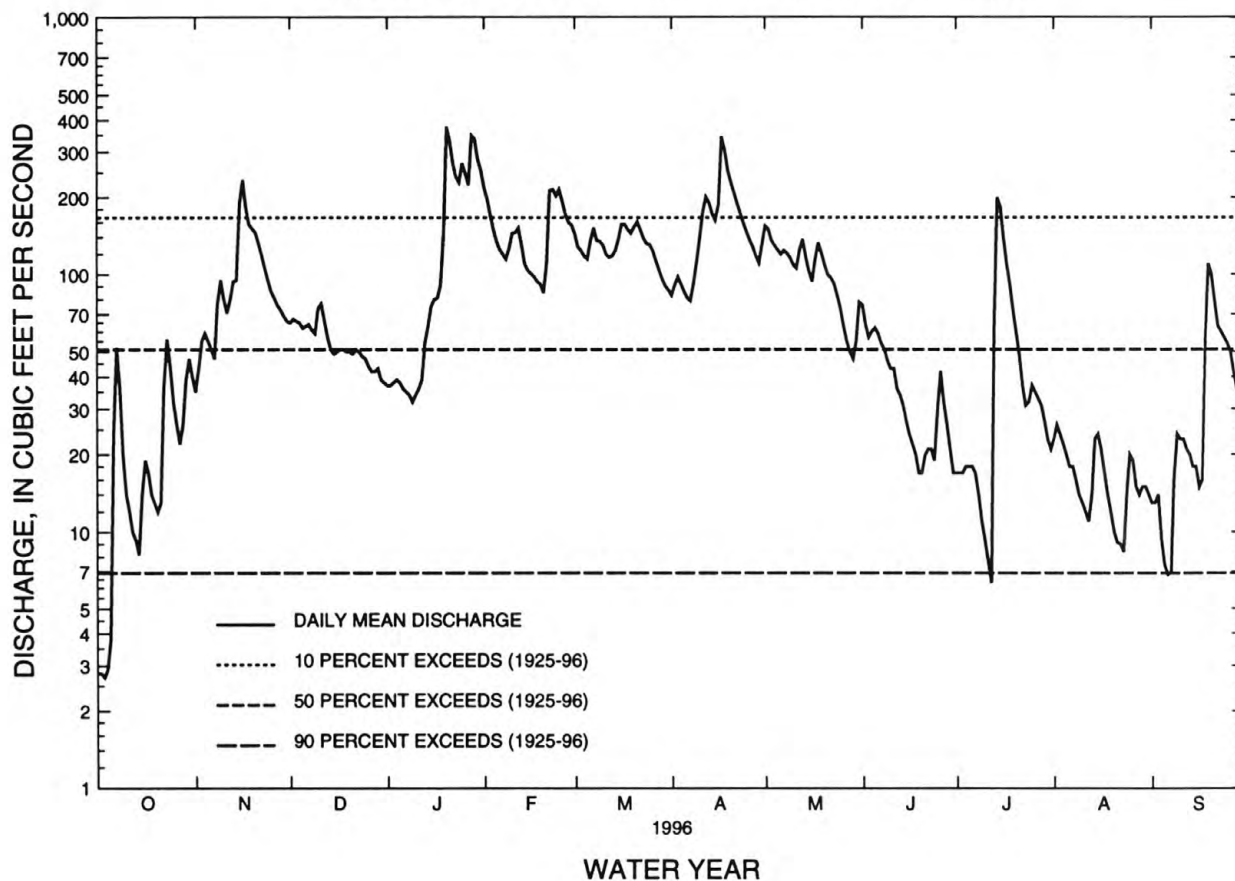
95

01109000 WADING RIVER NEAR NORTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1925 - 1996
ANNUAL TOTAL	18578.06	29981.8	
ANNUAL MEAN	50.9	81.9	73.0
HIGHEST ANNUAL MEAN			123 1984
LOWEST ANNUAL MEAN			28.8 1966
HIGHEST DAILY MEAN	234 Nov 16	376 Jan 20	1280 Mar 19 1968
LOWEST DAILY MEAN	.70 Sep 13	2.7 Oct 3	.30 Sep 10 1926
ANNUAL SEVEN-DAY MINIMUM	.80 Sep 9	10 Sep 1	.62 Aug 30 1993
INSTANTANEOUS PEAK FLOW		426 Jan 20	1460 Mar 19 1968
INSTANTANEOUS PEAK STAGE		8.53 Jan 20	11.47 Mar 19 1968
INSTANTANEOUS LOW FLOW		2.7 Oct 1	.30 Sep 10 1926
10 PERCENT EXCEEDS	109	172	167
50 PERCENT EXCEEDS	50	60	51
90 PERCENT EXCEEDS	2.9	14	6.9

e Estimated

WADING RIVER NEAR NORTON, MA 01109000



TAUNTON RIVER BASIN

01109060 THREEMILE RIVER AT NORTH DIGHTON, MA

LOCATION.--Lat 41°51'58", long 71°07'24", Bristol County, Hydrologic Unit 01090004, on right bank 800 ft downstream from Warner Boulevard at North Dighton and 1.4 mi upstream from mouth.

DRAINAGE AREA.--84.3 mi².

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

PERIOD OF RECORD.--Discharge: July 1966 to current year.
Water-quality records: Water years 1967-68.

GAGE.--Water-stage recorder. Datum of gage is 11.38 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Lake Mirimichi and other lakes and reservoirs upstream. Diversions to and from basin upstream for municipal supplies may be compensating.

AVERAGE DISCHARGE.--30 years, 166 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft³/s, Mar. 19, 1968, gage height, 8.30 ft; minimum, 1.9 ft³/s, Sept. 12, 1995.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 21	1715	*861	*5.33	Apr. 18	1000	751	5.08
Jan. 29	1330	769	5.12				

Minimum discharge, 10 ft³/s, Oct. 1, 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	72	134	e78	499	300	165	271	151	46	54	32
2	11	79	140	e79	444	275	184	292	134	44	61	35
3	11	99	137	82	370	251	193	287	118	45	55	30
4	10	106	137	78	333	242	190	267	118	47	50	28
5	15	105	131	76	339	230	177	253	121	45	45	24
6	68	96	129	84	303	285	165	246	114	41	43	22
7	79	93	130	81	264	322	160	242	103	38	42	23
8	81	144	128	76	251	304	181	242	95	35	40	66
9	65	153	123	79	267	285	213	235	89	32	37	57
10	51	165	145	82	283	284	266	224	84	29	36	52
11	42	151	156	81	299	270	331	229	82	25	34	52
12	37	163	145	84	314	256	398	222	79	23	30	49
13	33	167	129	126	288	246	418	235	71	105	38	46
14	30	195	116	148	254	251	390	242	67	267	53	45
15	46	312	109	153	229	270	355	215	61	376	51	43
16	54	416	106	152	208	303	390	194	55	372	47	41
17	50	472	105	170	198	323	608	228	50	288	41	45
18	44	393	103	196	192	320	734	247	48	225	37	e160
19	38	344	102	299	190	301	630	253	45	181	32	e190
20	34	311	99	582	182	313	531	236	45	144	29	e220
21	42	292	102	792	215	321	470	202	48	112	26	e200
22	74	265	112	707	328	318	414	181	50	86	26	e160
23	89	236	105	582	462	293	370	173	49	71	24	e130
24	97	210	101	525	502	269	337	162	46	69	31	e125
25	83	187	97	544	491	252	303	146	60	69	45	e115
26	67	169	93	561	461	242	276	129	72	69	42	e105
27	58	158	90	529	403	225	259	114	72	66	37	e100
28	63	148	87	631	358	208	237	103	61	61	35	e80
29	77	141	83	752	324	193	223	96	53	55	35	e82
30	82	136	82	686	---	181	242	101	47	50	34	e84
31	82	---	e78	589	---	172	---	150	---	49	32	---
TOTAL	1624	5978	3534	9684	9251	8305	9810	6417	2288	3165	1222	2441
MEAN	52.4	199	114	312	319	268	327	207	76.3	102	39.4	81.4
MAX	97	472	156	792	502	323	734	292	151	376	61	220
MIN	10	72	78	76	182	172	160	96	45	23	24	22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

MEAN	74.9	143	219	228	242	320	296	186	128	51.6	55.9	49.1
MAX	298	407	534	683	466	580	701	408	466	137	170	128
(WY)	1990	1990	1973	1979	1970	1983	1987	1967	1984	1973	1986	1989
MIN	16.1	32.7	40.1	29.8	55.7	136	84.5	83.4	25.6	12.1	9.47	10.9
(WY)	1994	1994	1981	1981	1980	1985	1985	1981	1991	1991	1993	1993

TAUNTON RIVER BASIN

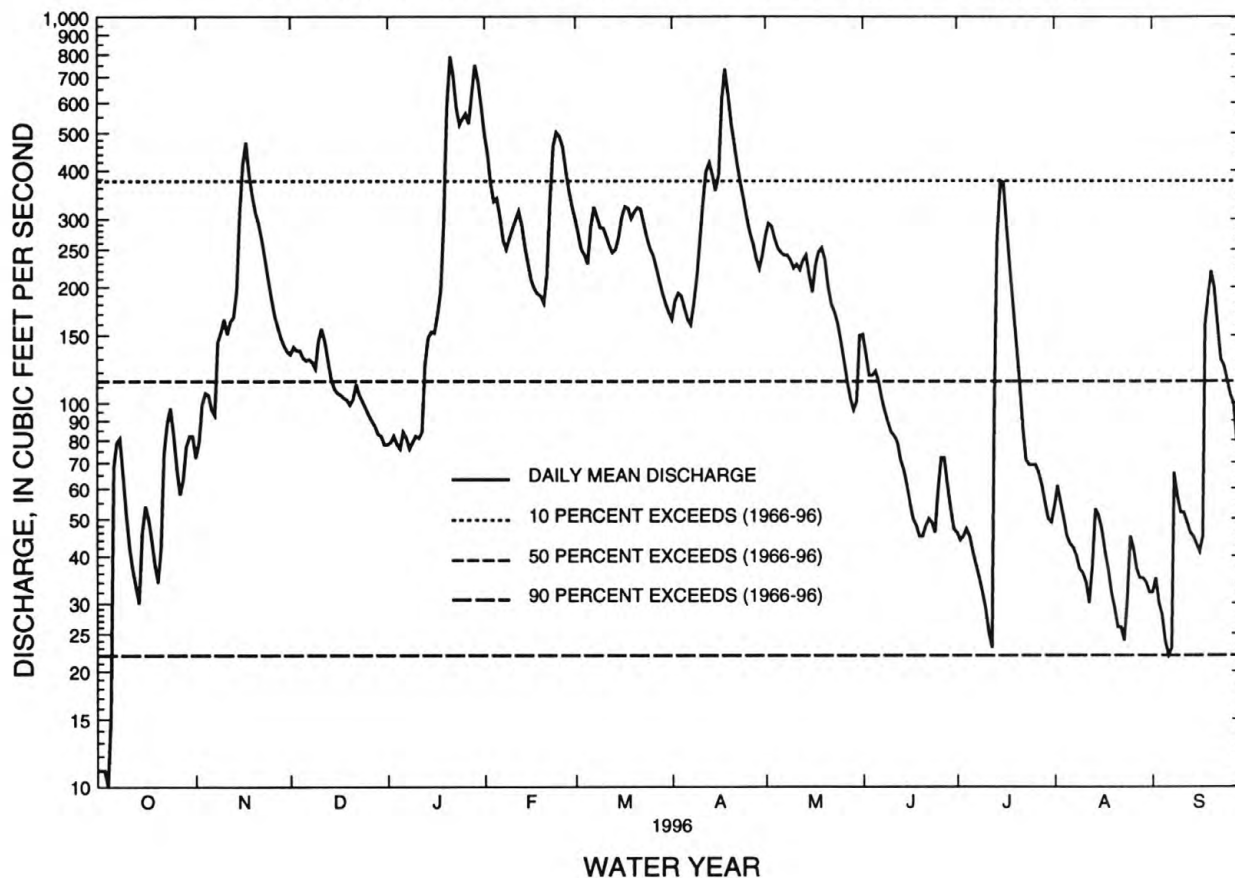
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01109060 THREEMILE RIVER AT NORTH DIGHTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1966 - 1996
ANNUAL TOTAL	40004.4	63719	
ANNUAL MEAN	110	174	166
HIGHEST ANNUAL MEAN			255
LOWEST ANNUAL MEAN			64.4
HIGHEST DAILY MEAN	472	792	2310
LOWEST DAILY MEAN	2.4	10	2.4
ANNUAL SEVEN-DAY MINIMUM	2.9	28	2.9
INSTANTANEOUS PEAK FLOW		861	2490
INSTANTANEOUS PEAK STAGE		5.33	8.30
INSTANTANEOUS LOW FLOW		10	1.9
10 PERCENT EXCEEDS	235	362	376
50 PERCENT EXCEEDS	102	129	114
90 PERCENT EXCEEDS	11	37	22

e Estimated

THREEMILE RIVER AT NORTH DIGHTON, MA 01109060



LOCATION.--Lat 41°50'25", long 71°08'36", Bristol County, Hydrologic Unit 01090004, on left bank 50 ft upstream from twin culverts on Center Street and 1.8 mi northwest of Dighton.

Water-quality records: Water years 1967-68.

REMARKS.--Records good. Occasional regulation by ponds upstream. Diversion upstream for Dighton Water District.

AVERAGE DISCHARGE.--30 years, 22.1 ft³/s, 28.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s, Mar. 18, 1968, gage height, 7.51 ft; no flow at times in several water years.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	0300	*310	*5.18	No other peak greater than base discharge.			
Minimum discharge, 0.09 ft ³ /s, Oct. 4, 5.							

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	6.9	12	7.9	41	26	12	31	14	1.1	2.7	.79
2	.13	9.8	17	8.2	29	22	20	28	8.3	1.2	3.9	.62
3	.11	16	17	8.6	24	21	25	21	6.4	1.1	3.8	1.1
4	.10	15	18	9.2	24	21	21	19	7.1	1.7	3.6	.86
5	.13	12	17	8.2	21	20	17	17	7.2	1.9	3.3	.69
6	6.0	9.1	17	7.6	18	47	15	18	6.1	1.7	2.7	.63
7	11	8.2	18	7.4	17	77	14	21	4.8	.88	1.6	.60
8	6.8	29	16	8.6	18	57	22	20	4.0	.58	1.2	13
9	3.8	32	15	8.3	29	50	33	19	3.4	.46	1.0	13
10	2.2	22	25	8.6	42	36	49	18	3.2	.42	1.1	7.8
11	1.6	16	27	8.9	47	30	71	19	3.3	.37	1.1	5.2
12	1.4	23	19	9.9	53	28	88	20	3.2	.32	.79	3.8
13	1.4	29	13	22	40	30	74	19	2.9	15	1.5	3.4
14	1.8	30	10	29	26	38	54	15	2.5	82	4.4	3.5
15	4.4	110	10	35	20	50	40	12	2.1	62	4.2	3.0
16	5.1	104	11	35	18	65	63	11	1.8	30	3.0	2.4
17	4.9	58	11	37	16	56	151	25	1.7	15	2.0	3.8
18	4.0	37	10	48	17	42	96	36	1.7	7.9	1.5	68
19	3.2	31	10	127	16	34	57	27	1.6	5.6	1.1	83
20	2.9	28	9.8	292	16	41	39	19	1.6	5.5	.85	46
21	3.4	25	11	149	39	45	31	14	1.7	4.5	.69	21
22	11	22	10	75	110	36	25	12	1.8	3.7	.58	12
23	12	19	10	52	92	28	22	9.3	1.8	3.2	.46	12
24	9.1	16	9.8	48	77	23	20	7.3	1.8	3.0	1.2	11
25	6.7	14	9.8	76	81	20	18	6.0	2.0	2.9	2.8	8.7
26	5.1	13	9.5	62	56	19	16	5.1	2.5	2.8	2.1	8.9
27	4.1	12	9.3	52	40	17	15	4.5	2.1	2.7	1.3	7.5
28	7.0	12	9.0	119	34	15	14	4.0	1.9	2.3	1.4	6.4
29	13	11	8.4	94	31	14	13	3.6	1.8	1.6	1.9	7.0
30	11	11	8.1	60	---	13	23	6.6	1.2	1.2	1.6	7.6
31	8.6	---	7.9	48	---	11	---	17	---	1.3	1.1	---
TOTAL	152.13	781.0	405.6	1561.4	1092	1032	1158	504.4	105.5	263.93	60.47	363.29
MEAN	4.91	26.0	13.1	50.4	37.7	33.3	38.6	16.3	3.52	8.51	1.95	12.1
MAX	13	110	27	292	110	77	151	36	14	82	4.4	83
MIN	.10	6.9	7.9	7.4	16	11	12	3.6	1.2	.32	.46	.60
CFSM	.46	2.46	1.23	4.75	3.55	3.14	3.64	1.53	.33	.80	.18	1.14
IN.	.53	2.74	1.42	5.48	3.83	3.62	4.06	1.77	.37	.93	.21	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

MEAN	8.56	22.0	32.4	33.9	34.5	45.5	36.9	23.2	14.1	4.97	5.14	5.51
MAX	42.7	58.4	74.7	110	63.2	91.4	106	61.7	64.3	24.9	35.3	21.5
(WY)	1978	1973	1987	1979	1970	1994	1987	1967	1984	1973	1976	1972
MIN	.38	4.69	3.70	3.34	7.23	20.2	9.55	7.87	1.51	.089	.015	.018
(WY)	1989	1981	1981	1981	1980	1981	1985	1981	1981	1993	1993	1980

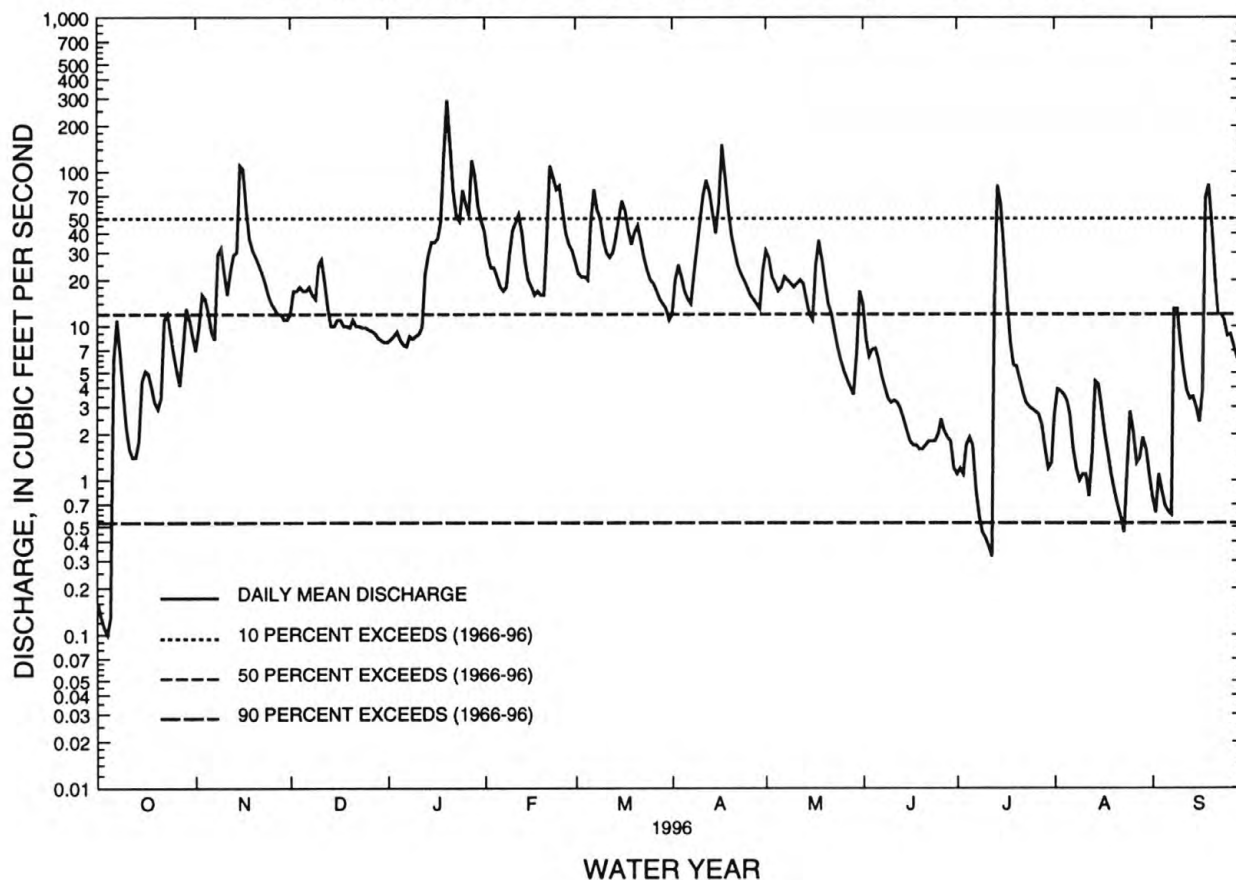
TAUNTON RIVER BASIN

99

01109070 SEGREGANSET RIVER NEAR DIGHTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1966 - 1996
ANNUAL TOTAL	5573.66	7479.72	22.1
ANNUAL MEAN	15.3	20.4	33.0
HIGHEST ANNUAL MEAN			7.68
LOWEST ANNUAL MEAN			1984
HIGHEST DAILY MEAN	110 Nov 15	292 Jan 20	670 Mar 18 1968
LOWEST DAILY MEAN	.00 Aug 24	.10 Oct 4	.00 Aug 13 1966
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 24	.68 Jul 6	.00 Aug 13 1966
INSTANTANEOUS PEAK FLOW		310 Jan 20	867 Mar 18 1968
INSTANTANEOUS PEAK STAGE		5.18 Jan 20	7.51 Mar 18 1968
INSTANTANEOUS LOW FLOW		.09 Oct 4	.00 Aug 13 1966
ANNUAL RUNOFF (CFSM)	1.44	1.93	2.09
ANNUAL RUNOFF (INCHES)	19.56	26.25	28.38
10 PERCENT EXCEEDS	35	51	50
50 PERCENT EXCEEDS	11	11	12
90 PERCENT EXCEEDS	.09	1.3	.53

SEGREGANSET RIVER NEAR DIGHTON, MA 01109070



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 mi².

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 except those for estimated daily discharges, which are fair. Flow affected by regulation and diversions from reservoirs upstream.

AVERAGE DISCHARGE.--10 years, 103 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,090 ft³/s, Apr. 6, 1987, gage height, 7.78 ft; minimum, 5.0 ft³/s, Apr. 19, 1991; minimum daily, 6.6 ft³/s, Apr. 19, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 618 ft³/s, Jan. 20, gage height, 6.22 ft; minimum, 18 ft³/s, Oct. 2, 3; minimum daily, 19 ft³/s, Oct. 2, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	61	85	54	272	e161	94	e194	93	36	53	33
2	19	78	90	e54	230	e147	128	e185	77	37	49	63
3	19	93	83	e54	e197	e132	126	e170	74	47	43	84
4	20	81	86	e53	e172	e123	116	e160	77	47	39	64
5	30	70	83	e53	e158	e153	100	e150	77	43	36	45
6	168	65	93	53	e150	e210	92	e150	72	39	34	37
7	149	68	91	e51	140	e190	92	e153	64	35	42	45
8	79	159	82	e52	135	e170	126	e147	59	31	41	75
9	54	138	85	e54	158	e164	e150	e140	56	31	37	76
10	45	97	124	56	180	e156	e190	e138	53	30	37	74
11	41	85	108	54	185	e146	e240	e140	54	27	36	51
12	38	134	89	61	194	e140	e300	e152	52	26	31	44
13	35	140	77	102	167	e140	e230	e164	49	178	53	42
14	32	127	72	105	139	e170	e200	e140	48	365	61	43
15	65	279	73	99	122	e191	e265	e120	44	252	48	37
16	59	383	69	91	e114	e212	e360	115	40	145	40	32
17	56	295	69	94	e112	e219	e490	171	39	102	36	44
18	68	243	69	113	106	e170	e410	183	41	79	35	173
19	69	222	69	193	99	e180	e348	154	39	71	32	180
20	62	193	75	521	98	e195	e310	133	46	67	28	101
21	81	164	69	524	136	e217	e272	122	53	55	30	73
22	194	140	68	e335	282	e192	e245	117	47	48	32	63
23	131	121	65	e300	312	172	e219	101	44	48	31	66
24	89	111	64	265	e295	153	e197	93	37	54	45	57
25	76	102	63	331	e265	137	e178	82	61	54	58	64
26	65	96	61	294	e230	134	e159	72	70	54	48	56
27	57	92	59	265	e200	122	e142	69	54	50	42	50
28	88	95	58	458	e180	112	e120	64	47	43	42	48
29	114	92	57	477	e167	109	e138	64	38	39	42	59
30	82	85	56	359	---	101	e158	75	35	40	36	55
31	67	---	55	315	---	96	---	107	---	40	32	---
TOTAL	2172	4109	2347	5890	5195	4914	6195	4025	1640	2213	1249	1934
MEAN	70.1	137	75.7	190	179	159	206	130	54.7	71.4	40.3	64.5
MAX	194	383	124	524	312	219	490	194	93	365	61	180
MIN	19	61	55	51	98	96	92	64	35	26	28	32

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1996, BY WATER YEAR (WY)

MEAN	61.6	103	140	135	138	171	183	108	57.5	39.8	51.7	49.5
MAX	171	223	304	201	261	348	407	188	103	71.4	119	94.4
(WY)	1990	1990	1993	1987	1988	1994	1987	1989	1989	1996	1989	1987
MIN	23.1	44.8	51.8	41.4	60.5	90.2	78.0	60.4	32.1	21.3	16.6	22.3
(WY)	1994	1994	1989	1989	1989	1989	1995	1992	1991	1991	1993	1993

TEN MILE RIVER BASIN

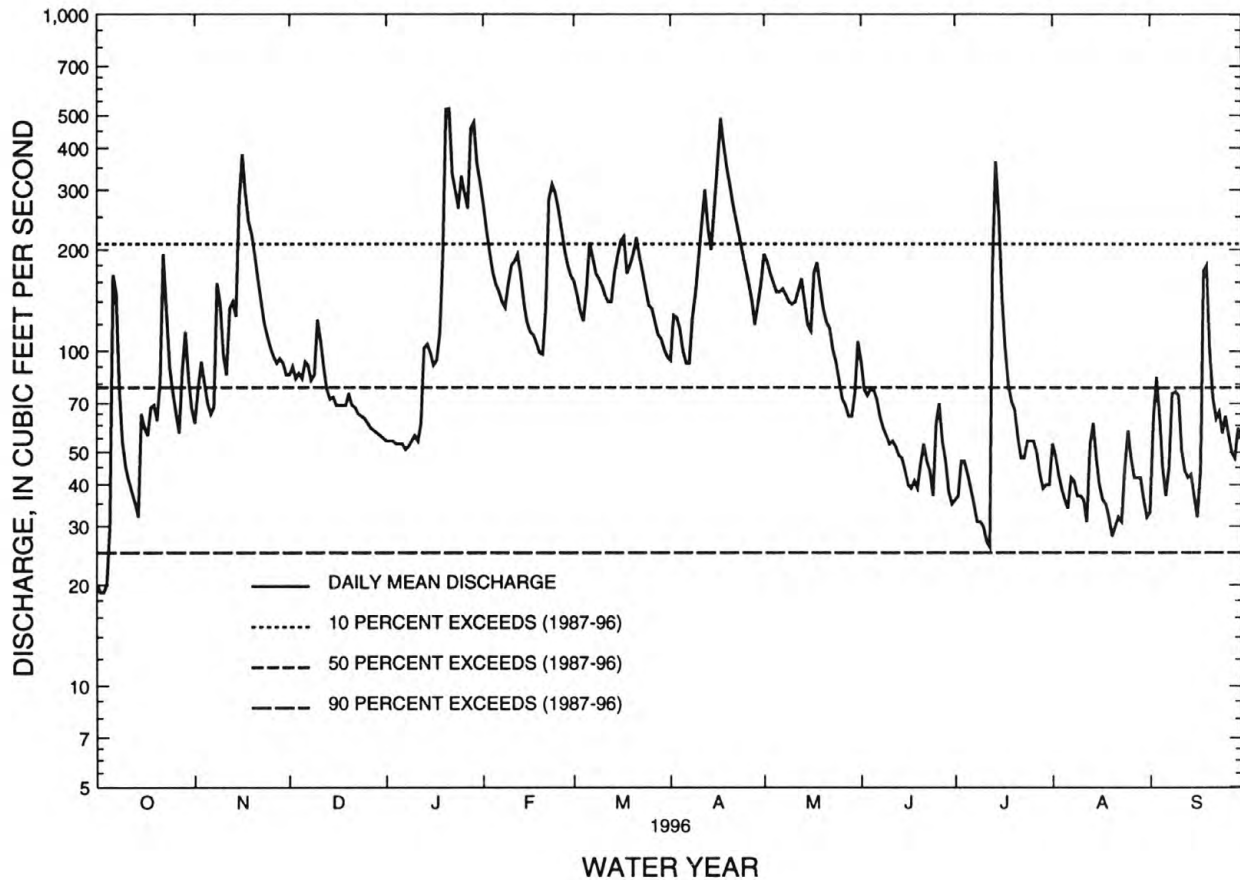
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01109403 TEN MILE RIVER AT PAWTUCKET AVENUE AT EAST PROVIDENCE, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1987 - 1996	
ANNUAL TOTAL	27249		41883		103	
ANNUAL MEAN	74.7		114		140	
HIGHEST ANNUAL MEAN					67.5	
LOWEST ANNUAL MEAN					1040	
HIGHEST DAILY MEAN	383	Nov 16	524	Jan 21	1040	Apr 6 1987
LOWEST DAILY MEAN	12	Sep 4	19	Oct 2	6.6	Apr 19 1991
ANNUAL SEVEN-DAY MINIMUM	14	Sep 7	31	Jul 6	12	Aug 31 1993
INSTANTANEOUS PEAK FLOW			618	Jan 20	1090	Apr 6 1987
INSTANTANEOUS PEAK STAGE			6.22	Jan 20	7.78	Apr 6 1987
INSTANTANEOUS LOW FLOW			18	Oct 2	5.0	Apr 19 1991
10 PERCENT EXCEEDS	134		224		208	
50 PERCENT EXCEEDS	69		84		78	
90 PERCENT EXCEEDS	20		38		25	

e Estimated

TEN MILE RIVER, PAWTUCKET AVE. AT EAST PROVIDENCE, RI 01109403



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 Bummett Brook.

PERIOD OF RECORD.--October 1939 to current year.

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 discharges, which are poor. Some regulation by Lake Quinsigamond 2.3 mi upstream and by ponds upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/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, 291 ft³/s, Jan. 27, gage height, 3.14 ft; minimum daily, 1.2 ft³/s, Oct. 3

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	33	34	18	e150	e85	e40	104	40	14	33	9.4
2	1.3	40	40	18	e130	e78	e50	93	37	14	31	9.0
3	1.2	48	32	22	e120	e70	e66	82	35	15	29	7.7
4	1.3	45	33	23	e105	e65	55	86	36	16	52	6.8
5	3.9	37	31	21	e95	e60	48	82	36	15	44	6.5
6	61	32	32	19	e85	e68	44	78	35	13	37	6.0
7	70	30	31	18	e75	e80	44	77	32	11	31	6.7
8	55	44	30	e18	e65	e75	53	71	39	9.4	26	15
9	41	41	28	e18	e70	e70	54	67	77	14	23	14
10	31	33	33	e18	e68	e65	70	66	72	18	36	14
11	24	29	30	e18	e68	e58	75	67	62	15	30	13
12	20	66	27	e19	e65	e54	78	87	52	12	24	12
13	17	81	25	e20	e62	e55	77	82	44	56	23	12
14	14	75	25	21	e52	e58	82	72	39	135	22	12
15	27	121	27	20	e48	e66	80	65	34	107	19	10
16	26	120	26	19	e47	e78	135	61	28	83	17	9.4
17	21	101	27	21	e46	e85	275	76	25	65	16	13
18	15	84	26	25	e45	e78	248	71	23	51	14	73
19	13	80	25	121	e42	e72	201	65	20	40	13	96
20	12	72	27	182	e40	e80	166	63	27	37	11	78
21	24	64	27	158	e60	e120	142	58	39	29	10	62
22	82	60	25	127	e120	e130	119	55	35	23	9.3	51
23	73	53	24	104	e140	e110	112	49	32	24	11	62
24	58	49	23	147	e130	e98	108	45	27	39	24	55
25	48	44	22	168	e125	e88	88	42	31	35	24	49
26	38	42	22	143	e110	e75	77	41	27	35	20	42
27	30	38	21	232	e105	e72	77	39	22	38	17	35
28	45	38	20	280	e100	e66	69	37	20	32	16	30
29	58	37	19	239	e90	e54	68	36	17	27	15	39
30	48	35	18	198	---	e45	96	38	15	24	12	38
31	38	---	18	e165	---	e38	---	41	---	22	10	---
TOTAL	998.1	1672	828	2620	2458	2296	2897	1996	1058	1068.4	699.3	886.5
MEAN	32.2	55.7	26.7	84.5	84.8	74.1	96.6	64.4	35.3	34.5	22.6	29.5
MAX	82	121	40	280	150	130	275	104	77	135	52	96
MIN	1.2	29	18	18	40	38	40	36	15	9.4	9.3	6.0

MEAN	20.3	33.2	43.7	47.8	53.8	77.7	77.2	52.3	37.6	19.9	17.9	15.8
MAX	94.3	149	108	159	141	154	202	92.3	143	64.2	169	130
(WY)	1956	1956	1984	1979	1970	1972	1987	1954	1982	1959	1955	1954
MIN	1.22	1.80	3.07	7.85	11.0	29.4	22.5	19.2	11.5	2.67	1.05	.70
(WY)	1943	1942	1942	1981	1977	1989	1966	1965	1995	1965	1965	1995

BLACKSTONE RIVER BASIN

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01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

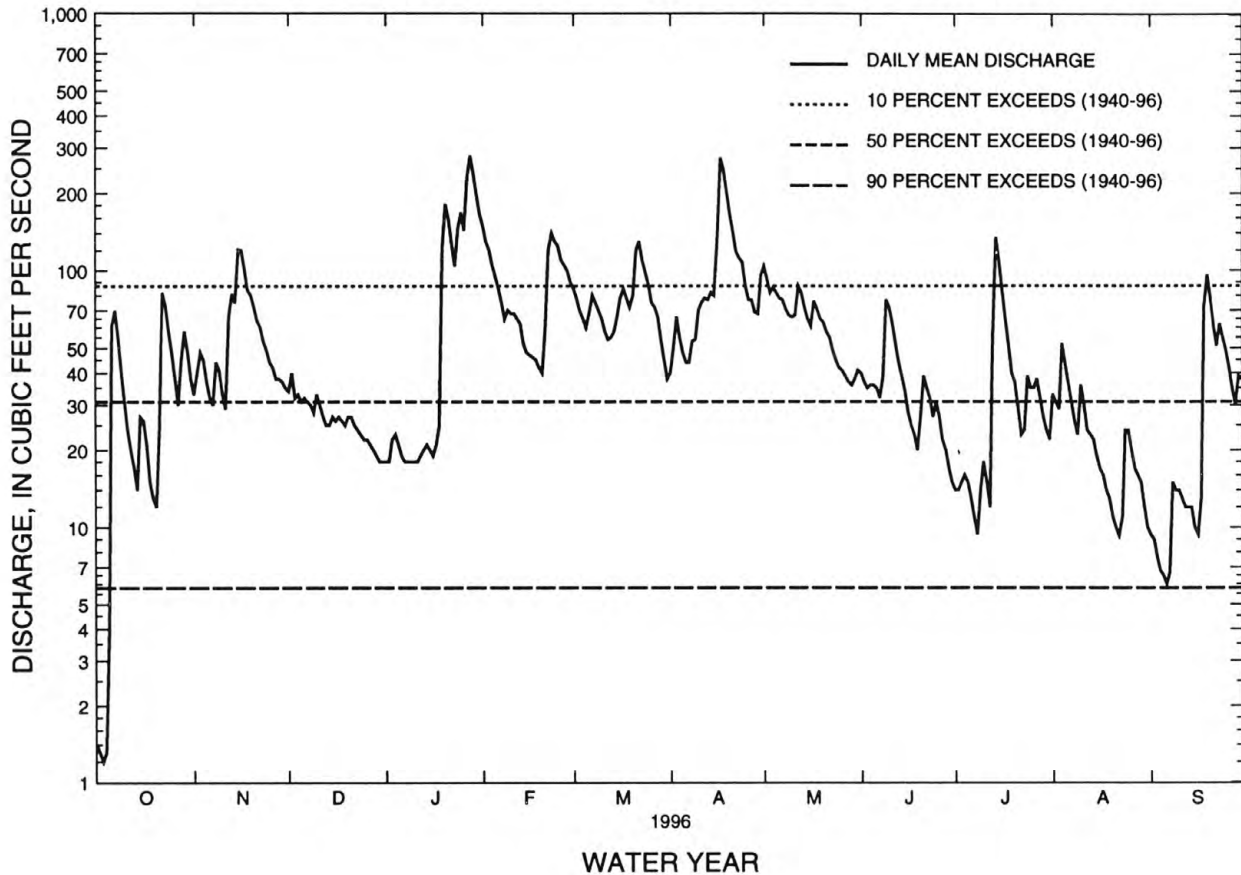
FOR 1996 WATER YEAR

WATER YEARS 1940 - 1996

ANNUAL TOTAL	10809.16	19477.3	41.3	
ANNUAL MEAN	29.6	53.2	68.4	1956
HIGHEST ANNUAL MEAN			16.5	1966
LOWEST ANNUAL MEAN			790	Aug 20 1955
HIGHEST DAILY MEAN	121 Nov 15	280 Jan 28	.00	Aug 6 1966
LOWEST DAILY MEAN	.04 Sep 13	1.2 Oct 3	.01	Sep 11 1980
ANNUAL SEVEN-DAY MINIMUM	.06 Sep 10	7.4 Sep 1	820	Aug 20 1955
INSTANTANEOUS PEAK FLOW		291 Jan 27	5.15	Aug 20 1955
INSTANTANEOUS PEAK STAGE		3.14 Jan 27	.00	Aug 6 1966
INSTANTANEOUS LOW FLOW		1.0 Oct 4	87	
10 PERCENT EXCEEDS	63	106	31	
50 PERCENT EXCEEDS	26	40	5.8	
90 PERCENT EXCEEDS	1.2	14		

e Estimated

QUINSIGAMOND RIVER AT NORTH GRAFTON, MA 01110000



LOCATION.--Lat 42°01'22", long 71°34'22", Worcester County, Hydrologic Unit 01090003, on left bank at Northbridge, 100 ft downstream from Sutton Street Bridge, and 3.0 mi downstream from Quinsigamond River.

PERIOD OF RECORD.--Discharge: October 1939 to September 1977. October 1995 to September 1996. October and November 1939 monthly discharge only, published in WSP 1301.

GAGE.--Water-stage recorder. Altitude of gage is 260 ft, from topographic map.

AVERAGE DISCHARGE.--39 years (water years 1940-77, 1996), 268 ft³/s.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 16,900 ft³/s, Aug. 20, 1955, gage height, 16.74 ft, from rating curve extended above 3,800 ft³/s on basis of computation of flow over dam at gage height 13.7 ft and slope-area measurement at gage height 16.74 ft; maximum gage height, 17.53 ft, Aug. 20, 1955, backwater from debris; minimum daily, 2 ft³/s, Aug. 29, 1941, Sept. 5, 1942, Aug. 28, 1957.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage and discharge of flood of Aug. 20, 1955 are the greatest since at least 1900. Flood of Mar. 19, 1936, reached a stage of 13.7 ft from floodmarks, discharge, 7,510 ft³/s by computation of flow over dam 800 ft upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,310 ft³/s, Apr. 17, gage height, 9.29 ft; minimum daily, 74 ft³/s, Sept. 7, 12.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	280	273	163	772	453	306	522	216	146	235	145
2	95	384	291	164	673	413	477	431	194	143	163	160
3	94	392	277	169	611	406	423	373	198	151	149	161
4	96	332	288	e165	561	372	373	408	224	155	420	114
5	117	287	274	e165	504	352	338	373	208	144	229	108
6	856	256	279	e160	465	468	311	372	194	137	189	96
7	375	252	265	e160	410	438	296	386	178	131	156	74
8	270	417	250	e155	395	415	371	362	211	128	135	138
9	216	321	238	e150	438	377	399	336	335	188	120	83
10	186	279	256	e145	418	338	477	340	304	164	229	85
11	164	257	242	e140	409	323	614	336	280	140	159	77
12	139	804	229	e140	395	321	755	495	250	133	131	74
13	138	651	212	e140	331	335	770	446	223	711	129	75
14	135	525	203	138	304	370	792	361	215	1080	123	77
15	290	1070	206	140	291	415	723	317	194	599	112	75
16	211	842	202	139	277	524	1410	303	175	412	105	77
17	184	627	199	154	278	505	2550	425	168	277	102	149
18	164	519	200	192	265	470	1200	365	163	211	92	870
19	161	533	195	623	246	431	846	331	157	175	88	622
20	155	489	198	2160	241	742	660	303	245	164	86	360
21	347	452	198	1210	673	750	560	289	282	139	84	253
22	912	413	193	798	1400	602	491	287	237	125	83	213
23	511	369	187	636	1000	513	474	260	213	161	92	381
24	361	338	186	774	921	444	431	242	193	294	388	285
25	292	314	178	1570	874	469	385	222	234	195	217	259
26	252	300	174	1020	712	451	342	208	194	230	160	229
27	227	290	181	1140	596	422	321	198	174	194	130	209
28	460	280	178	2840	551	394	297	193	166	159	126	192
29	472	273	176	1670	511	356	307	186	152	138	122	271
30	359	264	165	1190	---	330	521	227	148	123	111	222
31	328	---	165	944	---	316	---	250	---	118	104	---
TOTAL	8662	12810	6758	19354	15522	13515	18220	10147	6325	7265	4769	6134
MEAN	279	427	218	624	535	436	607	327	211	234	154	204
MAX	912	1070	291	2840	1400	750	2550	522	335	1080	420	870
MIN	94	252	165	138	241	316	296	186	148	118	83	74

MEAN	160	230	265	291	330	513	479	303	225	144	145	147
MAX	717	766	603	624	832	1072	923	608	661	428	1195	805
(WY)	1956	1956	1973	1996	1970	1972	1956	1972	1972	1959	1955	1954
MIN	53.5	67.7	86.9	93.8	153	250	192	123	98.4	58.4	51.2	56.8
(WY)	1942	1942	1942	1944	1944	1941	1966	1941	1957	1957	1965	1943

BLACKSTONE RIVER BASIN

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01110500 BLACKSTONE RIVER AT NORTHBRIDGE, MA--Continued

SUMMARY STATISTICS

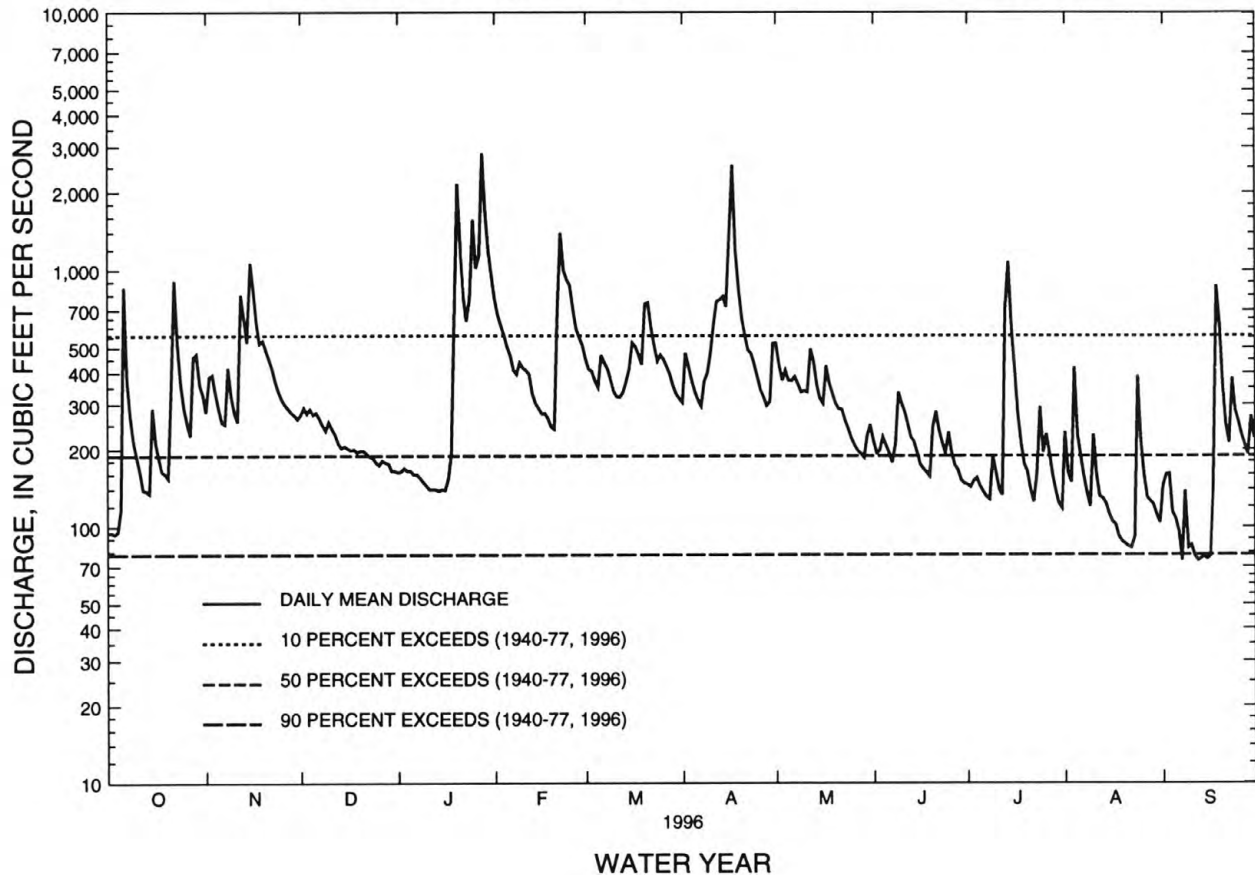
FOR 1996 WATER YEAR

WATER YEARS 1940 - 1996

ANNUAL TOTAL	129481				
ANNUAL MEAN	354			268	
HIGHEST ANNUAL MEAN				408	1955
LOWEST ANNUAL MEAN				132	1965
HIGHEST DAILY MEAN	2840	Jan 28		8850	Aug 20 1955
LOWEST DAILY MEAN	74	Sep 7		2.0	Aug 29 1941
ANNUAL SEVEN-DAY MINIMUM	77	Sep 10		29	Aug 4 1965
INSTANTANEOUS PEAK FLOW	3310	Apr 17		16900	Aug 20 1955
INSTANTANEOUS PEAK STAGE	9.29	Apr 17		16.74	Aug 20 1955
INSTANTANEOUS LOW FLOW	67	Sep 7			
10 PERCENT EXCEEDS	673			558	
50 PERCENT EXCEEDS	272			189	
90 PERCENT EXCEEDS	129			78	

e Estimated

BLACKSTONE RIVER AT NORTHBRIDGE, MA 01110500



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 south-east of Millville, and 1.6 mi upstream from Branch River. Prior to December 1980, at site 0.2 mi downstream.

DRAINAGE AREA.--277 mi².

PERIOD OF RECORD.--Water years 1969 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to December 1980.

pH: July to December 1980.

WATER TEMPERATURES: July 1969 to December 1980.

DISSOLVED OXYGEN: July 1969 to December 1980.

REMARKS.--Discharge computed by discharge measurements on the day of sampling.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
03...	0845	76	382	6.2	11.0	15.0	--	--	760	7.8	78
NOV											
07...	0815	394	279	6.0	0.0	7.0	--	--	761	11.1	92
DEC											
05...	0845	466	311	6.4	2.5	4.0	--	1.0	770	12.5	94
FEB											
06...	1230	988	274	6.8	-5.0	0.5	--	--	770	13.2	91
MAR											
05...	0830	730	318	6.8	-3.0	1.5	15	1.3	764	13.5	96
APR											
02...	1000	651	288	6.6	4.5	9.0	--	--	754	10.5	92
MAY											
07...	0815	926	273	7.1	5.5	11.0	--	--	774	9.8	88
JUN											
11...	0830	434	324	7.2	23.0	21.0	--	2.6	762	6.4	72
JUL											
09...	0815	133	349	7.1	22.5	24.0	--	--	751	6.3	76
AUG											
06...	0830	275	306	7.1	22.0	24.0	--	--	776	7.1	83
27...	0830	214	311	7.1	19.5	23.0	10	0.50	775	6.9	79

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
OCT											
03...	--	--	480	26	520	--	--	--	--	--	--
NOV											
07...	--	2.0	K16200	K1300	140	--	--	--	--	--	--
DEC											
05...	--	--	10200	5700	190	--	--	--	--	--	--
FEB											
06...	--	--	K32670	1100	1000	--	--	--	--	--	--
MAR											
05...	18	1.0	6100	200	360	38	12	2.0	42	69	3
APR											
02...	--	--	K8700	370	130	--	--	--	--	--	--
MAY											
07...	--	2.0	8100	490	260	--	--	--	--	--	--
JUN											
11...	20	--	4700	270	3400	--	--	--	--	--	--
JUL											
09...	--	1.0	2900	240	380	--	--	--	--	--	--
AUG											
06...	--	--	2900	200	520	--	--	--	--	--	--
27...	22	2.0	3200	290	4700	44	14	2.3	37	62	2

BLACKSTONE RIVER BASIN

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01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT											
03...	--	35	0	0	28	--	--	--	--	--	--
NOV											
07...	--	28	0	0	23	--	--	--	--	--	--
DEC											
05...	--	30	0	0	24	--	--	--	--	3	182
FEB											
06...	--	21	0	0	17	--	--	--	--	--	--
MAR											
05...	2.6	23	0	0	19	12	68	0.10	154	2	177
APR											
02...	--	26	0	0	21	--	--	--	--	--	--
MAY											
07...	--	25	0	0	21	--	--	--	--	--	--
JUN											
11...	--	26	0	0	21	--	--	--	--	18	202
JUL											
09...	--	24	0	0	20	--	--	--	--	--	--
AUG											
06...	--	16	0	0	13	--	--	--	--	--	--
27...	4.1	19	0	0	15	14	63	0.20	150	10	218

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHENOLS TOTAL (UG/L) (32730)
OCT											
03...	2.87	0.030	2.90	0.090	0.12	0.61	0.70	3.6	0.270	0.140	--
NOV											
07...	0.690	0.090	0.780	0.840	1.1	0.16	1.0	1.8	0.150	0.070	--
DEC											
05...	0.830	0.040	0.870	1.20	1.5	0.40	1.6	2.5	0.060	0.030	--
FEB											
06...	0.660	0.020	0.680	0.600	0.77	0.40	1.0	1.7	0.070	0.030	--
MAR											
05...	0.560	0.020	0.580	0.750	0.97	0.25	1.0	1.6	0.080	0.040	3
APR											
02...	0.450	0.020	0.470	0.850	1.1	0.45	1.3	1.8	0.120	0.030	--
MAY											
07...	0.560	0.070	0.630	0.620	0.80	0.58	1.2	1.8	0.170	0.040	--
JUN											
11...	1.31	0.190	1.50	0.470	0.61	0.43	0.90	2.4	0.230	0.080	--
JUL											
09...	1.88	0.020	1.90	0.040	0.05	0.46	0.50	2.4	0.160	0.110	--
AUG											
06...	1.16	0.040	1.20	0.040	0.05	0.56	0.60	1.8	0.170	0.090	--
27...	1.27	0.030	1.30	0.050	0.06	0.65	0.70	2.0	0.200	0.130	<1

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 mi².

PERIOD OF RECORD.--Discharge: March 1964 to September 1991, October 1993 to current year.

Water-quality records: Water year 1968.

GAGE.--Water-stage recorder. Elevation of gage is 340 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--30 years (water years 1965-91, 1994-96), 30.4 ft³/s, 25.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s, Jan. 25, 1979, gage height, 8.53 ft, from rating curve extended above 530 ft³/s; minimum, 0.02 ft³/s, Sept. 6-8, 15-17, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 270 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan.20	0200	a*600	*7.00	Apr. 16	2200	347	6.14
Jan. 28	0230	415	6.44				

a From rating curve extended above 260 ft³/s.

Minimum discharge, 0.26 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	8.5	22	13	e60	43	25	102	16	5.6	e5.0	1.2
2	.35	20	28	13	e54	e40	51	64	13	4.9	5.3	1.3
3	.34	32	25	e13	e50	e36	47	53	12	5.7	4.7	1.2
4	.35	19	29	e14	e46	e34	36	56	18	6.5	4.2	1.3
5	1.5	13	27	e13	e44	e34	31	48	16	5.7	3.4	1.4
6	24	10	27	e12	e42	58	28	51	12	4.8	2.9	1.5
7	14	10	27	e11	e40	56	28	55	10	4.0	6.4	2.9
8	7.8	34	23	e16	e38	e52	37	48	9.0	3.5	4.8	5.7
9	5.3	24	20	e15	e36	e46	40	43	8.9	3.6	3.4	5.2
10	3.7	15	26	e14	e48	e42	53	42	9.2	3.3	17	7.1
11	2.3	13	29	e13	e42	e38	60	45	9.5	2.6	10	7.0
12	1.7	69	21	e22	e38	38	90	69	8.6	2.4	6.1	5.8
13	1.3	58	e19	e31	e35	39	95	58	7.6	48	7.3	6.9
14	1.6	42	e19	e29	e32	46	84	45	6.7	93	10	8.8
15	12	108	e20	e27	e31	55	67	39	5.6	e50	7.2	7.3
16	8.1	68	e20	e25	e30	65	168	37	5.1	e24	5.5	6.4
17	4.5	47	e19	e30	e29	56	234	58	4.7	e16	4.6	9.8
18	3.0	37	e18	49	e27	51	114	49	4.5	e13	3.8	167
19	2.0	41	e17	141	e26	50	78	40	4.2	e10	3.0	81
20	1.7	38	e17	442	e26	82	66	34	7.9	e8.2	2.4	40
21	12	34	e18	217	e52	68	59	32	14	e6.4	2.1	26
22	54	31	e18	107	e130	54	53	34	12	e5.6	1.6	19
23	26	29	e17	67	97	47	49	26	9.5	e6.6	1.4	32
24	13	27	e17	85	90	42	46	22	7.3	e7.4	3.9	25
25	8.2	25	e16	186	85	38	42	18	14	e9.4	5.0	27
26	6.3	24	e16	e100	62	36	40	16	14	e7.8	3.6	22
27	5.2	23	e15	126	54	34	39	15	8.7	e7.2	2.5	17
28	25	22	e15	306	53	31	35	14	6.7	e6.7	2.2	17
29	41	22	e14	e134	49	30	40	13	5.5	e5.8	2.0	31
30	19	21	e14	88	---	29	79	16	5.2	e5.1	1.6	30
31	11	---	e13	70	---	27	---	24	---	e4.7	1.3	---
TOTAL	316.68	964.5	626	2429	1446	1397	1914	1266	285.4	387.5	144.2	614.8
MEAN	10.2	32.1	20.2	78.4	49.9	45.1	63.8	40.8	9.51	12.5	4.65	20.5
MAX	54	108	29	442	130	82	234	102	18	93	17	167
MIN	.34	8.5	13	11	26	27	25	13	4.2	2.4	1.3	1.2
CFSM	.64	2.01	1.26	4.90	3.12	2.82	3.99	2.55	.59	.78	.29	1.28
IN.	.74	2.24	1.46	5.65	3.36	3.25	4.45	2.94	.66	.90	.34	1.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
MEAN	13.1	26.5	38.7	42.3	43.5	62.2	57.5	36.0	21.7	7.93	8.39	6.21
MAX	59.9	81.5	95.4	176	92.7	124	156	69.0	109	29.8	49.5	23.7
(WY)	1990	1973	1973	1979	1970	1983	1987	1982	1984	1990	1989	1989
MIN	1.85	3.31	7.45	7.13	7.93	30.5	19.3	12.6	4.13	1.41	.90	.36
(WY)	1965	1966	1966	1981	1980	1989	1966	1986	1964	1965	1964	1983

BLACKSTONE RIVER BASIN

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01111300 NIPMUC RIVER NEAR HARRISVILLE, RI--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

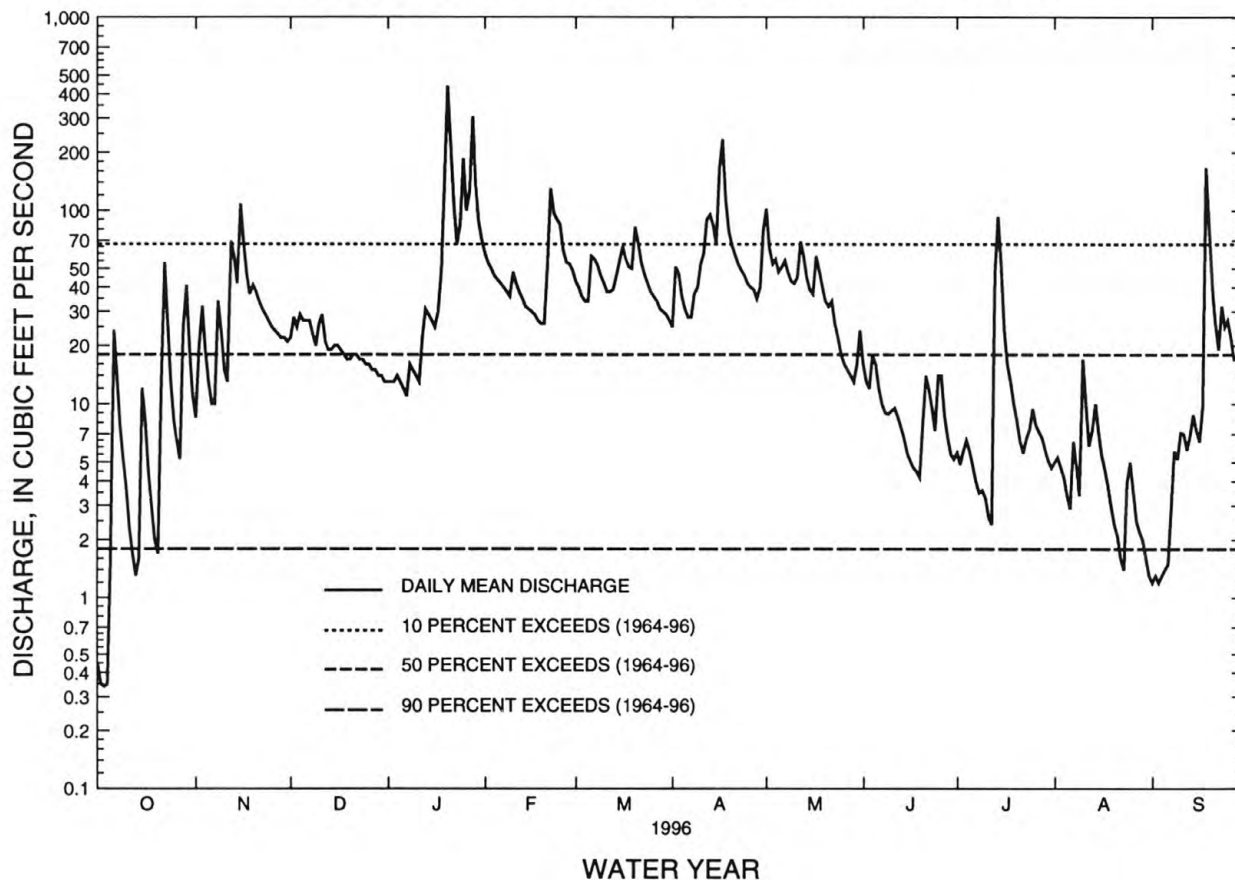
FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	6831.98	11791.08	
ANNUAL MEAN	18.7	32.2	30.4
HIGHEST ANNUAL MEAN			44.9
LOWEST ANNUAL MEAN			13.5
HIGHEST DAILY MEAN	108	442	937
LOWEST DAILY MEAN	.02 Sep 7	.34 Oct 3	.02 Jan 25 1979
ANNUAL SEVEN-DAY MINIMUM	.04 Sep 2	1.3 Aug 31	.04 Sep 2 1995
INSTANTANEOUS PEAK FLOW		600	1840
INSTANTANEOUS PEAK STAGE		7.00 Jan 20	8.53 Jan 25 1979
INSTANTANEOUS LOW FLOW		.26 Oct 4	.02 Sep 6 1995
ANNUAL RUNOFF (CFSM)	1.17	2.01	1.90
ANNUAL RUNOFF (INCHES)	15.88	27.41	25.80
10 PERCENT EXCEEDS	42	66	67
50 PERCENT EXCEEDS	17	22	18
90 PERCENT EXCEEDS	.54	3.6	1.8

e Estimated

NIPMUC RIVER NEAR HARRISVILLE, RI 01111300



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 mi².

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, nonrecording gage at site 1 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Occasional regulation by pond upstream. Prior to 1957, greater regulation by mills and reservoirs upstream.

AVERAGE DISCHARGE.--56 years, 175 ft³/s, 26.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft³/s, Jan. 25, 1979, gage height, 11.80 ft; maximum gage height, 11.90 ft, Mar. 18, 1968; minimum daily, 5.2 ft³/s, Oct. 7, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, about 5,800 ft³/s, Mar. 19, 1936, by computation of flow over dam 1 mi upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 880 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	0900	1,970	7.36	Apr. 17	0700	1,930	7.30
Jan. 28	1045	*1,990	*7.40	July 14	0630	924	5.19
Feb. 22	0900	1,040	5.44	Sept. 18	2115	988	5.33

Minimum daily, 15 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	101	96	65	442	296	133	561	125	48	56	26
2	e15	116	106	68	395	282	186	493	103	48	58	25
3	15	153	106	76	364	273	240	389	91	59	57	24
4	16	135	107	73	328	247	203	365	116	75	54	24
5	25	113	108	69	e283	234	181	334	126	63	49	23
6	121	100	110	64	e274	315	169	302	111	51	46	23
7	123	100	117	63	267	361	165	317	94	43	44	27
8	75	151	109	71	268	319	196	277	80	40	38	37
9	51	156	104	70	293	288	227	254	76	41	34	40
10	40	128	109	74	327	237	292	231	73	38	51	52
11	34	117	101	71	304	214	377	262	73	33	57	55
12	30	258	89	76	316	207	482	419	73	32	47	50
13	28	338	82	111	264	213	566	451	66	211	50	58
14	30	268	81	122	237	237	533	362	61	808	67	73
15	64	474	86	115	224	287	464	300	55	429	63	68
16	73	435	87	106	218	404	686	272	49	236	48	54
17	60	323	88	115	215	385	1700	344	44	141	41	61
18	57	265	77	163	205	326	1040	343	43	90	36	571
19	55	265	74	385	160	297	706	296	43	72	33	660
20	55	254	78	1740	148	419	553	224	57	64	31	301
21	107	223	77	985	293	449	454	198	93	56	29	177
22	282	202	77	609	960	354	355	192	101	48	29	154
23	219	182	73	458	696	291	285	173	82	51	29	180
24	153	168	73	432	588	253	254	146	67	81	39	182
25	124	160	70	798	610	227	229	131	89	88	44	172
26	113	127	70	622	500	202	203	121	94	76	40	159
27	105	108	69	599	399	187	200	113	75	74	35	132
28	130	104	68	1710	357	168	194	108	59	72	33	107
29	179	105	66	1040	333	161	198	95	50	64	32	117
30	145	101	66	710	---	158	404	105	46	57	30	137
31	122	---	65	559	---	153	---	132	---	54	28	---
TOTAL	2662	5730	2689	12219	10268	8444	11875	8310	2315	3343	1328	3769
MEAN	85.9	191	86.7	394	354	272	396	268	77.2	108	42.8	126
MAX	282	474	117	1740	960	449	1700	561	126	808	67	660
MIN	15	100	65	63	148	153	133	95	43	32	28	23
CFM	.94	2.09	.95	4.32	3.88	2.99	4.34	2.94	.85	1.18	.47	1.38
IN.	1.09	2.34	1.10	4.98	4.19	3.44	4.84	3.39	.94	1.36	.54	1.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	MEAN	95.8	159	213	227	240	340	316	201	128	57.8	61.2	64.0
MAX	479	472	565	810	581	723	877	399	710	156	372	397	
(WY)	1956	1956	1973	1979	1970	1972	1987	1967	1982	1959	1955	1954	
MIN	15.5	30.4	37.9	40.2	60.5	163	89.4	77.3	37.7	18.1	17.7	19.1	
(WY)	1958	1966	1966	1981	1980	1989	1966	1965	1964	1965	1970	1995	

BLACKSTONE RIVER BASIN

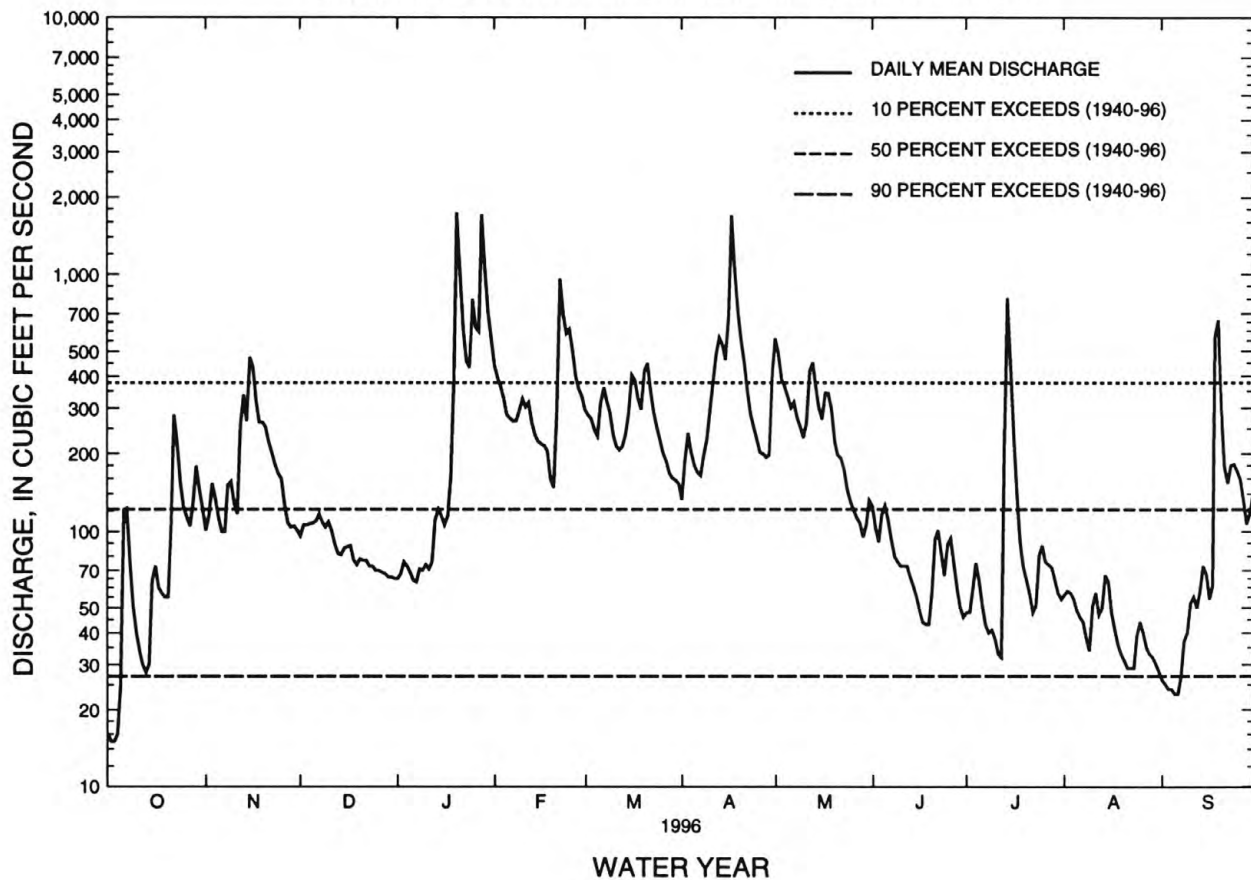
111

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	42400		72952		175	
ANNUAL MEAN	116		199		261	
HIGHEST ANNUAL MEAN					76.5	
LOWEST ANNUAL MEAN					4020	
HIGHEST DAILY MEAN	480	Jan 21	1740	Jan 20		Jun 6 1982
LOWEST DAILY MEAN	11	Sep 16	15	Oct 2	5.2	Oct 7 1948
ANNUAL SEVEN-DAY MINIMUM	12	Aug 31	25	Sep 1	7.7	Oct 26 1957
INSTANTANEOUS PEAK FLOW			1990	Jan 28	5470	Jan 25 1979
INSTANTANEOUS PEAK STAGE			7.40	Jan 28	11.90	Mar 18 1968
INSTANTANEOUS LOW FLOW			15	Oct 2		
ANNUAL RUNOFF (CFSM)	1.27		2.19		1.91	
ANNUAL RUNOFF (INCHES)	17.29		29.76		26.01	
10 PERCENT EXCEEDS	246		433		377	
50 PERCENT EXCEEDS	102		116		122	
90 PERCENT EXCEEDS	18		40		27	

e Estimated

BRANCH RIVER AT FORESTDALE, RI 01111500



BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1968, 1979 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
02...	1230	16	134	6.8	23.5	18.0	--	--	758	9.4	100
NOV											
06...	1200	99	96	6.0	11.5	9.0	--	--	766	11.5	99
13...	1305	320	103	--	4.5	7.0	--	--	--	--	--
DEC											
04...	1330	107	99	6.2	6.5	4.0	--	0.40	760	13.5	103
JAN											
16...	1045	105	142	6.4	-0.5	1.0	--	--	779	14.1	97
FEB											
05...	1115	288	97	6.2	-5.0	1.5	--	--	770	13.8	97
07...	1605	273	110	--	--	1.5	--	--	--	--	--
MAR											
04...	1245	242	92	6.2	-0.5	2.0	24	0.40	768	14.0	100
APR											
01...	1245	130	104	6.6	15.0	9.5	--	--	760	11.1	97
MAY											
06...	1200	294	86	6.4	4.0	14.0	--	--	767	10.2	98
JUN											
10...	1200	71	118	7.0	22.0	21.0	--	--	767	8.5	95
JUL											
08...	1215	39	130	6.8	30.0	26.0	--	--	754	7.7	96
AUG											
05...	1230	50	115	6.8	29.0	26.0	--	--	775	8.2	99
26...	1230	39	128	6.7	27.0	25.0	20	0.40	772	8.3	99

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
OCT											
02...	--	--	70	K4	660	--	--	--	--	--	--
NOV											
06...	--	2.0	180	K9	97	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	--	270	210	K3	--	--	--	--	--	--
JAN											
16...	<10	1.0	1100	K140	79	--	--	--	--	--	--
FEB											
05...	--	--	280	24	31	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	12	1.0	100	K6	K8	12	3.4	0.78	12	67	2
APR											
01...	--	--	73	K3	K12	--	--	--	--	--	--
MAY											
06...	--	<1.0	560	38	50	--	--	--	--	--	--
JUN											
10...	<10	--	140	54	330	--	--	--	--	--	--
JUL											
08...	--	<1.0	290	51	930	--	--	--	--	--	--
AUG											
05...	--	--	120	27	940	--	--	--	--	--	--
26...	17	--	77	32	K1200	17	4.9	1.1	16	65	2

BLACKSTONE RIVER BASIN

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01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT											
02...	--	16	0	0	13	--	--	--	--	--	--
NOV											
06...	--	6	0	0	5	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	--	6	0	0	5	--	--	--	--	<1	74
JAN											
16...	--	9	0	0	8	--	--	--	--	--	--
FEB											
05...	--	3	0	0	3	--	--	--	--	--	--
07...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	0.90	4	0	0	3	6.0	18	0.10	44	<1	66
APR											
01...	--	5	0	0	4	--	--	--	--	--	--
MAY											
06...	--	5	0	0	4	--	--	--	--	--	--
JUN											
10...	--	10	0	0	8	--	--	--	--	5	79
JUL											
08...	--	12	0	0	10	--	--	--	--	--	--
AUG											
05...	--	5	0	0	4	--	--	--	--	--	--
26...	1.6	7	0	0	6	6.0	25	0.10	59	2	94

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHENOLS TOTAL (UG/L) (32730)
OCT											
02...	0.210	<0.010	0.210	0.140	0.18	0.26	0.40	0.61	0.020	<0.010	--
NOV											
06...	0.150	0.020	0.170	0.070	0.09	0.33	0.40	0.57	<0.010	<0.010	--
13...	--	--	--	--	--	--	--	--	--	--	--
DEC											
04...	0.250	<0.010	0.250	0.070	0.09	0.23	0.30	0.55	0.020	<0.010	--
JAN											
16...	0.370	<0.010	0.370	0.230	0.30	0.17	0.40	0.77	0.020	<0.010	--
FEB											
05...	0.300	<0.010	0.300	0.060	0.08	0.24	0.30	0.60	0.020	<0.010	--
07...	--	--	--	--	--	--	--	--	--	--	--
MAR											
04...	0.230	0.010	0.240	0.080	0.10	0.12	0.20	0.44	0.020	<0.010	2
APR											
01...	0.270	<0.010	0.270	0.090	0.12	0.11	0.20	0.47	0.010	<0.010	--
MAY											
06...	0.140	<0.010	0.140	0.100	0.13	0.30	0.40	0.54	0.020	<0.010	--
JUN											
10...	0.290	0.010	0.300	0.180	0.23	0.22	0.40	0.70	0.030	<0.010	--
JUL											
08...	0.430	0.010	0.440	0.080	0.10	0.22	0.30	0.74	<0.010	<0.010	--
AUG											
05...	0.270	0.010	0.280	0.050	0.06	0.25	0.30	0.58	0.020	0.010	--
26...	0.230	0.010	0.240	0.050	0.06	0.35	0.40	0.64	0.030	<0.010	3

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 mi².

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 except those for estimated daily discharges, which are fair. 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.--67 years, 775 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s, Aug. 19, 1955, gage height, 11.8 ft, from floodmarks, from rating curve extended above 15,000 ft³/s on basis of slope-area measurement of peak flow (affected by failure of Horseshoe Dam on Mill River); minimum daily, 21 ft³/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, 7,210 ft³/s, Jan. 28, gage height, 9.46 ft; minimum daily, 93 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	621	649	389	2470	1500	784	2150	684	275	372	179
2	94	670	702	391	2250	1390	1080	1970	580	254	369	317
3	93	907	694	e390	2070	1360	1280	1640	521	290	345	330
4	94	804	683	e390	1890	1270	1120	1580	647	339	494	239
5	153	691	708	e380	1660	1200	980	1510	620	286	412	196
6	826	617	686	e380	1540	1510	872	1420	601	248	453	180
7	945	585	665	e380	1360	1610	821	1490	495	217	368	213
8	e560	862	631	e390	1290	1480	973	1380	387	209	283	273
9	415	872	588	e390	1390	1350	1120	1290	617	203	240	250
10	324	743	630	e400	1510	1220	1330	1210	591	243	400	256
11	265	690	599	e410	1440	1130	1590	1250	548	200	364	241
12	226	1240	561	531	1470	1120	2020	1690	496	173	300	216
13	194	1760	503	640	1240	1140	2190	1810	443	951	307	235
14	192	1450	475	652	1080	1260	2110	1520	391	3020	327	283
15	372	2190	493	589	1010	1440	1970	1290	363	2050	290	259
16	444	2400	501	534	974	1770	2420	1150	322	1440	250	228
17	344	1920	503	572	958	1780	5920	1460	286	960	226	285
18	297	1580	494	745	927	1620	4490	1420	267	660	212	1680
19	266	1490	457	1350	841	1510	3290	1340	250	526	186	2430
20	256	1430	492	5170	806	1880	2690	1150	321	460	174	1420
21	469	1310	512	e4190	1320	2180	2240	1040	515	392	170	910
22	1500	1190	488	e2720	3790	1890	1860	1060	489	335	166	727
23	1300	1090	467	2240	3320	1620	1580	917	420	335	158	872
24	899	1010	453	2130	2820	1430	1480	785	358	559	369	845
25	702	911	448	3270	2760	1280	1340	666	547	499	451	791
26	595	827	435	3190	2330	1180	1220	638	553	440	317	703
27	530	776	433	2830	1990	1090	1140	617	431	481	260	615
28	634	726	422	5920	1800	999	1050	553	358	393	230	542
29	1070	696	397	4940	1660	956	1050	514	304	354	226	638
30	849	669	414	3480	---	904	1740	572	277	307	205	681
31	705	---	400	2890	---	854	---	784	---	280	188	---
TOTAL	15714	32727	16583	52873	49966	42923	53750	37866	13682	17379	9112	17034
MEAN	507	1091	535	1706	1723	1385	1792	1221	456	561	294	568
MAX	1500	2400	708	5920	3790	2180	5920	2150	684	3020	494	2430
MIN	93	585	397	380	806	854	784	514	250	173	158	179

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1996, BY WATER YEAR (WY)

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940
MEAN	419	668	865	962	1000	1505	1430	885	603	333	316	334
MAX	2007	2233	2265	3167	2493	4063	3643	1779	2826	2453	2704	1980
(WY)	1956	1956	1973	1979	1970	1936	1987	1972	1982	1938	1955	1954
MIN	128	127	186	183	262	653	479	303	181	125	101	106
(WY)	1932	1932	1966	1981	1980	1989	1966	1930	1930	1957	1993	1995

BLACKSTONE RIVER BASIN

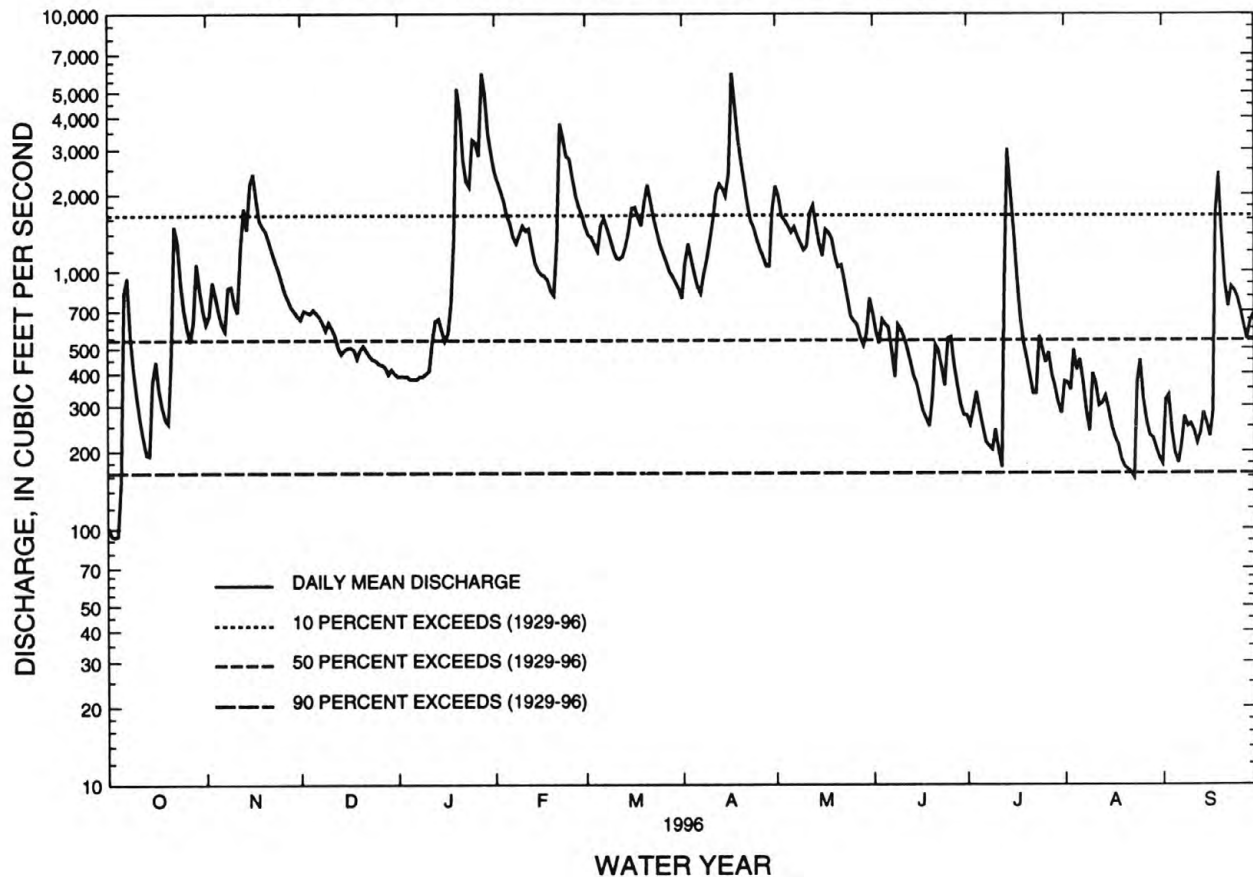
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01112500 BLACKSTONE RIVER AT WOONSOCKET, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1929 - 1996	
ANNUAL TOTAL	221346		359609		775	
ANNUAL MEAN	606		983		1162	
HIGHEST ANNUAL MEAN					345	
LOWEST ANNUAL MEAN					25900	
HIGHEST DAILY MEAN	2400	Nov 16	5920	Jan 28	21	Aug 20 1955
LOWEST DAILY MEAN	61	Sep 11	93	Oct 3	64	Aug 11 1934
ANNUAL SEVEN-DAY MINIMUM	64	Sep 6	185	Aug 17	32900	Sep 6 1995
INSTANTANEOUS PEAK FLOW			7210	Jan 28	21.80	Aug 19 1955
INSTANTANEOUS PEAK STAGE			9.46	Jan 28		Aug 19 1955
INSTANTANEOUS LOW FLOW			38	Jul 9		
10 PERCENT EXCEEDS	1290		2000		1660	
50 PERCENT EXCEEDS	523		682		537	
90 PERCENT EXCEEDS	95		249		165	

e Estimated

BLACKSTONE RIVER AT WOONSOCKET, RI 01112500



BLACKSTONE RIVER BASIN

01112900 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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
03...	1115	100	394	6.2	19.0	17.5	--	--	762	9.7	102
NOV											
07...	1130	555	242	6.1	10.5	8.0	--	--	763	12.2	103
DEC											
05...	1110	734	290	6.3	6.0	4.0	--	1.4	770	13.3	100
JAN											
16...	1400	606	340	5.8	-0.5	1.0	--	--	779	14.4	99
FEB											
06...	0915	1620	233	6.7	-9.0	0.5	--	--	773	14.8	101
MAR											
05...	1230	1200	294	6.9	-2.0	2.0	23	0.70	763	14.2	103
APR											
02...	1300	1090	271	6.6	7.5	9.5	--	--	757	11.6	102
MAY											
07...	1315	1540	226	7.1	20.0	13.0	--	--	775	11.0	103
JUN											
11...	1200	694	304	7.2	25.0	21.5	--	2.0	765	8.6	97
JUL											
09...	1230	222	346	7.2	24.5	25.0	--	--	755	8.5	104
AUG											
06...	1230	352	291	7.0	29.5	25.0	--	--	777	9.0	107
27...	1300	288	328	7.2	21.5	24.0	20	1.9	780	8.4	98

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CAC03) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
OCT										
03...	--	--	1100	52	94	--	--	--	--	--
NOV										
07...	--	2.0	7300	K320	76	--	--	--	--	--
DEC										
05...	--	--	5100	34	5700	--	--	--	--	--
JAN										
16...	22	2.0	13400	600	240	--	--	--	--	--
FEB										
06...	--	--	22330	330	400	--	--	--	--	--
MAR										
05...	12	1.0	290	K37	K6	31	9.6	1.8	40	72
APR										
02...	--	--	3900	120	130	--	--	--	--	--
MAY										
07...	--	1.0	4400	120	31	--	--	--	--	--
JUN										
11...	15	--	4800	170	120	--	--	--	--	--
JUL										
09...	--	2.0	1000	88	150	--	--	--	--	--
AUG										
06...	--	--	1100	96	240	--	--	--	--	--
27...	22	3.0	930	320	340	41	13	2.1	41	66

BLACKSTONE RIVER BASIN

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01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT										
03...	--	--	27	0	0	23	--	--	--	--
NOV										
07...	--	--	22	0	0	18	--	--	--	--
DEC										
05...	--	--	24	0	0	19	--	--	--	--
JAN										
16...	--	--	26	0	0	21	--	--	--	--
FEB										
06...	--	--	15	0	0	13	--	--	--	--
MAR										
05...	3	2.2	19	0	0	16	14	60	0.10	141
APR										
02...	--	--	22	0	0	18	--	--	--	--
MAY										
07...	--	--	18	0	0	14	--	--	--	--
JUN										
11...	--	--	22	0	0	18	--	--	--	--
JUL										
09...	--	--	15	0	0	13	--	--	--	--
AUG										
06...	--	--	14	0	0	11	--	--	--	--
27...	3	4.2	18	0	0	15	24	59	0.30	160

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
03...	--	--	3.07	0.030	3.10	0.150	0.19	0.85	1.0	4.1
NOV										
07...	--	--	0.880	0.050	0.930	0.360	0.46	0.44	0.80	1.7
DEC										
05...	4	180	0.720	0.040	0.760	0.800	1.0	0.40	1.2	2.0
JAN										
16...	--	--	0.830	0.030	0.860	1.30	1.7	0.40	1.7	2.6
FEB										
06...	--	--	0.660	0.020	0.680	0.440	0.57	0.46	0.90	1.6
MAR										
05...	4	167	0.530	0.030	0.560	0.820	1.1	0.18	1.0	1.6
APR										
02...	--	--	0.630	0.080	0.710	0.660	0.85	0.34	1.0	1.7
MAY										
07...	--	--	0.510	0.070	0.580	0.400	0.52	0.50	0.90	1.5
JUN										
11...	10	181	1.26	0.140	1.40	0.260	0.33	0.54	0.80	2.2
JUL										
09...	--	--	1.45	0.050	1.50	0.150	0.19	0.75	0.90	2.4
AUG										
06...	--	--	1.16	0.040	1.20	0.090	0.12	0.61	0.70	1.9
27...	12	216	1.12	0.080	1.20	1.10	1.4	0.60	1.7	2.9

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHOPHOS- PHATE (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT										
03...	0.720	0.590	--	--	--	--	--	--	--	--
NOV										
07...	0.070	0.080	120	1	60	<1	<1	8	570	3
DEC										
05...	0.140	0.090	--	--	--	--	--	--	--	--
JAN										
16...	0.190	0.100	80	<1	50	<1	1	6	470	1
FEB										
06...	0.080	0.040	--	--	--	--	--	--	--	--
MAR										
05...	0.080	0.050	90	<1	60	<1	<1	5	610	2
APR										
02...	0.120	0.070	--	--	--	--	--	--	--	--
MAY										
07...	0.150	0.060	180	1	30	<1	3	10	670	5
JUN										
11...	0.220	0.150	--	--	--	--	--	--	--	--
JUL										
09...	0.330	0.250	110	2	80	<1	2	9	720	5
AUG										
06...	0.280	0.220	--	--	--	--	--	--	--	--
27...	0.320	0.260	110	2	60	<1	3	11	660	6

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	PHENOLS TOTAL (UG/L) (32730)	SEDI- MENT, SUS- PENDE D (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
03...	--	--	--	--	--	--	--	--	--	--
NOV										
07...	80	<0.10	1	5	<1	<1	20	--	5	64
DEC										
05...	--	--	--	--	--	--	--	--	--	--
JAN										
16...	110	<0.10	2	5	<1	<1	50	--	10	41
FEB										
06...	--	--	--	--	--	--	--	--	--	--
MAR										
05...	100	<0.10	<1	3	<1	<1	30	2	5	56
APR										
02...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	100	<0.10	<1	4	<1	<1	30	--	7	88
JUN										
11...	--	--	--	--	--	--	--	--	--	--
JUL										
09...	180	<0.10	2	5	<1	<1	20	--	8	89
AUG										
06...	--	--	--	--	--	--	--	--	--	--
27...	120	<0.10	3	6	<1	<1	10	2	11	74



Hydrologic Technician Donald Searles uses 100-pound weight and electric reel to measure high flows in the Blackstone River at Northbridge, Massachusetts during a high-water event in March 1993.

LOCATION.--Lat 41°50'02", long 71°24'42", Providence County, Hydrologic Unit 01090004, on left bank 800 ft upstream from bridge on U.S. Highway 44 at Providence and 0.5 mi above mouth.

PERIOD OF RECORD.--Discharge: June 1963 to current year.
Water-quality records: Water year 1971.

REMARKS.--Records good except those for period of doubtful gage-height record, Dec. 5 to Jan. 3, and those for estimated daily discharges, which are fair. Occasional regulation at low flow. Several measurements of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s, Mar. 18, 1968, gage height, 3.46 ft, present datum, from rating curve extended above 460 ft³/s; maximum gage height, 5.81 ft, July 30, 1976; minimum discharge, 1.3 ft³/s, Aug. 23, 1970; minimum daily, 1.7 ft³/s, Aug. 10, 1970.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 6	0430	964	4.80	July 13	0330	744	4.39
Oct. 21	1745	612	4.11	July 13	1545	836	4.57
Jan. 19	1845	749	4.40	Sept. 18	0515	918	4.72
Jan. 27	1945	815	4.53				

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	19	26	19	72	43	30	120	26	12	17	9.5
2	4.6	59	26	19	64	44	85	64	22	11	14	9.7
3	4.6	35	22	21	61	47	47	58	31	26	14	6.8
4	4.3	29	24	21	56	39	37	56	33	20	10	6.4
5	48	22	24	19	e47	44	35	49	27	16	10	6.4
6	214	19	40	e16	46	115	34	64	22	13	9.9	6.2
7	40	61	27	17	42	82	43	58	20	11	9.5	56
8	21	73	23	24	42	64	73	54	18	10	8.7	25
9	16	34	42	22	69	52	59	47	16	9.5	8.4	13
10	13	25	39	19	63	48	120	51	16	9.8	12	13
11	9.6	23	26	18	65	50	108	47	16	11	8.6	16
12	12	91	22	48	60	50	108	75	15	8.4	7.8	14
13	8.1	44	21	80	43	53	87	52	18	358	50	14
14	6.3	91	21	53	38	57	74	42	14	165	18	14
15	57	194	22	41	37	68	66	38	12	48	13	13
16	20	78	21	32	36	78	311	46	11	30	11	11
17	13	51	21	46	37	63	256	83	10	23	9.7	30
18	11	44	20	52	34	56	124	53	12	18	9.0	339
19	10	51	20	243	31	52	90	44	15	17	7.9	79
20	9.9	43	21	329	36	129	76	42	23	16	6.9	34
21	125	37	22	134	106	71	66	55	40	12	7.8	24
22	122	33	22	91	156	57	58	39	20	11	6.8	22
23	42	29	21	74	85	49	54	33	16	24	6.7	25
24	27	27	21	129	131	43	58	29	14	21	35	20
25	21	25	20	151	95	40	52	25	53	16	13	34
26	19	24	20	85	64	41	49	24	21	16	11	20
27	18	23	20	217	57	38	47	24	15	15	9.1	16
28	69	24	19	300	62	35	41	23	12	12	13	15
29	31	25	19	139	51	35	75	22	11	11	9.9	27
30	21	23	19	113	---	33	80	38	11	9.6	8.8	17
31	20	---	19	93	---	31	---	34	---	19	10	---
TOTAL	1042.0	1356	730	2665	1786	1707	2443	1489	590	999.3	386.5	936.0
MEAN	33.6	45.2	23.5	86.0	61.6	55.1	81.4	48.0	19.7	32.2	12.5	31.2
MAX	214	194	42	329	156	129	311	120	53	358	50	339
MIN	4.3	19	19	16	31	31	30	22	10	8.4	6.7	6.2
CFSM	1.46	1.96	1.02	3.72	2.67	2.38	3.53	2.08	.85	1.40	.54	1.35
IN.	1.68	2.18	1.18	4.29	2.88	2.75	3.93	2.40	.95	1.61	.62	1.55

MEAN	22.4	37.6	50.1	52.7	52.3	68.8	64.9	44.6	31.8	18.9	20.2	19.5
MAX	69.0	118	143	174	93.8	141	160	104	125	35.5	53.8	50.1
(WY)	1978	1973	1973	1979	1984	1968	1983	1967	1982	1967	1986	1972
MIN	6.36	10.6	10.6	12.9	18.3	29.0	22.9	24.2	13.1	8.09	7.27	5.09
(WY)	1995	1966	1966	1981	1980	1985	1966	1965	1991	1995	1970	1970

MOSHASSUCK RIVER BASIN

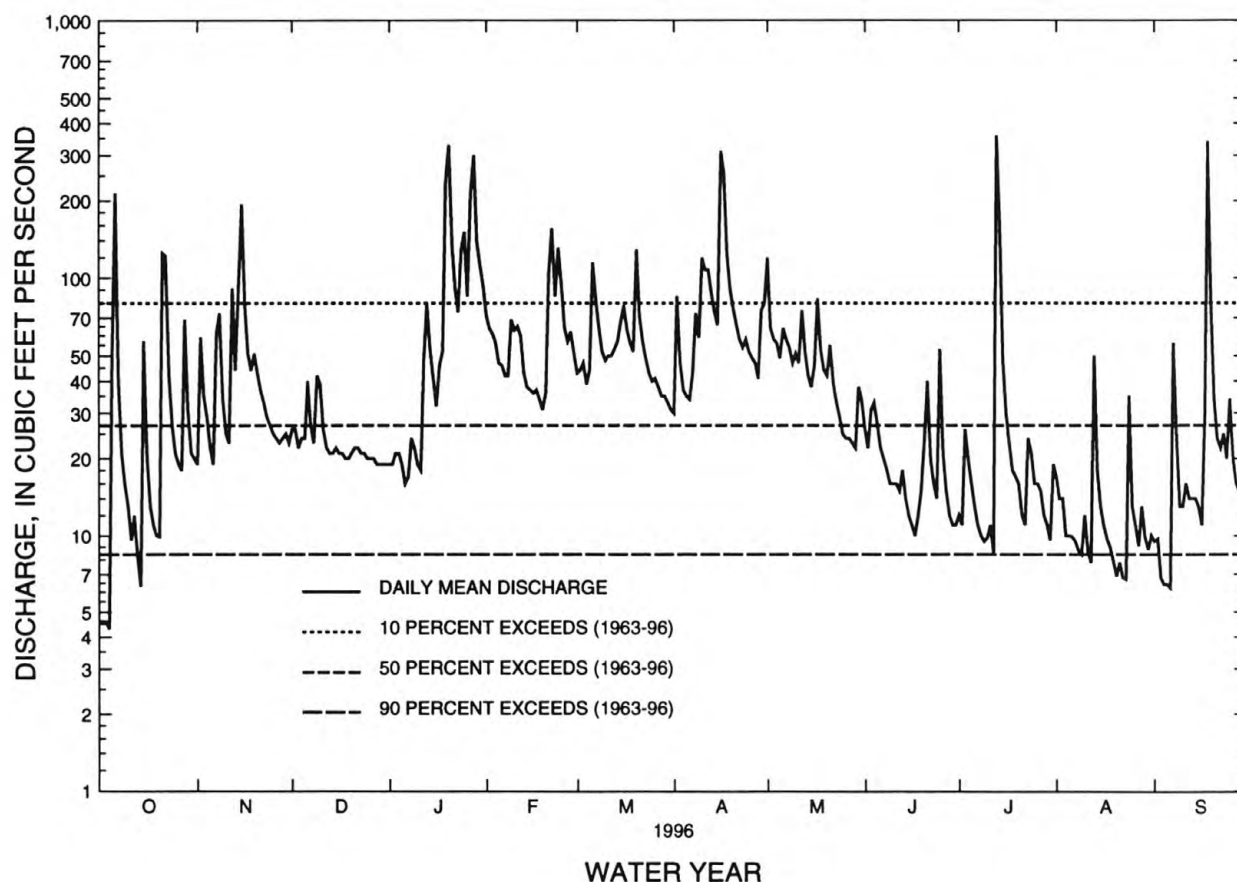
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01114000 MOSHASSUCK RIVER AT PROVIDENCE, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1963 - 1996	
ANNUAL TOTAL	10824.1		16129.8		40.3	
ANNUAL MEAN	29.7		44.1		62.5	
HIGHEST ANNUAL MEAN					20.2	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	214	Oct 6	358	Jul 13	1750	Mar 18 1968
LOWEST DAILY MEAN	3.9	Sep 16	4.3	Oct 4	1.7	Aug 10 1970
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep 2	7.8	Aug 17	2.6	Aug 4 1970
INSTANTANEOUS PEAK FLOW			964	Oct 6	2390	Mar 18 1968
INSTANTANEOUS PEAK STAGE			4.80	Oct 6	5.81	Jul 30 1976
INSTANTANEOUS LOW FLOW			4.3	Oct 3	1.3	Aug 23 1970
ANNUAL RUNOFF (CFSM)	1.28		1.91		1.74	
ANNUAL RUNOFF (INCHES)	17.43		25.98		23.68	
10 PERCENT EXCEEDS	53		85		80	
50 PERCENT EXCEEDS	25		27		27	
90 PERCENT EXCEEDS	5.9		10		8.4	

e Estimated

MOSHASSUCK RIVER AT PROVIDENCE, RI 01114000



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 mi².

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 good except those for estimated daily discharges, which are poor. 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.--55 years, 73.2 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s, Mar. 18, 1968, gage height, 7.75 ft, from floodmarks; minimum daily, 2.1 ft³/s, Aug. 26, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge during March 1936, 1,000 ft³/s, by computation of flow over dam 0.7 mi downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 454 ft³/s, Apr. 17, gage height, 4.19 ft; maximum gage height, 4.37 ft, Sept. 18; minimum daily, 11 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	39	76	62	235	166	103	128	48	17	21	16
2	12	48	75	62	208	157	117	121	44	16	20	16
3	11	e50	73	63	188	151	110	117	48	33	20	15
4	11	e46	73	61	169	e140	106	115	54	29	19	15
5	18	e41	71	60	153	e132	102	107	48	20	18	15
6	48	e38	75	60	140	e138	99	113	44	18	17	15
7	23	e38	73	60	129	e142	98	110	42	17	18	21
8	21	e50	71	62	119	e133	103	105	42	16	18	23
9	22	e52	71	61	121	e126	103	100	42	15	17	26
10	22	e44	74	60	123	e117	115	100	42	15	19	27
11	22	e39	72	58	126	e111	124	102	43	15	18	27
12	24	e60	70	53	128	e107	136	126	40	15	18	25
13	30	e110	67	69	123	e110	146	111	37	141	28	26
14	28	e100	67	59	117	e115	155	103	25	111	26	28
15	45	e130	67	51	111	e120	154	95	22	40	21	27
16	41	e120	66	46	e108	e130	230	93	21	37	19	26
17	36	e110	67	50	e103	e126	438	114	19	39	18	36
18	26	e110	66	57	e100	e121	363	103	19	36	18	268
19	21	e100	65	136	e91	e119	288	98	18	33	17	173
20	18	e96	66	239	e82	e160	237	92	25	31	17	101
21	47	e92	66	162	e160	159	199	88	31	25	17	88
22	90	e90	66	146	e300	159	175	83	24	21	17	102
23	81	e90	65	150	e278	157	167	79	21	26	16	119
24	80	e88	65	171	e256	152	148	76	19	32	24	121
25	76	e85	65	224	e227	145	79	75	30	27	22	125
26	59	e83	64	218	e209	139	105	74	22	27	19	112
27	47	e82	64	251	e200	133	107	73	19	26	18	103
28	49	e79	63	326	e196	126	97	72	18	23	18	90
29	50	77	62	314	e185	118	100	56	17	21	17	94
30	45	75	62	291	---	112	119	72	17	20	17	68
31	43	---	62	262	---	107	---	70	---	21	16	---
TOTAL	1158	2262	2109	3944	4685	4128	4623	2971	941	963	588	1948
MEAN	37.4	75.4	68.0	127	162	133	154	95.8	31.4	31.1	19.0	64.9
MAX	90	130	76	326	300	166	438	128	54	141	28	268
MIN	11	38	62	46	82	107	79	56	17	15	16	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	MEAN	38.3	58.3	84.5	92.8	103	141	130	86.0	55.0	31.1	29.2	30.3
MAX	200	208	239	281	254	357	364	191	214	72.2	83.6	116	
(WY)	1956	1956	1973	1979	1970	1983	1983	1967	1982	1959	1955	1954	
MIN	10.3	9.90	17.9	20.6	31.2	54.1	44.9	34.1	23.2	12.8	9.21	6.99	
(WY)	1958	1958	1966	1966	1944	1944	1966	1986	1965	1993	1963	1980	

WOONASQUATUCKET RIVER BASIN

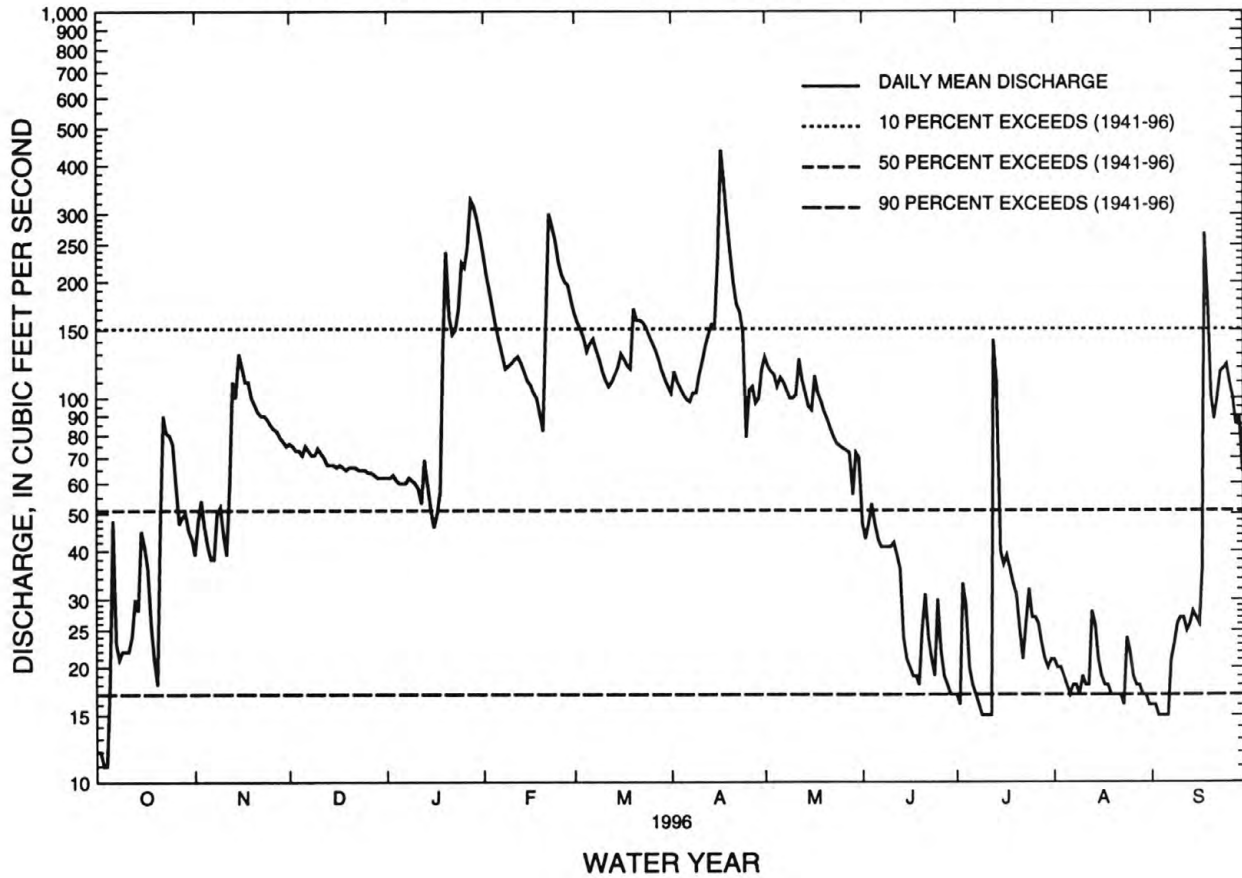
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01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1941 - 1996
ANNUAL TOTAL	20842.0	30320	
ANNUAL MEAN	57.1	82.8	73.2
HIGHEST ANNUAL MEAN			119 1984
LOWEST ANNUAL MEAN			31.5 1966
HIGHEST DAILY MEAN	165 Jan 21	438 Apr 17	1250 Mar 18 1968
LOWEST DAILY MEAN	5.8 Sep 5	11 Oct 3	2.1 Aug 26 1963
ANNUAL SEVEN-DAY MINIMUM	9.4 Sep 4	15 Aug 31	3.1 Aug 21 1963
INSTANTANEOUS PEAK FLOW		454 Apr 17	1440 Mar 18 1968
INSTANTANEOUS PEAK STAGE		4.37 Sep 18	7.75 Mar 18 1968
INSTANTANEOUS LOW FLOW		10 Oct 4	
10 PERCENT EXCEEDS	100	159	151
50 PERCENT EXCEEDS	59	67	51
90 PERCENT EXCEEDS	17	18	17

e Estimated

WOONASQUATUCKET RIVER AT CENTERDALE, RI 01114500



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 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 315 ft above sea level, from topographic map.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--2 years, 9.62 ft³/s, 26.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 176 ft³/s, Jan. 20 and Apr. 16, 1996, gage height, 2.49 ft; no flow Sept. 13, 16, 17, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	0345	*176	*2.49	Feb. 22	0500	109	2.27
Jan. 28	0500	131	2.35	Apr. 16	2300	*176	*2.49

Minimum discharge, 0.25 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	5.7	7.1	4.1	23	18	10	28	7.6	2.2	1.6	.47
2	.30	9.3	8.7	4.1	21	17	21	21	5.9	2.0	1.6	.53
3	.27	13	8.4	4.2	20	18	21	17	5.6	2.9	1.5	.56
4	.26	12	8.3	5.4	18	15	15	17	9.4	4.8	1.3	.56
5	.54	9.9	7.9	4.8	15	14	12	15	10	4.0	1.2	.56
6	7.9	8.3	8.4	3.7	13	27	11	17	7.5	2.6	1.0	.55
7	3.3	8.6	8.4	3.5	12	29	11	19	5.7	1.9	.95	.82
8	2.0	18	7.3	4.1	12	23	18	17	4.6	1.5	.86	1.3
9	1.5	14	6.9	4.1	17	19	20	15	4.0	1.5	.82	1.0
10	1.2	11	8.1	4.0	20	15	27	15	4.1	1.5	1.0	.87
11	.99	9.3	7.1	3.8	19	14	32	16	4.2	1.2	.85	.76
12	.92	26	6.0	4.1	20	14	43	21	3.7	.95	.70	.74
13	.90	27	5.2	10	14	16	44	20	3.2	16	1.4	.97
14	1.0	22	4.8	11	10	19	39	15	2.8	49	2.0	1.3
15	3.1	49	5.1	9.8	10	23	33	13	2.3	16	1.8	1.2
16	2.3	35	5.1	8.3	9.9	29	74	12	2.0	8.0	1.4	1.2
17	2.0	20	5.1	9.7	10	25	115	22	1.8	5.1	1.2	1.9
18	1.7	15	5.1	14	9.1	22	53	20	1.7	3.3	.93	29
19	1.5	15	5.0	42	7.8	20	37	16	1.6	2.7	.77	26
20	1.4	15	5.6	117	8.0	33	30	13	3.1	2.6	.65	9.0
21	4.2	13	5.5	44	34	33	25	12	6.6	2.0	.61	5.0
22	11	11	5.2	30	88	25	21	11	6.9	1.7	.59	3.7
23	8.9	9.8	4.8	24	46	21	19	9.3	5.1	2.0	.55	5.2
24	6.1	9.0	4.6	28	43	18	17	7.9	3.6	4.1	.83	5.1
25	4.5	8.3	4.5	56	42	17	15	6.9	4.0	3.9	.96	4.7
26	3.5	7.8	4.5	35	30	16	14	6.4	3.7	3.2	.79	3.9
27	3.0	7.4	4.5	38	24	14	14	6.0	2.8	2.8	.68	3.2
28	5.5	7.3	5.6	101	23	13	12	5.7	2.1	2.1	.66	2.9
29	8.2	7.1	5.2	48	22	12	13	5.5	1.6	1.7	.67	4.1
30	7.2	6.9	4.6	35	---	12	26	6.1	1.5	1.5	.59	4.3
31	6.4	---	4.2	30	---	11	---	8.8	---	1.4	.51	---
TOTAL	101.88	430.7	186.8	740.7	640.8	602	842	434.6	128.7	156.15	30.97	121.39
MEAN	3.29	14.4	6.03	23.9	22.1	19.4	28.1	14.0	4.29	5.04	1.00	4.05
MAX	11	49	8.7	117	88	33	115	28	10	49	2.0	.29
MIN	.26	5.7	4.2	3.5	7.8	11	10	5.5	1.5	.95	.51	.47
CFSM	.66	2.89	1.21	4.82	4.45	3.92	5.66	2.83	.86	1.02	.20	.82
IN.	.76	3.23	1.40	5.56	4.81	4.51	6.31	3.26	.97	1.17	.23	.91

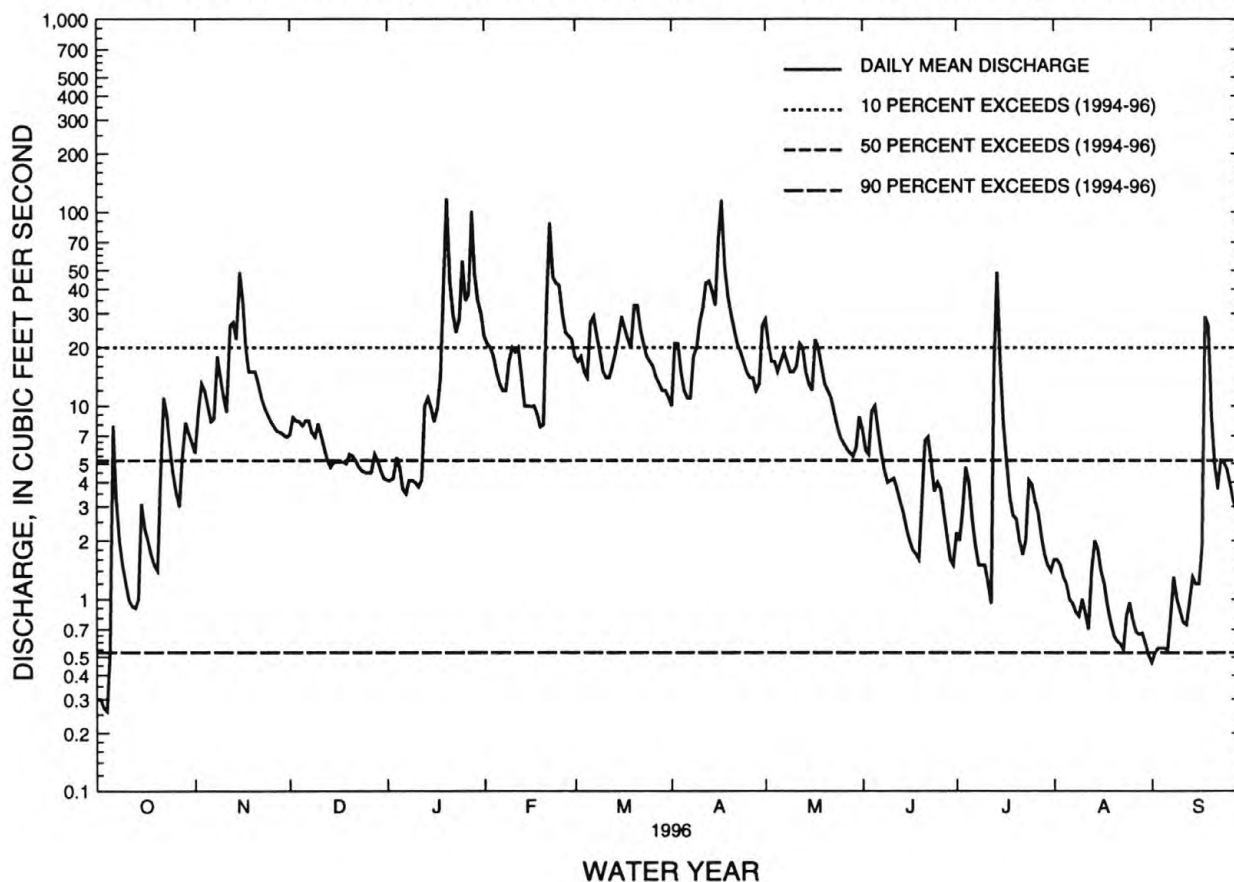
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	1994	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	
MEAN	2.11	9.47	9.41	18.9	16.6	17.8	19.3	12.2	4.45	2.44	1.16	2.01
MAX	3.29	14.4	12.8	23.9	22.1	19.4	28.1	14.0	4.60	5.04	2.00	4.05
(WY)	1996	1996	1995	1996	1996	1996	1996	1996	1996	1996	1996	1996
MIN	.94	4.59	6.03	13.8	10.9	16.2	10.6	10.5	4.29	.58	.48	.21
(WY)	1995	1995	1996	1995	1995	1995	1995	1995	1996	1995	1995	1995

01115098 PEEPTOAD BROOK AT ELMDALE ROAD NEAR NORTH SCITUATE, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1994 - 1996
ANNUAL TOTAL	2773.71	4416.69	9.62
ANNUAL MEAN	7.60	12.1	12.1
HIGHEST ANNUAL MEAN			7.17
LOWEST ANNUAL MEAN			1996
HIGHEST DAILY MEAN	49 Nov 15	117 Jan 20	117 Jan 20 1996
LOWEST DAILY MEAN	.00 Sep 16	.26 Oct 4	.00 Sep 16 1995
ANNUAL SEVEN-DAY MINIMUM	.01 Sep 10	.53 Aug 31	.01 Sep 10 1995
INSTANTANEOUS PEAK FLOW		176 Jan 20	176 Jan 20 1996
INSTANTANEOUS PEAK STAGE		2.49 Jan 20	2.49 Jan 20 1996
INSTANTANEOUS LOW FLOW		.25 Oct 3	.00 Sep 13 1995
ANNUAL RUNOFF (CFSM)	1.53	2.43	1.94
ANNUAL RUNOFF (INCHES)	20.80	33.13	26.36
10 PERCENT EXCEEDS	16	28	20
50 PERCENT EXCEEDS	7.0	7.3	5.2
90 PERCENT EXCEEDS	.30	.96	.53

PEEPTOAD BROOK, ELMDALE RD, NEAR NORTH SCITUATE, RI 01115098



PAWTUXET RIVER BASIN

01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI

LOCATION.--Lat 41°49'08", long 71°32'40", 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 mi².

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

GAGE.--Water-stage recorder. Elevation of gage is 355 ft above sea level, from topographic map.

REMARKS.--Records good except those below 10 ft³/s and above 150 ft³/s, which are fair, and those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--2 years, 24.4 ft³/s, 24.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 594 ft³/s, Jan. 19, 1996, gage height, 5.91 ft; no flow part of each day, Sept. 8-13, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	2345	*594	*5.91	Feb. 21	2330	311	4.10
Jan. 28	0145	464	5.12	Apr. 16	2045	553	5.69

Minimum discharge, 0.28 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	9.8	18	10	e55	38	20	89	13	2.2	3.8	.91
2	.48	16	23	e10	50	35	45	58	10	2.1	4.2	.76
3	.51	27	21	e12	e45	35	43	44	9.9	2.9	3.9	.76
4	.54	19	23	e14	e46	e32	31	43	15	7.8	3.4	.73
5	1.1	14	21	e13	e44	31	26	37	14	5.4	3.1	.67
6	17	12	22	e11	e44	69	23	38	11	3.6	2.8	.64
7	13	12	22	e10	e43	68	22	43	8.7	2.8	2.4	.94
8	7.2	37	19	e11	39	52	31	38	7.4	2.3	2.1	1.8
9	4.5	27	17	e12	46	e46	37	35	6.8	2.3	1.8	2.4
10	3.5	18	18	e11	47	e40	53	33	7.1	2.0	1.8	2.2
11	2.7	16	e16	e11	45	e36	62	37	7.6	1.7	1.7	1.7
12	2.2	85	e15	e13	47	e34	114	47	6.7	1.5	1.5	1.4
13	2.0	66	e14	e30	e32	38	129	42	5.6	55	2.3	1.7
14	1.7	45	e13	e32	e30	48	103	32	4.9	113	5.4	3.2
15	10	108	15	e30	e24	62	74	27	4.3	35	4.1	3.1
16	11	69	14	e25	e32	83	249	25	3.8	20	3.0	2.4
17	7.6	44	15	e30	e28	65	274	51	3.4	12	2.5	3.5
18	5.8	35	e13	e50	e26	52	128	41	3.5	8.8	2.2	83
19	5.0	38	e13	205	e24	45	86	31	3.9	7.0	1.7	53
20	3.9	37	e13	320	24	77	67	26	5.4	7.2	1.3	20
21	29	31	e13	e125	96	66	57	23	8.6	6.0	1.2	12
22	66	27	e13	76	200	47	48	22	7.3	4.8	1.0	9.3
23	22	24	16	61	105	39	42	18	6.0	4.9	.95	16
24	12	22	14	81	108	33	39	16	4.7	13	1.2	15
25	9.4	20	e13	164	104	30	35	14	4.9	10	1.6	14
26	7.4	19	13	88	68	28	32	12	4.5	8.6	1.8	12
27	6.7	18	13	125	53	25	30	11	3.8	8.0	1.6	9.2
28	16	18	e13	296	49	23	26	10	3.2	6.4	1.4	8.0
29	29	18	e12	122	44	22	28	9.7	2.6	4.9	1.3	14
30	17	17	e10	86	---	21	59	10	2.2	4.1	1.1	15
31	12	---	10	69	---	20	---	15	---	3.5	.84	---
TOTAL	326.67	948.8	485	2153	1598	1340	2013	977.7	199.8	368.8	68.99	309.31
MEAN	10.5	31.6	15.6	69.5	55.1	43.2	67.1	31.5	6.66	11.9	2.23	10.3
MAX	66	108	23	320	200	83	274	89	15	113	5.4	83
MIN	.44	9.8	10	10	24	20	20	9.7	2.2	1.5	.84	.64
CFSM	.77	2.31	1.14	5.07	4.02	3.16	4.90	2.30	.49	.87	.16	.75
IN.	.89	2.58	1.32	5.85	4.34	3.64	5.47	2.65	.54	1.00	.19	.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	1994	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	
MEAN	6.94	24.5	28.1	55.1	43.1	41.7	46.2	25.0	6.92	4.87	3.36	5.88
MAX	10.5	31.6	40.6	69.5	55.1	43.2	67.1	31.5	8.90	11.9	6.67	10.3
(WY)	1996	1996	1995	1996	1996	1996	1996	1995	1996	1996	1994	1996
MIN	3.35	17.3	15.6	40.8	30.7	40.2	25.5	21.6	5.19	1.07	1.18	.52
(WY)	1995	1995	1996	1995	1995	1995	1995	1995	1994	1995	1995	1995

PAWTUXET RIVER BASIN

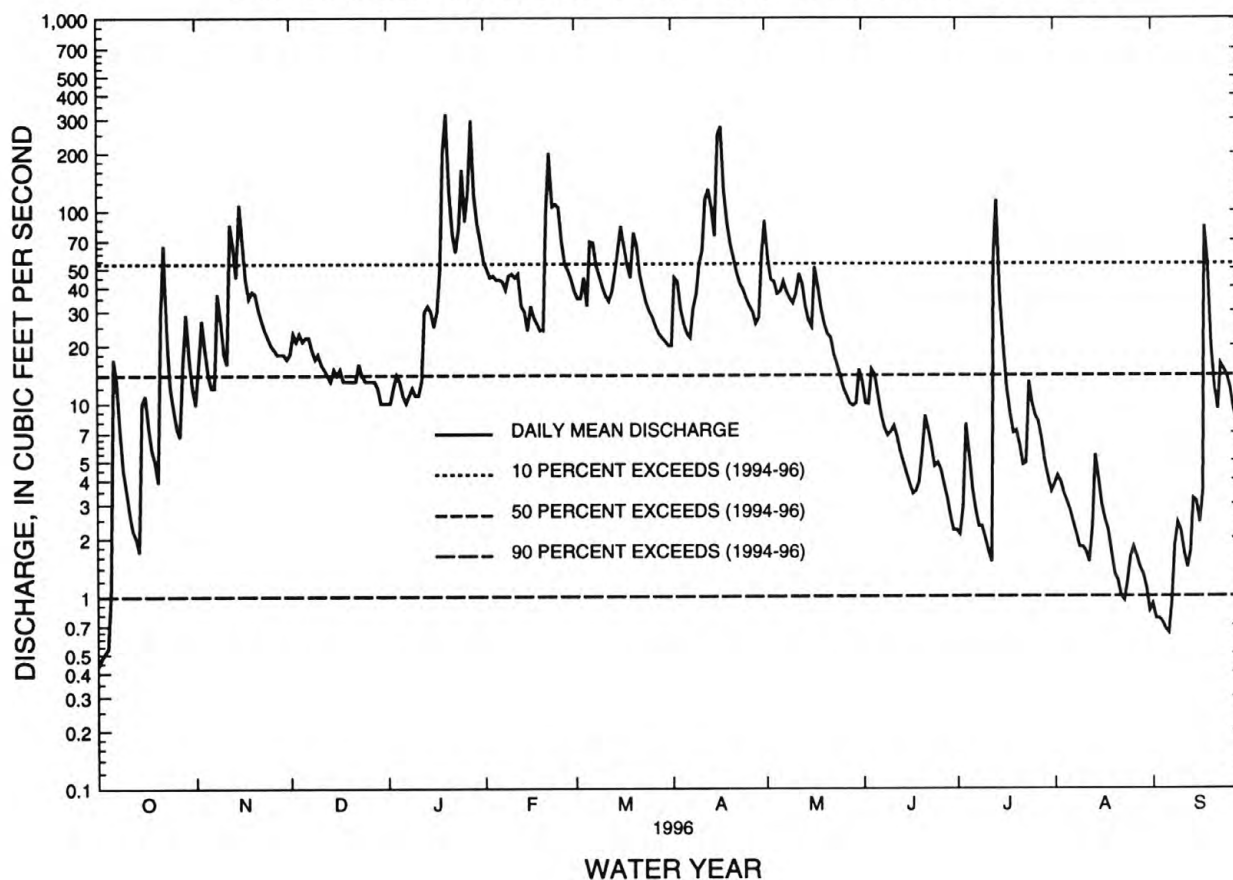
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01115187 PONAGANSET RIVER NEAR SOUTH FOSTER, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1994 - 1996	
ANNUAL TOTAL	6918.89		10789.07		24.4	
ANNUAL MEAN	19.0		29.5		29.5	1996
HIGHEST ANNUAL MEAN					19.3	1995
LOWEST ANNUAL MEAN					320	Jan 20 1996
HIGHEST DAILY MEAN	108	Nov 15	320	Jan 20		
LOWEST DAILY MEAN	.04	Sep 12	.44	Oct 1	.04	Sep 12 1995
ANNUAL SEVEN-DAY MINIMUM	.08	Sep 8	.76	Aug 31	.08	Sep 8 1995
INSTANTANEOUS PEAK FLOW			594	Jan 19	594	Jan 19 1996
INSTANTANEOUS PEAK STAGE			5.91	Jan 19	5.91	Jan 19 1996
INSTANTANEOUS LOW FLOW			.28	Oct 1	.00	Sep 3 1995
ANNUAL RUNOFF (CFSM)	1.38		2.15		1.78	
ANNUAL RUNOFF (INCHES)	18.79		29.30		24.19	
10 PERCENT EXCEEDS	43		67		53	
50 PERCENT EXCEEDS	17		16		14	
90 PERCENT EXCEEDS	.59		1.9		1.0	

e Estimated

PONAGANSET RIVER NEAR SOUTH FOSTER, RI 01115187



MEAN	71.8	102	158	169	178	226	213	149	108	63.8	62.7	64.2
MAX	216	354	422	489	327	434	595	294	444	130	168	240
(WY)	1956	1956	1987	1979	1970	1983	1983	1948	1982	1959	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

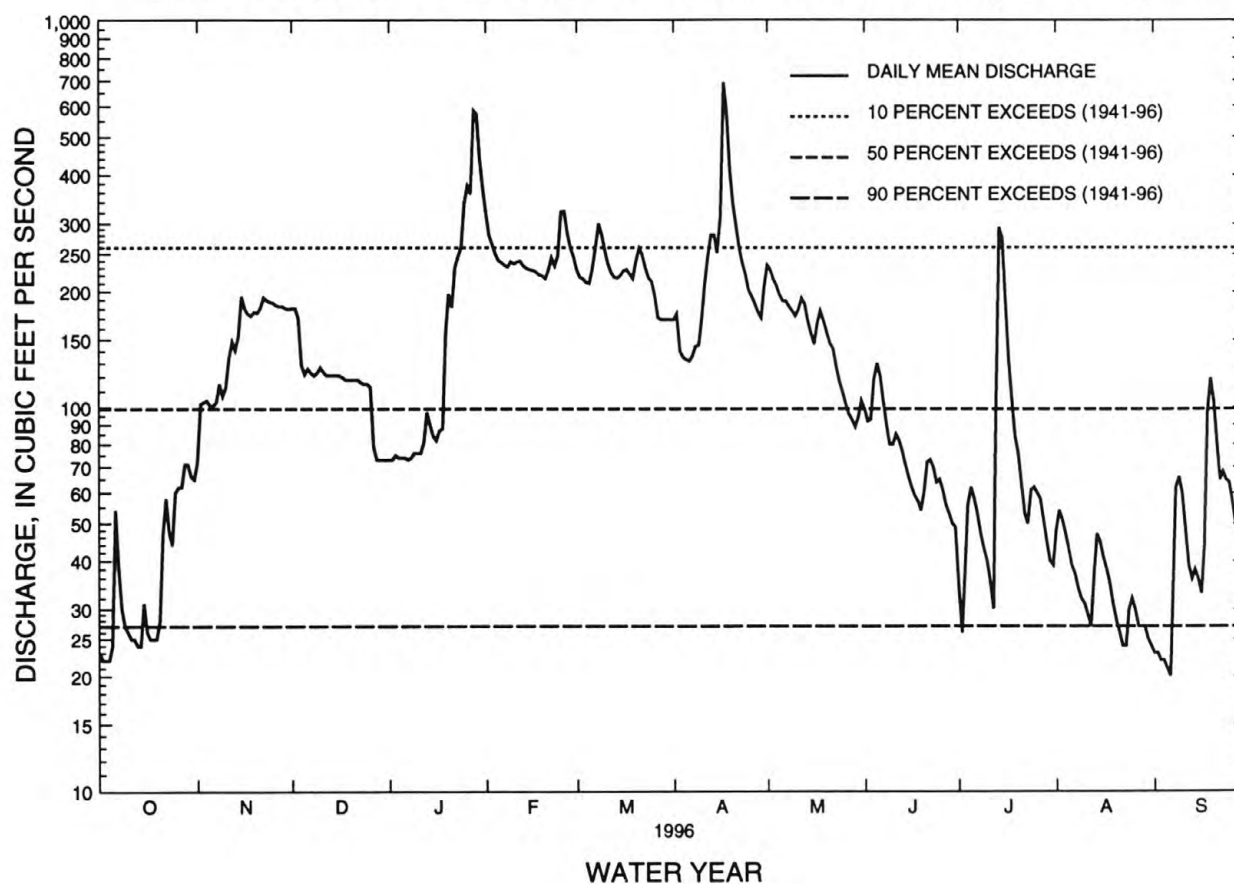
PAWTUXET RIVER BASIN

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01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	35477		48624		130	
ANNUAL MEAN	97.2		133		202	
HIGHEST ANNUAL MEAN					56.9	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	230	Jan 7	691	Apr 17	1680	Jun 7 1982
LOWEST DAILY MEAN	19	Jul 10	20	Sep 6	2.8	Aug 27 1944
ANNUAL SEVEN-DAY MINIMUM	22	Jul 5	22	Aug 31	9.3	Jun 23 1980
INSTANTANEOUS PEAK FLOW			761	Apr 17	1980	Jun 6 1982
INSTANTANEOUS PEAK STAGE			3.35	Apr 17	5.30	Jun 6 1982
INSTANTANEOUS LOW FLOW			19	Sep 6		
10 PERCENT EXCEEDS	190		246		260	
50 PERCENT EXCEEDS	89		111		99	
90 PERCENT EXCEEDS	25		30		27	

SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI 01116000



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 mi².

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. 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 ft³. 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.

AVERAGE DISCHARGE.--56 years (water years 1941-96), 347 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,440 ft³/s, June 7, 1982, gage height, 14.5 ft, from floodmark; minimum daily, 22 ft³/s, Sept. 4, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,770 ft³/s, Apr. 17, gage height, 10.44 ft, minimum daily, 57 ft³/s, Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	139	274	146	660	423	360	791	192	136	179	80
2	82	281	280	152	570	405	515	683	178	106	157	148
3	78	255	258	162	530	438	477	652	184	130	138	94
4	76	210	237	155	487	393	530	635	223	149	128	75
5	91	187	200	144	446	417	541	590	228	142	125	62
6	793	185	233	137	430	655	499	590	210	136	125	57
7	255	218	212	140	416	780	486	556	186	128	130	121
8	139	476	200	150	392	899	572	547	169	124	135	222
9	109	243	231	151	454	849	532	520	157	123	106	129
10	100	198	310	152	456	723	690	510	156	119	99	137
11	93	232	222	150	471	644	785	502	156	112	82	119
12	91	492	203	174	484	593	884	532	159	107	91	102
13	89	375	196	411	401	579	936	518	152	881	169	100
14	86	370	196	272	384	598	1010	462	146	1110	144	92
15	159	939	201	231	377	675	964	414	136	736	124	90
16	105	612	196	207	374	791	1330	392	128	515	112	90
17	91	435	198	238	370	778	2500	473	130	318	104	141
18	88	364	193	276	357	757	2440	447	126	226	96	815
19	87	407	193	640	349	690	1670	425	119	191	92	547
20	85	357	200	1360	351	983	1280	396	155	174	88	468
21	259	341	196	660	567	936	1090	374	156	153	82	224
22	572	365	193	514	897	872	941	355	145	138	83	164
23	178	329	189	502	583	758	816	313	139	145	83	209
24	136	331	188	618	653	629	751	285	131	166	125	160
25	128	309	188	914	665	576	664	253	154	155	108	158
26	136	300	187	790	598	536	592	234	130	148	97	136
27	140	293	165	828	537	459	571	223	120	145	87	119
28	278	287	149	1410	484	412	529	204	115	137	104	111
29	211	283	147	1180	463	397	531	194	113	128	92	130
30	156	291	147	953	---	392	640	194	112	120	87	120
31	143	---	146	783	---	372	---	201	---	134	83	---
TOTAL	5115	10104	6328	14600	14206	19409	26126	13465	4605	7232	3455	5220
MEAN	165	337	204	471	490	626	871	434	153	233	111	174
MAX	793	939	310	1410	897	983	2500	791	228	1110	179	815
MIN	76	139	146	137	349	372	360	194	112	106	82	57
(†)	3967	4153	4132	5032	5663	5730	5702	5543	5263	5086	4721	4610
(††)	103	90.4	88.3	95.6	93.4	92.2	92.5	99.9	136	129	128	109

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	MEAN	189	280	401	455	481	591	594	387	269	171	177	179
MAX	667	1024	1344	1238	1085	1291	1788	803	1237	360	438	698	
(WY)	1956	1956	1973	1979	1970	1983	1983	1948	1982	1972	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

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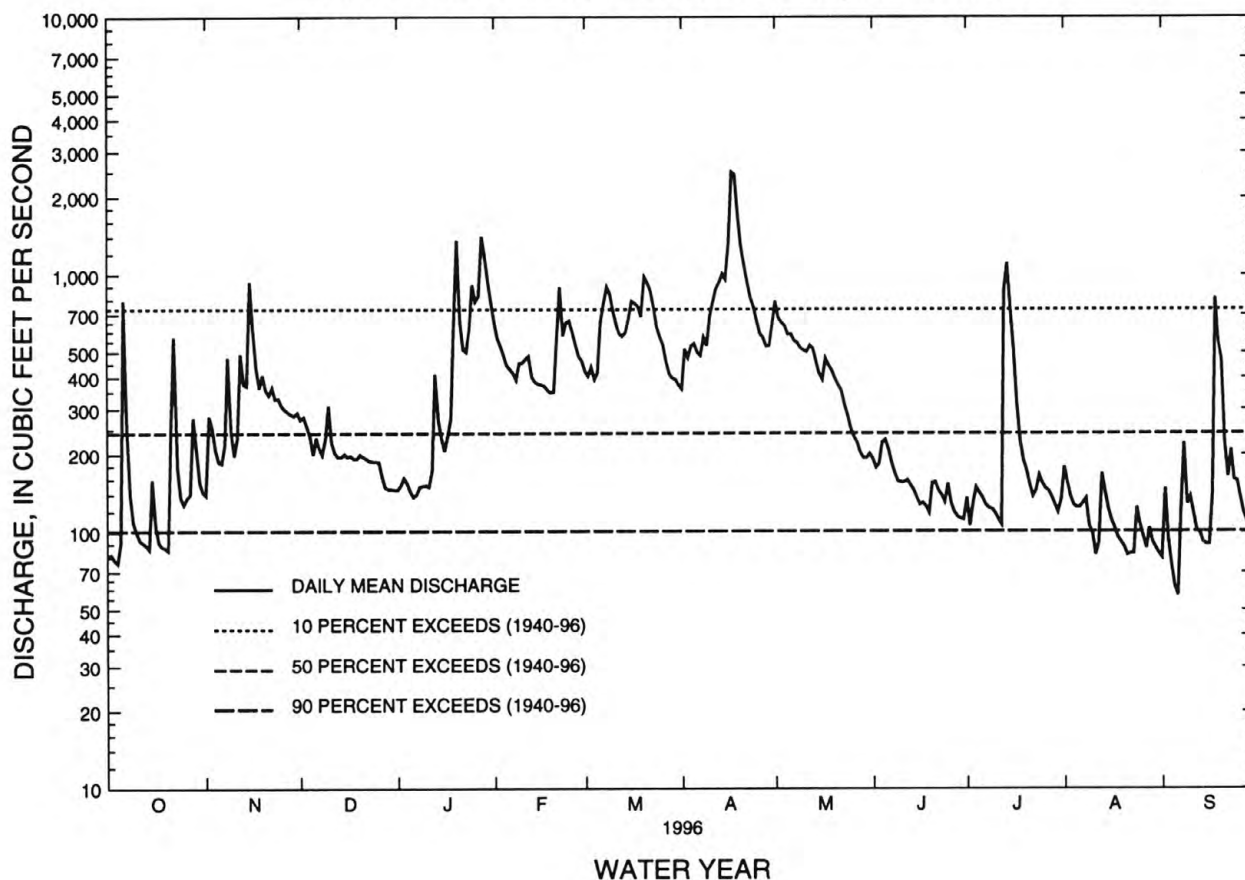
01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	81853		129865			
ANNUAL MEAN	224		355		347	
HIGHEST ANNUAL MEAN					595	
LOWEST ANNUAL MEAN					126	
HIGHEST DAILY MEAN	939	Nov 15	2500	Apr 17	5170	Jun 7 1982
LOWEST DAILY MEAN	48	Sep 13	57	Sep 6	22	Sep 4 1944
ANNUAL SEVEN-DAY MINIMUM	65	Sep 7	86	Aug 31	48	Aug 12 1985
INSTANTANEOUS PEAK FLOW			2770	Apr 17	5440	Jun 7 1982
INSTANTANEOUS PEAK STAGE			10.44	Apr 17	14.50	Jun 7 1982
INSTANTANEOUS LOW FLOW			52	Oct 5		
10 PERCENT EXCEEDS	387		764		736	
50 PERCENT EXCEEDS	199		222		242	
90 PERCENT EXCEEDS	90		100		101	

(†) Monthend contents, in millions of cubic feet (mcf), of Scituate Reservoir and five smaller reservoirs. Monthend contents on September 30, 1995, 4073 mcf.

(††) Diversions, in cubic feet per second, for municipal supplies. Figures of diversion and monthend contents provided by Providence Water Supply Board.

PAWTUXET RIVER AT CRANSTON, RI 01116500



PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1961 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to September 1981.

WATER TEMPERATURES: November 1961 to September 1981.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
04...	0830	72	454	6.2	19.0	16.5	--	--	763	2.8	29
04...	1417	81	499	--	22.0	17.5	--	--	--	--	--
NOV											
08...	0815	506	250	6.1	7.0	10.0	--	--	751	10.2	92
27...	1237	286	203	--	8.0	5.5	--	--	--	--	--
DEC											
06...	0930	258	248	6.4	9.0	6.0	--	1.7	764	12.0	96
JAN											
17...	0945	216	372	5.5	8.5	2.5	--	--	770	13.2	96
FEB											
08...	0915	387	208	6.6	2.0	2.0	--	--	765	13.6	98
MAR											
06...	0830	494	238	6.6	1.0	4.0	23	2.3	762	12.7	97
APR											
03...	0930	449	196	6.6	4.5	6.5	--	--	764	11.8	96
MAY											
08...	0845	551	177	6.8	7.5	13.0	--	--	775	10.3	96
JUN											
12...	0815	156	316	6.7	24.0	22.5	--	--	765	5.6	64
JUL											
10...	0830	117	316	6.6	19.5	23.0	--	--	762	2.7	32
AUG											
07...	0845	114	346	6.4	22.0	23.5	--	--	780	2.3	26
28...	0845	81	367	6.6	18.0	22.0	40	0.30	760	1.6	18

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	SODIUM AD- SORP- TION RATIO (00931)
OCT											
04...	--	--	230	94	K4	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	--	3.0	4100	280	960	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	--	660	900	65	--	--	--	--	--	--
JAN											
17...	23	2.0	240	28	56	--	--	--	--	--	--
FEB											
08...	--	--	180	K8	K12	--	--	--	--	--	--
MAR											
06...	22	1.0	1200	32	130	25	7.7	1.4	31	71	3
APR											
03...	--	--	900	35	K13	--	--	--	--	--	--
MAY											
08...	--	1.0	1500	71	2600	--	--	--	--	--	--
JUN											
12...	22	--	1500	310	210	--	--	--	--	--	--
JUL											
10...	--	3.0	180	87	44	--	--	--	--	--	--
AUG											
07...	--	--	150	51	190	--	--	--	--	--	--
28...	24	2.0	550	57	910	38	12	2.0	49	70	3

PAWTUXET RIVER BASIN

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01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)
OCT											
04...	--	32	0	0	26	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	--	19	0	0	15	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	--	20	0	0	16	--	--	--	--	4	152
JAN											
17...	--	25	0	0	21	--	--	--	--	--	--
FEB											
08...	--	15	0	0	13	--	--	--	--	--	--
MAR											
06...	2.1	15	0	0	12	13	46	0.20	112	6	137
APR											
03...	--	15	0	0	12	--	--	--	--	--	--
MAY											
08...	--	14	0	0	11	--	--	--	--	--	--
JUN											
12...	--	25	0	0	21	--	--	--	--	5	183
JUL											
10...	--	15	0	0	12	--	--	--	--	--	--
AUG											
07...	--	15	0	0	13	--	--	--	--	--	--
28...	6.4	20	0	0	16	16	72	0.30	179	6	222

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHODI- SOLVED (MG/L AS P) (00671)	PHENOLS TOTAL (UG/L) (32730)
OCT											
04...	1.53	0.170	1.70	1.20	1.5	0.50	1.7	3.4	0.470	0.390	--
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
08...	0.470	0.040	0.510	0.530	0.68	0.67	1.2	1.7	0.150	0.130	--
27...	--	--	--	--	--	--	--	--	--	--	--
DEC											
06...	0.590	<0.010	0.590	1.00	1.3	0.50	1.5	2.1	0.320	0.220	--
JAN											
17...	0.750	<0.010	0.750	1.20	1.5	0.60	1.8	2.6	0.170	0.140	--
FEB											
08...	0.640	0.010	0.650	0.470	0.61	0.43	0.90	1.5	0.110	0.060	--
MAR											
06...	0.570	0.010	0.580	0.630	0.81	0.17	0.80	1.4	0.110	0.080	4
APR											
03...	0.430	<0.010	0.430	0.500	0.64	0.20	0.70	1.1	0.120	0.100	--
MAY											
08...	0.330	<0.010	0.330	0.400	0.52	0.30	0.70	1.0	0.130	0.080	--
JUN											
12...	0.740	0.080	0.820	1.10	1.4	0.50	1.6	2.4	0.310	0.260	--
JUL											
10...	1.41	0.290	1.70	0.950	1.2	0.35	1.3	3.0	0.380	0.360	--
AUG											
07...	1.48	0.220	1.70	0.550	0.71	0.45	1.0	2.7	0.370	0.340	--
28...	1.81	0.190	2.00	0.650	0.84	0.45	1.1	3.1	0.450	0.440	3

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.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	TUR- BID- ITY (NTU) (00076)	BARO- METRIC PRES- SURE (MM HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
04...	1100	98	431	6.1	23.5	18.0	--	--	764	1.6	17
NOV											
08...	1100	406	260	6.1	9.0	10.0	--	--	752	10.1	91
DEC											
06...	1200	336	272	6.2	9.5	6.5	--	1.9	764	11.2	91
JAN											
17...	1200	308	458	6.3	11.5	3.0	--	--	770	12.1	89
FEB											
08...	1130	470	266	6.7	3.0	2.5	--	--	775	13.1	94
MAR											
06...	1145	600	278	6.7	0.5	4.0	23	1.2	761	12.7	97
APR											
03...	1215	491	242	6.5	11.0	9.0	--	--	761	11.3	98
MAY											
08...	1215	666	210	6.9	12.0	13.0	--	--	774	10.0	93
JUN											
12...	1100	219	346	6.8	28.5	22.5	--	--	767	4.8	55
JUL											
10...	1130	126	369	6.8	27.0	26.0	--	--	764	2.2	27
AUG											
07...	1130	200	394	6.6	27.0	23.5	--	--	780	1.5	17
28...	1230	123	419	6.6	18.5	21.5	30	1.3	760	1.0	11

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L) (00310)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)
OCT										
04...	--	--	460	6	280	--	--	--	--	--
NOV										
08...	--	3.0	5600	220	620	--	--	--	--	--
DEC										
06...	--	--	1900	3900	79	--	--	--	--	--
JAN										
17...	24	3.0	270	K14	K34	--	--	--	--	--
FEB										
08...	--	--	160	K8	83	--	--	--	--	--
MAR										
06...	17	1.0	480	K11	33	32	10	1.8	37	69
APR										
03...	--	--	410	K5	K4	--	--	--	--	--
MAY										
08...	--	1.0	1700	160	440	--	--	--	--	--
JUN										
12...	30	--	580	K270	180	--	--	--	--	--
JUL										
10...	--	4.0	270	100	69	--	--	--	--	--
AUG										
07...	--	--	210	81	96	--	--	--	--	--
28...	38	2.0	460	220	620	45	14	2.4	54	68

PAWTUXET RIVER BASIN

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01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SODIUM AD- SORP- TION RATIO (00931)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	HY- DROXIDE WATER DIS IT FIELD MG/L AS OH (71834)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)
OCT										
04...	--	--	34	0	0	28	--	--	--	--
NOV										
08...	--	--	21	0	0	17	--	--	--	--
DEC										
06...	--	--	26	0	0	22	--	--	--	--
JAN										
17...	--	--	34	0	0	28	--	--	--	--
FEB										
08...	--	--	24	0	0	19	--	--	--	--
MAR										
06...	3	2.6	24	0	0	20	14	56	0.20	139
APR										
03...	--	--	22	0	0	18	--	--	--	--
MAY										
08...	--	--	22	0	0	18	--	--	--	--
JUN										
12...	--	--	35	0	0	28	--	--	--	--
JUL										
10...	--	--	20	0	0	16	--	--	--	--
AUG										
07...	--	--	21	0	0	18	--	--	--	--
28...	4	7.3	24	0	0	19	21	81	0.50	207

DATE	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4) (71846)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
04...	--	--	2.94	0.160	3.10	1.20	1.5	0.70	1.9	5.0
NOV										
08...	--	--	0.680	0.040	0.720	0.480	0.62	0.52	1.0	1.7
DEC										
06...	5	164	0.750	0.010	0.760	1.40	1.8	0.60	2.0	2.8
JAN										
17...	--	--	0.800	0.020	0.820	1.70	2.2	0.70	2.4	3.2
FEB										
08...	--	--	0.780	0.020	0.800	0.990	1.3	0.61	1.6	2.4
MAR										
06...	6	163	0.670	0.020	0.690	1.40	1.8	0.30	1.7	2.4
APR										
03...	--	--	0.530	0.010	0.540	1.20	1.5	0.50	1.7	2.2
MAY										
08...	--	--	0.370	0.020	0.390	0.960	1.2	0.44	1.4	1.8
JUN										
12...	10	206	0.920	0.180	1.10	2.00	2.6	0.80	2.8	3.9
JUL										
10...	--	--	1.84	0.560	2.40	2.10	2.7	0.60	2.7	5.1
AUG										
07...	--	--	2.55	0.350	2.90	1.40	1.8	0.80	2.2	5.1
28...	14	266	2.63	0.170	2.80	1.30	1.7	0.80	2.1	4.9

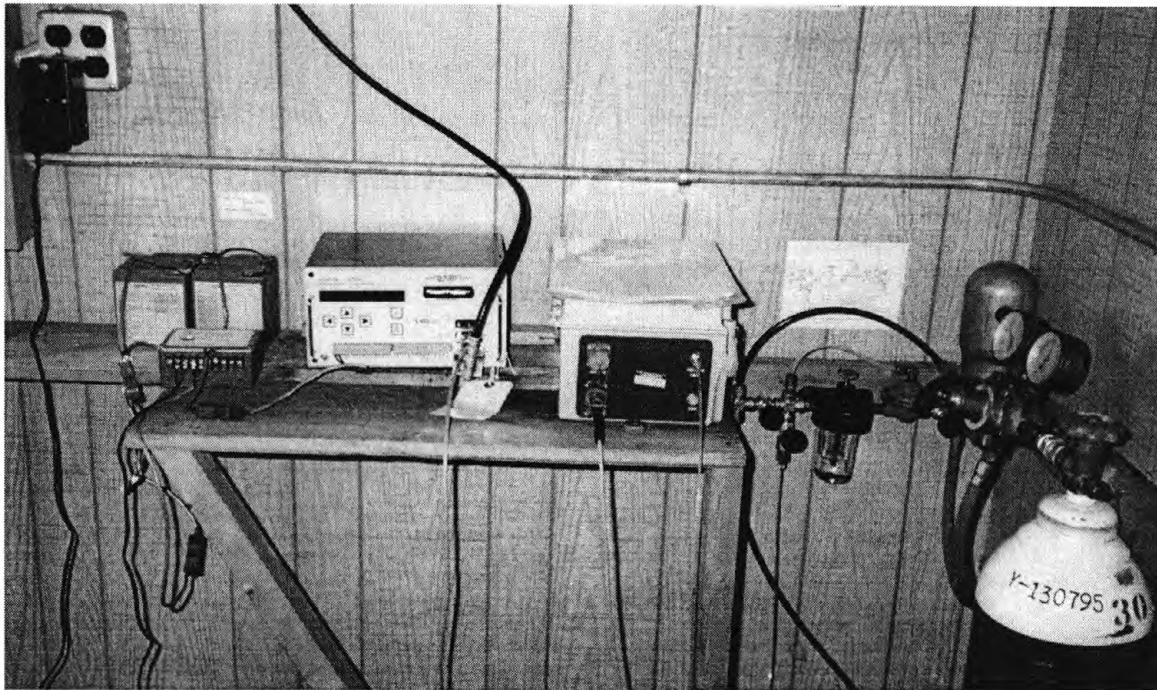
PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105)	ARSENIC TOTAL (UG/L AS AS) (01002)	BORON, TOTAL RECOV- ERABLE (UG/L AS B) (01022)	CADMIUM WATER UNFLTRD TOTAL (UG/L AS CD) (01027)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR) (01034)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB) (01051)
OCT										
04...	0.800	0.680	--	--	--	--	--	--	--	--
NOV										
08...	0.220	0.180	150	<1	70	<1	<1	4	760	4
DEC										
06...	0.370	0.250	--	--	--	--	--	--	--	--
JAN										
17...	0.320	0.180	200	<1	60	<1	1	6	770	5
FEB										
08...	0.190	0.100	--	--	--	--	--	--	--	--
MAR										
06...	0.170	0.120	150	<1	50	<1	<1	4	460	3
APR										
03...	0.190	0.140	--	--	--	--	--	--	--	--
MAY										
08...	0.230	0.140	110	<1	30	<1	<1	4	1000	3
JUN										
12...	0.560	0.480	--	--	--	--	--	--	--	--
JUL										
10...	0.580	0.480	80	<1	80	<1	<1	4	630	2
AUG										
07...	0.550	0.490	--	--	--	--	--	--	--	--
28...	0.460	0.430	30	<1	100	<1	<1	4	390	1

DATE	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI) (01067)	SELE- NIUM, TOTAL (UG/L AS SE) (01147)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG) (01077)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN) (01092)	PHENOLS TOTAL (UG/L) (32730)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
04...	--	--	--	--	--	--	--	--	--	--
NOV										
08...	140	<0.10	<1	3	<1	<1	30	--	5	75
DEC										
06...	--	--	--	--	--	--	--	--	--	--
JAN										
17...	260	<0.10	<1	6	<1	<1	70	--	9	77
FEB										
08...	--	--	--	--	--	--	--	--	--	--
MAR										
06...	150	<0.10	<1	5	<1	<1	30	3	5	65
APR										
03...	--	--	--	--	--	--	--	--	--	--
MAY										
08...	140	<0.10	<1	6	<1	<1	20	--	7	84
JUN										
12...	--	--	--	--	--	--	--	--	--	--
JUL										
10...	190	<0.10	1	6	<1	<1	10	--	6	52
AUG										
07...	--	--	--	--	--	--	--	--	--	--
28...	210	<0.10	3	14	<1	<1	10	3	8	61



River-stage measuring equipment installed at North Nashua River at Fitchburg, Massachusetts stream gaging station. From left to right: two 12-volt gel-cell batteries, data logger with antenna cable for transmitting data to weather satellite, pressure transducer for sensing water level in river, sight-feed for observing passage of nitrogen gas through system, nitrogen tank and regulator for supplying nitrogen gas to system.

POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, RI

LOCATION.--Lat 41°38'28", long 71°26'45", Washington County, Hydrologic Unit 01090004, on right bank 45 ft upstream from Old Forge Dam in North Kingstown, 1.5 mi south of East Greenwich, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--22.9 mi².

PERIOD OF RECORD.--Discharge: August 1940 to current year. Prior to October 1977, published as "Potowomut River." Water-quality records: Water years 1977-81.

REVISED RECORDS.--WSP 1621: 1957-58.

GAGE.--Water-stage recorder. Datum of gage is 5.42 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow affected by diversions for supply of East Greenwich, North Kingstown, Warwick, and Quonset Point (formerly U.S. Naval establishments).

AVERAGE DISCHARGE.--56 years, 46.4 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s, June 6, 1982, gage height, 3.73 ft, from rating curve extended above 440 ft³/s; maximum gage height of 6.78 ft, Aug. 31, 1954 (backwater from hurricane tidal wave); no flow at times in water years 1948, 1960, 1971, 1975-77, 1983, 1986-87, caused by closing of gate at Old Forge Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1915, about 8.5 ft Sept. 21, 1938 (backwater from hurricane tidal wave).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 230 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	0400	*342	*2.45	Apr. 17	0030	277	2.27
Jan. 28	0600	243	2.17	July 14	0200	280	2.28

Minimum discharge, 3.5 ft³/s, Oct. 4.

REVISIONS.--Revised daily discharges, in cubic feet per second, for the period June 1 to Sept. 30, 1995, are given below. These figures supersede those published in the report for 1995.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR JUNE 1995 TO SEPTEMBER 1995

DAILY MEAN VALUES

DAY	JUN	JUL	AUG	SEP
1	23	8.4	3.9	2.0
2	19	8.6	3.6	2.0
3	21	8.0	3.3	2.0
4	23	7.4	4.3	2.0
5	20	6.7	11	1.9
6	16	6.3	27	1.9
7	40	6.4	17	1.9
8	64	6.5	10	1.9
9	50	6.3	8.0	1.9
10	32	5.9	6.6	1.9
11	26	6.4	5.5	1.8
12	32	7.0	4.8	1.8
13	46	6.5	4.8	1.8
14	44	6.0	4.4	2.0
15	37	5.6	4.0	2.0
16	28	5.3	3.5	1.9
17	22	5.1	3.3	14
18	18	6.5	3.1	34
19	15	6.9	2.9	13
20	13	6.1	2.8	7.8
21	13	5.6	2.7	5.8
22	12	5.4	2.6	5.2
23	10	5.4	2.4	9.0
24	11	5.1	2.4	7.4
25	11	4.7	2.5	5.9
26	11	4.4	2.3	5.6
27	10	4.8	2.3	6.2
28	8.8	4.6	2.4	5.3
29	8.4	4.7	2.3	4.3
30	8.2	5.3	2.2	4.0
31	---	4.7	2.1	---
TOTAL	692.4	186.6	160.0	158.2
MEAN	23.1	6.02	5.16	5.27
MAX	64	8.6	27	34
MIN	8.2	4.4	2.1	1.8

SUMMARY STATISTICS

FOR 1995 WATER YEAR

ANNUAL TOTAL	11512.8
ANNUAL MEAN	31.5
HIGHEST DAILY MEAN	172 Dec 25
LOWEST DAILY MEAN	1.8 Sep 11
ANNUAL SEVEN-DAY MINIMUM	1.9 Sep 7
INSTANTANEOUS PEAK FLOW	225 Dec 24
INSTANTANEOUS PEAK STAGE	2.12 Dec 24
INSTANTANEOUS LOW FLOW	1.7 Sep 12
10 PERCENT EXCEEDS	68
50 PERCENT EXCEEDS	28
90 PERCENT EXCEEDS	3.9

POTOWOMUT RIVER BASIN

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01117000 HUNT RIVER NEAR EAST GREENWICH, RI--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	16	31	30	96	74	51	133	33	18	30	11
2	4.2	28	40	30	86	71	77	109	29	17	34	14
3	3.8	41	36	34	80	73	74	91	29	22	26	11
4	3.7	31	37	32	e72	70	63	93	43	30	21	9.3
5	4.8	25	35	29	e69	68	57	81	42	25	18	8.6
6												
7	84	20	43	25	e66	107	54	77	34	18	15	8.3
8	48	20	43	27	e64	134	53	76	28	15	13	22
9	28	60	37	38	e66	107	76	71	27	13	12	67
10	17	47	41	35	83	88	79	68	24	12	11	40
11	10	33	99	33	92	84	95	69	24	11	21	28
12	8.7	28	70	31	88	71	106	72	27	10	15	21
13	8.4	45	51	34	99	73	114	75	25	9.4	12	17
14	8.7	46	41	89	e81	76	101	66	23	126	23	17
15	8.5	41	37	87	e62	83	88	58	20	215	30	18
16	18	110	39	70	e59	91	79	54	20	107	21	16
17												
18	18	84	39	56	e56	100	145	54	18	63	16	13
19	12	59	38	58	e54	89	245	83	17	43	14	30
20	9.3	48	37	72	e52	79	170	77	14	31	13	99
21	8.0	56	36	115	e50	73	125	65	16	26	11	72
22	8.0	52	38	292	e55	126	107	58	23	26	9.8	46
23												
24	16	44	36	182	91	117	97	51	35	22	9.6	33
25	70	39	35	125	183	93	89	46	28	18	9.5	27
26	37	36	35	100	143	80	82	41	24	18	8.8	37
27	25	34	34	101	140	72	81	39	19	23	16	32
28	17	33	33	169	141	66	76	37	19	21	19	28
29												
30	13	31	33	134	109	65	72	36	17	19	14	23
31	12	31	32	114	92	61	71	35	14	20	12	20
32	26	28	31	222	86	57	66	33	13	17	25	20
33	39	29	30	163	80	56	69	32	13	15	20	23
34	25	29	29	126	---	56	113	33	13	13	14	22
35	19	---	29	113	---	54	---	38	---	15	12	---
TOTAL	614.3	1224	1225	2766	2495	2514	2775	1951	711	1038.4	525.7	833.2
MEAN	19.8	40.8	39.5	89.2	86.0	81.1	92.5	62.9	23.7	33.5	17.0	27.8
MAX	84	110	99	292	183	134	245	133	43	215	34	99
MIN	3.7	16	29	25	50	54	51	32	13	9.4	8.8	8.3

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)
1940	18.4	70.1	1.76	1969
1941	37.1	108	8.05	1950
1942	53.6	151	5.53	1966
1943	63.0	186	7.19	1966
1944	70.1	122	17.5	1944
1945	88.0	169	30.0	1981
1946	82.9	230	25.2	1966
1947	60.7	114	23.8	1992
1948	36.9	182	10.8	1957
1949	18.1	56.3	5.23	1994
1950	15.6	65.1	3.06	1965
1951	14.0	73.6	1.59	1968

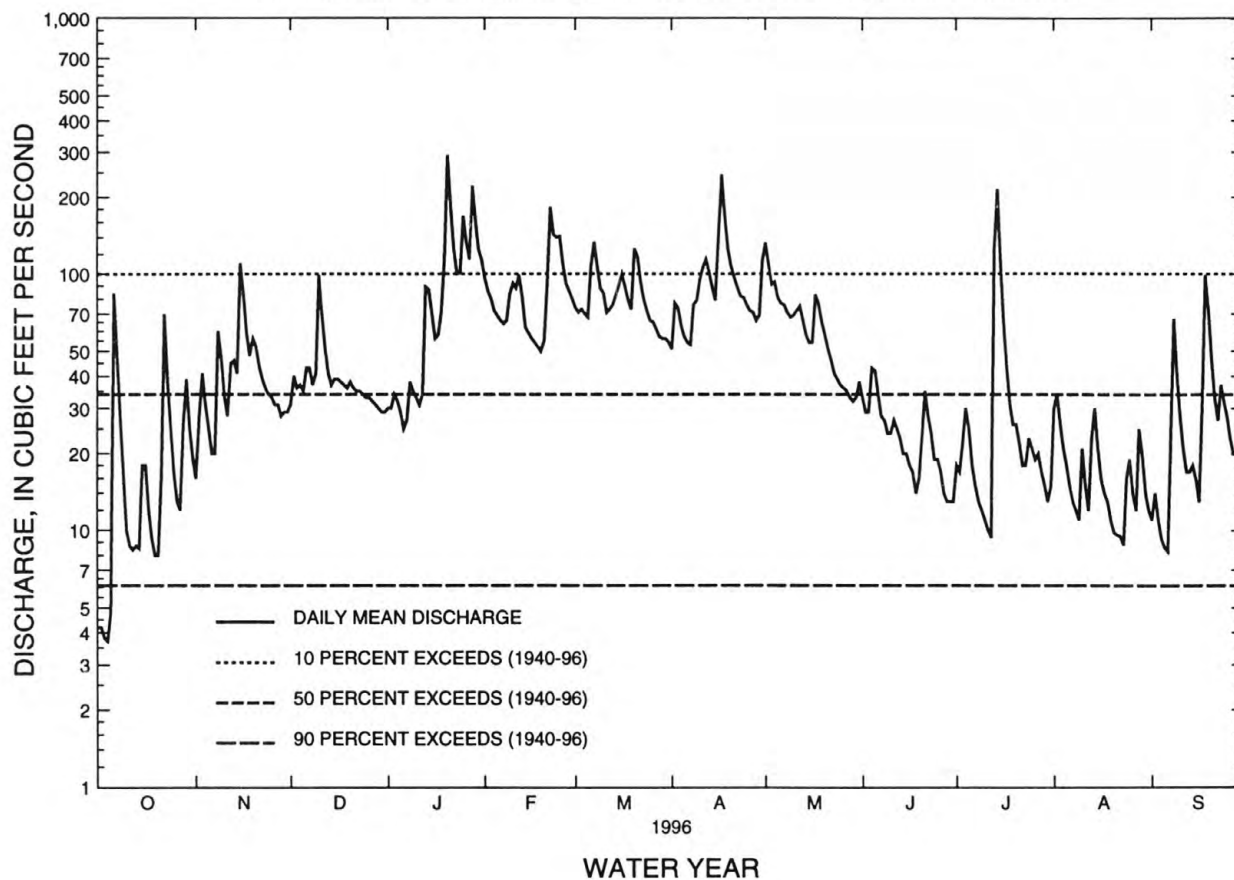
POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1940 - 1996
ANNUAL TOTAL	12283.5	18672.6	
ANNUAL MEAN	33.7	51.0	46.4
HIGHEST ANNUAL MEAN			81.5
LOWEST ANNUAL MEAN			17.7
HIGHEST DAILY MEAN	145 Jan 21	292 Jan 20	861 Jun 6 1982
LOWEST DAILY MEAN	1.8 Sep 11	3.7 Oct 4	.00 Oct 25 1947
ANNUAL SEVEN-DAY MINIMUM	1.9 Sep 7	11 Aug 31	.10 Sep 13 1943
INSTANTANEOUS PEAK FLOW		342 Jan 20	1020 Jun 6 1982
INSTANTANEOUS PEAK STAGE		2.45 Jan 20	6.78 Aug 31 1954
INSTANTANEOUS LOW FLOW		3.5 Oct 4	.00 Oct 24 1947
10 PERCENT EXCEEDS	66	101	100
50 PERCENT EXCEEDS	34	37	34
90 PERCENT EXCEEDS	3.9	13	6.1

e Estimated

HUNT RIVER NEAR EAST GREENWICH, RI 01117000





High water levels at Ipswich River surround the gage house in South Middleton, Massachusetts during a high-water event in March 1993.

PAWCATUCK RIVER BASIN

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI

LOCATION.--Lat 41°28'56", long 71°33'06", Washington County, Hydrologic Unit 01090005, on right bank at West Kingston, at downstream side of bridge on State Highway 138, 1.5 mi west of Kingston, and 3.1 mi upstream from Worden Pond.

DRAINAGE AREA.--9.99 mi².

PERIOD OF RECORD.--Discharge: February 1958 to July 1960 in Rhode Island Water Resources Board Geologic Bulletin 13. September 1973 to current year.

Water-quality records: Water years 1974-83.

GAGE.--Water-stage recorder. Datum of gage is 89.80 ft above sea level (Rhode Island State Board of Public Roads benchmark).

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion upstream for supply of University of Rhode Island.

AVERAGE DISCHARGE.--24 years (water years 1959, 1974-96), 21.0 ft³/s.

EXTREMES FOR PERIOD OF RECORDS SINCE 1973.--Maximum discharge, about 250 ft³/s, June 6, 1982; minimum, 0.47 ft³/s, Nov. 6, 7, 1994. Instantaneous maximum and minimum discharges not available prior to Sept. 14, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 64 ft³/s, Jan. 21, gage height, 5.96 ft; maximum gage height, 6.07 ft, July 15; minimum, 4.2 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	10	11	12	38	31	22	44	21	12	14	e7.5
2	4.8	13	12	12	35	30	26	46	20	12	16	e7.3
3	5.1	15	12	14	33	31	28	43	20	14	17	e7.2
4	5.1	17	12	14	32	29	28	41	21	16	17	e7.1
5	5.9	15	12	13	28	27	27	40	21	17	e14	e7.0
6	11	14	13	11	26	30	26	38	21	16	e12	e7.0
7	12	13	14	11	25	37	25	37	20	14	e11	e10
8	12	16	14	12	24	42	27	36	18	13	e10	e23
9	9.7	17	15	12	26	40	29	34	18	12	e9.6	e25
10	8.5	17	23	11	29	37	34	33	17	12	e9.2	e20
11	8.0	15	26	11	31	34	36	32	18	11	e8.8	e16
12	7.3	16	24	12	33	32	38	33	17	9.3	e8.5	e14
13	6.9	15	21	18	33	31	40	32	17	21	e9.8	e13
14	6.6	16	19	22	31	32	38	31	16	46	e14	e12
15	7.0	19	19	22	29	33	35	29	15	55	e13	e11
16	6.8	22	18	20	27	36	38	28	14	46	e11	e10
17	6.4	22	17	19	27	35	55	33	13	38	e10	e12
18	6.3	20	16	21	25	33	61	38	14	31	e9.4	20
19	6.3	20	15	28	23	31	54	38	14	27	e8.8	24
20	6.5	19	16	51	22	33	47	35	17	24	e8.3	24
21	7.4	19	16	63	25	36	42	33	19	22	e8.0	21
22	9.8	18	15	53	37	36	38	31	20	19	e7.9	19
23	13	16	15	43	45	35	35	28	20	18	e8.6	18
24	13	15	14	38	46	32	34	25	18	17	e9.4	16
25	12	14	14	40	47	29	33	23	17	16	e10	16
26	10	13	14	40	45	28	31	22	16	15	e9.5	14
27	8.9	13	13	39	40	26	31	20	14	15	e9.2	13
28	9.9	12	13	45	37	25	30	20	12	14	e8.8	12
29	11	11	13	51	34	24	30	20	11	13	e8.3	12
30	12	11	12	48	---	23	36	20	10	12	e8.0	12
31	11	---	12	43	---	22	---	21	---	12	e7.8	---
TOTAL	265.9	473	480	849	933	980	1054	984	509	619.3	326.9	430.1
MEAN	8.58	15.8	15.5	27.4	32.2	31.6	35.1	31.7	17.0	20.0	10.5	14.3
MAX	13	22	26	63	47	42	61	46	21	55	17	25
MIN	4.8	10	11	11	22	22	22	20	10	9.3	7.8	7.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1996, BY WATER YEAR (WY)

	MEAN	9.47	15.1	22.5	28.1	28.9	35.4	34.5	26.8	20.6	13.4	10.9	9.43
MAX	29.1	43.4	59.4	64.2	43.6	64.0	85.4	44.7	70.4	35.3	24.5	32.4	
(WY)	1990	1990	1987	1979	1984	1983	1983	1983	1982	1982	1982	1985	
MIN	3.57	4.32	5.11	3.54	10.4	9.14	12.7	11.5	7.89	3.94	1.65	1.50	
(WY)	1981	1995	1981	1981	1981	1981	1985	1981	1976	1976	1993	1993	

PAWCATUCK RIVER BASIN

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01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

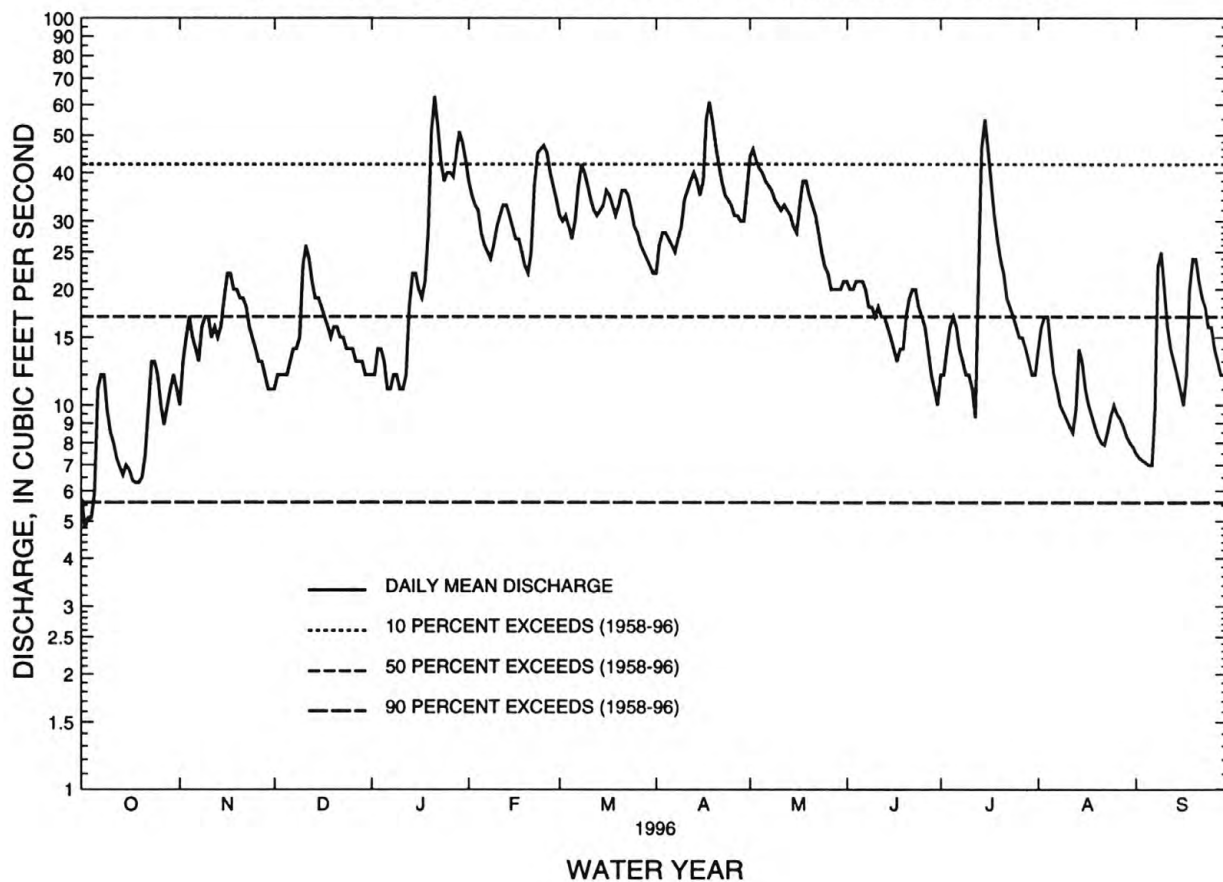
FOR 1996 WATER YEAR

WATER YEARS 1958 - 1996

ANNUAL TOTAL	5893.4	7904.2		
ANNUAL MEAN	16.1	21.6	21.0	
HIGHEST ANNUAL MEAN			32.8	1984
LOWEST ANNUAL MEAN			6.89	1981
HIGHEST DAILY MEAN	42	63	235	Jun 6 1982
LOWEST DAILY MEAN	3.6	4.8	.51	Nov 6 1994
ANNUAL SEVEN-DAY MINIMUM	3.7	6.6	.57	Nov 3 1994
INSTANTANEOUS PEAK FLOW		64	250	Jun 6 1982
INSTANTANEOUS PEAK STAGE		6.07	6.07	Jul 15 1996
INSTANTANEOUS LOW FLOW		4.2	.47	Nov 6 1994
10 PERCENT EXCEEDS	26	38	42	
50 PERCENT EXCEEDS	16	18	17	
90 PERCENT EXCEEDS	5.1	9.2	5.6	

e Estimated

CHIPUXET RIVER AT WEST KINGSTON, RI 01117350



PAWCATUCK RIVER BASIN

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 mi².

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 good except those for estimated daily discharges, which are fair. Flow affected at times by irrigation upstream.

AVERAGE DISCHARGE.--22 years (water years 1959, 1976-96), 75.3 ft³/s, 28.43 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,060 ft³/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, 307 ft³/s, Apr. 18, gage height, 6.04 ft; minimum, 12 ft³/s, Aug. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	39	50	46	158	121	75	179	57	34	35	18
2	16	44	57	46	141	113	92	182	51	34	46	21
3	16	58	57	48	135	112	105	153	49	34	39	24
4	16	52	56	48	132	110	95	141	61	44	e32	21
5	20	46	54	e45	e120	104	83	135	67	39	e28	20
6	50	43	59	42	114	114	76	123	58	32	e26	19
7	58	41	64	41	108	158	73	118	50	28	e24	40
8	42	69	58	43	105	169	91	112	47	25	e23	90
9	33	70	59	45	111	e145	103	105	44	25	e21	73
10	29	55	102	46	121	122	111	99	43	24	e20	51
11	27	49	101	45	123	110	127	98	46	22	e19	43
12	26	56	77	46	131	104	146	102	44	21	e18	40
13	26	64	64	82	122	104	156	105	41	65	e23	40
14	26	58	60	94	104	108	146	93	39	179	36	40
15	33	77	61	84	e95	114	129	83	36	205	31	37
16	36	90	62	73	e91	123	136	79	34	135	26	35
17	34	75	60	65	e87	126	272	112	32	69	23	44
18	31	63	59	78	e83	116	291	129	35	47	21	79
19	30	66	57	107	e80	106	220	114	34	40	18	91
20	29	69	58	232	78	115	176	95	45	40	e16	69
21	33	64	58	272	105	148	155	82	49	36	e15	52
22	54	59	56	209	211	141	144	75	45	32	15	46
23	51	55	54	160	244	122	134	67	40	29	14	50
24	42	54	53	140	207	109	126	62	36	34	17	49
25	37	52	52	174	215	99	121	59	34	33	22	47
26	36	51	51	200	193	94	114	56	32	32	19	44
27	35	50	50	176	160	89	108	55	29	31	17	41
28	39	49	49	226	139	83	103	54	28	28	19	40
29	53	50	48	256	130	81	100	54	27	26	21	43
30	47	50	47	214	---	79	136	54	27	24	19	46
31	41	---	46	182	---	76	---	61	---	24	18	---
TOTAL	1063	1718	1839	3565	3843	3515	3944	3036	1260	1471	721	1353
MEAN	34.3	57.3	59.3	115	133	113	131	97.9	42.0	47.5	23.3	45.1
MAX	58	90	102	272	244	169	291	182	67	205	46	91
MIN	16	39	46	41	78	76	73	54	27	21	14	18
CFSM	.95	1.59	1.64	3.19	3.67	3.14	3.64	2.71	1.16	1.31	.64	1.25
IN.	1.10	1.77	1.90	3.67	3.96	3.62	4.06	3.13	1.30	1.52	.74	1.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1996, BY WATER YEAR (WY)

	MEAN	35.4	61.9	86.9	105	106	129	132	93.4	69.0	35.5	30.5	26.8
MAX	85.7	150	212	266	180	240	335	179	276	71.9	56.1	75.7	
(WY)	1990	1990	1987	1979	1982	1983	1983	1978	1982	1984	1979	1985	
MIN	12.1	20.8	21.1	16.9	39.1	56.2	46.3	45.5	30.4	13.3	11.6	7.40	
(WY)	1995	1981	1981	1981	1980	1981	1985	1981	1994	1994	1981	1980	

PAWCATUCK RIVER BASIN

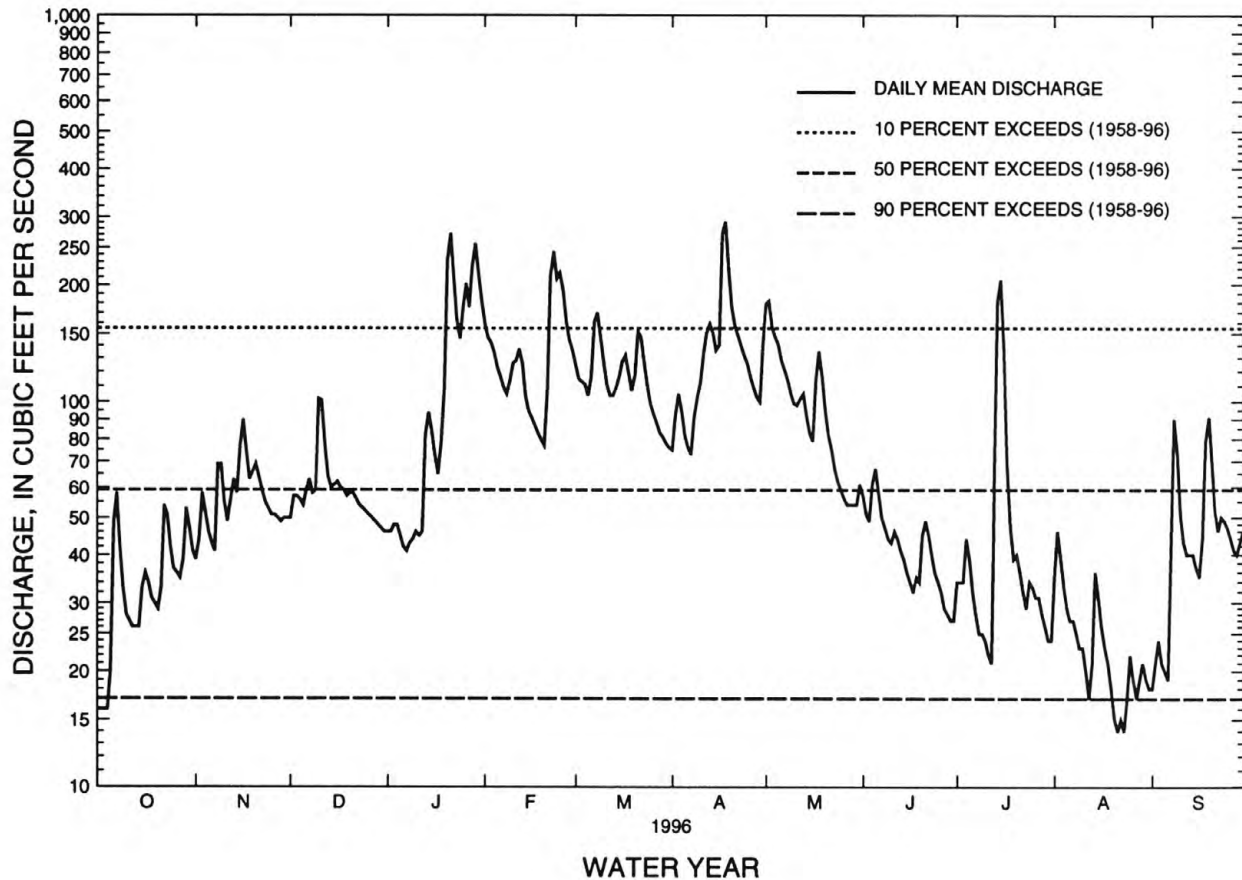
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01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1958 - 1996	
ANNUAL TOTAL	19957.0		27328		75.5	
ANNUAL MEAN	54.7		74.7		110	
HIGHEST ANNUAL MEAN					30.6	
LOWEST ANNUAL MEAN					1.1	
HIGHEST DAILY MEAN	152	Feb 17	291	Apr 18	1020	Jun 7 1982
LOWEST DAILY MEAN	2.5	Sep 6	14	Aug 23	1.1	Sep 14 1993
ANNUAL SEVEN-DAY MINIMUM	3.8	Sep 6	17	Aug 18	3.8	Sep 6 1995
INSTANTANEOUS PEAK FLOW			307	Apr 18	1060	Jun 6 1982
INSTANTANEOUS PEAK STAGE			6.04	Apr 18	9.23	Jun 6 1982
INSTANTANEOUS LOW FLOW			12	Aug 23	.00	Sep 13 1995
ANNUAL RUNOFF (CFSM)	1.51		2.07		2.09	
ANNUAL RUNOFF (INCHES)	20.57		28.16		28.43	
10 PERCENT EXCEEDS	94		142		155	
50 PERCENT EXCEEDS	57		56		59	
90 PERCENT EXCEEDS	11		24		17	

e Estimated

USQUEPAUG RIVER NEAR USQUEPAUG, RI 01117420



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 mi².

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 discharges, which are fair.

AVERAGE DISCHARGE.--21 years (water years 1976-96), 20.8 ft³/s, 32.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 370 ft³/s, June 6, 1982, gage height, 3.83 ft; minimum, 1.1 ft³/s, Sept. 7, 1993.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	0445	92	2.47	Apr. 17	0415	*103	*2.53
Jan. 28	0930	78	2.35	July 14	0245	83	2.37
Feb. 22	0245	94	2.45				

Minimum discharge, 2.5 ft³/s, Oct. 2-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	6.8	12	10	e39	36	22	57	19	10	12	4.5
2	2.7	9.8	14	10	36	35	33	45	17	10	14	4.9
3	2.5	12	13	11	36	36	30	38	17	12	11	4.8
4	2.5	11	13	11	34	33	25	42	25	15	9.9	4.2
5	3.3	9.0	13	e11	e33	32	23	36	25	12	8.9	4.1
6	15	8.1	15	e11	e31	44	22	35	20	10	8.5	4.0
7	12	8.8	16	14	29	52	22	34	17	9.1	8.4	21
8	8.6	21	13	19	27	43	31	32	16	8.8	7.6	28
9	6.3	16	15	23	31	36	31	30	16	8.7	6.9	14
10	5.2	12	30	21	33	32	34	31	16	8.2	7.1	9.6
11	4.7	11	e21	17	33	30	40	32	18	7.8	6.7	7.8
12	4.4	16	e16	17	35	30	44	36	16	7.3	6.4	7.1
13	4.2	17	17	26	29	32	40	32	15	43	9.2	7.0
14	4.1	15	e13	20	24	33	37	29	14	71	11	7.0
15	5.6	23	e14	16	24	34	33	27	13	36	8.8	6.4
16	6.4	21	14	e13	23	37	57	28	12	21	7.6	5.9
17	5.5	17	14	15	24	33	94	49	11	15	7.1	9.4
18	4.7	15	14	18	23	30	71	38	13	13	6.5	22
19	4.4	18	13	34	21	29	56	32	12	12	6.1	18
20	4.3	18	14	84	21	43	50	29	17	12	e4.8	11
21	6.3	16	e14	58	45	39	46	27	17	11	e4.3	8.7
22	13	15	13	42	86	34	43	25	15	9.9	e4.8	7.8
23	10	14	12	36	61	31	39	24	13	9.9	5.4	9.2
24	8.1	14	12	39	57	29	39	23	11	12	5.8	8.5
25	6.8	13	12	59	57	28	36	22	11	11	6.5	8.3
26	6.3	13	12	45	46	27	34	20	10	11	5.7	7.6
27	5.8	12	12	41	41	26	33	20	9.1	10	5.2	6.9
28	8.5	12	11	75	40	25	31	20	9.2	9.3	5.3	6.6
29	10	12	11	59	38	25	34	20	9.0	8.7	5.3	7.4
30	9.1	12	11	48	---	24	55	20	8.8	8.3	4.8	7.7
31	7.5	---	10	44	---	23	---	21	---	8.5	4.6	---
TOTAL	200.7	418.5	434	947	1057	1021	1185	954	442.1	451.5	226.2	279.4
MEAN	6.47	13.9	14.0	30.5	36.4	32.9	39.5	30.8	14.7	14.6	7.30	9.31
MAX	15	23	30	84	86	52	94	57	25	71	14	28
MIN	2.5	6.8	10	10	21	23	22	20	8.8	7.3	4.3	4.0
CFSM	.73	1.57	1.58	3.44	4.11	3.71	4.45	3.47	1.66	1.64	.82	1.05
IN.	.84	1.76	1.82	3.97	4.43	4.28	4.97	4.00	1.85	1.89	.95	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
8.78	17.1	25.0	28.9	28.0	35.8
37.1	27.4	20.6	10.0	8.22	6.93
48.3	82.1	22.7	16.4	25.2	1985
1979	1982	1982	1989	1985	
3.01	4.59	4.43	3.17	11.5	18.9
13.9	13.7	9.02	3.70	2.21	1.90
1995	1981	1981	1981	1985	1981
1985	1985	1981	1985	1981	1994
1994	1994	1993	1980		

PAWCATUCK RIVER BASIN

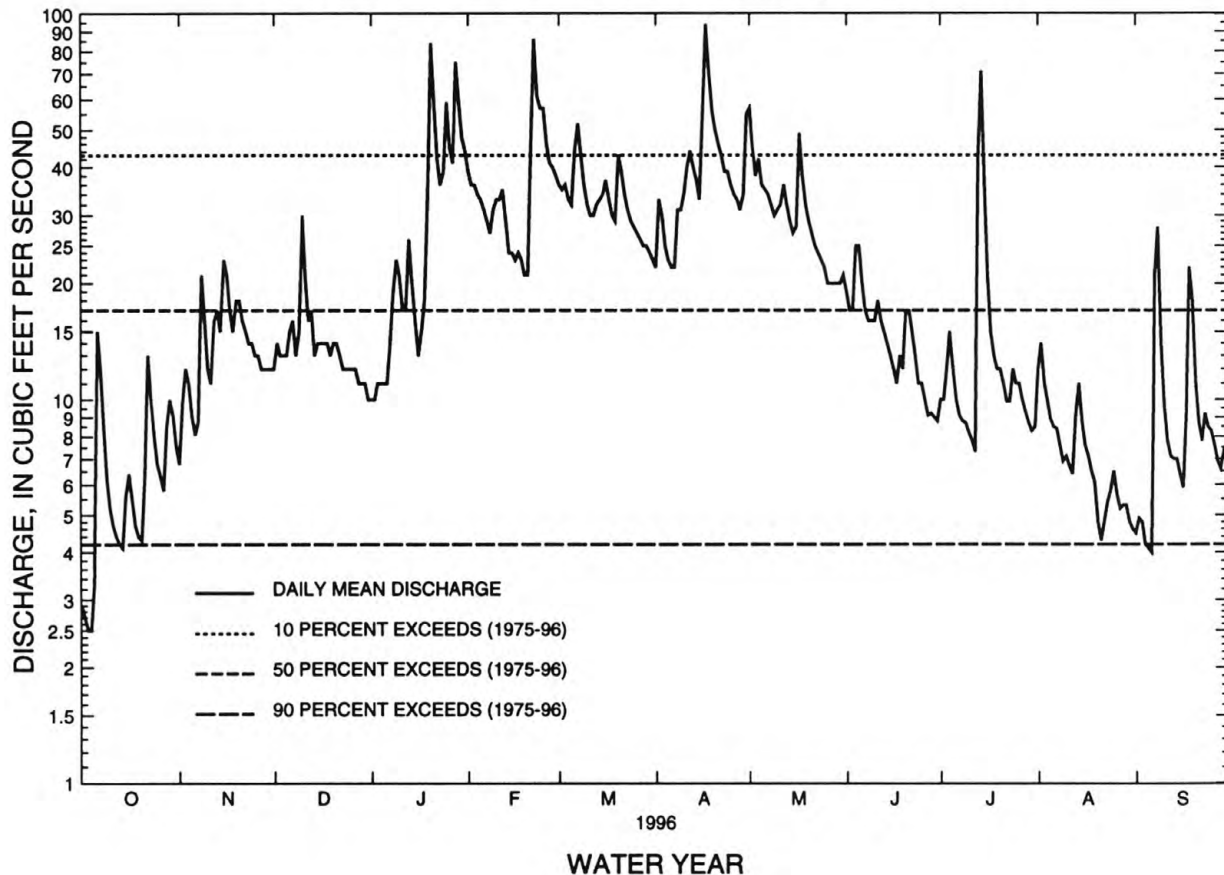
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01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1975 - 1996
ANNUAL TOTAL	5353.5	7616.4	
ANNUAL MEAN	14.7	20.8	21.2
HIGHEST ANNUAL MEAN			30.4
LOWEST ANNUAL MEAN			8.67
HIGHEST DAILY MEAN	45 Mar 1	94 Apr 17	324 Jun 6 1982
LOWEST DAILY MEAN	1.6 Sep 11	2.5 Oct 3	1.2 Sep 7 1993
ANNUAL SEVEN-DAY MINIMUM	1.7 Sep 6	4.4 Aug 31	1.3 Sep 1 1993
INSTANTANEOUS PEAK FLOW		103 Apr 17	370 Jun 6 1982
INSTANTANEOUS PEAK STAGE		2.53 Apr 17	3.83 Jun 6 1982
INSTANTANEOUS LOW FLOW		2.5 Oct 2	1.1 Sep 7 1993
ANNUAL RUNOFF (CFSM)	1.65	2.35	2.38
ANNUAL RUNOFF (INCHES)	22.45	31.94	32.40
10 PERCENT EXCEEDS	26	40	43
50 PERCENT EXCEEDS	14	15	17
90 PERCENT EXCEEDS	3.4	6.3	4.2

e Estimated

BEAVER RIVER NEAR USQUEPAUG, RI 01117468



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 mi².

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.

REMARKS.--Records good except those for estimated daily discharges, 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.--56 years, 194 ft³/s, 26.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s, June 7, 1982, gage height, 8.75 ft; minimum, 7.4 ft³/s, Oct. 10, 1947; minimum daily, 15 ft³/s, Oct. 11, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 608 ft³/s, Apr. 18, gage height, 4.28 ft; minimum, 27 ft³/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	67	106	111	418	341	207	444	180	94	116	57
2	31	82	114	111	375	320	245	458	171	95	142	57
3	30	108	116	115	329	308	263	438	165	100	139	55
4	29	108	117	117	e300	300	258	429	181	117	123	53
5	32	94	114	106	e290	292	241	401	195	114	109	52
6	76	81	123	104	e260	323	225	383	189	100	101	52
7	91	81	131	100	e250	378	220	360	173	90	94	108
8	93	128	130	97	248	406	250	338	161	83	87	186
9	74	139	123	99	272	374	274	322	152	78	82	194
10	58	127	196	104	299	356	315	307	147	80	85	160
11	49	107	207	106	317	331	354	297	147	73	81	120
12	45	116	194	112	332	318	375	307	147	71	76	103
13	43	121	160	150	304	308	390	297	144	154	87	97
14	41	124	147	167	263	304	386	282	136	279	106	94
15	45	144	147	179	242	305	362	260	123	339	103	89
16	48	159	147	179	231	319	398	248	114	326	93	84
17	46	160	146	180	225	316	524	317	109	248	85	104
18	43	144	142	193	225	307	594	345	110	178	79	160
19	42	140	138	251	216	293	589	337	110	149	75	188
20	41	141	135	417	217	319	521	308	137	141	71	181
21	48	138	134	459	281	332	453	276	145	127	67	151
22	72	130	136	461	447	341	409	256	142	115	65	125
23	83	120	133	415	508	325	383	235	131	110	63	121
24	78	114	130	382	529	295	364	218	119	112	63	119
25	66	110	127	406	527	272	337	204	111	111	66	120
26	59	107	124	412	481	260	319	192	103	109	66	114
27	55	105	122	424	444	246	299	183	96	108	63	108
28	66	103	120	495	405	234	282	178	89	100	63	101
29	83	104	117	520	373	227	276	174	87	93	63	98
30	83	103	114	529	---	220	376	175	86	88	60	98
31	74	---	112	485	---	213	---	182	---	87	58	---
TOTAL	1755	3505	4202	7986	9608	9483	10489	9151	4100	4069	2631	3349
MEAN	56.6	117	136	258	331	306	350	295	137	131	84.9	112
MAX	93	160	207	529	529	406	594	458	195	339	142	194
MIN	29	67	106	97	216	213	207	174	86	71	58	52
CFSM	.57	1.17	1.36	2.58	3.31	3.06	3.50	2.95	1.37	1.31	.85	1.12
IN.	.65	1.30	1.56	2.97	3.57	3.53	3.90	3.40	1.53	1.51	.98	1.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

MEAN	87.4	145	210	246	270	344	331	251	180	99.5	85.8	79.3
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	31.1	29.5
(WY)	1950	1966	1966	1981	1944	1981	1985	1981	1957	1957	1993	1980

PAWCATUCK RIVER BASIN

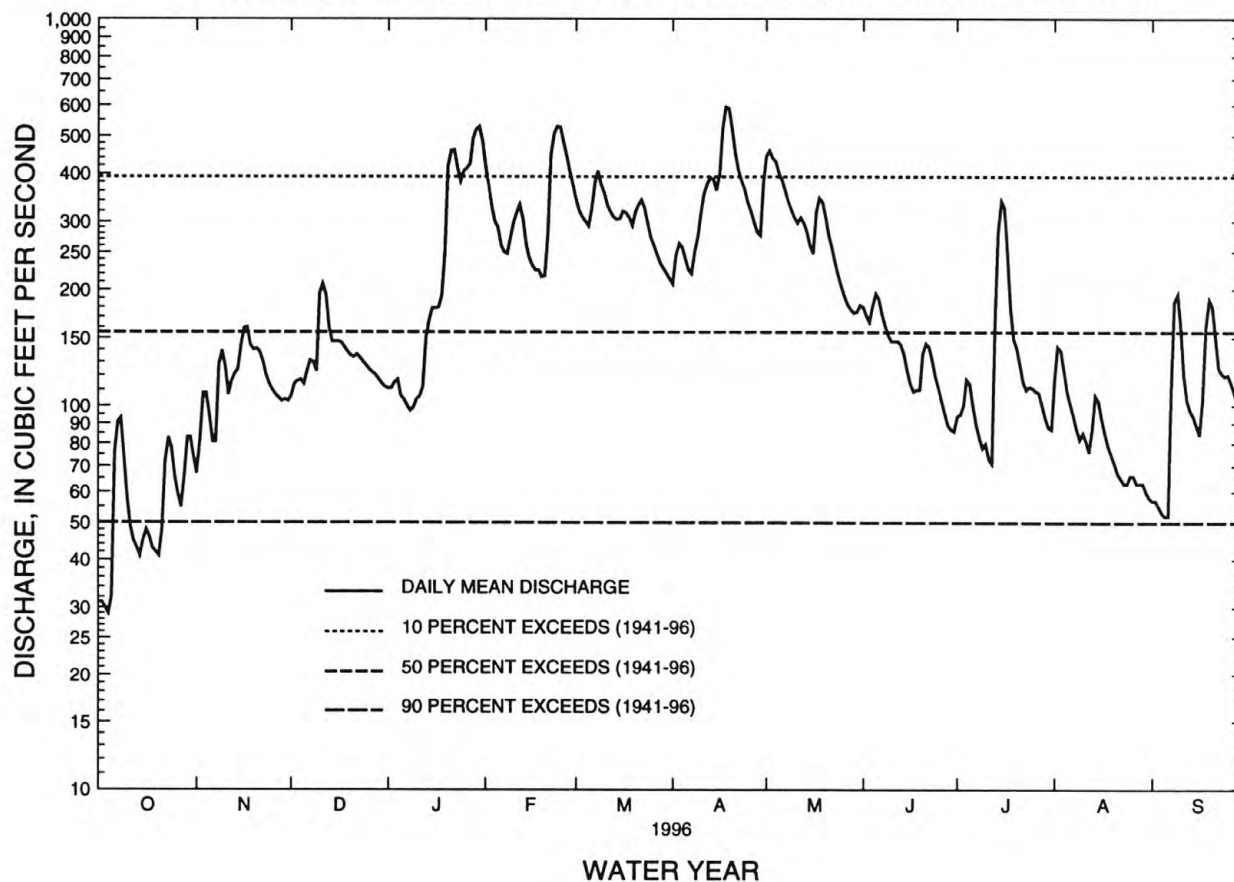
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01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	48945		70328		194	
ANNUAL MEAN	134		192		311	
HIGHEST ANNUAL MEAN					84.4	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	320	Mar 2	594	Apr 18	1830	Jun 7 1982
LOWEST DAILY MEAN	17	Sep 12	29	Oct 4	15	Oct 11 1947
ANNUAL SEVEN-DAY MINIMUM	20	Sep 1	44	Oct 14	20	Sep 1 1995
INSTANTANEOUS PEAK FLOW			608	Apr 18	1860	Jun 7 1982
INSTANTANEOUS PEAK STAGE			4.28	Apr 18	8.75	Jun 7 1982
INSTANTANEOUS LOW FLOW			27	Oct 5	7.4	Oct 10 1947
ANNUAL RUNOFF (CFSM)	1.34		1.92		1.94	
ANNUAL RUNOFF (INCHES)	18.21		26.16		26.42	
10 PERCENT EXCEEDS	239		382		392	
50 PERCENT EXCEEDS	138		141		155	
90 PERCENT EXCEEDS	34		66		50	

e Estimated

PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI 01117500



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 mi².

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 benchmark). Prior to Oct. 1, 1985, datum erroneously published as 137.97 ft above sea level.

REMARKS.--Records good.

AVERAGE DISCHARGE.--31 years (water years 1965-81, 1983-96), 76.2 ft³/s, 29.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 896 ft³/s, Mar. 18, 1968, gage height, 3.64 ft; minimum, 4.1 ft³/s, Sept. 1, 1995.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 6, 1982, reached a discharge of 1,010 ft³/s, gage height, 8.97 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 280 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 20	1815	343	5.62	Apr. 17	1400	*390	*5.96
Jan. 28	1530	316	5.41				

Minimum discharge, 8.7 ft³/s, Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	32	46	38	151	120	78	154	64	30	26	15
2	9.0	39	52	37	140	115	99	136	58	27	27	15
3	9.3	46	50	39	133	115	109	125	54	31	25	14
4	9.0	43	51	39	124	107	96	125	66	37	20	13
5	10	40	52	37	e120	104	82	116	64	35	19	12
6	57	37	57	37	114	139	79	112	59	29	17	12
7	44	37	58	38	107	161	82	107	54	26	15	20
8	31	69	54	41	105	152	104	102	51	24	13	31
9	23	60	52	43	112	135	105	99	47	23	13	27
10	20	54	63	43	117	121	123	96	46	24	13	23
11	17	49	59	43	121	113	129	98	47	33	12	20
12	15	74	51	45	128	109	150	112	47	25	12	18
13	14	81	48	70	110	110	157	116	42	65	18	24
14	14	79	45	68	100	116	150	103	41	113	20	30
15	23	97	46	65	95	124	136	99	39	75	17	25
16	26	93	46	59	91	135	211	93	37	63	15	22
17	22	82	46	62	91	129	381	115	34	52	14	31
18	19	74	46	69	85	121	319	104	34	43	13	65
19	18	74	44	122	80	113	232	101	34	39	13	61
20	16	70	45	324	80	138	186	90	39	39	15	50
21	23	64	47	276	143	133	161	79	40	33	14	44
22	42	62	46	190	263	121	145	72	38	30	14	40
23	37	58	44	150	235	111	135	65	36	28	12	48
24	33	56	44	148	217	103	127	65	33	34	16	41
25	30	56	43	207	207	95	118	62	31	30	21	37
26	28	53	42	182	174	92	112	60	28	28	18	33
27	25	50	42	178	149	85	109	58	26	28	17	32
28	33	48	41	309	139	81	104	57	25	24	17	28
29	46	46	39	271	130	79	115	56	25	21	15	31
30	38	46	39	210	---	83	145	54	24	19	14	31
31	34	---	38	177	---	82	---	56	---	19	15	---
TOTAL	774.3	1769	1476	3617	3861	3542	4279	2887	1263	1127	510	893
MEAN	25.0	59.0	47.6	117	133	114	143	93.1	42.1	36.4	16.5	29.8
MAX	57	97	63	324	263	161	381	154	66	113	27	65
MIN	9.0	32	38	37	80	79	78	54	24	19	12	12
CFM	.71	1.68	1.35	3.31	3.78	3.25	4.05	2.65	1.20	1.03	.47	.85
IN.	.82	1.87	1.56	3.82	4.08	3.74	4.52	3.05	1.33	1.19	.54	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1996, BY WATER YEAR (WY)

	MEAN	35.8	66.8	98.7	102	108	135	132	91.7	58.1	32.3	29.9	23.6
MAX	112	163	229	310	187	256	320	153	165	81.4	90.0	55.1	
(WY)	1990	1973	1973	1979	1970	1972	1983	1979	1984	1972	1979	1979	
MIN	12.4	11.2	15.5	19.0	43.6	76.3	44.2	48.7	26.9	12.7	8.86	7.05	
(WY)	1994	1966	1966	1966	1980	1985	1966	1986	1964	1991	1995	1980	

PAWCATUCK RIVER BASIN

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01117800 WOOD RIVER NEAR ARCADIA, RI--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

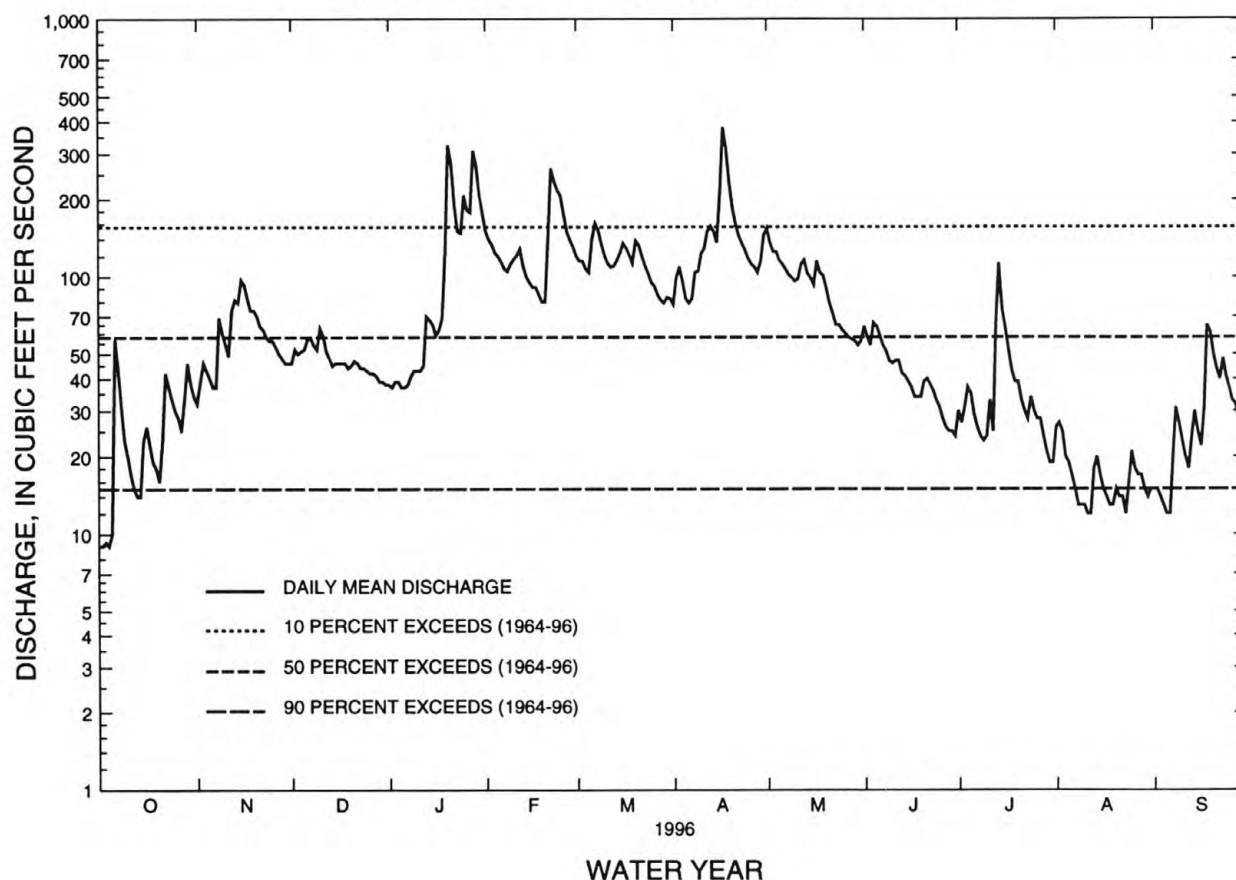
FOR 1996 WATER YEAR

WATER YEARS 1964 - 1996

ANNUAL TOTAL	19542.6	25998.3	76.2	
ANNUAL MEAN	53.5	71.0	114	1973
HIGHEST ANNUAL MEAN			33.3	1966
LOWEST ANNUAL MEAN			826	Jan 27 1978
HIGHEST DAILY MEAN	163	381	4.2	Sep 1 1995
LOWEST DAILY MEAN	4.2	9.0	4.2	Aug 31 1995
ANNUAL SEVEN-DAY MINIMUM	4.2	14	896	Mar 18 1968
INSTANTANEOUS PEAK FLOW		390	8.64	Mar 18 1968
INSTANTANEOUS PEAK STAGE		5.96	4.1	Sep 1 1995
INSTANTANEOUS LOW FLOW		8.7	2.17	
ANNUAL RUNOFF (CFSM)	1.52	2.02	29.42	
ANNUAL RUNOFF (INCHES)	20.65	27.48	156	
10 PERCENT EXCEEDS	102	139	58	
50 PERCENT EXCEEDS	50	51	15	
90 PERCENT EXCEEDS	8.8	17		

e Estimated

WOOD RIVER NEAR ARCADIA, RI 01117800



LOCATION.--Lat 41°29'53", long 71°43'01", Washington County, Hydrologic Unit 01090005, on right bank 0.2 mi downstream from highway bridge at Hope Valley and 6.6 mi upstream from mouth.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1201: 1948(P). See also PERIOD OF RECORD.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Some seasonal regulation by Locustville Pond on Brushy Brook since 1968. Some regulation at low flow by mills and ponds upstream until 1952; regulation greater prior to 1948.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s, June 6, 1982, gage height, 10.26 ft; minimum, 4.0 ft³/s, Sept. 9, 1987; minimum daily, 10 ft³/s, Oct. 13, 1941.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 580 ft³/s, and maximum (*):

e Estimated

Minimum discharge, 19 ft³/s, Oct. 5; minimum daily, 20 ft³/s, Oct. 4.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	57	86	77	e350	254	154	363	111	54	54	31
2	21	65	89	71	e300	243	199	308	99	53	60	36
3	21	100	96	88	e290	245	215	272	99	60	56	26
4	20	84	100	77	e280	226	193	281	138	81	52	26
5	22	86	98	71	e270	214	171	258	135	68	47	24
6	85	78	113	76	e260	281	152	250	122	59	45	23
7	120	75	119	79	e240	383	155	239	101	52	42	38
8	78	141	112	80	e230	333	216	225	95	50	37	64
9	62	135	113	80	e240	275	225	213	90	48	35	58
10	46	110	166	76	e250	247	265	207	96	49	35	49
11	42	100	141	75	e260	236	287	206	93	49	33	44
12	37	133	115	90	e270	229	342	236	91	49	31	39
13	34	162	99	150	e250	230	341	237	91	117	40	38
14	32	149	95	160	e220	246	316	220	85	312	50	45
15	47	187	103	142	e200	262	282	202	65	187	45	44
16	48	188	97	122	182	283	457	194	61	131	40	38
17	51	160	97	129	178	269	891	290	62	95	37	45
18	52	142	97	145	167	247	714	266	67	83	35	115
19	43	151	95	244	156	233	538	230	63	77	32	139
20	42	144	104	730	158	285	423	204	79	80	31	100
21	57	134	100	618	266	290	359	178	92	60	30	73
22	85	119	89	e500	636	258	315	161	72	58	30	59
23	74	109	76	e350	529	232	288	140	69	56	28	67
24	74	109	87	e330	479	212	274	127	63	61	30	68
25	57	95	79	e450	490	195	253	130	62	59	33	64
26	62	94	88	e410	386	189	240	121	57	57	34	56
27	57	91	83	e400	323	179	230	116	53	57	32	52
28	66	84	83	e660	296	167	215	115	51	52	31	55
29	91	90	69	e560	278	156	229	110	48	48	30	48
30	83	84	81	e450	---	163	330	108	48	45	28	51
31	68	---	69	e400	---	166	---	114	---	45	27	---
TOTAL	1698	3456	3039	7890	8434	7428	9269	6321	2458	2352	1170	1615
MEAN	54.8	115	98.0	255	291	240	309	204	81.9	75.9	37.7	53.8
MAX	120	188	166	730	636	383	891	363	138	312	60	139
MIN	20	57	69	71	156	156	152	108	48	45	27	23
CFSM	.76	1.59	1.35	3.52	4.02	3.31	4.27	2.82	1.13	1.05	.52	.74
IN.	.87	1.78	1.56	4.05	4.33	3.82	4.76	3.25	1.26	1.21	.60	.83

MEAN	75.3	131	186	201	217	277	262	191	128	69.6	62.9	59.4
MAX	341	386	477	666	398	465	664	365	540	168	183	311
(WY)	1956	1956	1987	1979	1970	1972	1983	1979	1982	1972	1979	1954
MIN	22.6	24.9	35.1	36.8	87.6	147	89.4	91.9	48.3	27.7	20.5	17.4
(WY)	1958	1966	1966	1981	1980	1981	1966	1986	1957	1957	1957	1957

PAWCATUCK RIVER BASIN

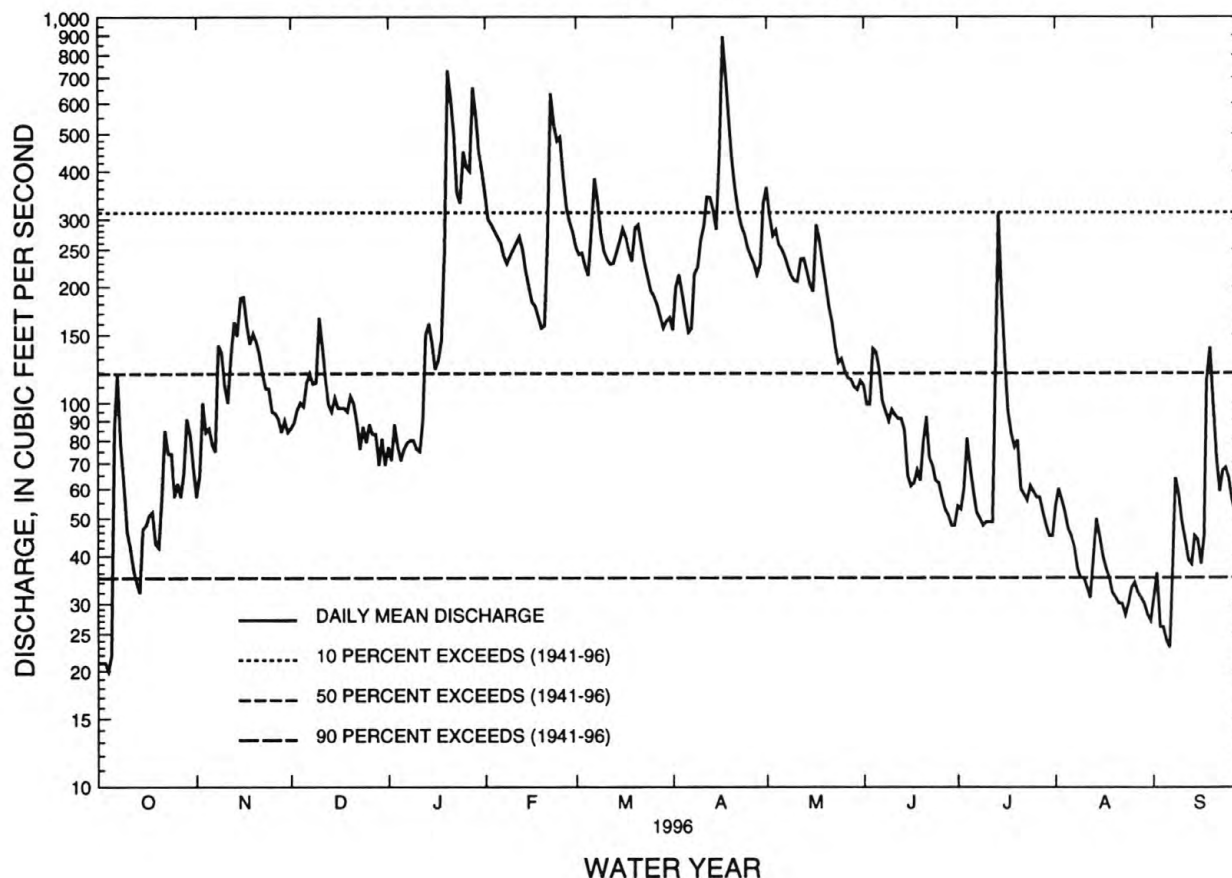
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01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	40800		55130		155	
ANNUAL MEAN	112		151		235	
HIGHEST ANNUAL MEAN					71.2	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	380	Jan 8	891	Apr 17	2200	Jun 6 1982
LOWEST DAILY MEAN	14	Sep 5	20	Oct 4	10	Oct 13 1941
ANNUAL SEVEN-DAY MINIMUM	14	Sep 5	28	Aug 31	14	Sep 5 1995
INSTANTANEOUS PEAK FLOW			947	Apr 17	2390	Jun 6 1982
INSTANTANEOUS PEAK STAGE			5.95	Apr 17	10.26	Jun 6 1982
INSTANTANEOUS LOW FLOW			19	Oct 5	4.0	Sep 9 1987
ANNUAL RUNOFF (CFSM)	1.54		2.08		2.14	
ANNUAL RUNOFF (INCHES)	20.96		28.33		29.08	
10 PERCENT EXCEEDS	214		297		312	
50 PERCENT EXCEEDS	103		99		119	
90 PERCENT EXCEEDS	22		38		35	

e Estimated

WOOD RIVER AT HOPE VALLEY, RI 01118000



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 TEMPERATURES: October 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1977.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 298 μ S/cm, Feb. 12, 1988; minimum recorded, 21 μ S/cm, Jan. 23, 1979.

WATER TEMPERATURES: Maximum recorded, 29.5°C, July 24, 1987, July 26, 27, 28, 1989; minimum recorded, 0.0°C, on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 151 μ S/cm, Oct. 13, 14; minimum, 78 μ S/cm, Feb. 26.

WATER TEMPERATURES: Maximum, 24.5°C, July 18, Aug. 10, 11; minimum, 0.0°C, on several days during winter period.

SPECIFIC CONDUCTANCE, US/CM @ 25 DEGREES CENTIGRADE, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	117	112	114	104	100	102	93	92	92	105	103	104
2	120	117	118	105	102	103	94	92	93	104	103	103
3	121	120	120	105	101	103	94	92	93	111	103	106
4	121	119	120	102	97	100	93	91	92	114	111	113
5	120	118	119	98	94	96	92	90	91	115	113	114
6	120	113	116	96	94	95	92	90	91	114	112	113
7	113	100	105	97	96	96	92	91	92	112	111	112
8	111	100	106	98	95	97	92	90	91	111	110	110
9	118	111	116	95	92	93	96	91	92	111	110	110
10	128	118	123	93	90	92	107	96	103	114	111	113
11	136	128	132	92	90	91	107	104	105	114	113	114
12	145	136	140	94	91	93	106	104	105	113	110	112
13	151	145	148	94	91	93	105	103	104	127	111	121
14	151	134	140	94	92	93	104	103	103	127	123	125
15	137	130	134	94	87	91	106	103	104	125	123	124
16	143	134	140	89	86	87	109	106	108	125	122	123
17	139	130	136	87	85	86	109	108	108	122	119	121
18	133	129	131	86	85	85	108	107	108	119	115	117
19	130	125	128	86	85	86	108	105	106	115	108	111
20	131	125	128	87	86	86	105	103	104	108	95	104
21	135	116	127	88	86	87	106	103	104	96	89	92
22	122	117	120	89	87	88	108	105	107	97	91	94
23	127	118	123	89	87	88	109	107	108	94	92	93
24	126	112	121	87	86	87	110	108	109	100	94	96
25	117	111	114	88	86	87	108	107	107	99	93	95
26	118	108	114	89	87	88	107	105	106	94	91	93
27	113	103	109	90	87	88	105	103	104	95	91	92
28	109	103	105	91	89	89	104	102	103	95	91	94
29	107	104	105	92	90	91	103	102	102	91	89	90
30	108	102	106	93	91	93	104	103	103	90	88	89
31	104	100	103	---	---	---	104	102	103	94	90	92
MONTH	151	100	121	105	85	92	110	90	101	127	88	106

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

WATER TEMPERATURE, DEGREES CELSIUS, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	2.0	0.0	0.5	4.5	3.5	4.0	8.5	7.5	8.0	14.5	13.0	13.5
2	1.0	1.0	1.0	3.5	2.5	3.0	9.0	8.0	8.5	15.0	14.0	14.5
3	1.0	0.0	0.0	3.0	2.5	2.5	9.0	8.0	8.5	14.5	13.5	14.0
4	1.0	0.0	0.5	3.0	2.0	2.5	9.5	8.0	9.0	13.5	13.0	13.5
5	1.5	1.0	1.0	3.5	2.5	3.0	9.5	9.0	9.0	15.0	13.0	14.0
6	1.5	1.0	1.0	3.5	3.5	3.5	9.0	8.0	8.5	14.5	13.5	14.5
7	1.5	1.0	1.0	3.5	2.5	3.0	8.0	7.5	8.0	13.5	12.5	13.0
8	1.0	1.0	1.0	2.5	1.5	2.0	7.5	6.5	7.0	13.5	12.5	13.0
9	1.0	0.0	1.0	2.0	1.5	1.5	7.0	6.0	6.5	13.5	13.0	13.0
10	1.5	1.0	1.0	2.5	1.5	2.0	6.0	5.0	5.5	13.5	13.0	13.0
11	1.5	1.5	1.5	3.0	2.0	2.5	6.5	5.0	5.5	15.0	13.0	14.0
12	1.5	1.0	1.5	4.0	2.5	3.5	7.5	6.5	7.5	15.5	15.0	15.0
13	1.5	0.0	1.0	5.0	3.5	4.0	8.5	7.5	8.0	15.0	13.5	14.0
14	1.5	1.0	1.0	5.5	4.5	5.0	8.5	8.0	8.5	14.0	13.0	13.5
15	2.0	0.0	1.0	5.5	5.0	5.0	9.0	7.5	8.0	14.0	12.5	13.5
16	1.5	1.5	1.5	6.0	5.0	5.5	9.0	8.5	9.0	14.0	13.0	13.5
17	1.5	1.0	1.5	6.0	5.0	5.5	9.0	8.5	8.5	14.5	13.0	13.5
18	1.5	1.0	1.5	6.0	5.0	5.5	9.5	8.0	8.5	15.0	14.5	15.0
19	1.5	1.0	1.5	6.0	5.5	6.0	10.5	9.5	10.0	16.5	14.5	15.5
20	2.0	1.5	2.0	6.5	6.0	6.5	12.0	10.5	11.5	18.5	16.0	17.0
21	3.0	2.0	2.5	7.0	6.5	7.0	14.0	12.0	13.0	20.5	18.5	19.0
22	3.0	2.5	2.5	7.0	6.5	7.0	15.0	14.0	14.5	21.5	20.0	20.5
23	3.5	2.5	3.0	7.0	6.0	6.5	16.0	14.5	15.0	21.0	20.0	20.5
24	4.0	3.5	4.0	6.5	5.5	6.0	16.0	15.5	15.5	20.5	19.0	19.5
25	4.5	4.0	4.0	7.5	6.0	7.0	15.5	14.5	14.5	19.5	18.0	18.5
26	5.0	4.0	4.5	9.5	7.5	8.5	14.5	14.0	14.0	18.5	17.0	17.5
27	5.0	4.5	4.5	9.0	8.0	8.5	15.0	14.0	14.5	17.0	16.0	16.5
28	6.0	5.0	5.5	8.5	7.5	8.0	14.5	13.5	14.0	16.5	15.5	16.0
29	6.0	4.5	5.5	7.5	6.5	7.0	13.5	12.5	13.0	16.5	15.0	15.5
30	---	---	---	7.5	6.0	7.0	13.0	12.0	12.5	16.0	15.0	15.0
31	---	---	---	8.5	6.5	7.5	---	---	---	16.5	14.0	15.0
MONTH	6.0	0.0	2.0	9.5	1.5	5.0	16.0	5.0	10.0	21.5	12.5	15.5

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 mi².

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 except those for estimated daily discharges, which are fair. 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.--55 years (water years 1942-96), 574 ft³/s, 26.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,070 ft³/s, June 6, 1982, gage height, 12.86 ft; minimum daily, 25 ft³/s, Aug. 17, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 3,150 ft³/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, 2,050 ft³/s, Apr. 17, gage height, 6.89 ft; maximum gage height, 7.01 ft, Apr. 17, backwater from tide; minimum daily, 66 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	222	370	335	1250	1030	603	1340	442	219	256	150
2	68	242	391	335	1110	967	707	1320	410	222	325	156
3	66	344	392	e330	e1000	925	809	1220	390	240	306	159
4	66	354	393	e320	e940	889	778	1210	431	284	289	150
5	68	320	385	e310	e860	854	735	1160	486	284	258	150
6	167	289	415	e310	e800	967	665	1100	471	258	234	148
7	276	280	467	e300	e760	1200	636	1050	425	233	219	208
8	276	452	443	e300	e740	1290	735	987	384	219	206	376
9	219	515	436	e310	e800	1180	830	938	357	208	194	393
10	176	448	737	e320	e900	1070	958	900	353	205	197	362
11	156	390	759	e330	e950	988	1110	883	373	198	189	301
12	139	420	e610	e340	e1000	947	1200	951	359	188	175	256
13	137	493	e510	e450	e940	940	1230	962	341	367	209	244
14	131	479	e470	e500	e840	949	1200	895	324	607	303	252
15	148	586	470	e540	e760	962	1120	821	300	607	270	240
16	166	651	479	e540	e720	988	1320	777	275	607	238	222
17	138	601	471	e540	e700	981	1970	981	260	596	216	252
18	127	532	452	625	e680	936	1940	1110	253	476	200	441
19	125	520	436	868	e660	892	1830	1030	260	384	187	582
20	119	534	431	1700	e640	958	1620	929	329	354	175	540
21	129	492	431	1620	e900	1030	1450	822	360	315	165	431
22	218	469	425	1480	e1390	988	1270	761	349	274	161	359
23	237	431	415	1330	1550	936	1150	685	312	258	159	339
24	222	405	385	1200	1590	872	1070	607	282	269	161	325
25	208	395	385	1250	1620	806	1010	554	266	267	167	320
26	189	375	375	1270	1500	758	942	519	250	256	167	316
27	179	370	370	1250	1350	720	888	483	233	248	161	284
28	192	361	365	1480	1230	684	840	460	215	240	159	272
29	256	381	359	1570	1120	650	827	441	208	222	161	272
30	266	374	343	1520	---	624	1140	425	208	205	159	264
31	249	---	344	1410	---	612	---	436	---	202	163	---
TOTAL	5183	12725	13714	24983	29300	28593	32583	26757	9906	9512	6429	8764
MEAN	167	424	442	806	1010	922	1086	863	330	307	207	292
MAX	276	651	759	1700	1620	1290	1970	1340	486	607	325	582
MIN	66	222	343	300	640	612	603	425	208	188	159	148
CFSM	.57	1.44	1.50	2.73	3.42	3.13	3.68	2.93	1.12	1.04	.70	.99
IN.	.65	1.60	1.73	3.15	3.69	3.61	4.11	3.37	1.25	1.20	.81	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1996, BY WATER YEAR (WY)

	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
MEAN	256	455	661	751	810	1037	977	712	492	264	237	220
MAX	1186	1450	1789	2151	1377	1775	2603	1274	2246	642	763	1233
(WY)	1956	1956	1987	1979	1982	1994	1983	1948	1982	1959	1946	1954
MIN	87.2	93.2	115	131	325	495	371	325	210	98.5	81.7	65.7
(WY)	1950	1966	1966	1981	1980	1981	1966	1986	1942	1957	1964	1964

PAWCATUCK RIVER BASIN

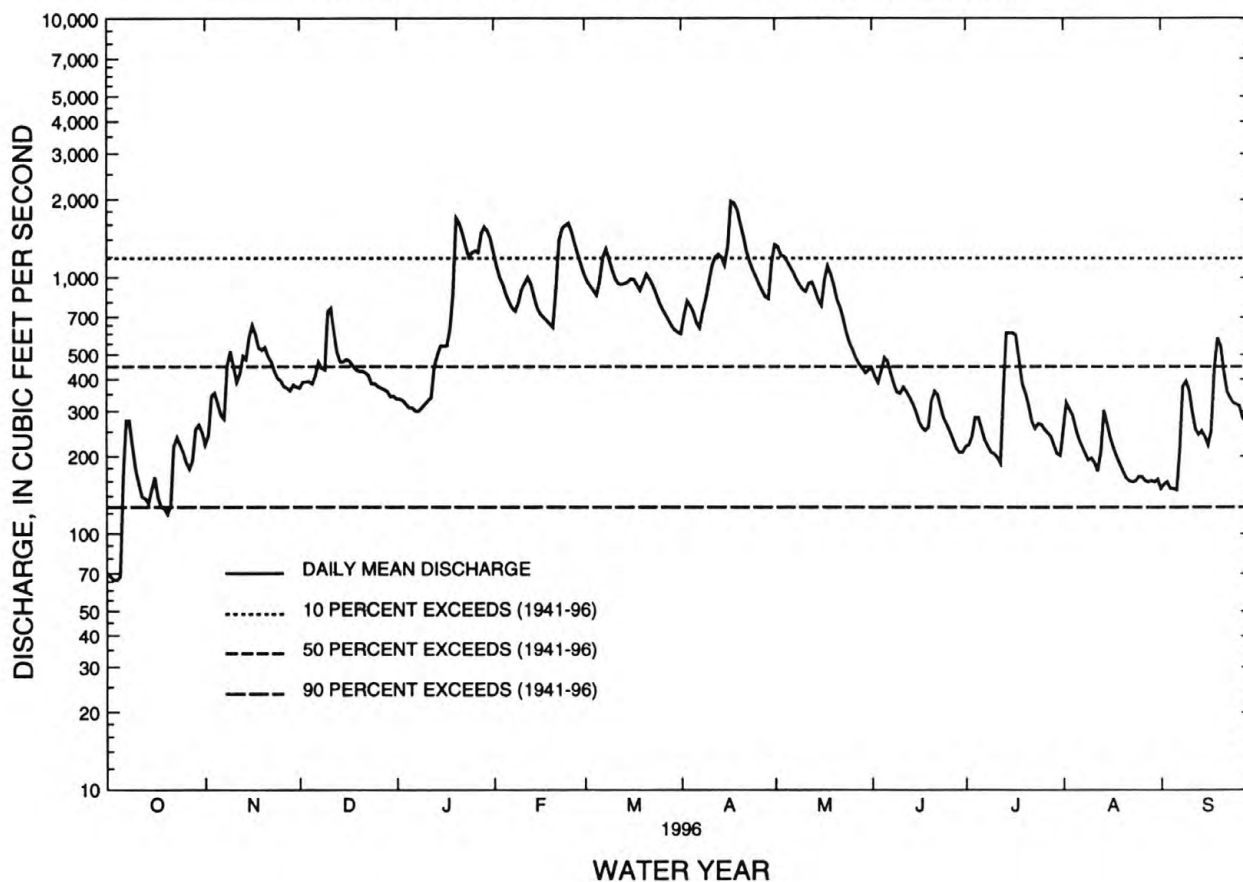
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01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1941 - 1996	
ANNUAL TOTAL	152931		208449		574	
ANNUAL MEAN	419		570		871	
HIGHEST ANNUAL MEAN					251	
LOWEST ANNUAL MEAN					6220	
HIGHEST DAILY MEAN	1100	Mar 2	1970	Apr 17	25	Jun 6 1982
LOWEST DAILY MEAN	45	Sep 5	66	Oct 3	47	Aug 17 1941
ANNUAL SEVEN-DAY MINIMUM	47	Sep 2	112	Oct 1	7070	Sep 2 1995
INSTANTANEOUS PEAK FLOW			2050	Apr 17	12.86	Jun 6 1982
INSTANTANEOUS PEAK STAGE			7.01	Apr 17		
INSTANTANEOUS LOW FLOW			66	Oct 3		
ANNUAL RUNOFF (CFSM)	1.42		1.93		1.95	
ANNUAL RUNOFF (INCHES)	19.28		26.29		26.46	
10 PERCENT EXCEEDS	770		1190		1190	
50 PERCENT EXCEEDS	429		425		450	
90 PERCENT EXCEEDS	76		176		127	

e Estimated

PAWCATUCK RIVER AT WESTERLY, RI 01118500



PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1953, 1963, 1976 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to September 1992.

WATER TEMPERATURES: June 1978 to September 1992.

INSTRUMENTATION.--Water-quality monitor June 1978 to September 1992.

REMARKS.--Interruptions in the record were due to instrument malfunction. Instantaneous records are representative of the cross section while continuous records are based on point samples. The instantaneous record values will not necessarily fall within the corresponding daily range of the continuous records. Extremes for period of daily record are only for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 354 μ S/cm, June 25, 1985; minimum, 27 μ S/cm, June 7, 1982.

WATER TEMPERATURES: Maximum, 30.0°C Aug. 9, 1980, Aug. 17, 18, 1987; minimum, 0.0°C on many days during the winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY NTU) (00076)	OXYGEN, DIS- SOLVED PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L) (00340)	COLI- FORM, FECAL 0.45 UM-MF (COLS. / 100 ML) (31616)	
NOV											
06...	1200	289	136	6.7	17.0	9.0	1.3	10.3	88	1	58
JAN											
16...	1115	540	115	6.5	0.0	0.0	0.80	13.6	91	--	K12
MAR											
05...	1030	853	100	6.5	8.5	1.5	1.4	13.9	101	--	K8
JUN											
04...	1000	425	118	6.7	21.0	16.5	2.0	9.1	93	--	80

DATE	ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML) (31649)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CAR- BONATE WATER DIS IT MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT MG/L AS HCO3 (00453)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
NOV											
06...	K17	21	5.5	1.7	16	1.5	0	12	10	18	17
JAN											
16...	172	17	4.4	1.4	15	1.1	0	8	7	10	20
MAR											
05...	K4	15	4.0	1.2	12	1.0	0	6	6	9.9	18
JUN											
04...	100	19	5.1	1.5	14	1.1	0	10	9	10	19

PAWCATUCK RIVER BASIN

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01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
	NOV										
	06...	0.10	11	97	96	<0.010	0.280	<0.015	0.40	0.40	0.40
JAN											
16...	<0.10	9.2	78	82	<0.010	0.350	0.040	0.26	0.30	0.20	0.65
MAR											
05...	<0.10	7.2	66	76	0.010	0.360	0.060	--	<0.20	<0.20	--
JUN											
04...	0.10	5.7	80	72	<0.010	0.350	0.060	0.44	0.50	0.40	0.85
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)	
	NOV										
	06...	0.020	0.030	0.020	110	<1.0	15	<1.0	<1.0	<1.0	<1.0
JAN											
16...	0.020	0.010	<0.010	104	<1.0	14	<1.0	<1.0	1.0	<1.0	
MAR											
05...	<0.010	0.010	<0.010	88	<1.0	11	<1.0	<1.0	<1.0	<1.0	
JUN											
04...	0.040	0.010	0.010	76	<1.0	14	<1.0	<1.0	<1.0	<1.0	
DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	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)	
	NOV										
	06...	1.0	360	<1.0	48	<1.0	<1.0	<1.0	7.0	<1.0	12
JAN											
16...	2.0	220	<1.0	60	<1.0	<1.0	<1.0	8.0	<1.0	6.7	
MAR											
05...	1.0	130	<1.0	35	<1.0	<1.0	<1.0	9.0	<1.0	4.4	
JUN											
04...	<1.0	400	<1.0	42	<1.0	<1.0	<1.0	3.0	<1.0	7.0	

THAMES RIVER BASIN

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT

LOCATION.--Lat 42°01'20", long 71°57'22", Windham County, Hydrologic Unit 01100001, on right bank at Quinebaug, 500 ft upstream from bridge on State Highway 197, 0.2 mi downstream from Massachusetts-Connecticut State line, 7.8 mi upstream from French River, and at mile 46.

DRAINAGE AREA.--155 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1931 to current year.

REVISED RECORDS.--WSP 851: 1936(M). WSP 1201: 1939-43, 1949. WSP 1381: 1938(M). WDR MA-RI-83-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 341.52 ft above sea level.

REMARKS.--Records good except for periods of estimated record, which are fair. Flow regulated by East Brimfield and Westville Lakes, and by smaller reservoirs upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	476	302	135	1320	494	262	752	148	62	146	42
2	47	477	312	128	1210	455	370	684	141	47	128	43
3	52	515	282	e127	1160	426	375	605	144	51	117	34
4	58	476	300	e125	e900	394	353	568	190	61	104	23
5	110	424	289	e123	e748	375	326	522	192	60	105	29
6	340	365	292	e122	e652	463	308	500	183	62	105	36
7	273	354	261	e121	e602	464	287	481	177	57	101	30
8	250	455	291	e121	e550	449	304	441	154	51	95	51
9	219	423	257	e120	507	e400	302	407	130	51	83	21
10	195	382	259	e119	504	e368	338	419	128	58	104	44
11	161	358	e250	e118	475	e345	413	442	127	52	75	38
12	143	717	e249	e117	462	e342	527	566	143	44	71	36
13	123	795	303	e116	424	340	585	542	110	298	62	37
14	110	751	346	e115	e380	366	624	511	108	496	56	38
15	244	1020	291	e114	e350	413	620	474	94	616	50	98
16	241	1120	226	e113	e340	488	1880	418	82	600	49	37
17	215	814	230	e112	310	486	2400	476	66	395	43	11
18	210	591	223	e111	300	479	1750	452	70	263	36	450
19	190	606	217	741	306	466	1580	414	58	201	40	455
20	158	634	220	1560	239	604	1450	374	77	168	24	403
21	322	592	281	1160	631	635	1340	330	103	131	32	336
22	638	492	248	1120	903	640	1300	330	94	116	31	273
23	265	461	207	1190	832	539	1230	281	94	114	32	312
24	374	439	188	1350	874	473	1140	259	80	141	90	284
25	703	403	188	1360	843	423	1020	228	166	123	117	244
26	648	363	176	1640	805	394	715	199	131	137	88	223
27	390	338	167	1850	736	366	471	178	120	180	71	197
28	567	325	158	2450	629	337	417	165	36	169	73	174
29	715	328	161	1700	565	319	607	159	40	151	62	221
30	706	309	141	1610	---	296	755	152	53	143	51	209
31	532	---	140	1450	---	280	---	161	---	135	44	---
TOTAL	9240	15803	7455	21338	18557	13319	24049	12490	3439	5233	2285	4429
MEAN	298	527	240	688	640	430	802	403	115	169	73.7	148
MAX	715	1120	346	2450	1320	640	2400	752	192	616	146	455
MIN	41	309	140	111	239	280	262	152	36	44	24	11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1996, BY WATER YEAR (WY)

	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943
MEAN	152	232	311	337	339	536	548	310	210	102	114	116
MAX	701	711	794	1028	845	1669	1239	658	1057	700	1971	1296
(WY)	1956	1956	1984	1979	1970	1936	1940	1989	1982	1938	1955	1938
MIN	16.3	34.4	81.4	57.4	83.0	235	169	131	45.9	17.8	12.9	12.2
(WY)	1958	1950	1966	1981	1980	1989	1985	1957	1957	1957	1957	1957

THAMES RIVER BASIN

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01124000 QUINEBAUG RIVER AT QUINEBAUG, CT--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1932 - 1996	
ANNUAL TOTAL	84405		137637		275	
ANNUAL MEAN	231		376		466	
HIGHEST ANNUAL MEAN					124	
LOWEST ANNUAL MEAN					1955	
HIGHEST DAILY MEAN	1120	Nov 16	2450	Jan 28	26500	Aug 19 1955
LOWEST DAILY MEAN	16	Jun 27	11	Sep 17	1.0	Sep 4 1956
ANNUAL SEVEN-DAY MINIMUM	18	Sep 10	32	Sep 3	8.7	Sep 30 1957
INSTANTANEOUS PEAK FLOW			3570	Apr 16	a49300	Aug 19 1955
INSTANTANEOUS PEAK STAGE			7.25	Apr 16	b18.96	Aug 19 1955
INSTANTANEOUS LOW FLOW			7.5	Sep 16	c1.0	Sep 4 1956
10 PERCENT EXCEEDS	500		753		610	
50 PERCENT EXCEEDS	195		283		186	
90 PERCENT EXCEEDS	24		52		37	

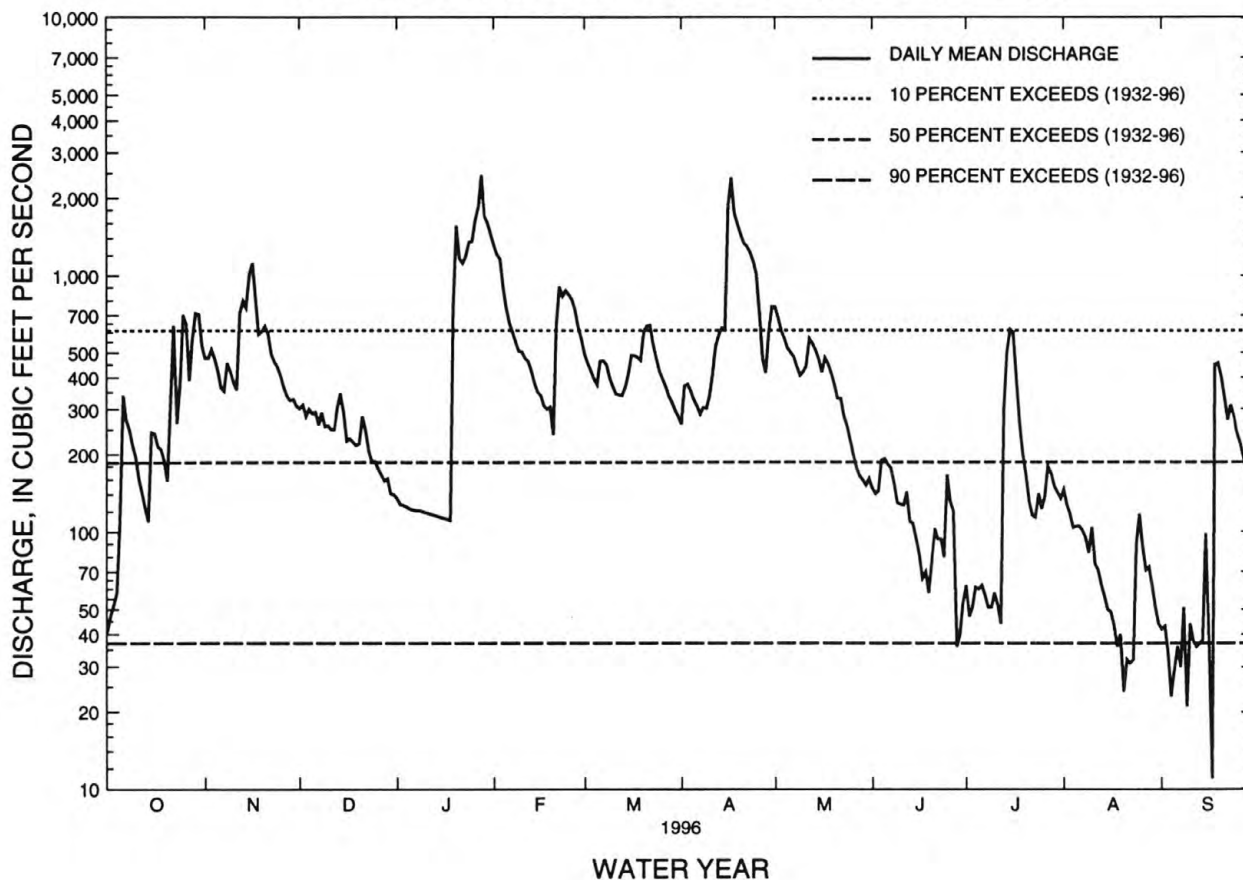
a From rating curve extended above 5,100 ft³/s on basis of slope-area measurement of peak flow.

b From floodmarks.

c Also occurred July 12, 1949, Sept 17 and 18, 1950, July 9, 1951, Sept. 4, 1956, Oct. 29, 1956, and Jan. 27, 1985 (ice siphoning).

e Estimated

QUINEBAUG RIVER AT QUINEBAUG, CT 01124000



THAMES RIVER BASIN

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses available for water years 1953 (WSP 1290), 1960 (WSP 1741), 1963 (WSP 1941), 1969 (WSP 2143). Water temperatures available for water year 1960 (WSP 1741), 1980 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1959 to September 1960, October 1968 to September 1969.

pH: October 1959 to September 1960, October 1968 to September 1969.

WATER TEMPERATURES: October 1959 to September 1960, October 1968 to September 1969.

DISSOLVED OXYGEN: October 1959 to September 1960, October 1968 to September 1969.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 308 μ S/cm, Jan. 31, 1969; minimum, 49 μ S/cm, April 2, 1960.

pH: Maximum, 7.7 units, June 14, 1969; minimum, 5.8 units, July 18, 1969.

WATER TEMPERATURE: Maximum, 30.5°C, July 16, 1969; minimum, 0.0°C on many days during December to March.

DISSOLVED OXYGEN: Maximum, 15.1 mg/L, Dec. 28, 1968; minimum, 1.4 mg/L, Sept. 7, 1969.

REMARKS.--Instantaneous record values will not necessarily fall within the corresponding daily range of the continuous records.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.45 UM-MF (COLS. / 100 ML) (31616)	ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML) (31649)	
NOV												
07...	1040	352	115	7.1	9.0	6.0	1.4	12.4	101	400	45	
JAN												
24...	1015	1300	103	6.8	6.0	1.0	2.0	14.1	101	80	51	
MAR												
15...	1015	395	153	7.0	15.0	3.0	1.1	12.9	99	540	152	
JUN												
11...	0930	113	145	7.2	31.0	22.0	2.6	8.1	94	320	80	
JUL												
10...	0915	50	167	7.6	27.0	25.0	2.2	7.6	94	600	200	
AUG												
26...	0915	132	161	7.4	28.0	23.5	2.2	8.3	99	270	120	
SEP												
12...	0915	36	170	7.4	17.0	20.0	1.6	8.1	90	160	130	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV												
07...	22	5.5	1.9	10	1.5	0	13	10	10	17	<0.10	
JAN												
24...	16	4.1	1.4	11	1.2	0	7	6	7.3	19	<0.10	
MAR												
15...	22	6.0	1.7	18	1.4	0	9	8	9.5	29	<0.10	
JUN												
11...	21	5.6	1.6	14	1.3	0	16	15	7.5	26	<0.10	
JUL												
10...	26	7.3	2.0	18	1.7	0	20	16	9.1	30	<0.10	
AUG												
26...	28	8.0	2.0	17	1.9	0	20	16	7.8	28	<0.10	
SEP												
12...	32	9.1	2.2	19	2.1	0	21	17	8.9	32	<0.10	

THAMES RIVER BASIN

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01124000 QUINEBAUG RIVER AT QUINEBAUG, CT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
NOV										
07...	7.3	70	72	<0.010	0.130	<0.015	0.30	0.30	0.30	0.43
JAN										
24...	7.3	58	72	<0.010	0.290	0.020	0.18	0.20	0.20	0.49
MAR										
15...	7.8	88	102	0.020	0.400	0.050	--	<0.20	<0.20	--
JUN										
11...	3.3	88	195	<0.010	0.490	0.050	0.45	0.50	0.40	0.99
JUL										
10...	3.7	94	110	0.010	0.460	0.040	0.36	0.40	0.20	0.86
AUG										
26...	5.1	90	96	<0.010	0.390	0.030	0.27	0.30	0.30	0.69
SEP										
12...	5.2	104	108	0.010	0.520	<0.015	0.30	0.30	0.20	0.82

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)
NOV										
07...	0.030	0.030	<0.010	37	<1.0	9.0	<1.0	<1.0	<1.0	<1.0
JAN										
24...	0.030	<0.010	<0.010	50	<1.0	9.0	<1.0	<1.0	<1.0	<1.0
MAR										
15...	0.020	<0.010	0.020	28	<1.0	10	<1.0	<1.0	<1.0	<1.0
JUN										
11...	0.040	0.030	0.020	18	<1.0	9.0	<1.0	<1.0	<1.0	<1.0
JUL										
10...	0.020	<0.010	0.020	20	<1.0	9.0	<1.0	<1.0	<1.0	<1.0
AUG										
26...	0.040	<0.010	0.020	18	<1.0	9.0	<1.0	<1.0	<1.0	<1.0
SEP										
12...	0.010	0.020	0.030	15	<1.0	11	<1.0	<1.0	<1.0	<1.0

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	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)
NOV										
07...	1.0	280	<1.0	37	<1.0	1.0	<1.0	5.0	<1.0	6.6
JAN										
24...	<1.0	160	<1.0	59	<1.0	1.0	<1.0	7.0	<1.0	4.1
MAR										
15...	<1.0	110	<1.0	37	<1.0	<1.0	<1.0	5.0	<1.0	2.9
JUN										
11...	2.0	290	<1.0	44	<1.0	1.0	<1.0	3.0	<1.0	6.7
JUL										
10...	2.0	610	1.0	26	<1.0	1.0	<1.0	3.0	<1.0	5.7
AUG										
26...	1.0	530	1.0	23	<1.0	1.0	<1.0	2.0	<1.0	5.2
SEP										
12...	2.0	480	1.0	22	<1.0	<1.0	<1.0	2.0	<1.0	4.5

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.

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.

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.

AVERAGE DISCHARGE.--80 years, 145 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s, Sept. 22, 1938, gage height, 21.55 ft, from floodmarks, from rating curve extended above 2,000 ft³/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, 3,400 ft³/s, Apr. 18; minimum daily, 13 ft³/s, Aug. 15-18.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e15	389	166	68	e670	328	175	513	59	20	22	17
2	e15	411	160	67	e560	301	251	507	54	20	22	17
3	e15	471	141	67	e490	284	291	434	53	18	23	19
4	e17	434	130	71	e420	258	280	400	75	22	23	20
5	e50	387	122	70	e370	237	259	417	83	18	21	20
6	137	350	107	68	e320	232	203	398	74	20	21	22
7	171	321	100	71	e300	220	191	382	67	17	19	23
8	144	353	93	72	e270	217	220	345	66	18	17	25
9	110	334	92	74	275	223	223	303	116	41	17	24
10	94	298	96	75	230	212	249	292	121	59	17	24
11	79	276	95	72	209	183	265	263	106	54	16	26
12	69	384	89	71	194	163	306	409	89	42	15	32
13	61	436	85	77	191	149	368	497	77	175	14	35
14	56	417	82	78	178	155	434	460	78	461	14	37
15	166	544	91	76	e170	180	493	392	73	443	13	36
16	144	571	93	71	e150	229	716	343	64	368	13	34
17	129	515	92	73	e140	226	2060	358	63	255	13	40
18	133	453	88	81	e130	215	3230	338	56	159	13	70
19	158	417	85	220	e130	204	3230	297	44	117	14	82
20	130	394	88	584	e130	249	2560	250	43	100	16	69
21	220	366	87	544	167	284	1870	226	42	83	17	47
22	542	339	87	478	358	286	1160	200	40	69	20	46
23	509	309	84	412	413	268	782	174	38	65	20	107
24	420	282	82	455	439	245	700	146	33	59	20	103
25	349	258	80	729	452	233	557	115	36	40	20	105
26	302	240	78	695	424	261	428	105	36	39	20	92
27	266	225	76	710	394	280	367	95	36	36	19	87
28	478	208	74	1440	372	269	321	93	31	31	18	75
29	633	196	72	1780	357	226	306	74	24	28	18	142
30	552	181	72	e1550	---	197	385	65	21	23	17	135
31	451	---	70	e1050	---	182	---	64	---	24	17	---
TOTAL	6615	10759	2957	11949	8903	7196	22880	8955	1798	2924	549	1611
MEAN	213	359	95.4	385	307	232	763	289	59.9	94.3	17.7	53.7
MAX	633	571	166	1780	670	328	3230	513	121	461	23	142
MIN	15	181	70	67	130	149	175	64	21	17	13	17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1996, BY WATER YEAR (WY)

MEAN	93.0	119	139	140	136	260	380	183	111	61.4	52.6	66.4
MAX	520	416	406	385	400	931	788	412	515	261	249	752
(WY)	1956	1956	1974	1996	1976	1936	1960	1967	1984	1938	1928	1938
MIN	11.6	15.7	30.7	13.3	24.4	39.0	93.7	55.0	14.1	8.17	8.24	5.75
(WY)	1948	1979	1979	1981	1980	1965	1985	1965	1964	1965	1965	1964

CONNECTICUT RIVER BASIN

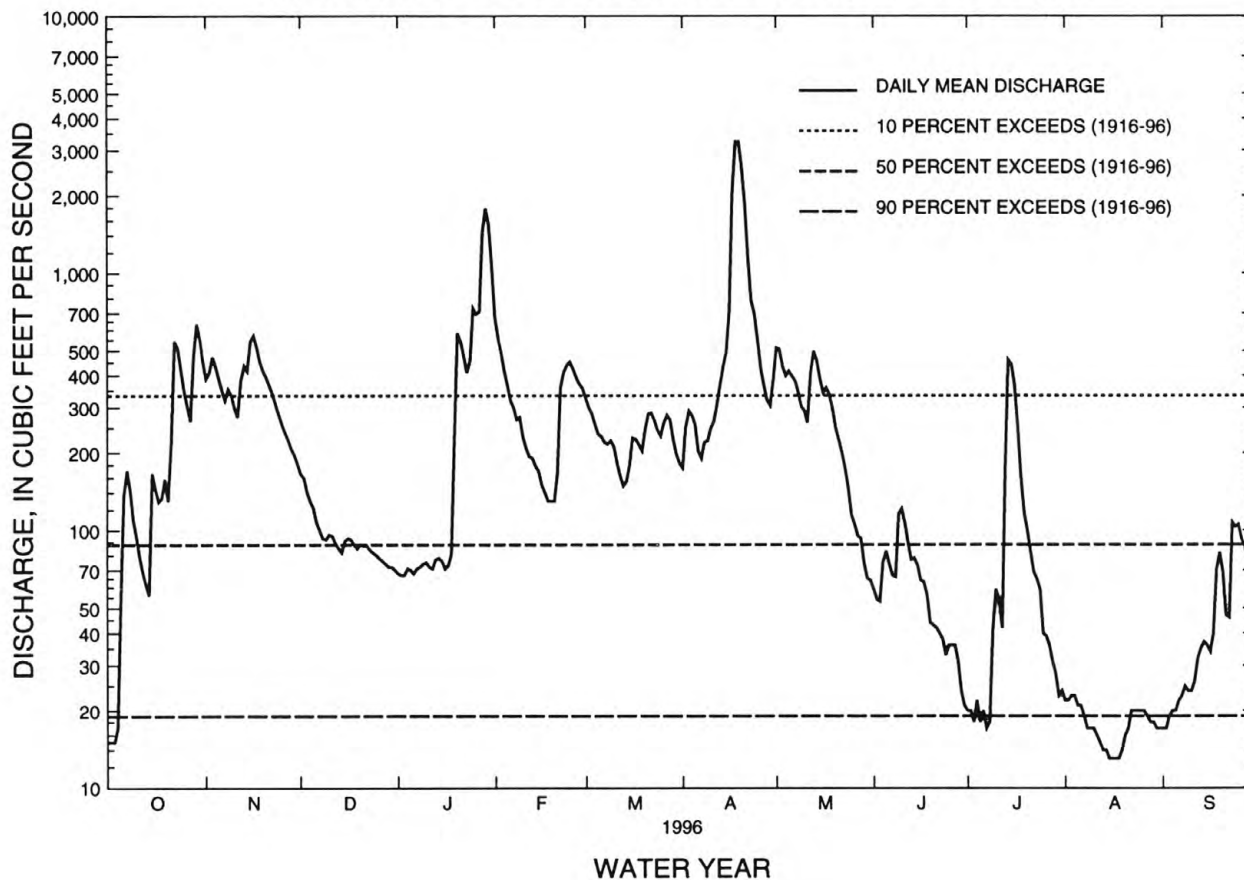
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01162000 MILLERS RIVER NEAR WINCHENDON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1916 - 1996	
ANNUAL TOTAL	49256.3		87096		145	
ANNUAL MEAN	135		238		238	1996
HIGHEST ANNUAL MEAN					38.5	1965
LOWEST ANNUAL MEAN					6130	Sep 22 1938
HIGHEST DAILY MEAN	633	Oct 29	3230	Apr 18	3.1	Oct 4 1930
LOWEST DAILY MEAN	5.6	Sep 15	13	Aug 15	4.5	Sep 24 1939
ANNUAL SEVEN-DAY MINIMUM	6.1	Sep 10	13	Aug 13	8500	Sep 22 1938
INSTANTANEOUS PEAK FLOW			3400	Apr 18	21.55	Sep 22 1938
INSTANTANEOUS PEAK STAGE			12.06	Apr 18	.00	Sep 20 1918
INSTANTANEOUS LOW FLOW			13	Jul 7		
10 PERCENT EXCEEDS	346		464		334	
50 PERCENT EXCEEDS	93		131		88	
90 PERCENT EXCEEDS	11		20		19	

e Estimated

MILLERS RIVER NEAR WINCHENDON, MA 01162000



CONNECTICUT RIVER BASIN

01162500 PRIEST BROOK NEAR WINCHENDON, MA

LOCATION.--Lat 42°40'57", long 72°06'56", Worcester County, Hydrologic Unit 01080202, on right bank 100 ft downstream from highway bridge, 3 mi upstream from mouth, and 3.5 mi west of Winchendon.

DRAINAGE AREA.--19.4 mi².

PERIOD OF RECORD.--Discharge: May 1916 to current year. Monthly discharge only October 1917 to July 1918 (published in WSP 1301) and September 1935 to September 1936.

Water-quality records: August 1994.

REVISED RECORDS.--WSP 451: 1916. WSP 871: Drainage area. WSP 1051: 1919, 1922-24. WSP 1301: 1917(M), 1919-24(M), 1926-27(M), 1929(M), 1931-35(M).

GAGE.--Water-stage recorder. Concrete control since September 1936. Datum of gage is 849.67 ft above sea level. Prior to Sept. 11, 1936, nonrecording gage on left bank at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Prior to 1962, occasional diurnal fluctuation at low flow by mill upstream; prior to 1953, regulation at low flow by mill and ponds. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--80 years, 32.9 ft³/s, 23.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft³/s, Sept. 21, 1938, gage height, 9.90 ft, from rating curve extended above 620 ft³/s on basis of contracted-opening measurements at gage heights 8.4 ft and 9.90 ft; minimum, 0.08 ft³/s, several times in September 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 190 ft³/s, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	1045	316	4.66	Jan. 28	1400	456	5.25
Nov. 15	2300	191	4.09	Apr. 17	1000	*573	*5.63
Jan. 20	1745	230	4.28	May 1	1400	193	4.10
Jan. 25	1430	298	4.58	May 13	0230	193	4.10

Minimum discharge, 0.59 ft³/s, Sept. 6, 7, 11, 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	115	25	16	e95	e66	e60	172	18	5.4	6.2	.93
2	1.6	102	25	15	79	e56	e66	157	15	5.0	6.1	.91
3	1.4	140	24	15	66	e47	83	122	14	5.1	6.9	.82
4	2.9	132	24	15	e51	e41	77	106	28	12	8.2	.72
5	4.0	102	24	15	e41	e39	67	111	36	13	6.3	.72
6	22	80	24	15	42	e37	60	102	28	10	5.0	.66
7	30	65	23	15	e37	e36	56	98	21	8.8	4.3	.63
8	20	72	21	15	e35	e35	54	86	22	11	4.0	.66
9	13	76	19	15	35	e34	53	73	69	24	3.7	.72
10	9.4	66	21	15	36	e32	56	70	69	30	4.2	.72
11	6.9	56	20	15	35	e30	57	83	52	20	3.7	.62
12	5.8	99	19	15	35	e30	68	139	40	12	3.3	.67
13	5.5	164	18	15	30	e32	81	187	31	22	3.1	.74
14	5.3	139	18	15	26	e36	113	156	42	119	3.0	.79
15	24	162	18	15	24	e42	140	121	40	96	2.7	.62
16	34	177	18	15	23	e100	221	97	30	73	2.5	.70
17	25	141	18	15	22	e90	539	96	23	52	2.2	1.0
18	27	113	18	16	22	e82	352	91	18	39	2.0	11
19	28	95	18	35	22	e74	208	79	15	31	1.8	18
20	26	86	18	159	21	e90	147	68	14	28	1.4	11
21	29	78	18	206	e42	e140	124	58	14	23	1.5	7.1
22	87	68	18	154	e80	e120	105	51	13	19	1.4	5.5
23	98	57	18	118	e170	e96	128	41	12	15	1.3	13
24	84	45	17	106	e150	e80	147	38	10	13	1.3	12
25	61	38	17	245	e130	e62	132	33	9.9	11	1.1	10
26	43	34	17	242	e110	e70	110	29	8.7	12	1.1	7.9
27	32	32	17	189	e94	e84	96	25	7.1	12	1.1	6.8
28	94	31	17	404	e80	e74	83	23	6.3	10	1.1	6.2
29	298	29	17	331	e72	e70	75	21	5.6	8.2	1.0	14
30	232	27	16	199	---	e66	107	20	5.4	7.0	.99	17
31	160	---	16	140	---	e62	---	20	---	6.4	.94	---
TOTAL	1511.6	2621	601	2800	1705	1953	3665	2573	717.0	752.9	93.43	152.13
MEAN	48.8	87.4	19.4	90.3	58.8	63.0	122	83.0	23.9	24.3	3.01	5.07
MAX	298	177	25	404	170	140	539	187	69	119	8.2	18
MIN	1.4	27	16	15	21	30	53	20	5.4	5.0	.94	.62
CFSM	2.51	4.50	1.00	4.66	3.03	3.25	6.30	4.28	1.23	1.25	.16	.26
IN.	2.90	5.03	1.15	5.37	3.27	3.74	7.03	4.93	1.37	1.44	.18	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1996, BY WATER YEAR (WY)

MEAN	16.1	29.1	33.8	30.5	27.7	63.3	93.4	43.3	24.5	12.2	10.0	12.2
MAX	69.2	124	111	90.3	102	162	225	93.9	125	62.5	68.8	178
(WY)	1976	1928	1974	1996	1984	1979	1940	1989	1922	1922	1928	1938
MIN	.55	1.38	4.67	1.23	5.28	13.6	21.8	12.8	2.53	1.04	.47	.29
(WY)	1965	1965	1930	1925	1980	1940	1985	1965	1964	1965	1964	1964

CONNECTICUT RIVER BASIN

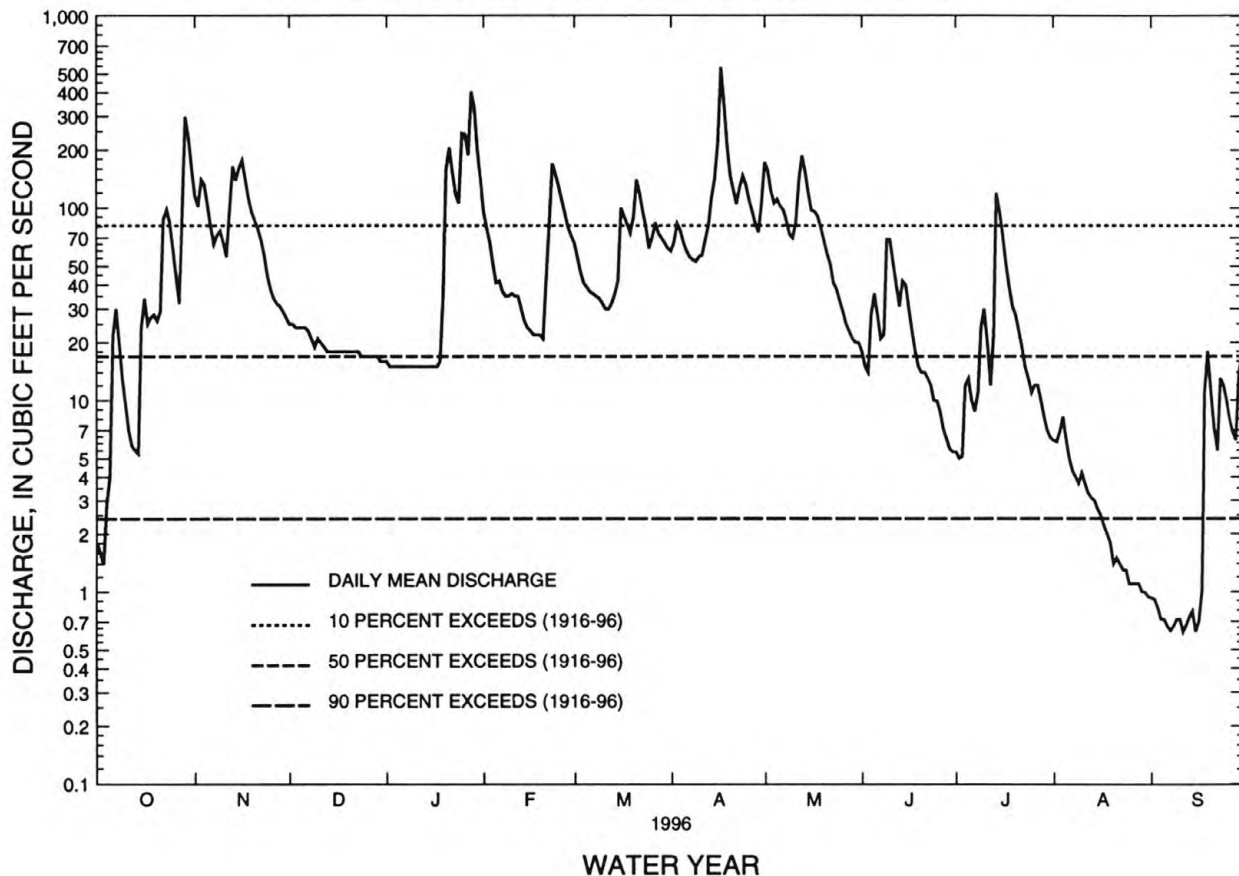
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01162500 PRIEST BROOK NEAR WINCHENDON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1916 - 1996
ANNUAL TOTAL	10682.32	19145.06	
ANNUAL MEAN	29.3	52.3	32.9
HIGHEST ANNUAL MEAN			55.0
LOWEST ANNUAL MEAN			8.19
HIGHEST DAILY MEAN	298 Oct 29	539 Apr 17	2280 Sep 21 1938
LOWEST DAILY MEAN	.20 Sep 16	.62 Sep 11	.10 Sep 4 1929
ANNUAL SEVEN-DAY MINIMUM	.24 Sep 4	.67 Sep 6	.19 Sep 2 1929
INSTANTANEOUS PEAK FLOW		573 Apr 17	3000 Sep 21 1938
INSTANTANEOUS PEAK STAGE		5.63 Apr 17	9.90 Sep 21 1938
INSTANTANEOUS LOW FLOW		.59 Sep 6	.08 Sep 18 1929
ANNUAL RUNOFF (CFSM)	1.51	2.70	1.70
ANNUAL RUNOFF (INCHES)	20.48	36.71	23.05
10 PERCENT EXCEEDS	77	131	81
50 PERCENT EXCEEDS	18	28	17
90 PERCENT EXCEEDS	.94	2.6	2.4

e Estimated

PRIEST BROOK NEAR WINCHENDON, MA 01162500



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 mi².

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.--31 years (water years 1966-96), 62.5 ft³/s, 24.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 948 ft³/s, Mar. 7, 1979, gage height, 5.02 ft; minimum, 2.0 ft³/s, Sept. 5, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 634 ft³/s, Apr. 17, gage height, 4.16 ft; minimum, about 2.9 ft³/s, Sept. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	115	55	30	e170	116	76	220	43	18	20	e7.6
2	5.8	125	56	30	e120	95	123	217	36	17	20	e6.4
3	7.6	174	52	e29	e87	e82	161	177	34	16	20	e5.7
4	12	161	52	e28	e76	e79	138	161	53	21	e27	e5.2
5	15	124	53	e28	e70	e71	109	197	58	20	e30	e4.2
6	78	92	54	e28	e70	e67	92	183	50	22	e29	e4.6
7	99	80	52	e28	e73	e67	86	169	40	31	e23	e5.7
8	67	117	46	e28	72	e67	95	146	37	32	e18	13
9	42	124	43	e28	79	e67	101	123	101	55	e17	e10
10	29	110	46	e28	83	e67	115	113	121	64	e16	e8.1
11	24	97	e42	e28	82	e60	121	121	101	49	e14	e8.9
12	20	148	e39	e28	82	e57	144	211	72	32	e12	e5.2
13	18	194	e36	e28	e63	66	174	243	52	76	e16	4.9
14	17	162	35	e29	e61	74	216	192	53	260	e18	e5.7
15	77	215	39	e30	56	89	239	150	46	238	e14	e6.8
16	88	250	37	e31	e49	122	300	126	38	176	e15	e5.7
17	62	202	38	e35	e49	122	602	137	31	104	e13	11
18	42	155	38	45	e43	108	497	133	28	61	e13	55
19	30	135	37	115	e43	95	339	120	26	43	e10	e125
20	23	130	39	362	e45	126	251	104	30	38	e11	e115
21	66	118	e39	365	82	161	207	92	32	32	e11	e79
22	313	106	37	250	221	155	176	85	29	25	e12	e51
23	285	95	36	185	251	131	188	74	28	24	e12	e65
24	198	84	35	178	228	107	186	64	24	30	e19	71
25	137	74	34	375	219	96	154	56	27	27	e12	56
26	97	69	33	367	192	113	122	48	25	29	e9.4	e46
27	74	63	33	281	159	133	116	43	22	32	e9.4	35
28	150	60	32	475	139	122	104	40	21	28	e9.0	e30
29	279	60	e30	455	130	102	101	38	18	23	e9.4	e65
30	222	56	30	305	---	87	163	40	17	23	e8.1	e88
31	150	---	30	221	---	80	---	45	---	21	e7.3	---
TOTAL	2734.4	3695	1258	4473	3094	2984	5496	3868	1293	1667	474.6	999.7
MEAN	88.2	123	40.6	144	107	96.3	183	125	43.1	53.8	15.3	33.3
MAX	313	250	56	475	251	161	602	243	121	260	30	125
MIN	5.8	56	30	28	43	57	76	38	17	16	7.3	4.2
CFSM	2.59	3.61	1.19	4.23	3.13	2.82	5.37	3.66	1.26	1.58	.45	.98
IN.	2.98	4.03	1.37	4.88	3.38	3.26	6.00	4.22	1.41	1.82	.52	1.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1996, BY WATER YEAR (WY)

	MEAN	41.0	59.2	66.9	62.8	66.2	109	128	75.1	50.8	27.2	26.6	25.4
MAX	117	123	155	149	153	223	279	139	148	58.2	87.5	85.5	
(WY)	1980	1996	1974	1979	1976	1979	1987	1984	1982	1967	1991	1991	
MIN	8.27	14.7	18.1	9.64	17.3	38.4	45.0	27.6	18.2	8.20	4.44	5.48	
(WY)	1969	1979	1965	1981	1977	1965	1985	1965	1965	1966	1966	1995	

CONNECTICUT RIVER BASIN

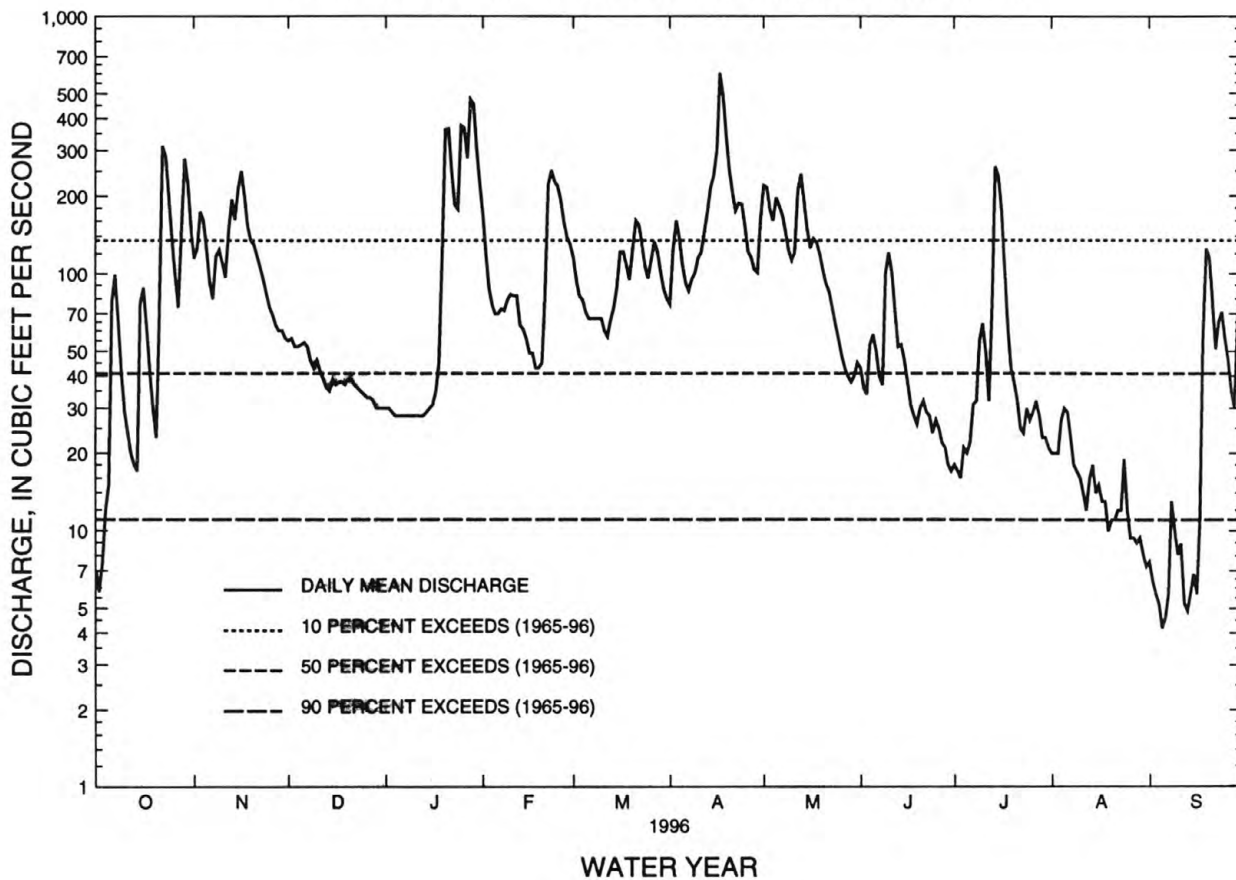
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01163200 OTTER RIVER AT OTTER RIVER, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1965 - 1996
ANNUAL TOTAL	19457.2	32036.7	
ANNUAL MEAN	53.3	87.5	62.5
HIGHEST ANNUAL MEAN			90.0
LOWEST ANNUAL MEAN			30.2
HIGHEST DAILY MEAN	313	602	883
LOWEST DAILY MEAN	2.4	4.2	2.4
ANNUAL SEVEN-DAY MINIMUM	2.6	5.6	2.6
INSTANTANEOUS PEAK FLOW		634	948
INSTANTANEOUS PEAK STAGE		4.16	5.02
INSTANTANEOUS LOW FLOW		e2.9	2.0
ANNUAL RUNOFF (CFSM)	1.56	2.57	1.83
ANNUAL RUNOFF (INCHES)	21.23	34.95	24.89
10 PERCENT EXCEEDS	119	197	135
50 PERCENT EXCEEDS	40	60	41
90 PERCENT EXCEEDS	6.0	14	11

e Estimated

OTTER RIVER AT OTTER RIVER, MA 01163200



CONNECTICUT RIVER BASIN

01166500 MILLERS RIVER AT ERVING, MA

LOCATION.--Lat 42°35'51", long 72°26'19", Franklin County, Hydrologic Unit 01080202, on right bank 75 ft downstream from bridge at Farley, 0.6 mi upstream from Mormon Hollow Brook, 2.4 mi downstream from Erving, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--372 mi².

PERIOD OF RECORD.--Discharge: August 1914 to June 1915 (twice-daily gage heights and corresponding discharge), July 1915 to current year.

Water-quality records: Water years 1953, 1965-66, 1994.

REVISED RECORDS.--WSP 641: 1920(M). WSP 781: 1928(M), 1933(M). WSP 1301: 1915(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 380 ft above sea level, from topographic map. Prior to June 30, 1915, nonrecording gage, June 30, 1915, to Sept. 20, 1938, water-stage recorder, and Sept. 21 to Dec. 31, 1938, non-recording gage, at site 2.2 mi upstream at different datum. Jan. 1 to Mar. 29, 1939, nonrecording gage, and Mar. 30, 1939, to Sept. 12, 1941, water-stage recorder, at site 0.4 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow regulated by powerplants and by Lake Monomonic and other reservoirs; high flow regulated by Birch Hill Reservoir 22 mi upstream since 1941 and Tully Lake since 1948. Greater regulation by powerplants prior to 1966.

AVERAGE DISCHARGE.--82 years, 637 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s, Sept. 22, 1938, gage height, 13.37 ft, from flood-marks, site and datum then in use, mean of two slope-area measurements; practically no flow at times during 1915 and 1916 because of regulations; minimum daily, 8 ft³/s, Sept. 6, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,360 ft³/s, Apr. 16, gage height, 6.80 ft; minimum daily, 61 ft³/s, Oct. 1, 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	2120	663	e350	3170	1330	880	3040	400	243	275	75
2	63	1660	626	e350	2520	1270	975	1510	360	210	236	90
3	61	1950	597	e350	2380	1140	902	3170	336	212	236	74
4	74	1950	589	e350	2220	963	820	3090	545	305	245	75
5	106	1690	611	e350	1940	986	828	3200	560	323	239	72
6	567	1410	570	e340	997	941	807	2930	531	291	249	71
7	567	1100	611	e340	1010	895	801	2840	442	250	245	71
8	499	1250	554	e340	1220	807	837	2320	592	294	218	71
9	388	1240	469	e340	1250	705	793	1920	1700	397	207	73
10	299	1150	548	e340	1460	740	835	1640	1510	672	178	101
11	250	1070	542	e340	1420	761	854	1470	1410	569	182	86
12	228	1930	507	e340	1410	749	975	2320	1110	463	165	72
13	223	2080	e520	e340	1300	747	1870	2400	942	1080	164	71
14	203	2180	e520	e340	1090	770	2150	2380	1330	2720	143	79
15	558	2390	e520	e340	1000	859	1510	2430	984	2760	143	78
16	657	2680	e540	e350	844	1040	3210	1970	789	2390	153	90
17	601	2550	e530	e370	567	1070	4040	1750	596	1630	140	94
18	498	2000	e520	e500	542	1040	2160	1680	503	1210	139	416
19	453	1690	e500	e1380	513	1010	3500	1550	408	877	128	531
20	425	1620	e490	2600	548	1180	3260	1340	441	636	124	470
21	515	1570	e470	1910	e680	1370	2930	1120	435	523	106	396
22	1290	1360	e460	1540	e1100	1390	3050	960	444	436	124	296
23	1530	1090	e440	1850	e2300	1200	3350	885	395	394	96	448
24	1710	991	e430	2290	e2600	1090	2720	772	338	390	122	437
25	1420	923	e420	2190	e2500	1010	2930	673	341	359	87	399
26	1080	851	e410	2720	e2400	1080	2950	619	325	369	123	357
27	860	810	e400	3240	e2300	1200	2720	532	298	373	85	278
28	2090	871	e380	3420	1860	1210	2500	490	273	329	84	277
29	2810	797	e360	3000	1720	1100	2380	464	254	295	91	476
30	2990	734	e350	3440	---	946	1470	428	228	288	93	558
31	2660	---	e350	3310	---	909	---	390	---	283	93	---
TOTAL	25736	45707	15497	39260	44861	31508	59007	52283	18820	21571	4913	6682
MEAN	830	1524	500	1266	1547	1016	1967	1687	627	696	158	223
MAX	2990	2680	663	3440	3170	1390	4040	3200	1700	2760	275	558
MIN	61	734	350	340	513	705	793	390	228	210	84	71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1996, BY WATER YEAR (WY)

	MEAN	346	528	641	617	608	1164	1597	844	521	289	233	267
MAX	1622	1617	1683	1444	1894	3989	3584	1687	1932	1118	1052	3030	
(WY)	1976	1928	1974	1978	1984	1936	1940	1996	1984	1938	1928	1938	
MIN	74.0	79.7	143	69.5	132	362	443	288	92.5	61.7	52.6	43.2	
(WY)	1940	1965	1931	1981	1931	1989	1985	1965	1964	1966	1964	1964	

CONNECTICUT RIVER BASIN

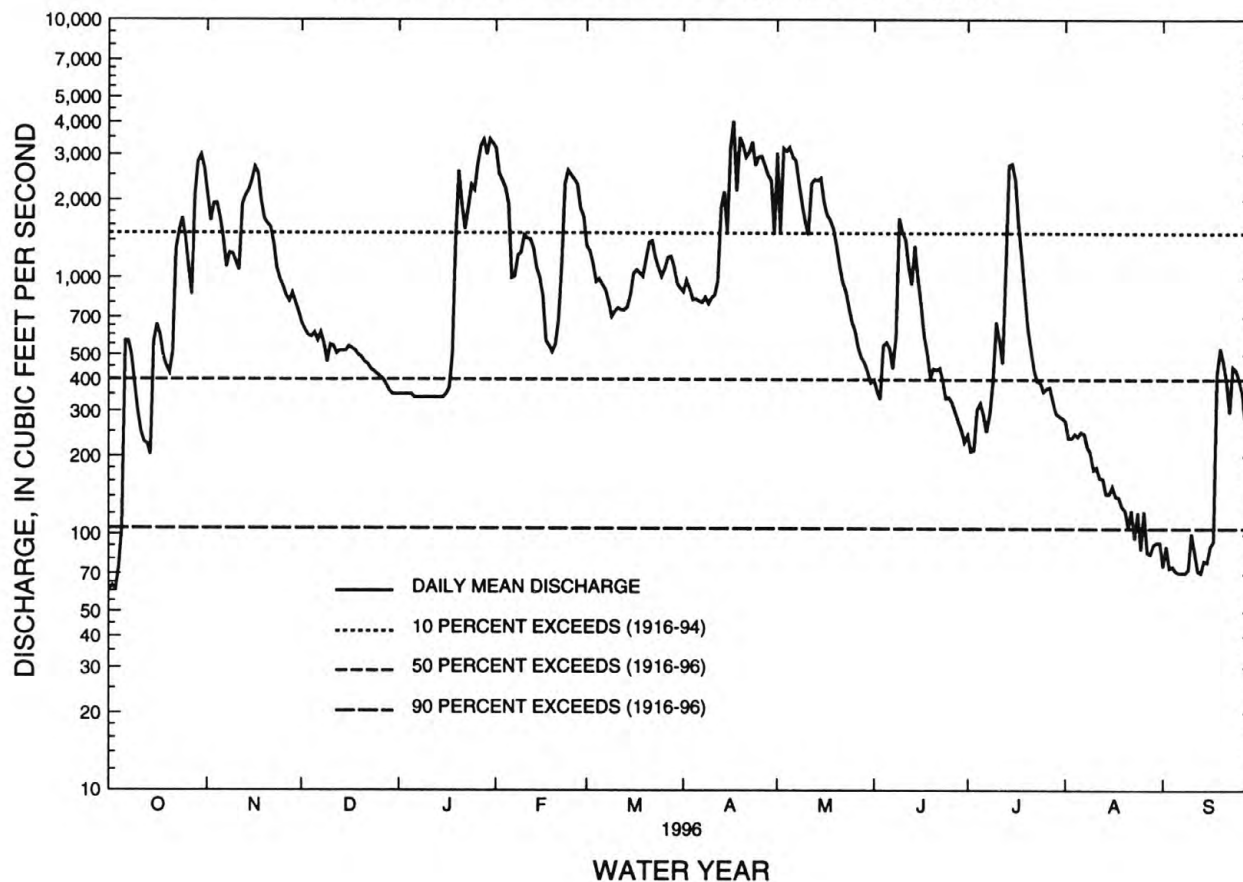
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01166500 MILLERS RIVER AT ERVING, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1916 - 1996	
ANNUAL TOTAL	217646		365845		637	
ANNUAL MEAN	596		1000		1044	
HIGHEST ANNUAL MEAN					196	
LOWEST ANNUAL MEAN					1984	
HIGHEST DAILY MEAN	2990	Oct 30	4040	Apr 17	22000	Sep 22 1938
LOWEST DAILY MEAN	25	Aug 26	61	Oct 1	8.0	Sep 6 1926
ANNUAL SEVEN-DAY MINIMUM	31	Aug 25	72	Sep 3	31	Aug 25 1995
INSTANTANEOUS PEAK FLOW			5360	Apr 16	29000	Sep 22 1938
INSTANTANEOUS PEAK STAGE			6.80	Apr 16	13.37	Sep 22 1938
INSTANTANEOUS LOW FLOW			44	Oct 1		
10 PERCENT EXCEEDS	1390		2450		1490	
50 PERCENT EXCEEDS	473		631		400	
90 PERCENT EXCEEDS	64		140		105	

e Estimated

MILLERS RIVER AT ERVING, MA 01166500



CONNECTICUT RIVER BASIN

01168151 DEERFIELD RIVER NEAR ROWE, MA

LOCATION.--Lat 42°40'57", long 72°58'37", Franklin County, Hydrologic Unit 01080203, on left bank 400 ft downstream from Fife Brook, 600 ft downstream from Fife Brook Dam, 1.2 mi northeast of Hoosac Tunnel, and 4 mi west of Rowe.

DRAINAGE AREA.--254 mi².

PERIOD OF RECORD.--May 1974 to current year.

REVISED RECORDS.--WDR MA-RI-78: 1977.

GAGE.--Water-stage recorder. Datum of gage is 745.00 ft above sea level.

REMARKS.--Records good except those for estimated daily discharges, which are fair. Flow regulated by Somerset and Harriman Reservoirs and by several powerplants upstream.

AVERAGE DISCHARGE.--22 years, 736 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft³/s, May 29, 1984, gage height, 14.73 ft, from flood-mark in stilling well, from rating curve extended above 8,300 ft³/s, on basis of slope-area measurement of peak flow and conveyance-slope study; maximum gage height, 14.79 ft, Aug. 10, 1976; minimum daily discharge, 28 ft³/s, Nov. 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,430 ft³/s, Oct. 21, gage height, 11.00 ft; minimum daily, 73 ft³/s, Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	1510	1070	e640	1780	1310	e600	e5200	163	97	e1200	231
2	97	1790	1040	e580	1150	1230	e700	e3000	160	99	e800	99
3	99	2460	1150	e660	1070	1250	e620	e2400	158	106	e500	102
4	275	2170	999	e1000	1080	1220	e520	e2100	341	105	e220	173
5	285	1270	1080	e920	1050	1270	e560	e1900	378	430	e300	171
6	646	626	1020	e940	1100	1230	e520	e1800	214	106	e600	170
7	261	1030	933	e980	1090	1280	e500	e1500	134	103	e940	169
8	186	1140	1010	e940	1100	1290	e540	e1200	90	105	e720	168
9	76	1140	1060	e900	1090	1260	e370	e1000	1070	103	e680	97
10	73	1150	845	e860	1090	1330	e400	e1300	1100	174	e700	99
11	143	1230	622	e880	1080	1330	e460	e2500	893	182	e620	217
12	204	3270	375	e880	1110	1300	e410	e6800	404	708	e800	177
13	223	2280	442	e880	935	1320	e340	e4000	172	1560	e1100	333
14	145	2120	503	e880	1070	1300	e1000	e2500	170	2580	e720	335
15	547	2060	892	e890	1080	1220	e980	2050	172	1710	e800	174
16	562	1610	911	e870	1080	1300	e2800	1860	237	1750	e1000	100
17	453	1150	498	e880	1070	1270	e3200	1800	159	1590	e600	102
18	442	1160	634	e900	1060	1210	e2300	1310	175	1240	e400	114
19	369	1170	716	1790	1090	1190	e1800	1130	81	1220	e800	78
20	794	1110	736	2240	1080	1190	e2700	1180	83	563	e660	78
21	2520	1090	683	1190	1130	969	e3500	884	85	212	e700	78
22	4490	1070	683	1230	1190	760	e3000	665	306	638	e600	78
23	2310	983	661	1090	1330	441	e4500	767	261	e580	348	518
24	1990	720	667	1320	1430	201	e6600	463	257	e440	416	99
25	1990	916	663	1060	1320	306	e4000	542	157	e600	342	155
26	1370	917	e190	1200	1250	e400	e2600	465	204	e800	428	155
27	1420	694	e110	1740	1290	e700	e4000	225	162	e780	187	151
28	2470	990	e700	2690	1260	e880	e2600	189	212	e1200	193	155
29	1900	765	e680	2190	1300	e720	e2000	290	233	e1100	222	227
30	1600	972	e660	2020	---	e460	e3500	175	198	e1000	189	239
31	1770	---	e660	1910	---	e520	---	165	---	e1100	175	---
TOTAL	29888	40563	22893	37150	33755	31657	57620	51360	8429	22981	17960	5042
MEAN	964	1352	738	1198	1164	1021	1921	1657	281	741	579	168
MAX	4490	3270	1150	2690	1780	1330	6600	6800	1100	2580	1200	518
MIN	73	626	110	580	935	201	340	165	81	97	175	78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 1996, BY WATER YEAR (WY)

	642	735	848	917	896	1020	1155	858	492	391	466	436
MEAN	642	735	848	917	896	1020	1155	858	492	391	466	436
MAX	1238	1352	1252	1502	1694	1993	2198	1934	1290	741	1630	957
(WY)	1978	1996	1976	1978	1981	1990	1993	1984	1989	1996	1976	1974
MIN	127	215	466	472	495	659	337	137	143	132	195	161
(WY)	1983	1981	1977	1977	1992	1980	1995	1995	1995	1995	1995	1995

CONNECTICUT RIVER BASIN

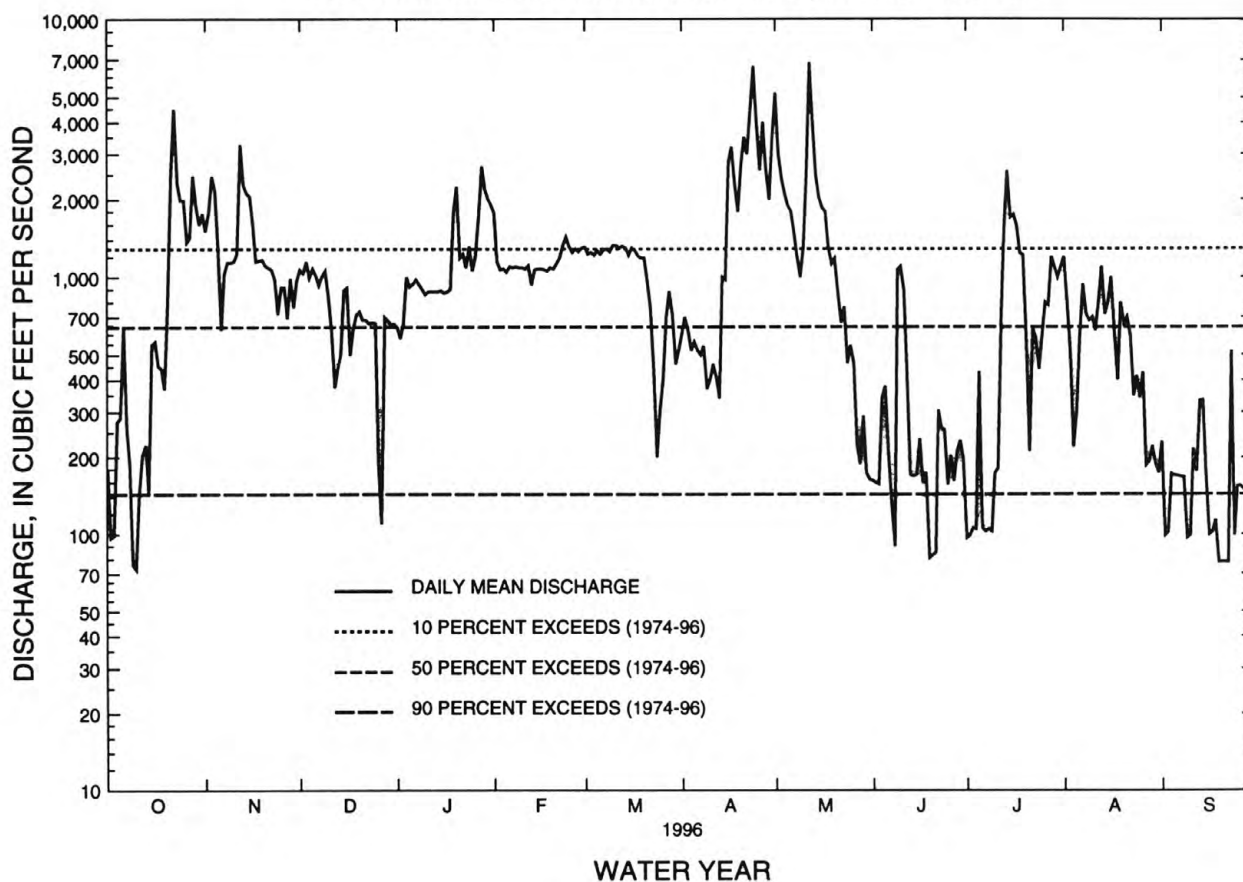
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01168151 DEERFIELD RIVER NEAR ROWE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1974 - 1996	
ANNUAL TOTAL	223307		359298		735	
ANNUAL MEAN	612		982		1001	
HIGHEST ANNUAL MEAN					471	
LOWEST ANNUAL MEAN					1976	
HIGHEST DAILY MEAN	4490	Oct 22	6800	May 12	12000	May 30 1984
LOWEST DAILY MEAN	73	Oct 10	73	Oct 10	28	Nov 14 1981
ANNUAL SEVEN-DAY MINIMUM	98	Jun 26	90	Sep 16	86	Oct 14 1982
INSTANTANEOUS PEAK FLOW			9430	Oct 21	20900	May 29 1984
INSTANTANEOUS PEAK STAGE			11.00	Oct 21	14.79	Aug 10 1976
INSTANTANEOUS LOW FLOW			68	Oct 19		
10 PERCENT EXCEEDS	1170		2030		1290	
50 PERCENT EXCEEDS	334		852		641	
90 PERCENT EXCEEDS	98		156		144	

e Estimated

DEERFIELD RIVER NEAR ROWE, MA 01168151



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 mi².

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 below 1,000 ft³/s, which are fair, and those for estimated daily discharges, which are poor. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants upstream. Telephone gage-height telemeter at station. Measurements of water temperature and air temperature were made during the year.

AVERAGE DISCHARGE.--83 years, 900 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s, Sept. 21, 1938, gage height, 20.17 ft, from flood-marks, from rating curve extended above 31,000 ft³/s on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft and 20.17 ft; minimum daily, 5 ft³/s, June 17, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,700 ft³/s, Oct. 22, gage height, 9.68 ft; minimum daily, 120 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	1610	1190	651	1830	1510	926	7210	e270	167	1020	245
2	120	2200	1150	596	1390	1390	1340	4460	e250	156	853	128
3	122	2760	1200	769	1230	1370	1150	3110	e220	176	774	123
4	285	2300	1130	985	e1100	1340	912	2930	e450	327	417	193
5	324	1550	1150	e880	e1000	1350	866	2770	e560	421	411	195
6	1170	906	1130	e900	e1100	1340	869	2640	e350	291	547	194
7	505	1170	966	e940	e1200	1370	863	2430	e230	170	886	198
8	303	1410	1030	897	1180	1360	861	1730	e500	169	655	211
9	168	1310	1040	845	1170	1280	719	1370	e2000	173	632	138
10	145	1260	944	775	1140	1350	724	1550	e1600	232	570	130
11	195	1340	722	e850	1140	1360	728	2590	e1200	227	561	242
12	204	6070	553	815	1130	1330	925	8350	e900	512	609	205
13	296	2930	580	817	996	1340	1080	5810	e350	2690	860	340
14	193	2520	714	807	1150	1360	2130	e4500	e370	3040	689	366
15	617	2900	955	816	1090	1370	1670	e3000	e310	1860	554	216
16	639	2160	994	e840	1100	1460	5660	e2600	e320	2060	787	128
17	590	1630	575	826	1070	1390	5770	e2700	e260	1690	665	152
18	469	1520	637	956	1040	1340	3150	e2300	e230	1240	341	646
19	451	1500	777	3830	1100	1340	2600	e2000	e160	1210	578	280
20	623	1420	705	4110	1060	1600	3410	e1700	e210	668	575	166
21	4290	1400	728	1730	1190	1410	4340	e1500	278	445	557	137
22	6340	1370	703	1540	1700	1110	3780	e840	415	543	592	139
23	2560	1270	704	1340	1820	874	5890	e1000	304	699	383	831
24	2020	1010	692	1830	1950	427	8150	e700	407	442	382	369
25	1970	1120	686	2140	1780	663	4400	e600	257	537	316	302
26	1420	1120	684	1610	1550	952	3010	e640	279	689	431	268
27	1380	886	584	3860	1530	1120	4940	e450	232	705	272	245
28	3620	1200	694	4030	1590	1160	3160	e360	269	918	216	240
29	2420	1000	664	2570	1580	1080	3040	e400	283	919	246	410
30	1790	1090	665	2260	---	788	4800	e310	252	872	212	426
31	1840	---	669	2030	---	788	---	e280	---	915	201	---
TOTAL	37265	51932	25615	47845	37906	37922	81863	72830	13716	25163	16792	7863
MEAN	1202	1731	826	1543	1307	1223	2729	2349	457	812	542	262
MAX	6340	6070	1200	4110	1950	1600	8150	8350	2000	3040	1020	831
MIN	120	886	553	596	996	427	719	280	160	156	201	123

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1996, BY WATER YEAR (WY)

MEAN	606	839	986	986	982	1372	1869	1138	643	444	454	484
MAX	2766	2123	2026	2092	2450	3642	4106	2889	1686	1611	1886	2404
(WY)	1956	1956	1928	1978	1981	1921	1914	1943	1972	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

CONNECTICUT RIVER BASIN

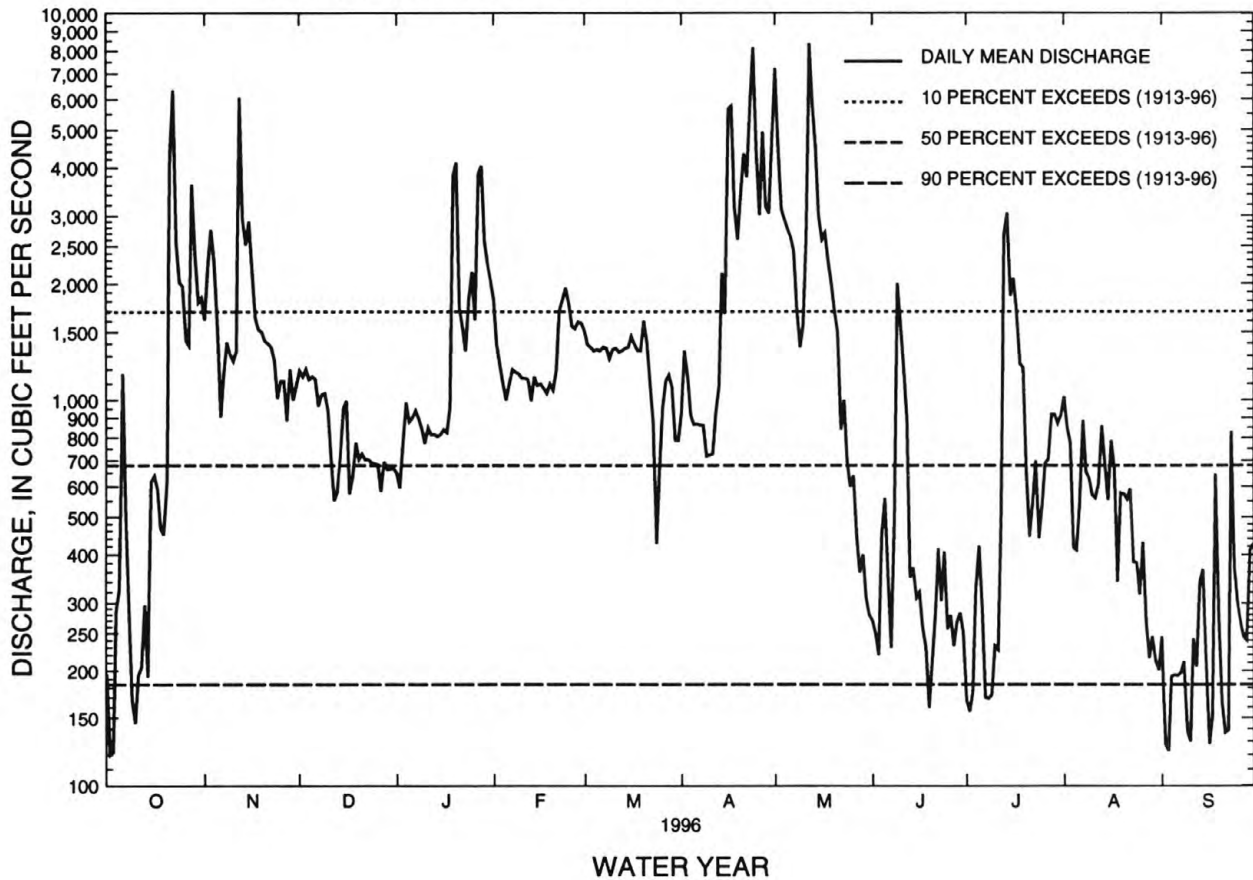
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01168500 DEERFIELD RIVER AT CHARLEMONT, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1913 - 1996	
ANNUAL TOTAL	282881		456712		900	
ANNUAL MEAN	775		1248		1364	1928
HIGHEST ANNUAL MEAN					455	1965
LOWEST ANNUAL MEAN					31100	Dec 31 1948
HIGHEST DAILY MEAN	6340	Oct 22	8350	May 12	5.0	Jun 17 1921
LOWEST DAILY MEAN	112	Sep 4	120	Oct 2	34	Sep 19 1953
ANNUAL SEVEN-DAY MINIMUM	135	Jun 28	177	Sep 2	56300	Sep 21 1938
INSTANTANEOUS PEAK FLOW			13700	Oct 22	20.17	Sep 21 1938
INSTANTANEOUS PEAK STAGE			9.68	Oct 22		
INSTANTANEOUS LOW FLOW			116	Oct 2		
10 PERCENT EXCEEDS	1570		2690		1690	
50 PERCENT EXCEEDS	520		903		680	
90 PERCENT EXCEEDS	167		225		184	

e Estimated

DEERFIELD RIVER AT CHARLEMONT, MA 01168500



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.

PERIOD OF RECORD.--Discharge: October 1939 to current year. October and November 1939 monthly discharge only, published in WSP 1301.

REVISED RECORDS.--WSP 1111: 1945(M). WDR MA-RI-84-1: Drainage area.

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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,200 ft³/s, Apr. 5, 1987, gage height, 11.19 ft, from rating curve extended above 2,900 ft³/s on basis of slope-area measurements at gage heights 9.55 ft and 11.19 ft; minimum daily, 5.1 ft³/s, Oct. 3, 1948.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2215	4,580	9.00	Jan. 27	1915	4,460	7.52
28	1145	2,630	6.28	Apr. 16	2115	4,270	7.41
Nov. 12	0600	*4,830	*9.10	May 1	0230	2,730	6.36
Jan. 19	2115	4,820	7.72	July 13	1745	2,620	6.27

Minimum discharge, 15 ft³/s, Aug. 15; minimum daily, 16 ft³/s, Sept. 5-7.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	268	163	e76	e280	276	312	1460	84	49	60	18
2	18	771	161	e75	e255	247	563	647	78	42	83	17
3	17	629	138	e74	e235	228	445	523	81	44	66	17
4	20	435	153	e73	e215	202	350	600	188	67	64	17
5	38	317	140	e72	e210	208	315	579	116	53	91	16
6	578	261	136	e71	e195	195	309	566	91	36	65	16
7	199	245	116	e69	e190	180	309	513	79	37	53	16
8	115	341	e100	e68	185	e175	299	393	161	39	47	24
9	78	245	91	e67	184	e150	271	332	419	42	42	28
10	60	200	e110	e66	171	e145	289	374	224	41	42	27
11	51	207	e110	e65	172	e165	304	642	178	32	40	23
12	45	2820	e110	e64	163	e165	506	1370	132	29	35	20
13	41	730	e105	e64	166	e165	532	665	225	783	34	22
14	41	540	e99	e64	e150	201	941	490	239	540	33	49
15	167	996	e110	e67	e135	275	655	398	136	261	25	35
16	108	646	110	e71	e125	286	2180	390	105	421	29	26
17	73	462	104	76	e125	219	1610	486	91	175	31	32
18	60	377	e100	104	e125	209	784	367	80	113	28	267
19	54	354	96	1470	e120	225	671	363	74	95	26	129
20	50	331	e94	1430	109	489	734	294	85	107	25	58
21	2270	325	e94	506	233	424	794	251	87	78	26	41
22	1640	291	e95	384	651	334	660	226	77	62	25	40
23	482	248	e91	e300	602	270	1180	182	75	60	23	319
24	302	217	e88	518	624	236	1010	170	64	61	24	114
25	220	183	e91	731	534	270	571	148	61	57	22	94
26	185	185	e91	e370	403	456	474	133	56	67	21	71
27	158	174	e86	1660	348	380	634	123	50	70	21	57
28	1390	191	e80	1310	412	290	424	115	47	56	22	50
29	655	210	e80	e560	373	269	637	107	44	50	21	140
30	396	166	e78	478	---	265	999	101	44	64	20	87
31	301	---	e77	362	---	276	---	94	---	57	18	---
TOTAL	9830	13365	3297	11365	7690	7875	19762	13102	3471	3688	1162	1870
MEAN	317	445	106	367	265	254	659	423	116	119	37.5	62.3
MAX	2270	2820	163	1660	651	489	2180	1460	419	783	91	319
MIN	17	166	77	64	109	145	271	94	44	29	18	16
CFSM	3.56	5.01	1.19	4.12	2.98	2.85	7.40	4.75	1.30	1.34	.42	.70
IN.	4.11	5.59	1.38	4.75	3.21	3.29	8.26	5.48	1.45	1.54	.49	.70

MEAN	101	172	178	147	159	333	572	276	135	66.3	49.6	54.7
MAX	832	468	522	398	801	866	1076	772	417	214	228	306
(WY)	1956	1956	1974	1978	1981	1953	1969	1984	1973	1972	1955	1960
MIN	11.8	25.4	49.5	24.2	23.7	46.2	169	85.3	28.4	17.5	12.5	9.00
(WY)	1965	1965	1962	1981	1940	1940	1981	1986	1965	1962	1956	1953

CONNECTICUT RIVER BASIN

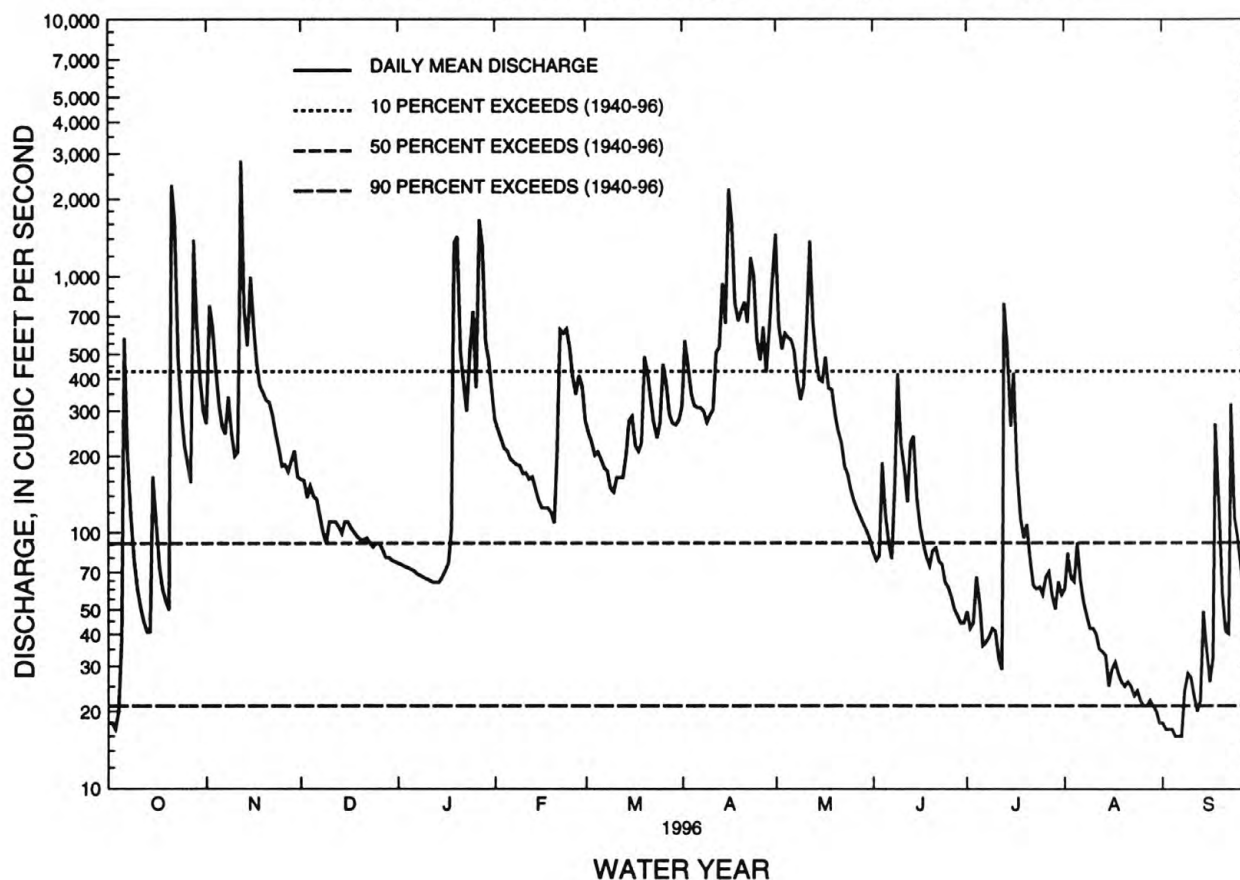
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01169000 NORTH RIVER AT SHATTUCKVILLE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1940 - 1996
ANNUAL TOTAL	63155.4	96477	187
ANNUAL MEAN	173	264	299
HIGHEST ANNUAL MEAN			79.9
LOWEST ANNUAL MEAN			1984
HIGHEST DAILY MEAN	2820 Nov 12	2820 Nov 12	8740 Oct 15 1955
LOWEST DAILY MEAN	9.0 Sep 8	16 Sep 5	5.1 Oct 3 1948
ANNUAL SEVEN-DAY MINIMUM	9.9 Sep 3	17 Sep 1	6.3 Sep 1 1953
INSTANTANEOUS PEAK FLOW		7830 Nov 12	14200 Apr 5 1987
INSTANTANEOUS PEAK STAGE		9.10 Nov 12	11.19
ANNUAL RUNOFF (CFSM)	1.94	2.96	2.10
ANNUAL RUNOFF (INCHES)	26.40	40.33	28.49
10 PERCENT EXCEEDS	377	625	428
50 PERCENT EXCEEDS	110	142	91
90 PERCENT EXCEEDS	19	32	21

e Estimated

NORTH RIVER AT SHATTUCKVILLE, MA 01169000



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 mi².

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.--30 years, 52.3 ft³/s, 29.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,750 ft³/s, Apr. 4, 1987, gage height, 10.16 ft, minimum, 2.1 ft³/s (revised), Sept. 13, 1995, but may have been lower earlier in the month.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2145	1,950	7.00	Jan. 27	1700	2,070	7.14
28	0915	1,930	6.98	Apr. 16	1715	1,380	6.29
Nov. 12	0545	*3,890	*8.86	July 13	1830	1,980	7.04
Jan. 19	1930	2,020	7.09				

Minimum discharge, 3.8 ft³/s, Oct. 1.

REVISIONS.--Revised daily and minimum discharges, in cubic feet per second, in water year 1995 are given below. They supersede the figures published in the report for 1995.

June 14 14	June 19 11	June 23 8.2	June 27 12
15 15	20 9.8	24 8.0	28 9.1
16 14	21 8.8	25 12	29 8.1
17 13	22 8.4	26 17	30 7.7
18 12			
July 1 10	July 9 12	July 17 7.4	July 25 9.6
2 17	10 9.1	18 9.8	26 8.0
3 9.4	11 8.6	19 17	27 7.3
4 8.0	12 13	20 8.9	28 7.4
5 7.5	13 9.6	21 7.4	29 7.8
6 7.2	14 8.1	22 6.9	30 6.2
7 29	15 8.3	23 6.3	31 5.2
8 22	16 8.0	24 8.9	
Aug. 1 4.6	Aug. 2 e4.0	Aug. 3 e4.0	
Sept. 14 e3.0	Sept. 19 4.9	Sept. 23 12	Sept. 27 6.0
15 3.0	20 3.9	24 6.3	28 4.8
16 2.6	21 3.7	25 5.1	29 4.1
17 7.0	22 5.0	26 5.8	30 3.9
18 9.5			

MONTH	TOTAL	MEAN	MAX	MIN	CFSM	IN
June 1995	501.1	16.7	121	7.7	0.69	0.77
July 1995	310.9	10.0	29	5.2	.42	.48
Aug. 1995	336.7	10.9	68	3.2	.45	.52
Sept. 1995	125.1	4.17	12	2.4	.17	.19
Wtr Yr 1995	12174.0	33.4	418	2.4	1.38	18.79

Minimum discharge, 2.1 ft³/s, Sept. 16, but may have been lower earlier in the month during the period of no gage-height record.

CONNECTICUT RIVER BASIN

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01169900 SOUTH RIVER NEAR CONWAY, MA--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	66	59	e28	e94	88	83	302	25	22	22	6.8
2	4.1	164	59	e28	e85	83	169	146	24	19	31	6.7
3	4.1	113	53	e27	e77	79	104	129	30	21	21	6.6
4	5.5	79	57	e27	e72	68	84	181	94	33	20	6.4
5	20	65	53	e26	e68	e61	77	172	47	21	18	8.4
6	213	60	53	e25	e67	e56	74	167	33	17	16	11
7	34	61	47	e24	e65	e53	77	134	28	16	15	7.3
8	20	89	e47	e23	e61	e51	83	106	161	16	17	14
9	15	59	e45	e22	e58	e51	84	92	185	16	14	12
10	12	51	e44	e22	e55	e52	89	102	82	17	13	9.7
11	11	67	e43	e22	e54	e53	99	207	70	14	12	8.6
12	9.8	976	e42	e23	e53	e56	134	360	50	13	12	8.0
13	9.2	218	e41	e23	e52	e63	124	153	155	594	12	10
14	8.9	177	e40	e23	e49	72	282	117	121	212	11	29
15	34	479	e40	e24	e44	102	153	101	59	100	11	13
16	18	230	e39	e24	e42	95	637	107	43	101	10	9.8
17	13	155	e38	e35	e41	72	380	126	37	57	10	21
18	11	129	e37	e70	e40	69	212	99	33	43	9.4	284
19	11	126	e36	e600	e39	74	170	91	32	40	8.7	63
20	10	121	e35	384	e45	193	150	76	61	40	8.3	34
21	637	121	e34	151	e100	126	133	68	66	30	8.8	20
22	274	104	e33	117	e200	100	115	62	45	26	8.3	23
23	79	87	e33	96	194	82	190	53	39	25	7.7	143
24	55	77	e32	263	186	75	186	49	31	26	9.2	44
25	44	68	e32	248	154	93	119	44	32	24	9.1	41
26	37	67	e31	131	120	135	105	40	27	35	7.5	29
27	39	64	e31	799	106	102	112	37	24	28	8.5	25
28	538	67	e30	398	146	80	86	33	22	22	14	23
29	168	66	e30	215	114	77	207	31	21	20	10	100
30	94	59	e30	161	---	76	247	30	22	19	8.3	41
31	74	---	e29	e120	---	78	---	29	---	20	7.3	---
TOTAL	2506.6	4265	1253	4179	2481	2515	4765	3444	1699	1687	390.1	1058.3
MEAN	80.9	142	40.4	135	85.6	81.1	159	111	56.6	54.4	12.6	35.3
MAX	637	976	59	799	200	193	637	360	185	594	31	284
MIN	4.0	51	29	22	39	51	74	29	21	13	7.3	6.4
CFSM	3.36	5.90	1.68	5.59	3.55	3.37	6.59	4.61	2.35	2.26	.52	1.46
IN.	3.87	6.58	1.93	6.45	3.83	3.88	7.36	5.32	2.62	2.60	.60	1.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

	MEAN	28.5	49.3	52.5	47.8	52.5	93.3	132	72.4	44.9	21.4	17.5	16.5
MAX		85.5	142	142	135	163	179	253	171	144	60.0	57.0	65.1
(WY)		1976	1996	1974	1996	1981	1979	1993	1984	1982	1972	1975	1975
MIN		6.22	11.0	13.9	7.27	14.1	32.3	32.6	23.5	12.6	5.92	4.86	4.17
(WY)		1983	1983	1983	1981	1980	1967	1985	1995	1985	1991	1981	1995

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

FOR 1996 WATER YEAR

WATER YEARS 1966 - 1996

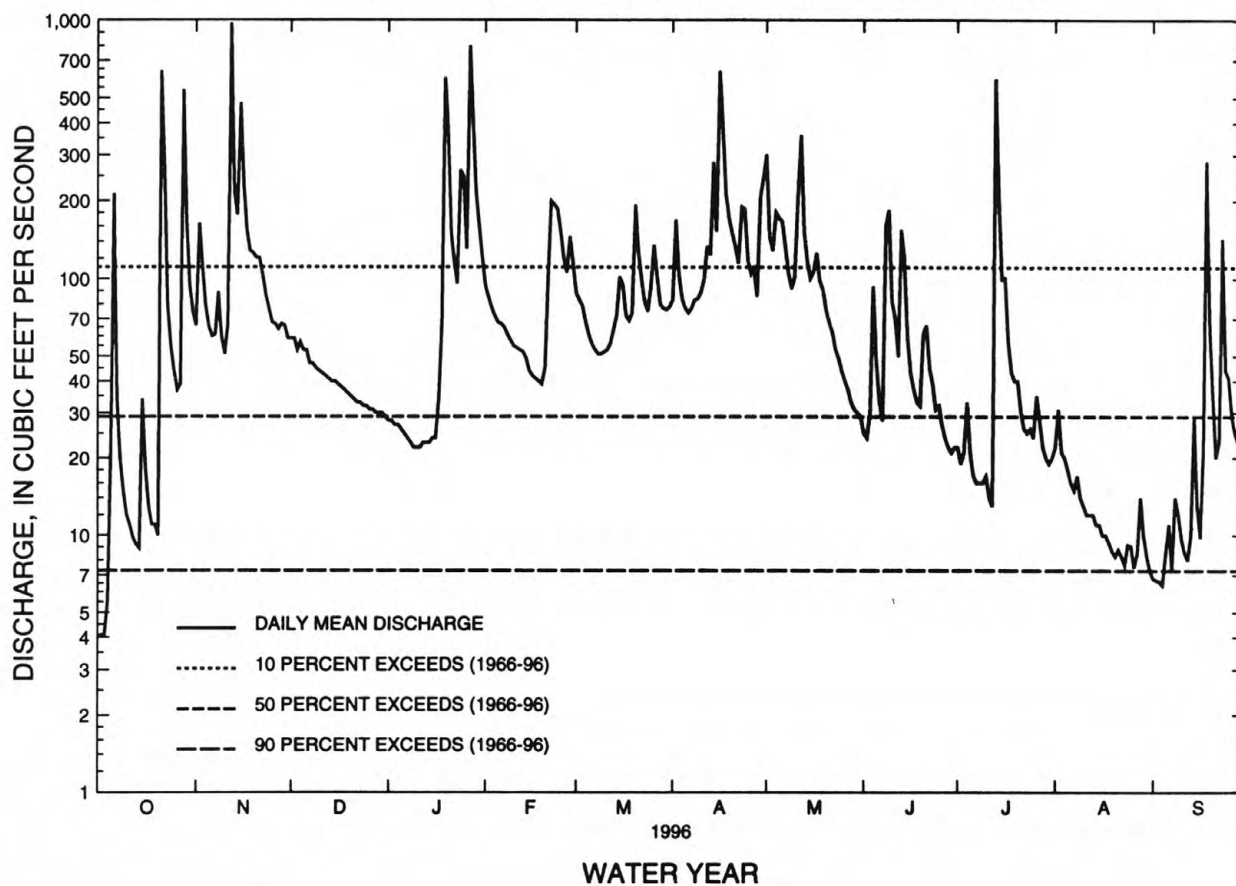
ANNUAL TOTAL	17199.4	30243.0	
ANNUAL MEAN	47.1	82.6	52.4
HIGHEST ANNUAL MEAN			82.6
LOWEST ANNUAL MEAN			21.5
HIGHEST DAILY MEAN	976	Nov 12	1570
LOWEST DAILY MEAN	2.4	Sep 7	2.4
ANNUAL SEVEN-DAY MINIMUM	2.6	Sep 3	2.6
INSTANTANEOUS PEAK FLOW			5750
INSTANTANEOUS PEAK STAGE			10.16
INSTANTANEOUS LOW FLOW			
ANNUAL RUNOFF (CFSM)	1.96		2.17
ANNUAL RUNOFF (INCHES)	26.55		29.52
10 PERCENT EXCEEDS	91	173	111
50 PERCENT EXCEEDS	32	51	29
90 PERCENT EXCEEDS	4.7	11	7.3

e Estimated

CONNECTICUT RIVER BASIN

01169900 SOUTH RIVER NEAR CONWAY, MA--Continued

SOUTH RIVER NEAR CONWAY, MA 01169900





Hydrologic Technician R. Glenn Casey measures winter streamflow at Assabet River at Maynard, Massachusetts. Ice has been cut away to provide open area for measurements.

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 mi².

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 winter period and 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.

AVERAGE DISCHARGE.--56 years (water years 1941-96), 1,840 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 61,700 ft³/s, Apr. 5, 1987, gage height, 17.71 ft; minimum daily, 28 ft³/s, July 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 21,600 ft³/s, Oct. 22, gage height, 9.87 ft; minimum daily, 157 ft³/s, Sept. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	2680	1530	877	2580	2170	1500	9770	449	345	1180	201
2	190	3890	1610	804	2420	2050	2370	6380	426	253	1080	248
3	179	4340	1590	899	1790	1960	2180	4500	385	298	988	166
4	221	3630	1590	1210	e1600	1780	1670	4440	939	501	964	157
5	525	2730	1570	e1100	e1400	1770	1540	4470	824	554	782	159
6	2370	1870	1520	e1000	e1500	1900	1500	4020	602	394	863	195
7	1140	1800	1280	e1100	e1600	1840	1490	3720	413	280	1080	221
8	564	2490	1440	e1200	1780	1750	1430	2740	701	230	760	239
9	319	2140	1280	e1100	1650	1690	1480	2150	2800	251	e720	218
10	261	1990	1390	e1000	1600	1750	1310	2280	2080	294	e700	161
11	254	2060	1130	e1000	1590	1840	1330	3340	1780	253	e660	235
12	291	10600	877	e1000	1520	1730	1790	7840	1120	582	e800	172
13	347	5070	824	e1100	1180	1750	2220	7490	972	4170	993	410
14	290	4000	988	e1000	1580	1870	2940	4780	1110	5350	776	424
15	865	5710	1490	e980	1620	1940	3180	3510	655	2620	730	331
16	893	4020	1540	e960	1470	2240	6150	3030	575	3360	844	228
17	808	2840	865	e1000	1480	1950	9860	3420	536	2340	756	178
18	525	2330	978	1450	1470	1890	5300	2620	407	1790	397	1550
19	620	2330	1110	3240	1440	1870	4160	2450	337	1630	603	726
20	788	2210	969	7010	1460	2440	4800	2100	416	923	696	249
21	6580	2160	1120	3050	1640	2590	6050	1990	587	911	566	233
22	11500	2010	1160	2410	2770	1980	5430	1390	553	891	625	183
23	3980	1920	1080	2060	3120	1640	8140	1490	550	944	422	1540
24	3030	1590	966	2650	3320	921	9530	1030	557	893	370	827
25	2850	1490	986	4260	3210	1080	6210	1000	481	852	442	422
26	2300	1480	927	2500	2570	1730	4120	1020	392	972	401	411
27	1980	1310	856	4640	2380	1920	6160	803	368	978	387	376
28	7240	1530	944	7640	2510	1710	4430	585	375	1120	235	298
29	4620	1600	1190	4490	2590	1680	4160	638	367	1110	277	897
30	2950	1460	899	3630	---	1310	6840	549	342	1080	248	597
31	2970	---	881	3100	---	1350	---	458	---	1100	199	---
TOTAL	61672	85280	36580	69460	56840	56091	119270	96003	22099	37269	20544	12252
MEAN	1989	2843	1180	2241	1960	1809	3976	3097	737	1202	663	408
MAX	11500	10600	1610	7640	3320	2590	9860	9770	2800	5350	1180	1550
MIN	179	1310	824	804	1180	921	1310	458	337	230	199	157

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1996, BY WATER YEAR (WY)

	MEAN	843	1211	1426	1390	1427	2105	2950	1720	935	564	558	610
MAX	4632	3302	2967	2801	3890	4771	5320	4094	2600	1658	2142	2112	
(WY)	1956	1956	1974	1978	1981	1953	1993	1984	1989	1973	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	

CONNECTICUT RIVER BASIN

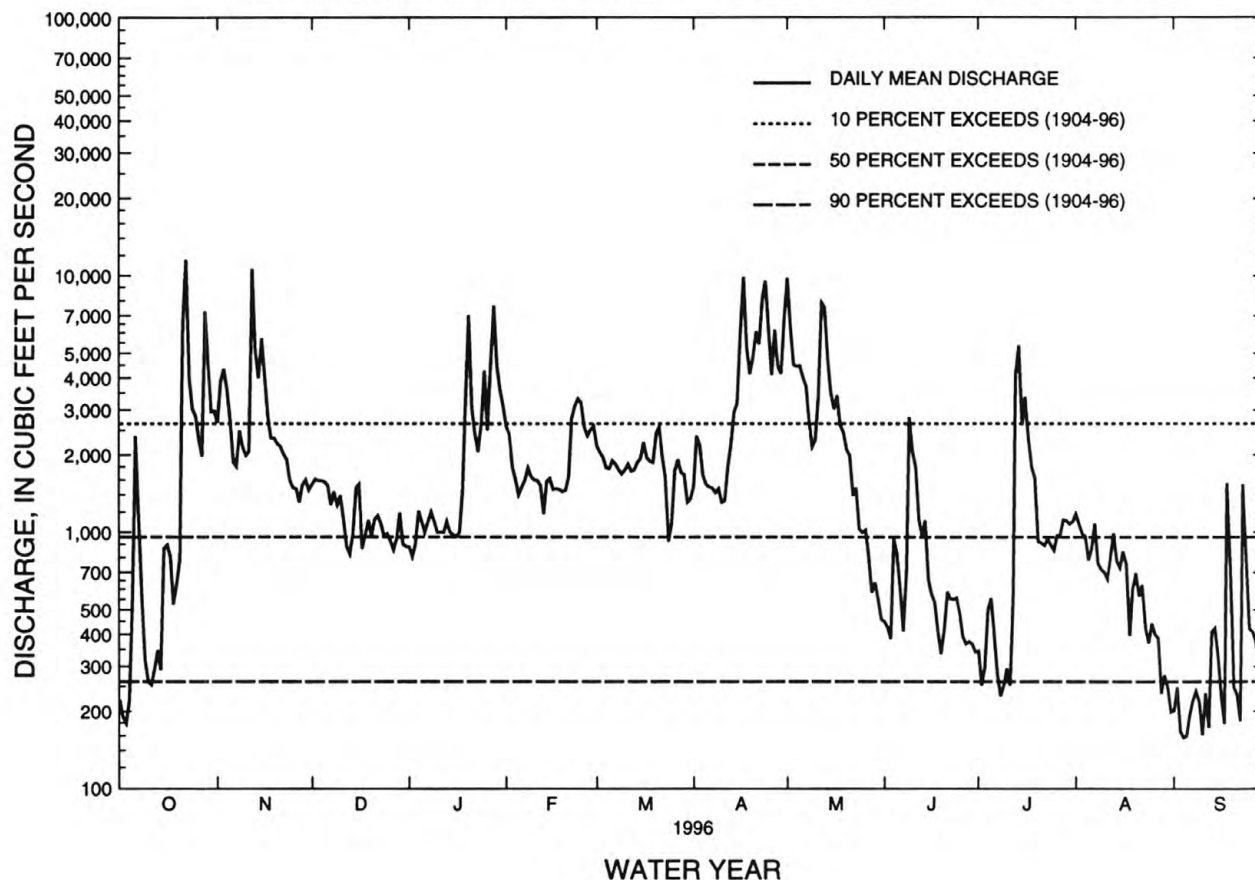
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01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1904 - 1996	
ANNUAL TOTAL	429708		673360		1308	
ANNUAL MEAN	1177		1840		1840	
HIGHEST ANNUAL MEAN					629	
LOWEST ANNUAL MEAN					1996	
HIGHEST DAILY MEAN	11500	Oct 22	11500	Oct 22	38300	Dec 31 1948
LOWEST DAILY MEAN	166	Sep 15	157	Sep 4	28	Jul 29 1962
ANNUAL SEVEN-DAY MINIMUM	182	Sep 2	189	Aug 31	39	Jul 27 1962
INSTANTANEOUS PEAK FLOW			21600	Oct 22	61700	Apr 5 1987
INSTANTANEOUS PEAK STAGE			9.87	Oct 22	17.71	Apr 5 1987
INSTANTANEOUS LOW FLOW			66	Sep 3		
10 PERCENT EXCEEDS	2420		4160		2650	
50 PERCENT EXCEEDS	865		1370		958	
90 PERCENT EXCEEDS	207		298		261	

e Estimated

DEERFIELD RIVER NEAR WEST DEERFIELD, MA 01170000



CONNECTICUT RIVER BASIN

01170100 GREEN RIVER NEAR COLRAIN, MA

LOCATION.--Lat 42°42'12", long 72°40'16", Franklin County, Hydrologic Unit 01080203, on right bank 0.5 mi upstream from bridge on West Leyden Road and 2.5 mi northeast of Colrain.

DRAINAGE AREA.--41.4 mi².

PERIOD OF RECORD.--Discharge: October 1967 to current year.

Water-quality records: Water years 1968-69, 1993-95.

REVISED RECORDS.--WDR MA-NH-RI-VT-71-1: 1968(M), 1969.

GAGE.--Water-stage recorder. Elevation of gage is 435 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--29 years, 90.0 ft³/s, 29.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,560 ft³/s, Dec. 21, 1973, gage height, 8.2 ft, from floodmarks, from rating curve extended above 1,500 ft³/s on basis of slope area measurement of peak flow and conveyance-slope study; maximum gage height, 8.87 ft, Jan. 27, 1976 (ice jam); minimum discharge, 1.9 ft³/s, Aug. 1, 1968, caused by unusual regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,100 ft³/s (revised) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2215	a3,140	7.15	Jan. 27	1900	a3,570	6.68
Nov. 12	0545	*a4,100	*7.88	Apr. 16	1800	a2,530	6.02
Jan. 19	2100	a2,290	6.39	May 1	0100	1,300	4.97

a From rating curve extended above 1,100 ft³/s.

Minimum discharge, 5.6 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	107	88	39	e125	e125	142	707	41	26	31	7.7
2	5.9	350	82	38	e115	122	258	320	37	23	42	7.5
3	5.7	282	73	34	e110	115	196	268	40	23	33	7.1
4	7.5	188	78	e34	e105	101	157	293	89	31	29	7.4
5	13	138	71	e34	e100	e95	141	267	57	26	30	7.8
6	210	118	71	e32	e95	e87	137	275	45	22	24	6.9
7	68	115	67	e30	e93	e84	137	249	39	19	21	6.8
8	38	156	e64	e30	e90	e78	136	183	66	19	19	10
9	25	113	e62	e29	e86	e71	127	159	132	20	18	12
10	20	95	e60	e30	e82	e72	134	172	90	18	18	11
11	16	101	e57	e31	e80	e75	142	284	72	14	16	9.3
12	14	1330	e55	e31	e77	e84	228	637	63	13	15	8.4
13	13	346	e54	e31	e75	e85	245	316	158	307	15	8.9
14	14	263	e53	e31	e68	95	412	225	145	262	14	21
15	47	512	e54	e32	e63	124	322	184	91	122	13	15
16	33	325	e53	e34	e58	126	1170	181	66	184	13	11
17	23	229	e52	39	e57	104	751	201	55	83	13	14
18	19	188	e50	48	e55	97	399	162	48	56	11	133
19	17	177	49	e720	e54	101	353	163	44	50	11	63
20	16	166	49	554	e53	214	406	137	48	55	10	27
21	806	164	47	e200	e85	185	440	118	49	41	11	18
22	657	146	46	156	e250	149	349	108	44	34	10	18
23	178	126	45	132	288	124	572	93	42	32	10	145
24	109	111	45	230	309	110	504	83	36	31	9.8	52
25	83	100	44	e280	263	126	286	71	35	29	9.3	44
26	67	95	45	e170	189	195	235	64	32	44	8.3	33
27	58	91	44	1060	163	166	315	59	28	45	8.5	26
28	547	93	40	652	190	133	203	56	26	32	10	23
29	268	100	39	e330	170	126	314	52	25	28	10	67
30	156	86	39	241	---	124	498	49	26	30	9.1	43
31	118	---	40	193	---	125	---	46	---	29	8.1	---
TOTAL	3658.2	6411	1716	5525	3548	3618	9709	6182	1769	1748	500.1	863.8
MEAN	118	214	55.4	178	122	117	324	199	59.0	56.4	16.1	28.8
MAX	806	1330	88	1060	309	214	1170	707	158	307	42	145
MIN	5.7	86	39	29	53	71	127	46	25	13	8.1	6.8
CFSM	2.85	5.16	1.34	4.30	2.96	2.82	7.82	4.82	1.42	1.36	.39	.70
IN.	3.29	5.76	1.54	4.96	3.19	3.25	8.72	5.55	1.59	1.57	.45	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1996, BY WATER YEAR (WY)

	MEAN	49.8	84.8	86.7	73.8	82.0	160	255	132	70.1	36.3	26.2	23.9
MAX	190	214	198	178	277	355	442	287	188	105	80.4	92.2	
(WY)	1976	1996	1974	1996	1981	1979	1969	1984	1973	1973	1969	1975	
MIN	11.4	17.8	27.9	11.6	18.1	53.2	77.6	42.1	24.2	10.6	9.62	6.55	
(WY)	1983	1979	1983	1981	1980	1971	1995	1986	1995	1995	1968	1983	

CONNECTICUT RIVER BASIN

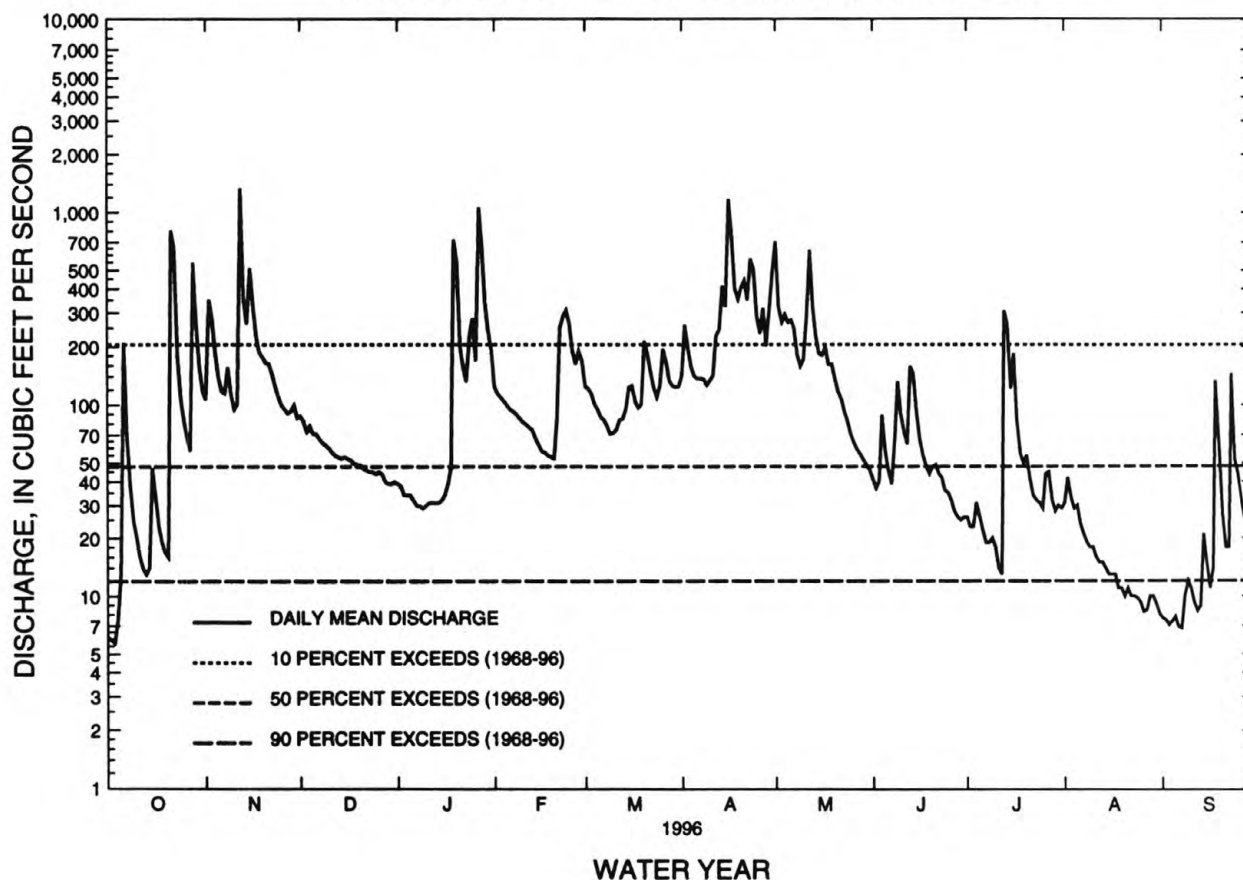
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01170100 GREEN RIVER NEAR COLRAIN, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1968 - 1996
ANNUAL TOTAL	26284.7	45248.1	89.9
ANNUAL MEAN	72.0	124	136
HIGHEST ANNUAL MEAN			44.4
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	1330 Nov 12	1330 Nov 12	2420 Mar 31 1987
LOWEST DAILY MEAN	3.8 Sep 8	5.7 Oct 3	3.3 Sep 16 1983
ANNUAL SEVEN-DAY MINIMUM	4.1 Sep 3	7.3 Sep 1	3.6 Sep 11 1983
INSTANTANEOUS PEAK FLOW		4100 Nov 12	4560 Dec 21 1973
INSTANTANEOUS PEAK STAGE		7.88 Nov 12	8.87 Jan 27 1976
INSTANTANEOUS LOW FLOW		5.6 Oct 3	1.9 Aug 1 1968
ANNUAL RUNOFF (CFSM)	1.74	2.99	2.17
ANNUAL RUNOFF (INCHES)	23.62	40.66	29.51
10 PERCENT EXCEEDS	159	285	206
50 PERCENT EXCEEDS	49	67	48
90 PERCENT EXCEEDS	7.0	13	12

e Estimated

GREEN RIVER NEAR COLRAIN, MA 01170100



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.

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.

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.

AVERAGE DISCHARGE.--92 years, 13,910 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,800 ft³/s, Apr. 17, gage height, 30.91 ft; minimum daily, 1.190 ft³/s, Oct. 3.

MEAN	8528	12380	12380	10910	10430	20660	38900	23470	11310	6631	5584	5896
MAX	25750	42270	31710	23890	33650	71920	66290	47000	30730	25680	18550	32660
(WY)	1978	1928	1984	1978	1981	1936	1960	1940	1984	1973	1990	1938
MIN	1829	2053	2810	2732	2086	4316	11390	8080	4270	2250	2412	1834
(WY)	1909	1909	1911	1905	1905	1940	1995	1941	1964	1911	1965	1908

CONNECTICUT RIVER BASIN

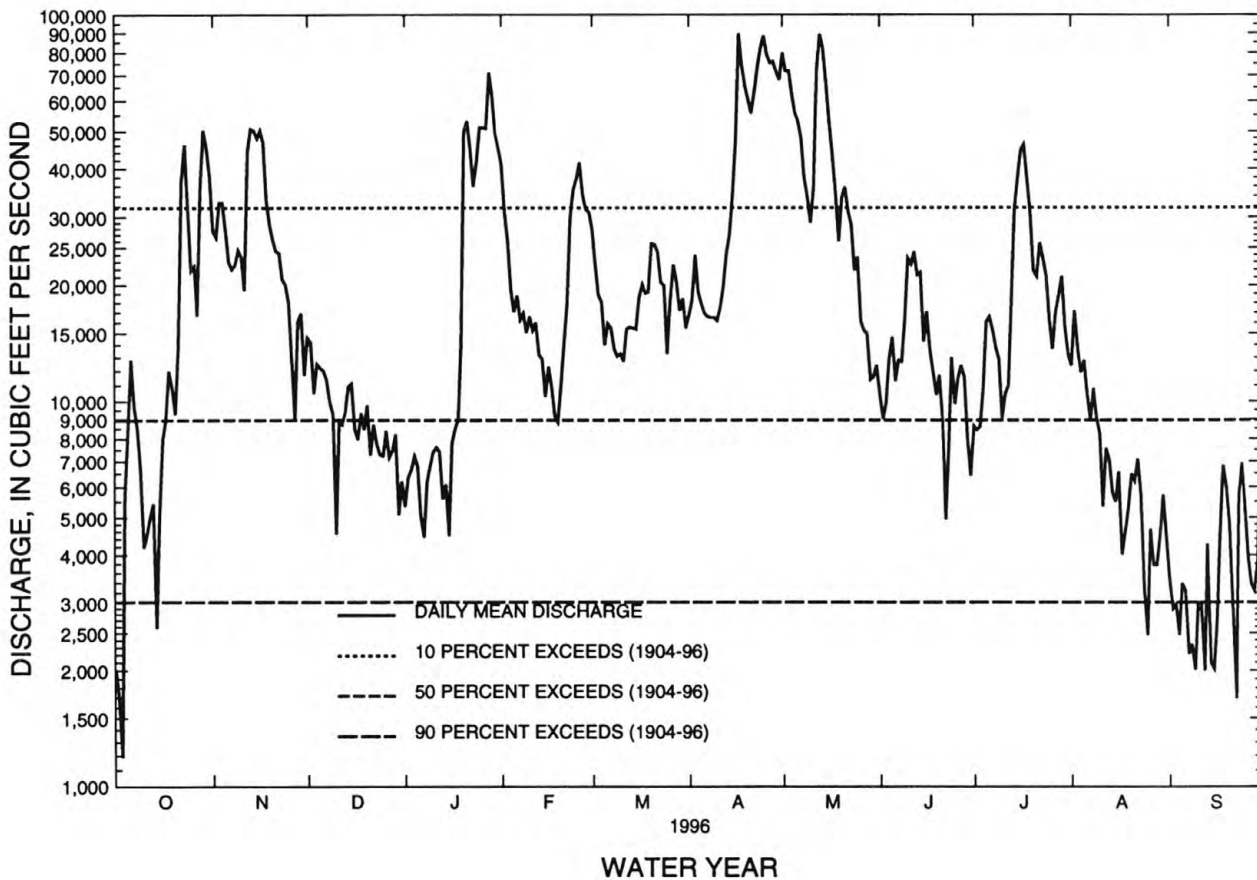
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01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1904 - 1996	
ANNUAL TOTAL	4242290		7550670		13910	
ANNUAL MEAN	11620		20630		20680	
HIGHEST ANNUAL MEAN					6768	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	50700	Nov 13	89500	Apr 17	233000	Mar 19 1936
LOWEST DAILY MEAN	1190	Oct 3	1190	Oct 3	215	Aug 31 1958
ANNUAL SEVEN-DAY MINIMUM	1610	Jul 5	2550	Sep 6	1300	Jul 29 1965
INSTANTANEOUS PEAK FLOW			94800	Apr 17	236000	Mar 19 1936
INSTANTANEOUS PEAK STAGE			30.91	Apr 17	49.20	Mar 19 1936
INSTANTANEOUS LOW FLOW			1120	Oct 4		
10 PERCENT EXCEEDS	28500		49600		31700	
50 PERCENT EXCEEDS	8700		14200		8940	
90 PERCENT EXCEEDS	2150		4490		3020	

e Estimated

CONNECTICUT RIVER AT MONTAGUE CITY, MA 01170500



LOCATION.--Lat 42°21'30", long 72°30'23", Hampshire County, Hydrologic Unit 01080201, on left bank 400 ft downstream from Southeast Street Bridge, 600 ft downstream from Hop Brook, and 1.3 mi southeast of Amherst.

PERIOD OF RECORD.--Discharge: June 1966 to September 1996 (discontinued).

Water-quality records: Water years 1971, 1973, 1994-95 (National Water Quality Assessment Site).

REVISED RECORDS.--WDR MA-RI-84-1: 1968-69(M), 1970(P), 1974-77(M), 1979(M), 1980(P), 1983(M), drainage area.

GAGE.--Water-stage recorder. Elevation of gage is 147 ft above sea level, from topographic map. Prior to May 10, 1974, at site 400 ft upstream at same datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversions upstream for municipal supply of Amherst.

AVERAGE DISCHARGE.--30 years, 63.7 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, Mar. 6, 1979, gage height, 9.94 ft; minimum, 1.9 ft³/s, Sept. 3, 1966, Sept. 6, 7, 1981, Aug. 27, 1995.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in March 1936 and September 1938 reached discharges of 2,360 ft³/s and 1,640 ft³/s, respectively, by computation of flow over dam 1.2 mi downstream.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	0215	677	5.39	Mar. 9	0045	690	5.45
Jan. 20	0430	1,360	7.87	Apr. 16	2345	*1,500	*8.31
Jan. 25	0315	794	5.88	July 14	0215	948	6.47
Jan. 28	0145	1,410	8.04				

Minimum discharge, 5.6 ft³/s, Oct. 2, 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	70	39	26	e130	112	53	301	26	16	25	9.2
2	7.0	142	43	27	109	88	136	200	23	14	22	9.3
3	8.0	183	40	e26	102	78	116	143	26	20	20	8.7
4	8.1	127	50	e25	e90	83	86	161	68	84	18	8.5
5	18	84	49	e24	e75	e80	67	179	55	58	18	8.0
6	129	63	52	e24	e67	e74	59	149	35	28	18	8.2
7	57	60	50	e24	64	e70	57	137	26	18	17	9.6
8	41	138	40	e23	65	e66	80	107	30	15	17	10
9	22	95	35	e23	90	e64	79	85	113	30	15	10
10	17	67	e33	e23	93	e60	106	101	70	44	14	9.3
11	13	56	e31	e23	91	e59	125	112	53	24	14	8.8
12	11	285	e29	e23	82	e62	155	292	37	15	14	8.1
13	13	230	e28	e23	e63	76	149	228	29	141	13	7.9
14	12	164	28	e24	e58	88	248	148	80	635	14	11
15	148	309	32	e25	e51	133	213	108	44	200	13	9.4
16	79	224	31	e28	e47	197	525	95	27	134	12	8.1
17	45	144	31	e33	e45	162	869	134	24	72	12	10
18	26	101	32	e50	e43	133	315	110	53	43	11	104
19	20	111	31	e260	e42	120	209	97	27	34	11	83
20	18	103	31	1050	41	180	159	80	68	36	11	44
21	56	90	e30	529	134	184	124	71	72	28	13	19
22	253	71	30	274	334	152	102	68	46	23	12	16
23	123	60	29	146	347	116	115	54	35	22	11	49
24	60	53	29	213	270	90	142	45	26	28	16	35
25	40	48	29	606	247	82	112	38	23	25	19	24
26	32	46	28	279	198	91	94	34	19	41	16	19
27	28	45	27	360	161	81	99	31	17	69	13	15
28	316	44	27	888	151	69	79	29	15	48	12	13
29	494	42	e25	299	140	64	104	28	14	29	12	105
30	189	40	25	205	---	60	255	29	15	25	11	60
31	104	---	26	e150	---	55	---	28	---	24	9.8	---
TOTAL	2399.1	3295	1040	5733	3430	3029	5032	3422	1196	2023	453.8	740.1
MEAN	77.4	110	33.5	185	118	97.7	168	110	39.9	65.3	14.6	24.7
MAX	494	309	52	1050	347	197	869	301	113	635	25	105
MIN	7.0	40	25	23	41	55	53	28	14	14	9.8	7.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1996, BY WATER YEAR (WY)

MEAN	40.7	55.0	69.9	71.9	76.7	124	121	79.2	46.8	27.1	27.8	23.9
MAX	136	124	132	185	184	212	220	192	152	74.8	86.7	106
(WY)	1990	1976	1974	1996	1976	1979	1983	1989	1972	1972	1969	1975
MIN	6.94	9.68	13.3	5.80	21.2	43.6	34.6	27.4	14.3	10.0	4.40	5.75
(WY)	1981	1979	1981	1981	1980	1989	1985	1986	1988	1995	1966	1978

CONNECTICUT RIVER BASIN

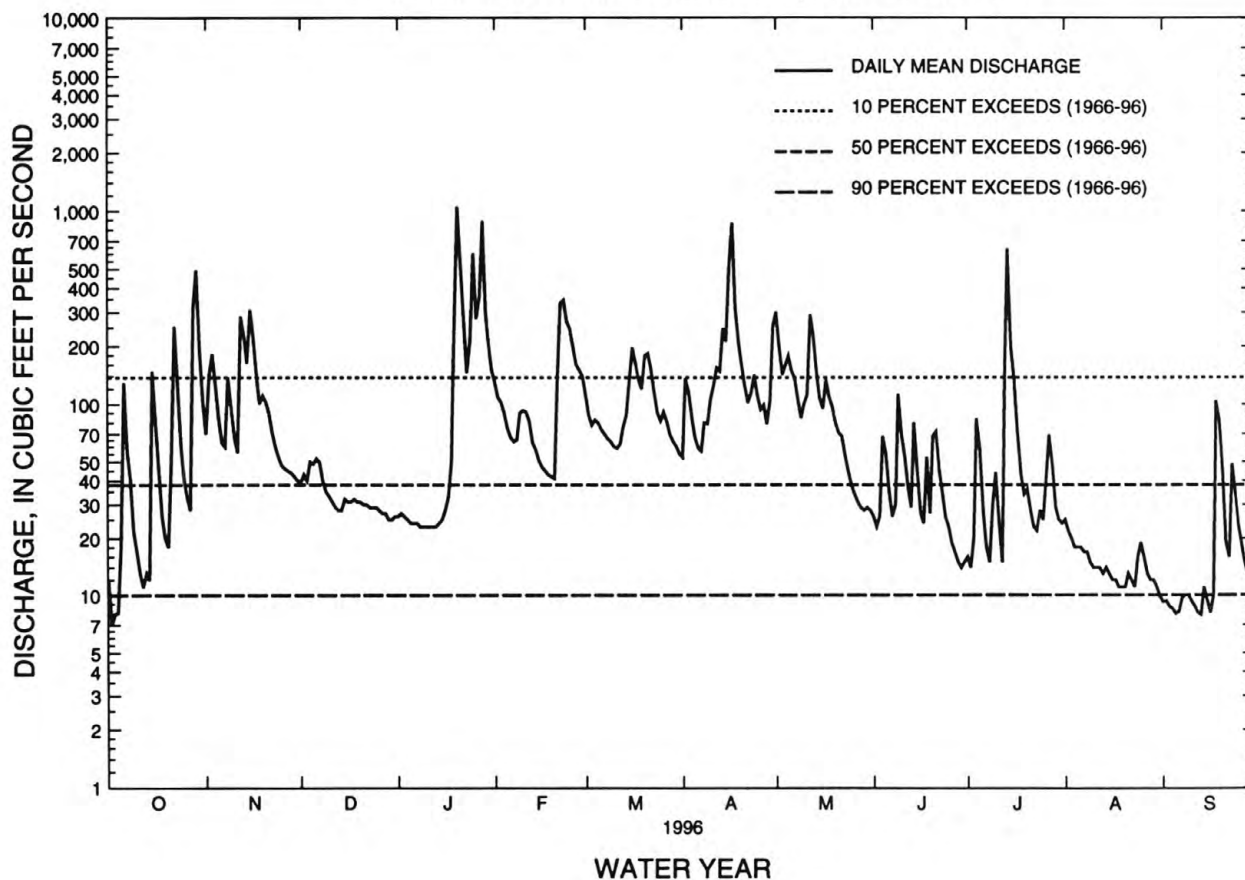
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01171300 FORT RIVER NEAR AMHERST, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1966 - 1996
ANNUAL TOTAL	19348.0	31793.0	
ANNUAL MEAN	53.0	86.9	63.7
HIGHEST ANNUAL MEAN			89.0
LOWEST ANNUAL MEAN			29.5
HIGHEST DAILY MEAN	517 Mar 9	1050 Jan 20	1580 May 30 1984
LOWEST DAILY MEAN	2.8 Aug 25	7.0 Oct 2	2.1 Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	3.4 Aug 22	8.8 Sep 1	3.1 Aug 28 1966
INSTANTANEOUS PEAK FLOW		1500 Apr 16	2100 Mar 6 1979
INSTANTANEOUS PEAK STAGE		8.31 Apr 16	9.94 Mar 6 1979
INSTANTANEOUS LOW FLOW		5.6 Oct 2	1.9 Sep 3 1966
10 PERCENT EXCEEDS	128	197	138
50 PERCENT EXCEEDS	34	49	38
90 PERCENT EXCEEDS	6.7	13	10

e Estimated

FORT RIVER NEAR AMHERST, MA 01171300



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 mi².

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 good except those for estimated daily discharges, which are poor. Flow regulated by mill upstream.

AVERAGE DISCHARGE.--57 years, 97.7 ft³/s, 24.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s, Aug. 19, 1955, gage height, 11.78 ft, from rating curve extended above 3,700 ft³/s on basis of computation of peak flow over dam; minimum, 2.2 ft³/s, Oct. 1, 1950; minimum daily, 4.2 ft³/s, Aug. 21, 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2230	2,090	6.28	Apr. 16	--	unknown	--
Oct. 28	1130	1,310	4.97	May 12	0445	1,420	5.19
Nov. 12	0845	a2,910	a7.60	July 14	0230	1,970	6.08
Jan. 19	1745	a2,870	a7.57	Aug. 27	2000	1,430	5.20
Jan. 27	1945	*a3,240	*a8.29				

a Discharge considered an estimate; recorded gage height at or near maximum.

Minimum discharge, 7.8 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	123	e98	e60	e270	210	173	566	56	36	35	22
2	8.6	232	e94	e60	e250	181	330	311	51	32	35	19
3	8.1	223	e86	e58	e220	e160	233	236	52	35	29	17
4	9.9	154	e96	e58	e200	e150	184	261	148	57	36	15
5	34	123	e92	e58	e180	e140	162	335	115	43	33	15
6	397	111	e86	e56	e170	e135	154	261	79	31	27	14
7	105	111	e74	e56	e160	e130	158	277	62	26	25	16
8	50	177	e70	e56	e150	e125	183	202	62	24	28	40
9	34	126	e64	e56	e140	e120	180	176	440	29	26	31
10	28	105	e62	e56	e130	e125	206	182	182	28	25	26
11	25	107	e62	e54	e125	e130	213	198	140	23	25	24
12	22	e1120	e64	e54	e120	134	254	847	105	20	21	23
13	19	e640	e60	e54	e120	141	232	364	85	168	20	27
14	35	e330	e62	e56	e115	159	565	248	94	833	21	54
15	113	e640	e64	e58	e110	233	e330	206	73	154	19	33
16	59	e350	e60	e70	e110	268	e1000	182	58	274	15	23
17	39	e250	e58	e94	e105	191	e650	293	52	121	15	37
18	31	e210	e58	e140	e105	177	352	209	49	75	15	515
19	27	e190	e56	e1100	e105	181	274	199	47	60	15	202
20	26	e180	e56	e500	e120	420	235	170	80	78	15	86
21	602	e170	e56	e250	e220	336	203	145	81	62	15	60
22	586	e160	e56	e200	e540	267	182	133	64	39	15	61
23	177	e130	e56	e190	e450	218	263	111	56	34	14	315
24	114	e120	e54	e360	e380	188	265	98	47	39	16	122
25	90	e110	e52	590	e350	200	183	89	44	35	18	105
26	75	e100	e52	288	e300	275	171	81	40	53	14	69
27	66	e96	e54	e1250	275	241	171	76	34	73	223	52
28	e950	e100	e54	e940	329	188	138	73	32	43	181	48
29	364	e120	e56	e660	293	173	376	68	30	33	56	226
30	190	e100	e58	e420	---	167	393	64	30	30	33	101
31	144	---	e60	e310	---	167	---	64	---	30	25	---
TOTAL	4437.3	6708	2030	8212	6142	5930	8413	6725	2488	2618	1090	2398
MEAN	143	224	65.5	265	212	191	280	217	82.9	84.5	35.2	79.9
MAX	950	1120	98	1250	540	420	1000	847	440	833	223	515
MIN	8.1	96	52	54	105	120	138	64	30	20	14	14
CFSM	2.65	4.14	1.21	4.91	3.92	3.54	5.19	4.02	1.54	1.56	.65	1.48
IN.	3.06	4.62	1.40	5.66	4.23	4.09	5.80	4.63	1.71	1.80	.75	1.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1996, BY WATER YEAR (WY)

MEAN	53.9	87.0	97.7	90.9	102	191	236	132	75.6	38.4	35.3	33.4
MAX	456	334	227	287	338	475	478	326	300	125	254	150
(WY)	1956	1956	1974	1978	1981	1953	1993	1984	1982	1973	1955	1975
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

CONNECTICUT RIVER BASIN

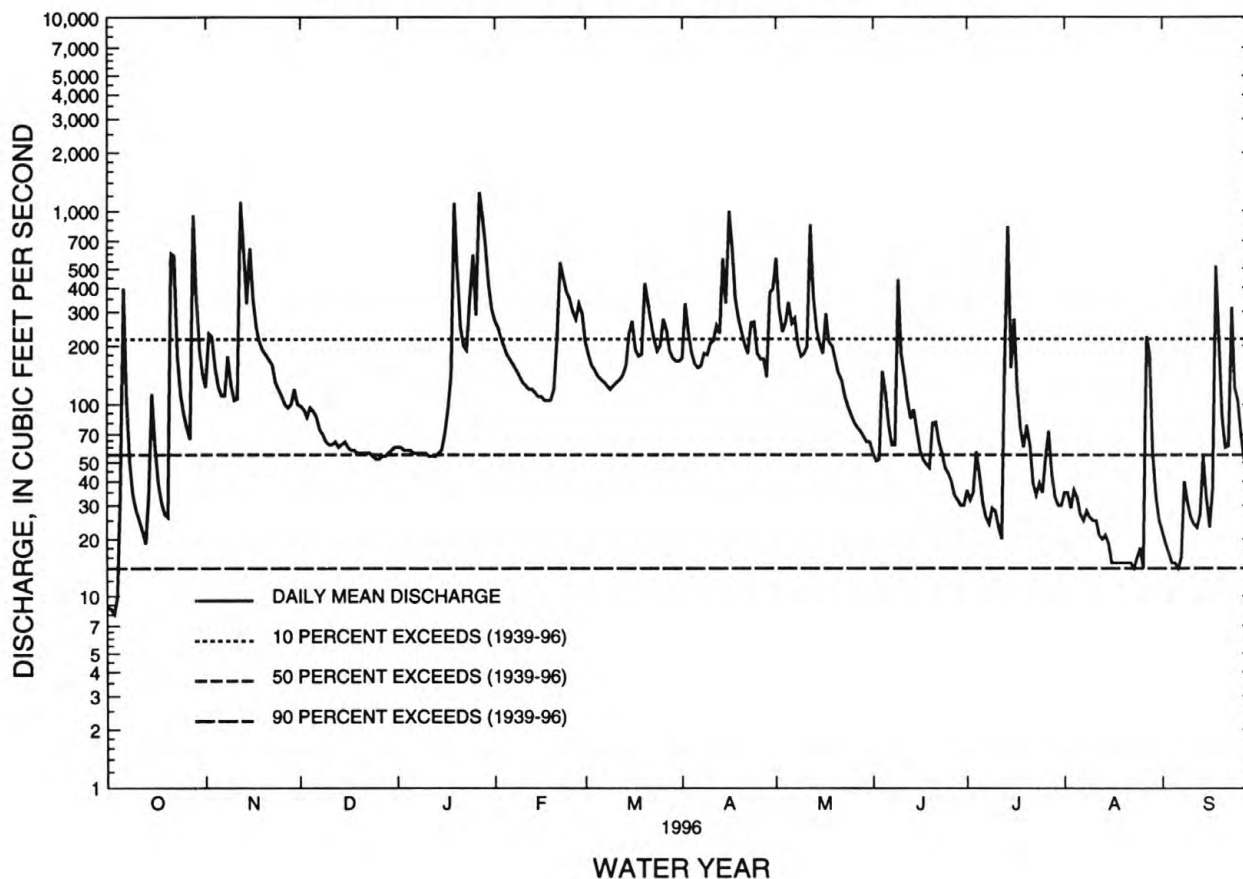
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01171500 MILL RIVER AT NORTHAMPTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1939 - 1996	
ANNUAL TOTAL	30235.5		57191.3		97.7	
ANNUAL MEAN	82.8		156		156	
HIGHEST ANNUAL MEAN					39.1	
LOWEST ANNUAL MEAN					1965	
HIGHEST DAILY MEAN	1120	Nov 12	1250	Jan 27	3870	Aug 19 1955
LOWEST DAILY MEAN	4.8	Sep 16	8.1	Oct 3	4.2	Aug 21 1957
ANNUAL SEVEN-DAY MINIMUM	5.2	Sep 3	15	Aug 17	4.3	Aug 18 1957
INSTANTANEOUS PEAK FLOW			3240	Jan 27	6300	Aug 19 1955
INSTANTANEOUS PEAK STAGE					11.78	Aug 19 1955
INSTANTANEOUS LOW FLOW			8.1	Oct 3		
ANNUAL RUNOFF (CFSM)	1.53		2.89		1.81	
ANNUAL RUNOFF (INCHES)	20.83		39.40		24.58	
10 PERCENT EXCEEDS	170		331		217	
50 PERCENT EXCEEDS	58		103		55	
90 PERCENT EXCEEDS	9.4		25		14	

e Estimated

MILL RIVER AT NORTHAMPTON, MA 01171500



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 mi².

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 except those for periods of estimated record, which are fair. Several measurements of water temperature were made during the year. 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 ft³. 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.--12 years (water years 1985-96), 11,990 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 153,000 ft³/s, June 1, 1984, gage height, 25.62 ft; minimum daily, 519 ft³/s, Sept. 30, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1854, 244,000 ft³/s, Mar. 20, 1936, gage height, 35.0 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,300 ft³/s, Apr. 17, gage height, 18.79 ft; minimum daily, 1,350 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1840	30900	11400	6630	41100	26500	12100	74200	8930	7480	12300	3950
2	1830	23500	12600	7330	32700	19800	13600	76800	9060	7880	14500	3240
3	1350	30200	9790	6130	25700	17300	16400	69600	7560	9480	14200	2580
4	2530	30200	9150	e5600	20100	14500	17300	66100	9290	9180	13400	2380
5	6140	26700	10400	e5000	e15000	12700	15300	56600	10800	11000	11700	2640
6	8570	20800	e9500	e4700	e14000	10700	13500	52900	10000	12800	11400	4080
7	8490	17700	e8500	e4400	e13000	e10200	12200	48100	10200	11200	8550	2600
8	5720	18700	e7500	3970	e12500	e9800	12500	40000	10000	9130	9790	2450
9	5540	20100	e6700	6980	e12000	e9700	12400	31800	12100	9420	9110	2230
10	3620	20600	6000	e6500	13700	e9600	12500	26400	17200	7620	8640	1860
11	4790	17900	5640	e6200	13500	e9500	13500	29000	19300	8750	6070	2730
12	5070	30200	8240	e6000	e11500	12800	14000	56300	20100	9460	6690	3000
13	5360	50000	e8000	e5800	e10000	12500	19000	84300	17700	12100	7540	2770
14	3980	50100	e7800	e5700	e9000	12400	21000	84800	20200	25900	6320	3590
15	5800	48200	e7700	e5600	e8700	12500	31800	72700	12500	33800	5360	2100
16	7250	48900	e7600	e5500	e8400	14400	36600	56100	13200	38300	6110	2000
17	8880	48700	e7500	8910	e8100	17000	83000	45600	11600	44200	5270	4710
18	9530	36600	8530	8930	e7800	15600	83800	35500	9710	35200	3710	7690
19	9800	27000	9260	9540	e7600	15300	68900	25300	8200	29200	5910	7610
20	8790	23500	e8500	41900	10500	19600	63100	26200	10300	20100	5540	6050
21	9590	21200	e8000	54700	12800	23300	56500	32000	9480	14800	6640	3530
22	27400	20500	7510	49600	14700	21800	59000	28900	7360	17700	6500	2390
23	40900	19100	8250	36000	22700	17900	68800	25700	5520	18300	6300	5080
24	33600	17200	7840	37700	31100	18200	77700	20700	9260	17000	4820	7780
25	21300	15400	7620	49600	35900	11300	86500	19400	9730	13700	2670	6280
26	18300	13000	8190	53600	39400	13700	81900	15800	8760	11100	2710	4610
27	15400	9230	8840	48300	34900	15800	74100	12500	11200	15000	5490	4550
28	22200	12300	7640	72900	28800	16800	75500	14600	10800	16500	3960	3080
29	48000	14100	8320	69400	28700	15000	70900	11500	7780	18600	4400	5030
30	46500	11400	7790	54200	---	13600	70000	11900	5580	16800	5100	6670
31	39400	---	6210	46000	---	13500	---	9610	---	13200	5450	---
TOTAL	437470	773930	256520	733320	543900	463300	1293400	1260910	333420	524900	226150	119260
MEAN	14110	25800	8275	23660	18760	14950	43110	40670	11110	16930	7295	3975
MAX	48000	50100	12600	72900	41100	26500	86500	84800	20200	44200	14500	7780
MIN	1350	9230	5640	3970	7600	9500	12100	9610	5520	7480	2670	1860

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1996, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	9579	12460	10510	9730	9773	17430	33680	17770	10090	6206	5803	4647	
MAX	16340	25800	20720	23660	21890	34660	58300	40670	31100	16930	14780	8601	
(WY)	1991	1996	1991	1996	1984	1990	1993	1996	1984	1996	1990	1987	
MIN	1512	3540	5787	4760	4250	9579	10270	7366	4088	2578	2718	1378	
(WY)	1985	1985	1985	1989	1987	1989	1995	1987	1988	1991	1985	1984	

CONNECTICUT RIVER BASIN

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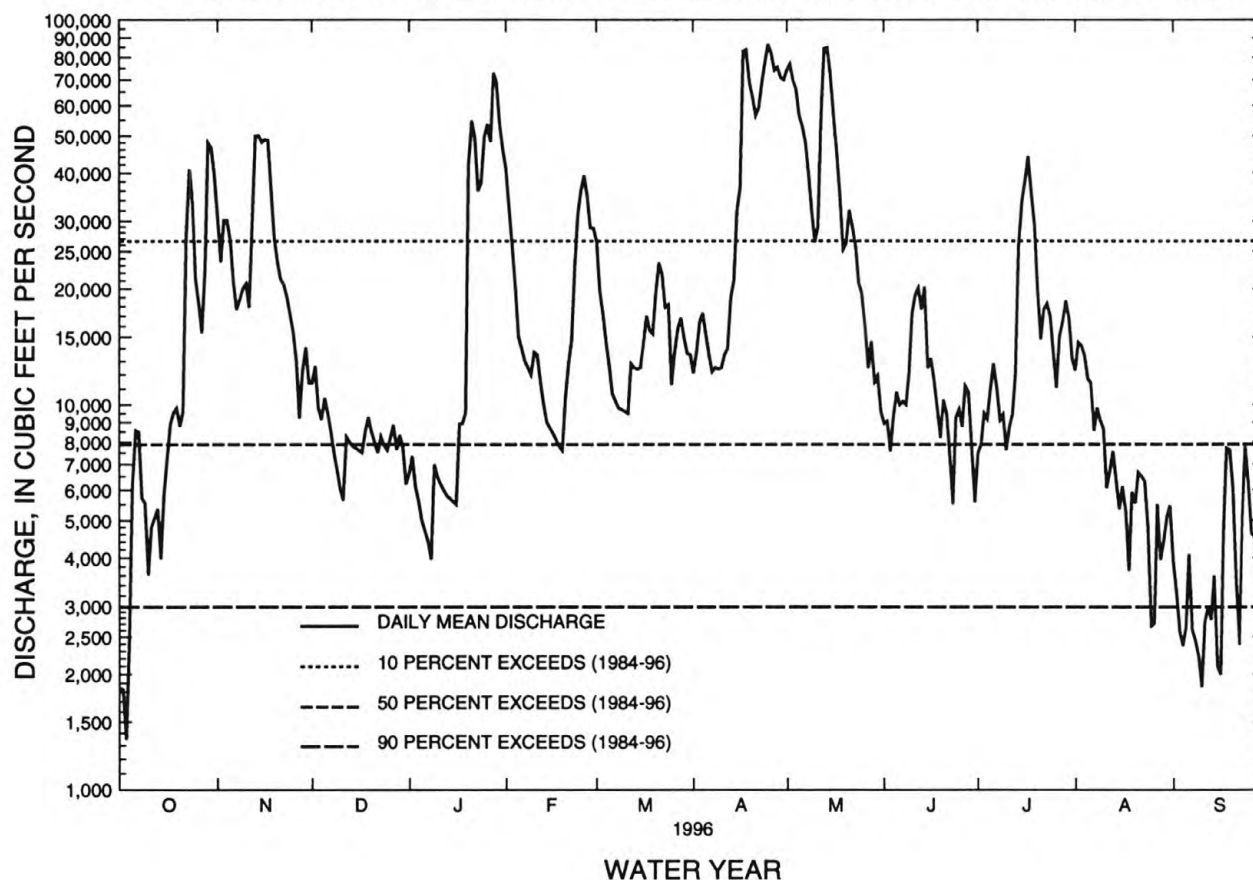
01172003 CONNECTICUT RIVER BELOW HOLYOKE DAM AT HOLYOKE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1984 - 1996	
ANNUAL TOTAL	3799944		6966480		11990	
ANNUAL MEAN	10410		19030		19030	
HIGHEST ANNUAL MEAN					6580	
LOWEST ANNUAL MEAN					1985	
HIGHEST DAILY MEAN	50100	Nov 14	86500	Apr 25	145000	Jun 1 1984
LOWEST DAILY MEAN	911	Sep 12	1350	Oct 3	519	Sep 30 1984
ANNUAL SEVEN-DAY MINIMUM	1390	Sep 6	2520	Sep 7	707	Sep 18 1984
INSTANTANEOUS PEAK FLOW			94300	Apr 17	153000	Jun 1 1984
INSTANTANEOUS PEAK STAGE			18.79	Apr 17	25.62	Jun 1 1984
INSTANTANEOUS LOW FLOW			1040	Oct 3	a200	Aug 15 1995
10 PERCENT EXCEEDS	24800		48400		26600	
50 PERCENT EXCEEDS	8120		12000		7880	
90 PERCENT EXCEEDS	1820		4770		2990	

a Occurred when Hadley 1 generator shutdown. Discharge was derived from extending the rating below 2.5 feet.

e Estimated

CONNECTICUT RIVER BL HOLYOKE DAM AT HOLYOKE, MA 01172003



CONNECTICUT RIVER BASIN

01172500 WARE RIVER NEAR BARRE, MA

LOCATION.--Lat 42°25'30", 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 mi².

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 above 200 ft³/s, which are poor, and 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 mi² upstream of station for municipal supply of Fitchburg. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--50 years, 95.2 ft³/s, 23.46 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/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 ft³/s, Sept. 8, 11, 1995. Maximum discharge since construction of Barre Falls Reservoir in 1958, 1,630 ft³/s, Apr. 13, 1987, gage height, 5.56 ft; maximum gage height, 5.62 ft, Mar. 14, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,350 ft³/s, Jan. 30, gage height, 5.34 ft; no flow part of each day Sept. 3-8, 13; minimum daily, 1.5 ft³/s, Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	138	83	50	1140	199	154	63	56	17	32	3.0
2	2.6	73	83	50	755	179	154	127	48	16	31	2.7
3	1.8	146	83	49	408	179	197	183	46	16	27	2.4
4	2.0	213	83	49	312	177	245	212	63	34	31	1.9
5	3.3	204	91	48	280	e177	208	186	68	27	35	1.7
6	39	130	108	47	223	170	143	217	58	20	28	1.6
7	72	62	116	47	172	168	132	229	47	15	23	1.5
8	53	183	87	47	141	e140	142	293	47	13	20	2.4
9	37	155	72	47	133	e126	151	362	89	14	17	2.6
10	25	125	72	47	134	e126	165	359	120	21	16	2.5
11	13	105	72	47	132	e124	181	210	108	16	14	2.6
12	18	162	68	47	150	e108	212	11	82	12	12	2.6
13	11	288	52	47	156	e106	261	106	66	11	25	2.3
14	9.3	157	42	48	117	e110	296	262	83	10	22	2.2
15	52	244	39	48	98	e124	394	341	71	122	16	2.1
16	67	499	39	59	89	e132	185	363	54	239	11	2.2
17	54	393	40	65	84	e137	19	204	44	337	8.2	2.5
18	22	221	45	64	84	e173	295	232	37	265	6.4	87
19	5.0	186	48	39	85	163	682	226	31	60	5.2	103
20	41	185	53	18	80	210	781	246	48	50	4.5	156
21	65	172	57	166	58	352	782	152	63	40	4.8	208
22	207	138	57	417	e129	304	818	128	56	31	5.0	66
23	496	122	57	605	e387	269	500	111	48	30	4.1	89
24	361	88	57	311	522	261	322	97	41	48	5.3	87
25	217	66	56	121	522	187	472	82	39	45	6.2	70
26	246	67	56	470	484	162	357	70	35	43	5.5	54
27	90	68	56	248	431	180	265	63	28	43	5.1	44
28	141	68	56	24	e364	186	330	58	23	36	4.9	36
29	280	69	53	442	e265	173	105	53	19	32	4.4	53
30	384	78	50	1130	---	161	104	54	17	41	4.0	63
31	194	---	50	1240	---	159	---	61	---	34	3.6	---
TOTAL	3212.9	4805	1981	6137	7935	5422	9052	5361	1635	1738	437.2	1154.8
MEAN	104	160	63.9	198	274	175	302	173	54.5	56.1	14.1	38.5
MAX	496	499	116	1240	1140	352	818	363	120	337	35	208
MIN	1.8	62	39	18	58	106	19	11	17	10	3.6	1.5
(†)	4.7	46.7	33.8	193.2	35.6	22.9	44.6	3.4	2.4	2.9	1.8	3.4
MEAN††	105	176	59.1	257	211	170	310	158	54.1	56.3	13.7	39.1
CFSM††	1.91	3.19	1.07	4.66	3.83	3.09	5.63	2.87	.98	1.02	.25	.71
IN.††	2.19	3.57	1.24	5.39	4.13	3.56	6.28	3.30	1.10	1.18	.29	.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1946	52.6	275	1956	4.17	1965
1947	84.1	233	1957	6.78	1965
1948	102	231	1958	13.1	1966
1949	102	285	1959	8.14	1981
1950	110	274	1960	18.0	1977
1951	176	365	1961	69.3	1967
1952	232	559	1962	77.4	1985
1953	123	257	1963	41.8	1965
1954	74.0	368	1964	14.1	1964
1955	31.3	91.0	1965	4.49	1965
1956	30.3	169	1966	1.97	1965
1957	27.0	205	1967	2.00	1953

CONNECTICUT RIVER BASIN

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01172500 WARE RIVER NEAR BARRE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1946 - 1996
ANNUAL TOTAL	27784.65	48870.9	
ANNUAL MEAN	76.1	134	95.2
ANNUAL MEAN††	76.2	134	95.2
HIGHEST ANNUAL MEAN			157 1984
LOWEST ANNUAL MEAN			29.5 1965
HIGHEST DAILY MEAN	499 Nov 16	1240 Jan 31	1520 Oct 16 1955
LOWEST DAILY MEAN	.10 Sep 8	1.5 Sep 7	.10 Sep 8 1995
ANNUAL SEVEN-DAY MINIMUM	.11 Sep 6	2.0 Sep 3	.11 Sep 6 1995
INSTANTANEOUS PEAK FLOW		420 Jan 30	1890 Oct 16 1955
INSTANTANEOUS PEAK STAGE		5.34 Jan 30	6.31 Oct 16 1955
INSTANTANEOUS LOW FLOW		.00 Sep 3	
ANNUAL RUNOFF (CFSM)††	1.38	2.43	1.73
ANNUAL RUNOFF (INCHES)††	18.77	33.01	23.46
10 PERCENT EXCEEDS	178	315	219
50 PERCENT EXCEEDS	61	70	60
90 PERCENT EXCEEDS	1.7	6.3	7.5

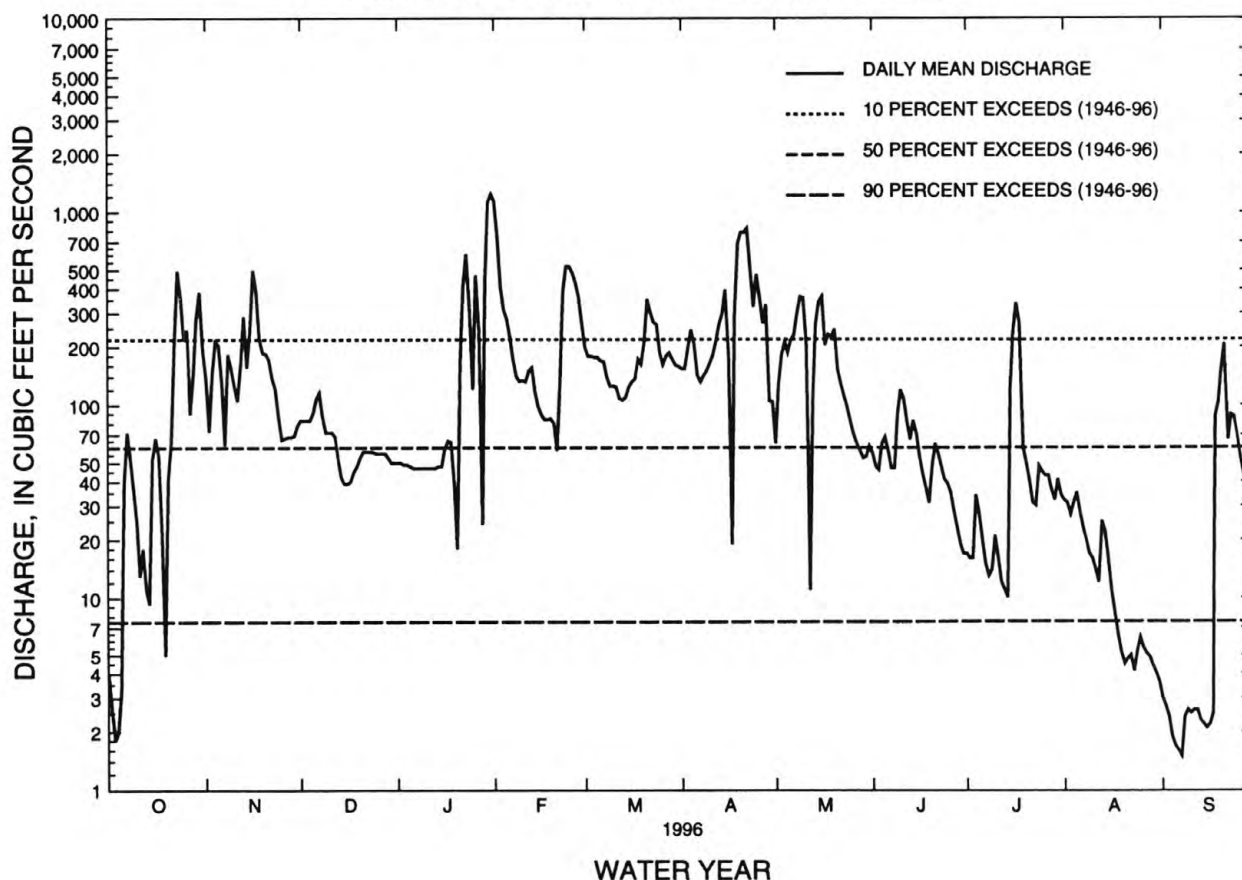
e Estimated

† 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, 1995, 2.0 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.

WARE RIVER NEAR BARRE, MA 01172500



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 mi².

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 mi² 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.--68 years, 168 ft³/s, 23.69 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s, Sept. 21, 1938, gage height, 664.28 ft, by computation of flow over dam; minimum daily, 0.46 ft³/s, Sept. 15, 1987, caused by unusual regulation. Maximum daily discharge since construction of Barre Falls Reservoir in 1958, 1,590 ft³/s, Apr. 14, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,310 ft³/s, Jan. 30; minimum daily, 8.0 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.4	228	170	102	1220	323	278	309	123	49	77	17
2	8.0	256	169	102	860	297	355	345	110	46	74	16
3	8.4	311	166	99	527	277	367	361	115	64	70	16
4	10	334	173	100	385	283	386	377	135	94	124	14
5	33	304	176	88	352	281	329	405	139	81	100	14
6	115	214	200	76	379	288	261	396	135	62	78	13
7	105	162	205	78	363	257	251	404	112	51	69	14
8	72	355	162	80	354	244	269	437	113	45	66	17
9	52	290	149	85	286	227	277	480	193	51	51	16
10	40	238	145	88	250	239	300	485	230	64	46	16
11	27	227	139	95	252	228	319	342	207	59	41	15
12	32	413	138	94	258	214	381	282	161	50	37	15
13	24	479	127	98	251	214	455	348	153	246	50	14
14	41	320	100	99	246	223	542	445	192	352	47	14
15	132	550	103	97	203	251	610	480	160	360	42	13
16	103	691	101	108	173	276	832	480	138	384	35	12
17	78	561	101	122	168	261	817	389	121	423	31	15
18	40	394	107	127	163	293	790	386	91	319	28	206
19	25	367	108	281	170	286	994	365	81	146	25	206
20	66	356	117	447	162	421	1020	362	124	138	23	224
21	169	313	121	478	205	527	974	271	132	108	24	214
22	412	263	119	657	424	456	986	243	125	78	23	145
23	517	244	119	825	612	405	631	215	110	85	23	175
24	378	187	117	620	666	386	529	191	96	108	31	164
25	293	164	117	643	652	312	599	168	89	99	28	147
26	263	162	116	801	615	321	482	152	79	99	24	65
27	127	161	115	745	578	335	421	141	69	97	23	78
28	353	160	113	673	533	324	442	138	61	82	22	74
29	459	160	107	924	414	296	257	133	53	79	21	144
30	462	164	102	1310	---	283	336	127	50	95	19	132
31	306	---	101	1300	---	274	---	131	---	80	17	---
TOTAL	4759.8	9028	4103	11442	11721	9302	15490	9788	3697	4094	1369	2225
MEAN	154	301	132	369	404	300	516	316	123	132	44.2	74.2
MAX	517	691	205	1310	1220	527	1020	485	230	423	124	224
MIN	8.0	160	100	76	162	214	251	127	50	45	17	12
MEAN†	155	317	128	429	341	295	525	300	123	132	43.7	74.8
CFSM†	1.61	3.29	1.33	4.45	3.54	3.06	5.45	3.12	1.28	1.37	.45	.78
IN.†	1.85	3.68	1.53	5.13	3.82	3.54	6.08	3.60	1.42	1.58	.52	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1928	87.4	465	1956	7.86	1965
1929	138	445	1956	13.9	1965
1930	169	413	1974	29.1	1966
1931	177	499	1979	17.2	1981
1932	178	488	1976	37.5	1980
1933	323	1066	1936	118	1940
1934	409	963	1940	129	1985
1935	220	438	1989	83.6	1965
1936	138	503	1984	31.2	1964
1937	68.2	337	1938	11.0	1965
1938	55.6	319	1955	5.93	1966
1939	66.2	893	1938	6.12	1995

CONNECTICUT RIVER BASIN

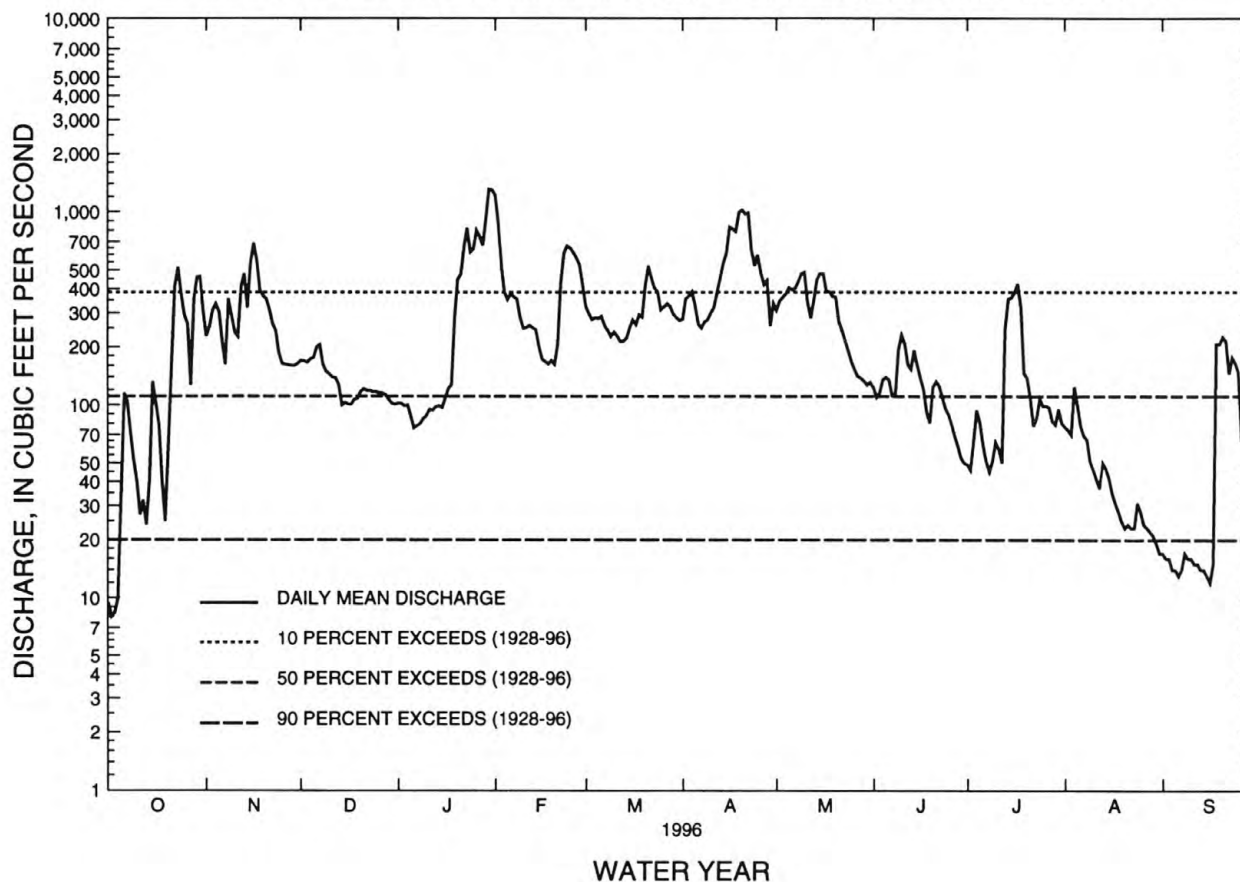
199

01173000 WARE RIVER AT INTAKE WORKS NEAR BARRE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1928 - 1996	
ANNUAL TOTAL	50990.3		87018.8			
ANNUAL MEAN	140		238		168	
ANNUAL MEAN†	140		238		168	
HIGHEST ANNUAL MEAN					277	
LOWEST ANNUAL MEAN					56.4	
HIGHEST DAILY MEAN	691		1310		8740	
LOWEST DAILY MEAN	3.2		8.0		.46	
ANNUAL SEVEN-DAY MINIMUM	3.9		14		3.4	
INSTANTANEOUS PEAK FLOW					14000	
INSTANTANEOUS PEAK STAGE					664.28	
ANNUAL RUNOFF (CFSM)†	1.45		2.47		1.74	
ANNUAL RUNOFF (INCHES)†	19.70		33.61		23.69	
10 PERCENT EXCEEDS	313		495		383	
50 PERCENT EXCEEDS	119		164		111	
90 PERCENT EXCEEDS	8.2		28		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.

WARE RIVER AT INTAKE WORKS NEAR BARRE, MA 01173000



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.

PERIOD OF RECORD.--Discharge: August 1912 to current year.
Water-quality records: Water years 1953-54.

WSP 1301: 1914(M). WDR MA-RI-84-1: Drainage area.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion at times: Since March 1931 from 96.3 mi² for supply of Boston metropolitan district and since 1955 from 6.5 mi² 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s, Sept. 21, 1938, gage height, 18.2 ft, from floodmarks, from rating curve extended above 4,600 ft³/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 ft³/s, Aug. 24, 1995; minimum daily, 6.0 ft³/s, Oct. 4, 1914. Maximum discharge since construction of Barre Falls Reservoir in 1958, 5,050 ft³/s, Mar. 6, 1979, gage height, 7.94 ft.

MEAN	166	254	294	323	319	508	588	375	248	141	124	139
MAX	750	922	653	794	802	1838	1394	830	746	714	890	1707
(WY)	1956	1956	1939	1996	1976	1936	1956	1996	1984	1938	1955	1938
MIN	29.0	39.0	68.5	29.6	77.7	210	231	167	69.5	36.5	25.8	14.5
(WY)	1965	1965	1966	1981	1980	1989	1966	1965	1964	1965	1964	1953

CONNECTICUT RIVER BASIN

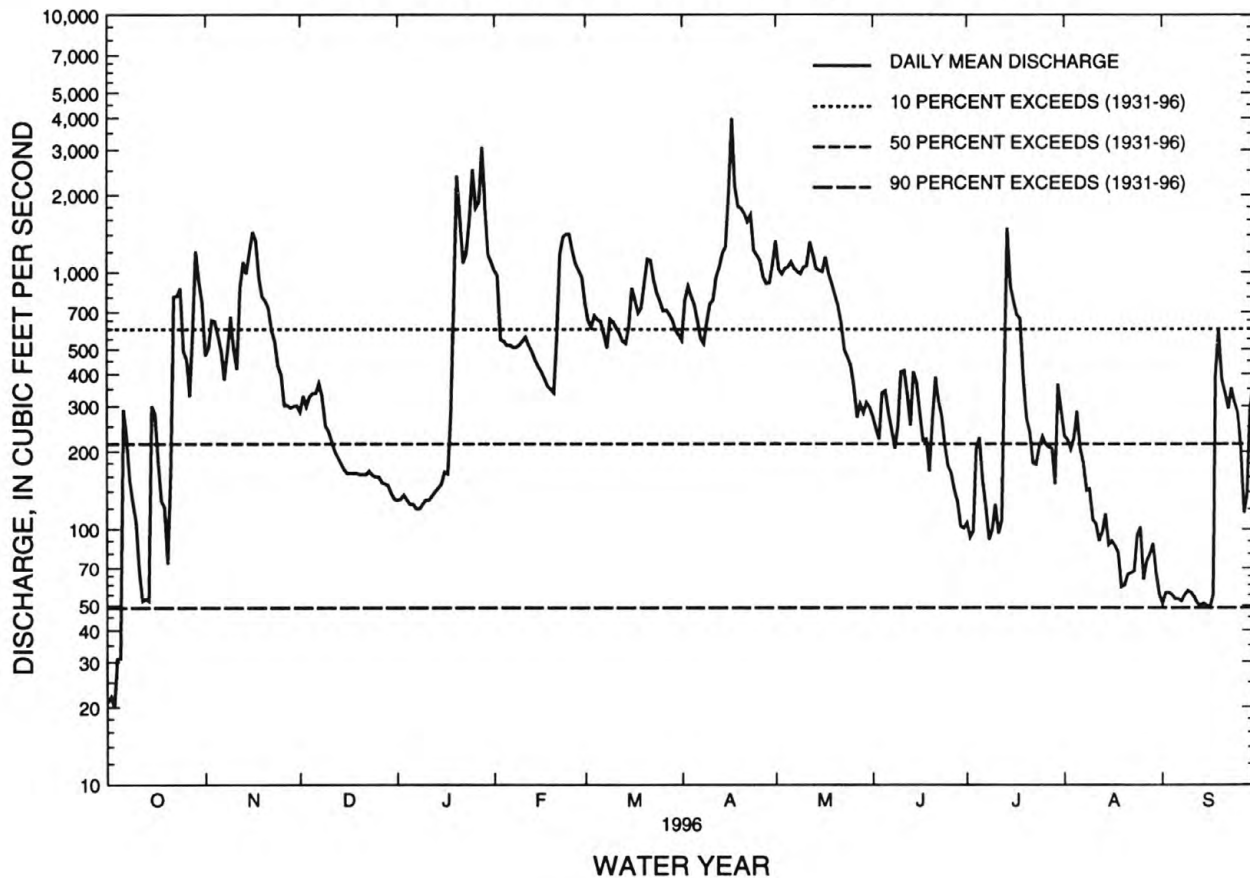
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01173500 WARE RIVER AT GIBBS CROSSING, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1931 - 1996	
ANNUAL TOTAL	104794		191003		290	
ANNUAL MEAN	287		522		581	
HIGHEST ANNUAL MEAN					107	
LOWEST ANNUAL MEAN					16700	
HIGHEST DAILY MEAN	1630	Mar 9	3990	Apr 17	16700	Sep 21 1938
LOWEST DAILY MEAN	12	Sep 6	20	Oct 3	7.0	Sep 12 1953
ANNUAL SEVEN-DAY MINIMUM	12	Sep 6	51	Sep 11	9.4	Sep 8 1953
INSTANTANEOUS PEAK FLOW			4550	Apr 17	22700	Sep 21 1938
INSTANTANEOUS PEAK STAGE			7.86	Apr 17	18.20	Sep 21 1938
INSTANTANEOUS LOW FLOW			19	Oct 3	4.2	Aug 24 1995
10 PERCENT EXCEEDS	662		1140		600	
50 PERCENT EXCEEDS	220		339		214	
90 PERCENT EXCEEDS	26		78		49	

e Estimated

WARE RIVER AT GIBBS CROSSING, MA 01173500



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 mi².

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 except those for estimated daily discharges, which are poor. No flow at times during several years. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--59 years, 71.3 ft³/s, 22.17 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/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.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 29	0215	424	20.33	Feb. 23	0430	359	20.23
Nov. 15	2130	353	20.22	Apr. 17	0245	*1,180	*21.34
Jan. 20	1130	677	20.70	May 12	2015	444	20.39
Jan. 25	0945	769	20.83	July 14	0630	836	20.92
Jan. 28	0815	882	20.98				

No flow Oct. 1-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	112	73	e42	178	e170	101	309	52	30	79	13
2	.00	119	72	e42	154	e150	158	277	46	29	73	13
3	.00	171	70	e42	142	e130	186	208	48	33	67	12
4	.00	153	71	e41	119	e120	163	197	81	97	136	11
5	.00	120	74	e41	101	e125	138	222	89	101	124	10
6	1.6	98	76	e41	96	e115	122	211	74	71	92	10
7	17	90	74	e40	93	e110	115	196	57	52	70	10
8	25	118	70	e40	99	e105	119	172	56	41	55	10
9	23	124	64	e40	110	e98	121	146	153	53	46	10
10	19	105	65	e40	116	e94	144	141	177	61	42	11
11	16	91	55	e41	116	e87	143	159	146	54	37	12
12	13	196	51	e46	114	e88	172	352	110	43	32	12
13	12	271	49	52	97	e90	208	373	102	178	31	11
14	11	210	48	46	85	e96	257	251	252	723	29	11
15	58	285	49	45	80	e125	273	181	171	378	28	10
16	79	304	49	42	78	e200	452	152	109	231	26	9.8
17	65	213	49	43	79	e180	985	183	85	158	25	12
18	45	164	e49	49	73	e156	521	175	68	108	23	102
19	37	153	e48	115	67	143	320	151	58	81	21	190
20	33	151	e48	607	65	179	239	135	80	73	18	121
21	49	141	e47	427	101	219	203	118	101	59	18	77
22	187	124	e47	266	254	208	171	102	86	49	18	58
23	176	108	e46	189	340	180	181	91	76	49	19	76
24	116	100	e46	219	305	154	193	77	65	63	29	76
25	82	91	e45	678	e282	136	168	66	58	62	31	65
26	65	86	e45	431	e228	141	147	59	54	68	27	52
27	51	83	e44	347	e201	150	141	55	44	77	23	43
28	192	79	e44	780	e183	138	123	52	38	69	21	37
29	377	82	e43	469	e180	124	128	50	33	56	18	99
30	234	76	e43	307	---	115	217	55	29	86	16	121
31	151	---	e43	232	---	106	---	55	---	87	14	---
TOTAL	2134.60	4218	1697	5840	4136	4232	6609	4971	2598	3320	1288	1304.8
MEAN	68.9	141	54.7	188	143	137	220	160	86.6	107	41.5	43.5
MAX	377	304	76	780	340	219	985	373	252	723	136	190
MIN	.00	76	43	40	65	87	101	50	29	29	14	9.8
CFSM	1.58	3.22	1.25	4.31	3.26	3.12	5.04	3.67	1.98	2.45	.95	1.00
IN.	1.82	3.59	1.44	4.97	3.52	3.60	5.63	4.23	2.21	2.83	1.10	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1937 - 1996, BY WATER YEAR (WY)

	MEAN	37.9	63.2	74.9	78.7	78.7	133	162	92.6	58.7	29.6	23.4	26.5
MAX	155	177	161	192	207	266	420	189	175	179	127	390	
(WY)	1980	1956	1939	1979	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	9.03	3.23	.80	.000	
(WY)	1965	1965	1981	1981	1940	1965	1985	1985	1964	1949	1953	1995	

CONNECTICUT RIVER BASIN

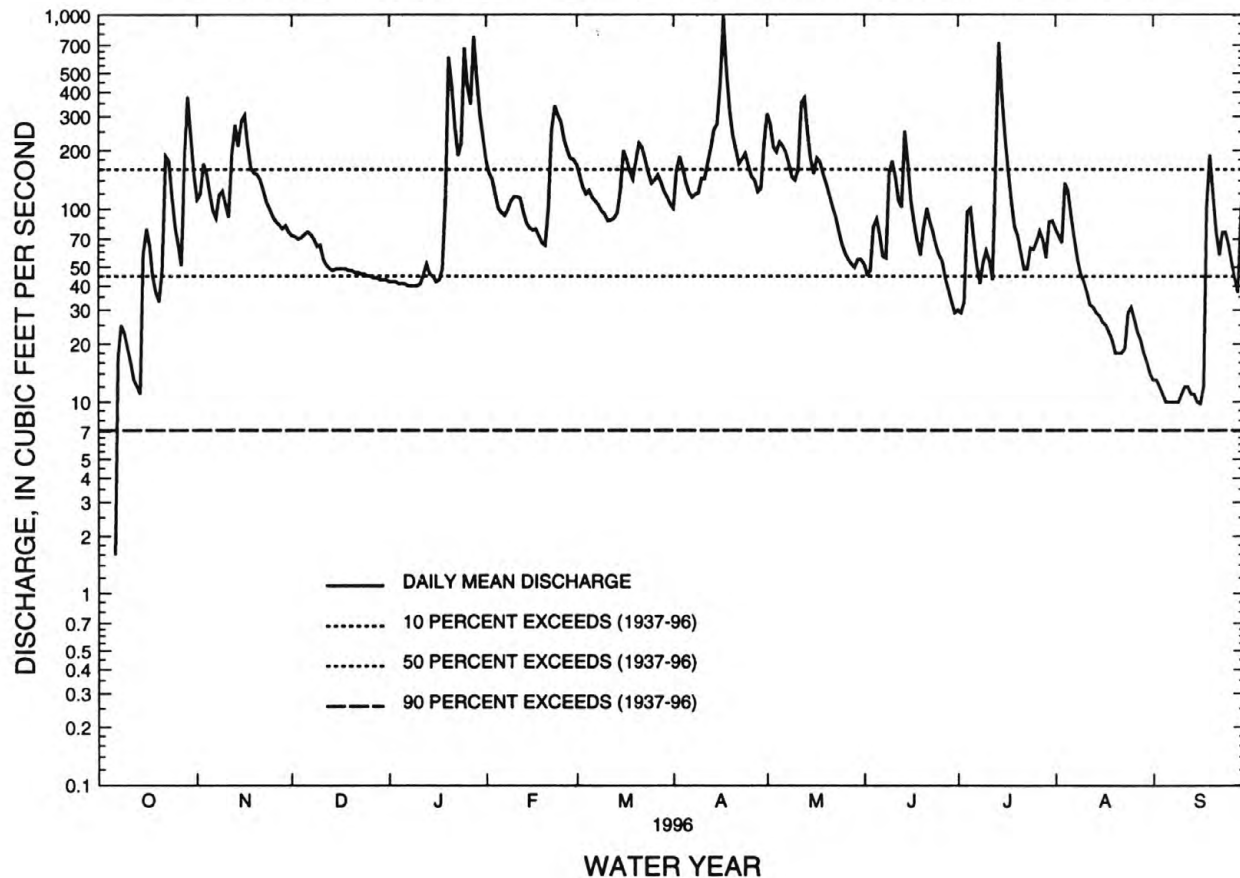
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01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1937 - 1996
ANNUAL TOTAL	24382.46	42348.40	
ANNUAL MEAN	66.8	116	71.3
HIGHEST ANNUAL MEAN			123 1938
LOWEST ANNUAL MEAN			22.8 1965
HIGHEST DAILY MEAN	438 Mar 9	985 Apr 17	4690 Sep 21 1938
LOWEST DAILY MEAN	.00 Aug 22	.00 Oct 1	.00 Aug 15 1939
ANNUAL SEVEN-DAY MINIMUM	.00 Aug 22	2.7 Oct 1	.00 Aug 31 1953
INSTANTANEOUS PEAK FLOW		1180 Apr 17	6780 Sep 21 1938
INSTANTANEOUS PEAK STAGE		21.34 Apr 17	22.49 Jun 25 1944
INSTANTANEOUS LOW FLOW		.00 Oct 1	.00 Aug 7 1939
ANNUAL RUNOFF (CFSM)	1.53	2.65	1.63
ANNUAL RUNOFF (INCHES)	20.76	36.05	22.17
10 PERCENT EXCEEDS	151	224	161
50 PERCENT EXCEEDS	52	84	45
90 PERCENT EXCEEDS	.00	20	7.1

e Estimated

EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA 01174500



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 mi².

PERIOD OF RECORD.--November 1983 to September 1985, April to September 1995.

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, which are poor.

AVERAGE DISCHARGE.--2 years (water years, 1985, 1996) 22.2 ft³/s, 23.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 801 ft³/s May 30, 1984, gage height, 4.64 ft, from rating curve extended above 310 ft³/s on basis of slope-area measurement at gage height 4.28 ft; minimum, about 0.35 ft³/s, mid-September 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 320 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 28	--	unknown	--	June 9	0200	369	3.46
Jan. 20	0415	324	3.30	June 14	0245	*a1,450	*5.87
Jan. 27	2300	a732	4.48	July 14	0300	a646	4.27
Apr. 16	1845	a682	4.36				

a From rating curve extended above 310 ft³/s on basis of slope-area measurement at gage height 4.28 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	e35	21	e10	e43	46	34	121	13	11	11	1.4
2	.97	e49	21	11	41	40	63	67	12	9.5	11	1.3
3	.92	e44	20	e10	38	37	52	55	13	8.5	9.6	1.2
4	1.5	e38	20	e10	e36	e33	41	65	25	14	10	1.2
5	3.7	e33	20	e10	e34	e33	35	80	20	12	8.3	1.2
6	49	e28	21	e10	e33	33	33	65	15	8.7	7.0	1.3
7	23	e31	19	e10	e31	31	32	59	13	7.7	6.3	1.4
8	11	e38	17	e10	31	30	34	48	32	6.8	5.7	1.6
9	6.9	e35	17	e10	31	e28	33	41	e180	6.8	5.5	1.9
10	4.6	e31	e17	e10	30	e26	37	45	e62	7.4	5.0	1.8
11	3.8	e28	e16	e10	29	e26	39	48	e41	5.2	4.3	1.6
12	3.2	e100	e16	e10	28	26	54	92	29	4.5	4.0	1.4
13	3.0	e60	e16	e10	e26	27	61	65	23	58	4.2	1.4
14	3.4	e45	e16	e11	e23	30	105	48	377	241	4.1	2.0
15	40	e110	e16	e11	e22	39	78	41	72	53	3.9	1.6
16	21	e52	e15	e11	e21	49	275	42	42	53	3.7	1.4
17	12	e43	14	e11	22	41	226	52	32	34	3.3	3.2
18	8.5	e37	14	12	e20	36	100	43	26	24	3.0	34
19	7.0	e43	13	72	e19	36	74	38	22	19	2.6	21
20	6.0	e40	14	204	18	50	61	33	28	22	2.5	10
21	16	e35	14	83	31	52	53	30	35	16	2.8	6.3
22	61	e31	13	52	86	47	46	27	29	13	2.5	5.9
23	27	e28	13	40	93	40	61	24	25	12	2.7	26
24	17	e27	13	70	85	36	62	22	19	14	3.7	15
25	13	25	e12	151	83	37	48	20	17	13	3.1	11
26	11	24	12	70	66	52	43	18	15	16	2.4	8.0
27	e9.4	23	12	190	56	49	46	17	12	19	2.1	6.2
28	e170	22	11	249	56	40	39	16	11	13	2.1	5.7
29	e110	22	11	90	55	36	51	15	10	10	2.0	38
30	e56	20	11	69	---	34	91	16	10	11	1.7	21
31	e41	---	11	54	---	33	---	14	---	11	1.5	---
TOTAL	741.85	1177	476	1582	1187	1153	2007	1367	1260	754.1	141.6	235.0
MEAN	23.9	39.2	15.4	51.0	40.9	37.2	66.9	44.1	42.0	24.3	4.57	7.83
MAX	170	110	21	249	93	52	275	121	377	241	11	38
MIN	.92	20	11	10	18	26	32	14	10	4.5	1.5	1.2
CFSM	1.90	3.11	1.22	4.05	3.25	2.95	5.31	3.50	3.33	1.93	.36	.62
IN.	2.19	3.47	1.41	4.67	3.50	3.40	5.93	4.04	3.72	2.23	.42	.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1996, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
MEAN	13.3	24.7	29.0	27.8	42.0	35.0	46.2	36.1	23.4	11.9	4.30	4.95	
MAX	23.9	39.2	56.8	51.0	70.6	37.2	83.0	78.1	42.0	24.3	7.71	9.59	
(WY)	1996	1996	1984	1996	1984	1996	1984	1996	1996	1996	1985	1985	
MIN	2.58	10.3	14.9	11.1	13.6	30.5	15.3	10.5	6.34	2.31	2.03	1.05	
(WY)	1985	1985	1985	1985	1985	1985	1985	1985	1985	1995	1995	1995	

CONNECTICUT RIVER BASIN

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01174565 WEST BRANCH SWIFT RIVER NEAR SHUTESBURY, MA--Continued

SUMMARY STATISTICS

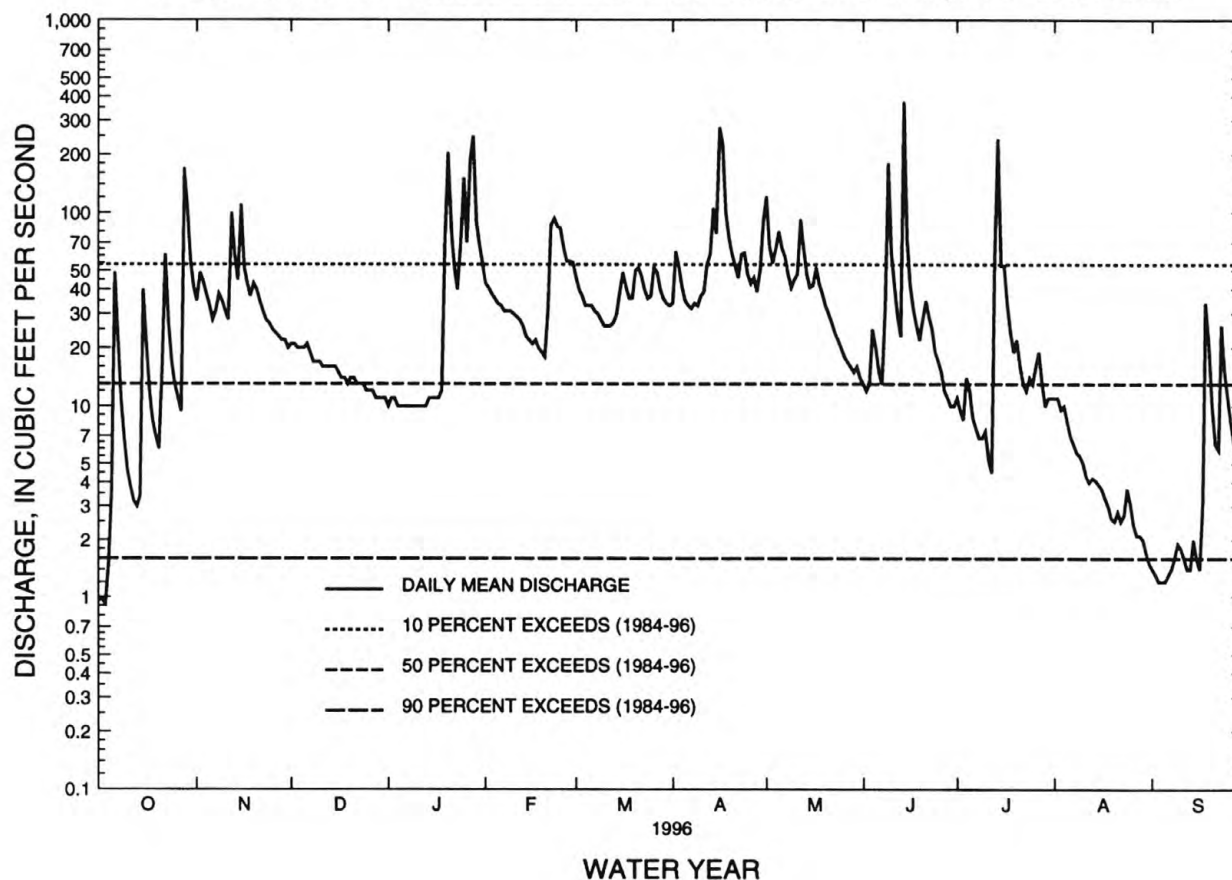
FOR 1996 WATER YEAR

WATER YEARS 1984 - 1996

ANNUAL TOTAL	12081.55		
ANNUAL MEAN	33.0		22.2
HIGHEST ANNUAL MEAN			33.0
LOWEST ANNUAL MEAN			11.3
HIGHEST DAILY MEAN	377	Jun 14	612
LOWEST DAILY MEAN	.92	Oct 3	.35
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 1	.38
INSTANTANEOUS PEAK FLOW	1450	Jun 14	1450
INSTANTANEOUS PEAK STAGE	5.87	Jun 14	5.87
INSTANTANEOUS LOW FLOW	.83	Oct 3	.35
ANNUAL RUNOFF (CFSM)	2.62		1.76
ANNUAL RUNOFF (INCHES)	35.67		23.89
10 PERCENT EXCEEDS	65		54
50 PERCENT EXCEEDS	22		13
90 PERCENT EXCEEDS	3.3		1.6

e Estimated

WEST BRANCH SWIFT RIVER NEAR SHUTESBURY, MA 01174565



CONNECTICUT RIVER BASIN

01174900 CADWELL CREEK NEAR BELCHERTOWN, MA

LOCATION.--Lat 42°20'08", long 72°22'12", Hampshire County, Hydrologic Unit 01080204, on left bank 200 ft upstream from mouth, 2 mi southeast of Knights Corner, and 4.5 mi north of Belchertown.

DRAINAGE AREA.--2.55 mi².

PERIOD OF RECORD.--July 1961 to current year.

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Elevation of gage is 540 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--35 years, 5.14 ft³/s, 27.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 283 ft³/s, Oct. 20, 1989, gage height, 7.39 ft, from rating curve extended above 92 ft³/s; maximum gage height, 7.42 ft, Mar. 6, 1979; minimum discharge, 0.06 ft³/s, Sept. 3, 4, 5, 6, 7, 8, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 28	1000	138	6.81	Jan. 27	2200	156	6.90
Jan. 19	1945	169	6.96	Apr. 16	1800	a192	7.06
24	2230	117	6.70	July 13	1915	a*204	*7.11

a From rating curve extended above 92 ft³/s.

Minimum discharge, 0.18 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	7.9	4.6	2.8	8.9	9.0	5.1	27	2.8	1.5	2.8	.28
2	.21	17	4.6	2.9	8.3	7.8	12	16	2.3	1.2	2.6	.26
3	.19	15	4.5	3.1	e7.5	7.3	9.4	12	2.6	3.1	2.0	.23
4	.34	10	6.3	3.1	e6.8	6.6	7.4	14	7.1	9.0	1.7	.22
5	1.7	7.8	5.7	2.8	e6.4	6.3	6.4	14	5.7	4.7	1.5	.21
6	17	6.8	5.5	e2.7	e6.2	7.7	5.7	12	4.3	2.6	1.2	.21
7	4.0	7.8	5.1	e2.6	e6.0	6.7	5.5	12	3.4	1.7	1.1	.25
8	2.1	14	4.4	e2.5	e5.8	6.3	5.9	9.5	3.2	8.4	.98	.51
9	1.4	8.4	4.3	e2.4	7.0	5.9	6.9	8.3	8.9	14	.91	.47
10	1.1	6.8	4.3	e2.4	6.7	5.5	7.7	8.6	6.2	5.9	.88	.42
11	.92	6.3	4.1	e2.4	6.7	5.4	8.5	11	5.3	3.5	.75	.37
12	.78	26	3.8	e2.4	6.6	5.5	15	39	3.8	2.3	.66	.33
13	.67	14	3.7	e2.4	5.6	6.5	15	24	7.4	80	.74	.33
14	2.0	13	3.7	e2.6	4.9	7.8	20	15	13	48	.80	.57
15	20	28	3.7	e2.6	4.7	11	15	12	5.9	18	.66	.44
16	5.4	14	3.5	2.6	4.2	18	67	10	3.9	16	.61	.33
17	3.3	10	3.4	3.5	4.3	12	49	15	2.9	9.1	.59	.68
18	2.4	8.5	3.4	4.6	4.1	10	23	12	3.6	6.5	.50	16
19	2.0	11	3.3	60	3.8	10	16	10	2.8	5.6	.42	6.6
20	1.7	9.7	3.4	43	3.9	16	13	9.1	7.6	6.1	.38	3.0
21	11	8.2	3.3	17	8.9	15	11	7.9	8.1	4.5	.52	1.8
22	17	7.1	3.2	11	31	12	9.3	7.5	5.6	3.4	.50	1.3
23	7.1	6.3	3.1	9.0	28	9.4	11	6.5	4.3	3.7	.37	6.6
24	5.1	5.8	3.3	41	23	8.0	12	5.7	3.0	5.1	1.5	4.1
25	4.1	5.4	3.2	45	20	7.7	9.4	5.0	2.7	4.2	1.4	3.0
26	3.4	5.2	3.1	17	15	8.2	8.3	4.4	2.0	5.5	.75	2.2
27	3.1	5.0	3.0	52	12	7.3	8.9	3.9	1.5	6.0	.49	1.7
28	77	4.8	2.9	62	12	6.3	7.3	3.6	1.3	3.9	.47	1.4
29	29	4.7	2.7	22	12	6.0	10	3.3	1.1	2.8	.46	11
30	13	4.4	2.7	15	---	5.7	21	3.4	1.2	2.7	.36	4.6
31	9.5	---	2.8	12	---	5.3	---	3.4	---	2.5	.30	---
TOTAL	246.74	298.9	118.6	456.4	280.3	262.2	421.7	345.1	133.5	291.5	28.90	69.41
MEAN	7.96	9.96	3.83	14.7	9.67	8.46	14.1	11.1	4.45	9.40	.93	2.31
MAX	77	28	6.3	62	31	18	67	39	13	80	2.8	16
MIN	.19	4.4	2.7	2.4	3.8	5.3	5.1	3.3	1.1	1.2	.30	.21
CFSM	3.12	3.91	1.50	5.77	3.79	3.32	5.51	4.37	1.75	3.69	.37	.91
IN.	3.60	4.36	1.73	6.66	4.09	3.83	6.15	5.03	1.95	4.25	.42	1.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

	3.35	4.85	5.88	5.85	5.99	10.7	10.0	6.51	3.56	1.70	1.64	1.60
MEAN	3.35	4.85	5.88	5.85	5.99	10.7	10.0	6.51	3.56	1.70	1.64	1.60
MAX	15.0	10.3	13.0	14.7	13.9	20.3	18.5	18.1	13.5	9.40	6.68	9.20
(WY)	1990	1976	1991	1996	1976	1977	1967	1984	1982	1996	1994	1975
MIN	.25	.48	1.29	.43	1.28	3.81	3.42	2.14	.50	.24	.13	.11
(WY)	1965	1965	1981	1981	1980	1989	1966	1986	1964	1993	1993	1964

CONNECTICUT RIVER BASIN

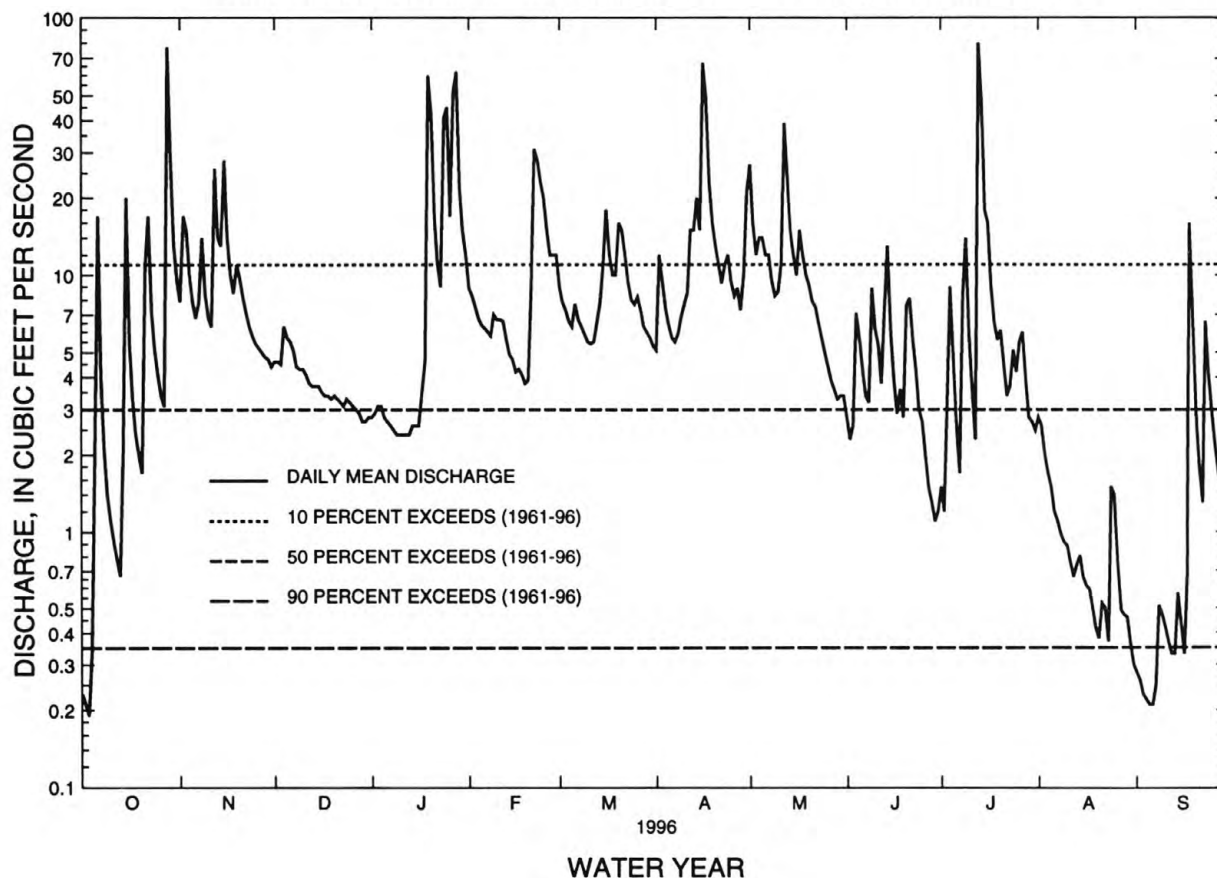
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01174900 CADWELL CREEK NEAR BELCHERTOWN, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1961 - 1996
ANNUAL TOTAL	1740.12	2953.25	
ANNUAL MEAN	4.77	8.07	5.14
HIGHEST ANNUAL MEAN			8.07
LOWEST ANNUAL MEAN			1.85
HIGHEST DAILY MEAN	77 Oct 28	80 Jul 13	181 Mar 6 1979
LOWEST DAILY MEAN	.07 Sep 3	.19 Oct 3	.07 Jul 16 1965
ANNUAL SEVEN-DAY MINIMUM	.08 Sep 2	.24 Sep 1	.08 Sep 2 1995
INSTANTANEOUS PEAK FLOW		204 Jul 13	283 Oct 20 1989
INSTANTANEOUS PEAK STAGE		7.11 Jul 13	7.42 Mar 6 1979
INSTANTANEOUS LOW FLOW		.19 Oct 3	.06 Sep 3 1995
ANNUAL RUNOFF (CFSM)	1.87	3.16	2.01
ANNUAL RUNOFF (INCHES)	25.39	43.08	27.37
10 PERCENT EXCEEDS	10	16	11
50 PERCENT EXCEEDS	3.6	5.4	3.0
90 PERCENT EXCEEDS	.22	.68	.35

e Estimated

CADWELL CREEK NEAR BELCHERTOWN, MA 01174900



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 mi², includes 1.6 mi² drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 mi².

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. Flow regulated since August 1939 by Quabbin Reservoir, usable capacity, 53.8 billion ft³, (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 ft³/s, 22.56 in/yr; 57 years (water years 1940-96), affected by storage and diversions, 93.8 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft³/s, Mar. 19, 1936, gage height, 15.00 ft; minimum daily, 9.1 ft³/s, Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 3,070 ft³/s, June 1, 1984, gage height, 11.58 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 717 ft³/s, June 14, gage height, 5.21 ft; minimum daily, 29 ft³/s, Oct. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	33	38	35	38	37	36	157	282	124	70	114
2	108	36	38	35	38	37	39	167	259	120	67	113
3	108	35	38	35	38	37	37	175	272	83	64	112
4	109	35	38	34	38	37	37	189	321	57	63	111
5	72	35	38	35	e37	37	37	208	315	55	62	111
6	45	34	37	35	37	37	37	251	306	51	61	109
7	34	34	37	35	36	37	37	267	273	50	59	109
8	33	36	37	e39	36	37	37	281	289	46	55	109
9	33	34	37	e38	37	37	37	296	442	50	51	107
10	33	35	37	37	37	37	38	321	481	48	51	108
11	48	34	37	37	37	37	39	386	475	44	48	110
12	46	37	37	37	37	37	39	576	461	41	45	109
13	32	36	37	36	36	37	38	630	476	59	43	109
14	32	36	37	36	36	36	40	640	696	86	42	109
15	35	40	36	35	36	38	38	623	661	106	40	108
16	30	37	36	35	36	38	56	619	572	151	47	109
17	30	37	36	35	36	37	48	700	455	173	56	112
18	30	37	36	35	36	37	52	681	411	179	58	121
19	29	38	35	45	36	37	59	654	332	172	71	112
20	30	38	35	41	36	38	63	638	336	186	100	70
21	33	38	36	37	40	37	71	626	313	151	101	37
22	33	38	36	36	42	37	76	612	274	137	87	36
23	32	38	36	36	39	37	88	569	234	118	70	77
24	30	38	36	43	40	37	98	550	206	109	73	67
25	30	37	37	41	39	36	99	492	193	90	72	39
26	31	38	37	38	38	37	99	429	172	87	91	35
27	32	38	36	48	38	36	109	389	158	84	110	79
28	41	38	36	45	38	36	110	351	152	79	106	114
29	33	38	37	40	37	36	120	338	142	77	84	116
30	33	38	36	39	---	36	137	343	130	75	107	66
31	33	---	34	39	---	36	---	310	---	72	120	---
TOTAL	1386	1096	1134	1172	1085	1143	1851	13468	10089	2960	2174	2838
MEAN	44.7	36.5	36.6	37.8	37.4	36.9	61.7	434	336	95.5	70.1	94.6
MAX	109	40	38	48	42	38	137	700	696	186	120	121
MIN	29	33	34	34	36	36	36	157	130	41	40	35
(†)	46992	48165	48125	49819	51253	52452	54815	55277	54783	54951	53700	53165

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	73.0	79.7	65.4	66.4	74.2	79.8	166	161	127	76.1	78.7	79.1
MEAN	73.0	79.7	65.4	66.4	74.2	79.8	166	161	127	76.1	78.7	79.1
MAX	222	858	330	224	387	330	1099	775	1192	301	149	139
(WY)	1956	1956	1956	1956	1952	1952	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

CONNECTICUT RIVER BASIN

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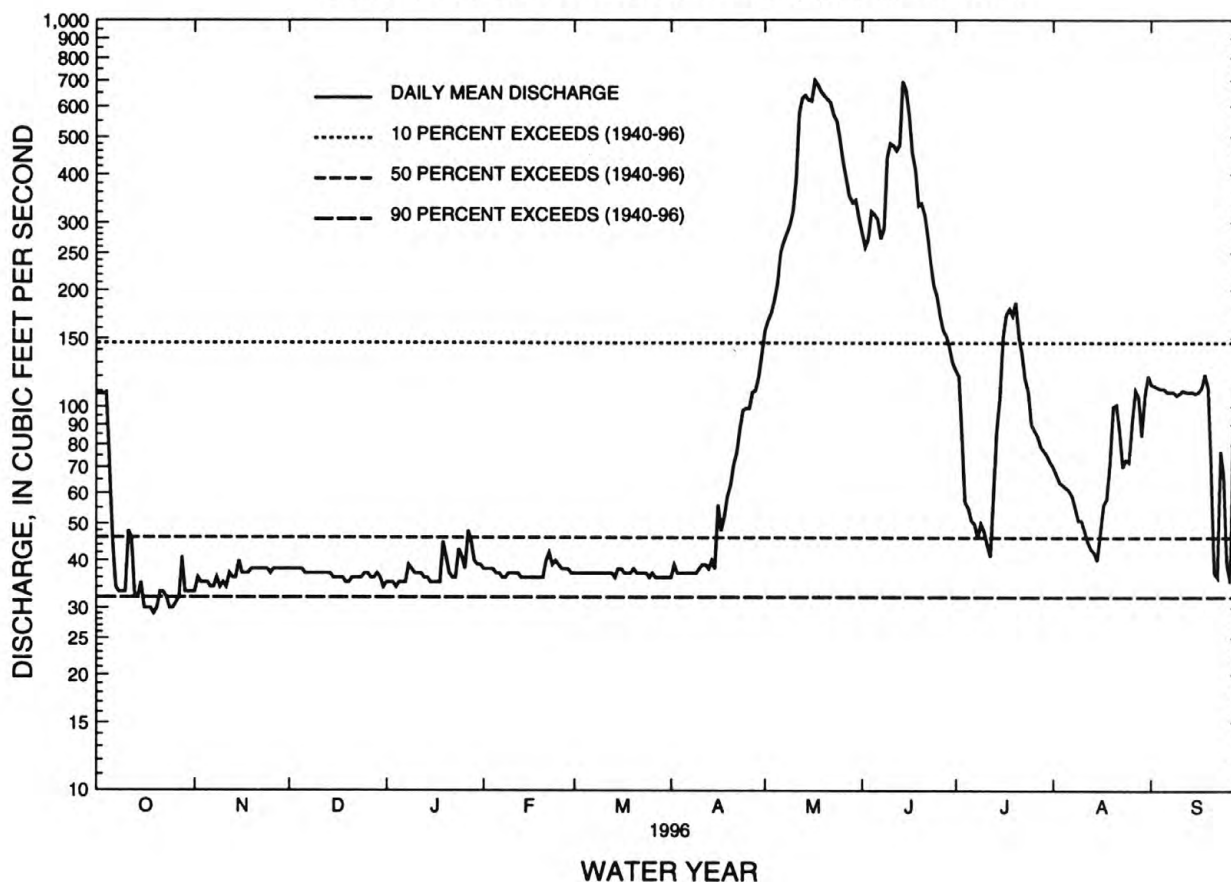
01175500 SWIFT RIVER AT WEST WARE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	17361		40396		93.8	
ANNUAL MEAN	47.6		110		347	
HIGHEST ANNUAL MEAN					30.7	
LOWEST ANNUAL MEAN					3040	
HIGHEST DAILY MEAN	113	Jul 1	700	May 17	9.1	Jun 1 1984
LOWEST DAILY MEAN	22	Jun 14	29	Oct 19	25	Dec 15 1968
ANNUAL SEVEN-DAY MINIMUM	25	Apr 23	31	Oct 16	25	Apr 23 1995
INSTANTANEOUS PEAK FLOW			717	Jun 14	3070	Jun 1 1984
INSTANTANEOUS PEAK STAGE			5.21	Jun 14	11.58	Jun 1 1984
INSTANTANEOUS LOW FLOW			29	Oct 18		
10 PERCENT EXCEEDS	109		311		146	
50 PERCENT EXCEEDS	31		40		46	
90 PERCENT EXCEEDS	26		35		32	

e Estimated

† Monthend contents, in millions of cubic feet (mcf), in Quabbin Reservoir. Records furnished by Watershed Management Division of Metropolitan District Commission. Monthend contents on Sept. 30, 1995, 46631 mcf.

SWIFT RIVER AT WEST WARE, MA 01175500



LOCATION.--Lat 42°15'54", long 72°00'19", Worcester County, Hydrologic Unit 01080204, on right bank 40 ft upstream from bridge on Cooney Road and 1.5 mi north of Spencer.

DRAINAGE AREA.--8.68 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1960. October 1960 to current year. October and November 1960 monthly discharge only, published in WSP 1901.

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

GAGE.--Water-stage recorder and crest-stage gage. Elevation of gage is 630 ft above sea level, from topographic map. Prior to Sept. 25, 1984, at datum 8.83 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Occasional regulation by ponds upstream since 1971.

AVERAGE DISCHARGE.--36 years, 15.0 ft³/s, 23.52 in/vr.

EXTREMES FOR PERIOD OF RECORD:--Maximum discharge, 412 ft³/s, Mar. 18, 1968, gage height, 5.19 ft, datum then in use; maximum gage height, unknown, Apr. 1, 1987, present datum; minimum discharge, 0.04 ft³/s, Sept. 10, 11, 1980 (regulated); minimum daily, 0.12 ft³/s, Sept. 6, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 60 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 22	0130	84	10.79	Jan. 27	2215	295	12.35
Oct. 28	1630	70	10.65	Feb. 21	2245	104	10.98
Nov. 12	1000	75	10.70	Apr. 16	2100	310	12.43
Nov. 15	0745	85	10.80	July 13	2000	176	11.58
Jan. 19	2115	*315	*12.46	Aug. 4	0515	61	10.55
Jan. 25	0030	164	11.49	Sept. 18	1400	119	11.12

Minimum discharge, 0.35 ft³/s, Oct. 4; minimum daily, 0.64 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	18	15	e6.8	e50	25	14	41	14	7.6	8.4	2.1
2	.72	22	15	e6.6	e35	22	24	33	11	7.2	7.8	1.9
3	.66	25	14	e6.6	e30	21	22	30	10	7.5	10	1.5
4	.64	21	15	e6.5	e26	e19	20	36	15	10	49	2.1
5	1.4	18	15	e6.4	e24	18	17	32	e13	9.3	25	2.2
6	13	15	15	e6.4	e23	e24	16	e30	10	7.9	16	1.8
7	9.9	16	14	e6.4	e20	e22	15	e30	9.5	6.4	11	1.9
8	8.1	25	14	e6.3	e18	e20	18	25	10	5.0	8.9	2.3
9	5.9	21	12	e6.3	e20	e20	18	22	15	26	7.6	2.3
10	4.2	18	e12	e6.3	e19	e17	24	23	13	29	e18	1.8
11	3.5	16	e11	e6.5	e18	e17	24	27	16	17	e7.9	1.7
12	3.1	53	e11	e7.0	e17	e14	34	49	13	8.2	e4.4	1.6
13	2.5	43	e10	e8.0	e15	e16	40	42	11	82	4.0	1.7
14	2.5	37	e10	e10	e13	17	49	34	19	104	4.1	2.1
15	15	72	e9.8	e9.5	e12	22	45	30	18	58	3.7	2.0
16	9.3	53	e9.5	e9.0	e12	30	141	27	13	e45	4.0	1.6
17	7.0	41	e9.4	e8.5	e12	27	183	35	9.0	e35	3.0	2.7
18	5.2	34	e9.2	e10	e11	24	104	29	8.0	e22	2.7	71
19	4.1	36	e9.0	e80	e10	23	74	26	7.3	e18	6.4	54
20	3.7	31	e9.0	185	9.9	e46	58	22	22	e15	1.2	26
21	22	28	e8.8	e100	48	44	48	e21	36	e12	1.2	15
22	58	25	e8.4	64	80	36	40	19	26	e10	1.6	11
23	28	22	e8.2	48	60	30	41	16	19	e9.6	5.6	20
24	20	19	e8.1	72	55	26	37	14	14	e12	6.4	14
25	15	18	e8.0	e125	50	23	30	13	12	e13	9.1	11
26	12	17	e7.8	e80	41	23	26	12	9.8	e11	5.3	8.3
27	9.9	16	e7.6	124	35	22	25	9.9	8.7	e9.5	3.6	6.9
28	43	16	e7.5	192	33	19	21	9.2	8.3	e8.2	3.0	6.4
29	44	16	e7.4	e95	30	18	24	8.9	8.5	e6.5	2.7	13
30	29	15	e7.2	71	---	17	40	16	7.9	10	3.3	12
31	22	---	e7.0	55	---	15	---	18	---	7.9	8.0	---
TOTAL	404.07	807	324.9	1424.1	826.9	717	1272	780.0	407.0	629.8	252.9	301.9
MEAN	13.0	26.9	10.5	45.9	28.5	23.1	42.4	25.2	13.6	20.3	8.16	10.1
MAX	58	72	15	192	80	46	183	49	36	104	49	71
MIN	.64	15	7.0	6.3	9.9	14	14	8.9	7.3	5.0	1.2	1.5
CFSM	1.50	3.10	1.21	5.29	3.28	2.66	4.88	2.90	1.56	2.34	.94	1.16
IN.	1.73	3.46	1.39	6.10	3.54	3.07	5.45	3.34	1.74	2.70	1.08	1.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1996, BY WATER YEAR (WY)

MEAN	7.75	12.6	17.4	17.9	18.4	30.4	31.9	18.5	12.0	5.11	4.39	4.04
MAX	29.0	28.0	41.2	56.5	44.8	66.2	69.5	40.5	46.5	20.3	14.4	15.7
(WY)	1976	1976	1984	1979	1970	1983	1987	1967	1982	1996	1979	1975
MIN	.79	1.41	3.56	2.75	3.87	12.9	11.2	6.00	2.78	.80	.39	.32
(WY)	1964	1965	1966	1981	1977	1967	1985	1982	1964	1965	1966	1964

CONNECTICUT RIVER BASIN

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01175670 SEVENMILE RIVER NEAR SPENCER, MA--Continued

SUMMARY STATISTICS

FOR 1995 CALENDAR YEAR

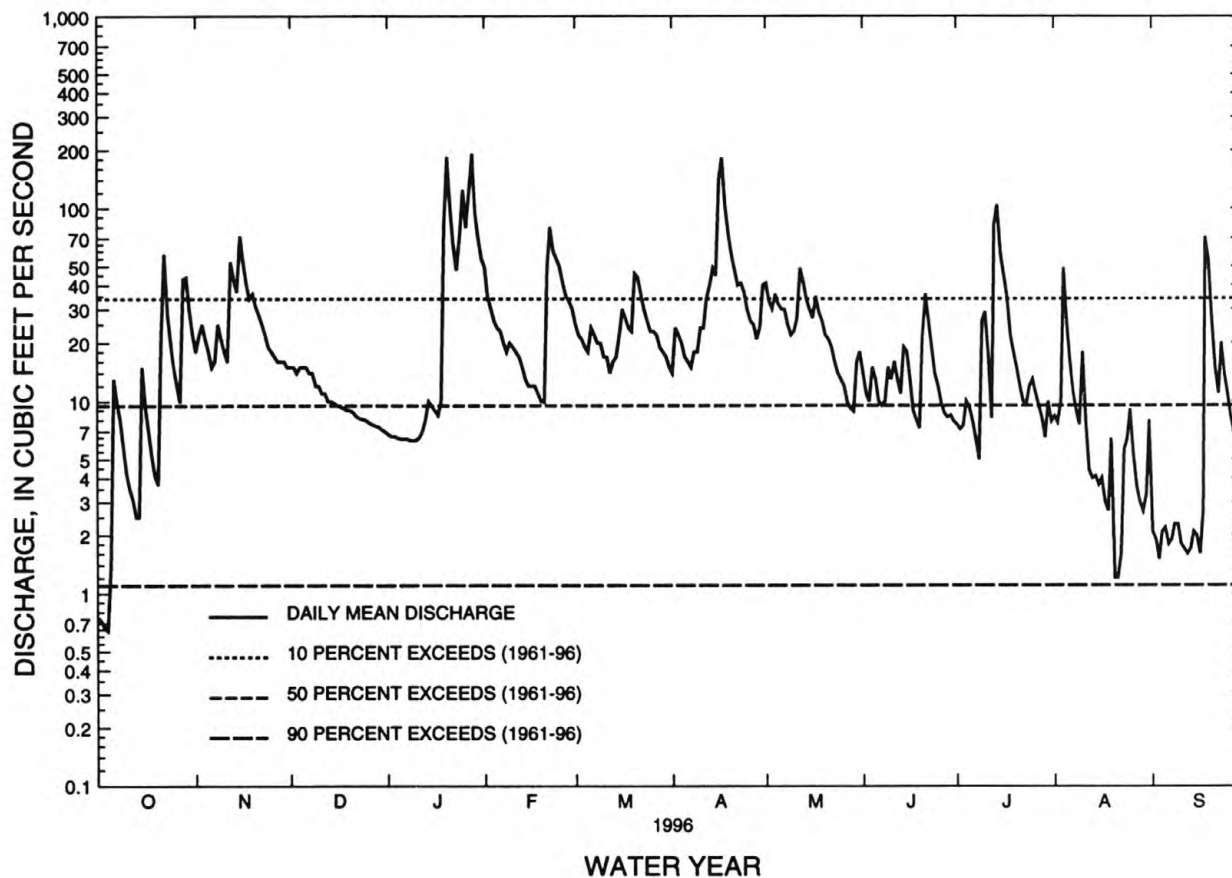
FOR 1996 WATER YEAR

WATER YEARS 1961 - 1996

ANNUAL TOTAL	4342.96	8147.57	15.0	
ANNUAL MEAN	11.9	22.3	22.3	1996
HIGHEST ANNUAL MEAN			5.40	1965
LOWEST ANNUAL MEAN			284	Mar 19 1968
HIGHEST DAILY MEAN	101 Mar 9	192 Jan 28	.12	Sep 6 1995
LOWEST DAILY MEAN	.12 Sep 6	.64 Oct 4	.16	Sep 3 1995
ANNUAL SEVEN-DAY MINIMUM	.16 Sep 3	1.8 Sep 10	412	Mar 18 1968
INSTANTANEOUS PEAK FLOW		315 Jan 19	13.39	Jan 25 1992
INSTANTANEOUS PEAK STAGE		12.46 Jan 19	.04	Sep 10 1980
INSTANTANEOUS LOW FLOW		.35 Oct 4	1.73	
ANNUAL RUNOFF (CFSM)	1.37	2.56	23.52	
ANNUAL RUNOFF (INCHES)	18.61	34.92	34	
10 PERCENT EXCEEDS	28	48	9.5	
50 PERCENT EXCEEDS	9.0	15	1.1	
90 PERCENT EXCEEDS	.47	3.7		

e Estimated

SEVENMILE RIVER NEAR SPENCER, MA 01175670



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 mi².

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.--84 years (water years 1913-96), 247 ft³/s, 22.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s, Aug. 19, 1955, gage height, 15.36 ft, from floodmarks, present site and datum, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 6.6 ft³/s, Sept. 28, 29, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 840 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 19	2100	1,330	6.08	Feb. 24	1515	911	5.27
Jan. 27	2200	*2,030	*7.30	Apr. 16	1815	1,780	6.89

Minimum discharge, 27 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	461	328	e130	e1250	697	388	786	211	93	178	62
2	30	482	301	e125	e1100	656	457	747	200	87	168	67
3	29	499	308	e115	e920	e580	443	720	189	101	176	55
4	30	473	307	e120	e840	e500	437	734	221	115	193	53
5	38	452	300	e135	e760	e480	425	703	204	110	183	52
6	163	432	298	e160	e680	e470	403	688	185	105	181	50
7	152	421	289	e180	e640	e460	390	661	172	97	176	51
8	137	467	270	e185	e580	e450	382	621	158	90	165	54
9	128	433	e249	e175	e540	e440	386	580	149	116	151	53
10	120	419	e230	e175	e500	e430	406	563	157	127	140	53
11	111	402	e240	e170	e450	e420	459	562	161	122	131	52
12	100	623	e240	e165	e400	423	551	704	153	119	124	51
13	92	586	e240	e165	e360	411	587	653	144	376	122	51
14	88	612	e238	e160	e340	422	646	631	140	529	115	50
15	190	782	e230	e160	e320	467	666	600	130	512	108	48
16	170	734	e230	e160	e295	527	1130	580	121	554	101	48
17	167	700	e230	e175	e290	548	1500	625	111	523	94	53
18	155	662	e240	e320	e290	560	1590	596	104	475	87	266
19	141	648	e230	722	e290	564	1570	575	97	431	85	268
20	129	617	e230	938	297	648	1460	537	126	369	78	282
21	253	588	e225	1010	428	663	1330	503	157	317	72	281
22	436	554	e220	982	656	666	1190	481	170	281	68	276
23	401	527	e215	944	807	642	1090	426	163	257	68	331
24	414	497	e210	1100	881	614	966	380	152	251	94	293
25	388	467	e200	1300	832	595	890	330	142	237	88	284
26	352	439	e195	1240	844	568	818	294	131	248	81	263
27	318	417	e180	1400	830	524	746	265	127	239	79	243
28	474	380	e170	1720	790	506	673	238	121	219	76	225
29	500	367	e160	1690	722	480	668	215	105	202	71	270
30	501	344	e150	1620	---	443	749	210	98	188	66	238
31	493	---	e140	1490	---	411	---	216	---	180	64	---
TOTAL	6732	15485	7293	19131	17932	16265	23396	16424	4499	7670	3583	4423
MEAN	217	516	235	617	618	525	780	530	150	247	116	147
MAX	501	782	328	1720	1250	697	1590	786	221	554	193	331
MIN	29	344	140	115	290	411	382	210	97	87	64	48
CFSM	1.45	3.44	1.57	4.11	4.12	3.50	5.20	3.53	1.00	1.65	.77	.98
IN.	1.67	3.84	1.81	4.74	4.45	4.03	5.80	4.07	1.12	1.90	.89	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1996, BY WATER YEAR (WY)

	128	188	249	273	280	484	546	317	190	104	107	107
MEAN	128	188	249	273	280	484	546	317	190	104	107	107
MAX	607	693	600	821	748	1399	1352	573	789	524	1440	1369
(WY)	1956	1956	1928	1979	1970	1936	1940	1943	1984	1938	1955	1938
MIN	11.9	26.9	48.5	46.6	65.2	169	173	108	46.6	17.6	12.8	12.0
(WY)	1958	1950	1931	1981	1977	1989	1915	1930	1964	1965	1957	1957

CONNECTICUT RIVER BASIN

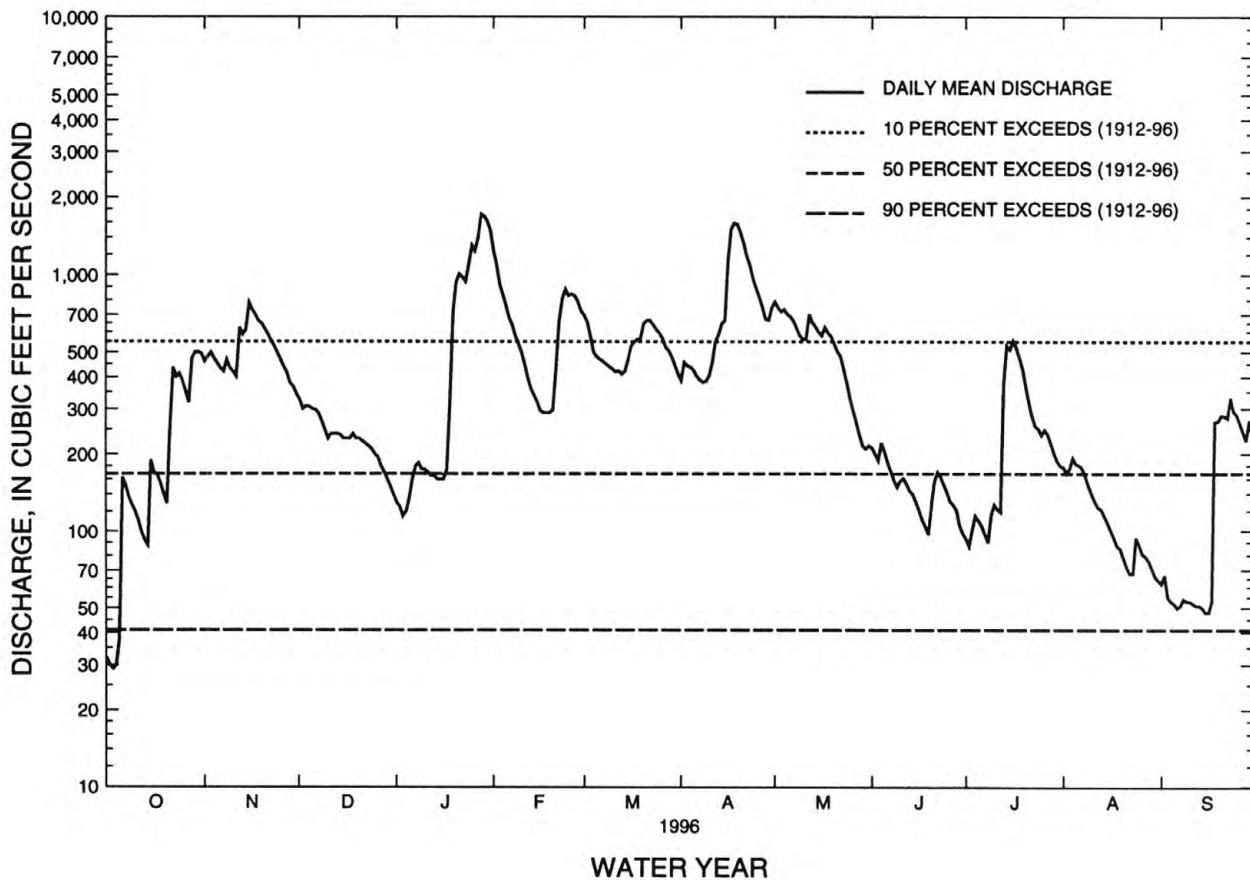
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01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1912 - 1996	
ANNUAL TOTAL	77388		142833		247	
ANNUAL MEAN	212		390		430	
HIGHEST ANNUAL MEAN					104	
LOWEST ANNUAL MEAN					1938	
HIGHEST DAILY MEAN	782	Nov 15	1720	Jan 28	7800	Sep 21 1938
LOWEST DAILY MEAN	14	Sep 16	29	Oct 3	6.6	Sep 28 1957
ANNUAL SEVEN-DAY MINIMUM	15	Sep 10	50	Sep 10	7.0	Sep 25 1957
INSTANTANEOUS PEAK FLOW			2030	Jan 27	12800	Aug 19 1955
INSTANTANEOUS PEAK STAGE			7.30	Jan 27	15.36	Aug 19 1955
INSTANTANEOUS LOW FLOW			27	Oct 4		
ANNUAL RUNOFF (CFSM)	1.41		2.60		1.65	
ANNUAL RUNOFF (INCHES)	19.19		35.42		22.42	
10 PERCENT EXCEEDS	487		752		550	
50 PERCENT EXCEEDS	170		293		168	
90 PERCENT EXCEEDS	26		88		41	

e Estimated

QUABOAG RIVER AT WEST BRIMFIELD, MA 01176000



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 mi².

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 mi² in Swift River basin and at times since 1931 from 97 mi² 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 mi² 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.--68 years, 909 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft³/s, Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 ft³/s, several times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,660 ft³/s, Apr. 17, gage height, 10.74 ft; minimum daily, 208 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	1350	1030	567	2820	1940	1180	2780	1020	633	799	386
2	289	1310	947	536	2640	1780	1530	2550	1120	623	730	398
3	214	1590	969	430	2200	1660	1770	2230	1240	554	664	347
4	208	1480	942	564	1970	1500	1580	2350	1290	707	692	422
5	269	1370	1050	616	1820	1430	1440	2340	1390	709	729	313
6	948	1230	970	772	1860	1600	1330	2270	1020	650	669	314
7	968	1040	921	749	1740	1640	1240	2330	1080	618	640	364
8	622	1400	876	657	1730	1440	1200	2130	991	504	571	350
9	480	1350	866	647	1740	1280	1330	2070	1070	479	539	336
10	400	1290	823	609	1790	1320	1450	2110	1400	586	351	392
11	408	1120	737	551	1690	1390	1570	2190	1510	510	482	354
12	334	1700	688	572	1740	1290	1890	3190	1410	525	471	344
13	252	2260	648	558	1180	1340	2000	3090	1010	963	461	377
14	267	1950	667	555	1260	1350	2190	2690	1500	2810	422	333
15	822	2490	666	554	1230	1580	2310	2530	1570	2330	502	320
16	988	2530	663	498	1170	1980	3460	2440	1370	1990	309	357
17	683	2330	662	560	1130	1950	7150	2820	986	1810	308	350
18	519	2070	659	630	1060	1820	5190	2660	1010	1650	393	1210
19	475	1860	635	1210	995	1750	3960	2480	933	1500	366	1740
20	395	1790	598	4260	1040	1990	3710	2290	922	1170	362	1200
21	524	1670	593	3630	1510	2250	3440	2180	1170	1060	520	917
22	1640	1510	646	2800	2460	2240	3100	2070	1130	1040	449	940
23	1710	1430	632	2570	2870	2060	2990	1910	1050	859	241	1240
24	1420	1250	654	2850	2860	1870	2850	1700	907	863	511	1140
25	1380	1130	613	5010	2840	1750	2350	1600	799	905	530	1040
26	907	1150	596	3830	2600	1670	2310	1480	784	794	548	817
27	1090	951	585	3640	2380	1540	2180	1100	697	891	438	709
28	1520	945	578	6640	2300	1450	1950	1290	693	818	461	679
29	2370	959	531	4900	2180	1370	1950	949	513	783	424	981
30	1970	944	555	3660	---	1280	2560	1250	547	668	382	1160
31	1680	---	512	3340	---	1220	---	1220	---	824	353	---
TOTAL	25980	45449	22512	58965	54805	50730	73160	66289	32132	30826	15317	19830
MEAN	838	1515	726	1902	1890	1636	2439	2138	1071	994	494	661
MAX	2370	2530	1050	6640	2870	2250	7150	3190	1570	2810	799	1740
MIN	208	944	512	430	995	1220	1180	949	513	479	241	313

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1996, BY WATER YEAR (WY)

	MEAN	529	735	881	968	996	1576	1817	1191	811	481	454	490
MAX	1953	3022	2278	2447	2374	5993	4117	2680	3519	2458	3719	5474	
(WY)	1956	1956	1939	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	

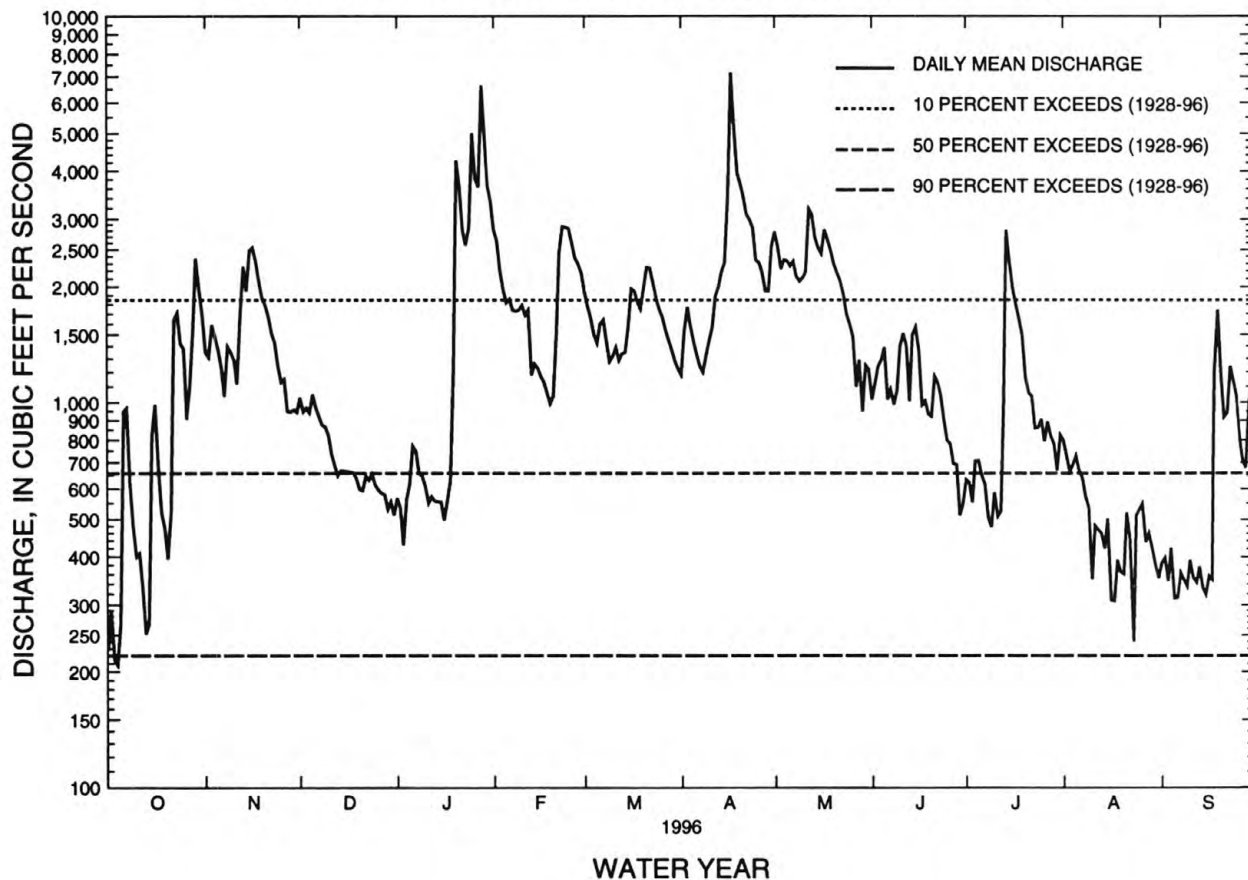
CONNECTICUT RIVER BASIN

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01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1928 - 1996	
ANNUAL TOTAL	282242		495995		909	
ANNUAL MEAN	773		1355		1952	
HIGHEST ANNUAL MEAN					376	
LOWEST ANNUAL MEAN					1938	
HIGHEST DAILY MEAN	2740	Mar 10	7150	Apr 17	37000	Sep 21 1938
LOWEST DAILY MEAN	122	Jul 22	208	Oct 4	16	Sep 1 1929
ANNUAL SEVEN-DAY MINIMUM	165	Sep 2	346	Sep 5	96	Oct 31 1965
INSTANTANEOUS PEAK FLOW			7660	Apr 17	45200	Sep 21 1938
INSTANTANEOUS PEAK STAGE			10.74	Apr 17		
INSTANTANEOUS LOW FLOW			159	May 29		
10 PERCENT EXCEEDS	1570		2540		1850	
50 PERCENT EXCEEDS	659		1130		658	
90 PERCENT EXCEEDS	230		418		220	

CHICOPEE RIVER AT INDIAN ORCHARD, MA 01177000



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.

PERIOD OF RECORD.--Discharge: August 1909 to September 1990, October 1995 to September 1996.
Water-quality records: Water year 1953.

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.

AVERAGE DISCHARGE.--82 years (water years 1910-90, 1996), 331 ft³/s, 27.92 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s, Sept. 21, 1938, gage height, 29.58 ft, from flood-marks, site and datum then in use, from rating curve extended above 3,800 ft³/s on basis of slope-area measurements at gage heights 24.07 ft and 29.58 ft; minimum, 0.1 ft³/s, Apr. 3, 1965; minimum daily, 1.1 ft³/s, Apr. 2, 1965. Maximum discharge since construction of Knightville Reservoir in 1941, 6,660 ft³/s, Mar. 21, 1945, gage height, 7.45 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,550 ft³/s, Apr. 22, gage height, 7.33 ft; minimum, not determined; minimum daily, 12 ft³/s, Oct. 13, 14.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e16	472	335	66	2630	e678	501	2470	155	104	115	39
2	e15	678	338	65	504	553	544	1320	141	93	150	35
3	e14	937	285	67	218	430	761	808	136	88	161	32
4	e15	581	303	134	237	e358	864	842	341	155	464	28
5	e18	437	285	157	275	e333	827	1050	287	147	315	28
6	e570	364	274	157	302	e442	779	1190	204	106	217	27
7	e580	332	232	153	691	e399	729	1080	160	84	154	30
8	e300	512	194	154	168	351	545	729	266	e73	124	51
9	e150	404	184	151	166	306	458	608	1300	e91	104	e65
10	e89	313	199	147	260	295	455	620	807	e87	95	e56
11	e48	303	206	147	264	298	462	797	489	e68	83	e52
12	e22	159	176	126	282	307	489	2140	332	e53	72	e43
13	e12	1580	185	118	284	323	540	1990	256	e300	69	e42
14	e12	2030	201	119	253	166	601	1130	e548	2030	66	90
15	e42	1330	217	119	205	119	1050	707	e293	1810	61	97
16	e180	2910	255	119	192	297	862	629	e203	1410	56	64
17	e110	2890	225	120	189	310	119	900	165	537	53	68
18	e75	1020	193	121	192	621	373	687	149	315	52	778
19	e69	591	175	e139	196	551	2320	680	141	222	47	1270
20	e56	580	180	867	e189	983	1960	556	283	233	43	559
21	e150	566	e180	1810	e392	1400	2020	458	341	176	43	177
22	e1300	548	176	2620	e766	732	3430	433	262	140	46	138
23	e2300	455	169	2900	e1310	558	2800	349	e212	124	42	908
24	e2200	394	169	e680	e1400	538	2770	309	165	125	50	537
25	e1100	339	160	1900	1330	471	3020	273	151	119	62	360
26	e280	336	164	e1720	1150	293	1480	244	137	155	46	273
27	e270	221	128	e290	730	653	849	e222	115	179	41	200
28	e270	385	e71	22	679	899	688	e207	103	128	89	169
29	e1300	484	e78	683	e740	600	516	191	93	108	70	585
30	e2350	358	73	e2680	---	494	2020	178	91	110	56	457
31	e2100	---	65	e3010	---	494	---	174	---	104	44	---
TOTAL	16013	22509	6075	21561	16194	15252	34832	23971	8326	9474	3090	7258
MEAN	517	750	196	696	558	492	1161	773	278	306	99.7	242
MAX	2350	2910	338	3010	2630	1400	3430	2470	1300	2030	464	1270
MIN	12	159	65	22	166	119	119	174	91	53	41	27
(†)	6.6	.9	25.3	205.6	25.1	50.3	46.5	.3	.2	.3	.1	1.0
MEAN††	519	748	205	763	486	501	1160	756	278	306	99.6	242
CFSM†††	3.22	4.65	1.27	4.74	3.02	3.11	7.20	4.7				

MEAN	177	305	303	296	287	615	947	443	249	129	107	124
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

CONNECTICUT RIVER BASIN

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01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA

SUMMARY STATISTICS

FOR 1996 WATER YEAR

WATER YEARS 1909 - 1996

ANNUAL TOTAL	184555		
ANNUAL MEAN	504		331
ANNUAL MEAN††	504		331
HIGHEST ANNUAL MEAN			538
LOWEST ANNUAL MEAN			137
HIGHEST DAILY MEAN	3430	Apr 22	13400
LOWEST DAILY MEAN	12	Oct 13	1.1
ANNUAL SEVEN-DAY MINIMUM	31	Sep 1	8.9
INSTANTANEOUS PEAK FLOW	3550	Apr 22	
INSTANTANEOUS PEAK STAGE	7.33	Apr 22	
INSTANTANEOUS LOW FLOW	12	Oct 13	
ANNUAL RUNOFF (CFSM)††	3.13		2.06
ANNUAL RUNOFF (INCHES)††	42.65		27.92
10 PERCENT EXCEEDS	1310		808
50 PERCENT EXCEEDS	270		164
90 PERCENT EXCEEDS	56		35

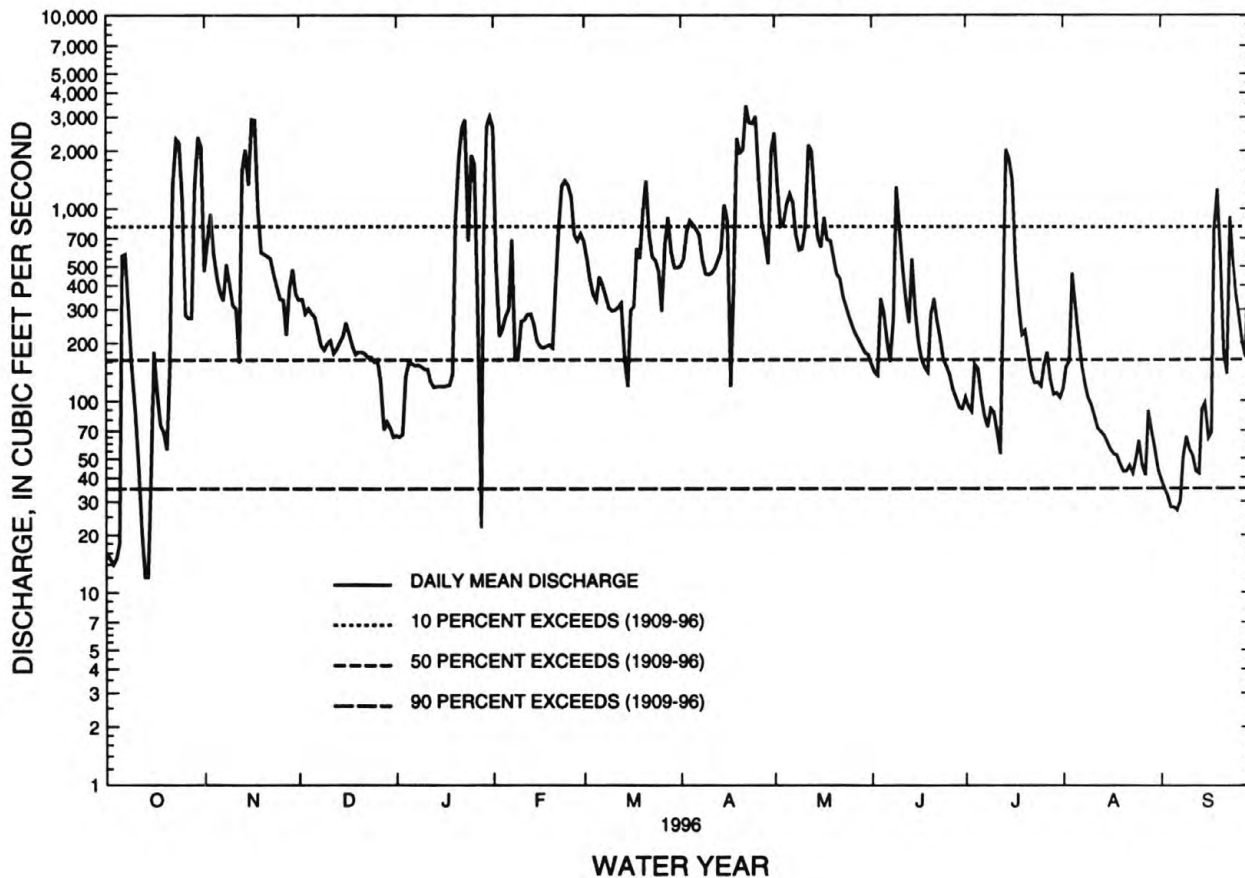
e Estimated

† Monthend contents, in millions of cubic feet (mcf), in Knightville Reservoir. Records furnished by U.S.Army Corp of Engineers. Monthend contents on Sept. 30, 1995, 0.1 mcf.

†† Adjusted for change in contents in Knightville Reservoir.

Note.--Except as footnoted, all statistics are based on unadjusted daily and monthly mean discharges.

WESTFIELD RIVER AT KNIGHTVILLE, MA 01179500



MEAN	105	180	199	181	185	369	505	256	135	66.8	58.9	63.6
MAX	1041	544	664	537	712	1098	1176	761	684	307	632	579
(WY)	1956	1956	1974	1996	1981	1936	1993	1984	1972	1972	1955	1938
MIN	13.4	24.7	39.8	24.3	35.3	112	116	75.6	27.1	8.85	8.46	8.93
(WY)	1958	1965	1947	1981	1980	1941	1985	1986	1964	1991	1957	1953

CONNECTICUT RIVER BASIN

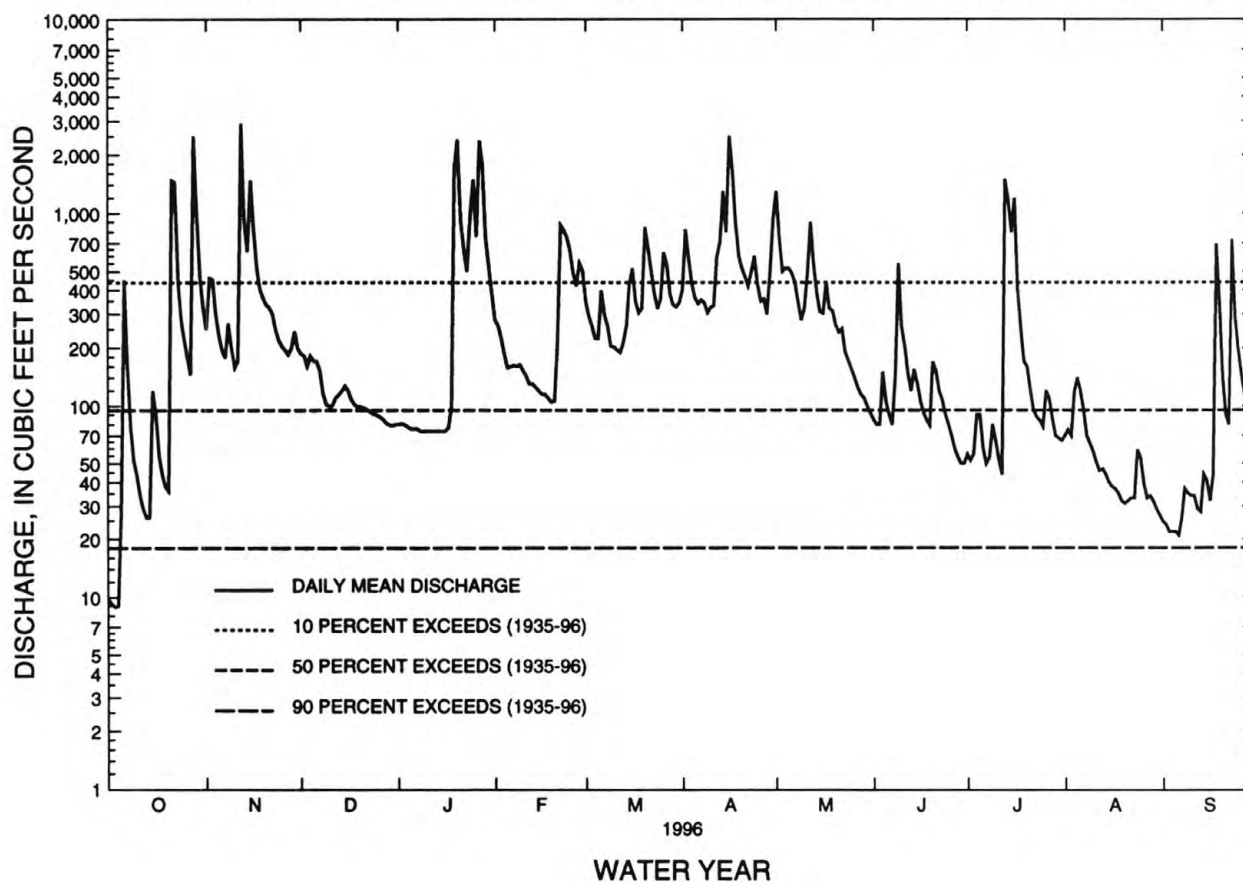
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01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1935 - 1996	
ANNUAL TOTAL	62743.8		110576.8		192	
ANNUAL MEAN	172		302		302	
HIGHEST ANNUAL MEAN					73.6	
LOWEST ANNUAL MEAN					10500	
HIGHEST DAILY MEAN	2900	Nov 12	2900	Nov 12	10500	Aug 19 1955
LOWEST DAILY MEAN	5.2	Sep 14	8.9	Oct 3	3.3	Aug 9 1955
ANNUAL SEVEN-DAY MINIMUM	5.3	Sep 10	23	Sep 1	3.8	Aug 4 1955
INSTANTANEOUS PEAK FLOW			6790	Nov 12	26100	Aug 19 1955
INSTANTANEOUS PEAK STAGE			9.91	Nov 12	15.27	Aug 19 1955
INSTANTANEOUS LOW FLOW			8.3	Oct 4	3.3	Aug 9 1955
ANNUAL RUNOFF (CFSM)	1.83		3.21		2.04	
ANNUAL RUNOFF (INCHES)	24.83		43.76		27.72	
10 PERCENT EXCEEDS	372		716		439	
50 PERCENT EXCEEDS	105		157		95	
90 PERCENT EXCEEDS	11		38		18	

e Estimated

WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA 01181000



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.

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.

REMARKS.--Records good. 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.--82 years, 929 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,300 ft³/s, Aug. 19, 1955, gage height, 34.2 ft, from floodmarks, from rating curve extended above 18,000 ft³/s on basis of computations of flow over dam at gage heights 27.20 ft, 29.40 ft, and 34.2 ft; minimum, 9 ft³/s, Oct. 2, 1921; minimum daily, 40 ft³/s, Dec. 28, 29, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,900 ft³/s, Jan. 28, gage height, 12.80 ft; minimum, 49 ft³/s, Oct. 4; minimum daily, 69 ft³/s, Oct. 3.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	1690	930	372	4420	2050	1580	5820	531	289	443	179
2	100	1560	945	402	2380	1700	2140	3830	483	310	480	171
3	69	2320	829	437	1150	1400	2130	2550	477	299	466	172
4	80	1590	845	482	1050	1240	2070	2370	881	406	623	232
5	143	1230	848	628	1020	1070	1930	2590	860	422	757	196
6	1660	1030	935	564	989	1540	1820	2650	713	341	693	219
7	1480	941	795	610	1280	1480	1700	2730	584	269	598	235
8	638	1250	668	595	1250	1320	1710	2030	586	269	485	243
9	420	1130	591	631	920	1170	1530	1700	2010	409	421	291
10	310	899	605	571	1100	1150	1590	1640	1790	316	370	325
11	249	831	633	537	943	986	1590	1970	1220	275	294	326
12	213	4980	649	557	969	1090	1840	4760	940	220	278	269
13	192	3230	692	501	998	1190	2100	4150	725	2050	346	279
14	171	5120	775	472	943	1310	3280	2980	911	5580	354	393
15	533	4250	629	454	916	1280	3040	2060	708	4280	321	364
16	598	5600	627	573	877	2040	5260	1780	548	4030	249	274
17	391	5090	625	630	809	1610	5220	2350	486	2020	262	330
18	294	2850	709	641	677	1680	2550	1910	448	1230	213	2120
19	257	1800	682	1800	777	1850	4400	1770	425	913	211	2690
20	224	1660	685	5300	684	2870	4630	1480	589	820	179	1560
21	1590	1550	655	4370	1100	3470	4150	1320	728	644	192	757
22	4630	1470	653	4900	2760	2630	5430	1280	686	531	178	580
23	3890	1290	616	4750	3580	1970	5170	1050	524	540	213	2260
24	3800	1150	615	2970	3680	1720	4460	977	469	569	245	1990
25	2180	1030	569	4840	3440	1550	4660	881	401	527	273	1310
26	917	985	556	4550	2780	1900	3280	805	367	584	231	1070
27	720	929	605	4070	2280	2100	2090	729	317	689	282	872
28	3590	693	532	6100	2220	2220	1830	680	280	568	334	710
29	3540	1280	447	2840	2470	1880	1840	647	263	452	269	1510
30	4050	1020	387	5150	---	1460	4170	614	254	431	239	1560
31	3730	---	373	5360	---	1400	---	569	---	444	208	---
TOTAL	40731	60448	20705	66657	48462	52326	89190	62672	20204	30727	10707	23487
MEAN	1314	2015	668	2150	1671	1688	2973	2022	673	991	345	783
MAX	4630	5600	945	6100	4420	3470	5430	5820	2010	5580	757	2690
MIN	69	693	373	372	677	986	1530	569	254	220	178	171

MEAN	516	826	898	880	888	1674	2333	1223	727	404	389	399
MAX	4587	3344	2446	2635	2663	5064	5225	2630	2792	1738	3237	2938
(WY)	1956	1928	1974	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

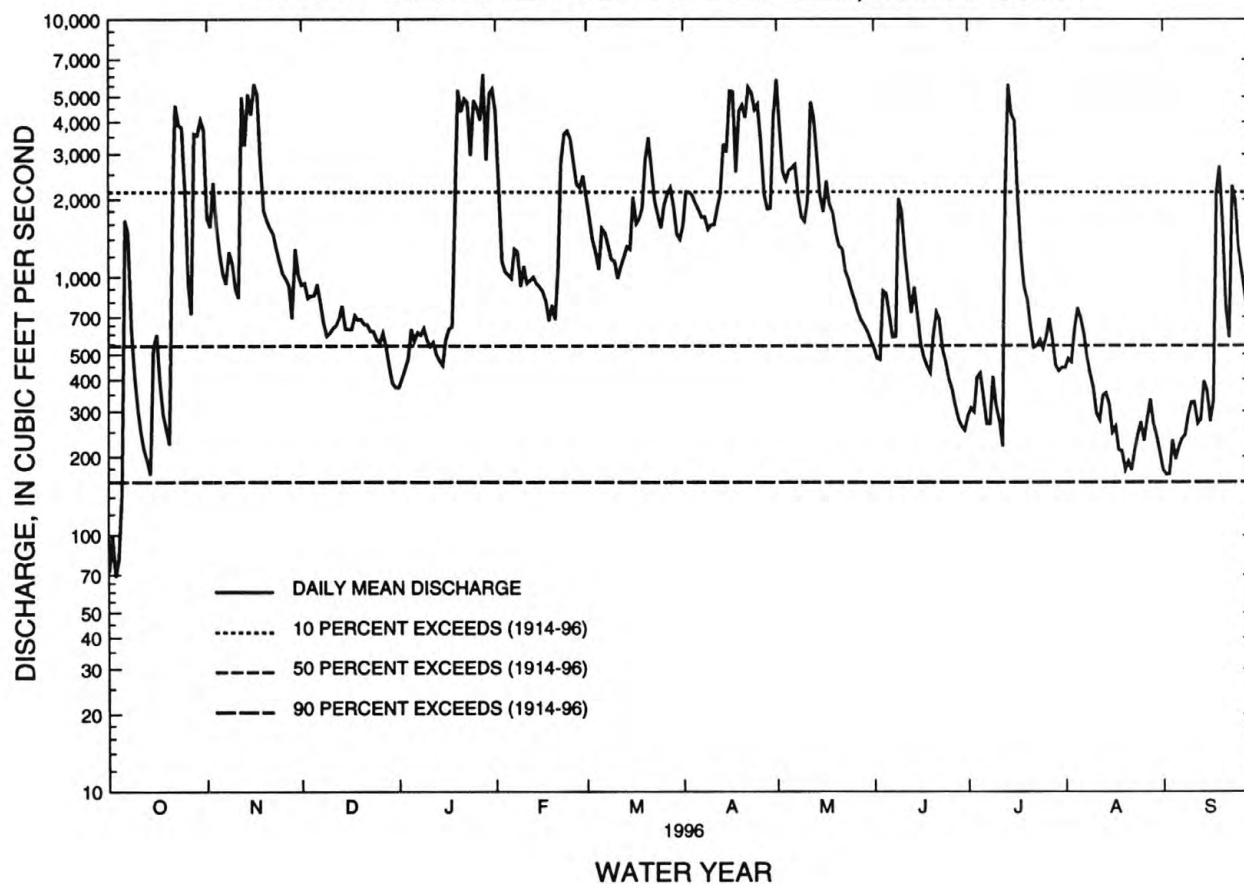
CONNECTICUT RIVER BASIN

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01183500 WESTFIELD RIVER NEAR WESTFIELD, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1914 - 1996	
ANNUAL TOTAL	299949		526316		929	
ANNUAL MEAN	822		1438		1594	
HIGHEST ANNUAL MEAN					368	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	5600	Nov 16	6100	Jan 28	37400	Aug 19 1955
LOWEST DAILY MEAN	49	Sep 13	69	Oct 3	40	Dec 28 1914
ANNUAL SEVEN-DAY MINIMUM	50	Sep 3	197	Aug 31	50	Sep 3 1995
INSTANTANEOUS PEAK FLOW			10900	Jan 28	70300	Aug 19 1955
INSTANTANEOUS PEAK STAGE			12.80	Jan 28	34.20	Aug 19 1955
INSTANTANEOUS LOW FLOW			49	Oct 4	9.0	Oct 2 1921
10 PERCENT EXCEEDS	1770		3810		2130	
50 PERCENT EXCEEDS	598		914		540	
90 PERCENT EXCEEDS	95		269		160	

WESTFIELD RIVER NEAR WESTFIELD, MA 01183500



LOCATION.--Lat 41°59'14", long 72°36'21", Hartford County, Hydrologic Unit 01080205, on right bank just upstream from Enfield Dam, 1.0 mi downstream from Thompsonville, 3.0 mi downstream from Massachusetts-Connecticut State line, and at mile 63.6.

WATER-DISCHARGE RECORDS

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 113,000 ft³/s, Apr. 18, gage height, 6.75 ft; minimum daily, 2,940 ft³/s, Oct. 3.

MEAN	10100	14870	15370	14020	13640	24920	45270	27390	13610	7806	7014	7111
MAX	31730	33310	38350	30180	39100	89210	76050	51520	42600	28810	22530	42700
(WY)	1978	1996	1984	1978	1981	1936	1960	1972	1984	1973	1955	1938
MIN	2690	5015	5548	4311	4386	6965	14920	9611	4900	3202	2911	2719
(WY)	1964	1965	1948	1931	1940	1940	1995	1941	1964	1962	1965	1964

CONNECTICUT RIVER BASIN

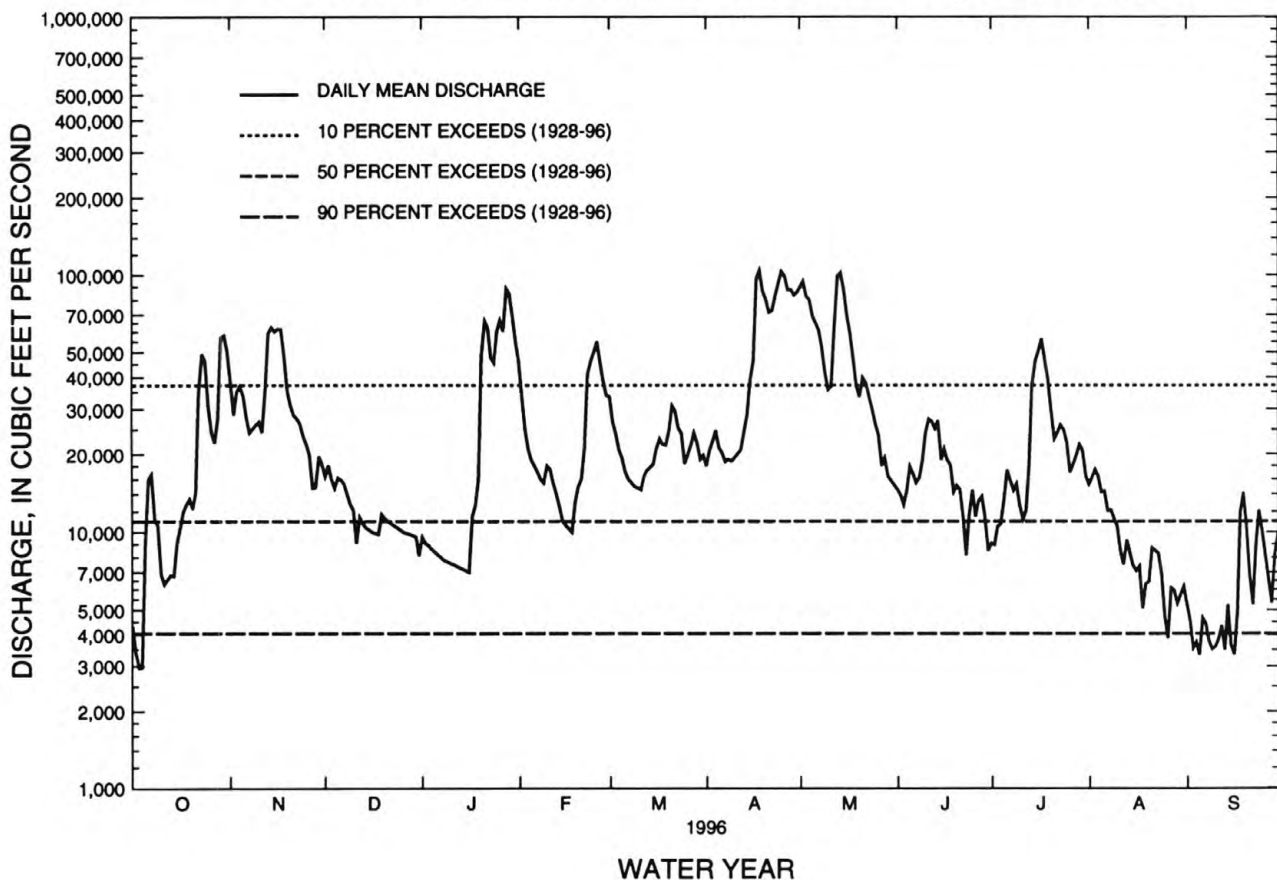
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01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1928 - 1996	
ANNUAL TOTAL	5280290		9122180		16730	
ANNUAL MEAN	14470		24920		24920	1996
HIGHEST ANNUAL MEAN					7847	1965
LOWEST ANNUAL MEAN					278000	Mar 20 1936
HIGHEST DAILY MEAN	62400	Nov 14	104000	Apr 18	968	Oct 20 1963
LOWEST DAILY MEAN	2350	Aug 29	2940	Oct 3	1870	Aug 15 1964
ANNUAL SEVEN-DAY MINIMUM	2580	Sep 3	3860	Sep 7	282000	Mar 20 1936
INSTANTANEOUS PEAK FLOW			113000	Apr 18	a16.60	Mar 20 1936
INSTANTANEOUS PEAK STAGE			6.75	Apr 18	968	Oct 20 1963
INSTANTANEOUS LOW FLOW			2680	Oct 4	37200	
10 PERCENT EXCEEDS	32200		60300		11000	
50 PERCENT EXCEEDS	12200		16700		4050	
90 PERCENT EXCEEDS	3160		6710			

a From floodmarks.
e Estimated.

CONNECTICUT RIVER AT THOMPSONVILLE, CT 01184000



CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1966 to current year (National Stream Quality Accounting Network and radiochemical station, 1966-95).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: October 1955 to September 1956, October 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1973.

REMARKS.--Interruptions in the record are due to malfunctions of the instrument. Instantaneous records are representative of the cross section while continuous records are based on point samples. The instantaneous record values will not necessarily fall within the corresponding daily range of the continuous records. Extremes for period of daily record and current year are for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 443 μ S/cm, Feb. 15, 1992; minimum, 46 μ S/cm, April 2, 1977.

WATER TEMPERATURES: Maximum, 36.5°C, Aug. 30, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 178 μ S/cm, Sept. 14; minimum, 65 μ S/cm, July 15.

WATER TEMPERATURES: Maximum, 26.5°C, Aug. 22, 23, 25-27, Sept. 5; minimum 0.0°C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)	ENTERO- COCCI ME,MF WATER TOTAL (COL / 100 ML) (31649)	
OCT												
24...	1315	44600	96	7.5	21.0	13.0	--	11.0	104	1100	560	
DEC												
08...	1130	14500	108	7.3	-1.0	1.5	2.4	13.7	97	4100	172	
FEB												
20...	1045	E15000	121	7.3	8.0	0.0	1.0	15.4	104	160	43	
APR												
09...	0930	19100	106	7.6	14.5	6.0	1.2	12.5	102	290	251	
JUN												
20...	0930	16400	104	7.4	21.0	21.0	3.8	7.1	80	580	144	
JUL												
26...	0930	17200	105	7.5	19.0	21.0	2.5	8.3	93	80	K15	
AUG												
14...	0900	8410	125	7.4	21.0	22.0	1.1	7.7	88	130	K17	
SEP												
16...	0900	3400	152	7.5	24.0	21.0	1.7	7.1	80	K19	K1	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
OCT												
24...	29	9.4	1.4	5.3	1.6	0	19	16	7.2	8.4	<0.10	
DEC												
08...	34	11	1.6	7.0	1.1	0	35	29	8.0	11	<0.10	
FEB												
20...	35	11	1.9	8.6	1.2	0	29	20	8.9	14	<0.10	
APR												
09...	31	10	1.4	7.6	1.0	0	25	21	8.1	11	<0.10	
JUN												
20...	34	11	1.5	7.2	1.1	0	32	27	6.9	10	<0.10	
JUL												
26...	31	10	1.4	5.9	1.0	0	30	24	6.8	8.7	<0.10	
AUG												
14...	39	13	1.6	7.2	1.3	0	37	30	8.1	11	<0.10	
SEP												
16...	46	15	2.1	12	1.8	0	44	36	11	18	<0.10	

CONNECTICUT RIVER BASIN

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01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
OCT										
24...	5.3	63	140	<0.010	0.130	0.030	0.27	0.30	0.20	0.43
DEC										
08...	6.8	63	74	<0.010	0.360	0.090	0.11	0.20	0.20	0.56
FEB										
20...	7.2	72	86	<0.010	0.570	0.170	0.13	0.30	<0.20	0.87
APR										
09...	5.5	66	62	<0.010	0.290	0.050	0.15	0.20	<0.20	0.49
JUN										
20...	5.4	76	64	0.010	0.350	0.170	0.13	0.30	0.30	0.65
JUL										
26...	6.0	62	82	0.010	0.260	0.110	0.09	0.20	0.30	0.46
AUG										
14...	5.3	81	72	0.020	0.370	0.120	0.18	0.30	<0.20	0.67
SEP										
16...	4.9	99	106	0.030	0.510	0.280	0.22	0.50	0.50	1.0

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)
OCT										
24...	0.020	<0.010	0.020	59	<1.0	11	<1.0	<1.0	<1.0	<1.0
DEC										
08...	0.020	0.030	0.020	34	<1.0	12	<1.0	<1.0	<1.0	<1.0
FEB										
20...	0.020	0.010	0.020	30	<1.0	16	<1.0	<1.0	<1.0	<1.0
APR										
09...	0.040	0.020	0.020	25	<1.0	12	<1.0	<1.0	<1.0	<1.0
JUN										
20...	0.040	0.020	0.040	27	<1.0	14	<1.0	<1.0	<1.0	<1.0
JUL										
26...	0.020	0.020	0.040	29	<1.0	10	<1.0	<1.0	<1.0	<1.0
AUG										
14...	<0.010	0.030	0.030	20	<1.0	12	<1.0	<1.0	<1.0	<1.0
SEP										
16...	0.040	0.060	0.060	14	<1.0	17	<1.0	<1.0	<1.0	<1.0

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	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)
OCT										
24...	2.0	140	<1.0	11	<1.0	1.0	<1.0	2.0	<1.0	9.4
DEC										
08...	1.0	140	<1.0	29	<1.0	<1.0	<1.0	2.0	<1.0	3.6
FEB										
20...	<1.0	100	<1.0	32	<1.0	<1.0	<1.0	6.0	<1.0	2.6
APR										
09...	<1.0	83	<1.0	16	<1.0	<1.0	<1.0	2.0	<1.0	3.2
JUN										
20...	2.0	150	<1.0	24	<1.0	<1.0	<1.0	1.0	<1.0	4.0
JUL										
26...	1.0	150	<1.0	13	<1.0	<1.0	<1.0	<1.0	<1.0	7.4
AUG										
14...	1.0	110	<1.0	16	<1.0	1.0	<1.0	1.0	<1.0	4.0
SEP										
16...	2.0	75	<1.0	21	<1.0	1.0	<1.0	3.0	<1.0	3.6

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

[illegible]

CONNECTICUT RIVER BASIN

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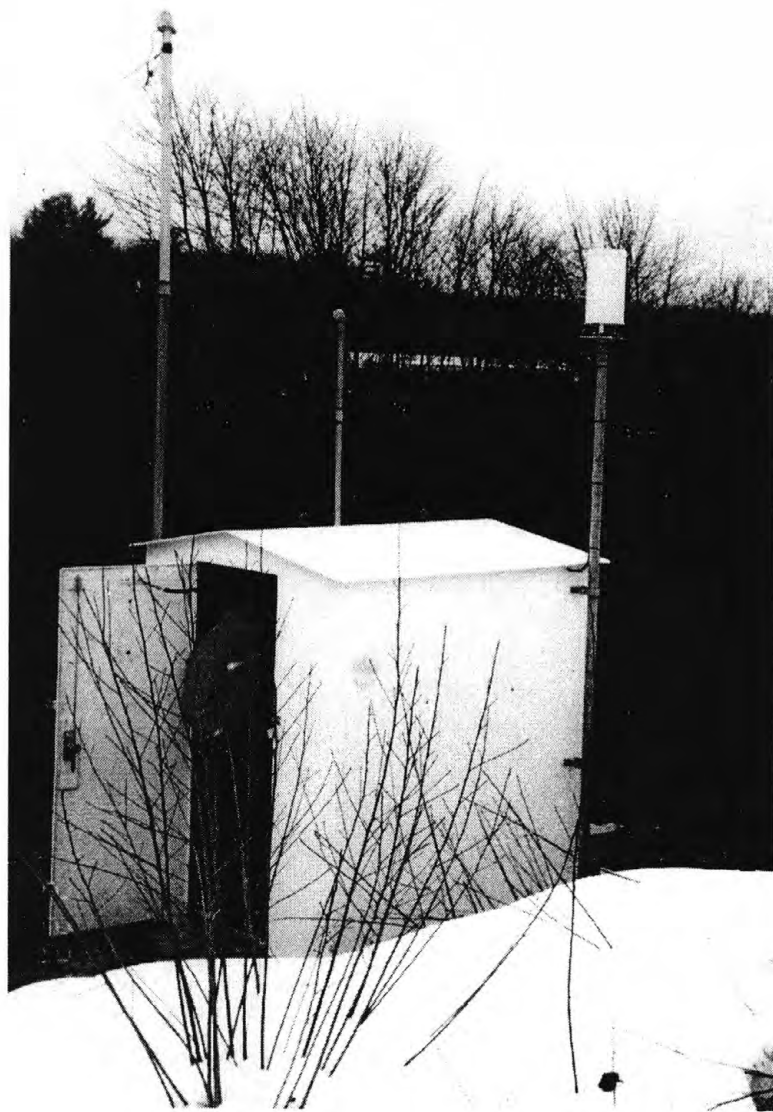
01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE, (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	---	---	---	125	118	123	117	111	114	157	151	154
2	---	---	---	129	122	126	118	115	116	160	152	157
3	---	---	---	133	121	128	117	104	111	162	155	159
4	---	---	---	122	116	119	106	103	105	166	159	163
5	---	---	---	122	115	119	107	103	105	168	164	166
6	---	---	---	116	109	112	109	106	108	171	165	167
7	---	---	---	109	104	107	114	108	111	167	159	164
8	---	---	---	111	106	108	122	113	117	167	162	165
9	---	---	---	110	104	108	120	118	119	170	164	167
10	---	---	---	109	104	107	128	118	121	168	132	163
11	---	---	---	112	108	110	122	116	120	172	166	168
12	---	---	---	112	107	110	121	116	120	172	164	168
13	---	---	---	109	101	106	123	120	121	171	164	167
14	---	---	---	101	75	84	123	119	121	178	166	172
15	---	---	---	78	65	70	128	121	125	168	162	165
16	---	---	---	88	76	84	129	123	126	172	161	165
17	---	---	---	98	88	93	128	122	125	174	164	169
18	---	---	---	98	93	95	131	125	129	170	142	153
19	---	---	---	99	95	96	139	130	135	144	126	133
20	124	118	122	107	99	103	139	129	135	133	125	129
21	123	114	118	107	104	105	142	133	137	137	129	134
22	119	114	116	108	104	106	143	138	141	139	132	137
23	117	111	114	106	104	105	148	141	144	142	130	137
24	130	114	119	106	102	104	151	144	146	131	122	127
25	125	114	118	109	103	106	149	143	146	143	130	138
26	131	117	124	115	108	111	151	143	147	144	136	140
27	130	108	119	117	114	115	154	148	151	145	137	141
28	116	111	112	114	110	112	156	144	151	146	139	144
29	124	115	117	113	110	111	146	142	145	155	140	148
30	125	118	122	111	109	110	152	146	149	149	135	138
31	---	---	---	112	108	110	155	148	153	---	---	---
MONTH	---	---	---	133	65	107	156	103	129	178	122	153
YEAR	178	65	---									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

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



Streamgage structure with 110-volt power and telephone masts and heated rain gage (far right) at Shawsheen River at Hanscom Field near Bedford, Massachusetts.

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.

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. Telephone gage-height telemeter at station.

AVERAGE DISCHARGE.--83 years, 183 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,300 ft³/s, Aug. 19, 1955, gage height, 14.06 ft, from rating curve extended above 9,600 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.4 ft³/s, Aug. 20, 21, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,470 ft³/s, Jan. 27, gage height, 8.01 ft; minimum daily, 12 ft³/s, Oct. 1, 2.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	561	189	e78	496	372	290	956	81	36	74	19
2	12	585	183	e78	e410	313	553	586	76	33	86	16
3	17	549	169	e78	351	273	471	447	75	34	79	15
4	15	455	167	e78	243	246	380	468	163	43	116	15
5	35	397	148	e80	e200	237	323	528	175	52	97	15
6	242	356	156	e84	e180	351	296	441	95	48	95	15
7	185	337	147	e90	e170	302	303	431	81	42	124	19
8	128	391	124	e92	e160	273	366	358	76	37	98	27
9	95	342	113	e88	e150	237	357	290	184	133	78	23
10	72	272	e110	e82	e140	223	301	293	114	93	59	26
11	64	284	e110	e78	e130	206	288	321	102	69	50	23
12	57	1950	e110	e76	e120	202	365	760	84	77	45	21
13	45	1120	e110	e76	e120	206	491	585	72	910	50	18
14	41	836	e110	e74	e120	225	1000	448	66	1300	50	26
15	90	1200	e110	e74	e130	343	734	363	61	777	50	23
16	100	1010	e105	e76	e140	430	1340	321	54	1260	52	19
17	88	797	e105	277	e160	333	1560	402	48	757	50	33
18	84	571	e105	466	182	294	889	355	44	517	36	646
19	66	513	e105	1480	216	330	612	333	42	333	35	642
20	58	477	e105	1540	257	590	497	294	95	259	e31	268
21	409	450	e105	939	476	584	440	265	85	141	e24	169
22	812	424	e100	642	736	459	374	264	73	108	23	183
23	539	390	e100	474	655	329	402	198	66	96	40	627
24	481	360	e100	754	e560	282	523	178	56	96	53	420
25	423	334	e98	1200	e490	293	395	158	51	97	41	264
26	378	319	e96	793	e450	409	315	137	44	180	32	201
27	345	309	e94	2040	422	417	302	113	38	192	27	156
28	1520	305	e92	2070	479	390	249	106	33	112	24	132
29	1200	309	e88	1070	454	350	364	98	31	93	22	340
30	751	279	e84	767	---	331	651	94	33	82	25	279
31	631	---	e82	598	---	302	---	87	---	73	18	---
TOTAL	8995	16482	3620	16392	8797	10132	15431	10678	2298	8080	1684	4680
MEAN	290	549	117	529	303	327	514	344	76.6	261	54.3	156
MAX	1520	1950	189	2070	736	590	1560	956	184	1300	124	646
MIN	12	272	82	74	120	202	249	87	31	33	18	1

MEAN	139	206	195	180	165	301	412	216	128	80.0	88.8	91.0
MAX	774	817	556	529	608	947	934	627	479	290	1002	644
(WY)	1956	1928	1974	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

CONNECTICUT RIVER BASIN

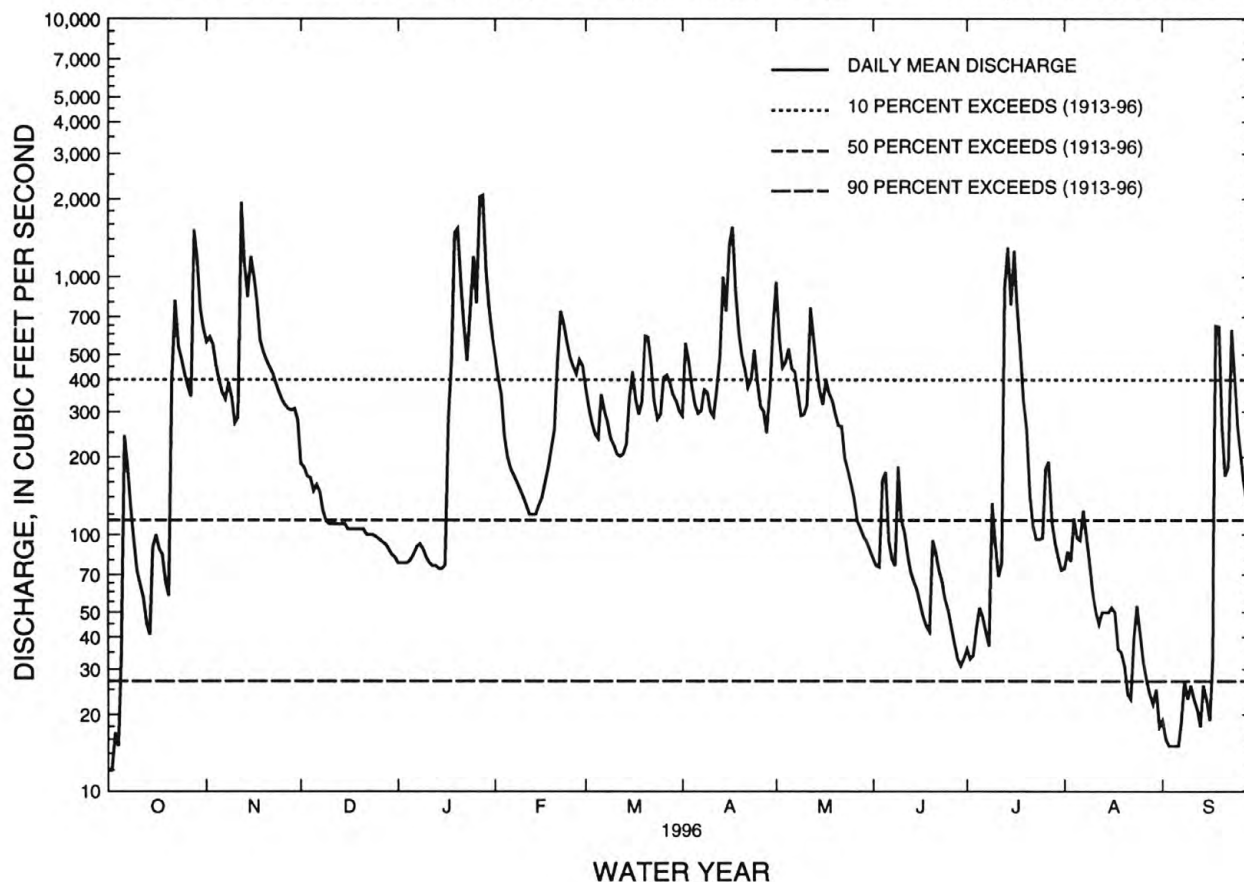
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01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1913 - 1996	
ANNUAL TOTAL	59816.5		107269		183	
ANNUAL MEAN	164		293		341	
HIGHEST ANNUAL MEAN					66.1	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	1950	Nov 12	2070	Jan 28	16100	Aug 19 1955
LOWEST DAILY MEAN	2.7	Sep 9	12	Oct 1	2.4	Aug 20 1957
ANNUAL SEVEN-DAY MINIMUM	3.2	Sep 7	16	Aug 31	3.1	Sep 9 1957
INSTANTANEOUS PEAK FLOW			4770	Jan 27	34300	Aug 19 1955
INSTANTANEOUS PEAK STAGE			8.01	Jan 27	14.06	Aug 19 1955
INSTANTANEOUS LOW FLOW			11	Oct 2		
10 PERCENT EXCEEDS	406		643		400	
50 PERCENT EXCEEDS	94		179		114	
90 PERCENT EXCEEDS	12		35		27	

e Estimated

WEST BRANCH FARMINGTON RIVER NR NEW BOSTON, MA 01185500



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 mi².

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 ft³, 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.--60 years, 106 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s, Sept. 21, 1938, gage height, 10.80 ft, from rating curve extended above 2,300 ft³/s on basis of computation of peak flow over dam; minimum daily, 4.4 ft³/s, Aug. 15, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1755, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 22	0030	*1,690	*4.11	Jan. 27	2115	1,470	3.84
Nov. 12	1015	1,290	3.62	Apr. 17	0100	1,660	4.07
Jan. 19	2215	1,680	4.10	July 13	2145	1,550	3.94

Minimum daily, 17 ft³/s, Oct. 1.

REVISIONS.--The maximum discharge for the water year 1995 has been revised to 1,200 ft³/s, Mar. 9, 1995, gage height, 3.50 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	119	80	46	205	e206	e167	e704	e45	41	47	20
2	35	143	77	47	e180	e167	287	e403	e45	37	54	20
3	36	166	69	49	e165	e147	280	e293	e55	60	54	20
4	44	125	81	47	e150	e142	215	e275	e87	142	117	22
5	60	93	79	44	e135	e135	187	e313	e81	110	84	22
6	173	88	78	42	e120	e159	173	e275	e65	73	115	22
7	134	93	71	48	e100	e152	150	e267	e55	58	113	21
8	55	125	61	46	92	e142	148	e201	e200	43	70	22
9	40	111	57	48	93	140	138	e207	625	39	53	27
10	33	96	56	48	91	129	e135	e201	e293	38	44	26
11	28	85	55	45	95	122	135	e353	e174	33	39	24
12	26	886	51	46	86	121	185	e716	e115	27	35	22
13	24	506	51	47	66	112	247	e430	e190	522	36	20
14	26	265	49	44	62	e110	535	e282	e257	877	34	23
15	105	386	58	45	65	e160	392	e201	e128	392	33	22
16	74	379	58	44	58	208	722	e201	83	471	31	21
17	43	244	57	51	60	164	1100	e293	67	276	30	27
18	33	197	56	64	58	156	543	e239	60	157	28	294
19	30	207	55	531	53	167	e430	e233	57	133	27	290
20	28	199	56	965	60	273	e416	e207	119	136	26	120
21	386	187	53	593	161	e271	e430	e144	127	90	45	67
22	1010	134	52	384	454	e231	e361	e138	e100	63	33	66
23	303	102	51	272	e441	e215	e448	e121	82	50	29	349
24	154	89	51	376	e422	e172	e645	e110	64	48	34	236
25	128	79	49	660	e362	e200	e373	e100	60	45	37	159
26	113	79	49	414	e320	e332	e293	e94	49	49	30	122
27	92	77	48	696	e271	e308	e403	e76	39	51	33	94
28	502	85	48	980	e257	e167	e305	e58	36	41	49	81
29	476	110	46	490	e247	e129	e361	e58	34	38	31	182
30	213	88	46	321	---	123	e617	e55	38	49	25	153
31	140	---	46	251	---	e147	---	e51	---	47	22	---
TOTAL	4561	5543	1794	7784	4929	5407	10821	7299	3430	4236	1438	2594
MEAN	147	185	57.9	251	170	174	361	235	114	137	46.4	86.5
MAX	1010	886	81	980	454	332	1100	716	625	877	117	349
MIN	17	77	46	42	53	110	135	51	34	27	22	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1936 - 1996, BY WATER YEAR (WY)

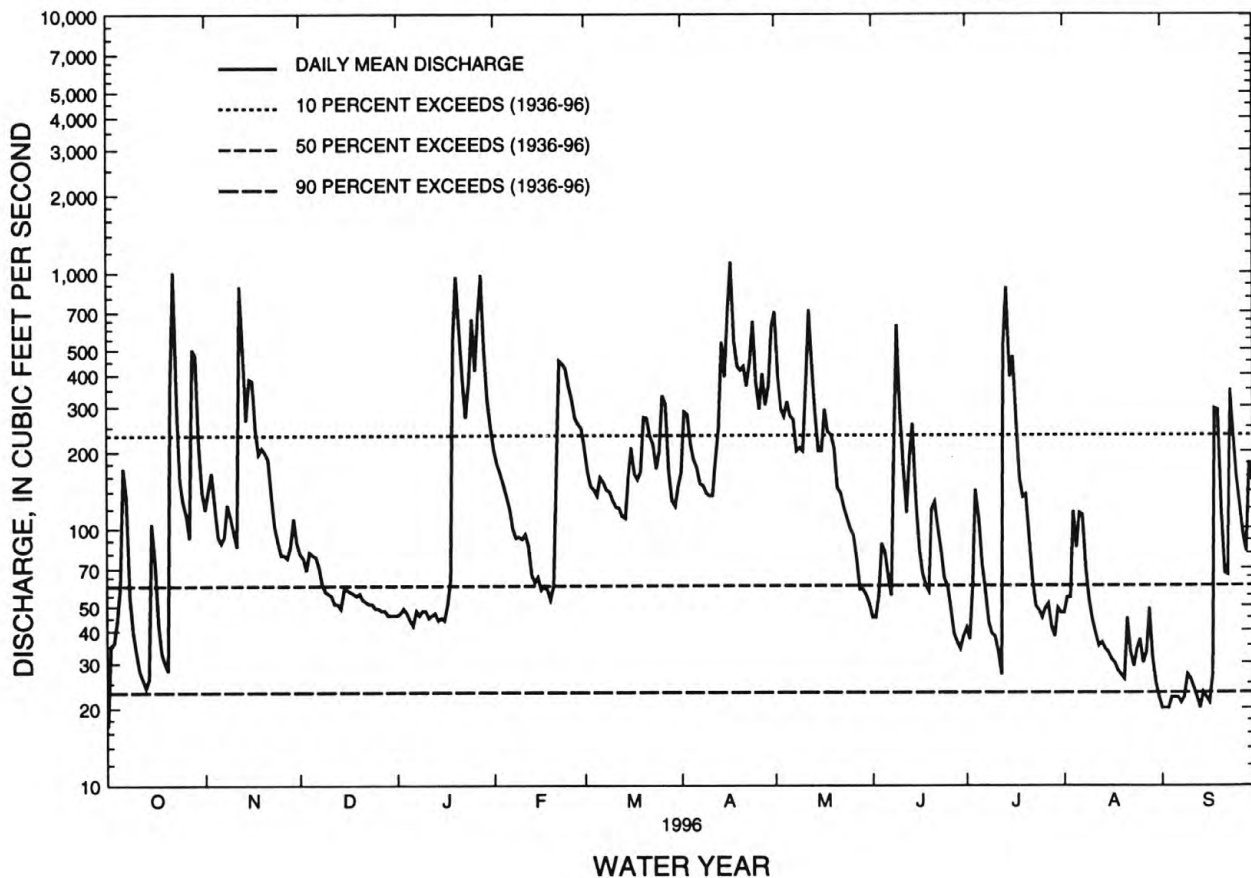
	MEAN	MAX	(WY)	MIN	(WY)
1936	69.4	318	1956	19.9	1965
1937	97.0	279	1957	19.1	1966
1938	100	321	1958	31.2	1981
1939	95.7	252	1959	15.5	1982
1940	95.8	274	1960	16.0	1983
1941	174	417	1961	50.4	1984
1942	266	582	1962	66.3	1985
1943	141	366	1963	37.7	1986
1944	81.3	326	1964	25.4	1987
1945	53.4	220	1965	12.9	1988
1946	47.5	188	1966	14.9	1989
1947	54.2	326	1967	14.3	1990
1948			1968		1991
1949			1969		1992
1950			1970		1993
1951			1971		1994
1952			1972		1995
1953			1973		1996

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1936 - 1996	
ANNUAL TOTAL	31712		59836		106	
ANNUAL MEAN	86.9		163		163	
HIGHEST ANNUAL MEAN					42.6	
LOWEST ANNUAL MEAN					1996	
HIGHEST DAILY MEAN	1010	Oct 22	1100	Apr 17	4460	Mar 18 1936
LOWEST DAILY MEAN	10	Sep 3	17	Oct 1	4.4	Aug 15 1936
ANNUAL SEVEN-DAY MINIMUM	11	Sep 3	21	Sep 1	9.5	Sep 11 1983
INSTANTANEOUS PEAK FLOW			1690	Oct 22	6400	Sep 21 1938
INSTANTANEOUS PEAK STAGE			4.11	Oct 22	10.80	Sep 21 1938
INSTANTANEOUS LOW FLOW			12	Oct 1		
10 PERCENT EXCEEDS	198		392		232	
50 PERCENT EXCEEDS	54		94		60	
90 PERCENT EXCEEDS	15		33		23	

e Estimated

EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA 01197000



LOCATION.--Lat 42°13'55", long 73°21'19", Berkshire County, Hydrologic Unit 01100005, on left bank at upstream side of highway bridge at Van Deusenville, 0.5 mi upstream from Williams River, and 2 mi north of Great Barrington.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 415: 1913-14. WSP 781: 1928(M). WSP 1051: 1928, 1933. WSP 1301: 1914-15(M), 1917-27(M), 1929-31(M). WDR MA-RI-83-1: 1980(P), 1982(P). WDR MA-RI-84-1: Drainage Area.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Regulation at low flow by power-plants upstream. High flow slightly affected by retarding reservoir since 1973. Telephone and satellite gage-height telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s, Jan. 1, 1949, gage height, 12.08 ft, from rating curve extended above 6,400 ft³/s on basis of computations of flow over dams at gage heights 11.72 ft and 12.08 ft; minimum daily, 1.0 ft³/s, Oct. 18, 1914.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 13	1845	2,410	5.46
Jan. 21	0145	*4,430	*7.73
Jan. 25	2245	2,660	5.74
Jan. 28	1815	4,040	7.30

Minimum daily, 86 ft³/s, Oct. 1.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	788	518	240	1380	1070	654	2520	354	216	316	163
2	93	741	518	242	1130	926	847	2540	325	196	371	152
3	98	882	486	e240	e950	803	1020	1990	329	262	368	127
4	128	805	503	e250	e850	716	891	1580	547	759	386	123
5	218	649	508	e245	e750	684	751	1480	583	789	387	121
6	574	539	498	e245	e700	796	668	1420	465	605	324	121
7	697	516	477	e250	e650	806	645	1410	354	459	358	140
8	508	621	427	e260	e600	741	668	1270	503	373	326	147
9	351	600	e400	e250	e570	701	648	1050	1130	463	283	148
10	257	530	e370	e250	e530	e710	630	982	1340	493	241	149
11	223	529	e350	e260	e500	e650	643	1220	968	343	209	142
12	194	1420	e340	e250	e470	615	718	1990	697	276	186	133
13	166	2290	e330	e250	e450	621	861	2430	568	1200	179	143
14	168	2100	e330	e260	e440	648	1500	2160	632	3490	172	148
15	433	1890	e340	e250	e430	770	1830	1650	637	3490	163	142
16	473	1860	e360	e250	e420	968	1870	1300	456	3360	157	129
17	349	1610	e350	e260	e410	876	2750	1310	370	2640	170	137
18	239	1280	e340	e330	e410	774	3030	1290	319	1710	154	750
19	215	1100	e340	1080	e410	733	2400	1200	299	1130	141	1370
20	197	1050	e340	3880	e410	827	1860	1100	410	896	135	890
21	299	961	e330	4090	722	1030	1630	924	485	695	136	522
22	1590	866	e320	2850	1500	981	1490	882	460	557	170	377
23	1890	718	e315	1820	1970	824	1500	783	417	482	155	1210
24	1150	624	e310	1520	1980	711	1790	709	344	441	202	1350
25	706	559	e300	2470	1880	658	1910	634	312	372	199	944
26	573	523	e295	2400	1610	784	1630	562	290	428	173	697
27	511	514	e290	2210	1350	930	1530	515	252	441	211	565
28	1280	483	e290	3770	1280	830	1490	470	230	368	441	465
29	2300	517	e280	3540	1260	714	1420	432	204	321	250	635
30	1800	542	e260	2540	---	664	1880	412	194	332	182	756
31	1110	---	e245	1820	---	641	---	382	---	315	171	---
TOTAL	18876	28107	11360	38572	26012	24202	41154	38597	14474	27902	7316	12896
MEAN	609	937	366	1244	897	781	1372	1245	482	900	236	430
MAX	2300	2290	518	4090	1980	1070	3030	2540	1340	3490	441	1370
MIN	86	483	245	240	410	615	630	382	194	196	135	121
CFSM	2.16	3.32	1.30	4.41	3.18	2.77	4.86	4.42	1.71	3.19	.84	1.52
IN.	2.49	3.71	1.50	5.09	3.43	3.19	5.43	5.09	1.91	3.68	.97	1.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1996, BY WATER YEAR (WY)

MEAN	303	467	519	510	494	905	1244	691	410	278	241	258
MAX	1170	2040	1588	1744	1319	2528	2646	1502	1312	1140	937	1601
(WY)	1978	1928	1974	1949	1984	1936	1920	1984	1972	1945	1928	1938
MIN	80.9	85.5	112	83.5	128	291	338	241	134	93.4	86.8	75.1
(WY)	1915	1965	1915	1931	1931	1941	1985	1985	1921	1962	1913	1913

HOUSATONIC RIVER BASIN

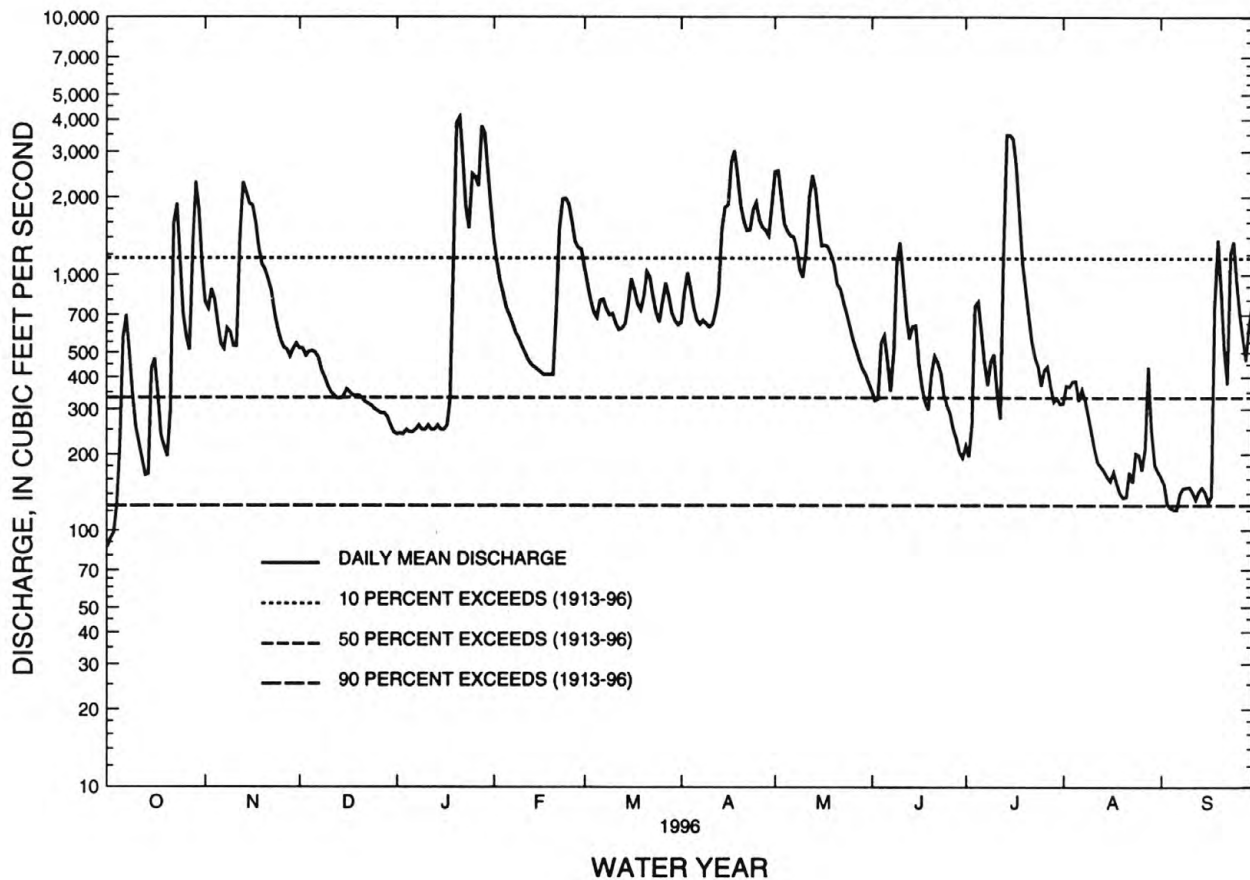
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01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1913 - 1996	
ANNUAL TOTAL	158877		289468		527	
ANNUAL MEAN	435		791		962	
HIGHEST ANNUAL MEAN					211	
LOWEST ANNUAL MEAN					1928	
HIGHEST DAILY MEAN	2600	Mar 9	4090	Jan 21	11100	Jan 1 1949
LOWEST DAILY MEAN	52	Sep 6	86	Oct 1	1.0	Oct 18 1914
ANNUAL SEVEN-DAY MINIMUM	56	Sep 3	132	Sep 3	40	Aug 10 1913
INSTANTANEOUS PEAK FLOW			4430	Jan 21	12200	Jan 1 1949
INSTANTANEOUS PEAK STAGE			7.73	Jan 21	12.08	Jan 1 1949
INSTANTANEOUS LOW FLOW			84	Oct 1		
ANNUAL RUNOFF (CFSM)	1.54		2.80		1.87	
ANNUAL RUNOFF (INCHES)	20.96		38.19		25.38	
10 PERCENT EXCEEDS	999		1820		1160	
50 PERCENT EXCEEDS	329		540		333	
90 PERCENT EXCEEDS	79		181		126	

e Estimated

HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA 01197500



HOUSATONIC RIVER BASIN

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical analyses for water years 1957 (WSP 1520), 1958 (WSP 1571), 1959 (WSP 1641), 1964, 1971, and 1980. Suspended-sediment data for water years 1971, 1979-80, and March 1994 to April 1996.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: April 1979 to September 1980 and March 1994 to April 1996.

SUSPENDED-SEDIMENT DISCHARGE: April 1979 to September 1980 and March 1994 to April 1996.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 148 mg/L Apr. 10, 1980; minimum daily mean, 0 mg/L Dec. 4, 1994.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 955 tons Mar. 22, 1980, minimum daily, 0.24 tons Sept. 30, 1995.

EXTREMES FOR CURRENT PERIOD.--

SUSPENDED-SEDIMENT CONCENTRATION: Water year 1996: maximum daily mean, 91 mg/L, Jan. 20; minimum daily mean, 2 mg/L, on many days.

SUSPENDED-SEDIMENT DISCHARGE: Water year 1996: maximum daily, 941 tons, Jan. 20; minimum daily, 0.46 tons, Oct. 1.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	86	2	.46	788	11	24	518	2	2.9
2	93	2	.50	741	9	19	518	2	2.9
3	98	2	.53	882	9	21	486	2	2.8
4	128	2	.69	805	8	18	503	2	3.0
5	218	2	1.4	649	8	14	508	2	3.1
6	574	14	21	539	7	11	498	2	3.1
7	697	11	20	516	7	9.7	477	2	3.1
8	508	8	11	621	6	9.7	427	2	2.8
9	351	6	6.1	600	5	7.6	e400	3	3.2
10	257	5	3.6	530	4	5.3	e370	3	3.0
11	223	4	2.5	529	3	4.4	e350	3	2.8
12	194	4	2.1	1420	21	98	e340	3	2.8
13	166	4	1.8	2290	27	168	e330	3	2.7
14	168	4	1.8	2100	19	107	e330	3	2.7
15	433	5	6.4	1890	12	63	e340	3	2.8
16	473	4	4.9	1860	11	53	e360	3	2.9
17	349	4	3.4	1610	9	40	e350	3	2.8
18	239	3	2.1	1280	8	28	e340	3	2.8
19	215	3	1.8	1100	8	24	e340	3	2.8
20	197	3	1.6	1050	8	23	e340	3	2.8
21	299	8	10	961	8	21	e330	3	2.7
22	1590	31	136	866	9	20	e320	3	2.6
23	1890	38	200	718	9	17	e315	3	2.6
24	1150	9	31	624	9	15	e310	4	3.3
25	706	5	10	559	9	14	e300	4	3.2
26	573	4	6.3	523	10	14	e295	4	3.2
27	511	4	5.5	514	10	13	e290	4	3.1
28	1280	18	82	483	6	8.1	e290	4	3.1
29	2300	32	200	517	4	5.1	e280	4	3.0
30	1800	17	85	542	2	3.2	e260	4	2.8
31	1110	14	42	---	---	---	e245	4	2.6
TOTAL	18876	---	901.48	28107	---	878.1	11360	---	90.0

e Estimated

HOUSATONIC RIVER BASIN

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01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	240	4	2.3	1380	3	10	1070	4	11
2	242	3	2.2	1130	2	6.1	926	4	9.3
3	e240	3	1.9	e950	2	5.1	803	4	7.9
4	e250	3	2.0	e850	2	4.6	716	4	6.9
5	e245	3	2.0	e750	2	4.0	684	4	6.5
6	e245	3	2.0	e700	2	3.8	796	3	7.4
7	e250	3	2.0	e650	2	3.5	806	3	7.3
8	e260	3	2.1	e600	2	3.2	741	3	6.6
9	e250	3	2.0	e570	2	3.1	701	3	6.1
10	e250	3	2.0	e530	2	2.9	e710	3	5.8
11	e260	3	2.1	e500	2	2.7	e650	3	5.3
12	e250	3	2.0	e470	2	2.5	615	3	5.1
13	e250	3	2.0	e450	2	2.4	621	3	5.1
14	e260	3	2.1	e440	2	2.4	648	3	5.3
15	e250	3	2.0	e430	2	2.3	770	4	8.5
16	e250	3	2.0	e420	2	2.3	968	6	15
17	e260	3	2.1	e410	2	2.2	876	5	13
18	e330	3	2.7	e410	2	2.2	774	4	9.4
19	1080	32	168	e410	2	2.2	733	4	7.9
20	3880	91	941	e410	2	2.2	827	5	12
21	4090	37	416	722	3	6.4	1030	8	21
22	2850	17	132	1500	17	77	981	7	19
23	1820	8	40	1970	20	104	824	7	15
24	1520	8	35	1980	11	57	711	6	12
25	2470	20	135	1880	8	41	658	6	11
26	2400	12	78	1610	6	27	784	9	19
27	2210	10	64	1350	4	16	930	13	33
28	3770	40	410	1280	4	14	830	13	29
29	3540	25	247	1260	4	13	714	11	21
30	2540	10	71	---	---	---	664	9	16
31	1820	5	26	---	---	---	641	7	13
TOTAL	38572	---	2800.5	26012	---	425.1	24202	---	370.4

e Estimated

HOUSATONIC RIVER BASIN

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	APRIL			MAY			JUNE		
1	654	6	11	2520	---	---	354	---	---
2	847	---	---	2540	---	---	325	---	---
3	1020	---	---	1990	---	---	329	---	---
4	891	---	---	1580	---	---	547	---	---
5	751	---	---	1480	---	---	583	---	---
6	668	---	---	1420	---	---	465	---	---
7	645	---	---	1410	---	---	354	---	---
8	668	---	---	1270	---	---	503	---	---
9	648	---	---	1050	---	---	1130	---	---
10	630	---	---	982	---	---	1340	---	---
11	643	---	---	1220	---	---	968	---	---
12	718	---	---	1990	---	---	697	---	---
13	861	---	---	2430	---	---	568	---	---
14	1500	---	---	2160	---	---	632	---	---
15	1830	---	---	1650	---	---	637	---	---
16	1870	---	---	1300	---	---	456	---	---
17	2750	---	---	1310	---	---	370	---	---
18	3030	---	---	1290	---	---	319	---	---
19	2400	---	---	1200	---	---	299	---	---
20	1860	---	---	1100	---	---	410	---	---
21	1630	---	---	924	---	---	485	---	---
22	1490	---	---	882	---	---	460	---	---
23	1500	---	---	783	---	---	417	---	---
24	1790	---	---	709	---	---	344	---	---
25	1910	---	---	634	---	---	312	---	---
26	1630	---	---	562	---	---	290	---	---
27	1530	---	---	515	---	---	252	---	---
28	1490	---	---	470	---	---	230	---	---
29	1420	---	---	432	---	---	204	---	---
30	1880	---	---	412	---	---	194	---	---
31	---	---	---	382	---	---	---	---	---
TOTAL	41154	---	---	38597	---	---	14474	---	---

HOUSATONIC RIVER BASIN

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01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	JULY			AUGUST			SEPTEMBER		
1	216	---	---	316	---	---	163	---	---
2	196	---	---	371	---	---	152	---	---
3	262	---	---	368	---	---	127	---	---
4	759	---	---	386	---	---	123	---	---
5	789	---	---	387	---	---	121	---	---
6	605	---	---	324	---	---	121	---	---
7	459	---	---	358	---	---	140	---	---
8	373	---	---	326	---	---	147	---	---
9	463	---	---	283	---	---	148	---	---
10	493	---	---	241	---	---	149	---	---
11	343	---	---	209	---	---	142	---	---
12	276	---	---	186	---	---	133	---	---
13	1200	---	---	179	---	---	143	---	---
14	3490	---	---	172	---	---	148	---	---
15	3490	---	---	163	---	---	142	---	---
16	3360	---	---	157	---	---	129	---	---
17	2640	---	---	170	---	---	137	---	---
18	1710	---	---	154	---	---	750	---	---
19	1130	---	---	141	---	---	1370	---	---
20	896	---	---	135	---	---	890	---	---
21	695	---	---	136	---	---	522	---	---
22	557	---	---	170	---	---	377	---	---
23	482	---	---	155	---	---	1210	---	---
24	441	---	---	202	---	---	1350	---	---
25	372	---	---	199	---	---	944	---	---
26	428	---	---	173	---	---	697	---	---
27	441	---	---	211	---	---	565	---	---
28	368	---	---	441	---	---	465	---	---
29	321	---	---	250	---	---	635	---	---
30	332	---	---	182	---	---	756	---	---
31	315	---	---	171	---	---	---	---	---
TOTAL	27902	---	---	7316	---	---	12896	---	---

HOUSATONIC RIVER BASIN

01197802 WILLIAMS RIVER NEAR GREAT BARRINGTON, MA

LOCATION.-- Lat 42°13'39", Long 73°21'46", Berkshire County, Hydrologic Unit 01100005, at railroad bridge 200 ft south of Division Street, 1.0 mi upstream from mouth, and 2.2 mi north of Great Barrington.

DRAINAGE AREA.-- 43.2 mi².

PERIOD OF RECORD.-- March 1994 to April 1996 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. & FINER THAN .062 MM (70331)
OCT									
02...	1625	3.6	--	407	23.5	16.5	6	0.06	--
05...	1440	4.9	--	391	--	15.5	3	0.04	--
05...	2115	9.9	--	374	--	14.5	2	0.05	--
06...	0645	47	--	337	--	14.0	34	4.3	66
06...	0650	47	--	337	--	14.0	18	2.3	--
06...	0932	63	--	369	--	13.5	22	3.7	--
06...	0943	63	--	346	--	13.5	13	2.2	--
06...	0945	63	--	360	12.5	13.5	46	7.8	30
06...	1334	70	--	354	--	14.0	11	2.1	--
06...	1550	68	--	355	--	15.0	9	1.7	--
08...	1215	38	--	404	14.5	14.0	3	0.31	--
11...	1520	12	--	401	20.5	14.5	5	0.16	--
12...	1345	10	433	--	19.5	14.0	--	--	--
15...	1230	16	--	409	13.0	14.0	4	0.17	--
20...	1515	13	--	430	15.5	12.0	4	0.14	--
21...	1540	19	--	408	19.0	15.0	5	0.26	--
22...	0032	78	--	335	--	13.5	26	5.5	39
22...	0252	82	--	348	--	12.0	14	3.1	--
22...	0810	116	--	372	--	11.0	25	7.8	--
22...	1225	135	--	382	--	13.0	20	7.3	67
22...	1555	139	--	378	--	13.0	18	6.8	--
23...	0958	111	--	375	--	11.0	6	1.8	--
26...	1022	44	--	372	--	10.5	3	0.36	--
28...	1010	70	--	338	--	12.5	5	0.95	--
28...	1645	114	--	309	15.5	12.5	7	2.2	--
29...	1420	139	--	341	10.5	11.0	4	1.5	--
NOV									
02...	1500	73	--	339	11.5	8.5	3	0.59	--
07...	1555	54	--	360	--	5.5	3	0.44	--
11...	1130	55	--	357	14.5	5.0	2	0.30	--
12...	0755	166	--	289	--	6.0	23	10	77
12...	1035	157	--	311	1.5	6.5	9	3.8	--
12...	1430	176	--	286	3.0	6.5	12	5.7	--
12...	1815	229	--	304	--	5.5	37	23	--
12...	1818	229	--	291	--	5.5	40	25	46
13...	1220	295	--	273	2.0	4.0	17	14	60
13...	1645	315	--	255	0.0	4.0	38	32	29
14...	1505	204	--	293	2.0	4.0	7	3.9	--
15...	1108	193	--	307	--	5.0	5	2.6	--
18...	1555	157	--	312	1.5	3.0	2	0.85	--
20...	1400	149	--	321	4.0	4.0	3	1.2	--
27...	1540	79	--	360	6.5	3.0	2	0.43	--
30...	1510	66	--	362	-0.5	1.5	3	0.53	--
DEC									
10...	1355	49	--	373	-6.0	0.0	6	0.79	--
16...	1515	46	--	379	1.5	0.0	9	1.1	--
29...	1610	35	--	383	-1.0	0.0	3	0.28	--

HOUSATONIC RIVER BASIN

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01197802 WILLIAMS RIVER NEAR GREAT BARRINGTON, MA

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JAN									
19...	1510	312	--	307	--	2.0	38	32	--
19...	1946	900	--	253	--	0.5	89	216	--
20...	0118	475	--	254	--	0.0	71	91	--
20...	1225	629	--	305	--	0.0	82	139	--
20...	1226	629	--	292	--	0.0	80	136	--
20...	1235	730	--	305	--	0.0	334	658	--
20...	1643	849	--	291	--	0.5	174	399	--
20...	1648	849	--	282	--	0.5	168	385	--
21...	1102	559	--	264	--	0.0	59	89	--
21...	1103	559	--	265	--	0.0	94	142	--
22...	1550	360	--	286	3.0	0.0	37	36	--
23...	1530	269	--	304	2.0	0.0	22	16	--
24...	1425	269	--	305	--	2.0	26	19	--
25...	0820	475	--	279	--	0.0	21	27	--
25...	0826	475	--	281	--	0.0	26	33	--
25...	1525	516	--	277	--	-0.5	27	38	--
25...	1530	516	--	276	--	-0.5	26	36	--
26...	1530	456	--	289	1.0	0.0	30	37	--
28...	1148	788	--	236	--	1.0	77	164	70
28...	1703	741	--	238	--	0.5	50	100	--
28...	1705	741	--	236	--	0.5	52	104	--
29...	1115	472	--	257	--	0.0	30	38	--
29...	1125	472	--	257	--	0.0	21	27	--
FEB									
21...	1020	82	--	387	--	1.5	6	1.3	--
22...	1440	256	--	319	--	2.0	23	16	--
22...	1825	274	--	315	--	1.5	26	19	--
23...	1145	269	--	278	--	2.0	7	5.1	--
24...	1445	236	--	277	6.5	2.0	11	7.0	--
26...	1320	200	--	297	8.5	3.0	6	3.2	--
27...	1325	174	--	306	--	3.5	3	1.4	--
MAR									
13...	1535	82	--	363	9.5	3.0	12	2.7	--
20...	1805	127	--	341	--	4.5	2	0.69	--
26...	1300	113	--	336	11.0	8.0	4	1.2	--
29...	1345	102	--	339	10.5	6.0	8	2.2	--
APR									
01...	1055	90	--	343	--	8.0	1	0.24	--
01...	1058	90	--	346	--	8.0	3	0.73	--
02...	1618	110	--	339	--	8.5	6	1.8	--
02...	1622	110	--	327	--	8.5	2	0.59	--

LOCATION.--Lat 42°11'31", long 73°23'28", Berkshire County, Hydrologic Unit 01100005, on left bank at upstream side of bridge on Hurlburt Street, 0.2 mi downstream from Seekonk Brook, 1.5 mi west of Great Barrington, and 3 mi upstream from mouth.

WATER-DISCHARGE RECORDS

REVISED RECORDS.--WSP 1701: 1956 (M). WSP 1901: drainage area.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,740 ft³/s, July 13, 1996, gage height, 9.84 ft, on basis of rating curve extended above 1,100 ft³/s; minimum, 2.2 ft³/s, Sept. 4, 5, 6, 1995.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 750 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 22	0130	1,130	4.57	Apr. 16	2345	1,050	4.29
Nov. 12	1115	2,030	5.88	May 1	0400	816	3.82
Jan. 20	0215	a6,490	9.68	July 13	2115	a*6,740	*9.84
Jan. 25	0200	1,630	5.23	July 16	0345	870	3.94
Jan. 27	2100	a3,000	6.90				

Minimum discharge, 3.0 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	118	74	36	219	162	87	578	57	44	85	18
2	3.5	143	73	36	191	147	119	364	53	38	186	17
3	3.4	151	67	35	162	135	115	303	65	92	106	16
4	4.1	127	71	34	e140	114	99	288	102	282	91	15
5	7.3	108	69	e34	e128	108	92	257	80	267	80	15
6	51	96	68	e34	e117	113	86	257	65	143	72	14
7	37	92	64	e34	e108	104	87	233	55	108	67	14
8	22	135	58	e35	99	94	94	194	137	107	62	15
9	17	108	56	e35	97	88	92	171	378	125	56	16
10	15	93	55	e35	91	e83	94	189	209	103	48	17
11	13	91	53	35	90	e79	95	259	191	80	44	15
12	12	895	49	35	84	85	115	592	148	70	40	14
13	11	455	47	36	e64	85	118	437	126	1900	39	14
14	11	346	46	36	62	96	296	321	119	1600	37	16
15	29	475	50	35	60	138	219	259	101	621	34	14
16	29	342	49	33	55	161	539	243	85	645	32	13
17	23	264	47	37	54	129	686	259	76	379	43	15
18	20	222	45	43	51	124	426	217	69	303	36	197
19	19	207	44	856	e45	128	324	204	68	251	31	123
20	17	186	44	2700	50	154	278	175	95	218	28	70
21	109	166	43	723	170	156	232	171	84	167	26	53
22	491	149	42	483	462	145	197	166	72	139	24	54
23	168	131	42	343	379	126	240	135	65	e114	29	192
24	116	116	41	520	374	113	364	127	57	111	45	117
25	103	104	40	972	322	111	246	108	52	100	35	99
26	86	98	39	459	257	132	215	96	47	124	28	84
27	74	92	38	1180	217	122	237	89	43	105	27	73
28	318	87	37	1200	245	109	183	80	40	89	27	67
29	259	83	36	538	210	104	255	74	37	84	24	148
30	173	77	36	397	---	98	383	67	43	e79	21	112
31	139	---	36	299	---	91	---	62	---	76	19	---
TOTAL	2383.7	5757	1559	11308	4603	3634	6613	6975	2819	8564	1522	1647
MEAN	76.9	192	50.3	365	159	117	220	225	94.0	276	49.1	54.9
MAX	491	895	74	2700	462	162	686	592	378	1900	186	197
MIN	3.4	77	36	33	45	79	86	62	37	38	19	13
CFSM	1.51	3.76	.99	7.15	3.11	2.30	4.32	4.41	1.84	5.42	.96	1.08
IN.	1.74	4.20	1.14	8.25	3.36	2.65	4.82	5.09	2.06	6.25	1.11	1.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1952 - 1996, BY WATER YEAR (WY)

MEAN	35.7	81.6	87.9	93.1	84.7	155	234	107	47.3	31.0	18.6	20.3
MAX	179	250	163	365	161	289	410	225	142	276	78.0	71.3
(WY)	1956	1956	1955	1996	1953	1953	1969	1996	1952	1996	1955	1960
MIN	3.06	3.43	13.4	21.0	33.0	70.7	79.5	41.5	12.7	6.43	4.22	3.43
(WY)	1965	1965	1965	1965	1963	1965	1966	1964	1964	1964	1964	1995

HOUSATONIC RIVER BASIN

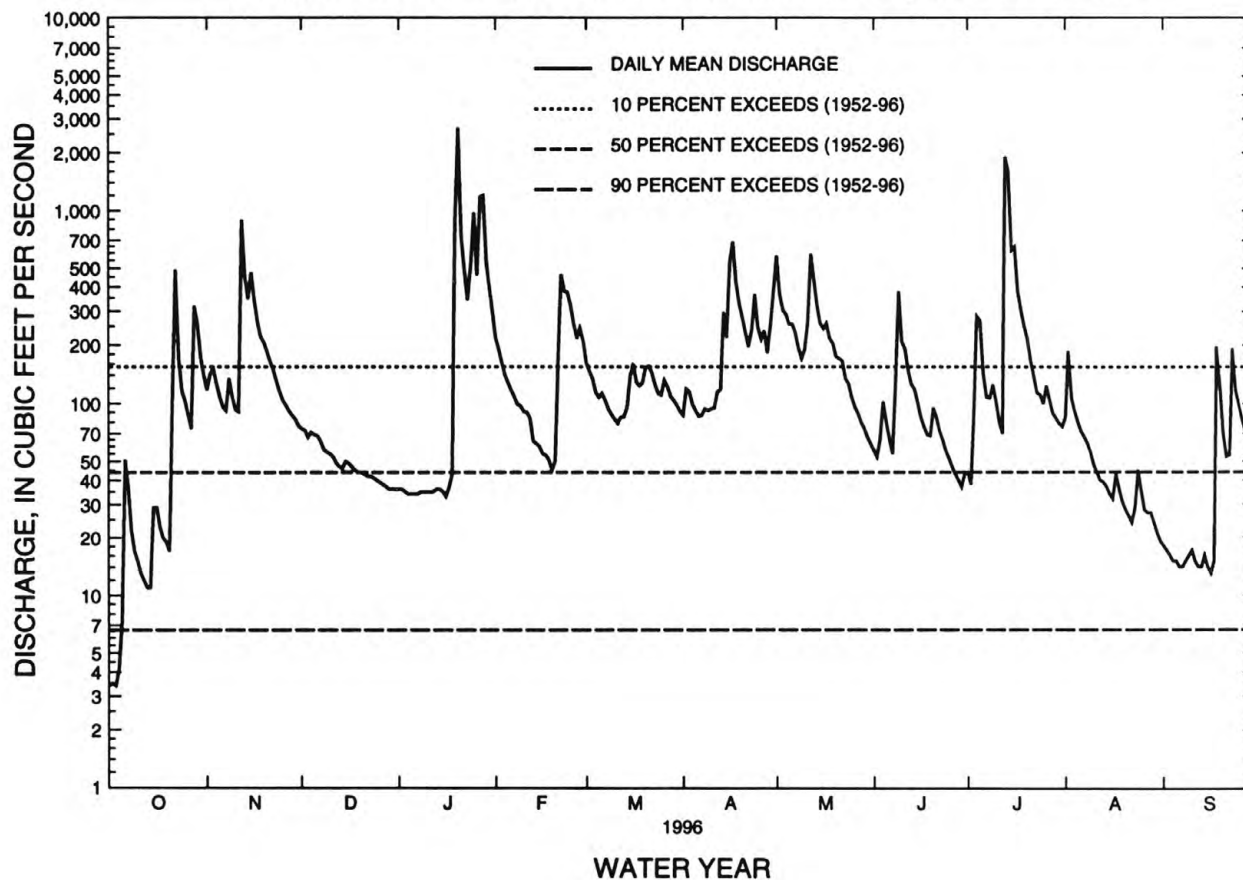
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01198000 GREEN RIVER NEAR GREAT BARRINGTON, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1952 - 1996
ANNUAL TOTAL	27749.6	57384.7	
ANNUAL MEAN	76.0	157	82.3
HIGHEST ANNUAL MEAN			157 1996
LOWEST ANNUAL MEAN			30.7 1965
HIGHEST DAILY MEAN	912 Mar 9	2700 Jan 20	2700 Jan 20 1996
LOWEST DAILY MEAN	2.6 Sep 7	3.4 Oct 1	2.6 Sep 7 1995
ANNUAL SEVEN-DAY MINIMUM	2.7 Sep 2	14 Oct 8	2.7 Sep 2 1995
INSTANTANEOUS PEAK FLOW		6740 Jul 13	6740 Jul 13 1996
INSTANTANEOUS PEAK STAGE		9.84 Jul 13	9.84 Jul 13 1996
INSTANTANEOUS LOW FLOW		3.0 Oct 2	2.2 Sep 4 1995
ANNUAL RUNOFF (CFSM)	1.49	3.07	1.61
ANNUAL RUNOFF (INCHES)	20.24	41.86	21.93
10 PERCENT EXCEEDS	176	329	195
50 PERCENT EXCEEDS	47	92	44
90 PERCENT EXCEEDS	3.7	24	6.6

e Estimated

GREEN RIVER NEAR GREAT BARRINGTON, MA 01198000



HOUSATONIC RIVER BASIN

01198000 GREEN RIVER NEAR GREAT BARRINGTON, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.-- Chemical analyses for water year 1964. Suspended-sediment data for water years 1967-71 and March 1994 to April 1996 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: March 1994 to April 1996 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: March 1994 to April 1996 (discontinued).

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 220 mg/L, Mar. 8, 1995; minimum daily mean, 0 mg/L on several days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,180 tons, Jan. 20, 1996; minimum daily, 0.01 tons, on many days.

EXTREMES FOR CURRENT PERIOD.--

SUSPENDED-SEDIMENT CONCENTRATION: Water year 1996: maximum daily mean, 183 mg/L, Jan. 27; minimum daily mean, 1 mg/L, on several days.

SUSPENDED-SEDIMENT DISCHARGE: Water year 1996: maximum daily, 1,180 tons, Jan. 20; minimum daily, 0.01 tons, on several days.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	3.4	1	.01	118	2	.64	74	1	.21
2	3.5	1	.01	143	5	2.2	73	1	.22
3	3.4	1	.01	151	4	1.8	67	1	.21
4	4.1	1	.01	127	4	1.4	71	1	.24
5	7.3	2	.07	108	4	1.2	69	1	.25
6	51	15	2.0	96	4	1.0	68	1	.26
7	37	3	.31	92	4	1.1	64	1	.26
8	22	2	.12	135	6	2.1	58	2	.25
9	17	2	.09	108	3	.87	56	2	.25
10	15	2	.08	93	3	.76	55	2	.26
11	13	2	.07	91	3	.73	53	2	.27
12	12	2	.06	895	131	406	49	2	.27
13	11	2	.06	455	22	28	47	3	.37
14	11	2	.07	346	13	12	46	4	.53
15	29	7	.58	475	18	23	50	6	.87
16	29	3	.23	342	8	7.8	49	9	1.2
17	23	2	.12	264	4	2.8	47	9	1.2
18	20	2	.11	222	2	1.4	45	9	1.1
19	19	2	.10	207	1	.83	44	8	.97
20	17	2	.10	186	1	.54	44	8	.90
21	109	42	62	166	1	.53	43	7	.82
22	491	52	115	149	1	.58	42	7	.75
23	168	4	2.1	131	2	.63	42	6	.70
24	116	4	1.1	116	2	.68	41	6	.63
25	103	3	.91	104	3	.74	40	5	.57
26	86	3	.70	98	3	.85	39	5	.53
27	74	3	.60	92	4	.93	38	5	.48
28	318	31	35	87	3	.64	37	4	.44
29	259	9	7.0	83	2	.38	36	4	.40
30	173	3	1.4	77	1	.23	36	4	.40
31	139	2	.75	---	---	---	36	4	.41
TOTAL	2383.7	---	230.77	5757	---	502.36	1559	---	16.22

HOUSATONIC RIVER BASIN

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01198000 GREEN RIVER NEAR GREAT BARRINGTON, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	36	4	.42	219	3	2.1	162	13	5.6
2	36	4	.43	191	3	1.4	147	13	5.0
3	35	5	.44	162	2	.97	135	12	4.5
4	34	5	.43	e140	2	.76	114	12	3.7
5	e34	5	.46	e128	2	.69	108	12	3.4
6	e34	5	.46	e117	2	.63	113	12	3.5
7	e34	5	.46	e108	2	.58	104	11	3.2
8	e35	5	.47	99	2	.53	94	11	2.8
9	e35	5	.47	97	2	.52	88	11	2.6
10	e35	6	.57	91	2	.49	e83	11	2.5
11	35	6	.55	90	2	.49	e79	10	2.1
12	35	6	.56	84	2	.45	85	10	2.4
13	36	6	.60	e64	2	.35	85	10	2.3
14	36	6	.61	62	2	.33	96	11	2.8
15	35	6	.61	60	2	.32	138	16	6.4
16	33	7	.59	55	2	.30	161	15	6.6
17	37	7	.69	54	2	.29	129	12	4.2
18	43	8	.90	51	2	.27	124	10	3.5
19	856	181	929	e45	2	.24	128	10	3.6
20	2700	164	1180	50	2	.32	154	15	6.2
21	723	66	135	170	41	25	156	8	3.5
22	483	19	26	462	115	154	145	6	2.3
23	343	10	9.1	379	32	34	126	4	1.5
24	520	72	191	374	27	27	113	3	1.0
25	972	80	252	322	26	23	111	3	.97
26	459	29	36	257	17	12	132	5	1.7
27	1180	183	1020	217	17	9.8	122	3	.96
28	1200	103	397	245	18	12	109	2	.59
29	538	37	55	210	15	8.7	104	2	.55
30	397	14	16	---	---	---	98	2	.43
31	299	6	5.0	---	---	---	91	1	.31
TOTAL	11308	---	4260.82	4603	---	317.53	3634	---	90.71

e Estimated

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	87	1	.25	578	---	---	57	---	---
2	119	---	---	364	---	---	53	---	---
3	115	---	---	303	---	---	65	---	---
4	99	---	---	288	---	---	102	---	---
5	92	---	---	257	---	---	80	---	---
6	86	---	---	257	---	---	65	---	---
7	87	---	---	233	---	---	55	---	---
8	94	---	---	194	---	---	137	---	---
9	92	---	---	171	---	---	378	---	---
10	94	---	---	189	---	---	209	---	---
11	95	---	---	259	---	---	191	---	---
12	115	---	---	592	---	---	148	---	---
13	118	---	---	437	---	---	126	---	---
14	296	---	---	321	---	---	119	---	---
15	219	---	---	259	---	---	101	---	---
16	539	---	---	243	---	---	85	---	---
17	686	---	---	259	---	---	76	---	---
18	426	---	---	217	---	---	69	---	---
19	324	---	---	204	---	---	68	---	---
20	278	---	---	175	---	---	95	---	---
21	232	---	---	171	---	---	84	---	---
22	197	---	---	166	---	---	72	---	---
23	240	---	---	135	---	---	65	---	---
24	364	---	---	127	---	---	57	---	---
25	246	---	---	108	---	---	52	---	---
26	215	---	---	96	---	---	47	---	---
27	237	---	---	89	---	---	43	---	---
28	183	---	---	80	---	---	40	---	---
29	255	---	---	74	---	---	37	---	---
30	383	---	---	67	---	---	43	---	---
31	---	---	---	62	---	---	---	---	---
TOTAL	6613	---	---	6975	---	---	2819	---	---

HOUSATONIC RIVER BASIN

01198000 GREEN RIVER NEAR GREAT BARRINGTON, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	JULY			AUGUST			SEPTEMBER		
1	44	---	---	85	---	---	18	---	---
2	38	---	---	186	---	---	17	---	---
3	92	---	---	106	---	---	16	---	---
4	282	---	---	91	---	---	15	---	---
5	267	---	---	80	---	---	15	---	---
6	143	---	---	72	---	---	14	---	---
7	108	---	---	67	---	---	14	---	---
8	107	---	---	62	---	---	15	---	---
9	125	---	---	56	---	---	16	---	---
10	103	---	---	48	---	---	17	---	---
11	80	---	---	44	---	---	15	---	---
12	70	---	---	40	---	---	14	---	---
13	1900	---	---	39	---	---	14	---	---
14	1600	---	---	37	---	---	16	---	---
15	621	---	---	34	---	---	14	---	---
16	645	---	---	32	---	---	13	---	---
17	379	---	---	43	---	---	15	---	---
18	303	---	---	36	---	---	197	---	---
19	251	---	---	31	---	---	123	---	---
20	218	---	---	28	---	---	70	---	---
21	167	---	---	26	---	---	53	---	---
22	139	---	---	24	---	---	54	---	---
23	e114	---	---	29	---	---	192	---	---
24	111	---	---	45	---	---	117	---	---
25	100	---	---	35	---	---	99	---	---
26	124	---	---	28	---	---	84	---	---
27	105	---	---	27	---	---	73	---	---
28	89	---	---	27	---	---	67	---	---
29	84	---	---	24	---	---	148	---	---
30	e79	---	---	21	---	---	112	---	---
31	76	---	---	19	---	---	---	---	---
TOTAL	8564	---	---	1522	---	---	1647	---	---

e Estimated

HOUSATONIC RIVER BASIN

01198122 IRONWORKS BROOK, EAST ROAD, AT SHEFFIELD, MA

LOCATION.--Lat 42°06'31", long 73°20'08", Berkshire County, Hydrologic Unit 01100005, on right bank at downstream side of bridge on East Rd., 0.6 mi east of Sheffield, 0.9 mi downstream of Soda Creek, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--11.2 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1994 to April 1996 (discontinued).

GAGE.--Staff gage read once daily and crest-stage gage. Elevation of gage is 660 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges, which are poor. Flow affected Sept. 6-8, 12-14, 1994 and Sept. 4-6, 1995, caused by removal of flash boards in dam upstream at Three Mile Pond.

AVERAGE DISCHARGE.--1 year, 11.8 ft³/s, 14.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 483 ft³/s, Mar. 8, 1995, gage height, 5.94 ft; minimum daily, 0.02 ft³/s, Aug. 26, 27, 1995.

EXTREMES FOR CURRENT PERIOD.--October 1995 to April 1996: Maximum discharge 402 ft³/s, Jan. 19, gage height, 5.50 ft; minimum daily, 0.44 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	19	13	e6.8	e38	29	18	---	---	---	---	---
2	.44	e26	12	e6.7	e32	29	35	---	---	---	---	---
3	e.34	e28	11	e6.5	e27	26	---	---	---	---	---	---
4	e.44	e23	12	e6.4	e24	24	---	---	---	---	---	---
5	3.5	e18	e12	e6.2	e21	22	---	---	---	---	---	---
6	22	16	e12	e6.1	e19	e22	---	---	---	---	---	---
7	11	15	11	e6.1	e18	e21	---	---	---	---	---	---
8	e7.1	21	11	e6.0	e17	e19	---	---	---	---	---	---
9	e5.9	16	11	e6.0	e16	18	---	---	---	---	---	---
10	5.5	14	e11	e6.0	e15	e16	---	---	---	---	---	---
11	4.6	13	e10	e6.0	e15	15	---	---	---	---	---	---
12	4.1	84	e10	e6.0	e14	16	---	---	---	---	---	---
13	3.6	e38	e9.6	e6.0	e13	18	---	---	---	---	---	---
14	3.5	e33	e9.4	e6.0	e11	26	---	---	---	---	---	---
15	e12	67	e9.7	e6.0	e10	50	---	---	---	---	---	---
16	7.1	e47	e9.8	e5.9	e9.6	51	---	---	---	---	---	---
17	5.5	31	e9.6	e5.8	e9.2	28	---	---	---	---	---	---
18	e4.6	24	e9.4	e8.5	e8.8	29	---	---	---	---	---	---
19	e4.2	26	e9.1	150	e8.4	e32	---	---	---	---	---	---
20	3.7	24	e8.8	138	e10	46	---	---	---	---	---	---
21	12	21	e8.6	80	65	41	---	---	---	---	---	---
22	30	19	e8.4	e41	100	36	---	---	---	---	---	---
23	14	17	e8.3	e27	70	32	---	---	---	---	---	---
24	12	16	e8.2	107	76	27	---	---	---	---	---	---
25	e11	16	e7.9	118	68	26	---	---	---	---	---	---
26	9.9	e16	e7.7	e46	51	29	---	---	---	---	---	---
27	8.8	e16	e7.4	157	e41	e28	---	---	---	---	---	---
28	131	e16	e7.2	171	e42	e26	---	---	---	---	---	---
29	48	16	e7.0	85	38	24	---	---	---	---	---	---
30	29	13	e7.0	64	---	18	---	---	---	---	---	---
31	23	---	e6.9	e47	---	18	---	---	---	---	---	---
TOTAL	438.38	749	296.0	1344.0	887.0	842	---	---	---	---	---	---
MEAN	14.1	25.0	9.55	43.4	30.6	27.2	---	---	---	---	---	---
MAX	131	84	13	171	100	51	---	---	---	---	---	---
MIN	.34	13	6.9	5.8	8.4	15	---	---	---	---	---	---
CFSM	1.26	2.23	.85	3.87	2.73	2.43	---	---	---	---	---	---
IN.	1.46	2.49	.98	4.46	2.95	2.80	---	---	---	---	---	---

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
MEAN	9.44	15.8	16.1	37.7	22.2	30.4	14.5	7.54	3.00	.60	4.45	2.59
MAX	14.1	25.0	22.7	43.4	30.6	33.5	14.5	7.54	3.00	.60	8.17	4.38
(WY)	1996	1996	1995	1996	1996	1995	1995	1995	1995	1995	1994	1994
MIN	4.75	6.63	9.55	32.1	13.5	27.2	14.5	7.54	3.00	.60	.72	.80
(WY)	1995	1995	1996	1995	1995	1996	1995	1995	1995	1995	1995	1995

HOUSATONIC RIVER BASIN

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01198122 IRONWORKS BROOK, EAST ROAD, AT SHEFFIELD, MA--Continued

SUMMARY STATISTICS

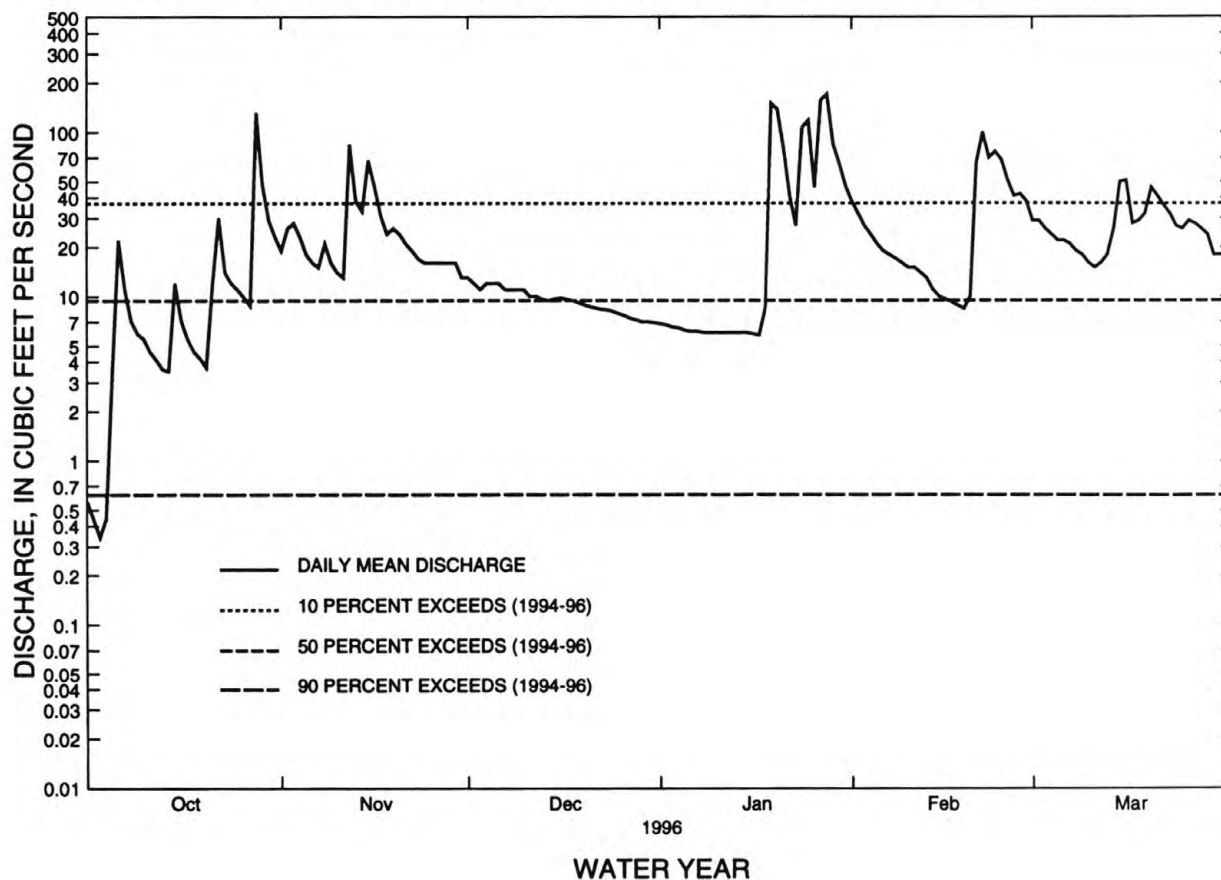
FOR 1995 CALENDAR YEAR

WATER YEARS 1994 - 1996

ANNUAL TOTAL	4721.20				
ANNUAL MEAN	12.9			11.8	
HIGHEST ANNUAL MEAN				11.8	1995
LOWEST ANNUAL MEAN				11.8	1995
HIGHEST DAILY MEAN	170	Mar 8		171	Jan 28 1996
LOWEST DAILY MEAN	.02	Aug 26		.02	Aug 26 1995
ANNUAL SEVEN-DAY MINIMUM	.03	Aug 23		.03	Aug 23 1995
INSTANTANEOUS PEAK FLOW				483	Mar 8 1995
INSTANTANEOUS PEAK STAGE				5.94	Mar 8 1995
INSTANTANEOUS LOW FLOW				.02	Aug 26 1995
ANNUAL RUNOFF (CFSM)	1.15			1.05	
ANNUAL RUNOFF (INCHES)	15.68			14.25	
10 PERCENT EXCEEDS	29			37	
50 PERCENT EXCEEDS	9.6			9.4	
90 PERCENT EXCEEDS	.39			.62	

e Estimated

IRONWORKS BROOK, EAST ROAD, AT SHEFFIELD, MA 01198122



HOUSATONIC RIVER BASIN

01198122 IRONWORKS BROOK, EAST ROAD, AT SHEFFIELD, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1994 to April 1996 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	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)
OCT									
05...	1700	2.4	--	173	--	14.5	15	0.10	--
05...	2210	16	--	178	--	14.5	54	2.3	51
06...	0735	26	--	167	--	13.5	38	2.7	42
06...	1021	26	--	169	--	13.5	25	1.8	--
06...	1432	24	--	168	--	14.5	12	0.78	--
06...	1630	22	--	167	--	15.0	8	0.48	--
12...	1920	4.4	170	--	16.0	13.0	--	--	--
22...	0133	43	--	130	--	12.5	33	3.8	51
22...	0340	44	--	132	--	12.5	32	3.8	38
22...	0905	32	--	140	--	10.5	13	1.1	--
22...	1642	22	--	145	--	13.0	8	0.48	--
26...	1140	9.9	--	157	--	10.0	3	0.08	--
28...	0803	261	--	93	--	13.5	930	655	54
28...	1122	193	--	92	--	13.5	258	134	37
28...	1632	126	--	92	--	14.0	56	19	59
29...	0838	48	--	125	--	10.5	27	3.5	--
NOV									
07...	1650	15	--	137	--	6.5	6	0.24	--
08...	0743	19	--	126	--	6.0	9	0.46	--
12...	1010	121	--	89	--	5.5	93	30	45
12...	1744	63	--	94	--	5.0	27	4.6	36
15...	0905	67	--	100	--	5.0	21	3.8	52
JAN									
19...	1653	275	--	124	--	1.0	1200	891	--
19...	1657	275	--	124	--	1.0	1360	1010	--
19...	1923	402	--	91	--	0.5	1320	1430	--
19...	1925	402	--	92	--	0.5	1400	1520	--
20...	0005	268	--	72	--	--	319	231	--
20...	0010	268	--	73	--	--	319	231	--
20...	1145	121	--	80	--	0.0	69	23	--
20...	1150	121	--	79	--	0.0	66	22	--
20...	1602	102	--	89	--	0.0	257	71	--
20...	1608	102	--	96	--	0.0	256	71	32
21...	1159	87	--	107	--	0.0	26	6.1	--
21...	1200	87	--	106	--	0.0	31	7.3	--
24...	1645	181	--	79	--	2.0	628	307	--
24...	1647	181	--	80	--	2.0	639	312	--
25...	0933	121	--	81	--	0.0	85	28	--
25...	0938	121	--	82	--	0.0	76	25	--
28...	0907	167	--	83	--	0.0	82	37	--
28...	0909	167	--	85	--	0.0	92	41	--
28...	1458	158	--	91	--	0.5	137	58	--
28...	1501	158	--	89	--	0.5	124	53	17
29...	1226	85	--	97	--	0.5	73	17	15
FEB									
22...	1615	105	--	76	--	1.5	285	81	--
22...	1618	105	--	74	--	1.5	256	73	--
23...	1050	57	--	94	--	2.0	42	6.5	--
MAR									
20...	1730	49	--	96	--	4.0	24	3.2	--
APR									
01...	1320	18	--	108	--	6.5	4	0.19	--
01...	1325	18	--	111	--	6.5	1	0.05	--
02...	0759	36	--	108	--	3.0	28	2.7	--
02...	0801	36	--	105	--	3.0	26	2.5	--
02...	1516	38	--	104	--	7.5	20	2.1	--
02...	1519	38	--	101	--	7.5	20	2.1	--

HOUSATONIC RIVER BASIN

01198125 HOUSATONIC RIVER NEAR ASHLEY FALLS, MA

LOCATION.-- Lat 42°04'29", Long 73°20'03", Berkshire County, Hydrologic Unit 01100005, on right bank beneath bridge on U.S. Highway 7, 1.3 mi north of Ashley Falls, 2.5 mi downstream from Ironworks Brook, and 3.1 mi upstream from Konkapot River.

DRAINAGE AREA.-- 465 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1994 to September 1996 (discontinued).

GAGE.-- Water-stage recorder and crest-stage gage. Elevation of gage is 650 ft above sea level, from topographic map.

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

AVERAGE DISCHARGE.--2 years, 994 ft³/s, 29.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,110 ft³/s, gage height, 13.57 ft, Jan. 21, 1996; minimum, 65 ft³/s, Sept. 6, 7, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,110 ft³/s, gage height, 13.57 ft, Jan. 21; minimum, 101 ft³/s, Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	1540	863	e415	2880	1930	1030	3570	619	364	627	274
2	103	1310	860	e410	e2160	1700	1220	4030	573	357	797	260
3	111	1460	828	e410	e1800	1510	1520	3670	547	356	788	260
4	119	1420	819	e405	e1610	1330	1480	2980	850	1070	736	218
5	170	1210	866	e405	e1470	1260	1270	2550	992	1460	680	205
6	538	1030	864	e400	e1400	1350	1140	2370	878	1250	623	201
7	910	929	856	400	e1350	1430	1070	2330	682	902	573	218
8	788	1050	760	e400	1340	1290	1130	2170	677	719	588	237
9	548	1130	682	e405	1290	e1250	1160	1890	1590	833	515	228
10	395	993	e680	e410	1260	e1160	1100	1700	1980	856	475	233
11	321	903	e660	e410	1190	e1110	1110	1870	1770	695	414	240
12	278	1740	e640	e405	1130	e1090	1150	2670	1340	545	368	220
13	243	3180	e620	e405	1030	1070	1290	3450	1030	1050	351	210
14	219	3390	e600	e415	e932	1110	1900	3560	931	4250	333	225
15	355	3310	e620	e420	e869	1290	2590	3050	1020	5780	313	236
16	618	3120	e640	e410	e835	1710	2850	2400	848	6280	294	216
17	534	2800	e620	e410	e813	1650	3960	2200	689	5820	320	210
18	401	2350	e600	595	e799	1460	4540	2130	600	4450	332	747
19	370	1970	e580	1150	e785	1360	4290	2040	546	2970	290	1880
20	353	1790	e560	4100	822	1430	3470	1930	656	2110	262	1710
21	416	1670	e550	6860	1150	1670	2780	1680	778	1680	246	1080
22	1630	1520	e550	6590	2360	1720	2420	1590	756	1320	256	741
23	2270	1350	e550	5230	3170	1560	2290	1370	698	1040	280	1290
24	2070	1170	e520	3940	3300	1320	2610	1210	613	947	456	1940
25	1330	1050	e510	4460	3230	1200	2840	1080	538	855	459	1660
26	1000	966	e500	4600	2910	1220	2670	976	496	879	362	1250
27	861	927	e490	4090	2470	1390	2400	905	444	993	314	1000
28	1590	886	e480	5550	2190	1390	2300	840	398	867	496	845
29	2880	869	e465	5950	2190	1240	2200	773	365	750	524	985
30	2910	884	e450	5130	---	1130	2820	717	337	678	346	1240
31	2200	---	e430	3940	---	1060	---	673	---	649	293	---
TOTAL	26639	47917	19713	69120	48735	42390	64600	64374	24241	52775	13711	20259
MEAN	859	1597	636	2230	1681	1367	2153	2077	808	1702	442	675
MAX	2910	3390	866	6860	3300	1930	4540	4030	1980	6280	797	1940
MIN	103	869	430	400	785	1060	1030	673	337	356	246	201
CFSM	1.85	3.43	1.37	4.80	3.61	2.94	4.63	4.47	1.74	3.66	.95	1.45
IN.	2.13	3.83	1.58	5.53	3.90	3.39	5.17	5.15	1.94	4.22	1.10	1.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

MEAN	617	994	863	1871	1183	1473	2075	1227	485	736	330	349
MAX	859	1597	1090	2230	1681	1579	3250	2077	808	1702	442	675
(WY)	1996	1996	1995	1996	1996	1995	1994	1996	1996	1996	1996	1996
MIN	375	391	636	1513	668	1367	821	486	288	154	133	97.6
(WY)	1995	1995	1996	1995	1995	1996	1995	1995	1995	1995	1995	1995

HOUSATONIC RIVER BASIN

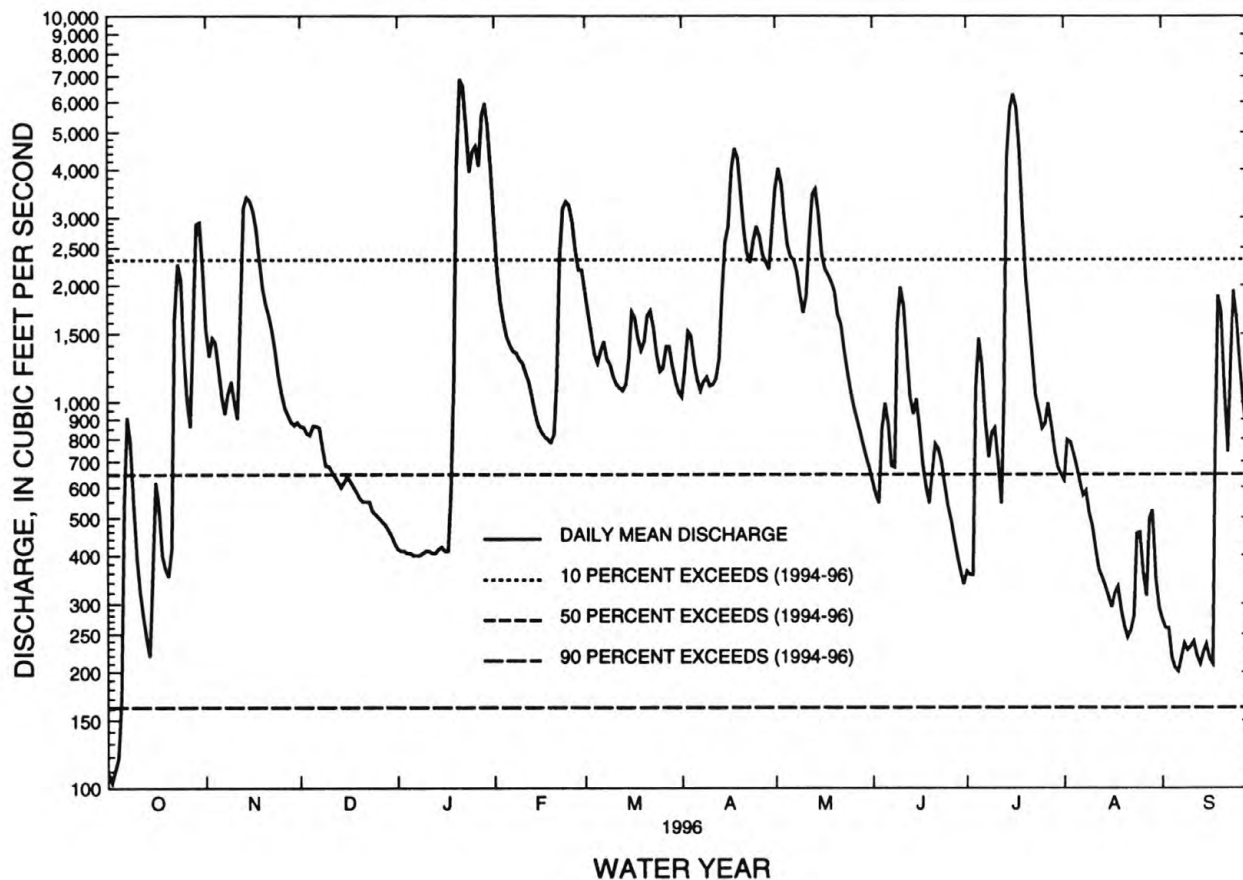
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SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1994 - 1996	
ANNUAL TOTAL	268969		494474		994	
ANNUAL MEAN	737		1351		1351	
HIGHEST ANNUAL MEAN					1351	
LOWEST ANNUAL MEAN					635	
HIGHEST DAILY MEAN	3970		6860		6860	
LOWEST DAILY MEAN	65		103		65	
ANNUAL SEVEN-DAY MINIMUM	69		220		69	
INSTANTANEOUS PEAK FLOW			7110		7110	
INSTANTANEOUS PEAK STAGE			13.57		13.57	
INSTANTANEOUS LOW FLOW			101		65	
ANNUAL RUNOFF (CFSM)	1.58		2.91		2.14	
ANNUAL RUNOFF (INCHES)	21.52		39.56		29.03	
10 PERCENT EXCEEDS	1670		2930		2330	
50 PERCENT EXCEEDS	580		992		649	
90 PERCENT EXCEEDS	108		329		162	

e Estimated

HOUSATONIC RIVER NEAR ASHLEY FALLS, MA 01198125



HOUSATONIC RIVER BASIN

01198125 HOUSATONIC RIVER NEAR ASHLEY FALLS, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Chemical and biological analyses for water years 1992 to current year. Suspended-sediment data for March 1994 to April 1996 (discontinued).

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: March 1994 to April 1996 (discontinued).

SUSPENDED-SEDIMENT DISCHARGE: March 1994 to April 1996 (discontinued).

REMARKS.--Water-quality records for water years 1992 to current year published in Connecticut Water Resources Data report.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 131 mg/L, Jan. 20, 1996; minimum daily mean, 1 mg/L, on many days.

SUSPENDED-SEDIMENT DISCHARGE: Maximum daily, 1,690 tons, Jan. 28, 1996; minimum daily, 0.41 tons, Aug. 25, 1995.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Water year 1996: maximum daily mean, 131 mg/L, Jan. 20; minimum daily mean, 3 mg/L, Oct. 1.

SUSPENDED-SEDIMENT DISCHARGE: Water year 1996, maximum daily, 1,690 tons, Jan. 28; minimum daily, 0.95 tons, Oct. 1.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616)	ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML) (31649)	
NOV												
27...	1045	932	280	8.0	9.0	3.0	2.5	12.9	99	660	108	
JAN												
23...	1030	5300	199	7.5	3.0	0.0	4.5	13.5	93	540	152	
MAR												
12...	1045	1100	284	7.9	6.0	0.5	3.6	14.1	101	500	68	
MAY												
02...	1000	4070	206	7.9	--	--	--	--	--	--	--	
JUN												
27...	0930	438	338	8.1	24.0	20.0	3.7	7.9	88	55	288	
JUL												
29...	0930	754	321	8.0	27.0	20.0	2.5	8.2	92	460	39	
AUG												
09...	0945	520	322	8.2	28.0	22.5	2.4	8.1	96	420	28	
SEP												
24...	0930	1970	218	7.9	14.0	14.0	11	9.8	97	760	540	
DATE		HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
NOV												
27...	120	31	10	11	1.1	0	120	98	13	18	<0.10	
JAN												
23...	73	19	6.1	11	1.1	0	70	57	8.2	18	<0.10	
MAR												
12...	110	29	9.0	15	1.1	0	115	94	12	23	<0.10	
MAY												
02...	--	--	--	--	--	0	86	71	--	--	--	
JUN												
27...	130	34	12	16	1.2	0	147	120	11	22	<0.10	
JUL												
29...	130	33	11	12	1.1	0	140	115	9.6	17	<0.10	
AUG												
09...	130	34	11	15	1.4	0	165	136	12	19	<0.10	
SEP												
24...	80	21	6.8	9.3	1.3	0	95	78	8.8	13	<0.10	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)
NOV										
27...	4.4	163	170	<0.010	0.530	0.030	0.17	0.20	<0.20	0.73
JAN										
23...	4.0	107	126	<0.010	0.500	0.030	0.27	0.30	0.30	0.80
MAR										
12...	3.7	157	178	0.010	0.570	0.020	--	<0.20	0.20	--
MAY										
02...	--	--	--	<0.010	--	0.030	0.27	0.30	<0.20	0.43
JUN										
27...	4.1	191	194	0.020	0.530	<0.015	0.30	0.30	0.20	0.83
JUL										
29...	4.3	164	188	<0.010	0.440	0.040	0.16	0.20	0.30	0.64
AUG										
09...	2.6	172	182	0.020	0.440	0.020	0.18	0.20	<0.20	0.64
SEP										
24...	4.5	126	188	0.020	0.290	<0.020	0.40	0.40	0.30	0.69

DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	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)
NOV										
27...	0.050	0.010	0.010	16	<1.0	11	<1.0	<1.0	<1.0	<1.0
JAN										
23...	0.030	0.020	0.010	27	<1.0	8.0	<1.0	<1.0	<1.0	<1.0
MAR										
12...	<0.010	0.010	0.010	12	<1.0	10	<1.0	<1.0	<1.0	<1.0
MAY										
02...	0.070	0.020	<0.010	--	--	--	--	--	--	--
JUN										
27...	0.040	<0.010	0.010	16	<1.0	15	<1.0	<1.0	<1.0	<1.0
JUL										
29...	<0.010	<0.010	0.020	15	<1.0	14	<1.0	<1.0	2.0	<1.0
AUG										
09...	0.050	0.010	0.020	18	<1.0	14	<1.0	<1.0	<1.0	<1.0
SEP										
24...	0.070	0.040	0.030	25	<1.0	11	<1.0	<1.0	<1.0	<1.0

DATE	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	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)
NOV										
27...	2.0	86	<1.0	47	<1.0	1.0	<1.0	3.0	<1.0	3.2
JAN										
23...	<1.0	75	<1.0	17	<1.0	<1.0	<1.0	2.0	<1.0	3.6
MAR										
12...	1.0	62	<1.0	40	<1.0	<1.0	<1.0	4.0	<1.0	3.6
MAY										
02...	--	--	--	--	--	--	--	--	--	4.6
JUN										
27...	1.0	62	<1.0	30	<1.0	1.0	<1.0	<1.0	<1.0	4.0
JUL										
29...	1.0	69	<1.0	29	<1.0	2.0	<1.0	<1.0	<1.0	4.5
AUG										
09...	1.0	64	<1.0	20	<1.0	1.0	<1.0	<1.0	<1.0	4.7
SEP										
24...	1.0	92	<1.0	9.0	<1.0	1.0	<1.0	<1.0	<1.0	7.5

HOUSATONIC RIVER BASIN

01198125 HOUSATONIC RIVER NEAR ASHLEY FALLS, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	108	3	.95	1540	22	93	863	10	24
2	103	4	1.1	1310	17	59	860	10	24
3	111	5	1.4	1460	15	60	828	10	23
4	119	5	1.7	1420	14	55	819	10	23
5	170	5	2.1	1210	14	45	866	11	25
6	538	15	25	1030	13	36	864	11	25
7	910	26	63	929	12	31	856	11	25
8	788	22	46	1050	12	34	760	11	22
9	548	17	25	1130	11	35	682	10	18
10	395	12	13	993	11	29	e680	9	17
11	321	10	8.4	903	10	25	e660	8	14
12	278	8	6.3	1740	62	344	e640	7	12
13	243	7	4.6	3180	74	634	e620	6	10
14	219	6	3.7	3390	69	633	e600	6	9.7
15	355	9	8.8	3310	40	361	e620	5	8.4
16	618	11	19	3120	35	295	e640	5	8.6
17	534	10	14	2800	31	238	e620	5	8.4
18	401	9	9.6	2350	25	158	e600	5	8.1
19	370	8	8.1	1970	21	112	e580	5	7.8
20	353	8	7.6	1790	18	87	e560	5	7.6
21	416	9	10	1670	15	69	e550	5	7.4
22	1630	64	315	1520	14	57	e550	5	7.4
23	2270	77	471	1350	13	47	e550	5	7.4
24	2070	47	266	1170	12	38	e520	5	7.0
25	1330	28	100	1050	12	33	e510	5	6.9
26	1000	21	57	966	11	30	e500	5	6.8
27	861	17	40	927	11	27	e490	5	6.6
28	1590	52	245	886	11	25	e480	5	6.5
29	2880	76	587	869	10	24	e465	5	6.3
30	2910	45	351	884	10	24	e450	5	6.1
31	2200	30	181	---	---	---	e430	5	5.8
TOTAL	26639	---	2892.35	47917	---	3738	19713	---	394.8

e Estimated

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	e415	5	5.6	2880	49	380	1930	30	159
2	e410	5	5.5	e2160	42	245	1700	27	125
3	e410	5	5.5	e1800	37	180	1510	25	102
4	e405	5	5.5	e1610	33	143	1330	23	81
5	e405	5	5.5	e1470	31	123	1260	21	71
6	e400	5	5.4	e1400	30	113	1350	25	90
7	400	5	5.4	e1350	29	106	1430	28	110
8	e400	5	5.4	1340	28	102	1290	26	92
9	e405	5	5.5	1290	28	96	e1250	24	81
10	e410	5	5.5	1260	26	89	e1160	23	72
11	e410	5	5.5	1190	23	73	e1110	21	63
12	e405	5	5.5	1130	19	59	e1090	20	59
13	e405	5	5.5	1030	17	46	1070	20	58
14	e415	5	5.6	e932	14	35	1110	21	63
15	e420	5	5.7	e869	12	28	1290	28	99
16	e410	5	5.5	e835	10	22	1710	35	164
17	e410	5	5.5	e813	9	20	1650	30	136
18	595	5	8.0	e799	7	15	1460	22	87
19	1150	49	255	e785	6	13	1360	15	55
20	4100	131	1400	822	5	12	1430	12	46
21	6860	65	1190	1150	22	79	1670	16	74
22	6590	38	682	2360	102	650	1720	17	81
23	5230	30	423	3170	107	915	1560	14	60
24	3940	39	408	3300	89	798	1320	12	43
25	4460	91	1100	3230	73	640	1200	10	32
26	4600	85	1060	2910	59	468	1220	10	34
27	4090	58	640	2470	46	304	1390	10	39
28	5550	113	1690	2190	37	218	1390	9	34
29	5950	74	1190	2190	35	204	1240	6	21
30	5130	63	878	---	---	---	1130	6	17
31	3940	56	600	---	---	---	1060	5	15
TOTAL	69120	---	11617.6	48735	---	6176	42390	---	2263

e Estimated

HOUSATONIC RIVER BASIN

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01198125 HOUSATONIC RIVER NEAR ASHLEY FALLS, MA--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	1030	5	14	3570	---	---	619	---	---
2	1220	---	---	4030	---	---	573	---	---
3	1520	---	---	3670	---	---	547	---	---
4	1480	---	---	2980	---	---	850	---	---
5	1270	---	---	2550	---	---	992	---	---
6	1140	---	---	2370	---	---	878	---	---
7	1070	---	---	2330	---	---	682	---	---
8	1130	---	---	2170	---	---	677	---	---
9	1160	---	---	1890	---	---	1590	---	---
10	1100	---	---	1700	---	---	1980	---	---
11	1110	---	---	1870	---	---	1770	---	---
12	1150	---	---	2670	---	---	1340	---	---
13	1290	---	---	3450	---	---	1030	---	---
14	1900	---	---	3560	---	---	931	---	---
15	2590	---	---	3050	---	---	1020	---	---
16	2850	---	---	2400	---	---	848	---	---
17	3960	---	---	2200	---	---	689	---	---
18	4540	---	---	2130	---	---	600	---	---
19	4290	---	---	2040	---	---	546	---	---
20	3470	---	---	1930	---	---	656	---	---
21	2780	---	---	1680	---	---	778	---	---
22	2420	---	---	1590	---	---	756	---	---
23	2290	---	---	1370	---	---	698	---	---
24	2610	---	---	1210	---	---	613	---	---
25	2840	---	---	1080	---	---	538	---	---
26	2670	---	---	976	---	---	496	---	---
27	2400	---	---	905	---	---	444	---	---
28	2300	---	---	840	---	---	398	---	---
29	2200	---	---	773	---	---	365	---	---
30	2820	---	---	717	---	---	337	---	---
31	---	---	---	673	---	---	---	---	---
TOTAL	64600	---	---	64374	---	---	24241	---	---

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	364	---	---	627	---	---	274	---	---
2	357	---	---	797	---	---	260	---	---
3	356	---	---	788	---	---	260	---	---
4	1070	---	---	736	---	---	218	---	---
5	1460	---	---	680	---	---	205	---	---
6	1250	---	---	623	---	---	201	---	---
7	902	---	---	573	---	---	218	---	---
8	719	---	---	588	---	---	237	---	---
9	833	---	---	515	---	---	228	---	---
10	856	---	---	475	---	---	233	---	---
11	695	---	---	414	---	---	240	---	---
12	545	---	---	368	---	---	220	---	---
13	1050	---	---	351	---	---	210	---	---
14	4250	---	---	333	---	---	225	---	---
15	5780	---	---	313	---	---	236	---	---
16	6280	---	---	294	---	---	216	---	---
17	5820	---	---	320	---	---	210	---	---
18	4450	---	---	332	---	---	747	---	---
19	2970	---	---	290	---	---	1880	---	---
20	2110	---	---	262	---	---	1710	---	---
21	1680	---	---	246	---	---	1080	---	---
22	1320	---	---	256	---	---	741	---	---
23	1040	---	---	280	---	---	1290	---	---
24	947	---	---	456	---	---	1940	---	---
25	855	---	---	459	---	---	1660	---	---
26	879	---	---	362	---	---	1250	---	---
27	993	---	---	314	---	---	1000	---	---
28	867	---	---	496	---	---	845	---	---
29	750	---	---	524	---	---	985	---	---
30	678	---	---	346	---	---	1240	---	---
31	649	---	---	293	---	---	---	---	---
TOTAL	52775	---	---	13711	---	---	20259	---	---

HOUSATONIC RIVER BASIN

01198200 KONKAPOT RIVER AT ASHLEY FALLS, MA

LOCATION.--Lat 42° 03' 11", Long 73° 19' 35", Berkshire County, Hydrologic Unit 01100005, on right bank at downstream side of bridge on U.S. Highway 7, 0.5 mi southeast of Ashley Falls, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--61.1 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Crest-stage partial-record: water years 1963-71; low-flow partial-record: water years 1963-65 and 1991-93; March 1994 to September 1996 (discontinued).

GAGE.--Staff gage read once daily and crest-stage gage. Elevation of gage is 670 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Flow affected several days each year when water is released from Lake Garfield for flood control purposes, and when water is held back to fill Lake Garfield by Town of Monterey.

AVERAGE DISCHARGE.--2 years, 116 ft³/s, 25.86 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,280 ft³/s, Jan. 28, 1996, gage height, 6.29 ft; minimum daily, 8.3 ft³/s, Aug. 29, 30, 1995.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,280 ft³/s, Jan. 28, gage height, 6.29 ft, from crest-stage gage; minimum daily, 15 ft³/s, Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	172	99	e67	194	157	116	544	61	48	72	31
2	16	204	108	e67	184	e150	226	334	61	46	161	32
3	16	241	93	e67	e174	e139	204	246	78	49	104	30
4	15	196	110	e66	e163	e135	141	249	135	e228	e85	30
5	21	e174	104	e65	149	128	133	237	133	82	82	28
6	148	146	115	e64	149	e142	131	237	108	72	84	e27
7	89	140	106	e64	149	e135	164	207	95	52	82	e29
8	49	217	85	e63	149	e131	144	184	96	49	82	30
9	36	149	e82	e62	e141	e129	135	169	215	86	63	32
10	31	125	e82	e62	132	e129	146	160	132	64	69	35
11	27	581	e82	e61	e131	128	139	217	99	45	59	32
12	25	748	81	e61	123	e128	133	448	86	40	52	28
13	23	415	88	e61	e108	133	224	337	76	264	51	30
14	36	e316	e78	e60	e100	e155	462	210	69	770	51	29
15	106	497	100	e60	e95	184	366	232	62	403	50	30
16	71	300	e90	e60	e92	e222	427	269	58	750	48	31
17	53	226	81	60	e89	e179	665	244	49	502	61	31
18	e53	213	78	79	e87	169	392	178	47	324	52	294
19	55	204	76	363	86	165	317	183	42	260	47	276
20	55	187	e74	1220	e97	256	244	163	41	213	42	109
21	152	174	e74	573	219	e263	217	155	57	163	40	186
22	581	164	e73	305	463	222	191	167	59	124	36	474
23	196	151	71	227	447	176	241	135	53	111	40	356
24	124	142	e71	338	371	167	352	133	61	110	72	266
25	110	125	e71	824	313	147	252	129	54	108	58	156
26	97	124	69	380	241	137	198	128	52	144	49	98
27	96	123	69	542	232	166	229	108	46	123	43	81
28	680	111	70	988	229	152	195	100	43	109	41	69
29	811	106	65	419	195	137	236	91	45	93	40	128
30	264	101	62	306	---	133	468	74	44	85	e38	121
31	230	---	66	228	---	120	---	e66	---	e82	e33	---
TOTAL	4282	6772	2573	7862	5302	4914	7488	6334	2257	5599	1887	3129
MEAN	138	226	83.0	254	183	159	250	204	75.2	181	60.9	104
MAX	811	748	115	1220	463	263	665	544	215	770	161	474
MIN	15	101	62	60	86	120	116	66	41	40	33	27
CFSM	2.26	3.69	1.36	4.15	2.99	2.59	4.09	3.34	1.23	2.96	1.00	1.71
IN.	2.61	4.12	1.57	4.79	3.23	2.99	4.56	3.86	1.37	3.41	1.15	1.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 1996, BY WATER YEAR (WY)

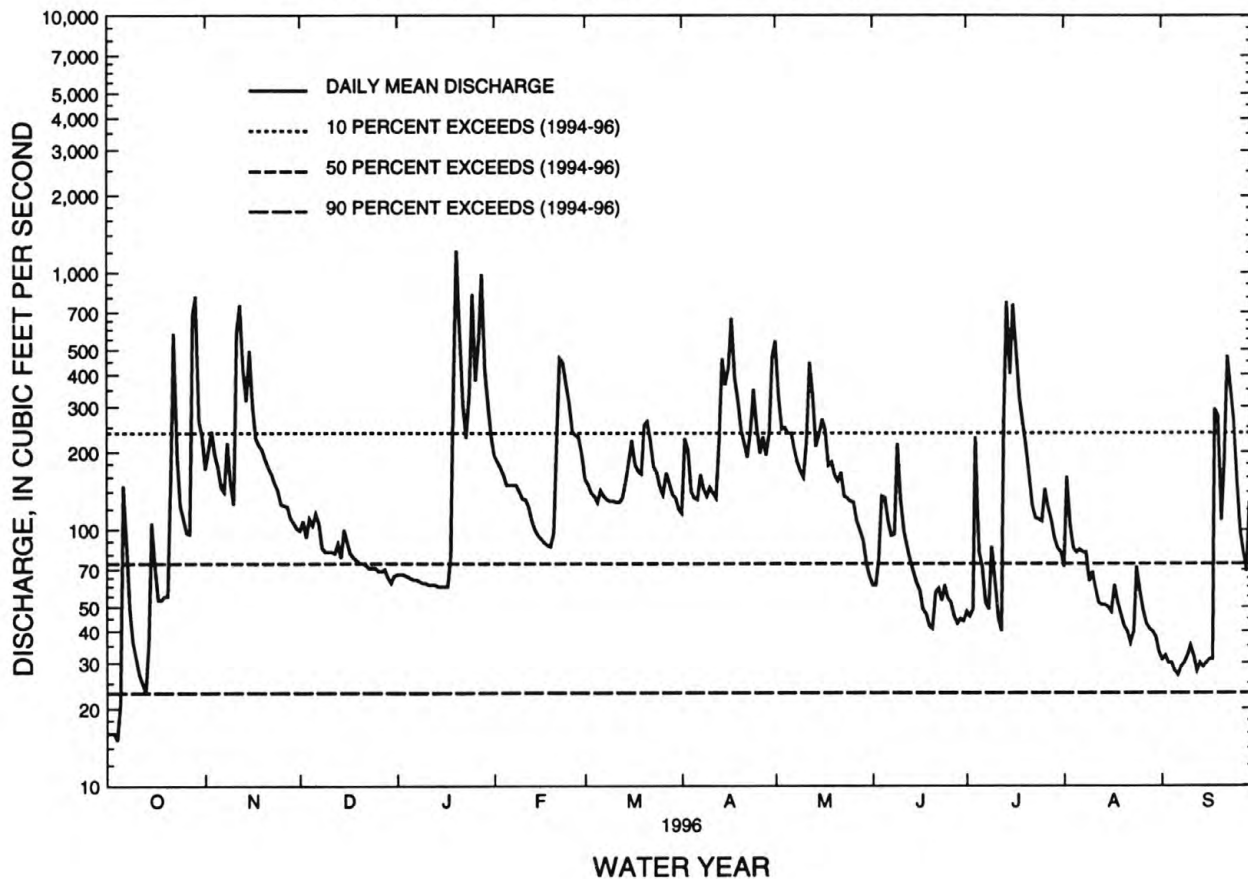
	1994	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995
MEAN	95.3	136	106	207	134	159	169	132	53.9	98.6	51.2	52.7
MAX	138	226	128	254	183	159	250	204	75.2	181	74.1	104
(WY)	1996	1996	1995	1996	1996	1995	1996	1996	1996	1996	1994	1996
MIN	52.4	45.9	83.0	161	83.9	159	88.7	59.0	36.2	23.4	18.5	15.1
(WY)	1995	1995	1996	1995	1995	1996	1995	1995	1995	1995	1995	1995

01198200 KONKAPOT RIVER AT ASHLEY FALLS, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1994 - 1996
ANNUAL TOTAL	33250.4	58399	
ANNUAL MEAN	91.1	160	116
HIGHEST ANNUAL MEAN			160
LOWEST ANNUAL MEAN			72.9
HIGHEST DAILY MEAN	811 Oct 29	1220 Jan 20	1220 Jan 20 1996
LOWEST DAILY MEAN	8.3 Aug 29	15 Oct 4	8.3 Aug 29 1995
ANNUAL SEVEN-DAY MINIMUM	9.3 Aug 26	29 Sep 2	9.3 Aug 26 1995
INSTANTANEOUS PEAK FLOW		1280 Jan 28	1280 Jan 28 1996
INSTANTANEOUS PEAK STAGE		6.29 Jan 28	6.29 Jan 28 1996
INSTANTANEOUS LOW FLOW		15 Oct 4	8.3 Aug 29 1995
ANNUAL RUNOFF (CFSM)	1.49	2.61	1.90
ANNUAL RUNOFF (INCHES)	20.24	35.56	25.86
10 PERCENT EXCEEDS	193	327	237
50 PERCENT EXCEEDS	72	118	74
90 PERCENT EXCEEDS	16	41	23

e Estimated

KONKAPOT RIVER AT ASHLEY FALLS, MA 01198200



HOUSATONIC RIVER BASIN

01198200 KONKAPOT RIVER AT ASHLEY FALLS, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1994 to April 1996 (discontinued).

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT									
05...	1545	21	--	321	--	14.5	3	0.17	--
05...	2240	45	--	289	--	14.5	13	1.6	--
05...	2247	45	--	297	--	14.5	16	1.9	--
06...	0820	166	--	260	--	13.5	161	72	70
06...	0824	166	--	254	--	13.5	174	78	71
06...	0835	170	--	253	--	13.5	139	64	77
06...	1050	187	--	228	--	13.5	152	77	57
06...	1053	187	--	239	--	13.5	137	69	68
06...	1340	190	--	219	18.5	14.0	76	39	93
06...	1505	190	--	209	--	14.5	85	44	49
06...	1508	190	--	219	--	14.5	69	35	70
06...	1643	182	--	216	--	14.5	76	37	--
07...	1100	86	--	201	13.0	12.5	17	3.9	--
07...	1105	27	--	280	21.5	11.5	6	0.44	--
12...	1855	27	303	--	16.0	14.0	--	--	--
13...	1240	23	--	289	--	13.0	2	0.12	--
16...	1040	73	--	225	10.0	10.0	10	2.0	--
19...	1135	55	--	226	19.0	10.0	8	1.2	--
22...	0153	636	--	146	--	13.0	266	457	--
22...	0158	636	--	137	--	13.0	323	555	36
22...	0418	646	--	138	--	13.0	247	431	--
22...	0421	646	--	136	--	13.0	190	331	24
22...	0931	654	--	123	--	12.0	158	279	--
22...	0934	654	--	119	--	12.0	194	343	29
22...	1350	641	--	116	--	12.5	36	62	74
22...	1358	641	--	112	--	12.5	94	163	39
22...	1414	641	--	113	--	12.5	71	123	49
22...	1756	547	--	126	--	12.5	72	106	40
22...	1800	547	--	123	--	12.5	73	108	--
23...	1055	177	--	183	19.0	11.0	20	9.6	--
23...	1100	177	--	182	19.0	11.0	11	5.3	84
23...	1734	149	--	188	--	12.5	14	5.6	--
24...	1040	125	--	205	16.5	11.0	12	4.1	--
26...	1135	98	--	222	13.5	10.0	11	2.9	--
28...	0845	470	--	159	--	13.5	393	499	60
28...	0858	508	--	153	--	13.5	419	575	58
28...	0911	512	--	158	--	13.5	364	503	53
28...	1224	660	--	123	--	14.0	445	793	68
28...	1228	660	--	120	--	14.0	415	740	70
28...	1251	681	--	118	--	14.0	476	875	55
28...	1444	929	--	108	--	14.0	344	863	59
28...	1446	941	--	116	--	14.0	408	1040	--
28...	1725	1180	--	107	--	14.0	456	1450	27
28...	1728	1180	--	104	--	14.0	384	1220	32
28...	1740	1230	--	105	--	14.0	2150	7140	6
28...	1741	1230	--	108	--	14.0	3400	11300	4
28...	2302	1200	--	91	--	12.5	232	752	20
28...	2307	1200	--	99	--	12.5	194	629	--
29...	0931	911	--	99	--	10.5	51	125	48
29...	0933	911	--	100	--	10.5	48	118	--
29...	1640	595	--	130	--	10.5	57	92	55
30...	1050	260	--	186	11.5	8.5	14	9.8	75
30...	1055	260	--	189	11.5	8.5	20	14	--

HOUSATONIC RIVER BASIN

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01198200 KONKAPOT RIVER AT ASHLEY FALLS, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
NOV									
02...	1405	210	--	205	11.0	9.0	17	9.6	--
07...	1035	140	--	192	6.5	5.0	4	1.5	--
08...	0828	224	--	192	--	6.0	21	13	--
10...	1335	125	--	199	7.0	4.0	8	2.7	--
12...	0932	657	--	125	--	7.5	339	601	--
12...	0934	657	--	130	--	7.5	339	601	59
12...	1145	717	--	118	--	7.0	225	436	--
12...	1149	717	--	113	--	7.0	196	379	47
12...	1410	813	--	114	2.0	7.0	196	430	--
12...	1415	813	--	110	2.0	7.0	129	283	50
12...	1639	870	--	103	--	6.5	154	362	--
12...	1640	870	--	109	--	6.5	56	132	90
13...	1355	360	--	138	0.0	4.0	54	52	34
13...	1400	360	--	140	0.0	4.0	40	39	--
15...	0920	498	--	145	--	5.5	62	83	--
15...	1310	496	--	134	4.5	4.5	80	107	29
15...	1315	496	--	132	4.5	4.5	64	86	--
17...	1345	225	--	168	4.5	3.5	12	7.3	--
21...	1405	174	--	192	8.5	5.5	6	2.8	--
24...	1335	140	--	205	2.0	3.0	5	1.9	--
30...	1450	102	--	221	1.5	1.5	9	2.5	--
DEC									
08...	0940	89	--	213	3.0	0.0	6	1.4	--
JAN									
18...	1255	78	--	226	--	1.5	2	0.42	--
19...	1619	541	--	156	--	2.5	509	743	49
19...	1621	541	--	158	--	2.5	473	691	--
19...	1844	641	--	131	--	2.0	574	993	--
19...	1850	641	--	138	--	2.0	508	879	54
19...	2300	824	--	114	--	0.0	366	814	--
19...	2319	824	--	108	--	0.0	310	690	46
20...	0942	1210	--	88	--	0.0	110	359	--
20...	0950	1210	--	92	--	0.0	107	350	24
20...	1505	1230	--	86	--	0.0	123	408	--
20...	1511	1230	--	90	--	0.0	158	525	22
21...	1000	570	--	120	--	0.0	37	57	--
21...	1007	570	--	120	--	0.0	38	58	--
22...	0940	320	--	152	7.0	0.5	16	14	--
22...	0945	320	--	157	7.0	0.5	28	24	--
22...	1720	289	--	156	--	1.0	43	34	--
24...	1758	473	--	166	--	3.0	245	313	--
24...	1802	473	--	164	--	3.0	265	338	59
25...	1022	870	--	95	--	0.0	68	160	--
25...	1027	870	--	96	--	0.0	107	251	--
25...	1033	870	--	100	--	0.0	68	160	50
25...	1628	763	--	97	--	0.5	62	128	--
25...	1630	763	--	98	--	0.5	53	109	--
26...	1340	342	--	147	1.5	0.5	36	33	--
26...	1345	342	--	153	1.5	0.5	40	37	--
28...	0928	1180	--	80	--	0.0	40	127	61
28...	0930	1180	--	80	--	0.0	43	137	--
28...	1525	1040	--	82	--	1.0	34	95	--
28...	1526	1040	--	83	--	1.0	25	70	--
29...	1305	431	--	147	--	0.0	36	42	--
29...	1309	431	--	145	--	0.0	36	42	--

HOUSATONIC RIVER BASIN

01198200 KONKAPOT RIVER AT ASHLEY FALLS, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
FEB									
10...	1040	132	--	222	5.5	2.0	3	1.1	--
21...	1434	244	--	191	--	1.5	66	43	--
21...	1436	244	--	185	--	1.5	62	41	--
21...	1715	276	--	178	--	1.5	82	61	--
21...	1717	279	--	178	--	1.5	79	60	--
22...	1230	487	--	127	--	2.0	156	205	--
22...	1232	487	--	127	--	2.0	151	199	--
22...	1648	559	--	112	--	1.5	196	296	--
22...	1650	559	--	109	--	1.5	210	317	--
22...	1655	559	--	109	--	1.5	203	306	--
23...	0951	475	--	108	--	1.5	66	85	--
23...	1345	418	--	112	11.0	2.0	69	78	--
23...	1350	418	--	117	11.0	2.0	60	68	--
26...	1110	244	--	156	6.0	2.0	27	18	--
26...	1115	244	--	154	6.0	2.0	17	11	--
MAR									
01...	1350	157	--	189	0.5	1.5	12	5.1	--
01...	1355	157	--	186	0.5	1.5	11	4.7	--
20...	1228	274	--	161	--	3.5	40	30	--
20...	1625	282	--	160	--	4.0	25	19	--
23...	1235	177	--	183	2.0	2.0	9	4.3	--
29...	1345	137	--	191	10.0	5.0	2	0.74	--
29...	1350	137	--	190	10.0	5.0	2	0.74	--
APR									
01...	1437	119	--	191	--	7.0	2	0.64	--
01...	1440	119	--	190	--	7.0	3	0.96	--
01...	1444	119	--	187	--	7.0	1	0.32	--
01...	1446	119	--	189	--	7.0	8	2.6	--
02...	1114	244	--	165	--	5.0	34	22	--
02...	1120	244	--	164	--	5.0	40	26	--
02...	1140	246	--	162	--	5.0	48	32	--
02...	1142	246	--	161	--	5.0	43	29	--

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 mi².

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 except those for estimated daily discharges, which are poor. 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.--65 years, 90.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s, Sept. 21, 1938, gage height, 9.25 ft, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of computation of peak flow over dam; minimum daily, 8.0 ft³/s, Aug. 31, Sept. 1, 1968.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2300	909	7.87	Jan. 19	1915	*1,090	*8.10

Minimum discharge, 15 ft³/s, Oct. 3; minimum daily, 16 ft³/s, Oct. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	90	71	e43	150	116	135	482	62	47	45	24
2	17	161	72	e43	145	113	206	310	59	33	62	23
3	16	162	66	e42	130	110	165	265	65	67	79	22
4	28	138	78	e41	115	99	139	322	95	130	98	23
5	46	115	70	e40	106	98	128	332	76	88	59	22
6	204	95	67	e39	99	123	123	314	66	81	53	22
7	130	85	61	e38	92	107	126	284	60	93	52	21
8	64	121	56	e38	92	99	125	238	177	53	46	21
9	54	97	55	e38	98	90	116	214	327	45	43	25
10	32	83	57	e37	92	86	115	227	149	39	42	24
11	30	92	55	e37	96	82	122	344	116	34	38	22
12	27	469	50	e37	89	82	169	523	93	32	35	21
13	30	226	47	e36	77	86	183	323	90	330	35	20
14	31	210	47	e36	78	95	367	258	113	388	33	24
15	116	308	52	e36	76	122	284	227	89	162	32	22
16	61	202	50	37	74	126	499	229	73	225	31	21
17	44	150	51	65	68	104	510	259	56	135	32	26
18	39	133	52	89	65	108	328	217	53	104	30	200
19	35	130	52	578	63	118	274	182	52	100	28	109
20	30	126	53	564	62	175	314	163	91	107	27	58
21	318	127	52	259	207	147	338	160	117	87	34	49
22	444	120	51	195	348	127	291	187	76	67	31	63
23	186	106	50	163	257	110	446	172	68	48	29	212
24	130	97	50	260	248	104	479	162	59	50	29	96
25	110	89	49	345	219	118	314	137	59	47	28	86
26	94	81	49	204	177	174	289	95	52	57	27	66
27	90	62	48	418	159	151	354	67	48	54	29	57
28	289	76	46	460	199	122	255	64	45	48	38	e58
29	218	81	44	243	171	117	336	66	43	44	31	e140
30	143	65	43	215	---	116	433	66	48	45	27	78
31	117	---	44	183	---	120	---	66	---	43	25	---
TOTAL	3190	4097	1688	4859	3852	3545	7963	6955	2577	2883	1228	1655
MEAN	103	137	54.5	157	133	114	265	224	85.9	93.0	39.6	55.2
MAX	444	469	78	578	348	175	510	523	327	388	98	212
MIN	16	62	43	36	62	82	115	64	43	32	25	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1996, BY WATER YEAR (WY)

	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN
(WY)	1956	1956	1974	1979	1981	1936	1940	1940	1972	1938	1975	1938
(WY)	1965	1965	1965	1981	1940	1965	1946	1985	1965	1991	1956	1980

HUDSON RIVER BASIN

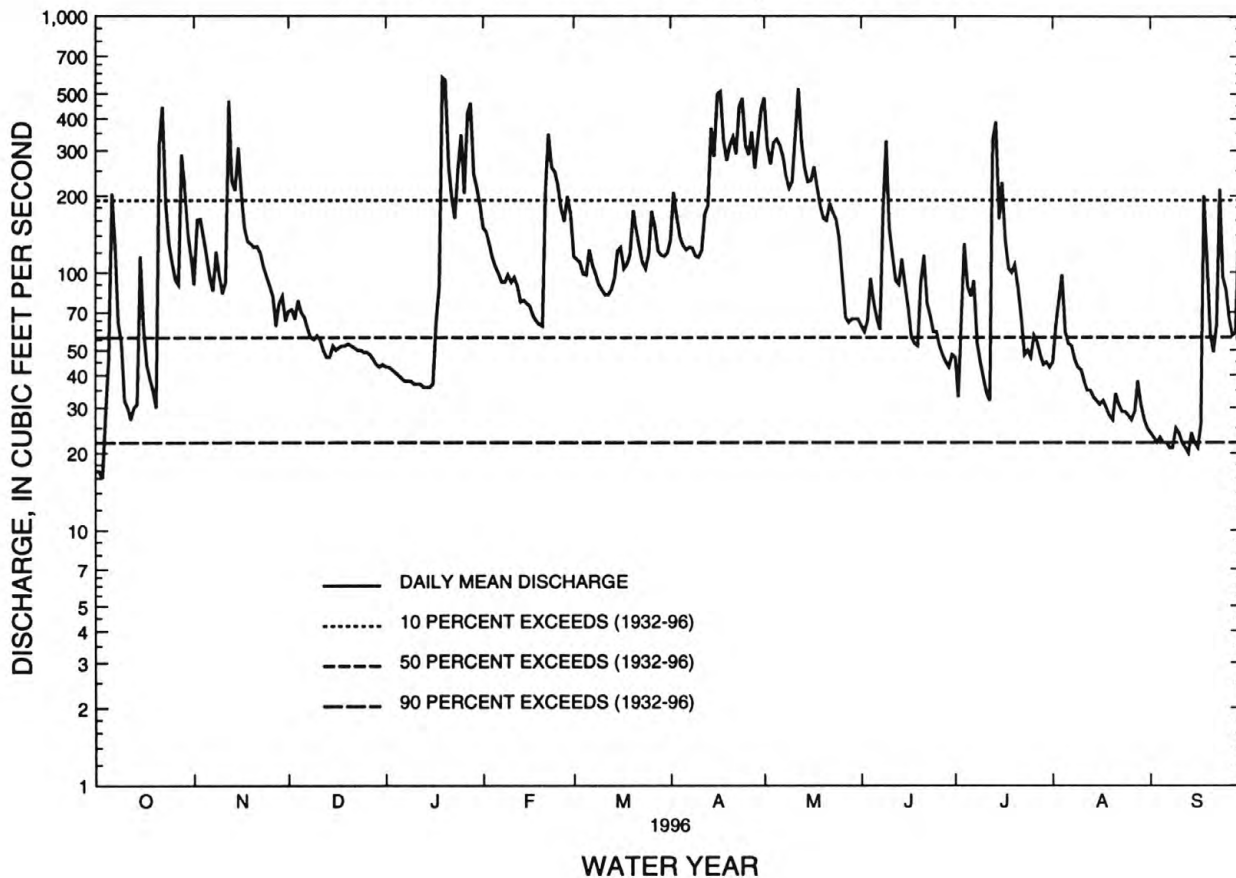
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01331500 HOOSIC RIVER AT ADAMS, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1932 - 1996	
ANNUAL TOTAL	27930		44492		90.0	
ANNUAL MEAN	76.5		122		130	
HIGHEST ANNUAL MEAN					41.2	
LOWEST ANNUAL MEAN					2410	
HIGHEST DAILY MEAN	469	Nov 12	578	Jan 19	8.0	Mar 18 1936
LOWEST DAILY MEAN	12	Aug 25	16	Oct 3	8.8	Aug 31 1968
ANNUAL SEVEN-DAY MINIMUM	12	Aug 25	22	Sep 2	5080	Sep 7 1980
INSTANTANEOUS PEAK FLOW			1090	Jan 19	9.25	Sep 21 1938
INSTANTANEOUS PEAK STAGE			8.10	Jan 19	Sep 21 1938	
INSTANTANEOUS LOW FLOW			15	Oct 3		
10 PERCENT EXCEEDS	169		285		192	
50 PERCENT EXCEEDS	59		87		56	
90 PERCENT EXCEEDS	17		31		22	

e Estimated

HOOSIC RIVER AT ADAMS, MA 01331500



HUDSON RIVER BASIN

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'01", long 73°09'34", Berkshire County, Hydrologic Unit 02020003, on left bank 0.3 mi downstream from Sherman Brook and 2.7 mi east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi².

PERIOD OF RECORD.--Discharge: July 1940 to current year.

Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft above sea level, (U.S. Army Corps of Engineers benchmark). Prior to June 6, 1979, at site 1.2 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Prior to 1966, slight diurnal fluctuation at low flow caused by mills upstream. Some regulation by Cheshire Reservoir 16 mi upstream. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--56 years, 273 ft³/s, 29.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s, Dec. 31, 1948, gage height, 14.85 ft, former site and datum, from rating curve extended above 4,300 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft³/s, Aug. 30, 31, Oct. 26, 1940; minimum daily, 24 ft³/s, Sept. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2245	3,930	9.15	Apr. 23	0230	2,980	8.50
Nov. 12	0730	2,820	8.38	Apr. 24	0315	2,770	8.35
Jan. 19	2215	*5,730	*10.25	May 1	0300	2,560	8.19
27	1945	3,250	8.69	May 11	2315	3,010	8.52
Apr. 16	2330	3,380	8.78	July 13	1930	2,630	8.24

Minimum discharge, 45 ft³/s, Oct. 1, 2, 3, 4; minimum daily, 47 ft³/s, Oct. 1-3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	260	188	111	349	329	398	1830	170	116	159	62
2	47	491	190	112	e310	302	648	962	153	94	222	61
3	47	551	168	e110	e260	286	505	756	162	193	256	60
4	63	450	209	e110	e240	247	415	910	258	411	242	59
5	94	335	186	e110	e225	245	371	922	194	295	156	59
6	566	279	179	e110	e210	291	358	860	165	183	133	58
7	282	247	162	e105	e200	252	368	764	149	187	126	55
8	162	377	147	e105	e190	235	357	601	418	134	115	56
9	128	276	136	e105	e180	215	328	514	987	126	130	66
10	97	227	142	e105	e170	209	332	581	431	125	121	66
11	87	224	138	e105	e165	202	343	1150	327	105	104	60
12	82	1680	e130	e100	e160	205	539	2300	252	95	94	58
13	77	756	e125	e100	e155	220	601	1240	222	1090	91	56
14	83	588	e120	e100	e150	251	1290	827	251	1330	87	67
15	351	873	e125	e100	e145	332	896	656	205	467	82	62
16	207	596	e130	e110	e145	334	1950	614	174	593	79	60
17	153	427	131	e170	e140	275	2090	686	145	336	81	73
18	128	362	131	220	e140	280	1060	582	170	247	75	414
19	116	342	130	2070	e140	310	911	569	142	225	72	231
20	106	326	134	2330	156	498	1160	457	183	259	69	127
21	1170	317	e130	802	552	418	1430	413	264	201	78	103
22	1860	293	e130	544	1130	347	1160	414	179	166	75	114
23	567	260	e125	426	931	296	2090	370	159	134	70	455
24	361	235	120	840	994	270	1960	350	138	133	71	205
25	295	209	116	1150	779	318	1010	306	137	124	68	179
26	249	201	118	578	546	531	1040	242	124	162	66	147
27	212	179	117	1430	454	459	1480	209	114	150	63	125
28	1010	201	116	1680	506	355	835	190	105	128	80	125
29	687	223	113	721	458	332	1060	185	99	118	70	368
30	396	181	111	582	---	328	1460	180	110	139	66	205
31	308	---	111	451	---	343	---	181	---	122	64	---
TOTAL	10038	11966	4308	15692	10180	9515	28445	20821	6587	8188	3265	3836
MEAN	324	399	139	506	351	307	948	672	220	264	105	128
MAX	1860	1680	209	2330	1130	531	2090	2300	987	1330	256	455
MIN	47	179	111	100	140	202	328	180	99	94	63	55
CFSM	2.57	3.17	1.10	4.02	2.79	2.44	7.53	5.33	1.74	2.10	.84	1.01
IN.	2.96	3.53	1.27	4.63	3.01	2.81	8.40	6.15	1.94	2.42	.96	1.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1996, BY WATER YEAR (WY)

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951
MEAN	172	260	271	246	243	444	683	375	213	134	116	122
MAX	618	544	714	591	765	1038	1178	872	636	393	416	454
(WY)	1978	1956	1974	1949	1981	1979	1969	1943	1972	1945	1976	1960
MIN	41.0	46.5	118	60.8	75.3	139	253	144	81.0	60.4	48.2	34.5
(WY)	1965	1965	1962	1981	1980	1965	1995	1987	1965	1962	1980	1980

HUDSON RIVER BASIN

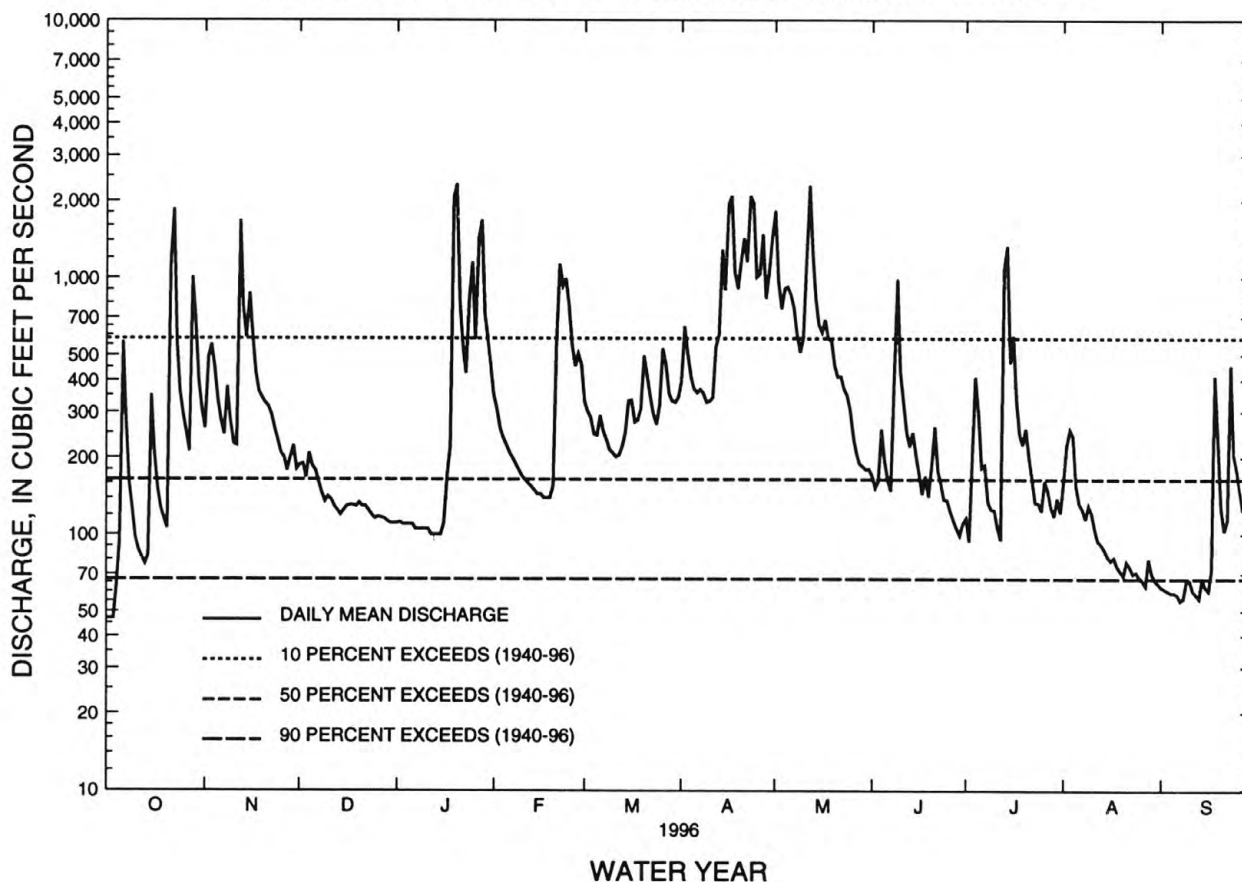
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01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR		FOR 1996 WATER YEAR		WATER YEARS 1940 - 1996	
ANNUAL TOTAL	80190		132841		273	
ANNUAL MEAN	220		363		135	
HIGHEST ANNUAL MEAN					368	
LOWEST ANNUAL MEAN					135	
HIGHEST DAILY MEAN	1860	Oct 22	2330	Jan 20	10400	Dec 31 1948
LOWEST DAILY MEAN	40	Aug 25	47	Oct 1	24	Sep 9 1980
ANNUAL SEVEN-DAY MINIMUM	41	Aug 24	58	Sep 2	25	Sep 9 1980
INSTANTANEOUS PEAK FLOW			5730	Jan 19	13000	Dec 31 1948
INSTANTANEOUS PEAK STAGE			10.25	Jan 19	14.85	Dec 31 1948
INSTANTANEOUS LOW FLOW			45	Oct 1	5.8	Aug 30 1940
ANNUAL RUNOFF (CFSM)	1.74		2.88		2.17	
ANNUAL RUNOFF (INCHES)	23.68		39.22		29.44	
10 PERCENT EXCEEDS	479		910		582	
50 PERCENT EXCEEDS	153		206		165	
90 PERCENT EXCEEDS	51		80		67	

e Estimated

HOOSIC RIVER NEAR WILLIAMSTOWN, MA 01332500



HUDSON RIVER BASIN

01333000 GREEN RIVER AT WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'32", long 73°11'50", Berkshire County, Hydrologic Unit 02020003, on left bank 0.1 mi upstream from bridge on State Highway 2 at Williamstown and 0.8 mi upstream from mouth.

DRAINAGE AREA.--42.6 mi².

PERIOD OF RECORD.--Discharge: September 1949 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-RI-84-1: 1977-78(P), 1979, 1980-83(P).

GAGE.--Water-stage recorder. Elevation of gage is 615 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Slight diurnal fluctuation at times caused by mill upstream.

AVERAGE DISCHARGE.--47 years, 82.4 ft³/s, 26.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s, Dec. 21, 1973, gage height, 5.68 ft in gage well, from rating curve extended above 750 ft³/s on basis of slope-area measurement at gage height 4.94 ft; maximum gage height, 6.35 ft, Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s, Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 21	2015	990	3.84	Apr. 23	0115	1,260	4.16
Nov. 12	0545	998	3.85	Apr. 24	0200	943	3.78
Jan. 20	0400	1,240	4.14	Apr. 26	2030	1,070	3.94
Jan. 24	2100	897	3.72	May 1	0100	1,160	4.04
Jan. 27	2000	1,350	4.27	May 11	2045	1,340	4.25
Apr. 16	1930	943	3.78	July 13	1900	*1,650	*4.59

Minimum discharge, 6.6 ft³/s, Oct. 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	101	77	39	144	126	96	586	54	37	56	13
2	6.9	137	75	38	e110	116	136	348	51	33	74	13
3	6.9	143	69	e37	e90	106	116	277	56	61	51	12
4	12	132	84	e36	e74	92	105	320	72	136	50	12
5	18	113	73	e35	e66	99	97	288	56	116	41	12
6	139	100	71	e34	e64	119	91	314	49	76	36	12
7	51	100	65	e33	e60	92	93	265	46	63	32	12
8	34	137	59	e32	e58	86	95	226	103	57	30	13
9	27	106	e56	e31	e56	79	89	195	223	61	41	15
10	24	94	e54	e30	e54	e76	91	193	118	63	33	14
11	22	90	e52	e30	e52	e74	94	436	101	50	28	13
12	20	412	e50	e30	e50	e74	115	631	86	45	26	12
13	18	254	e48	e29	e48	80	132	415	78	671	25	11
14	20	234	e47	e29	e47	85	306	302	71	480	23	17
15	73	288	e45	e30	e46	111	226	246	63	269	22	13
16	46	218	e45	e31	e45	108	474	230	57	330	21	12
17	37	185	e44	e40	e44	101	507	219	53	207	23	16
18	32	164	e43	e66	e44	111	342	199	49	155	20	116
19	28	161	e43	e400	e45	125	287	191	47	137	19	41
20	26	144	44	783	82	168	300	162	66	123	18	25
21	246	133	44	352	189	142	317	145	84	99	22	21
22	297	122	46	260	307	124	292	128	59	82	18	28
23	155	110	45	212	253	109	577	112	53	73	17	136
24	115	98	44	413	278	99	564	103	48	66	18	55
25	93	86	42	356	234	107	345	91	46	59	17	48
26	77	82	42	235	199	137	419	84	42	62	16	38
27	69	78	41	641	179	123	464	77	40	55	15	33
28	215	79	40	487	179	111	309	71	38	48	15	34
29	171	81	39	304	147	106	384	66	36	43	14	143
30	135	73	39	238	---	98	437	63	38	41	14	71
31	115	---	39	187	---	94	---	59	---	40	13	---
TOTAL	2336.0	4255	1605	5498	3244	3278	7900	7042	1983	3838	848	1011
MEAN	75.4	142	51.8	177	112	106	263	227	66.1	124	27.4	33.7
MAX	297	412	84	783	307	168	577	631	223	671	74	143
MIN	6.9	73	39	29	44	74	89	59	36	33	13	11
CFSM	1.77	3.33	1.22	4.16	2.63	2.48	6.18	5.33	1.55	2.91	.64	.79
IN.	2.04	3.72	1.40	4.80	2.83	2.86	6.90	6.15	1.73	3.35	.74	.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1996, BY WATER YEAR (WY)

	MEAN	45.5	78.3	92.2	80.0	81.6	143	208	112	61.4	32.1	26.8	28.3
MAX	222	171	259	219	239	376	390	251	256	124	147	158	
(WY)	1978	1956	1974	1979	1984	1979	1969	1984	1972	1996	1975	1960	
MIN	5.33	6.71	24.8	11.0	14.6	33.6	70.5	32.4	18.2	8.30	5.61	4.09	
(WY)	1965	1965	1965	1981	1980	1965	1995	1987	1965	1993	1964	1964	

HUDSON RIVER BASIN

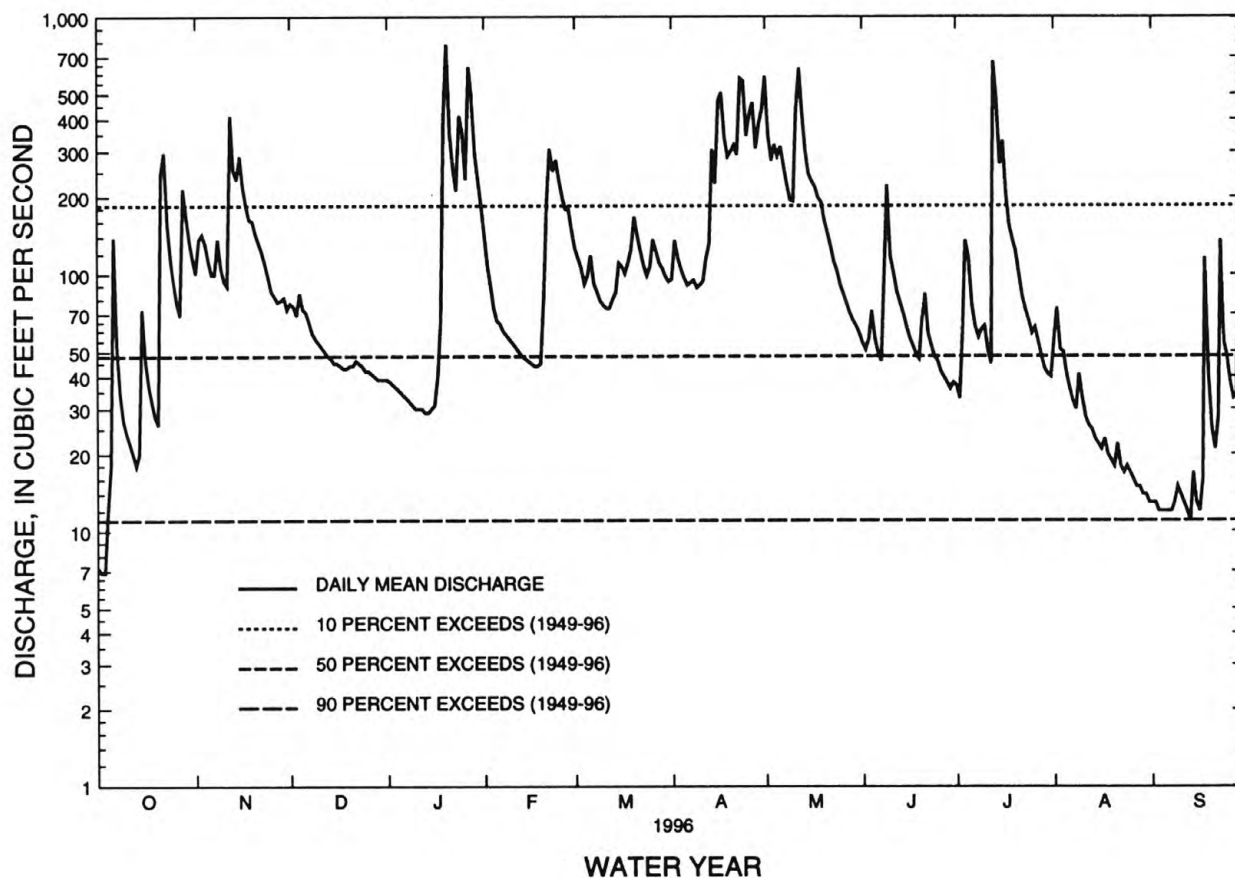
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01333000 GREEN RIVER AT WILLIAMSTOWN, MA--Continued

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR	FOR 1996 WATER YEAR	WATER YEARS 1949 - 1996
ANNUAL TOTAL	24209.8	42838.0	82.4
ANNUAL MEAN	66.3	117	126
HIGHEST ANNUAL MEAN			31.7
LOWEST ANNUAL MEAN			1975
HIGHEST DAILY MEAN	476 Mar 9	783 Jan 20	2200 Dec 21 1973
LOWEST DAILY MEAN	5.4 Sep 8	6.9 Oct 2	3.2 Sep 20 1964
ANNUAL SEVEN-DAY MINIMUM	6.1 Sep 3	12 Sep 1	3.4 Sep 19 1964
INSTANTANEOUS PEAK FLOW		1650 Jul 13	4060 Dec 21 1973
INSTANTANEOUS PEAK STAGE		4.59 Jul 13	6.35 Mar 13 1977
INSTANTANEOUS LOW FLOW		6.6 Oct 3	3.1 Sep 20 1964
ANNUAL RUNOFF (CFSM)	1.56	2.75	1.93
ANNUAL RUNOFF (INCHES)	21.14	37.41	26.28
10 PERCENT EXCEEDS	160	293	185
50 PERCENT EXCEEDS	45	73	48
90 PERCENT EXCEEDS	9.6	20	11

e Estimated

GREEN RIVER AT WILLIAMSTOWN, MA 01333000



DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

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.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1996

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
MERRIMACK RIVER BASIN						
01094396	Philips Brook at Fitchburg, MA	Lat 42°34'28", long 71°50'15", Worcester County, at bridge on Westminster Street, 2.0 mi west of Fitchburg.	--	1994-96	8- 7-96 8-21-96 9- 5-96	5.22 1.34 .86
01095928	Trapfall Brook near Ashby, MA	Lat 42°40'24", long 71°46'39", Middlesex County at bridge on unmarked road off State Highway 119, 2.2 mi east of Ashby.	--	1993-96	10-13-96	.90
01096855	Danforth Brook at Hudson, MA	Lat 42°23'57", long 71°34'00", Middlesex County, at culvert on Cox Street, Hudson.	--	1975-78, 1994-96	8- 6-96 8-20-96 9- 5-96	1.55 .14 .21
01100608	Meadow Brook near Tewksbury, MA	Lat 42°37'14", long 71°12'44", Middlesex County, at culvert on Pinnacle Street 1.2 mi northeast of Tewksbury.	4.08	1973-75, 1994-96	8- 6-96 8-20-96 9- 6-96	1.63 .59 .97
IPSWICH RIVER BASIN						
01101850	Pye Brook (Head of Howlett Brook) near Topsfield, MA	Lat 42°39'17", long 70°57'12", Essex County, at bridge on Haverhill Street 1.2 mi north of Topsfield.	--	1970-71, 1994-96	8- 6-96 8-20-96 9- 6-96	1.77 1.88 .82
DANVERS RIVER BASIN						
01102053	Crane Brook at Danvers, MA	Lat 42°33'34", long 70°56'55", Essex County, on Pine Street, 0.5 mi southwest of Danvers center.	--	1994-96	8- 6-96 8-20-96 9- 6-96	1.13 .62 .69
MYSTIC RIVER BASIN						
01102470	Sweetwater Brook at Stoneham, MA	Lat 42°28'45", long 71°06'44", Middlesex County, at culvert on Maple Street, 0.6 mi west of Stoneham.	2.10	1973-74, 1994-96	8- 6-96 8-20-96 9- 6-96	0.52 .32 .25
WEIR RIVER BASIN						
01105630	Crooked Meadow River near Hingham Center, MA	Lat 42°12'53", long 70°53'06", Plymouth County, at culvert on Main Street, 1.3 mi south of Hingham Center.	5.00	1969-71, 1994-96	8- 7-96 8-21-96 9- 5-96	1.79 1.10 2.89

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1996--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
HERRING RIVER BASIN						
011058793	Herring River near Wellfleet, MA	Lat 41°57'43", long 70°01'16", Barnstable County, at culvert on dirt road, 0.6 mi east of stream crossing at State Highway 6, 1.8 mi northeast of Wellfleet center.	--	1994-96	8- 7-96	0.25
					8-21-96	.21
					9- 5-96	.52
01105880	Herring River at North Harwich, MA	Lat 41°42'00", long 70°06'27", Barnstable County, 30 ft upstream from bridge on U.S. Route 6, 0.8 mi northeast of North Harwich, 1.1 mi downstream from Hinckleys Pond, and 2 mi northwest of Harwich.	9.4	1966- 88+, 1994-96	8- 7-96	4.25
					8-21-96	6.48
					9- 5-96	11.0
CENTERVILLE RIVER BASIN						
0110588320	Centerville River near Centerville, MA	Lat 41°39'06", long 70°20'09", Barnstable County, at culvert on Pine Street, 0.7 mi east of Centerville.	5.67	1994-96	8- 7-96	0
					8-20-96	.05
					9- 5-96	.10
SANTUIT RIVER BASIN						
0110588340	Santuit River at Old Kings Road at Santuit, MA	Lat 41°37'39", long 70°27'04", Barnstable County, at culvert on Old Kings Road, 0.7 mi south of Santuit.	--	1993, 1994-96	8- 8-96	6.50
					8-20-96	5.94
					9- 6-96	10.4
MASHPEE RIVER BASIN						
0110588360	Mashpee River, Route 28, near Waquoit Village, MA	Lat 41°37'18", long 70°28'51", Barnstable County, at bridge on State Highway 28, 1.8 mi south of Waquoit Village.	1.07/ 3.36	1978, 1993, 1994-96	8- 8-96	10.6
					8-20-96	9.43
					9- 6-96	7.32
COONAMESSETT RIVER BASIN						
01105883757	Coonamessett River at Sandwich Road near East Falmouth, MA	Lat 41°35'55", long 70°34'20", Barnstable County, at Sandwich Road, 1.5 mi northwest of East Falmouth.	1.80	1980, 1989, 1993, 1994-96	8- 8-96	5.30
					8-20-96	2.13
					9- 6-96	5.06
EAST BRANCH WESTPORT RIVER BASIN						
01105947	Bread and Cheese Brook at Head of Westport, MA	Lat 41°38'00", 71°03'46", Bristol County, at culvert on State Highway 177, 1.0 mi north of Head of Westport.	8.70	1972-74, 1992, 1994-96	8- 7-96	2.57
					8-20-96	1.25
					9- 5-96	6.56
TAUNTON RIVER BASIN						
01106460	Beaver Brook near East Bridgewater, MA	Lat 42°02'43", 70°58'17", Plymouth County, at culvert on Belmont Street, 1.0 mi northwest of East Bridgewater.	9.43	1965-68, 1983, 1994-96	8- 7-96	2.41
					8-21-96	1.60
					9- 5-96	3.82
01108600	Hodges Brook at West Mansfield, MA	Lat 41°59'11", 71°14'27", Bristol County, at culvert on Oak Street, 0.8 mi south of West Mansfield.	3.72	1966-67, 1994-96	10- 2-95	.32
					8- 7-96	2.93
					8-20-96	.42
					9- 5-96	.14
PALMER RIVER BASIN						
01109225	Rocky Run near Rehoboth, MA	Lat 41°46'52", 71°15'03", Bristol County, at bridge on Davis Street, 2.2 mi south of Rehoboth.	7.37	1972-74, 1979-81, 1983, 1986-87, 1994-96	8- 7-96	0.78
					8-20-96	.65
					9- 5-96	.72

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
BLACKSTONE RIVER BASIN						
01111142	Miscoe Brook near Grafton, MA	Lat 42°11'25", 71°39'23", Worcester County, at bridge on State Route 140 at outlet of Silver Lake, 1.9 mi southwest of Grafton.	--	1994-96	8- 6-96 8-20-96 9- 5-96	2.43 .09 .29
01112190	Muddy Brook at South Milford, MA	Lat 42°05'35", 71°31'11", Worcester County, at bridge on Bellingham Road, 1.0 mi southwest of South Millford, and 2.4 mi west of Bellingham.	6.23	1978, 1985-86, 1994-96	8-23-96 9- 5-96 10- 8-96	1.00 ^a .61 2.88
THAMES RIVER BASIN						
01123161	Wales Brook at Brimfield, MA	Lat 42°06'52", long 72°11'36", Hampden County, at bridge on Holland Road, 0.6 mi southeast of Brimfield.	--	1994-96	8- 7-96 8-20-96 9- 5-96	4.19 1.75 .57
CONNECTICUT RIVER BASIN						
01163298	Trout Brook at Route 202, near Baldwinville, MA	Lat 42°35'49", 72°05'28", Worcester County, at bridge on Route 202, 1.1 mi southwest of Baldwinville.	--	1994-96	8- 7-96 8-20-96 9- 5-96	6.63 3.77 2.84
01165250	Riceville Brook near South Athol, MA	Lat 42°32'17", 72°14'51", Worcester County, at bridge on South Athol Road, 4.0 mi south of Athol.	--	1994-96	8- 7-96 8-20-96 9- 5-96	5.02 .88 .36
01169801	South River, North Poland Road, near Burkville, MA	Lat 42°30'45", 72°44'36", Franklin County, 100 ft downstream from mouth of Poland Brook near North Poland Road, 1.7 mi west of Burkville.	15.6	1993-96	8- 6-96 8-20-96	10.5 4.09
01170240	Mill Brook near Bernardston, MA	Lat 42°39'33", 72°34'18", Franklin County, at culvert on Eden Trail, 1.3 mi southwest of Bernardston.	--	1969, 1994-96	8- 7-96 8-20-96 9- 5-96	1.13 .31 .12
01171970	Stony Brook at Morgan Street at South Hadley, MA	Lat 42°15'08", 72°34'26", Hampshire County, 50 ft upstream from bridge on Morgan Street, 0.5 mi south of South Hadley.	18.5	1955†, 1965, 1994-96	8- 7-96 8-20-96 9- 5-96	6.61 4.04 2.45
01175890	Naultaug Brook near Warren, MA	Lat 42°13'31", long 72°10'12", Worcester County, at bridge on State Highway 67, 1.5 mi northeast of Warren.	3.55	1981-82, 1994-96	8- 7-96 8-20-96 9- 5-96	2.18 .68 .40
01176300	Foskett Mill Stream near Fentonville, MA	Lat 42°07'43", long 72°15'31", Hampden County, 30 ft upstream from bridge on Old Palmer Road, 1.2 mi southeast of Fentonville, and 3.8 mi southeast of Palmer.	6.65	1960-62, 1965-66, 1994-96	8- 7-96 8-20-96 9- 5-96	7.88 5.51 3.90
01176415	Chicopee Brook at Route 32, South Monson, MA	Lat 42°05'35", long 72°18'44", Hampden County, at bridge on Old Palmer Road, 1.2 mi southeast of Fentonville, and 3.8 mi southeast of Palmer.	--	1994-96	8- 7-96 8-20-96 9- 5-96	7.57 5.06 5.07
01179900	Trout Brook at West Worthington, MA	Lat 42°25'21", long 72°59'19", Hampshire County, at bridge on Route 143, at West Worthington.	--	1994-96	8- 6-96 8-20-96 9- 5-96 10 8-96	37.9 1.78 .87 5.26

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at low-flow partial-record stations during water year 1996--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
HOUSATONIC RIVER BASIN						
01197140	Yokun Brook near Lenox, MA	Lat 42°22'51", long 73°15'26", Berkshire County, 30 ft downstream from twin cul- verts on East Street, 1.7 mi south of Pittsfield city line and 2.2 mi north- east of Lenox.	5.92	1963-65, 1994-96	8- 7-96	4.19
					8-20-96	.94
					9- 5-96	1.17
01198160	Umpachene Brook at Southfield, MA	Lat 42°05'26", long 73°14'40", Berkshire County, at bridge on Canaan-Southfield Road, 0.9 mi southwest of Southfield.	8.56	1963-65, 1994-96	8- 6-96	3.79
					8-20-96	2.00
					9- 6-96	1.78
HUDSON RIVER BASIN						
01331380	South Brook at Cheshire, MA	Lat 42°33'40", long 73°09'06", Berkshire County, at culvert on Windsor Road, 3,000 ft above mouth, and 0.8 mi east of Cheshire.	7.23	1965, 1967-69, 1994-96	8- 6-96	4.62
					8-20-96	1.73
					9- 5-96	1.13
01331960	Hudson Brook at Middle Road at Clarksburg, MA	Lat 42°42'59", long 73°05'48", Berkshire County, at bridge on side street to Mid- dle Road at Clarksburg, 1.25 mi north- east of North Adams.	--	1994-96	8- 6-96	4.15
					8-20-96	1.64
					9- 5-96	1.02
01332900	Hopper Brook near South Williamstown, MA	Lat 42°40'38", long 73°12'39", Berkshire County, at culvert on Hopper Road, 350 ft above mouth, and 2.0 mi northeast of South Williamstown.	6.72	1967-69, 1994-96	8- 6-96	6.45
					8-20-96	2.17
					9- 5-96	1.86

a Average of two measurements.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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 during water year 1996

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
MERRIMACK RIVER BASIN						
01095410 Malden Brook	Wachusett Reservoir	Lat 42°22'53", long 71°47'45", Worcester County, at mouth, on right bank 15 ft upstream from weir and culvert on Thomas Street, 0.6 mi south of Oakdale, MA.	1.26	1971-73, 1994-95	10- 6-95	3.83
01095420 West Boylston Brook	do.	Lat 42°22'06", long 71°46'50", Worcester County, 300 ft upstream from mouth, 0.8 mi downstream from outlet of Carrolls Ponds, at West Boylston, MA.	--	1994-95	10- 6-95	.73
01095438 Muddy Brook	do.	Lat 42°20'51", long 71°45'58", Worcester County, 75 ft upstream from mouth and culvert on State Highway 140, 1.4 mi southeast of West Boylston, MA.	--	1994-95	10- 6-95	1.56
01095442 Malagasco Brook	do	Lat 42°20'27", long 71°44'55", Worcester County, at culvert on West Temple Street, 50 ft upstream from mouth, and 1.1 mi southwest of Boylston Center, MA	--	1994-95	10- 6-95	3.91
01095446 French Brook	do.	Lat 42°22'08", long 71°43'28", Worcester County, at culvert on State Highway 70, 0.5 mi upstream from mouth, and 1.2 mi northeast of Boylston Center, MA.	--	1994-95	10- 6-95	8.04
01095930 Willard Brook	Squannacook River	Lat 42°40'27", long 71°46'14", Middlesex County, at bridge on State Highway 119, 0.25 mi west of intersection of State Highway 119 and Wheeler Road, 1.7 mi west of West Townsend, MA.	12.3	1971-73, 1994-95	10-13-95	2.60
01095977 Squannacook River	Nashua River	Lat 42°40'41", long 71°43'29", Middlesex County, at bridge on Turnpike Road, 1.2 mi northwest of Townsend, MA.	--	1994-95	10-13-95	8.27
01095990 Squannacook River	do.	Lat 42°39'08", long 71°40'22", Middlesex County, at bridge at South Street, at Townsend Harbor, MA.	--	1994-95	10-13-95	13.0
01096035 Squannacook River	do.	Lat 42°36'07", long 71°37'43", Middlesex County, about 400 ft below State Route 225 bridge, at West Groton, MA.	--	1994-95	10-13-95	19.9
TAUNTON RIVER BASIN						
01108440 Wading River	Threemile River	Lat 42°02'18", long 71°16'32", Norfolk County, at bridge on West Street, 0.4 mi northwest of South Foxboro, MA.	--	1994-95	10- 2-95	0.02 (flume measurement)
01108470 Hawthorne Brook	Wading River	Lat 42°01'39", long 71°17'57", Norfolk County, at bridge on Mirimichi Street, 2.5 mi northeast of Plainville center, and 1.5 mi southwest of South Foxboro, MA.	--	1994-95	10- 2-95	.29
01108490 Wading River	Threemile River	Lat 42°01'07", long 71°16'02", Plymouth County, at bridge on West Street, 2.6 mi west of Mansfield center, and 1.25 mi south of South Foxboro, MA.	--	1994-95	10- 2-95	1.13

See footnotes at end of table

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
TAUNTON RIVER BASIN--Continued						
01108500 Wading River	Threemile River	Lat 42°00'00", long 71°15'38", Bristol County, 200 ft downstream from bridge on Balcolm Street, at West Mansfield, 2.0 mi upstream from Hodges Brook, and 3.0 mi southwest of Mansfield, MA.	19.2	1954-86 ^b , 1990, 1995	10- 2-95	1.54
01108700 Wading River	do.	Lat 41°57'06", long 71°13'27", Plymouth County, 150 ft downstream from bridge on Route 123, 0.25 mi northeast of Chartley, and 2.2 mi southwest of Norton, MA.	--	1994-95	10- 2-95	2.72
BLACKSTONE RIVER BASIN						
01111200 West River	Blackstone River	Lat 42°06'17", long 71°36'28", Worcester County, on right bank 250 ft downstream from West Hill Dam, 3.5 mi upstream from mouth and 2.2 mi northeast of Uxbridge, MA.	27.9	1962-90 ^a , 1991-95	8-27-96	10.3
01113710 Ash Swamp Brook	Arnolds Mills Reservoir	Lat 41°58'57", long 71°24'45", Providence County, at State Highway 120, 1.0 mi west of Arnolds Mills, RI.	--	1993-95	10-23-95 11-28-95 1-24-96 1-29-96 2-14-96 4- 8-96 5-15-96 7- 1-96 9-24-96	6.89 6.85 24.6 37.3 9.90 11.2 12.3 2.15 3.77
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	1993-95	4- 9-96 4-17-96 6- 6-96 7-26-96 8-26-96 9-20-96	16.1 90.4 5.34 2.79 .40 8.10
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	1994-95	4- 9-96 6- 5-96 7-25-96 8-26-96 9-11-96 9-19-96	.66 .20 0 0 0 .33
01115180 Brandy Brook	do.	Lat 41°49'10", long 71°35'11", Providence County, at State Highway 116, 0.9 mi south of North Scituate, RI.	1.59	1993-95	4-17-96 6- 6-96 7-25-96 8-27-96 9-11-96 9-19-96	17.4 2.60 1.64 .42 .56 6.28
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	1994-95	1-30-96 4-11-96 6- 6-96 7-26-96 8-27-96 9-20-96	14.0 10.5 2.06 1.09 .06 3.82
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	1994-95	4- 9-96 6- 5-96 7-25-96 8-27-96 9-11-96 9-19-96	4.18 1.93 .65 .18 .10 1.26

See footnotes at end of table

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
PAWTUXET RIVER BASIN--Continued						
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	1993-95	12-15-95	7.42
					1-30-96	27.1
					4-11-96	24.4
					4-17-96	87.3
					6- 6-96	3.09
					7-25-96	1.85
	8-26-96	.58				
01115265 Hemlock Brook	do.	Lat 41°47'26", long 71°41'57", Providence County, at King Road, 1.2 mi northeast Foster Center, RI.			7-26-96	5.0
					8-26-96	1.65
					9-10-96	1.24
					9-19-96	37.1
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	1993-95	4- 9-96	4.77
					6- 5-96	1.93
					7-25-96	.51
					8-27-96	.05
					9-11-96	.07
	9-19-96	4.82				
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	1992-95	4-11-96	18.0
					6- 5-96	7.66
					7-26-96	2.24
					8-27-96	2.07
					9-11-96	.72
	9-20-96	6.38				
01115500 Pawtuxet River	Narragansett Bay	Lat 41°43'58", long 71°33'01", Providence County, near Fairground Way, at Fiskeville, RI.	102	1915-25 ^b	9-24-96	26.4
01115630 Nooseneck River	Big River	Lat 41°37'59", long 71°37'59", Kent County, at State Highway 3 at Nooseneck, and 5.5 mi southwest of Washington, RI.	8.23	1961-63, 1964-81 ^b , 1994-95	2- 1-96	44.6
					3-28-96	19.5
					4-26-96	25.8
					5-29-96	9.54
					6-17-96	5.96
					7-18-96	9.62
					8-15-96	3.24
					9-26-96	6.36
01115670 Congdon River	do.	Lat 41°36'44", long 71°37'24", Kent County, at Congdon Mill Road, 1.3 mi southeast of Nooseneck, RI.	4.39	1961-63	8-18-95	.80
					5-29-96	6.49
					6-17-96	4.45
					7-18-96	4.49
					8-15-96	3.21
	9-26-96	3.74				
01115700 Unnamed	Congdon River	Lat 41°36'46", long 71°37'06", Kent County, at Sweet Sawmill Road, 1.3 mi southeast of Nooseneck, RI.	0.47	1961-63	8-18-95	.40
					8-18-95	.39
					6-17-96	.73
					7-18-96	.62
					8-15-96	.40
	9-26-96	.30				
01115730 Carr River	Capwell Mill Pond	Lat 41°38'01", long 71°34'52", Kent County, at New London Turnpike, 4 mi south of Washington, RI.	2.26	1961-63	8-21-95	.20
					8-21-95	.19
01115770 Carr River	Big River	Lat 41°38'35", long 71°36'30", Kent County, at Burnt Sawmill Road, 1.5 mi northeast of Nooseneck, RI, and 4 mi southwest of Washington, RI.	6.74	1964-80 ^b	6-30-95	1.85
					8-18-95	.12
					2- 1-96	21.6
					3-28-96	13.3
					4-26-96	17.8
					5-29-96	7.42
					6-17-96	5.06
					7-18-96	8.62
					8-15-96	5.52
					9-26-96	4.66

See footnotes at end of table

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Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
PAWTUXET RIVER BASIN--Continued						
01115800 Big River	Pawtuxet River	Lat 41°38'41", long 71°36'48", Kent County, at State Highway 3, 0.6 mi east of Kitts Corner, RI.	6.73	1992-95	2- 1-96 3-28-96 4-26-96 5-29-96 6-17-96 7-18-96 8-15-96 9-27-96	96.8 50.6 59.8 24.3 16.1 24.9 16.4 14.4
01115830 Bear Brook	do.	Lat 41°39'37", long 71°37'42", Kent County, at Fish Hill Road, 3 mi south of Coventry, RI.	3.98	1961-63	5-30-96 6-18-96 7-18-96 8-16-96 9-27-96	5.61 2.18 2.03 1.38 1.57
01115963 Old Hickory Brook	do.	Lat 41°39'23", long 71°36'00", Kent County, at Mishnock Road, 1.5 mi north-east of Kitts Corner, RI.			5-30-96 6-18-96 7-18-96 8-16-96 9-27-96	.64 .12 .08 .08 .11
01115965 Outflow of Lake Mishnock	do.	Lat 41°39'20", long 71°35'28", Kent County, at Mishnock Road, 1.9 mi north-east of Kitts Corner, RI.			5-30-96 6-18-96 7-18-96 8-16-96 9-27-96	3.49 3.03 3.76 2.99 2.92
01115970 Mishnock River	do.	Lat 41°40'44", long 71°34'52", Kent County, at State Highway 3, 1 mi south-west of Washington, RI.	3.32	1961-63	5-30-96 6-18-96 7-18-96 8-16-96 9-27-96	4.74 3.81 5.86 3.69 4.58
HUNT RIVER BASIN						
01116800 Scrabbletown Brook	Hunt River	Lat 41°35'39", long 71°29'56", Washington County, at State Highway 2, 1.8 mi southwest of Davisville, RI.	1.32	1961-63	8-16-95 8-16-95 9-20-95 9-20-95 10-18-95 10-18-95 11-21-95 1-17-96 2-14-96 3-13-96 4-19-96 4-24-96 5-15-96 6-19-96 7-24-96 8-21-96 9- 7-96 9-25-96	0.17 .15 .13 .12 .09 .10 2.09 2.91 3.33 3.98 6.24 4.10 2.73 .65 1.40 .16 .50 1.43
01116820 Hunt River Tributary	Hunt River	Lat 41°36'15", long 71°29'44", Kent County, at State Highway 2, 1.2 mi southwest of Davisville, RI.	1.26	1961-63	8-16-95 9-20-95 10-18-95 11-21-95 1-17-96 2-14-96 3-13-96 4-19-96 4-24-96 5-15-96 6-19-96 7-24-96 8-21-96 9- 7-96 9-25-96	.36 .24 .27 2.63 3.84 4.06 4.77 7.15 5.68 3.38 1.48 1.28 .51 .69 1.41

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previ- ously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
See footnotes at end of table						
HUNT RIVER BASIN--Continued						
01116830 ^f Hunt River	Narragansett Bay	Lat 41°36'20", long 71°29'32", Kent County, near South Road, 1.1 mi south- west of Davisville, RI.	4.03	--	9-20-95 4-24-96	1.52 16.6
01116850 ^f Hunt River	do.	Lat 41°37'25", long 71°28'57", Kent County, at Davisville Road, 0.8 mi northwest of Davisville, RI.	5.78	1961-63, 1991	9-20-95 4-24-96 9- 7-96	4.73 23.8 4.00
01116875 Frenchtown Brook	Hunt River	Lat 41°37'29", long 71°29'34", Kent County, at State Highway 2, 1.2 mi north of Briggs Corner, RI.	6.74	--	8-16-95 9-20-95 10-18-95 11-21-95 1-17-96 2-14-96 3-13-96 4-19-96 4-24-96 5-15-96 6-19-96 7-24-96 8-21-96 9- 7-96 9-25-96	.73 1.24 1.76 11.6 14.9 16.2 19.0 31.4 22.1 13.5 3.36 6.74 1.84 1.80 5.77
01116880 ^f Frenchtown Brook	do.	Lat 41°37'33", long 71°29'03", Kent County, at Davisville Road, 1 mi north- east of Davisville, RI.	6.93	1961-63, 1991	9-20-95 4-24-96 9- 7-96	1.75 23.7 2.06
01116890 ^f Hunt River	Narragansett Bay	Lat 41°37'43", long 71°28'49", Kent County, at Frenchtown Road, 0.7 mi east of Frenchtown, RI.	13.1	--	9-20-95 4-24-96 9- 7-96	7.57 50.8 5.79
01116895 Fry Brook	Hunt River	Lat 41°37'56", long 71°29'14", Kent County, at State Highway 4, 0.4 mi northeast of Frenchtown, RI.	3.11	--	8-16-95 8-16-95 9-20-95 9-20-95 10-18-95 11-21-95 1-17-96 2-14-96 3-13-96 4-19-96 4-24-96 5-15-96 6-19-96 7-24-96 8-21-96 9-25-96	.03 .05 .04 .04 .19 5.32 13.8 6.00 9.07 16.5 8.88 5.57 1.02 1.63 .21 1.76
01116910 ^f Hunt River	Narragansett Bay	Lat 41°38'03", long 71°28'05", Washington County, at State Highway 1, 1.9 mi southwest of East Greenwich, RI.	17.2	1962-63, 1991	9-20-95 4-24-96 9- 7-96	5.65 64.5 9.20
01116915 ^f Hunt River	do.	Lat 41°38'18", long 71°27'46", Washington County, at Conrail railroad, 1.5 mi southwest of East Greenwich, RI.	18.3	--	9-20-95 4-24-96 9- 7-96	5.43 62.7 6.90
01116930 ^f Hunt River	do.	Lat 41°37'47", long 71°27'13", Washington County, at Potowomut Road, 2 mi south of East Greenwich, RI.	18.7	--	9-20-95 4-24-96 9- 7-96	5.14 61.3 8.74
01116940 Sandhill Brook	Hunt River	Lat 41°35'28", long 71°29'01", Washington County, at Stony Lane, 0.9 mi northeast of Wickford Junction, RI.	--	--	4-24-96 9- 7-96	1.29 .21
01116950 Sandhill Brook	do.	Lat 41°36'34", long 71°28'15", Washington County, at Devil's Foot Road, 0.5 mi southeast of Davisville, RI.	1.68	1961-63	9-20-95 9-20-95 4-24-96	.08 .07 3.65

See footnotes at end of table

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previ- ously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
HUNT RIVER BASIN--Continued						
01116960 Sandhill Brook	Hunt River	Lat 41°37'09", long 71°27'24", Washington County, at Chadsey Road, 1.2 mi north- east of Davisville, RI.	2.60	--	9-20-95	0.78
					4-24-96	5.27
					9- 7-96	1.33
01116980 Sandhill Brook	do.	Lat 41°37'45", long 71°26'51", Washington County, at North Quidnesset Road, 2 mi south of East Greenwich, RI.	3.53	1961-64	9-20-95	.71
					4-24-96	7.08
					9- 7-96	2.55
COCUMCOSSUC BROOK BASIN						
01117050 Cocumcossuc Brook	Narragansett Bay	Lat 41°35'01", long 71°27'55", Washington County, at State Highway 1, 1.2 mi northwest of Wickford, RI.	1.52	--	8-16-95	.11
					8-16-95	.11
					9-20-95	.35
					10-18-95	.60
					11-21-95	3.55
					1-17-96	5.24
					2-14-96	3.82
					3-13-96	4.88
					4-19-96	6.98
					4-24-96	4.37
					5-15-96	3.11
					6-19-96	.83
					7-24-96	1.19
					8-21-96	.50
					9- 7-96	1.16
9-25-96	2.90					
ANNAQUATUCKET RIVER BASIN						
01117060 ^g Annaquatucket River	Narragansett Bay	Lat 41°34'04", long 71°23'13", Kent County, at State Fish Hatchery, near Hatchery road, and 1.9 mi southeast of Exeter, RI.	0.21	--	4-24-96	2.68
01117070 ^g Annaquatucket River	do.	Lat 41°34'24", long 71°29'18", Kent County, at Hatchery Road, 0.5 mi south- east of Wickford Junction, RI.	2.92	1961-63	4-24-96	3.84
					9- 7-96	1.16
01117100 ^g Annaquatucket River	do.	Lat 41°33'25", long 71°27'55", Washington County, at State Highway 1, 1 mile southwest of Wickford, RI, and 1.5 mi upstream from mouth.	6.44	1961-62, 1986-87	8-16-95	4.72
					9-20-95	7.44
					10-18-95	7.76
					11-21-95	14.9
					1-17-96	15.9
					2-14-96	19.0
					3-13-96	19.1
					4-19-96	26.5
					4-24-96	20.7
					5-15-96	17.5
					6-19-96	9.61
					7-24-96	15.2
					8-21-96	7.33
					9- 7-96	11.1
					9-25-96	30.0
PETTAQUAMSCUTT RIVER BASIN						
01117170 Mattatuxet River	Pettaquamscutt River	Lat 41°32'16", long 71°28'09", Washington County, at State Highway 1, 0.4 mi south of Allenton, RI.	1.78	1961-64	9-20-95	1.36
					4-24-96	4.75
					9- 7-96	15.7

See footnotes at end of table

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previ- ously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
PETTAQUAMSCUTT RIVER BASIN--Continued						
01117200 Mattatuxet River	Pettaquamscutt River	Lat 41°31'10", long 71°26'44", Washington County, at Gilbet Stuart Road, 1.5 mi northwest of Saunderstown, RI.	4.81	1961-64	8-16-95	2.65
					9-20-95	2.68
					10-18-95	2.08
					11-22-95	3.74
					1-17-96	19.7
					2-14-96	14.3
					3-13-96	18.1
					4-19-96	15.2
					4-24-96	12.0
					5-15-96	12.2
					6-19-96	5.51
					7-24-96	4.12
8-21-96	3.73					
	9- 7-96	11.8				
	9-25-96	8.42				
	QUEEN RIVER BASIN					
01117365 Queen's Fort Brook	Narragansett Bay	Lat 41°32'53", long 71°32'01", Kent County, at Slocumville Road, 1.5 mi northwest of Slocum, RI.	3.22	1988-91	11-21-95	0
					1-17-96	0
					2-14-96	2.62
					3-13-96	1.57
					4-19-96	6.19
					4-24-96	1.43
					5-15-96	.10
					6-19-96	0
					7-24-96	0
					8-21-96	0
					9- 7-96	0
					9-25-96	0
THAMES RIVER BASIN						
01123360 Quinebaug River	Thames River	Lat 42°06'31", long 72°07'27", Worcester County, on right bank, 750 ft downstream from East Brimfield Dam and 2.4 mi upstream from Cedar Pond outlet at Fiskdale, MA.	67.4	1973-90 ^a , 1991-95	9- 4-96	16.6
01123600 Quinebaug River	do.	Lat 42°04'58", long 72°03'27", Worcester County, on right bank, 200 ft downstream from Westville Dam, 1.0 mi upstream from Mckinstry Brook, and 1.3 mi west of Southbridge, MA.	99.0	1963-90 ^a , 1991-95	2-26-96 9- 3-96	694 29.1
01124350 French River	Quinebaug River	Lat 42°07'06", long 71°52'54", Worcester County, on right bank 240 ft downstream from Hodges Village Dam, 0.8 mi west of Oxford, and 1.2 mi upstream from Little River at Hodges Village, MA.	31.2	1962-90 ^a , 1991-95	8-29-96	7.57
01124500 Little River	French River	Lat 42°06'57", long 71°53'26", Worcester County, on left bank, 0.6 mi upstream from mouth, 1.1 mi downstream from Buf- fumville Dam, and 1.5 mi west of Oxford, MA.	26.0	1939-90 ^a , 1991-95	10-27-95 2-12-96 7- 8-96 8-29-96	37.3 76.4 7.65 7.78
01125000 French River	Quinebaug River	Lat 42°03'03", long 71°53'08", Worcester County, on right bank in Dudley, 50 ft upstream from Pleasant Street Bridge at Webster, MA and 1.1 mi upstream from Potash Brook.	85.3	1949-81 ^b , 1982-95	10-27-95 1-29-96 4- 4-96 8-28-96	10.4 925 223 28.7

See footnotes at end of table

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

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Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previ- ously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
CONNECTICUT RIVER BASIN						
01164000 Millers River	Connecticut River	Lat 42°37'47", long 72°09'03", Worcester County, on right bank, 500 ft downstream from bridge in South Royalston, MA, 0.4 mi downstream from Beaver Brook, 1.7 mi downstream from Birch Hill Dam, and at mile 25.5.	189	1939-90 ^a , 1991-95	4- 3-96 5-21-96 8-14-96	280 586 56.0
01165000 East Branch Tully River	Millers River	Lat 42°38'32", long 72°13'34", Worcester County, on right bank, 300 ft downstream from Tully Dam, 1.3 mi downstream from Lawrence Brook, 3.5 mi north of Athol, MA, and 4.9 mi upstream from mouth.	50.5	1916-90 ^a , 1991-93, 1995	2-28-96 2-28-96 3- 1-96 4- 4-96 5-21-96 7- 8-96 8-14-96	342 498 463 169 111 17.0 9.07
01170020 Green River	do.	Lat 42°48'51", long 72°44'53", Windham County, Vt., at culvert on Guilford Road, 0.3 mi west of Harrisville, Vt., and 5.5 mi north of the Mass.-Vt. border.	--	1994-95	10-12-95	2.04
01170025 Green River	do.	Lat 42°47'43", long 72°39'52", Windham County, Vt., at bridge on Green River Road, 0.7 mi south of West Guilford, Vt., and 4.4 mi north of the Mass.-Vt. border,	--	1994-95	10-12-95	6.75
01170030 Hinesburg Brook	Green River	Lat 42°47'54", long 72°39'33", Windham County, Vt., at bridge on Guilford Road, 0.6 mi southeast of West Guilford, Vt., and 4.6 mi north of the Mass.-Vt. border.	--	1994-95	10-12-95	1.55
0110121 Green River	Deerfield River	Lat 42°44'27", long 72°40'27", Windham County, Vt., 50 ft east of Green River Road, 100 ft upstream from Roaring Brook, 0.6 mi north of the Mass.-Vt. border, and 2.4 mi south of Green River, Vt.	--	1994-95	10-12-95	10.3
01170121 Green River	Deerfield River	Lat 42°44'27", long 72°40'27", Franklin County, 100 ft east of Green River Road, 0.1 mi downstream from Stafford Brook, and 2.3 mi east of Colrain, MA.	--	1994-95	10-12-95	15.4
01170141 Green River	do.	Lat 42°39'12", long 72°37'32", Franklin County, 200 ft east of Green River Road, 350 ft downstream from Workman Brook, and 4.7 mi northwest of Greenfield, MA.	--	1994-95	10-12-95	16.7
01173920 Middle Branch Swift River	Quabbin Reservoir	Lat 42°31'54", long 72°18'11", Franklin County, 0.2 mi upstream from unnamed tributary, 1.2 mi southeast of North New Salem, MA.	9.03	--	5- 1-96 5-10-96 6- 4-96 7- 1-96 7-31-96 7-31-96	91.5 30.6 21.1 6.42 7.25 6.41
01174005 Hop Brook	do.	Lat 42°28'03", long 72°19'13", Franklin County, on right bank 100 ft upstream from mouth, 1.5 mi northeast of North Prescott, MA.	5.43	--	9-24-95 5-10-96 6- 3-96 7- 1-96 8- 9-96 8-30-96	.97 30.2 5.10 5.62 3.45 1.32

See footnotes at end of table

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previ- ously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
CONNECTICUT RIVER BASIN--Continued						
01174055 East Branch Fever Brook	Quabbin Reservoir	Lat 42°26'46", long 72°15'12", Worcester County, on left bank 25 ft upstream from mouth, 4.0 mi southwest of Petersham, MA.	8.69	--	5-10-96 6- 4-96 7- 1-96 7-31-96 8- 9-96 8-30-96	26.9 28.6 5.18 7.21 7.75 1.80
01174577 Dickey Brook	do.	Lat 42°26'38", long 72°22'18", Franklin County, 0.2 mi upstream from mouth, 1.6 mi southwest of North Prescott, MA.	4.18	--	9-24-95 10- 6-95 5-10-96 6- 3-96 8- 9-96 8-30-96	.80 31.6 18.0 4.29 1.67 .76
01174580 Atherton Brook	do.	Lat 42°24'52", long 72°22'50", Hampshire County, on right bank 100 ft upstream from mouth, 2.0 mi northeast of Pelham, MA.	2.6	--	9-19-95 10- 5-95 5- 1-96 6- 3-96 6- 3-96 7- 1-96	.06 16.0 25.7 2.02 2.08 1.64
01175660 Sevenmile River	E. Brookfield River	Lat 42°17'30", long 72°00'04", Worcester County, at bridge on State Highway 31, 3.6 mi north of Spencer, MA.	--	1994-95	10- 3-95	.21
01175695 Sevenmile River	do.	Lat 42°13'26", long 72°02'42", Worcester County, 0.2 mi downstream from bridge on Podunk Street, 0.6 mi upstream of mouth, at East Brookfield, MA.	--	1984, 1994-95	10- 3-95	5.95
01175905 Quaboag River	Chicopee River	Lat 42°12'45", long 72°12'14", Worcester County, at bridge on unnamed road 0.5 mi west of the intersection of State High- ways 19 and 67 in Warren, MA., and 0.1 mi south of State Highway 67.	--	1994-95	10- 3-95	29.1
01176350 Quaboag River	do.	Lat 42°08'37", long 72°18'50", Hampden County, at bridge on State Highway 32, 0.55 mi south from U.S. Highway 20, and 1.3 mi southeast of Palmer, MA.	--	1994-95	10- 3-95	37.8
01176435 Quaboag River	do.	Lat 42°10'43", long 72°21'53", Hampden County, at bridge on Main Street, 300 ft upstream from mouth, 2.3 mi northwest of Palmer, MA.	--	1994-95	10- 3-96	47.0
01180500 Middle Branch Westfield River	Westfield River	Lat 42°15'31", long 72°52'23", Hampshire County, on right bank at upstream side at highway bridge at Goss Heights, MA, 0.3 mi upstream from mouth, 0.7 mi down- stream from Littleville Dam, and 1.7 mi north of Huntington, MA.	52.7	1910-90*, 1991-95	2-13-96 6- 4-96	68.0 66.3
01180660 West Branch Westfield River	do.	Lat 42°20'00", long 73°05'02", Berkshire County, at bridge on High Street, 0.25 mi northeast from State Highway 8 in Becket, MA.	--	1994-95	10-11-95	4.58
01180750 West Branch Westfield River	do.	Lat 42°16'47", long 72°58'52", Hampden County, at highway bridge at Chester, MA.	54.2	1911, 1915, 1984, 1994-95	10-11-95	18.8
01180780 Hamilton Brook	Walker Brook	Lat 42°16'26", long 73°04'09", Berkshire County, at culvert on Hamilton Road, 1.2 mi northwest of Bonny Rigg Corners, and 0.7 mi southwest of Becket Center, MA.	--	1994-95	10-11-95	.44

See footnotes at end of table

Discharge measurements made at miscellaneous sites during water year 1996--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
CONNECTICUT RIVER BASIN--Continued						
01180800 Walker Brook	West Branch Westfield River	Lat 42°15'49", long 73°02'48", Berkshire County, at culvert on U.S. Highway 20, 0.2 mi east of Bonny Rigg Corners, 1.7 mi southeast of Becket Center, MA.	2.94	1962, 1963-77 ^b , 1978-81, 1983-84, 1994-95	10-11-95	1.24
01180821 Walker Brook	do.	Lat 42°16'40", long 72°58'49", Hampden County, at bridge on U.S. Highway 20, 70 ft upstream from mouth in Chester, MA.	--	1994-95	10-11-95	8.90
HOUSATONIC RIVER BASIN						
01197802 Williams River	Housatonic River	Lat 42°13'39", long 73°21'46", Berkshire County, at railroad bridge 200 ft south of Division Street, 2.2 mi north of Great Barrington, MA.	43.2	1994-95	10-13-95 12- 8-95 1-25-96 1-28-96 2-23-96 4- 1-96	*8.37 *54.2 504 797 267 *86.8
01198500 Blackberry River	do.	Lat 42°01'26", long 73°20'32", Litchfield County, at bridge on U.S. Highway 44, 0.7 mi southwest of Canaan, CT.	43.8	1949-71 ^b , 1994-95	10-13-95 10-29-95 12- 8-95 1-25-96 4- 2-96 6- 3-96	*12.7 341 *67.0 696 223 *31.9

^a Operated as a continuous-record gaging station 1972-86; since 1986 an unpublished continuous stage record has been collected.

^b Operated as a continuous-record gaging station.

^c Operated as a continuous-record gaging station prior to 1991; since 1991 an unpublished continuous stage record has been collected.

^d Peak flow.

^e Flow affected by public-supply wells for supply of East Greenwich, North Kingstown, Warwick, and Quonset Point (formerly U.S. Naval establishments).

^g Flow affected by ground-water pumpage of about 2.0 ft³/s from operation of State fish hatchery.

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	25.86	DEC 20	24.71	FEB 26	23.70	APR 23	22.39	JUN 21	23.10	AUG 23	24.52
NOV 21	25.04	JAN 20	24.63	MAR 21	23.01	MAY 23	22.68	JUL 23	23.95	SEP 20	22.62

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.

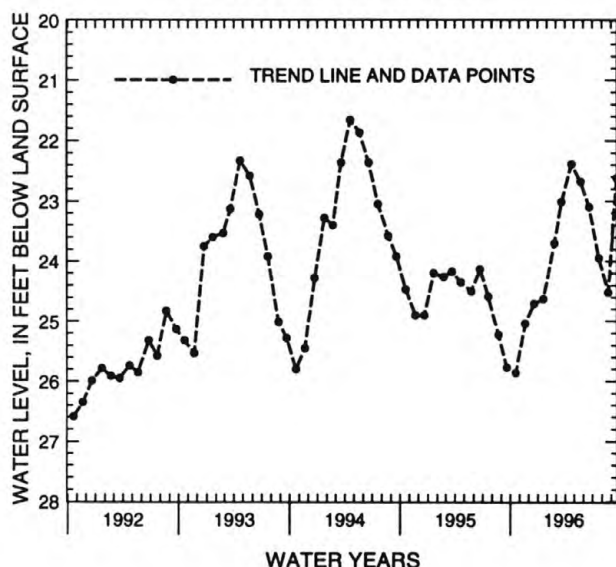
PERIOD OF RECORD.--November 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.73 ft below land-surface datum, May 26, 1987; lowest measured, 28.64 ft below land-surface datum, Oct. 25, 1966.

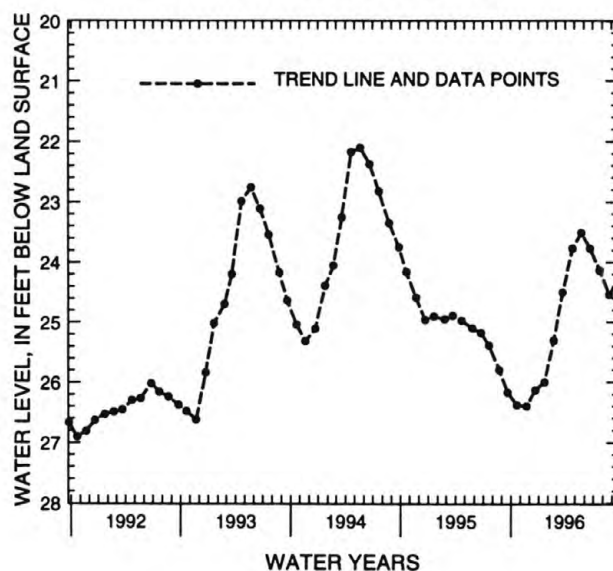
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	26.38	DEC 20	26.13	FEB 20	25.31	APR 23	23.77	JUN 21	23.77	AUG 23	24.54
NOV 21	26.40	JAN 20	26.00	MAR 21	24.50	MAY 23	23.51	JUL 23	24.13	SEP 20	24.31

BARNSTABLE 230 WELL



BARNSTABLE 247 WELL



BARNSTABLE COUNTY--Continued

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, 29.88 ft below land-surface datum, Apr. 22, 1987; lowest measured, 36.17 ft below land-surface datum, Oct. 25, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	34.80	DEC 21	33.73	FEB 21	32.87	APR 22	31.98	JUN 25	32.77	AUG 21	33.96
NOV 20	34.47	JAN 22	33.70	MAR 20	32.15	MAY 23	32.13	JUL 22	3.38	SEP 24	33.50

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.

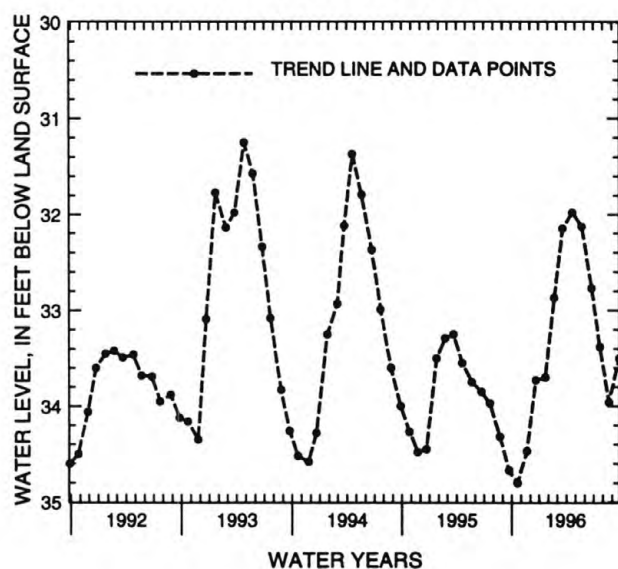
PERIOD OF RECORD.--October 1957 to current year.

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.

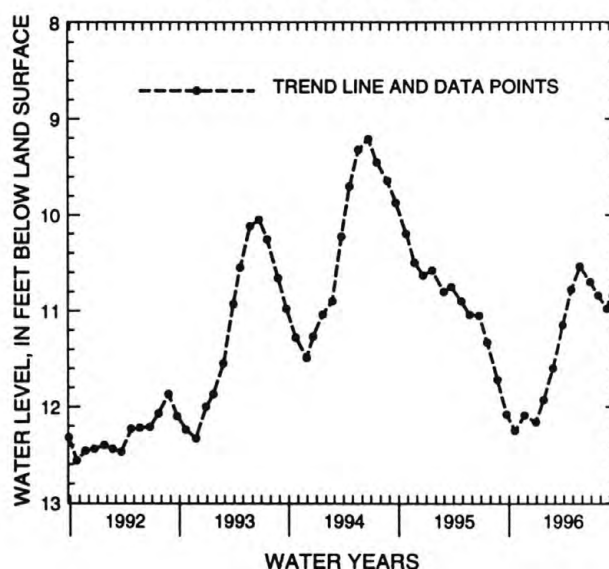
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	12.25	DEC 28	12.16	FEB 23	11.60	APR 25	10.78	JUN 26	10.70	AUG 22	10.98
NOV 21	12.09	JAN 23	11.93	MAR 27	11.15	MAY 24	10.54	JUL 24	10.84	SEP 24	10.57

BOURNE 198 WELL



BREWSTER 21 WELL



BARNSTABLE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	32.80	NOV 21	32.66	DEC 28	32.47	JAN 23	32.33	FEB 23	31.68	MAR 27	31.02
APR 25	30.64	MAY 24	30.59	JUN 26	31.00	JUL 24	31.40	AUG 22	31.62	SEP 24	31.43

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.

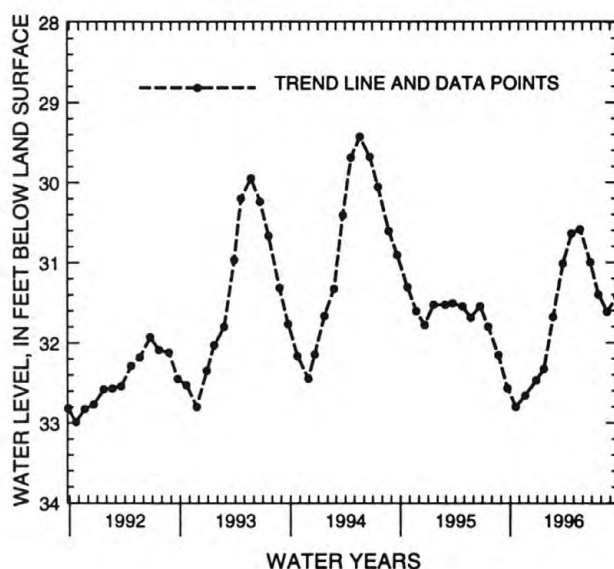
PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

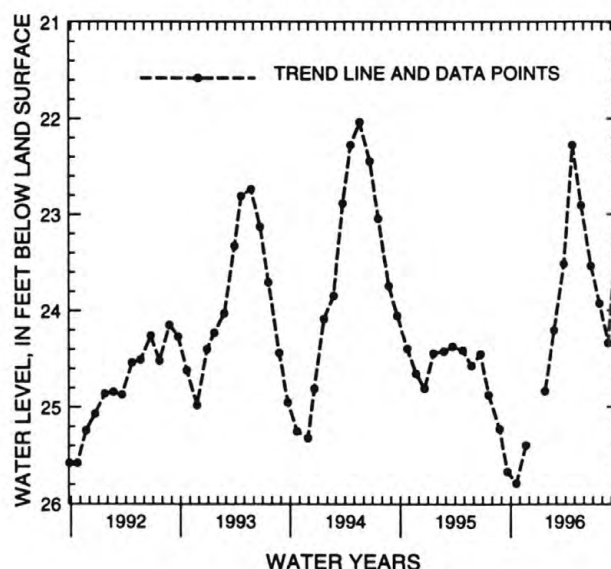
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	25.79	JAN 23	24.84	MAR 27	23.52	MAY 24	22.91	JUL 24	23.93	SEP 24	23.02
NOV 21	25.40	FEB 23	24.21	APR 25	22.28	JUN 25	23.54	AUG 22	24.34		

BREWSTER 22 WELL



CHATHAM 138 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	9.90	JAN 22	8.58	MAR 20	7.54	MAY 23	7.25	JUL 22	8.33	SEP 24	7.42
NOV 20	8.95	FEB 21	8.17	APR 22	7.19	JUN 25	7.79	AUG 21	8.76		

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.

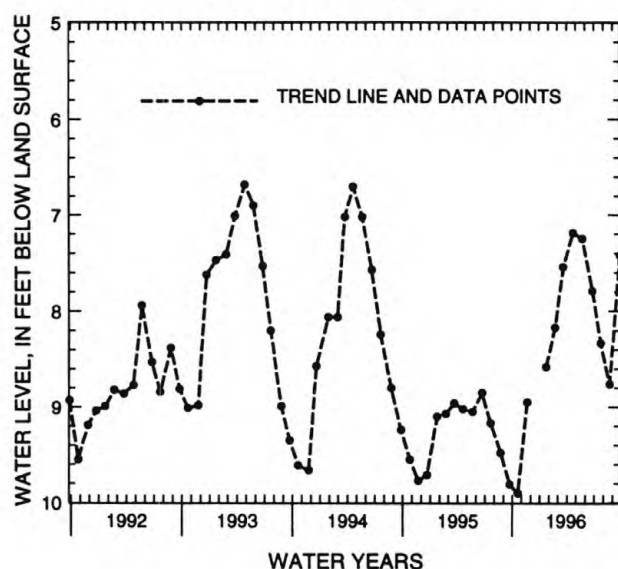
PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

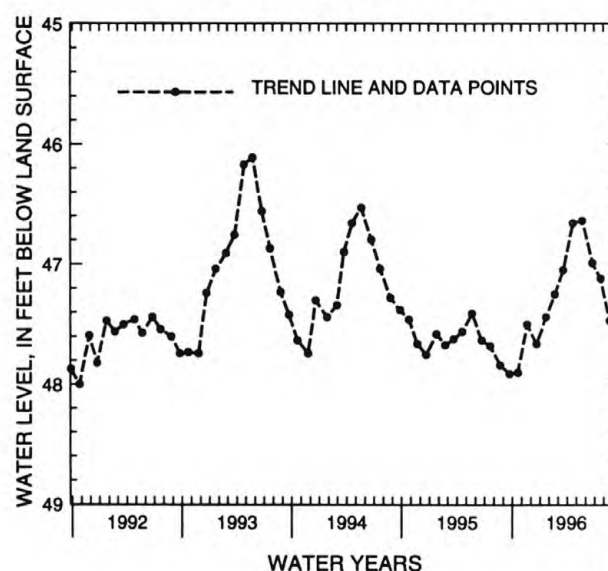
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	47.90	DEC 21	47.66	FEB 21	47.25	APR 22	46.66	JUN 25	46.99	AUG 21	47.47
NOV 20	47.50	JAN 22	47.44	MAR 20	47.05	MAY 23	46.64	JUL 22	47.12	SEP 24	47.06

MASHPEE 29 WELL



SANDWICH 252 WELL



BARNSTABLE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	53.13	DEC 21	52.88	FEB 21	52.39	APR 22	51.14	JUN 25	51.00	AUG 21	51.52
NOV 20	52.83	JAN 22	52.78	MAR 20	51.77	MAY 23	50.78	JUL 22	51.25	SEP 24	50.88

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.

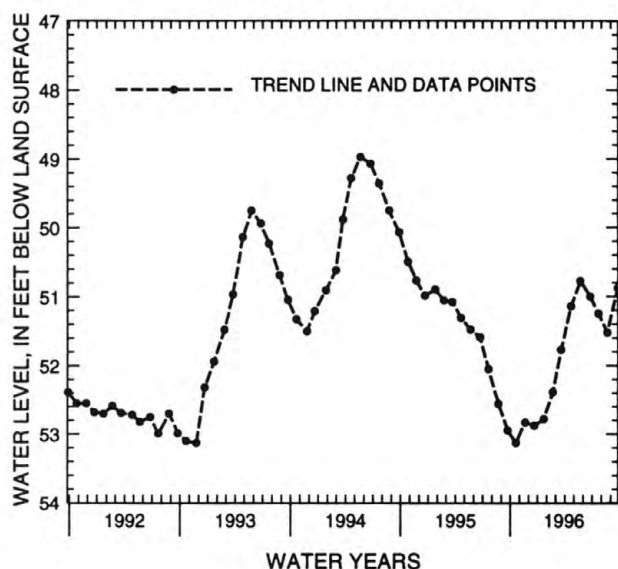
PERIOD OF RECORD.--August 1950 to current year.

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.

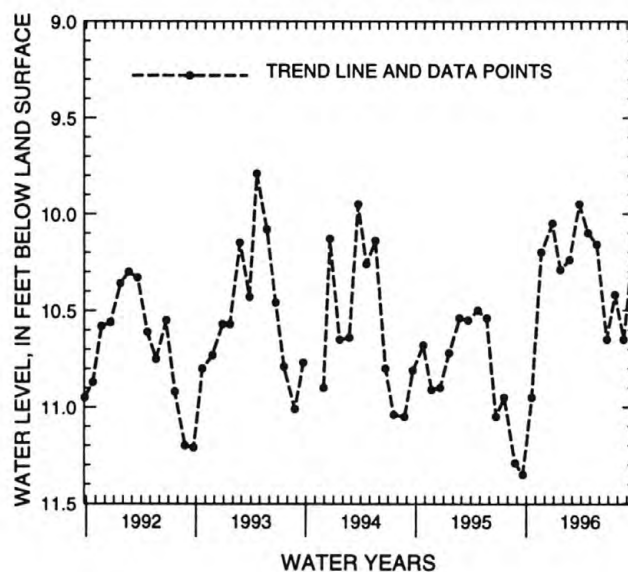
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	10.95	DEC 28	10.05	FEB 23	10.24	APR 25	10.10	JUN 26	10.65	AUG 22	10.65
NOV 21	10.20	JAN 23	10.29	MAR 27	9.95	MAY 24	10.16	JUL 24	10.42	SEP 24	10.14

SANDWICH 253 WELL



TRURO 1 WELL



BARNSTABLE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	12.55	DEC 28	11.89	FEB 23	11.60	APR 25	11.26	JUN 26	11.90	AUG 22	12.39
NOV 21	12.12	JAN 23	11.66	MAR 27	11.40	MAY 24	11.54	JUL 24	12.12	SEP 24	11.81

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.

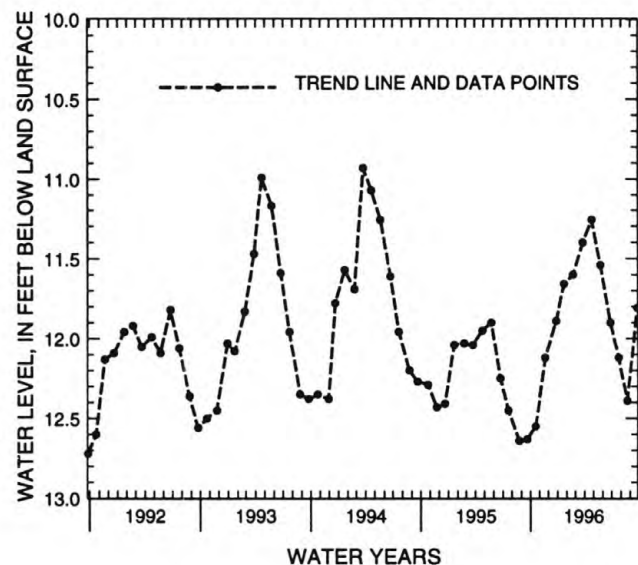
PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

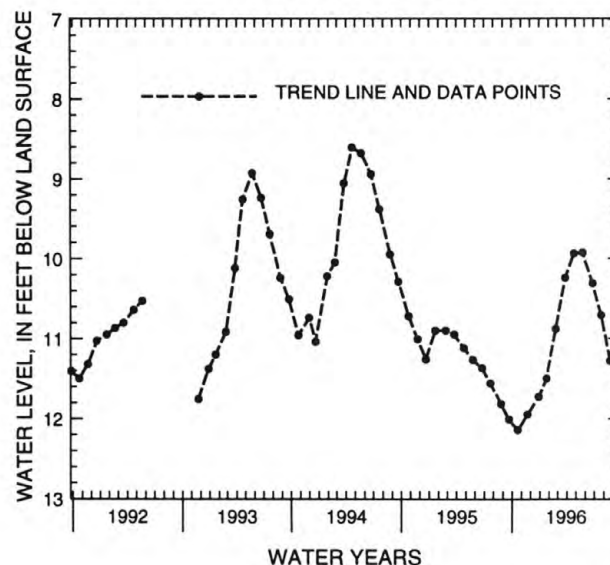
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	12.14	DEC 28	11.73	FEB 23	10.88	APR 25	9.94	JUN 26	10.31	AUG 22	11.28
NOV 21	11.95	JAN 23	11.50	MAR 27	10.24	MAY 24	9.93	JUL 24	10.71	SEP 24	10.75

TRURO 89 WELL



WELLFLEET 17 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.75	JAN 22	2.63	APR 26	2.61	MAY 29	2.80	JUL 30	3.00	SEP 24	2.57
NOV 28	2.86	FEB 27	2.73	APR 24	2.36	JUN 26	2.95	AUG 20	3.31		

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.

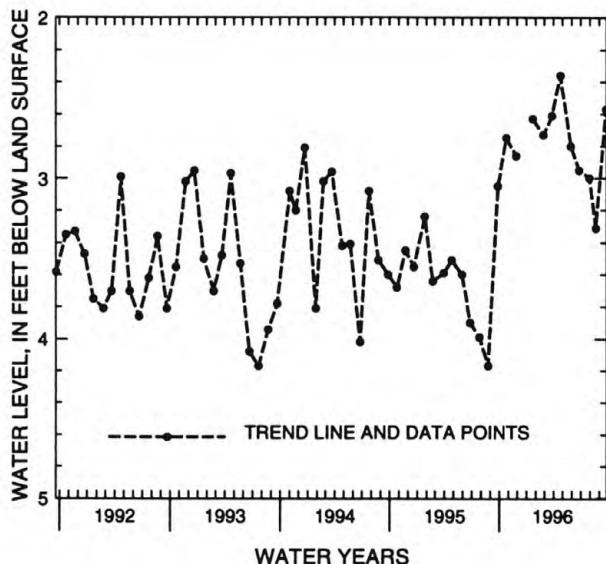
PERIOD OF RECORD.--October 1951 to current year.

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.

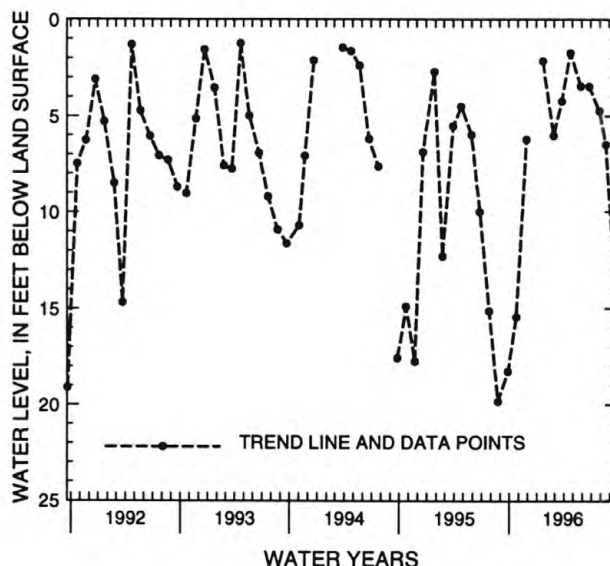
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	15.45	NOV 29	6.22	JAN 23	2.15	FEB 28	6.02	MAR 26	4.23	APR 24	1.72
MAY 29	3.44	JUN 26	3.46	JUL 30	4.73	AUG 20	6.50	SEP 24	14.83		

BECKET 12 WELL



CHESHIRE 2 WELL



BERKSHIRE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	12.07	JAN 22	5.14	MAR 26	7.06	MAY 29	9.45	JUL 30	9.56	SEP 24	8.80
NOV 28	9.33	FEB 27	8.19	APR 24	7.10	JUN 26	10.08	AUG 27	10.29		

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.--Augured 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.

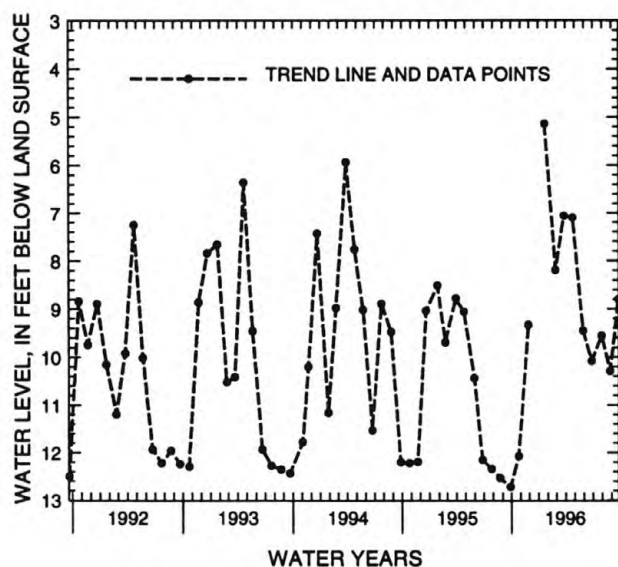
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

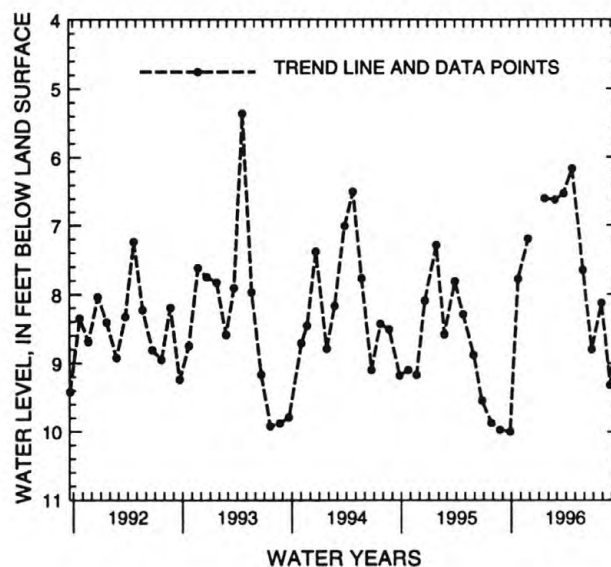
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	7.78	JAN 22	6.60	MAR 26	6.53	MAY 29	7.65	JUL 30	8.13	SEP 24	8.35
NOV 28	7.20	FEB 27	6.62	APR 24	6.17	JUN 26	8.80	AUG 27	9.32		

GREAT BARRINGTON 2 WELL



OTIS 7 WELL



GROUND-WATER LEVELS IN MASSACHUSETTS

BERKSHIRE COUNTY--Continued

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 ft, 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 electric tape by observer. 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.

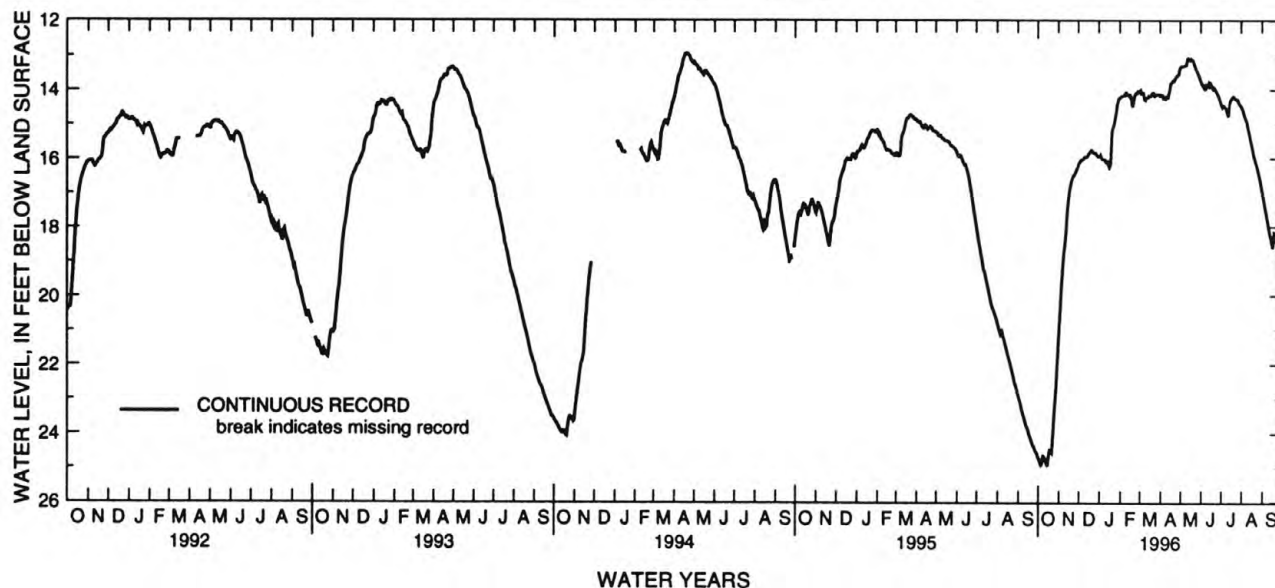
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft below land-surface datum, Apr. 25, 1969; lowest measured, 27.57 ft below land-surface datum, Dec. 11, 1964

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.70	21.01	16.14	15.93	14.22	14.05	14.16	13.35	13.75	14.38	14.49	16.98
2	24.76	20.67	16.11	15.93	14.21	14.01	14.14	13.32	13.80	14.44	14.52	17.08
3	24.81	20.32	16.11	15.90	14.19	14.00	14.14	13.30	13.85	14.49	14.57	17.19
4	24.87	19.97	16.06	15.95	14.18	14.09	14.14	13.30	13.84	14.45	14.63	17.30
5	24.91	19.66	16.05	16.00	14.17	14.07	14.15	13.30	13.89	14.45	14.71	17.42
6	24.88	19.40	16.03	16.02	14.17	14.07	14.24	13.30	13.93	14.47	14.78	17.52
7	24.73	19.11	16.02	16.02	14.16	14.08	14.24	13.30	13.97	14.50	14.82	17.62
8	24.64	18.84	16.02	16.02	14.14	14.20	14.24	13.28	13.97	14.51	14.86	17.73
9	24.65	18.66	15.99	16.02	14.10	14.28	14.25	13.27	13.83	14.55	14.93	17.83
10	24.69	18.50	15.95	16.05	14.13	14.29	14.20	13.27	13.83	14.63	15.02	17.94
11	24.75	18.31	15.95	16.11	14.09	14.22	14.22	13.20	13.84	14.70	15.11	18.05
12	24.80	18.02	15.95	16.11	14.11	14.22	14.22	13.08	13.88	14.77	15.20	18.16
13	24.87	17.70	15.95	16.09	14.12	14.22	14.22	13.07	13.90	14.71	15.29	18.26
14	24.92	17.47	15.94	16.14	14.12	14.21	14.10	13.10	13.77	14.41	15.39	18.33
15	24.91	17.25	15.90	16.20	14.17	14.17	14.04	13.11	13.78	14.36	15.49	18.43
16	24.71	17.10	15.87	16.25	14.20	14.18	13.93	13.12	13.83	14.29	15.58	18.54
17	24.56	16.96	15.84	16.21	14.17	14.18	13.81	13.09	13.87	14.26	15.67	18.61
18	24.47	16.84	15.81	16.14	14.21	14.18	13.79	13.12	13.92	14.24	15.77	18.43
19	24.48	16.74	15.78	15.78	14.40	14.14	13.77	13.11	13.96	14.20	15.88	18.16
20	24.50	16.66	15.75	15.28	14.48	14.09	13.73	13.12	13.92	14.19	15.97	18.17
21	24.54	16.57	15.75	15.14	14.39	14.08	13.72	13.18	13.94	14.21	16.01	18.33
22	24.30	16.53	15.79	15.08	14.26	14.08	13.73	13.23	13.96	14.24	16.08	18.43
23	23.96	16.50	15.82	15.03	14.18	14.13	13.70	13.29	14.01	14.25	16.16	18.26
24	23.67	16.49	15.83	14.95	14.11	14.17	13.64	13.34	14.04	14.27	16.23	18.03
25	23.39	16.45	15.83	14.83	14.09	14.15	13.61	13.40	14.07	14.28	16.30	17.87
26	23.09	16.40	15.83	14.74	14.10	14.13	13.59	13.44	14.12	14.28	16.38	17.75
27	22.84	16.36	15.84	14.59	14.10	14.13	13.56	13.48	14.15	14.30	16.48	17.75
28	22.52	16.30	15.88	14.42	14.03	14.13	13.56	13.53	14.21	14.36	16.56	17.79
29	22.12	16.28	15.91	14.35	14.04	14.13	13.54	13.57	14.27	14.41	16.65	17.69
30	21.72	16.24	15.93	14.26	---	14.13	13.42	13.63	14.33	14.43	16.76	17.52
31	21.36	---	15.93	14.24	---	14.13	---	13.69	---	14.46	16.87	---
MEAN	24.13	17.78	15.92	15.54	14.17	14.14	13.93	13.29	13.95	14.40	15.59	17.91
LOW	24.92	21.01	16.14	16.25	14.48	14.29	14.25	13.69	14.33	14.77	16.87	18.61
HIGH	21.36	16.24	15.75	14.24	14.03	14.00	13.42	13.07	13.75	14.19	14.49	16.98

WTR YR 1996 HIGH 13.06 MAY 12, 13 LOW 24.95 OCT 14, 15

PITTSFIELD 51 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	15.90	OCT 29	15.53	NOV 30	14.05	JAN 22	13.75	FEB 27	12.31	APR 01	12.13
12	15.95	NOV 02	15.15	DEC 08	14.01	26	13.41	MAR 01	12.32	24	11.68
13	15.97	07	14.86	13	14.02	29	13.05	11	12.40	MAY 29	11.10
19	16.03	10	14.76	29	14.18	FEB 01	12.83	20	12.09	JUN 26	11.55
22	15.98	12	14.69	JAN 05	14.28	09	12.65	23	12.09	JUL 30	11.09
23	15.93	17	14.48	17	14.44	21	12.78	26	12.12	AUG 27	11.57
25	15.87	24	14.18	21	13.89	23	12.55	29	12.11	SEP 24	11.64
26	15.82	28	14.06								

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.

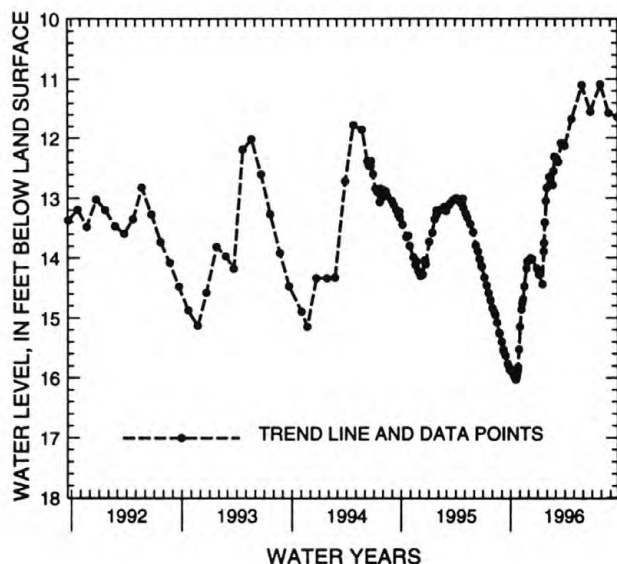
PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Jan. 27, 1978; lowest measured, 5.23 ft below land-surface datum, Aug. 26, 1964.

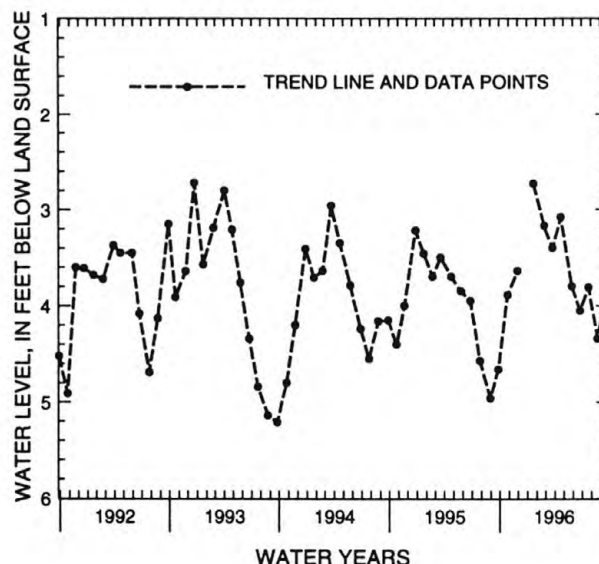
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	3.89	JAN 22	2.73	MAR 26	3.40	MAY 29	3.80	JUL 24	3.81	SEP 24	3.82
NOV 30	3.64	FEB 27	3.17	APR 23	3.08	JUN 25	4.05	AUG 22	4.34		

SHEFFIELD 58 WELL



ATTLEBORO 83 WELL



BRISTOL COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	15.38	JAN 22	13.99	MAR 26	13.05	JUN 25	13.50	AUG 22	14.35	SEP 24	13.69
NOV 30	14.54	FEB 27	13.40	APR 23	12.62	JUL 24	13.91				

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.

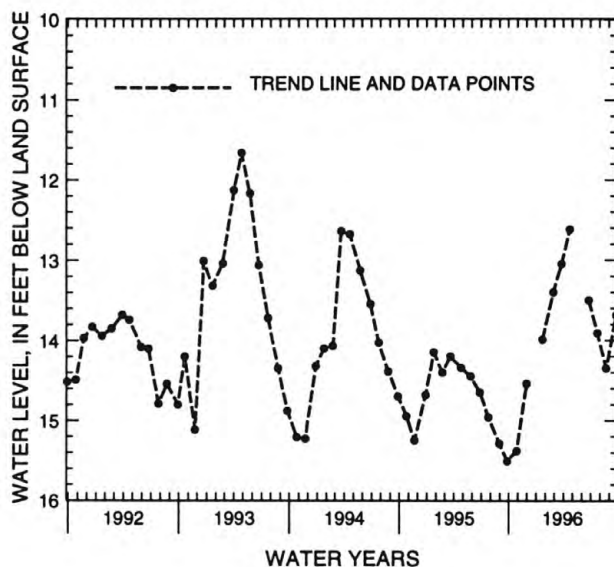
PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

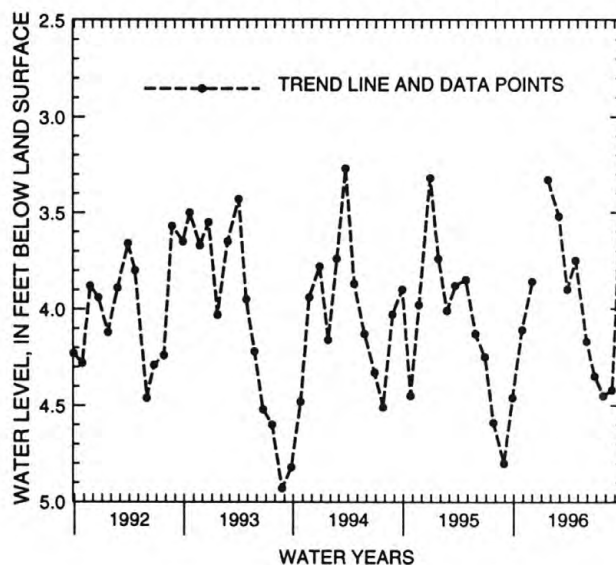
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.11	JAN 22	3.33	MAR 26	3.90	MAY 29	4.17	JUL 24	4.45	SEP 24	3.38
NOV 30	3.86	FEB 27	3.52	APR 23	3.75	JUN 25	4.35	AUG 22	4.42		

FREETOWN 23 WELL



NEW BEDFORD 116 WELL



BRISTOL COUNTY--Continued

415812071111101. Norton well N4W 37.

LOCATION.--Lat 41°58'12", long 71°11'11", Bristol County, Hydrologic Unit 01090004, at Wheaton College, 250 ft north-east 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	7.63	JAN 22	4.23	MAR 26	5.45	MAY 29	7.06	JUL 24	6.97	SEP 24	7.10
NOV 30	6.10	FEB 27	4.74	APR 23	4.87	JUN 25	8.30	AUG 22	8.57		

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.

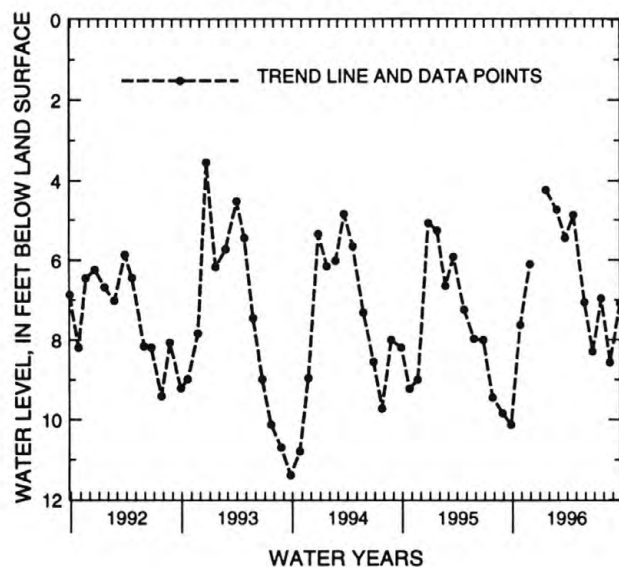
PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

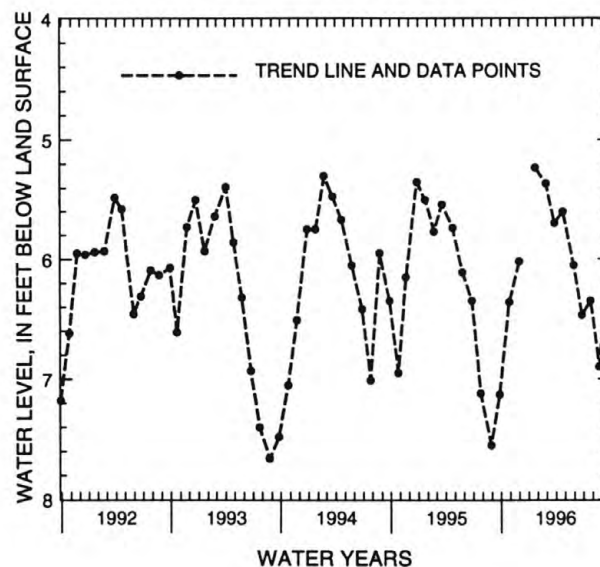
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	6.36	JAN 22	5.23	MAR 26	5.70	MAY 29	6.05	JUL 24	6.35	SEP 24	5.92
NOV 30	6.02	FEB 27	5.36	APR 23	5.60	JUN 25	6.47	AUG 22	6.90		

NORTON 37 WELL



SEEKONK 275 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.94	JAN 22	7.38	MAR 26	6.98	MAY 29	8.57	JUL 24	9.09	SEP 24	9.09
NOV 30	8.74	FEB 27	7.45	APR 23	7.08	JUN 25	9.12	AUG 22	9.70		

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.

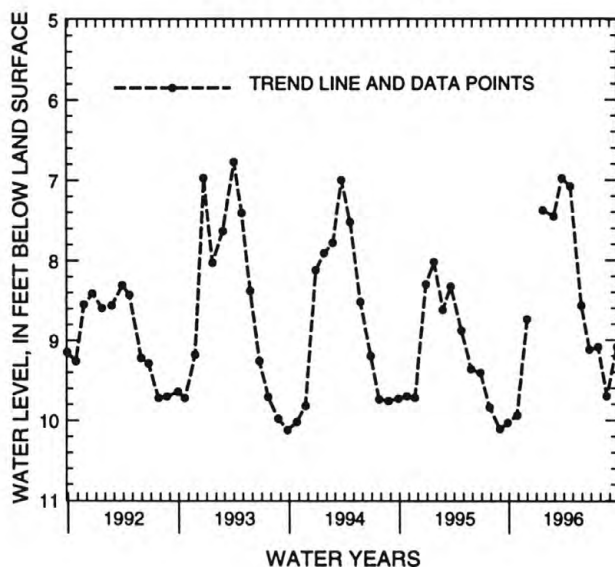
PERIOD OF RECORD.--December 1976 to current year.

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.

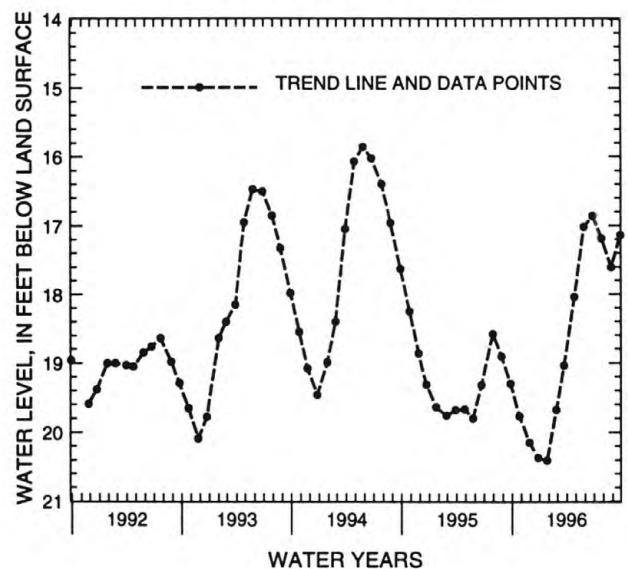
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	19.77	DEC 27	20.37	FEB 26	19.68	APR 26	18.04	JUN 26	16.86	AUG 26	17.61
NOV 28	20.15	JAN 26	20.41	MAR 23	19.04	MAY 28	17.02	JUL 26	17.19	SEP 26	17.14

TAUNTON 337 WELL



EDGARTOWN 52 WELL



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.

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	16.10	NOV 27	15.24	JAN 24	15.12	FEB 26	14.69	MAR 28	14.59	APR 22	13.97
MAY 28	14.42	JUN 27	15.04	JUL 26	15.09	AUG 23	15.48	SEP 26	15.38		

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.

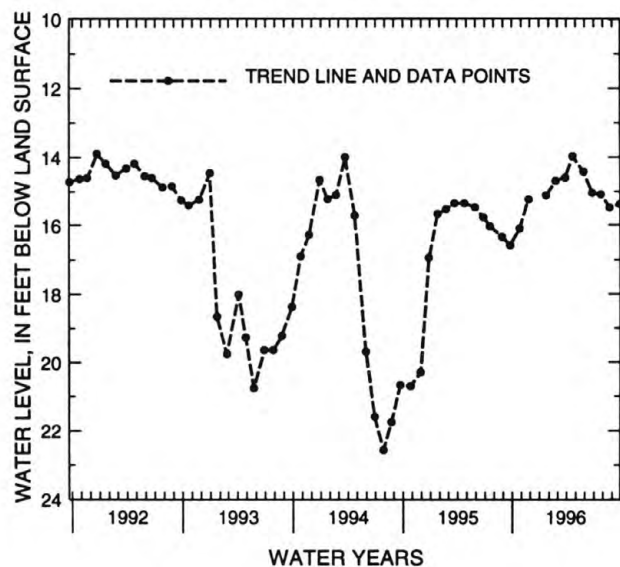
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft below land-surface datum, Mar. 27, 1969; lowest measured, 6.65 ft below land-surface datum, Sept. 22, 1965.

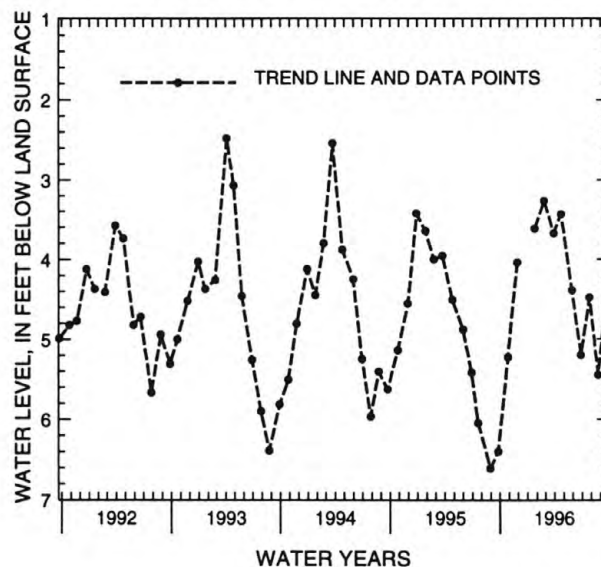
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	5.23	JAN 24	3.62	MAR 28	3.68	MAY 28	4.39	JUL 26	4.48	SEP 26	4.28
NOV 27	4.04	FEB 26	3.27	APR 22	3.44	JUN 27	5.20	AUG 23	5.45		

ANDOVER 462 WELL



GEORGETOWN 168 WELL



GROUND-WATER LEVELS IN MASSACHUSETTS

ESSEX COUNTY--Continued

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.

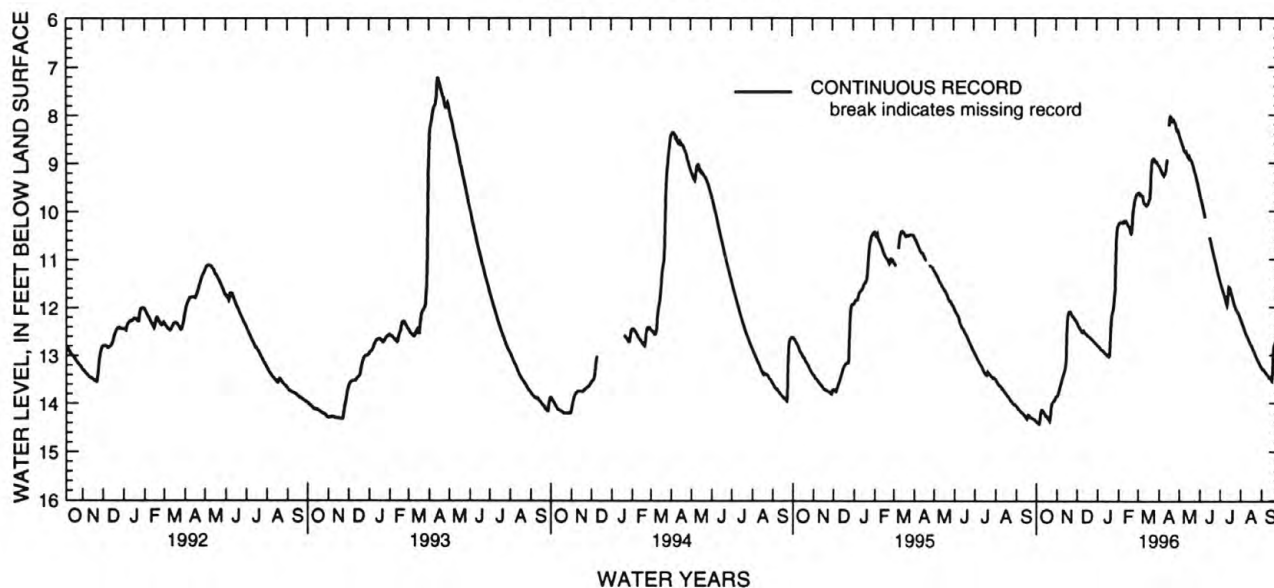
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14.38	13.85	12.31	12.80	10.29	9.63	9.05	8.37	9.61	11.43	12.24	13.25
2	14.39	13.84	12.34	12.81	10.26	9.61	9.06	8.42	9.68	11.48	12.28	13.28
3	14.40	13.80	12.38	12.82	10.24	9.61	9.09	8.47	9.73	11.53	12.32	13.29
4	14.41	13.75	12.40	12.84	10.23	9.65	9.12	8.50	9.79	11.58	12.36	13.29
5	14.42	13.69	12.43	12.86	10.23	9.64	9.16	8.55	9.86	11.62	12.40	13.31
6	14.39	13.64	12.45	12.88	10.23	9.65	9.20	8.59	9.92	11.67	12.43	13.33
7	14.25	13.60	12.47	12.89	10.24	9.68	9.22	8.64	9.99	11.72	12.47	13.35
8	14.17	13.55	12.50	12.90	10.22	9.68	9.24	8.67	10.06	11.76	12.51	13.37
9	14.14	13.49	12.52	12.91	10.21	9.76	9.26	8.73	10.13	11.82	12.55	13.39
10	14.14	13.44	12.50	12.92	10.23	9.82	9.23	8.76	---	11.86	12.58	13.41
11	14.16	13.40	12.49	12.94	10.21	9.85	9.22	8.77	---	11.91	12.61	13.42
12	14.18	13.35	12.52	12.96	10.20	9.85	9.14	8.76	---	11.96	12.64	13.44
13	14.21	13.29	12.54	12.97	10.23	9.87	9.04	8.81	---	11.91	12.68	13.47
14	14.23	13.24	12.55	12.98	10.24	9.88	8.92	8.85	---	11.65	12.71	13.48
15	14.26	13.04	12.56	13.00	10.28	9.86	---	8.88	---	11.58	12.74	13.49
16	14.26	12.48	12.58	13.01	10.31	9.85	---	8.90	e10.54	11.59	12.77	13.51
17	14.28	12.22	12.59	13.02	10.31	9.80	8.23	8.87	10.60	11.63	12.79	13.53
18	14.30	12.14	12.60	13.03	10.36	9.76	8.05	8.91	10.67	11.70	12.82	13.42
19	14.32	12.10	12.62	13.00	10.43	9.73	8.03	8.93	10.73	11.74	12.86	13.03
20	14.34	12.09	12.62	12.68	10.46	9.52	8.04	8.94	10.79	11.79	12.89	12.84
21	14.36	12.09	12.63	12.34	10.44	9.19	8.10	8.97	10.85	11.85	12.92	12.78
22	14.29	12.11	12.65	12.20	10.17	9.01	8.16	9.03	10.92	11.91	12.95	12.75
23	14.14	12.14	12.66	12.12	10.00	8.93	8.07	9.08	10.97	11.96	12.99	12.73
24	14.05	12.18	12.68	12.07	9.90	8.92	8.11	9.14	11.03	11.99	13.02	12.73
25	14.00	12.19	12.69	11.97	9.81	8.91	8.15	9.19	11.09	12.03	13.05	12.74
26	13.98	12.21	12.71	11.80	9.75	8.92	8.16	9.24	11.15	12.07	13.08	12.75
27	13.96	12.23	12.72	11.63	9.71	8.97	8.24	9.30	11.21	12.08	13.11	12.77
28	13.95	12.25	12.74	11.15	9.65	8.98	8.30	9.36	11.27	12.11	13.14	12.78
29	13.92	12.27	12.75	10.66	9.64	8.97	8.33	9.41	11.33	12.13	13.17	12.79
30	13.89	12.29	12.77	10.42	---	9.00	8.32	9.48	11.37	12.16	13.20	12.81
31	13.86	---	12.78	10.32	---	9.02	---	9.54	---	12.20	13.23	---
MEAN	14.19	12.87	12.57	12.42	10.15	9.47	---	8.91	---	11.82	12.76	13.15
LOW	14.42	13.85	12.78	13.03	10.46	9.88	---	9.54	---	12.20	13.23	13.53
HIGH	13.86	12.09	12.31	10.32	9.64	8.91	---	8.37	---	11.43	12.24	12.73

WTR YR 1996 HIGH 8.02 APR 19, 20 LOW 14.42 OCT 5, 6

e Estimated

HAVERHILL 23 WELL



GROUND-WATER LEVELS IN MASSACHUSETTS

299

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, 1.36 ft below land-surface datum, Mar. 30, 1993; lowest, 12.68 ft below land-surface datum, Nov. 24, 1965.

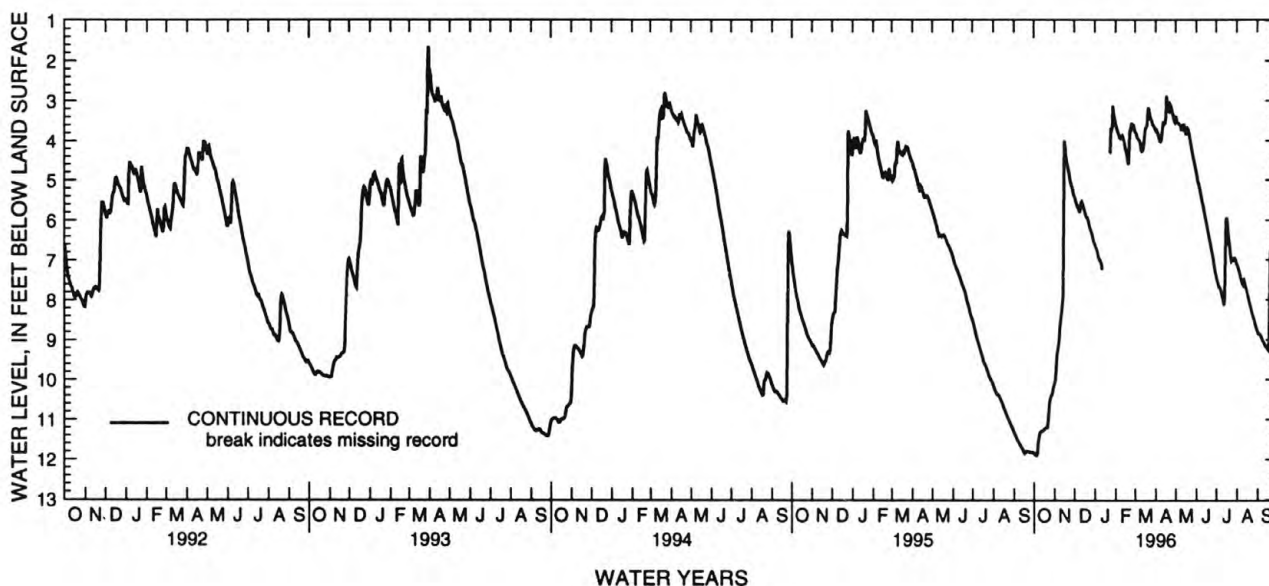
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.85	10.09	5.42	6.63	3.59	3.78	3.75	3.40	4.86	7.46	7.14	8.81
2	11.87	10.03	5.46	6.68	3.65	3.80	3.73	3.47	4.96	7.53	7.19	8.86
3	11.88	9.79	5.55	6.72	3.71	3.83	3.77	3.55	5.04	7.60	7.25	8.86
4	11.90	9.52	5.58	6.76	3.76	3.91	3.82	3.56	5.09	7.67	7.31	8.86
5	11.90	9.34	5.65	6.84	3.81	3.94	3.88	3.56	5.16	7.67	7.38	8.89
6	11.85	9.23	5.68	6.91	3.87	3.96	3.96	3.59	5.24	7.71	7.46	8.92
7	11.64	9.15	5.71	6.97	3.93	3.99	4.01	3.59	5.33	7.77	7.52	8.96
8	11.48	8.98	5.76	6.99	3.94	4.01	4.02	3.64	5.42	7.83	7.58	9.01
9	11.39	8.71	5.81	7.02	3.90	4.11	3.98	3.72	5.51	7.90	7.62	9.04
10	11.34	8.53	5.70	7.08	3.92	4.24	3.87	3.72	5.59	7.97	7.54	9.07
11	11.31	8.39	5.56	7.11	3.88	4.28	3.68	3.67	5.66	8.06	7.51	9.11
12	11.30	8.25	5.54	e7.24	3.91	4.27	3.52	3.59	5.75	8.14	7.57	9.15
13	11.29	8.06	5.59	---	3.97	4.23	3.59	3.59	5.84	7.97	7.64	9.18
14	11.29	7.90	5.65	---	4.05	4.10	3.56	3.69	5.93	6.81	7.69	9.19
15	11.28	5.84	5.68	---	4.16	3.92	3.56	3.78	6.00	6.05	7.77	9.21
16	11.26	4.00	5.75	---	4.25	3.73	3.39	3.85	6.10	5.94	7.84	9.24
17	11.24	4.15	5.82	---	4.29	3.68	2.88	3.70	6.19	6.07	7.89	9.26
18	11.22	4.38	5.88	---	4.40	3.64	3.04	3.68	6.28	6.28	7.96	8.91
19	11.21	4.52	5.92	---	4.54	3.60	3.12	3.71	6.38	6.45	8.04	7.68
20	11.20	4.59	5.93	---	4.61	3.26	3.18	3.75	6.46	6.59	8.11	6.91
21	11.20	4.66	5.97	---	4.68	3.17	3.24	3.85	6.55	6.76	8.17	6.71
22	11.07	4.75	6.03	---	3.73	3.26	3.31	3.96	6.64	6.91	8.24	6.75
23	10.82	4.85	6.11	---	3.76	3.35	3.11	4.04	6.72	7.04	8.30	6.85
24	10.64	4.96	6.18	e4.32	3.66	3.44	3.14	4.15	6.82	7.02	8.36	6.95
25	10.52	5.05	6.23	3.73	3.56	3.47	3.25	4.25	6.90	7.01	8.42	7.03
26	10.45	5.10	6.27	3.74	3.62	3.50	3.30	4.35	6.99	7.01	8.47	7.11
27	10.41	5.16	6.32	3.67	3.66	3.58	3.38	4.44	7.12	6.95	8.54	7.18
28	10.38	5.22	6.40	3.13	3.64	3.61	3.48	4.53	7.23	6.95	8.61	7.21
29	10.30	5.31	6.48	3.31	3.72	3.63	3.52	4.60	7.32	7.00	8.66	7.24
30	10.20	5.38	6.55	3.40	---	3.67	3.40	4.68	7.40	7.05	8.71	7.26
31	10.14	---	6.59	3.49	---	3.72	---	4.77	---	7.11	8.76	---
MEAN	11.16	6.80	5.90	---	3.93	3.76	3.51	3.88	6.08	7.17	7.91	8.25
LOW	11.90	10.09	6.59	---	4.61	4.28	4.02	4.77	7.40	8.14	8.76	9.26
HIGH	10.14	4.00	5.42	---	3.56	3.17	2.88	3.40	4.86	5.94	7.14	6.71

WTR YR 1996 HIGH 2.82 APR 17, LOW 11.90 OCT 4, 5, 6

e Estimated

NEWBURY 27 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	15.35	JAN 24	6.72	MAR 28	8.34	MAY 28	10.60	JUL 26	13.10	SEP 26	14.65
NOV 27	9.92	FEB 26	7.27	APR 22	7.62	JUN 27	12.20	AUG 23	14.01		

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.

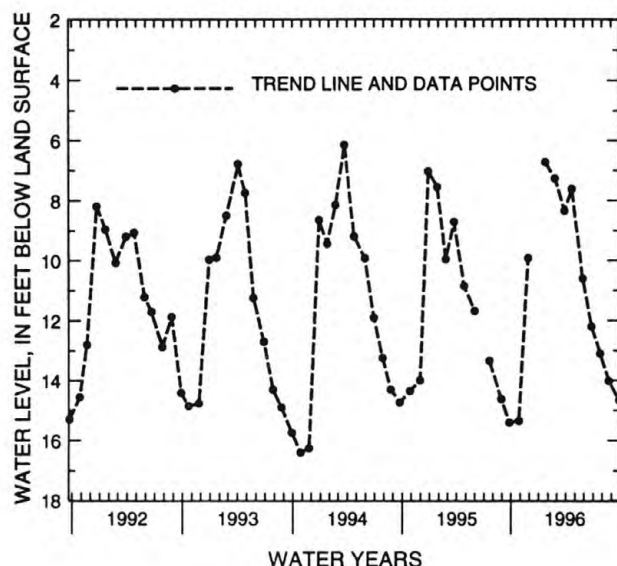
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

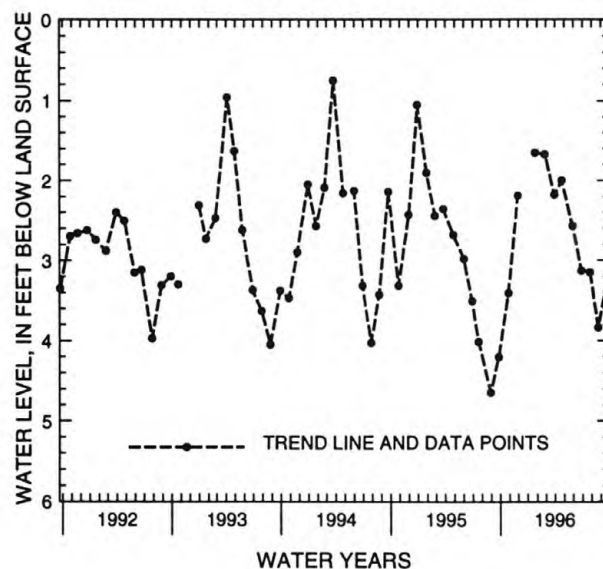
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	3.41	JAN 24	1.65	MAR 28	2.18	MAY 28	2.57	JUL 26	3.15	SEP 26	3.15
NOV 27	2.19	FEB 26	1.67	APR 22	2.00	JUN 27	3.13	AUG 22	3.84		

TOPSFIELD 1 WELL



WENHAM 76 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	21.18	JAN 23	18.21	MAR 27	16.79	MAY 30	16.55	JUL 26	19.13	SEP 23	20.37
NOV 29	16.75	FEB 28	16.94	APR 25	15.80	JUN 27	18.16	AUG 23	20.06		

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.

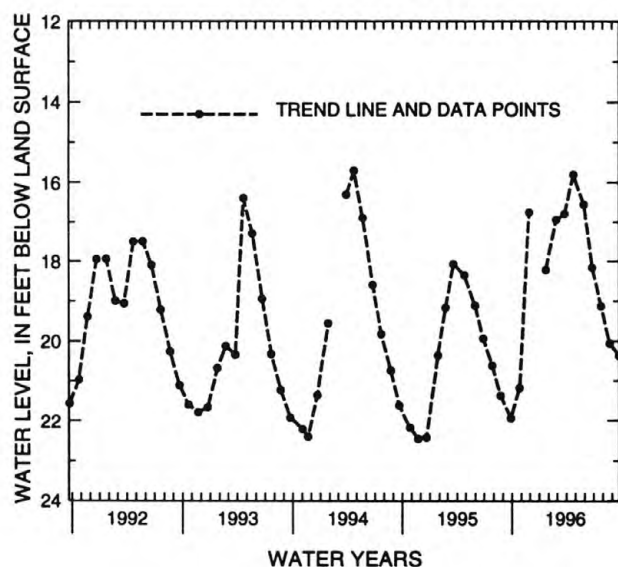
PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

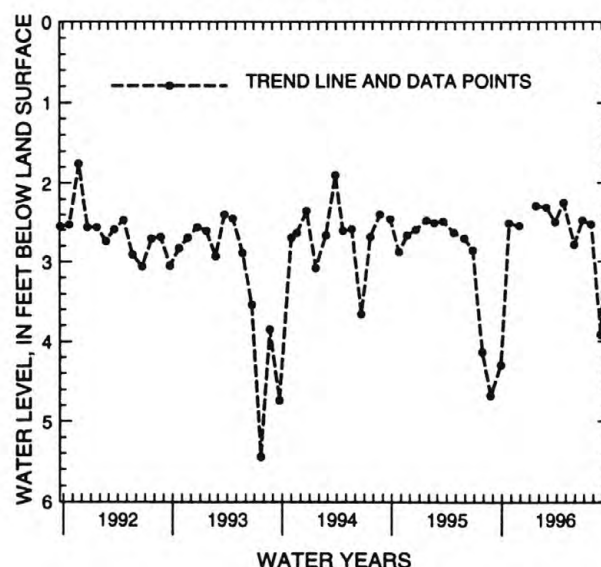
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	2.52	JAN 23	2.29	MAR 27	2.50	MAY 30	2.79	JUL 26	2.53	SEP 23	2.00
NOV 29	2.55	FEB 28	2.31	APR 25	2.25	JUN 27	2.48	AUG 26	3.92		

COLRAIN 8 WELL



DEERFIELD 44 WELL



FRANKLIN COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.72	JAN 23	3.03	MAR 27	2.85	MAY 30	3.15	JUL 26	3.70	SEP 23	3.62
NOV 29	2.93	FEB 28	2.84	APR 25	2.48	JUN 27	3.64	AUG 26	4.60		

423305072320301. Montague well M5W 5.

LOCATION.--Lat 42°33'05", long 72°32'03", Franklin County, Hydrologic Unit 01080201, about 15 ft west of Montague Road, 0.2 mi north of Old Northfield Road, and 1.0 mi north of Montague.

Owner: Private owner.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 12 ft, screened 9 to 12 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 240 ft above sea level. Measuring point: Top of casing, 1.75 ft above land-surface datum.

REMARKS.--Well plugged sometime between July and August 1995.

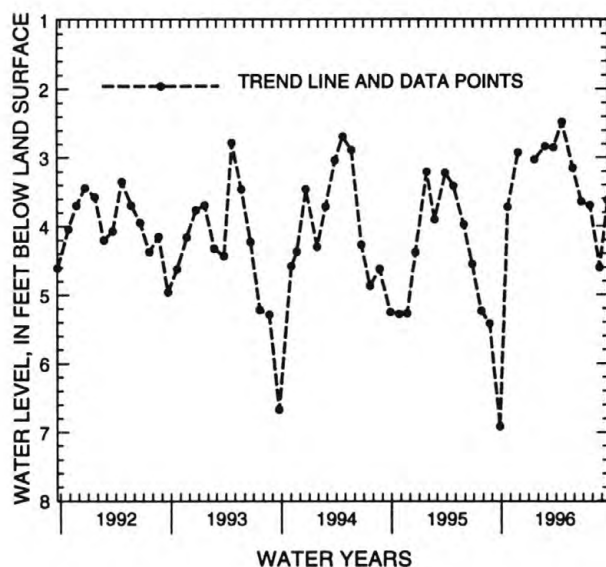
PERIOD OF RECORD.--January 1936 to September 1996 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft below land-surface datum, Feb. 26, 1976; lowest measured, 8.00 ft below land-surface datum, Dec. 28, 1966.

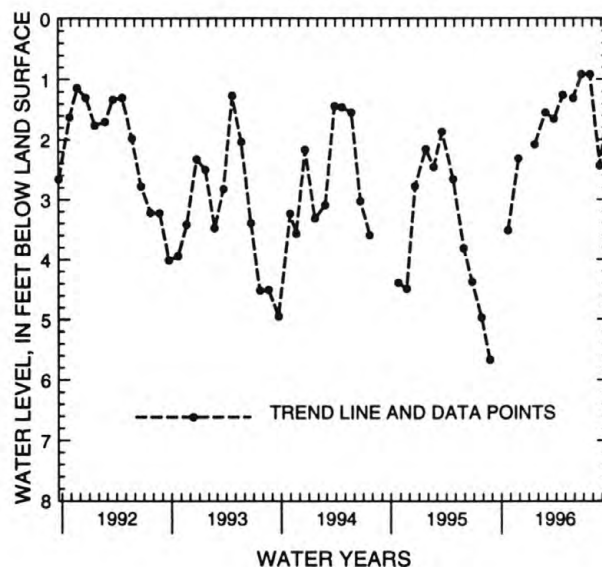
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	3.52	JAN 23	2.08	MAR 27	1.65	MAY 30	1.31	JUL 26	0.92	SEP 23	1.41
NOV 29	2.32	FEB 28	1.55	APR 26	1.26	JUN 27	.92	AUG 26	2.44		

HAWLEY 8 WELL



MONTAGUE 5 WELL



FRANKLIN COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	7.15	NOV 30	6.10	JAN 23	5.92	FEB 26	5.65	MAR 21	5.71	APR 25	4.81
MAY 28	5.02	JUN 25	5.46	JUL 25	5.91	AUG 28	7.21	SEP 25	7.61		

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.

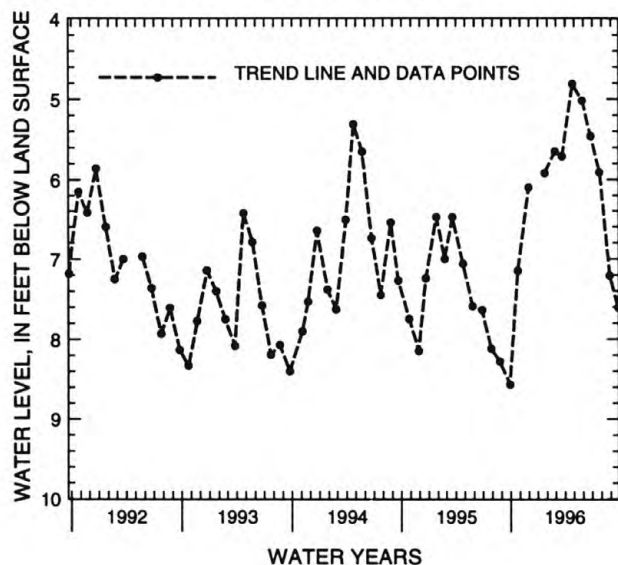
PERIOD OF RECORD.--November 1957 to current year.

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.

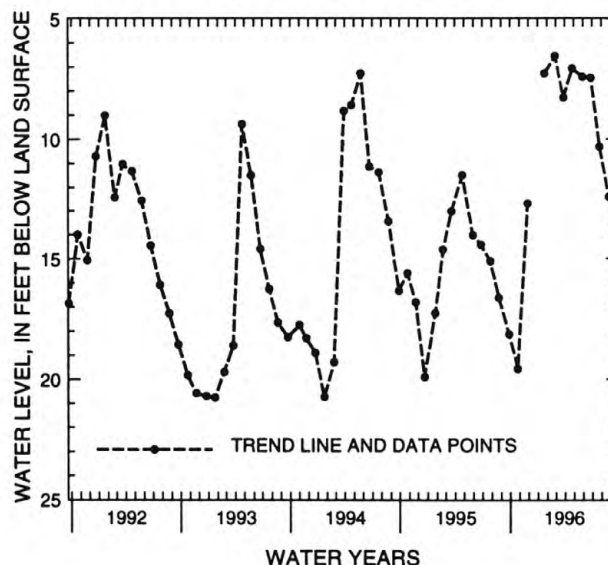
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	19.57	JAN 23	7.27	MAR 27	8.28	MAY 30	7.41	JUL 26	10.32	SEP 23	13.84
NOV 29	12.70	FEB 28	6.55	APR 26	7.07	JUN 27	7.45	AUG 26	12.42		

ORANGE 63 WELL



SUNDERLAND 7 WELL



GROUND-WATER LEVELS IN MASSACHUSETTS

FRANKLIN COUNTY--Continued

422559072332402. 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.25	JAN 23	2.24	MAR 27	1.98	MAY 30	1.99	JUL 26	2.16	SEP 23	2.82
NOV 29	2.47	FEB 28	1.62	APR 26	1.34	JUN 27	2.26	AUG 26	3.58		

HAMPDEN COUNTY

421228072585301. 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.

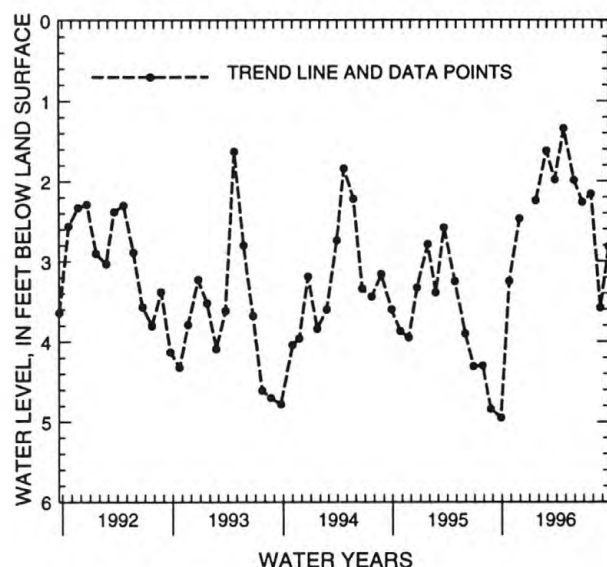
PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.85 ft below land-surface datum, Nov. 22, 1992; lowest measured, 4.60 ft below land-surface datum, Aug. 24, 1995.

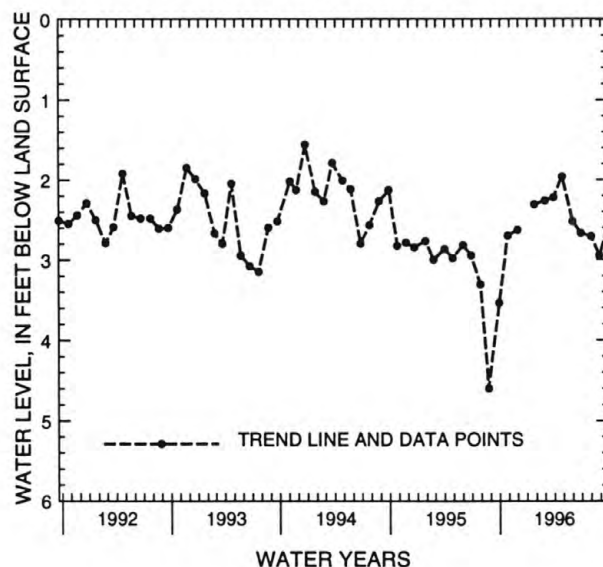
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.70	JAN 22	2.31	MAR 26	2.22	MAY 29	2.52	JUL 30	2.71	SEP 24	2.59
NOV 28	2.63	FEB 27	2.26	APR 24	1.96	JUN 26	2.67	AUG 27	2.95		

SUNDERLAND 68 WELL



BLANDFORD 9 WELL



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 in 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	22.75	JAN 24	21.94	MAR 21	20.68	MAY 28	19.44	JUL 25	19.87	SEP 25	21.10
NOV 30	21.83	FEB 26	20.85	APR 26	20.03	JUN 25	19.96	AUG 28	20.34		

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.

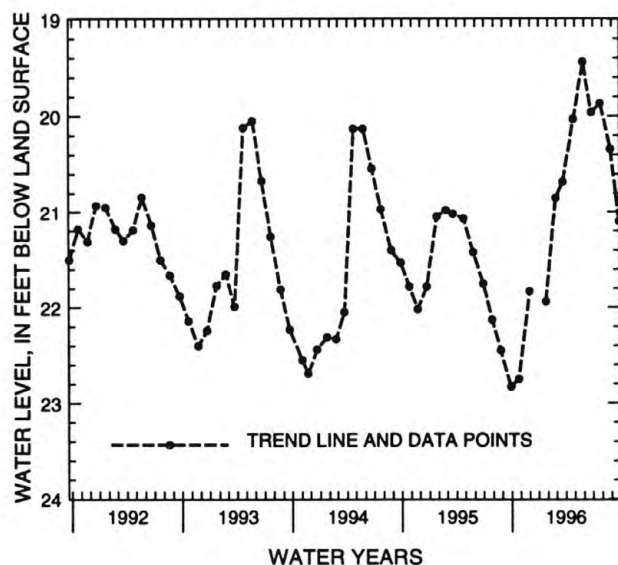
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

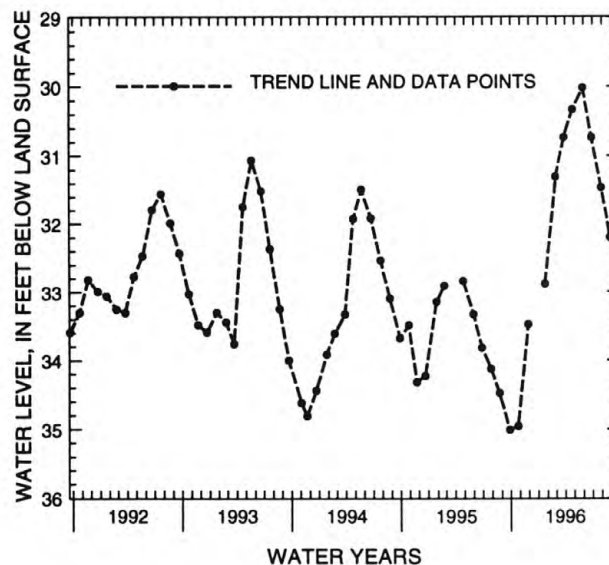
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	34.96	JAN 22	32.88	MAR 26	30.73	MAY 29	30.02	JUL 29	31.46	SEP 24	32.76
NOV 28	33.48	FEB 27	31.30	APR 24	30.33	JUN 26	30.73	AUG 27	32.20		

CHICOPEE 95 WELL



GRANVILLE 5 WELL



HAMPDEN COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.45	JAN 22	3.27	MAR 26	3.22	MAY 29	4.68	JUL 29	5.62	SEP 24	3.93
NOV 28	3.94	FEB 27	3.31	APR 24	3.26	JUN 26	6.49	AUG 27	6.85		

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.

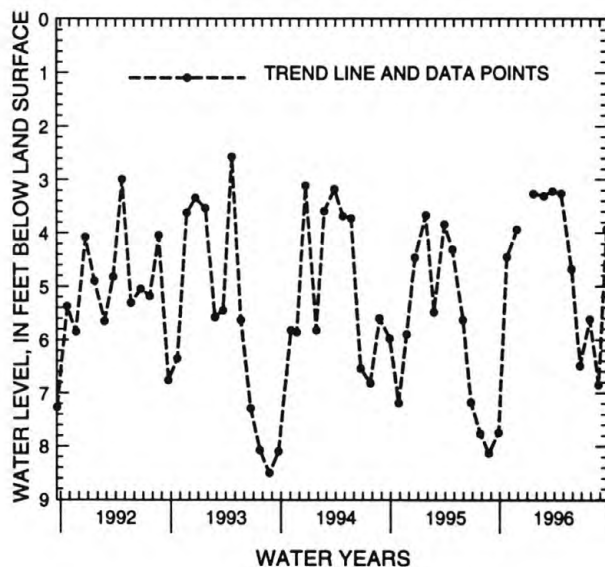
PERIOD OF RECORD.--October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.07 ft below land-surface datum, Apr. 21, 1993; lowest measured, 4.31 ft below land-surface datum, Sept. 21, 1993

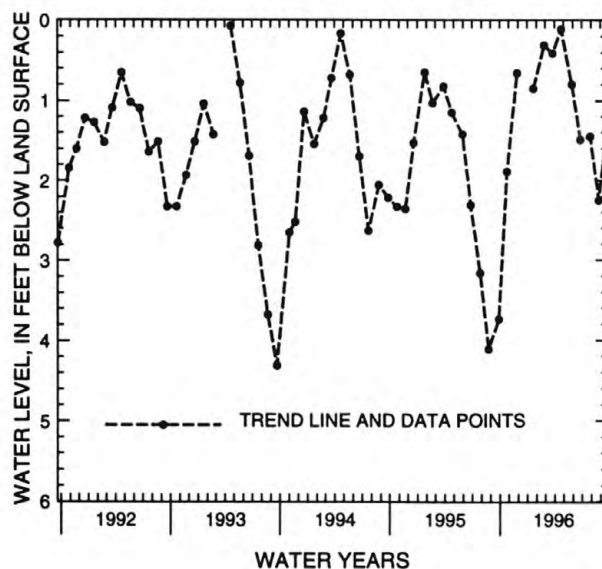
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	1.89	JAN 22	0.85	MAR 26	0.41	MAY 29	0.80	JUL 29	1.45	SEP 23	1.35
NOV 28	.66	FEB 27	.31	APR 24	.11	JUN 26	1.49	AUG 26	2.25		

GRANVILLE 6 WELL



MONTGOMERY 19 WELL



HAMPDEN COUNTY--Continued

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, 5.82 ft below land-surface datum, Sept. 27, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	4.36	JAN 22	3.02	MAR 26	1.53	MAY 29	1.74	JUL 29	2.96	SEP 24	3.24
NOV 28	3.56	FEB 27	1.71	APR 24	1.43	JUN 26	2.34	AUG 27	4.12		

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.

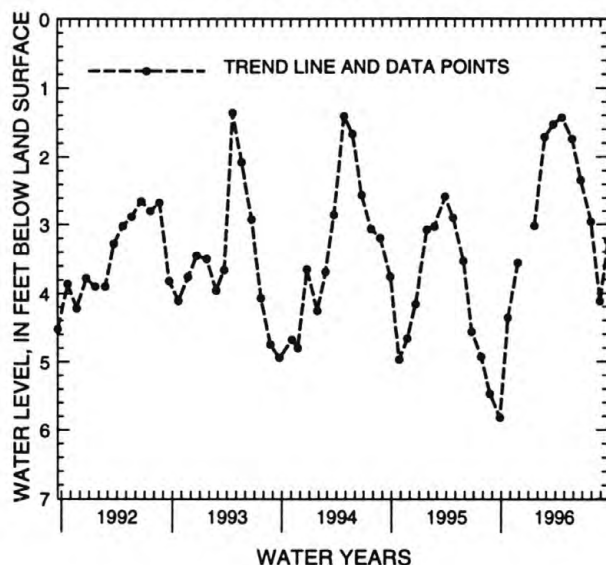
PERIOD OF RECORD.--August 1957 to current year.

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.

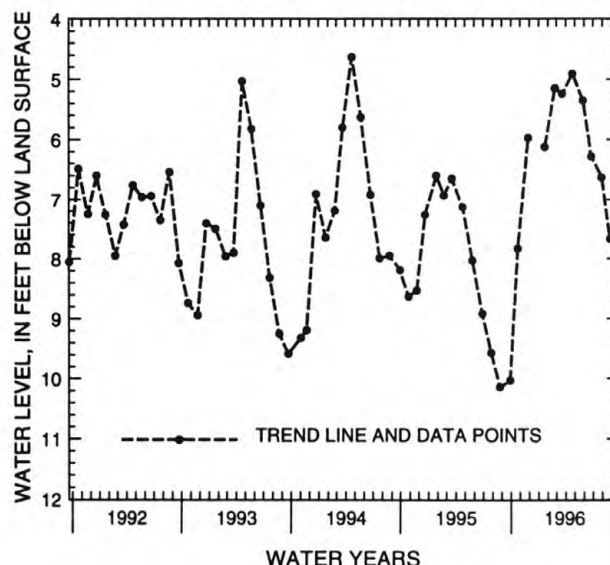
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	7.83	NOV 28	5.97	JAN 22	6.12	FEB 26	5.15	MAR 21	5.24	APR 24	4.91
MAY 29	5.35	JUN 25	6.28	JUL 29	6.63	AUG 26	7.67	SEP 23	6.39		

SOUTHWICK 95 WELL



WESTFIELD 62 WELL



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, 2.20 ft below land-surface datum, June 21, 1989; 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	3.31	JAN 22	2.92	MAR 21	2.84	MAY 29	3.55	JUL 29	3.75	SEP 23	2.74
NOV 28	3.67	FEB 26	2.71	APR 24	3.20	JUN 25	3.78	AUG 26	4.02		

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.

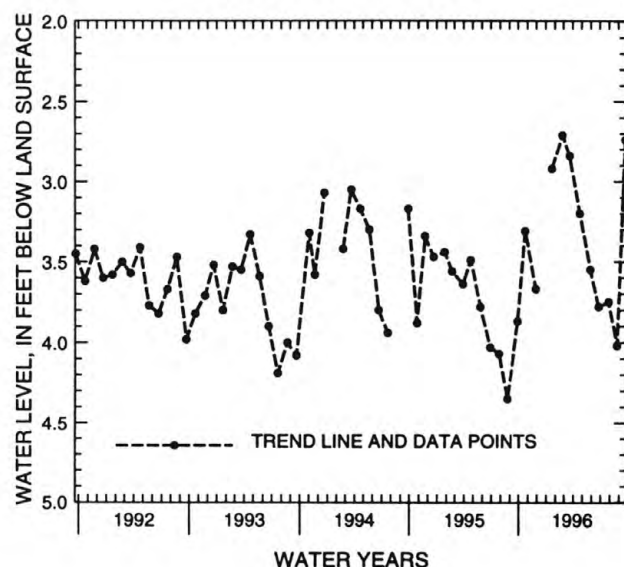
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.56 ft below land-surface datum, Mar. 28, 1979; lowest measured, 45.44 ft below land-surface datum, Jan. 24, 1966.

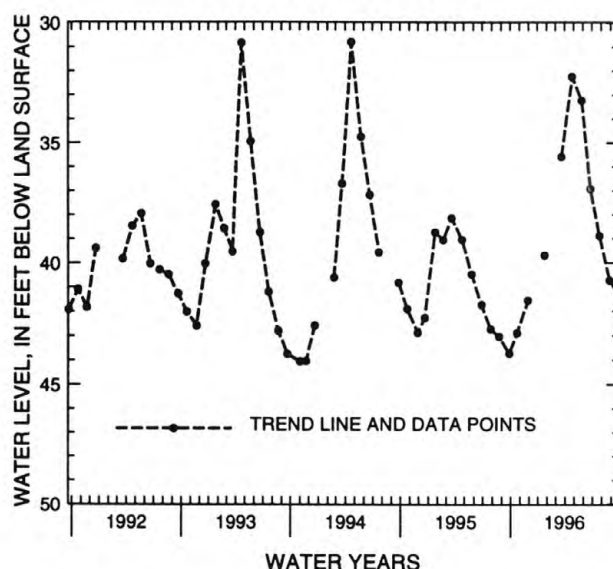
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	42.89	JAN 24	39.69	APR 26	32.22	JUN 25	36.92	AUG 28	40.73	SEP 25	41.25
NOV 30	41.56	MAR 21	35.58	MAY 28	33.22	JUL 25	38.88				

WESTFIELD 152 WELL



WILBRAHAM 55 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.21	JAN 23	3.15	MAR 27	3.39	MAY 30	4.13	JUL 26	5.01	SEP 23	4.92
NOV 29	3.89	FEB 28	3.27	APR 25	2.49	JUN 27	4.84	AUG 26	5.88		

421355072322001. Granby well GKW 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.

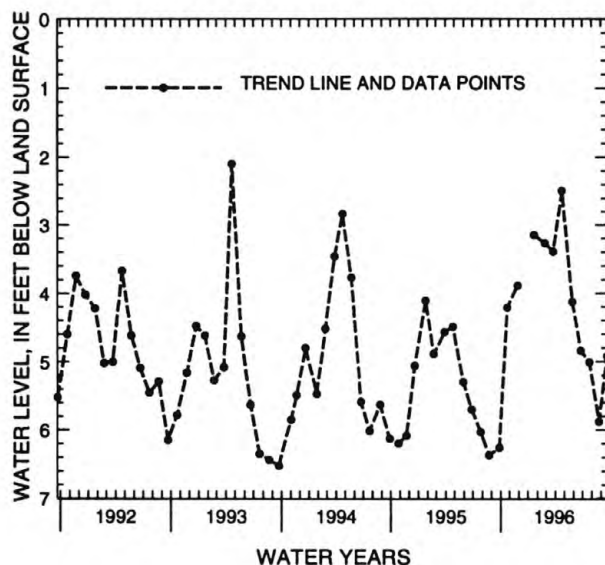
PERIOD OF RECORD.--April 1954 to current year.

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.

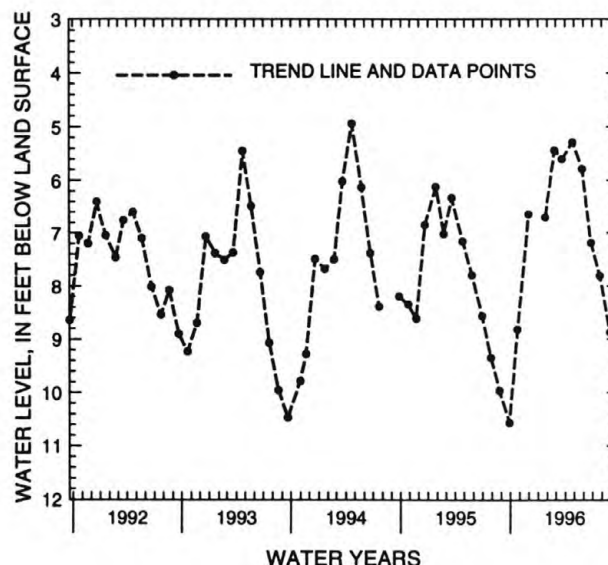
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	8.82	JAN 24	6.70	MAR 21	5.60	MAY 28	5.79	JUL 25	7.81	SEP 25	9.20
NOV 30	6.64	FEB 26	5.44	APR 26	5.29	JUN 25	7.19	AUG 28	8.88		

CUMMINGTON 13 WELL



GRANBY 68 WELL



GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPSHIRE COUNTY--Continued

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 observer. 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 pumping.

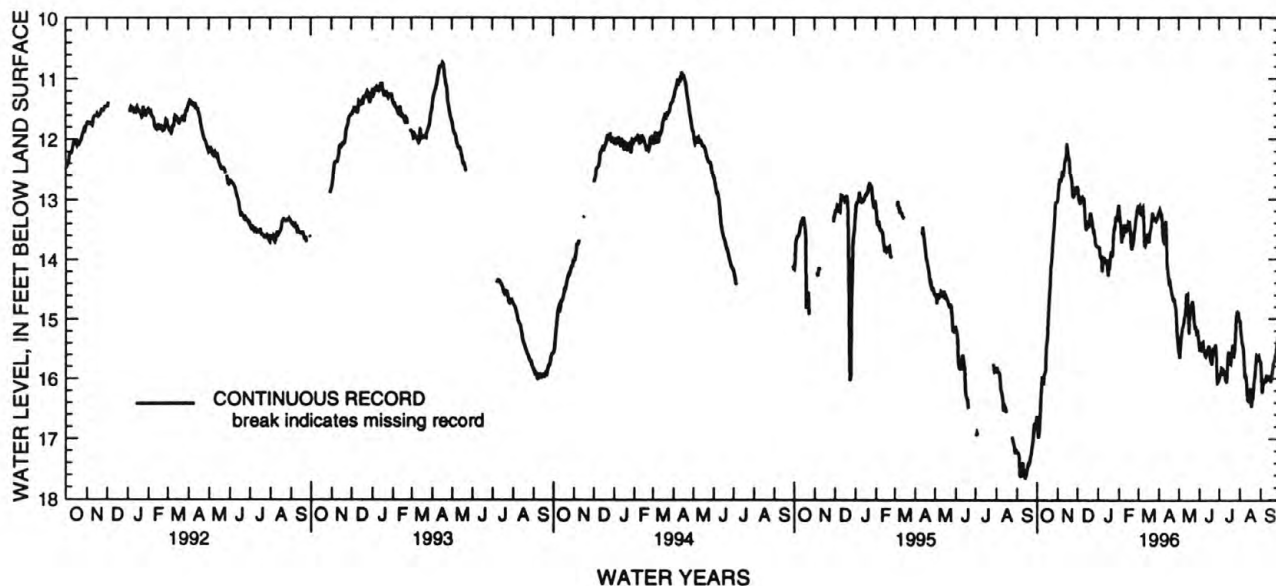
PERIOD OF RECORD.--October 1981 to October 1991; digital recorder (60-minute punch) October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.44 ft below land-surface datum, Apr. 7, 1982; lowest, 17.75 ft below land-surface datum, Sept. 13, 1995.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16.62	13.03	12.78	13.79	13.09	13.16	13.21	15.57	15.54	16.01	15.03	15.72
2	16.82	12.91	12.84	13.81	13.27	13.14	13.17	15.66	15.51	15.93	15.19	15.90
3	16.98	12.76	13.00	13.79	13.35	13.12	13.21	15.55	15.52	15.92	15.31	16.24
4	16.93	12.69	13.03	13.95	13.49	13.24	13.27	15.36	15.41	15.82	15.39	16.18
5	16.84	12.70	13.08	13.97	13.72	13.25	13.24	15.26	15.40	15.83	15.46	16.03
6	16.56	12.69	13.04	13.94	13.62	13.19	13.55	15.16	15.39	15.90	15.52	16.03
7	16.34	12.67	12.99	14.21	13.62	13.15	13.68	15.13	15.51	15.88	15.74	16.05
8	16.14	12.53	13.00	14.08	13.61	13.13	13.67	15.07	15.55	15.94	15.99	16.04
9	15.98	12.58	12.97	13.99	13.41	13.34	13.76	14.98	15.61	15.87	15.95	15.97
10	15.98	12.59	12.99	13.96	13.47	13.76	13.48	14.93	15.63	16.03	15.98	15.94
11	16.10	12.51	12.99	14.03	13.55	13.78	13.36	14.81	15.59	16.04	16.09	16.02
12	15.93	12.34	13.19	14.06	13.50	13.73	13.60	14.58	15.55	16.07	16.35	16.00
13	15.91	12.37	13.43	14.00	13.51	13.64	14.09	14.60	15.52	15.85	16.36	15.98
14	15.89	12.28	13.51	14.03	13.45	13.72	14.19	14.59	15.48	15.60	16.30	15.96
15	15.53	12.07	13.48	14.15	13.38	13.61	14.29	15.01	15.45	15.55	16.28	15.96
16	15.41	12.13	13.40	14.28	13.40	13.63	14.44	15.25	15.54	15.67	16.16	16.06
17	15.32	12.24	13.41	14.18	13.39	13.72	14.33	14.94	15.71	15.73	16.23	16.02
18	15.06	12.30	13.43	14.15	13.53	13.57	14.45	14.84	15.67	15.75	16.47	15.92
19	14.77	12.35	13.37	14.02	13.78	13.51	14.50	14.81	15.77	15.66	16.35	15.84
20	14.63	12.56	13.24	13.90	13.84	13.47	14.58	14.76	15.69	15.54	16.34	15.76
21	14.41	12.60	13.24	13.91	13.80	13.33	14.62	14.70	15.50	15.43	16.23	15.72
22	14.14	12.64	13.30	13.96	13.75	13.22	14.70	14.77	15.50	15.57	16.07	15.71
23	14.04	12.73	13.35	13.88	13.66	13.27	14.66	14.92	15.55	15.60	15.99	15.63
24	13.90	12.95	13.44	13.61	13.56	13.31	14.67	15.08	15.47	15.54	15.87	15.60
25	13.73	12.96	13.54	13.46	13.46	13.36	14.77	15.17	15.43	15.27	15.70	15.46
26	13.56	12.95	13.53	13.51	13.36	13.32	14.82	15.12	15.53	15.04	15.62	15.40
27	13.46	12.88	13.61	13.32	13.29	13.32	14.99	15.23	15.88	14.89	15.64	15.30
28	13.25	12.80	13.75	13.28	13.18	13.35	15.22	15.21	16.07	14.88	15.65	15.21
29	13.06	12.87	13.76	13.36	13.14	13.32	15.38	15.18	16.06	14.89	15.63	15.08
30	13.06	12.85	13.79	13.26	---	13.27	15.51	15.32	16.01	14.99	15.67	15.01
31	13.05	---	13.79	13.15	---	13.24	---	15.42	---	15.02	15.72	---
MEAN	15.14	12.62	13.30	13.84	13.49	13.39	14.18	15.06	15.60	15.60	15.88	15.79
LOW	16.98	13.03	13.79	14.28	13.84	13.78	15.51	15.66	16.07	16.07	16.47	16.24
HIGH	13.05	12.07	12.78	13.15	13.09	13.12	13.17	14.58	15.39	14.88	15.03	15.01
WTR YR 1996	HIGH 12.03 NOV 1, LOW 17.00 OCT 2											

PELHAM 23 WELL



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, 2.24 ft below land-surface datum, Mar. 21, 1996; lowest water level measured, 7.59 ft below land-surface datum, Sept. 28, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	4.38	JAN 24	2.97	MAR 21	2.24	MAY 28	3.58	JUL 25	2.73	SEP 25	4.40
NOV 22	3.27	FEB 26	2.32	APR 26	2.77	JUN 25	3.80	AUG 28	5.25		

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.

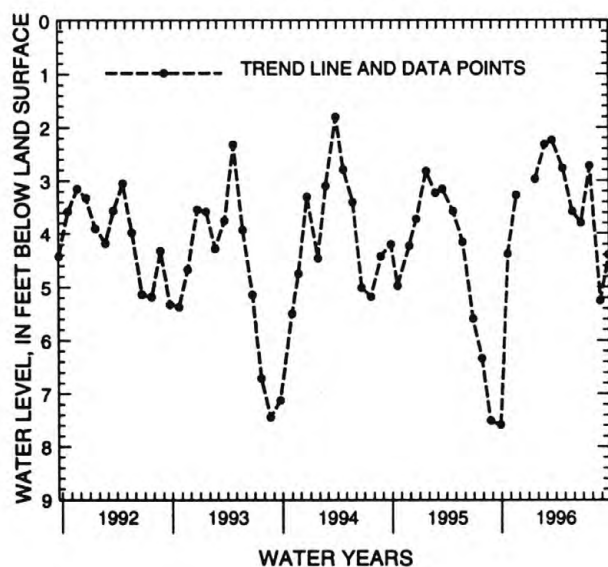
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1975, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.17 ft below land-surface datum, June 22, 1984; lowest measured, 10.34 ft below land-surface datum, Jan. 26, 1971.

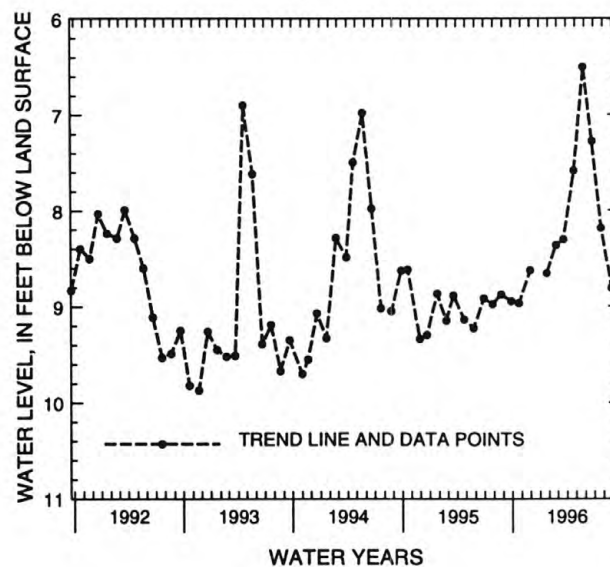
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	8.97	JAN 24	8.66	MAR 21	8.31	MAY 28	6.50	JUL 25	8.19	SEP 25	9.08
NOV 30	8.63	FEB 26	8.37	APR 26	7.59	JUN 25	7.28	AUG 28	8.81		

PELHAM 24 WELL



WARE 43 WELL



HAMPSHIRE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	16.79	JAN 22	11.04	MAR 26	7.35	MAY 29	4.17	JUL 29	10.40	SEP 23	13.78
NOV 28	9.91	FEB 27	7.08	APR 24	5.19	JUN 26	7.89	AUG 26	12.19		

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 casing, 3.0 ft above land-surface datum.

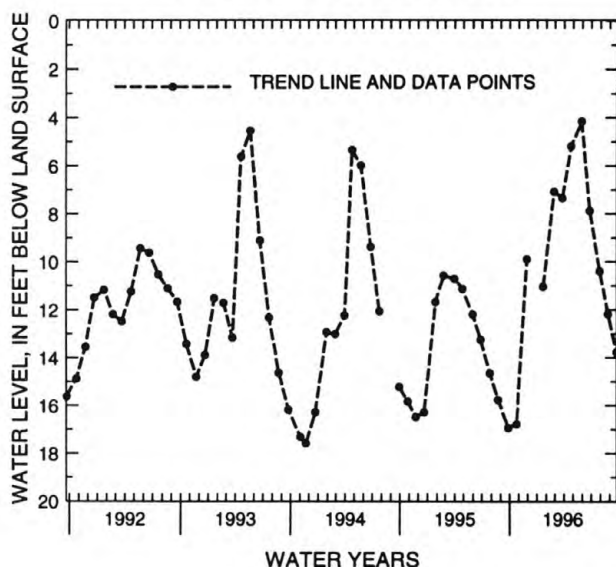
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

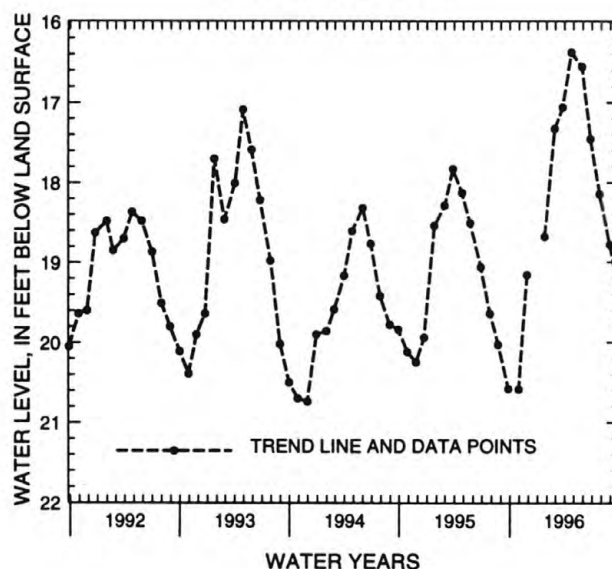
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	20.59	NOV 27	19.16	JAN 25	18.68	FEB 28	17.33	MAR 26	17.06	APR 23	16.38
MAY 29	16.56	JUN 26	17.46	JUL 26	18.15	AUG 28	18.78	SEP 26	19.32		

WESTHAMPTON 20 WELL



ACTON 158 WELL



MIDDLESEX COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	10.05	JAN 24	3.19	MAR 26	3.11	MAY 29	5.09	JUL 26	7.05	SEP 26	8.36
NOV 27	6.24	FEB 28	2.50	APR 23	2.11	JUN 26	7.48	AUG 29	9.21		

423845071231401. Chelmsford well CHW 68.

LOCATION.--Lat 42°38'45", long 71°23'14", Middlesex County, Hydrologic Unit 01070002, 1,300 ft north of intersection of Wharton Lane and the B and M Railroad, 400 ft east of Middlesex Street, and 0.5 mi north of Vinal Square in North Chelmsford.

Owner: Wellman Realty Company.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 50 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 100.83 ft above sea level. Measuring point: Top of hole in cap on casing, 1.40 ft below land-surface datum.

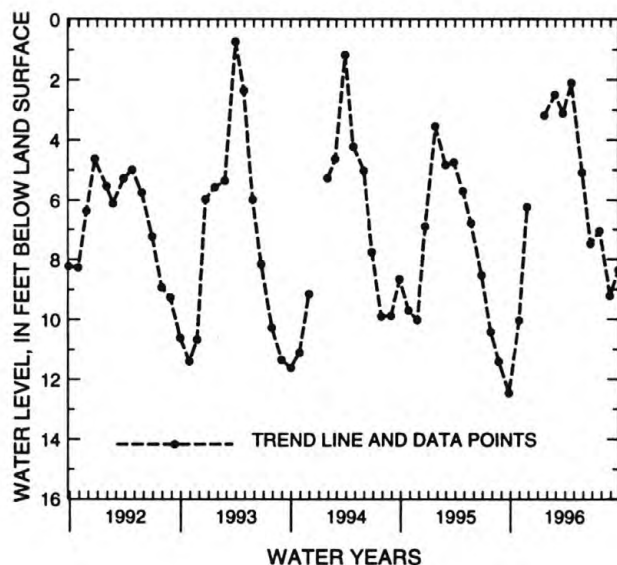
PERIOD OF RECORD.--August 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.83 ft below land-surface datum, Apr. 23, 1987; lowest measured, 12.24 ft below land-surface datum, Sept. 28, 1957.

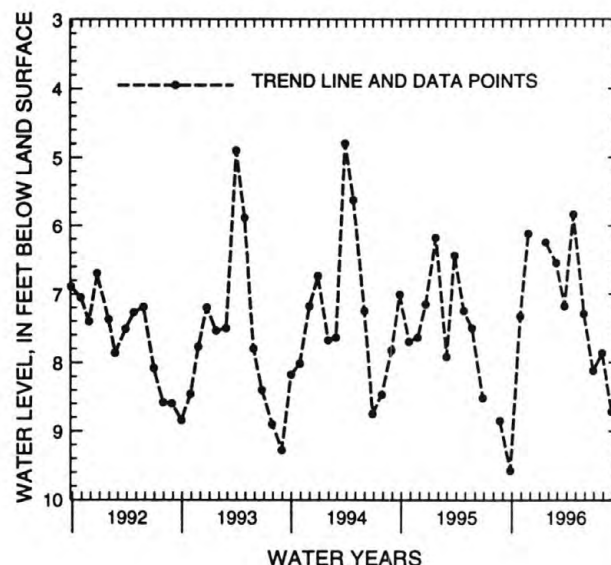
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	7.33	JAN 24	6.25	MAR 26	7.18	MAY 29	7.29	JUL 29	7.87	SEP 26	7.89
NOV 27	6.12	FEB 28	6.55	APR 25	5.83	JUN 28	8.12	AUG 29	8.72		

BILLERICA 363 WELL



CHELMSFORD 68 WELL



MIDDLESEX COUNTY--Continued

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, 14.33 ft below land-surface datum, Apr. 23, 1996; lowest measured, 17.31 ft below land-surface datum, Sept. 26, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	16.14	JAN 24	15.29	MAR 26	14.77	MAY 29	14.84	JUL 26	15.18	SEP 26	15.88
NOV 27	15.40	FEB 28	14.72	APR 23	14.33	JUN 26	15.58	AUG 29	16.22		

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 201.12 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum, 2.0 ft prior to October 1991.

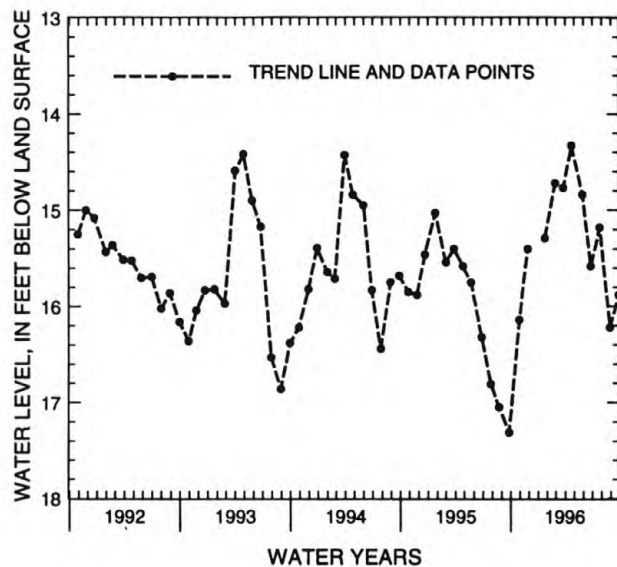
PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

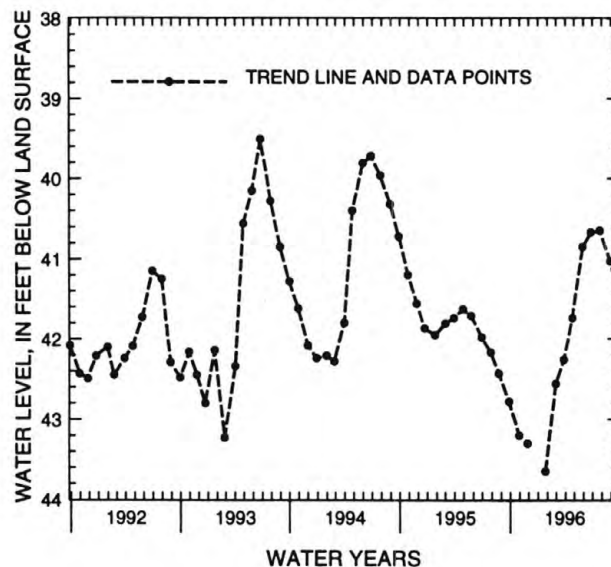
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	43.20	JAN 25	43.65	MAR 26	42.26	MAY 29	40.85	JUL 26	40.65	SEP 26	41.42
NOV 27	43.30	FEB 28	42.56	APR 23	41.74	JUN 26	40.67	AUG 28	41.03		

CHELMSFORD 384 WELL



CONCORD 165 WELL



MIDDLESEX COUNTY--Continued

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, 10.59 ft below land-surface datum, Sept. 27, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	7.61	JAN 25	5.40	MAR 26	5.42	MAY 29	6.28	JUL 26	6.98	SEP 26	7.10
NOV 27	6.66	FEB 28	5.35	APR 23	5.08	JUN 26	7.18	AUG 28	8.00		

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.

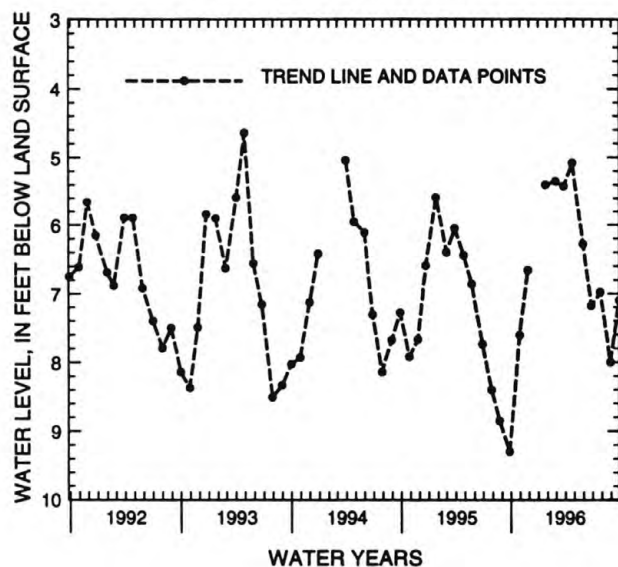
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

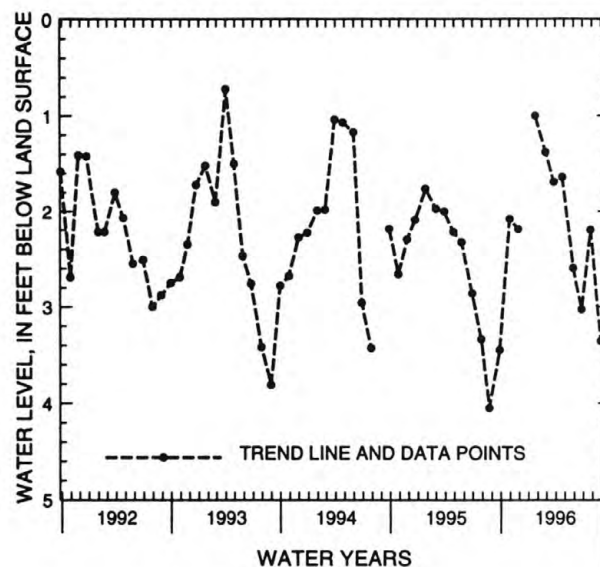
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	2.08	JAN 25	1.00	MAR 26	1.69	MAY 29	2.60	JUL 26	2.20	SEP 26	2.05
NOV 27	2.19	FEB 28	1.38	APR 23	1.64	JUN 26	3.03	AUG 28	3.36		

CONCORD 167 WELL



LEXINGTON 104 WELL



MIDDLESEX COUNTY--Continued

421851071312601. Southborough well SSW 12.

LOCATION.--Lat 42°18'51", long 71°31'26", Middlesex 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	12.73	JAN 25	.93	MAR 26	2.19	MAY 29	6.11	JUL 26	6.55	SEP 26	8.76
NOV 27	3.24	FEB 28	1.64	APR 23	2.50	JUN 26	7.41	AUG 28	8.82		

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.

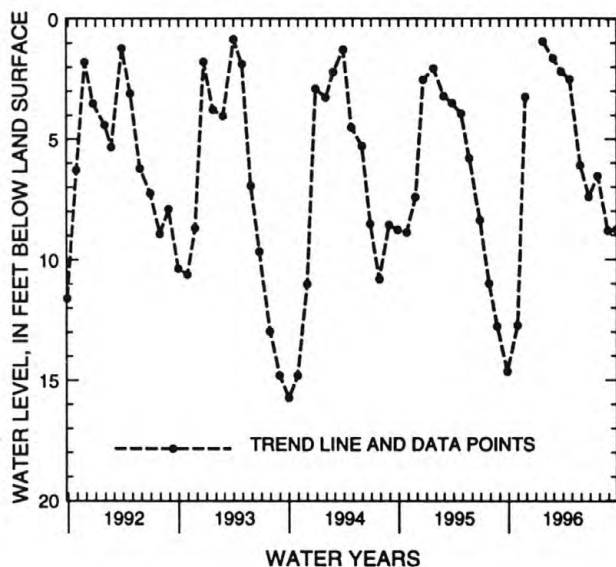
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

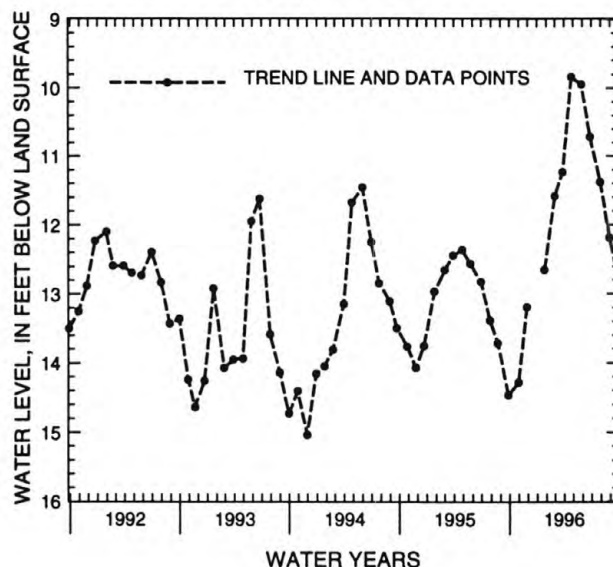
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	14.29	JAN 24	12.66	MAR 26	11.24	MAY 29	9.95	JUL 29	11.38	SEP 26	12.75
NOV 27	13.20	FEB 28	11.59	APR 25	9.84	JUN 26	10.72	AUG 29	12.19		

SOUTHBOROUGH 12 WELL



TOWNSEND 13 WELL



MIDDLESEX COUNTY--Continued

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 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, 4.51 ft below land-surface datum, Mar. 27, 1969; lowest measured, 9.99 ft below land-surface datum, Sept. 22, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	7.80	NOV 27	6.57	JAN 25	5.03	FEB 28	5.67	MAR 26	5.81	APR 23	5.48
MAY 29	6.58	JUN 26	7.40	JUL 26	7.40	AUG 29	8.29	SEP 26	7.48		

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.

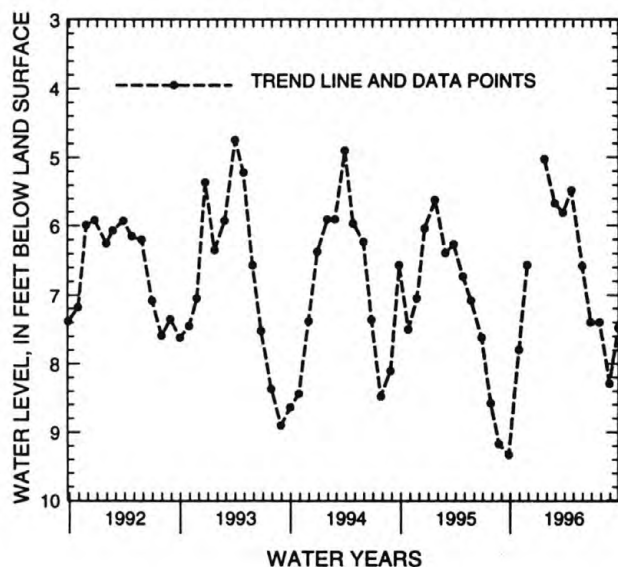
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

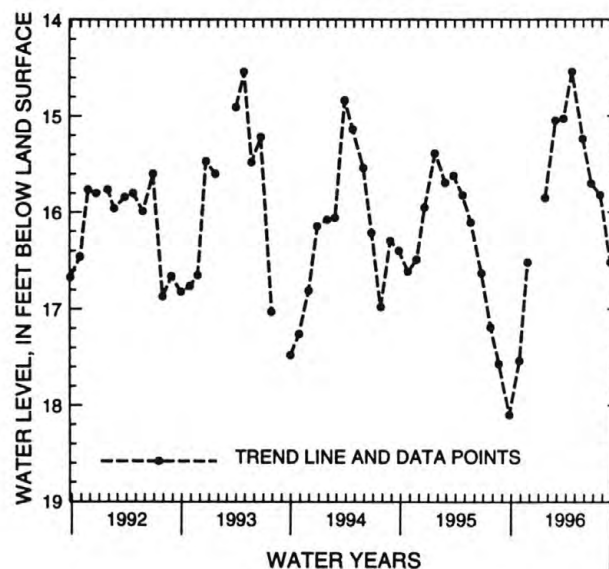
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	17.54	JAN 25	15.85	MAR 26	15.03	MAY 29	15.24	JUL 26	15.82	SEP 26	16.23
NOV 27	16.52	FEB 28	15.05	APR 23	14.54	JUN 26	15.70	AUG 28	16.52		

WAKEFIELD 38 WELL



WAYLAND 2 WELL



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.

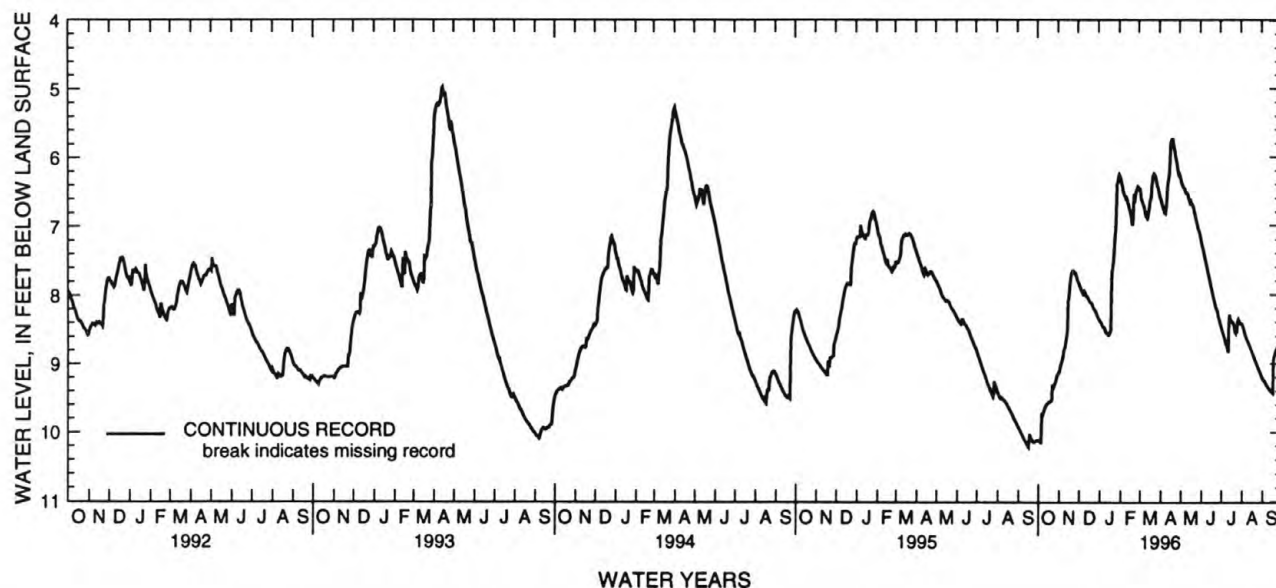
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.19 ft below land-surface datum, Apr. 19, 20, 1987; lowest measured, 11.27 ft below land-surface datum, Oct. 30, 1957.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10.12	9.13	7.82	8.37	6.28	6.46	6.58	6.28	7.19	8.45	8.42	9.21
2	10.12	9.09	7.86	8.39	6.30	6.46	6.61	6.31	7.24	8.49	8.43	9.23
3	10.13	9.04	7.88	8.39	6.34	6.50	6.63	6.36	7.28	8.52	8.46	9.23
4	10.15	9.01	7.90	8.41	6.39	6.60	6.67	6.39	7.32	8.55	8.49	9.25
5	10.15	8.98	7.94	8.44	6.42	6.63	6.71	6.41	7.36	8.59	8.53	9.26
6	9.72	8.94	7.95	8.46	6.49	6.66	6.75	6.44	7.41	8.62	8.57	9.28
7	9.76	8.91	7.97	8.47	6.53	6.69	6.78	6.45	7.46	8.66	8.60	9.30
8	9.73	8.82	8.00	8.47	6.55	6.71	6.81	6.46	7.50	8.70	8.63	9.32
9	9.70	8.79	8.00	8.49	6.57	6.76	6.82	6.50	7.55	8.73	8.65	9.33
10	9.66	8.76	7.96	8.52	6.60	6.82	6.76	6.52	7.59	8.76	8.67	9.35
11	9.64	8.71	7.98	8.55	6.59	6.86	6.65	6.52	7.63	8.80	8.69	9.36
12	9.62	8.63	8.01	8.55	6.62	6.87	6.47	6.53	7.68	8.83	8.72	9.38
13	9.60	8.58	8.03	8.56	6.67	6.89	6.38	6.56	7.72	8.42	8.74	9.39
14	9.59	8.49	8.03	8.57	6.68	6.87	6.31	6.60	7.77	8.29	8.76	9.40
15	9.58	8.08	8.05	8.58	6.74	6.80	6.26	6.63	7.82	8.36	8.79	9.41
16	9.57	8.07	8.07	8.57	6.78	6.74	6.06	6.66	7.87	8.37	8.81	9.42
17	9.56	7.94	8.09	8.54	6.81	6.65	5.81	6.64	7.91	8.38	8.84	9.43
18	9.56	7.83	8.11	8.52	6.87	6.61	5.76	6.67	7.96	8.40	8.86	9.45
19	9.55	7.75	8.12	8.10	6.95	6.58	5.74	6.68	8.01	8.40	8.89	8.90
20	9.55	7.70	8.12	7.66	6.99	6.40	5.74	6.70	8.05	8.43	8.91	8.88
21	9.52	7.66	8.14	7.63	6.87	6.31	5.78	6.73	8.09	8.48	8.94	8.84
22	9.31	7.65	8.17	7.53	6.54	6.26	5.86	6.77	8.13	8.53	8.96	8.80
23	9.37	7.65	8.19	7.44	6.66	6.24	5.89	6.82	8.17	8.55	8.99	8.78
24	9.34	7.67	8.21	7.31	6.58	6.25	5.96	6.86	8.21	8.48	9.01	8.76
25	9.32	7.68	8.22	7.12	6.51	6.27	6.02	6.90	8.21	8.50	9.04	8.75
26	9.29	7.68	8.24	7.07	6.49	6.30	6.06	6.95	8.26	8.39	9.06	8.74
27	9.26	7.71	8.26	6.73	6.46	6.37	6.13	6.99	8.31	8.36	9.09	8.74
28	9.22	7.74	8.29	6.39	6.43	6.41	6.20	7.04	8.35	8.38	9.11	8.74
29	9.17	7.79	8.32	6.37	6.44	6.44	6.25	7.06	8.38	8.40	9.13	8.74
30	9.16	7.81	8.34	6.30	---	6.49	6.24	7.09	8.42	8.41	9.16	8.74
31	9.14	---	8.35	6.26	---	6.53	---	7.14	---	8.42	9.18	---
MEAN	9.59	8.28	8.08	7.90	6.59	6.56	6.29	6.67	7.83	8.50	8.81	9.10
LOW	10.15	9.13	8.35	8.58	6.99	6.89	6.82	7.14	8.42	8.83	9.18	9.43
HIGH	9.14	7.65	7.82	6.26	6.28	6.24	5.74	6.28	7.19	8.29	8.42	8.74

WTR YR 1996 HIGH 5.71 JAN 27, LOW 10.15 OCT 4, 5

WILMINGTON 78 WELL



MIDDLESEX COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	12.84	JAN 25	4.87	MAR 26	7.26	MAY 29	10.33	JUL 26	12.09	SEP 26	13.05
NOV 27	8.08	FEB 28	7.17	APR 23	6.92	JUN 26	12.30	AUG 29	13.49		

NANTUCKET COUNTY

411555070021901. 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.

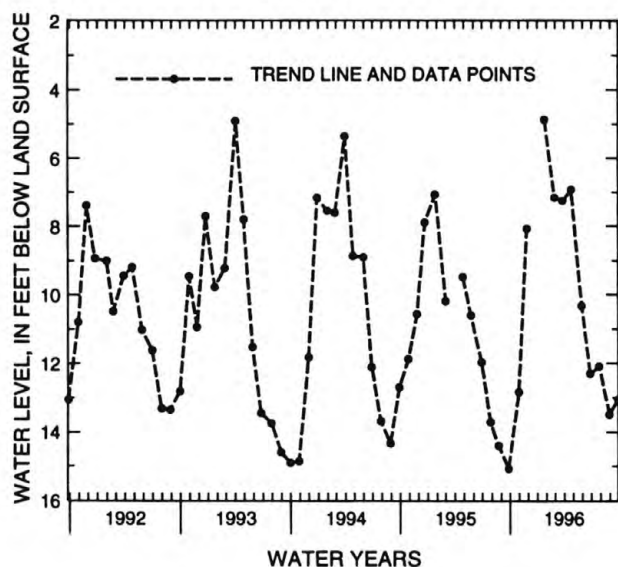
PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.89 ft below land-surface datum, May 25, 1994; lowest measured, 27.90 ft below land-surface datum, Feb. 23, 1981.

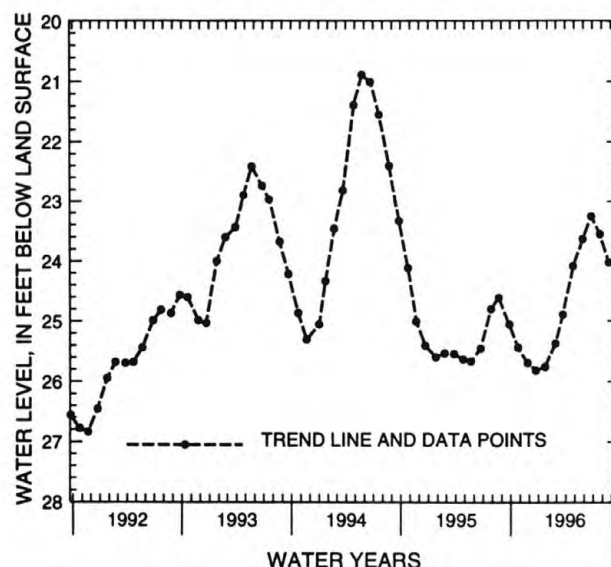
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	25.44	DEC 22	25.82	FEB 26	25.38	APR 26	24.09	JUN 25	23.26	AUG 23	24.03
NOV 26	25.70	JAN 23	25.76	MAR 22	24.90	MAY 28	23.64	JUL 24	23.56	SEP 25	23.83

WINCHESTER 14 WELL



NANTUCKET 228 WELL



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, 13.91 ft below land-surface datum, Sept. 27, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	11.35	JAN 23	3.65	MAR 27	4.30	MAY 30	6.11	JUL 25	8.69	SEP 24	8.02
NOV 30	6.07	FEB 28	3.98	APR 25	3.80	JUN 26	8.36	AUG 22	9.37		

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.

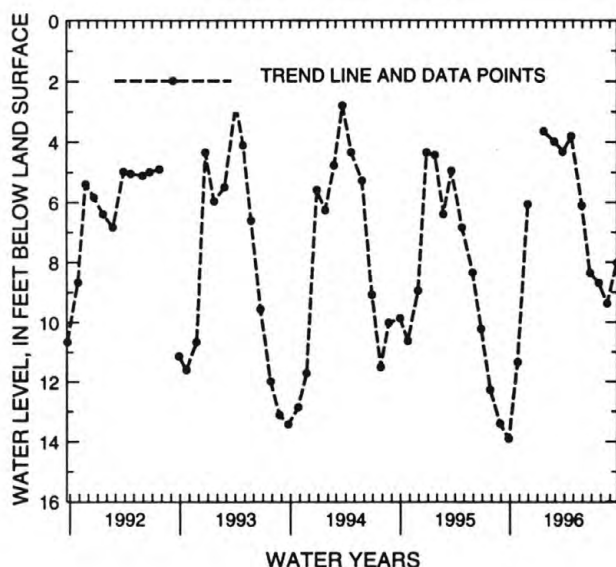
PERIOD OF RECORD.--January 1965 to current year.

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.

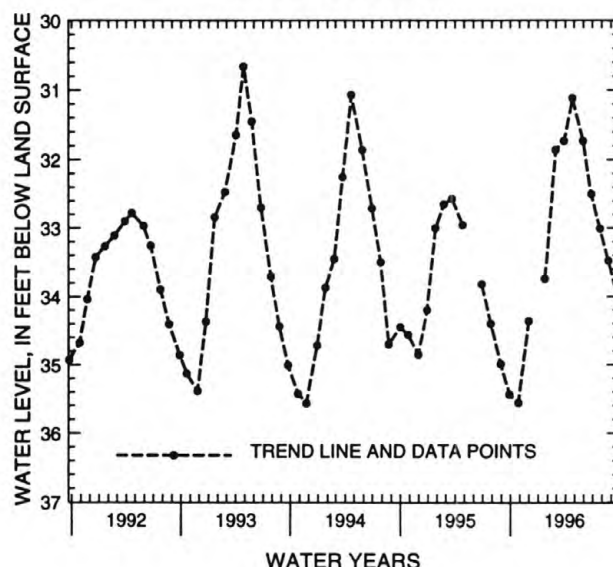
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	35.56	JAN 23	33.74	MAR 27	31.73	MAY 30	31.73	JUL 25	33.01	SEP 24	34.02
NOV 30	34.36	FEB 28	31.86	APR 25	31.12	JUN 26	32.50	AUG 22	33.48		

DEDHAM 231 WELL



DOVER 10 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	20.31	JAN 22	17.69	MAR 26	17.35	MAY 29	17.77	JUL 24	18.64	SEP 24	19.37
NOV 30	18.65	FEB 27	17.23	APR 23	16.78	JUN 25	18.36	AUG 22	19.36		

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 casing, 1.7 ft above land-surface datum.

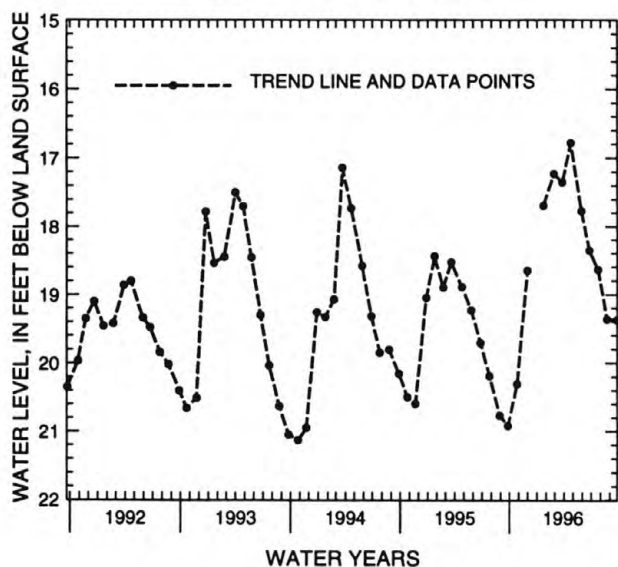
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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, 7.97 ft below land-surface datum, Sept. 24, 1980.

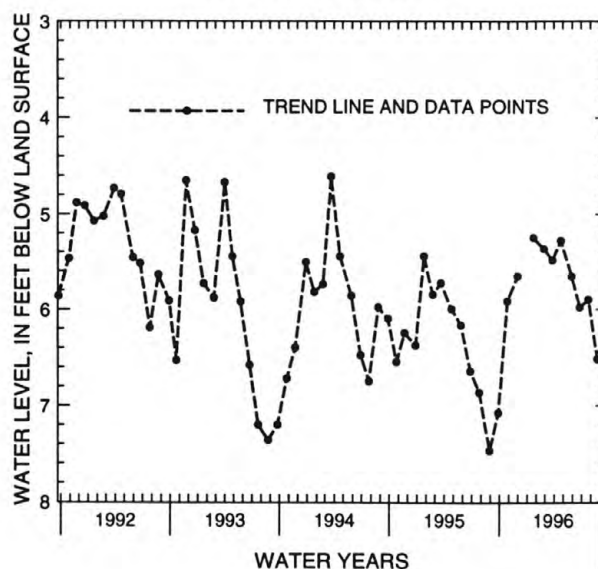
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	5.92	JAN 22	5.25	MAR 26	5.49	MAY 29	5.66	JUL 24	5.90	SEP 24	6.14
NOV 30	5.66	FEB 27	5.37	APR 23	5.28	JUN 25	5.98	AUG 22	6.52		

FOXBOROUGH 3 WELL



NORFOLK 27 WELL



NORFOLK COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	21.09	NOV 30	16.15	JAN 23	8.25	FEB 28	6.15	MAR 27	6.89	APR 25	6.62
MAY 30	8.32	JUN 26	11.17	JUL 25	12.07	AUG 22	14.63	SEP 25	12.16		

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.

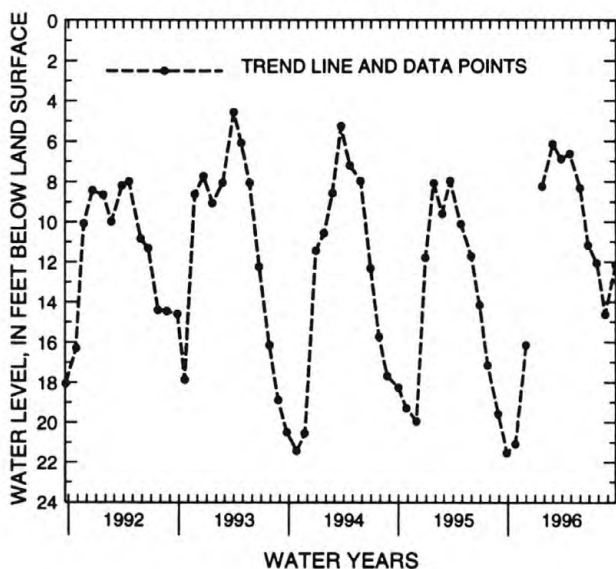
PERIOD OF RECORD.--January 1965 to current year.

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.

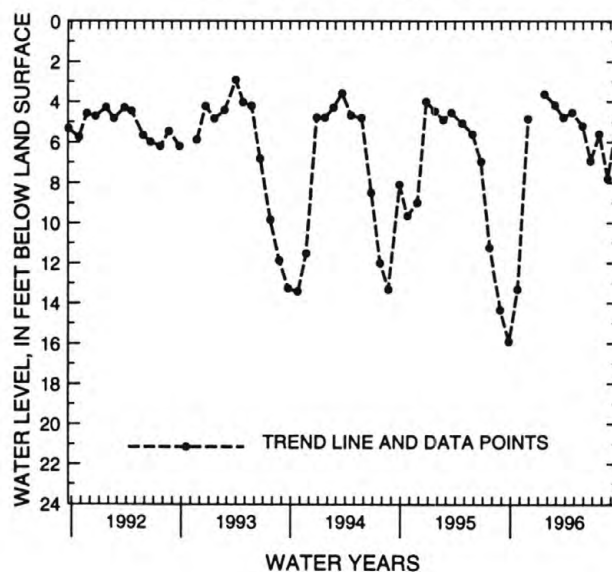
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	13.32	JAN 23	3.64	MAR 27	4.78	MAY 30	5.20	JUL 25	5.61	SEP 25	4.79
NOV 30	4.86	FEB 28	4.19	APR 25	4.55	JUN 26	6.93	AUG 22	7.81		

WEYMOUTH 2 WELL



WEYMOUTH 3 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	7.18	JAN 23	5.07	MAR 27	5.98	JUN 26	6.98	AUG 22	7.78	SEP 26	5.90
NOV 30	6.57	FEB 28	5.52	APR 25	5.80	JUL 25	6.78				

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 casing, 1.5 ft above land-surface datum.

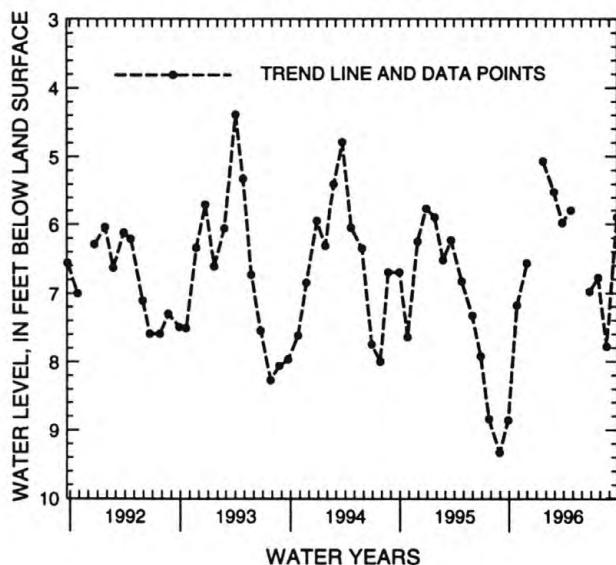
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

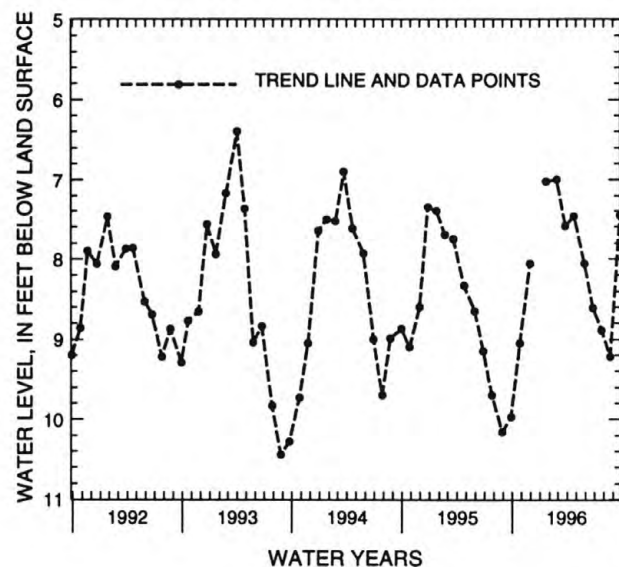
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.05	JAN 23	7.02	MAR 27	7.59	MAY 30	8.06	JUL 25	8.89	SEP 25	7.46
NOV 30	8.06	FEB 28	7.00	APR 25	7.47	JUN 26	8.61	AUG 22	9.22		

WEYMOUTH 4 WELL



DUXBURY 79 WELL



PLYMOUTH COUNTY--Continued

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, 19.53 ft below land-surface datum, Jan. 26, 1978; lowest measured, 24.02 ft below land-surface datum, Sept. 28, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	22.70	JAN 23	20.65	MAR 27	21.12	MAY 30	21.63	JUL 25	22.42	SEP 25	20.99
NOV 30	21.63	FEB 28	20.25	APR 25	21.02	JUN 26	22.11	AUG 22	22.73		

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.

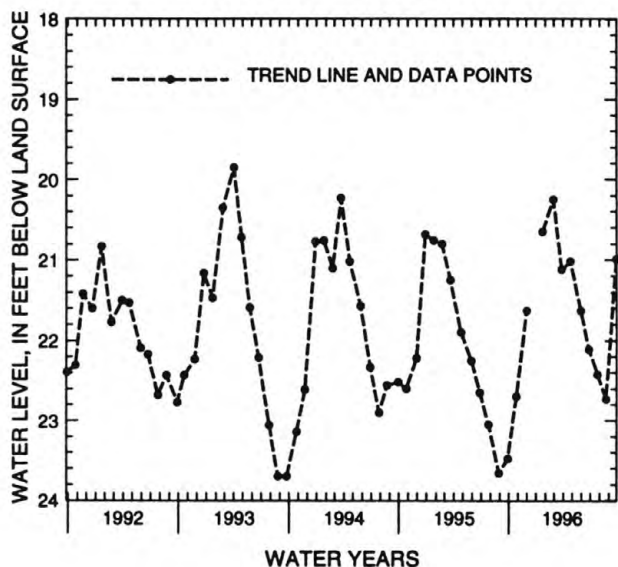
PERIOD OF RECORD.--July 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.26 ft below land-surface datum, Apr. 2, 1993; lowest measured, 17.83 ft below land-surface datum, Dec. 28, 1965.

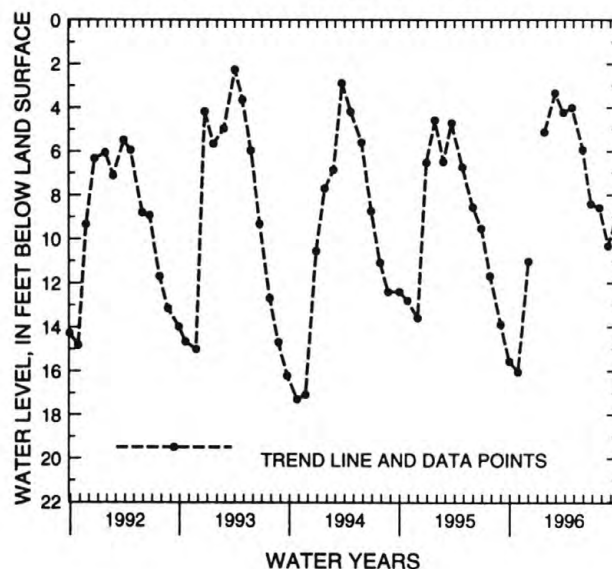
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	16.03	JAN 23	5.12	MAR 27	4.22	MAY 30	5.94	JUL 25	8.59	SEP 25	8.81
NOV 30	11.02	FEB 28	3.34	APR 25	4.00	JUN 26	8.41	AUG 22	10.32		

DUXBURY 80 WELL



EAST BRIDGEWATER 30 WELL



PLYMOUTH COUNTY--Continued

415820070522801. Halifax well HBW 97.

LOCATION.--Lat 41°58'20", long 70°52'28", Plymouth County, Hydrologic Unit 01090004, 1,950 ft west of South Street and 130 ft south of River Street in Halifax.

Owner: Private owner.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3.0 in, depth 945 ft, cased to 90 ft, open hole.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 35 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum.

PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.30 ft below land-surface datum, Jan. 26, 1978; lowest measured, 6.28 ft below land-surface datum, Sept. 23, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.80	JAN 23	3.61	MAR 27	3.46	MAY 30	3.97	JUL 25	4.94	SEP 25	4.07
NOV 30	4.55	FEB 26	3.47	APR 25	3.30	JUN 26	4.40	AUG 22	5.08		

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.

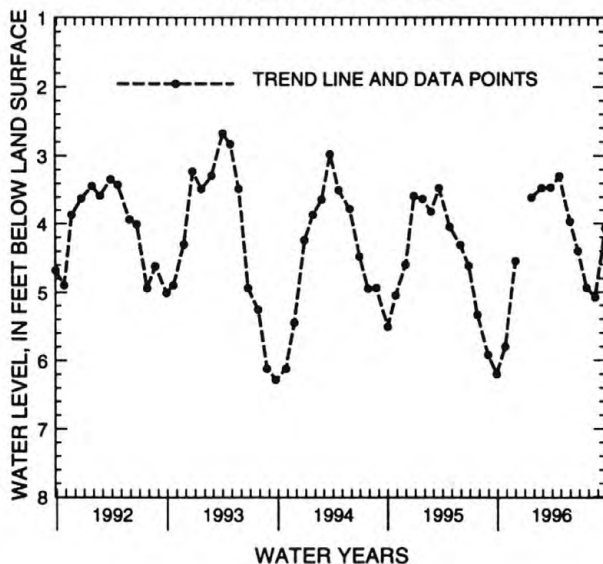
PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

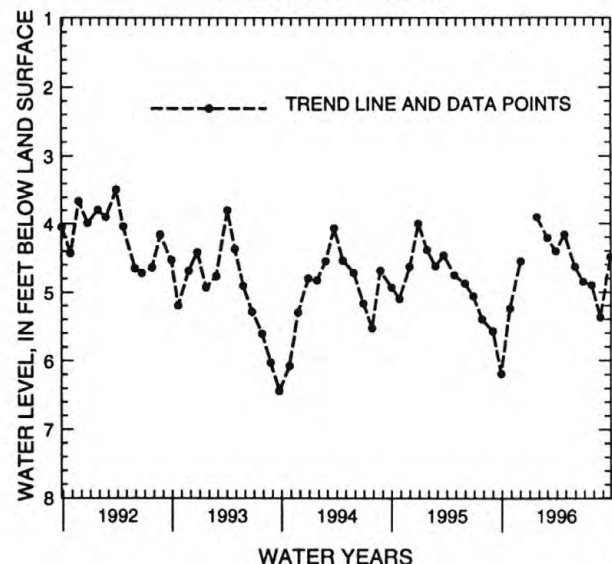
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.24	JAN 23	3.90	MAR 27	4.40	MAY 30	4.63	JUL 25	4.90	SEP 25	4.49
NOV 30	4.55	FEB 28	4.21	APR 25	4.16	JUN 26	4.85	AUG 22	5.37		

HALIFAX 97 WELL



HANSON 76 WELL



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.

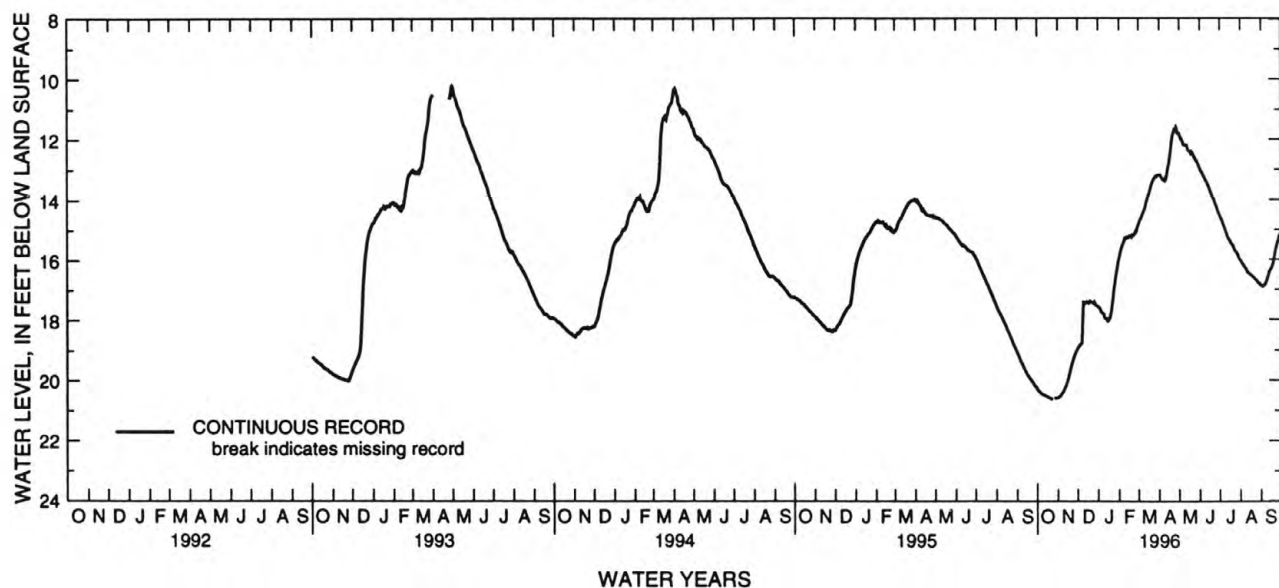
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, Mar. 29, 1983; lowest measured, 23.59 ft below land-surface datum, Oct. 26, 1966.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.29	20.58	18.93	17.59	15.93	14.81	13.20	11.87	13.01	14.57	16.04	16.87
2	20.32	20.56	18.90	17.60	15.82	14.73	13.19	11.92	13.07	14.62	16.08	16.87
3	20.35	20.54	18.87	17.62	15.71	14.68	13.24	12.00	13.09	14.67	16.11	16.90
4	20.37	20.54	18.83	17.69	15.64	14.66	13.26	12.00	13.12	14.71	16.15	16.90
5	20.39	20.52	18.81	17.75	15.57	14.59	13.31	12.06	13.17	14.79	16.18	16.88
6	20.42	20.47	18.79	17.77	15.51	14.54	13.35	12.10	13.22	14.86	16.22	16.85
7	20.43	20.44	18.77	17.78	15.45	14.49	13.35	12.19	13.26	14.92	16.25	16.83
8	20.46	20.41	18.10	17.80	15.39	14.41	13.37	12.20	13.31	14.97	16.28	16.78
9	20.47	20.38	17.42	17.83	15.31	14.37	13.39	12.20	13.37	15.03	16.31	16.72
10	20.48	20.34	17.43	17.93	15.32	14.32	13.29	12.20	13.41	15.11	16.35	16.65
11	20.49	20.28	17.45	17.95	15.29	14.22	13.31	12.20	13.44	15.18	16.40	16.59
12	20.50	20.23	17.46	17.96	15.26	14.12	13.20	12.22	13.49	15.25	16.44	16.51
13	20.51	20.19	17.43	17.98	15.27	14.04	13.08	12.30	13.54	15.27	16.45	16.43
14	20.52	20.13	17.40	18.02	15.28	13.97	12.95	12.38	13.59	15.32	16.46	16.37
15	20.53	20.06	17.41	18.05	15.24	13.89	12.85	12.40	13.65	15.36	16.49	16.34
16	20.55	20.00	17.43	18.03	15.22	13.84	12.69	12.40	13.73	15.39	16.51	16.30
17	20.55	19.91	17.45	17.96	15.23	13.77	12.53	12.40	13.78	15.44	16.52	16.25
18	20.57	19.81	17.41	17.95	15.24	13.69	12.33	12.47	13.84	15.49	16.55	16.19
19	20.58	19.72	17.38	17.83	15.26	13.61	12.13	12.42	13.90	15.50	16.57	16.13
20	20.59	19.63	17.39	17.74	15.19	13.51	11.96	12.45	13.94	15.53	16.59	16.03
21	20.60	19.53	17.41	17.58	15.20	13.45	11.84	12.50	13.98	15.59	16.60	15.91
22	20.61	19.45	17.43	17.41	15.21	13.40	11.78	12.52	14.03	15.65	16.63	15.77
23	20.62	19.38	17.44	17.23	15.18	13.35	11.69	12.60	14.09	15.69	16.66	15.65
24	20.62	19.31	17.46	17.02	15.14	13.32	11.66	12.61	14.16	15.73	16.68	15.56
25	---	19.24	17.47	16.86	15.08	13.28	11.66	12.70	14.20	15.76	16.70	15.47
26	---	19.17	17.43	16.71	15.10	13.25	11.61	12.70	14.28	15.79	16.73	15.40
27	20.60	19.11	17.48	16.52	15.03	13.26	11.68	12.73	14.35	15.83	16.76	15.32
28	20.59	19.07	17.52	16.41	14.92	13.23	11.80	12.80	14.41	15.89	16.78	15.24
29	20.59	19.02	17.54	16.28	14.88	13.20	11.80	12.82	14.47	15.94	16.79	15.18
30	20.58	18.98	17.55	16.13	---	13.20	11.80	12.90	14.52	15.98	16.82	15.15
31	20.58	---	17.57	16.01	---	13.19	---	12.95	---	16.02	16.85	---
MEAN	---	19.90	17.79	17.45	15.31	13.88	12.58	12.39	13.71	15.35	16.48	16.20
LOW	---	20.58	18.93	18.05	15.93	14.81	13.39	12.95	14.52	16.02	16.85	16.90
HIGH	---	18.98	17.38	16.01	14.88	13.19	11.61	11.87	13.01	14.57	16.04	15.15

WTR YR 1996 HIGH 11.60 APR 23, 24, 25, 26, 27, LOW 20.62 OCT 23, 24

LAKEVILLE 14 WELL



PLYMOUTH COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	16.86	NOV 30	9.09	JAN 23	3.37	FEB 28	3.53	MAR 27	4.01	APR 25	3.50
MAY 30	6.93	JUN 26	10.56	JUL 23	13.12	AUG 20	14.57	SEP 25	13.49		

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.

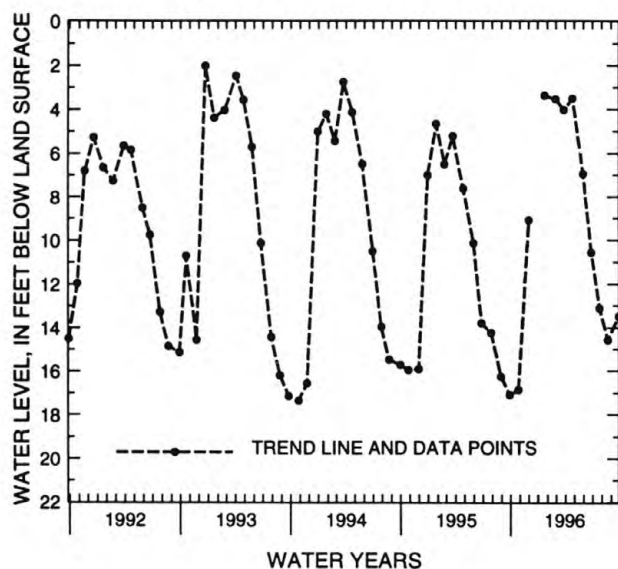
PERIOD OF RECORD.--November 1956 to current year.

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.

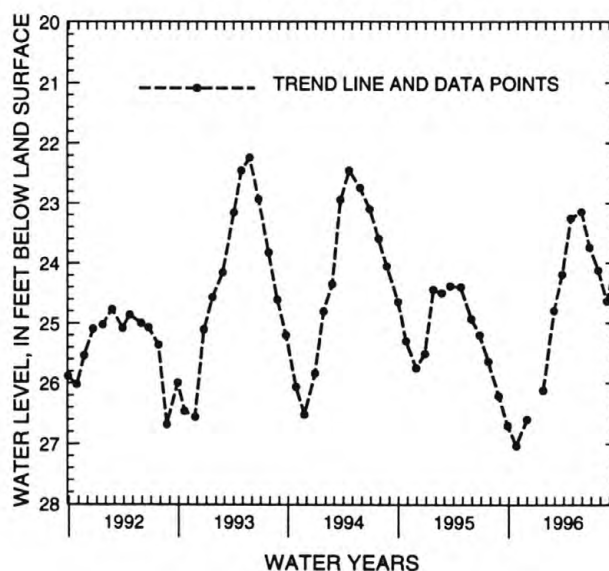
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	27.03	JAN 23	26.12	MAR 27	24.19	MAY 30	23.15	JUL 25	24.12	SEP 25	23.87
NOV 30	26.60	FEB 28	24.80	APR 25	23.26	JUN 26	23.74	AUG 22	24.64		

MIDDLEBOROUGH 82 WELL



PLYMOUTH 22 WELL



PLYMOUTH COUNTY--Continued

415217070393102. Plymouth well PWV 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, 27.24 ft below land-surface datum, May 14, 1987; lowest measured, 33.23 ft below land-surface datum, Nov. 24, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	32.40	JAN 23	32.05	MAR 27	30.66	MAY 30	29.73	JUL 25	30.20	SEP 25	29.99
NOV 30	32.05	FEB 28	31.17	APR 25	29.95	JUN 26	29.95	AUG 22	30.50		

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.

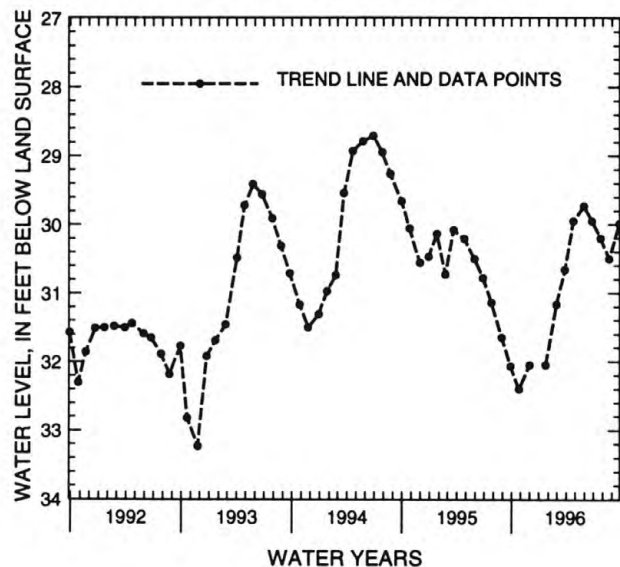
PERIOD OF RECORD.--July 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

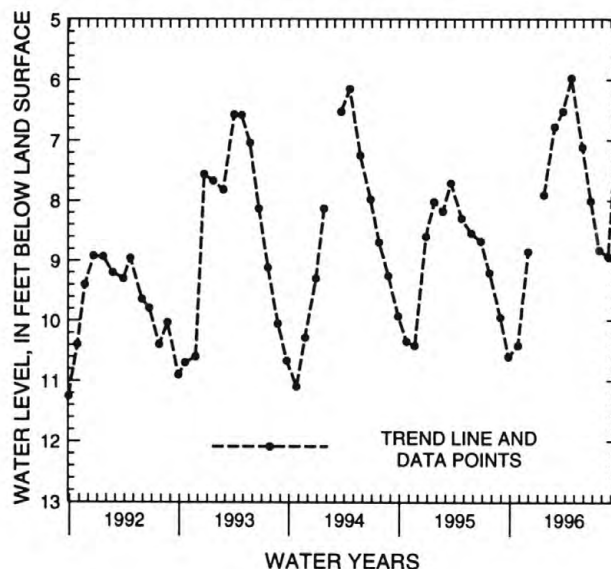
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	10.42	JAN 22	7.91	MAR 26	6.52	MAY 29	7.12	JUL 23	8.83	SEP 24	6.41
NOV 30	8.86	FEB 27	6.78	APR 23	5.97	JUN 25	8.01	AUG 22	8.93		

PLYMOUTH 494 WELL



WAREHAM 51 WELL



SUFFOLK COUNTY

422133071033801. Boston well BGW 925.

LOCATION.--Lat 42°21'33", long 71°03'38", Suffolk County, Hydrologic Unit 01090001, in basement room at Scollay Building, intersection of Court and Tremont Streets in Boston.

Owner: United States Trust.

AQUIFER.--Cambridge slate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8.0 in, depth 624 ft, cased to 90 ft, open hole.

INSTRUMENTATION.--Monthly measurement with chalked tape by observer.

DATUM.--Elevation of land-surface datum is 35 ft above sea level. Measuring point: Top of casing, 15 ft below land-surface datum.

REMARKS.--Water levels affected by tide and barometric pressure.

PERIOD OF RECORD.--February 1960 to current year. Water-level recorder October 1977 to September 1982. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 17.49 ft below measuring point, Jan. 22, 1985; lowest measured, 26.20 ft below measuring point, Oct. 7, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	23.31	JAN 02	23.11	FEB 27	22.59	APR 24	22.21	JUL 25	22.46	SEP 26	22.65
NOV 29	23.11	24	22.80	MAR 27	22.47	MAY 29	22.25	AUG 28	22.51		

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.--Augured 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.

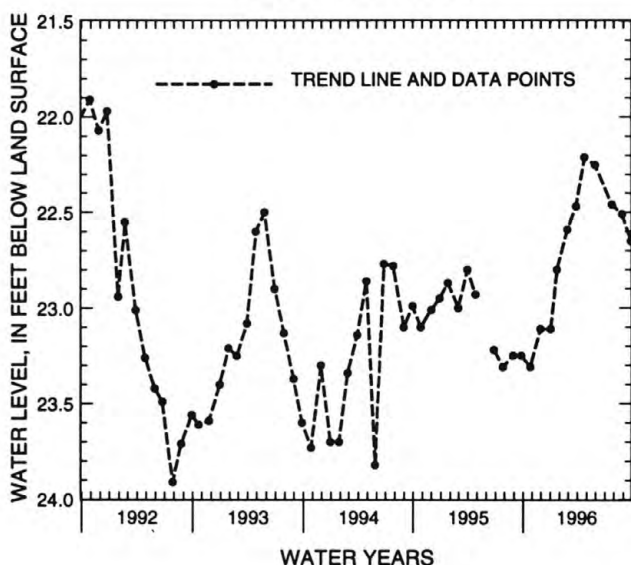
PERIOD OF RECORD.--June 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.84 ft below land-surface datum, Jan. 29, 1996; lowest measured, 9.18 ft below land-surface datum, Aug. 29, 1996

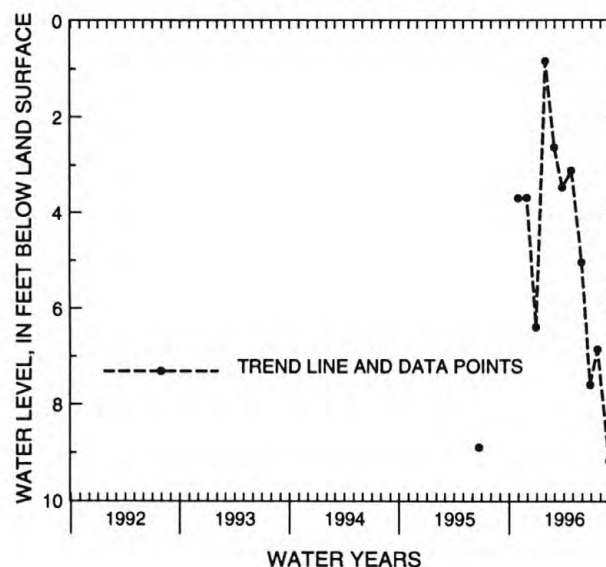
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	8.90	SEP 22	dry	DEC 28	6.40	MAR 26	3.48	JUN 26	7.60	AUG 29	9.18
JUL 26	dry	OCT 30	3.71	JAN 29	.84	APR 25	3.12	JUL 21	6.87	SEP 26	5.28
AUG 28	dry	NOV 28	3.70	FEB 28	2.63	MAY 29	5.05				

BOSTON 925 WELL



BOYLSTON 87 WELL



WORCESTER COUNTY--Continued

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, 9.21 ft below land-surface datum, Apr. 21, 1983; lowest measured, 17.77 ft below land-surface datum, Nov. 22, 1965.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	15.81	DEC 26	14.87	FEB 26	11.61	APR 23	9.85	JUN 24	14.28	AUG 23	15.23
NOV 27	12.90	JAN 25	10.77	APR 02	12.24	MAY 24	11.47	JUL 30	14.37	SEP 24	15.56

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.

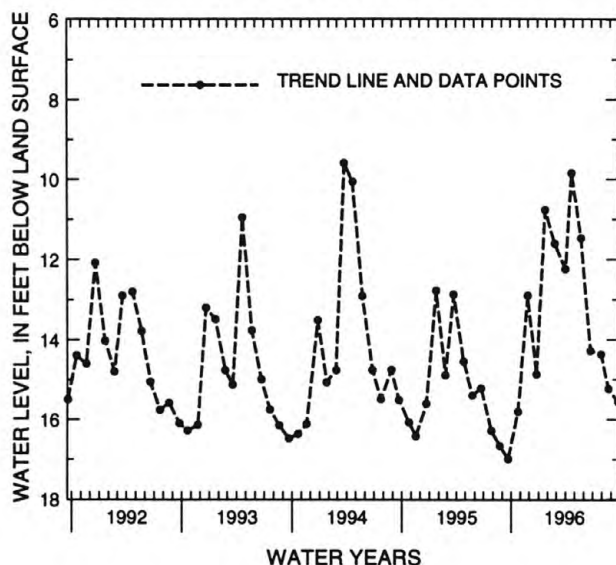
PERIOD OF RECORD.--November 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.08 ft below land-surface datum, Apr. 22, 1994; lowest measured, 12.00 ft below land-surface datum, Nov. 25, 1984.

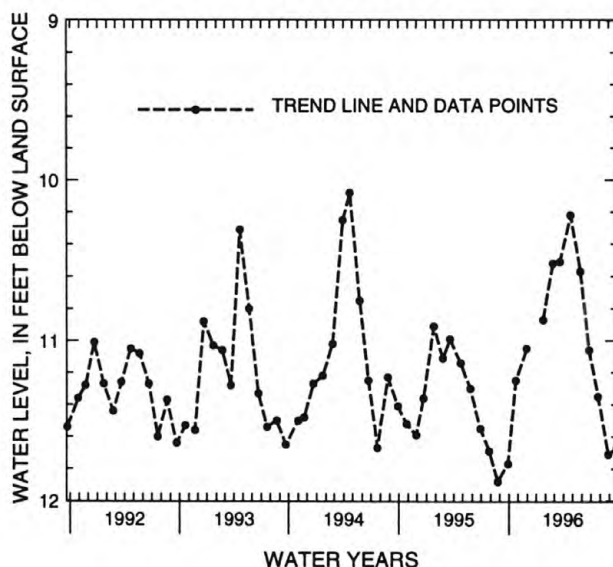
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	11.25	JAN 24	10.87	MAR 21	10.51	MAY 28	10.57	JUL 25	11.35	SEP 25	11.67
NOV 30	11.05	FEB 26	10.52	APR 26	10.22	JUN 25	11.06	AUG 28	11.71		

HARDWICK 1 WELL



HARDWICK 31 WELL



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, 0.37 ft below land-surface datum, Jan. 29, 1996; lowest measured, 7.97 ft below land-surface datum, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	3.59	SEP 22	7.97	DEC 20	2.13	MAR 26	0.71	JUN 26	2.00	AUG 29	3.88
JUL 26	5.59	OCT 30	4.27	JAN 29	.37	APR 25	.66	JUL 21	2.77	SEP 26	3.50
AUG 28	6.76	NOV 28	2.10	FEB 28	.50	MAY 29	.92				

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.

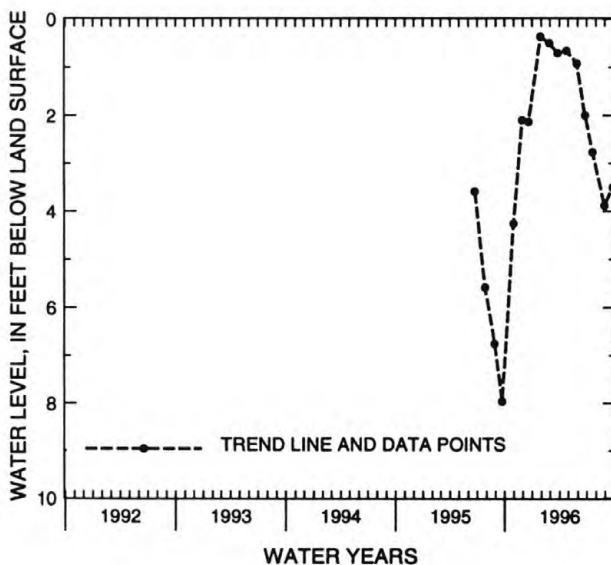
PERIOD OF RECORD.--August 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.29 ft below land-surface datum, Apr. 23, 1996; lowest measured, 5.14 ft below land-surface datum, Oct. 22, 1986.

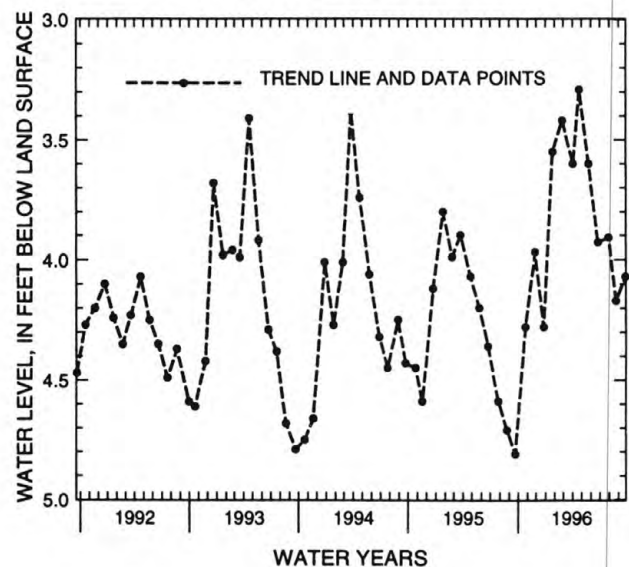
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.28	NOV 27	3.97	DEC 26	4.28	JAN 25	3.55	FEB 26	3.42	APR 02	3.60
APR 23	3.29	MAY 24	3.60	JUN 24	3.93	JUL 30	3.91	AUG 23	4.17	SEP 24	4.07

HOLDEN 169 WELL



NORTHBRIDGE 54 WELL



WORCESTER COUNTY--Continued

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 in 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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	16.08	JAN 24	11.47	MAR 21	12.43	MAY 28	12.30	JUL 25	12.40	SEP 25	14.86
NOV 30	11.14	FEB 26	9.30	APR 25	8.75	JUN 25	13.30	AUG 28	14.37		

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.

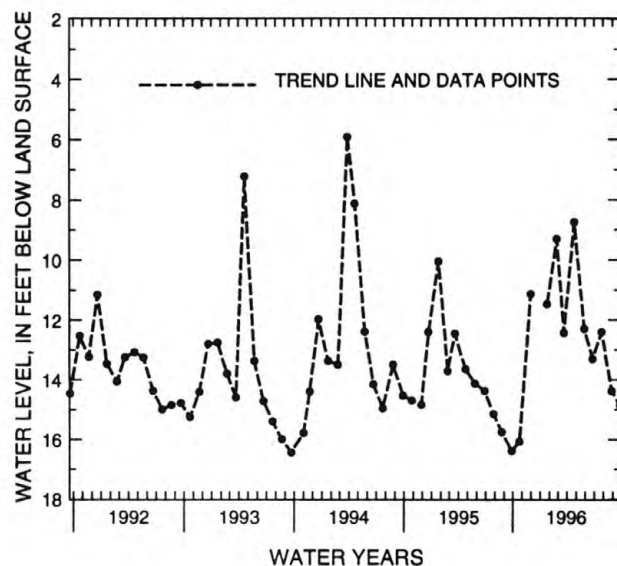
PERIOD OF RECORD.--June 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.95 ft below land-surface datum, Jan. 29, 1996; lowest measured, 18.22 ft below land-surface datum, Sept. 26, 1996.

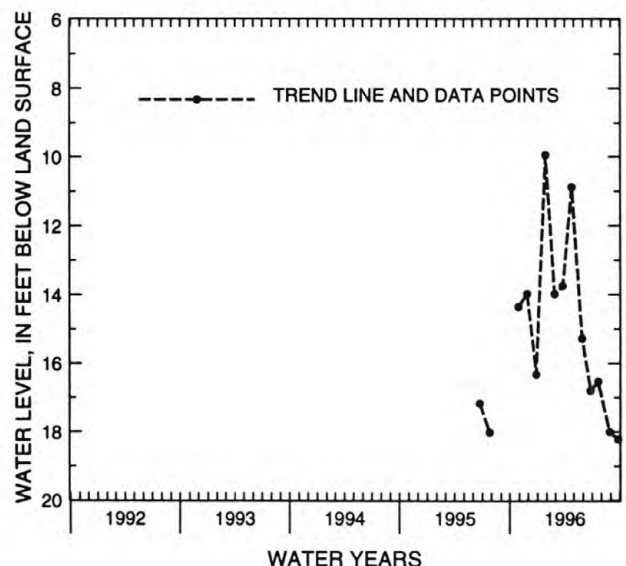
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	17.17	SEP 22	dry	DEC 28	16.33	MAR 26	13.75	JUN 26	16.80	AUG 29	18.00
JUL 26	18.02	OCT 30	14.35	JAN 29	9.95	APR 25	10.88	JUL 21	16.54	SEP 26	18.22
AUG 28	dry	NOV 28	13.98	FEB 28	13.98	MAY 29	15.28				

PETERSHAM 16 WELL



PRINCETON 64 WELL



WORCESTER COUNTY--Continued

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, 1.66 ft below land-surface datum, Mar. 26, 1969; dry, Nov. 28, 1964.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	4.82	DEC 26	2.93	FEB 26	2.71	APR 23	2.80	JUL 30	4.87	SEP 24	5.70
NOV 27	2.87	JAN 25	1.76	APR 02	2.77	MAY 24	3.07	AUG 29	8.83		

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 till 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.

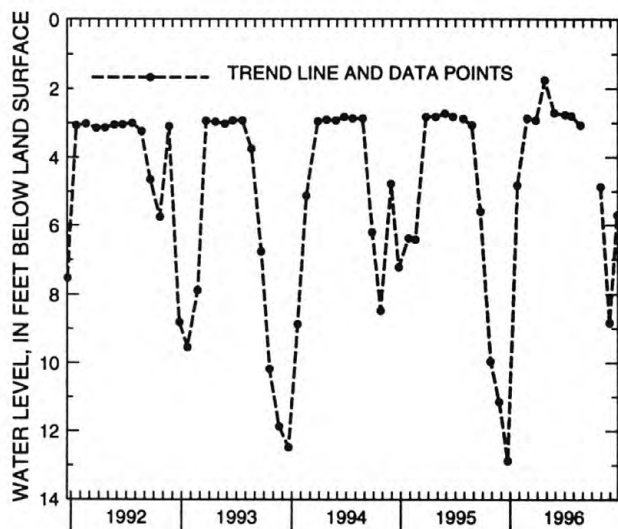
PERIOD OF RECORD.--June 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.40 ft below land-surface datum, Jan. 29, 1996; lowest measured, 15.79 ft below land-surface datum, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

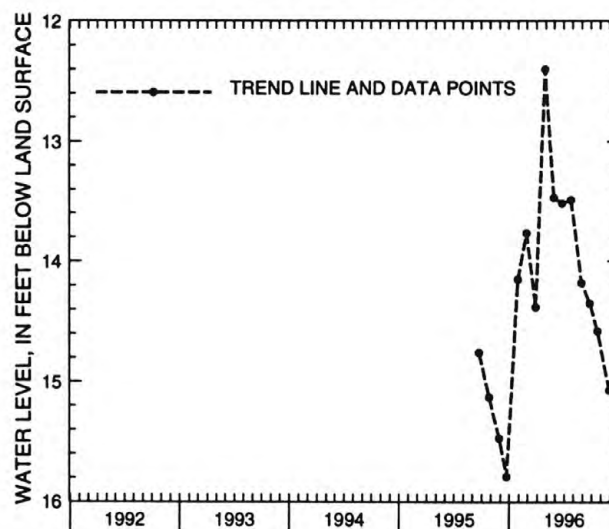
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	14.76	SEP 22	15.79	DEC 28	14.38	MAR 26	13.52	JUN 26	14.35	AUG 29	15.07
JUL 26	15.13	OCT 30	14.15	JAN 29	12.40	APR 25	13.49	JUL 21	14.58	SEP 26	14.85
AUG 28	15.47	NOV 28	13.77	FEB 28	13.47	MAY 29	14.18				

STERLING 1 WELL



WATER YEARS

STERLING 177 WELL



WATER YEARS

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.95	DEC 26	3.70	FEB 26	2.90	APR 23	2.72	JUN 24	3.88	AUG 23	4.21
NOV 27	3.33	JAN 25	1.99	APR 02	3.10	MAY 24	3.42	JUL 30	3.79	SEP 24	3.67

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.

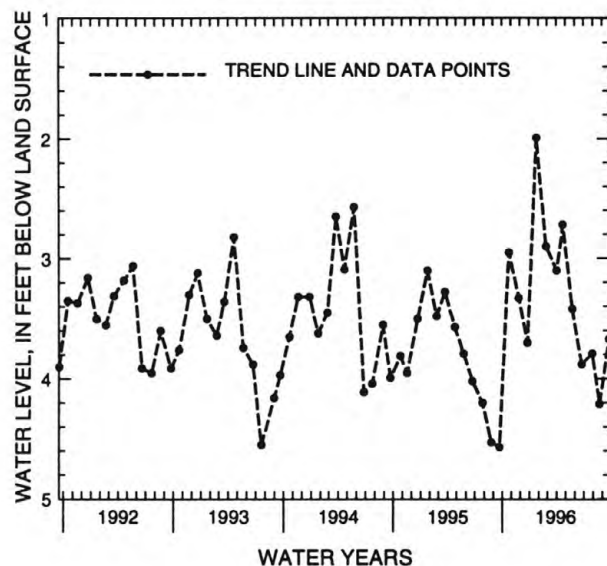
PERIOD OF RECORD.--September 1958 to November 1979, October 1981 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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

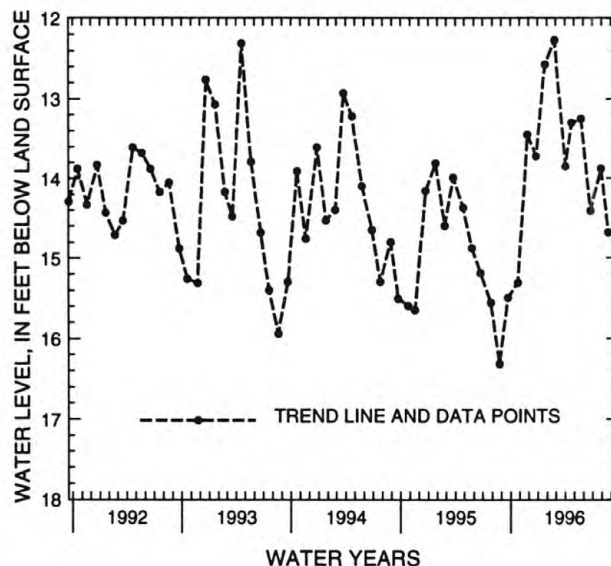
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	15.31	DEC 26	13.72	FEB 26	12.27	APR 23	13.30	JUN 24	14.41	AUG 23	14.68
NOV 27	13.45	JAN 25	12.57	APR 02	13.85	MAY 24	13.25	JUL 30	13.88	SEP 24	14.62

TEMPLETON 3 WELL



WEBSTER 1 WELL



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, 10.36 ft below land-surface datum, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	7.00	SEP 22	10.36	DEC 28	5.44	MAR 26	2.98	JUN 26	6.60	AUG 29	7.70
JUL 26	8.31	OCT 30	6.13	JAN 29	1.30	APR 25	2.74	JUL 21	7.01	SEP 26	6.65
AUG 28	9.28	NOV 28	3.68	FEB 28	2.42	MAY 29	5.20				

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.

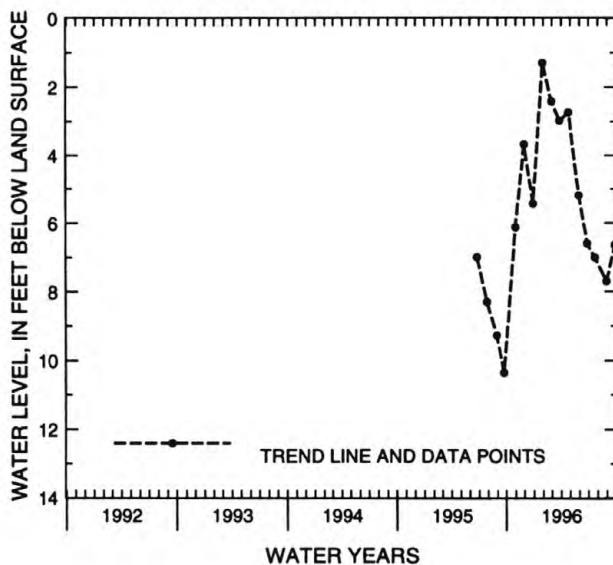
PERIOD OF RECORD.--June 1995 to current year.

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.

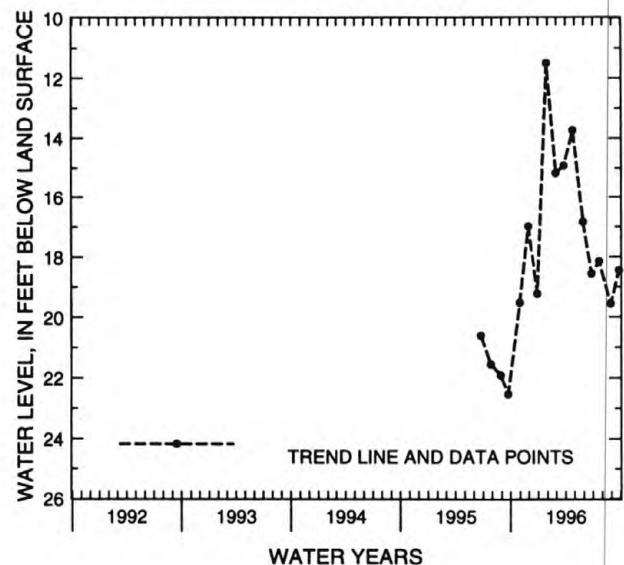
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 23	20.61	SEP 22	22.53	DEC 28	19.23	MAR 26	14.92	JUN 26	18.57	AUG 29	19.56
JUL 26	21.55	OCT 30	19.53	JAN 29	11.50	APR 25	13.74	JUL 21	18.15	SEP 26	18.45
AUG 28	21.91	NOV 28	16.98	FEB 28	15.17	MAY 29	16.84				

WEST BOYLSTON 26 WELL



WEST BOYLSTON 27 WELL



WORCESTER COUNTY--Continued

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, 9.37 ft below land-surface datum, Jan. 29, 1996; lowest measured, 21.10 ft below land-surface datum, Sept. 22, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, JUNE 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JUN 27	15.52	SEP 22	21.10	DEC 28	13.24	MAR 26	10.77	JUN 26	15.05	AUG 29	16.82
JUL 26	18.37	OCT 30	11.30	JAN 29	9.37	APR 25	10.84	JUL 21	14.28	SEP 26	12.40
AUG 28	19.02	NOV 28	11.82	FEB 28	9.95	MAY 29	12.90				

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.

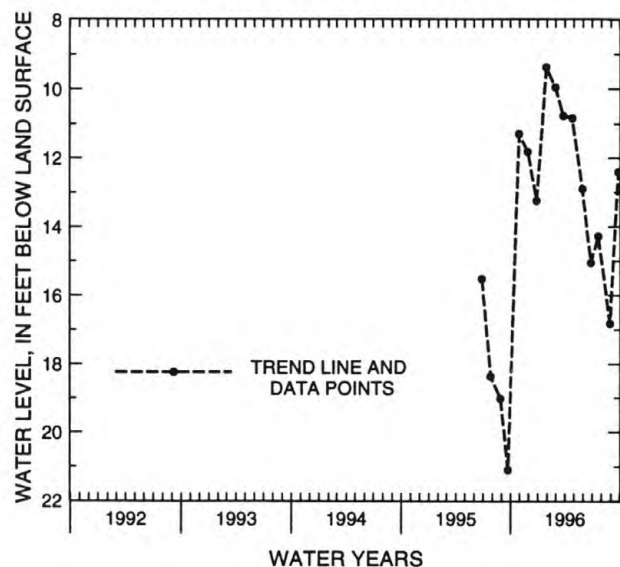
PERIOD OF RECORD.--October 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

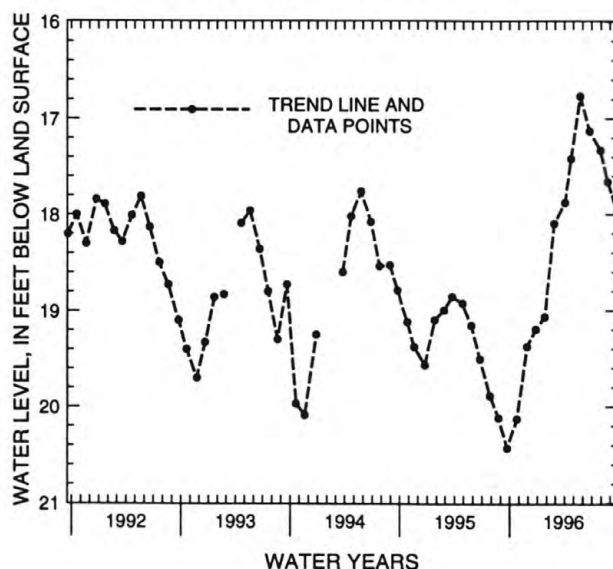
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	20.13	DEC 26	19.20	FEB 26	18.10	APR 23	17.42	JUN 24	17.13	AUG 23	17.66
NOV 27	19.38	JAN 25	19.07	APR 02	17.88	MAY 24	16.77	JUL 30	17.33	SEP 24	17.97

WEST BOYLSTON 28 WELL



WEST BROOKFIELD 2 WELL



WORCESTER COUNTY--Continued

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, 12.36 ft below land-surface datum, Nov. 20, 1985.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.85	DEC 26	4.13	FEB 26	1.79	APR 23	1.62	JUN 24	5.39	AUG 23	8.19
NOV 27	2.73	JAN 25	1.43	APR 02	1.75	MAY 24	3.01	JUL 30	5.90	SEP 24	8.44

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.

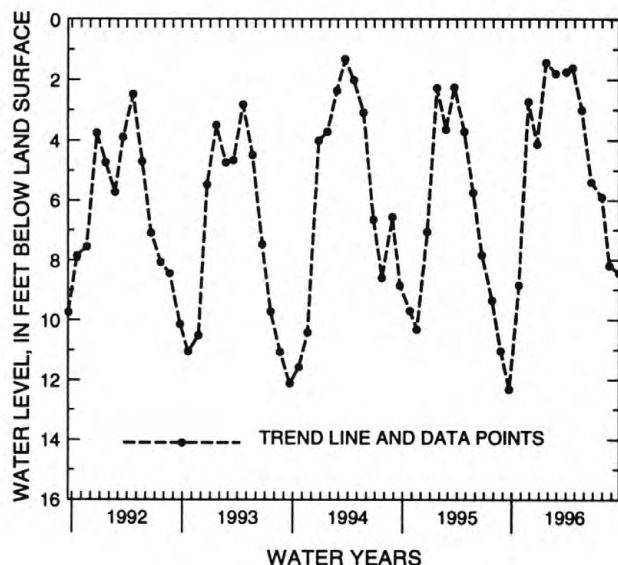
PERIOD OF RECORD.--October 1939 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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.

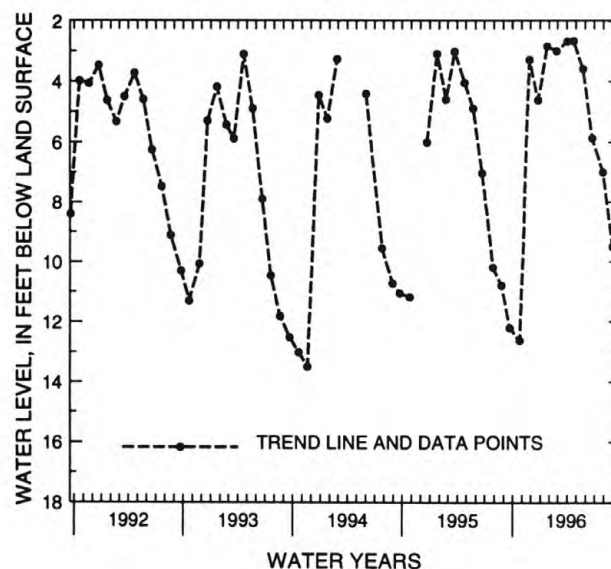
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	12.63	DEC 26	4.62	FEB 26	3.00	APR 23	2.66	JUN 24	5.87	AUG 29	9.50
NOV 27	3.28	JAN 25	2.83	APR 02	2.67	MAY 24	3.58	JUL 30	7.00	SEP 24	10.87

WEST BROOKFIELD 10 WELL



WINCHENDON 13 WELL



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.

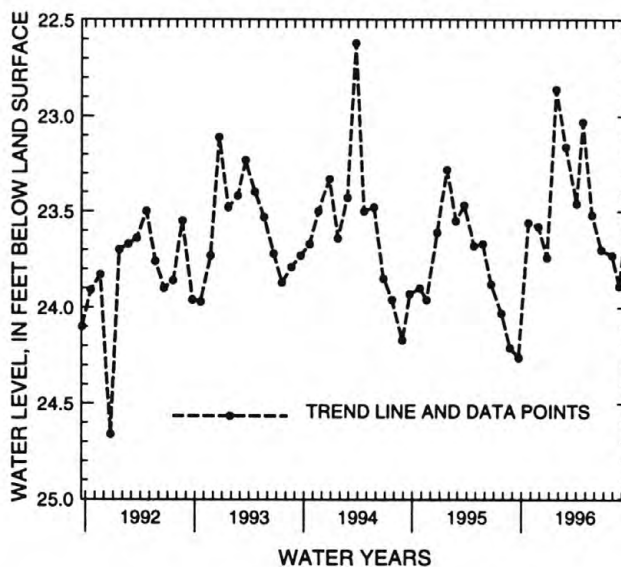
PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	23.56	DEC 26	23.74	FEB 26	23.16	APR 23	23.03	JUN 24	23.70	AUG 23	23.89
NOV 27	23.58	JAN 25	22.86	APR 02	23.46	MAY 24	23.52	JUL 30	23.73	SEP 24	23.45

WORCESTER 274 WELL



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: Spray painted arrow on rock, 1.89 ft above land-surface datum.

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, 11.90 ft below land-surface datum, Sep. 26, 1957.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	10.18	JAN 24	7.33	MAR 27	7.14	MAY 29	8.70	JUL 27	10.39	SEP 25	10.65
NOV 27	8.75	FEB 28	6.42	APR 24	6.31	JUN 25	9.88	AUG 21	11.02		

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.

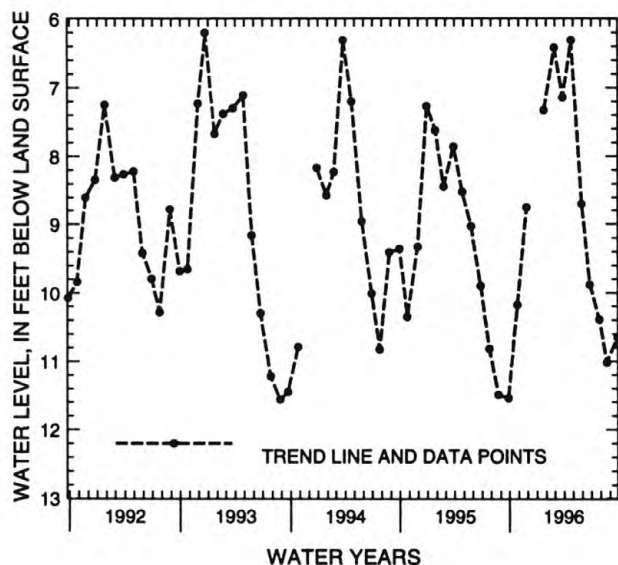
PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.43 ft below land-surface datum, Apr. 23, 1983; dry on Oct. 25, 1986.

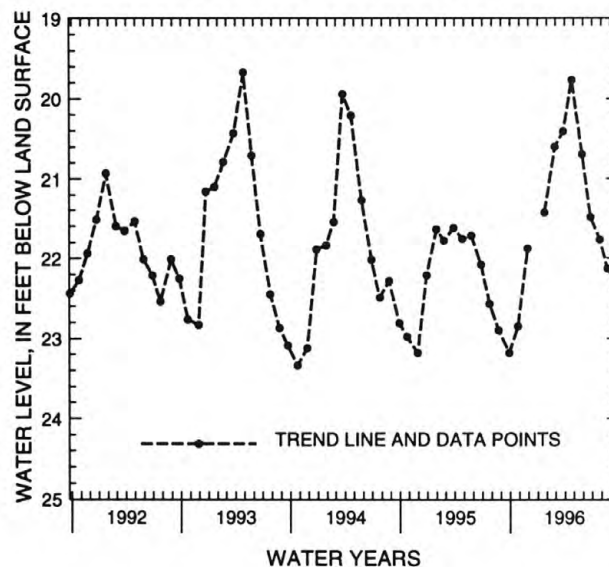
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	22.85	JAN 24	21.43	MAR 27	20.41	MAY 29	20.70	JUL 27	21.77	SEP 25	22.38
NOV 28	21.88	FEB 28	20.60	APR 24	19.77	JUN 25	21.49	AUG 21	22.13		

COVENTRY 342 WELL



COVENTRY 411 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

KENT COUNTY--Continued

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: Audubon 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, 5.19 ft below land-surface datum, Aug. 28, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	2.30	DEC 18	2.24	FEB 20	2.26	APR 25	2.17	JUN 24	3.06	AUG 22	4.50
NOV 20	1.91	JAN 23	1.95	MAR 25	2.27	MAY 20	2.29	JUL 24	3.16	SEP 24	3.15

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.

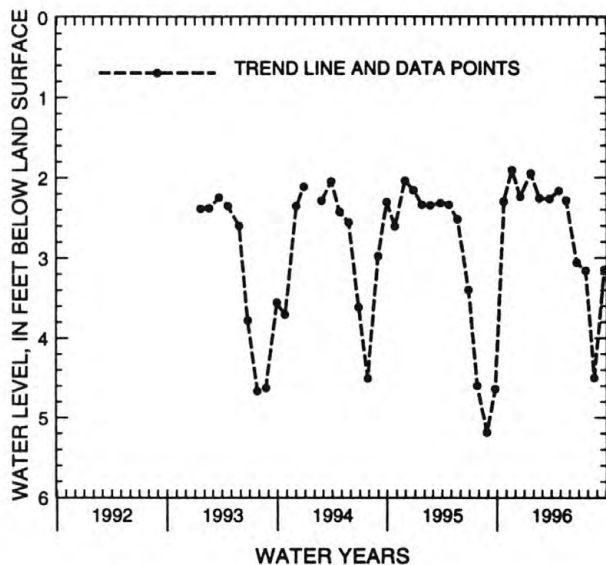
PERIOD OF RECORD.--April 1949 to December 1955, November 1990 to current year.

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.

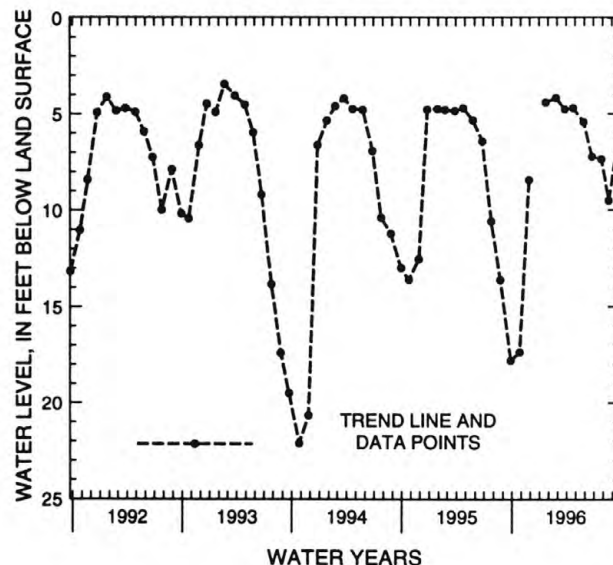
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	17.37	JAN 23	4.43	MAR 27	4.77	MAY 29	5.44	JUL 27	7.38	SEP 25	5.85
NOV 28	8.46	FEB 26	4.18	APR 24	4.70	JUN 25	7.23	AUG 21	9.52		

COVENTRY 466 WELL



WARWICK 59 WELL



KENT COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	16.03	NOV 27	14.87	JAN 24	13.50	FEB 28	13.80	MAR 27	14.73	APR 24	13.78
MAY 29	15.68	JUN 25	17.21	JUL 27	16.31	AUG 21	16.61	SEP 25	16.08		

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.

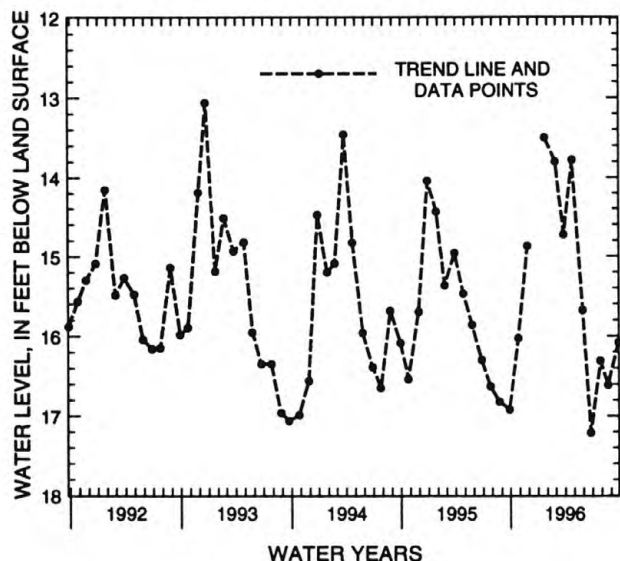
PERIOD OF RECORD.--October 1955 to June 1960, January 1989 to current year.

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.

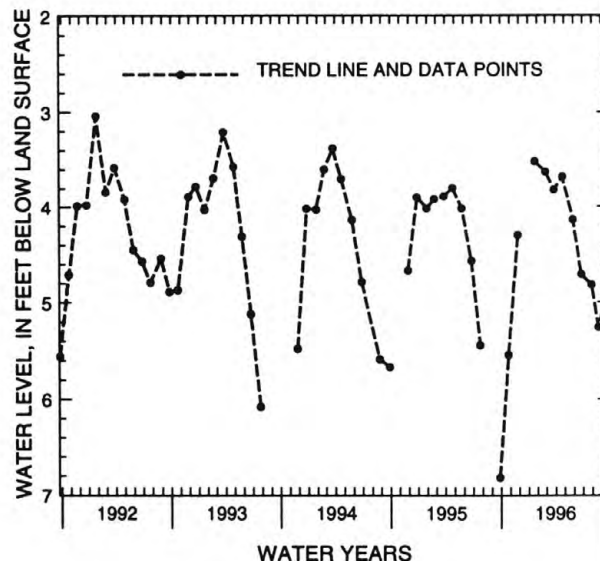
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	5.55	JAN 24	3.52	MAR 27	3.82	MAY 29	4.14	JUL 29	4.82	SEP 25	4.85
NOV 27	4.30	FEB 28	3.63	APR 24	3.68	JUN 25	4.71	AUG 21	5.26		

WEST GREENWICH 181 WELL



WEST GREENWICH 206 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	17.96	DEC 19	11.24	FEB 19	9.12	APR 25	6.27	JUN 25	15.55	AUG 20	16.81
NOV 22	8.62	JAN 22	3.23	MAR 25	9.14	MAY 20	11.36	JUL 24	16.67	SEP 24	7.43

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.

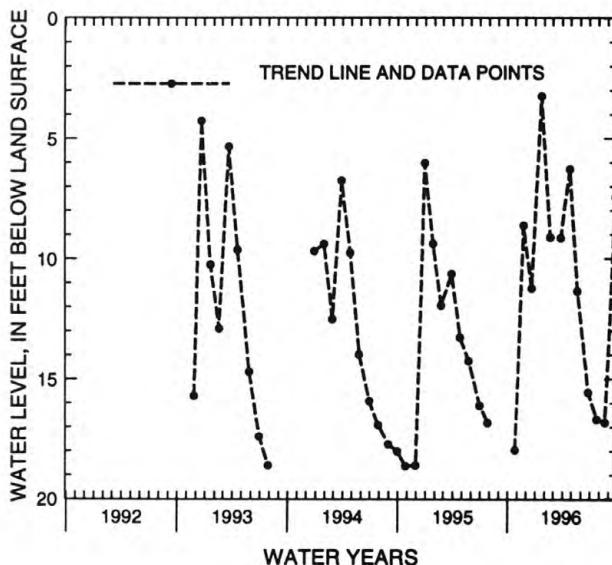
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.66 ft below land-surface datum, Jan. 22, 1996; lowest measured, dry, Sept. 29, Oct. 26, 1993.

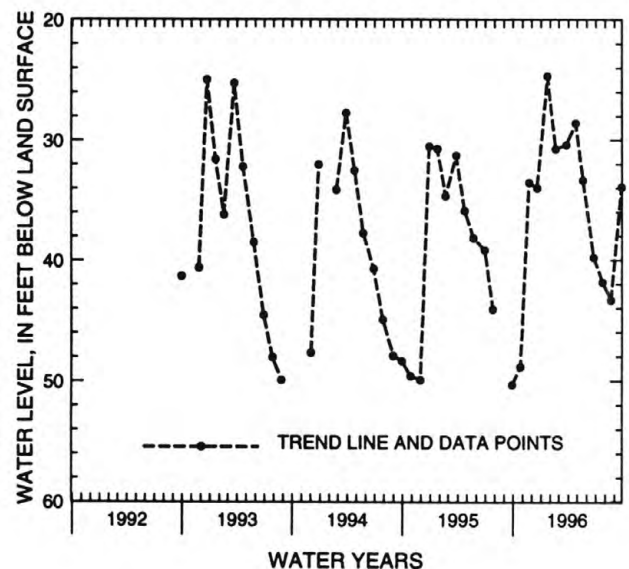
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	48.83	DEC 19	33.98	FEB 19	30.74	APR 25	28.58	JUN 24	39.78	AUG 20	43.33
NOV 22	33.54	JAN 22	24.66	MAR 25	30.39	MAY 20	33.34	JUL 24	41.83	SEP 24	33.91

LITTLE COMPTON 142 WELL



PORTSMOUTH 551 WELL



NEWPORT COUNTY--Continued

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, 12.77 ft below land-surface datum, Oct. 26, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.67	DEC 19	1.54	FEB 19	2.01	APR 25	1.55	JUN 25	3.86	AUG 20	7.03
NOV 22	1.44	JAN 22	1.09	MAR 25	1.75	MAY 20	1.12	JUL 24	6.26	SEP 24	1.38

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.

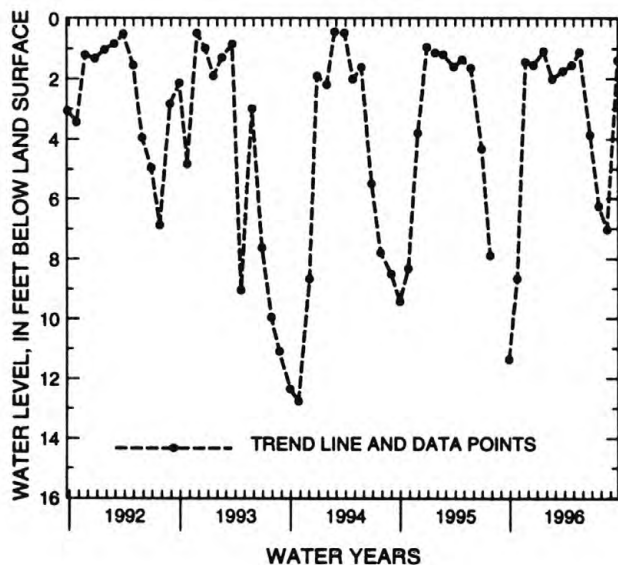
PERIOD OF RECORD.--January 1968 to current year.

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.

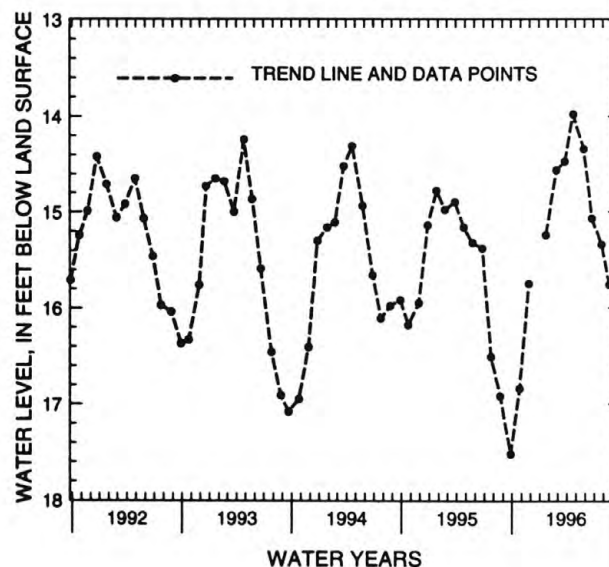
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	16.84	JAN 24	15.24	MAR 27	14.47	MAY 29	14.34	JUL 27	15.34	SEP 25	15.61
NOV 27	15.75	FEB 28	14.56	APR 24	13.98	JUN 25	15.07	AUG 21	15.76		

TIVERTON 274 WELL



BURRILLVILLE 187 WELL



PROVIDENCE COUNTY--Continued

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, 12.05 ft below land-surface datum, Sept. 28, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.68	JAN 22	5.54	FEB 28	5.69	APR 25	5.86	JUN 25	7.93	AUG 22	9.58
NOV 21	6.20	FEB 20	6.21	MAR 25	5.96	MAY 20	6.05	JUL 22	8.28	SEP 25	9.02
DEC 18	6.82										

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.

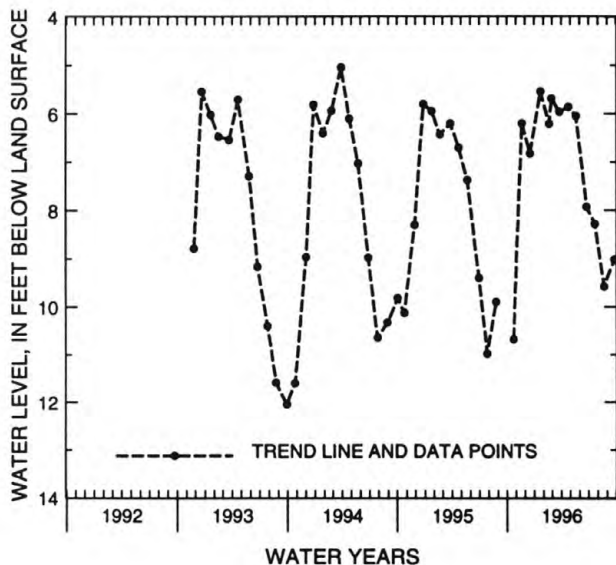
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.32 ft below land-surface datum, Mar. 28, 1994; lowest measured, 6.82 ft below land-surface datum, Sept. 26, 1995.

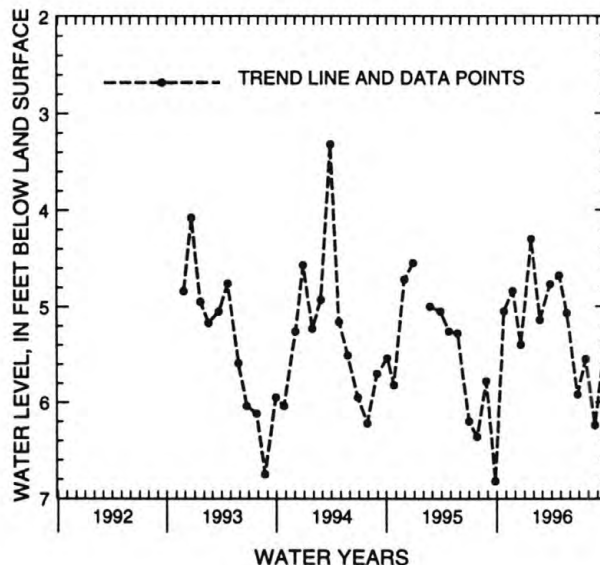
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	5.05	DEC 18	5.40	FEB 20	5.14	APR 25	4.68	JUN 25	5.92	AUG 22	6.24
NOV 21	4.84	JAN 22	4.30	MAR 25	4.77	MAY 20	5.07	JUL 22	5.55	SEP 25	5.38

BURRILLVILLE 395 WELL



BURRILLVILLE 396 WELL



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, Nov. 25, 1992.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	24.55	JAN 22	16.22	FEB 28	9.30	APR 25	9.22	JUN 25	16.95	AUG 22	19.55
NOV 21	16.43	FEB 20	11.92	MAR 25	9.61	MAY 20	10.55	JUL 22	18.35	SEP 25	21.00
DEC 18	15.51										

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.

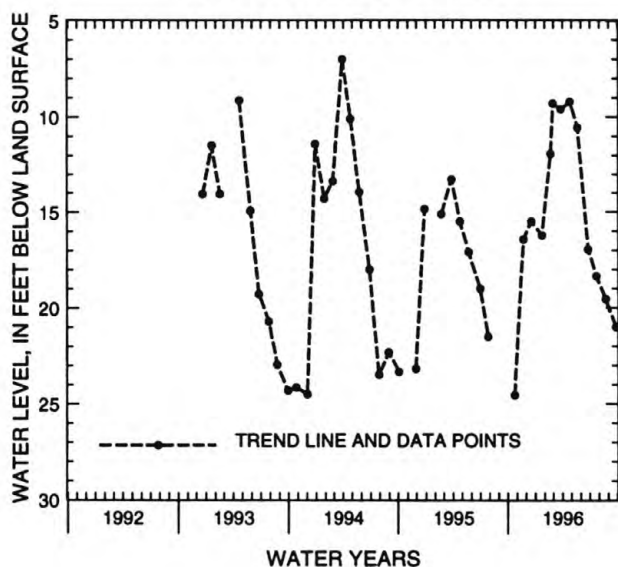
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.65 ft below land-surface datum, Mar. 28, 1994; lowest measured, 12.28 ft below land-surface datum, Dec. 2, 1993.

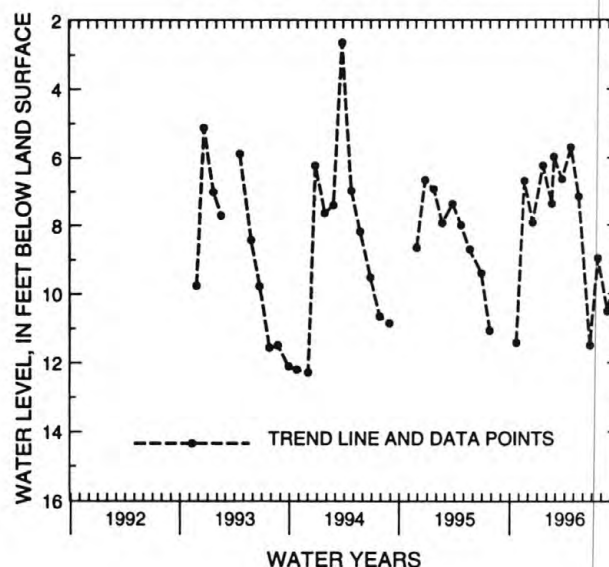
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	11.42	JAN 22	6.23	FEB 28	5.97	APR 25	5.70	JUN 25	11.51	AUG 22	10.51
NOV 21	6.68	FEB 20	7.37	MAR 25	6.63	MAY 20	7.16	JUL 22	8.96	SEP 25	9.28
DEC 18	7.92										

BURRILLVILLE 397 WELL



BURRILLVILLE 398 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

PROVIDENCE COUNTY--Continued

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, 4.77 ft below land-surface datum, Mar. 28, 1994; lowest measured, 20.56 ft below land-surface datum, Sept. 28, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	19.68	DEC 18	14.78	FEB 20	8.86	APR 25	6.98	JUN 24	15.33	AUG 22	18.34
NOV 20	17.42	JAN 23	10.14	MAR 25	7.39	MAY 20	10.27	JUL 24	17.49	SEP 24	18.95

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.

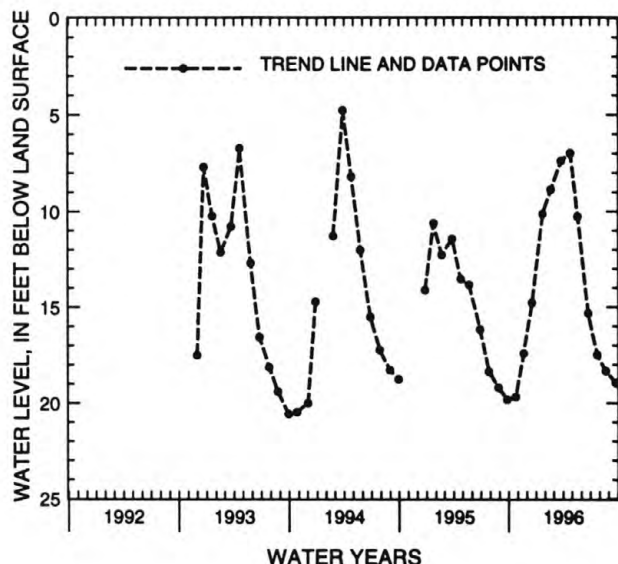
PERIOD OF RECORD.--August 1946 to current year.

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.

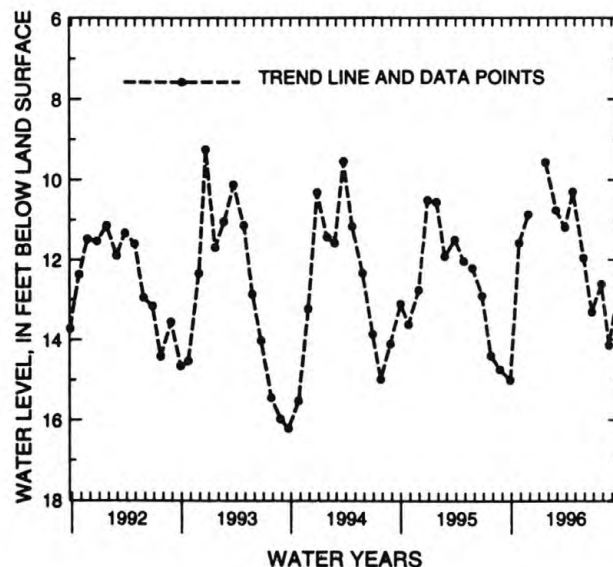
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	11.59	JAN 24	9.57	MAR 27	11.19	MAY 29	11.96	JUL 27	12.62	SEP 26	12.65
NOV 27	10.87	FEB 27	10.77	APR 24	10.30	JUN 25	13.32	AUG 21	14.14		

CRANSTON CITY 439 WELL



CUMBERLAND 265 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

347

PROVIDENCE COUNTY--Continued

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	6.67	JAN 24	2.86	MAR 27	3.88	MAY 29	5.56	JUL 27	6.91	SEP 25	6.63
NOV 27	4.13	FEB 28	2.90	APR 24	3.82	JUN 25	7.02	AUG 21	8.55		

414357071405101. Foster well FOW 290.

LOCATION.--Lat 41°43'57", long 71°40'51", Providence County, Hydrologic Unit 01090004, town of Foster, Parker Woodland, Audubon 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.

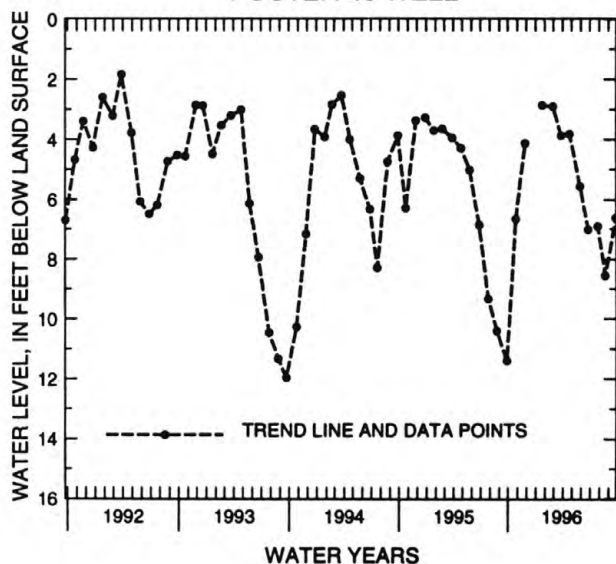
PERIOD OF RECORD.--September 1992 to current year.

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 and 1994.

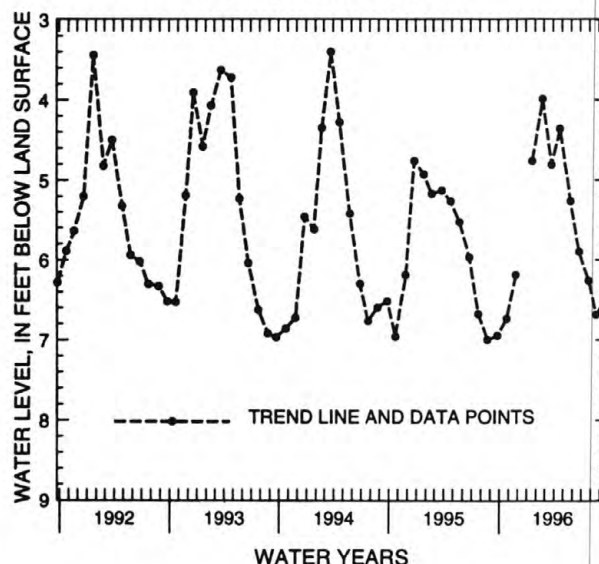
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	dry	JAN 23	5.71	FEB 28	3.93	APR 25	3.96	JUN 24	8.18	AUG 22	11.68
NOV 22	9.53	FEB 20	4.85	MAR 25	4.51	MAY 20	5.06	JUL 24	10.19	SEP 24	13.53
DEC 18	8.95										

FOSTER 40 WELL



FOSTER 290 WELL



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-in 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, 7.30 ft below land-surface datum, Aug. 24, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	3.98	JAN 24	3.00	MAR 27	4.19	MAY 29	4.67	JUL 27	4.19	SEP 25	3.93
NOV 27	4.47	FEB 27	3.38	APR 24	3.42	JUN 25	4.05	AUG 21	4.84		

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.

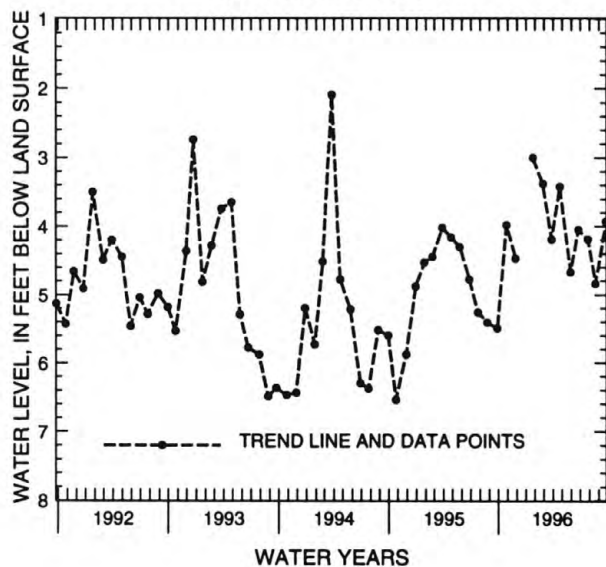
PERIOD OF RECORD.--May 1947 to current year.

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.

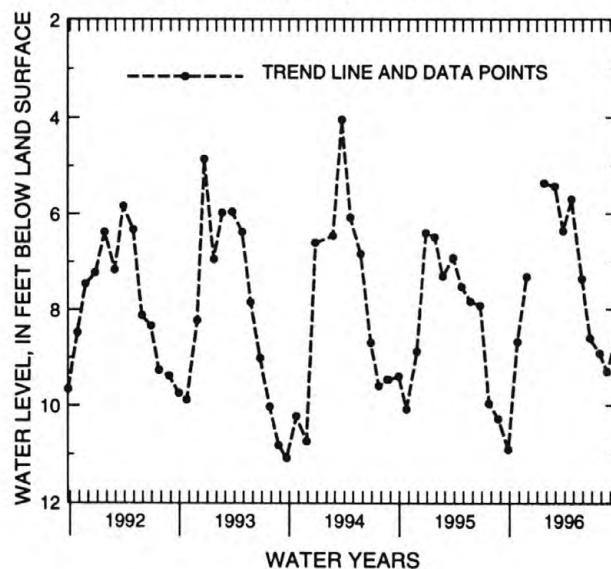
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.68	JAN 24	5.36	MAR 27	6.36	MAY 29	7.37	JUL 27	8.93	SEP 25	8.46
NOV 27	7.32	FEB 28	5.43	APR 24	5.70	JUN 25	8.61	AUG 21	9.31		

LINCOLN 84 WELL



NORTH SMITHFIELD 21 WELL



PROVIDENCE COUNTY--Continued

415317071220601. Pawtucket well PAW 136.

LOCATION.--Lat 41°53'17", long 71°22'06", Providence County, Hydrologic Unit 01090004, city of Pawtucket, at 314 Woodbine Street, and 1,500 ft northeast of intersection of Cottage Street and Central Avenue.
 Owner: Greenhalgh Mills, Inc.

AQUIFER.--Gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in, depth 43 ft, cased to about 40 ft, screened about 40 to 43 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 86 ft. Measuring point: Top of casing, 3.15 ft above land-surface datum.

PERIOD OF RECORD.--January 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Apr. 23, 1983; lowest measured, 7.28 ft below land-surface datum, Jan. 29, 1966.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.86	JAN 24	3.64	MAR 27	2.85	MAY 29	3.05	JUL 27	3.79	SEP 25	4.12
NOV 27	4.14	FEB 27	3.14	APR 24	2.24	JUN 25	3.22	AUG 21	4.26		

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.

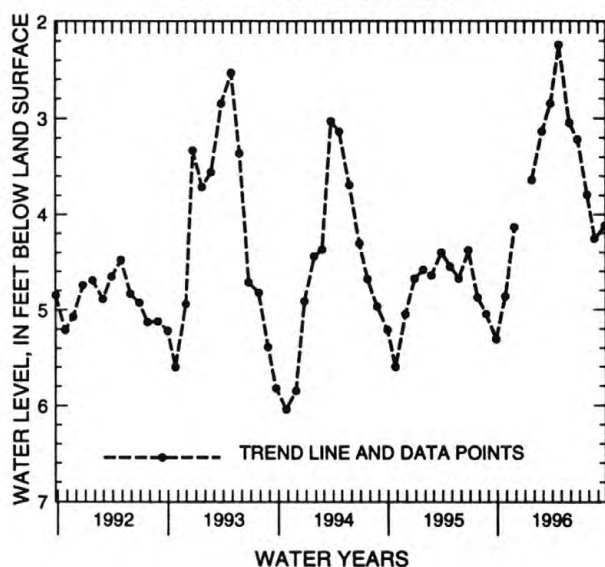
PERIOD OF RECORD.--December 1944 to current year.

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.

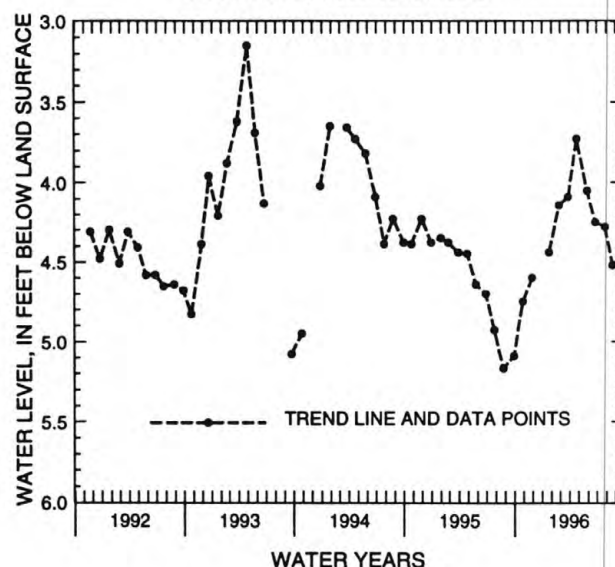
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.75	JAN 23	4.44	MAR 27	4.09	MAY 29	4.05	JUN 25	4.25	AUG 21	4.52
NOV 27	4.60	FEB 26	4.14	APR 24	3.73	JUN 24	4.25	JUL 27	4.28	SEP 25	4.49

PAWTUCKET 136 WELL



PROVIDENCE 48 WELL



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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	20.85	JAN 23	18.22	MAR 28	15.25	MAY 30	15.29	JUL 28	18.04	SEP 26	17.78
NOV 28	20.01	FEB 26	15.93	APR 25	14.22	JUN 26	17.03	AUG 22	18.32		

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 miles 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.

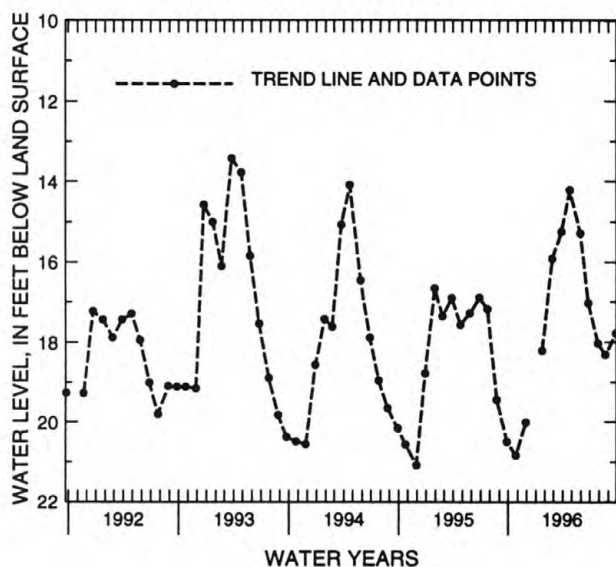
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.57 ft below land-surface datum, Nov. 28, 1994; lowest measured, 5.20 ft below land-surface datum, Aug. 29, 1995.

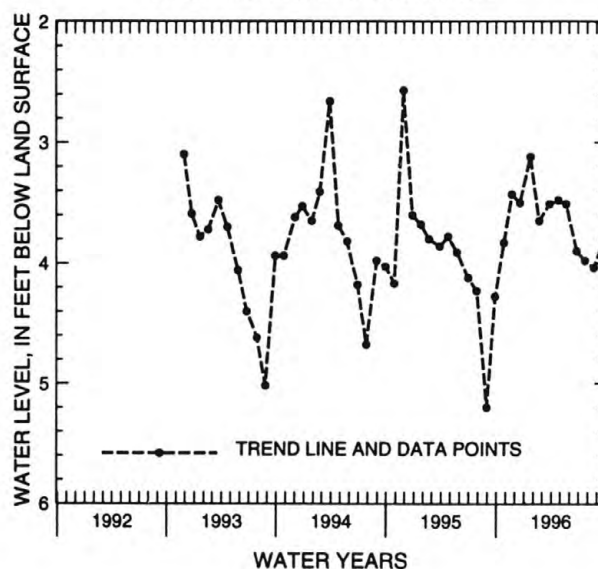
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.83	DEC 18	3.50	FEB 20	3.65	APR 25	3.48	JUN 25	3.90	AUG 21	4.04
NOV 21	3.43	JAN 22	3.12	MAR 25	3.51	MAY 21	3.51	JUL 22	3.98	SEP 25	3.79

CHARLESTOWN 18 WELL



CHARLESTOWN 586 WELL



WASHINGTON COUNTY--Continued

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 miles 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, 2.80 ft below land-surface datum, Mar. 28, 1994; lowest measured, 12.04 ft below land-surface datum, Oct. 26, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	11.40	DEC 18	6.21	FEB 20	6.83	APR 25	4.97	JUN 25	9.99	AUG 21	11.03
NOV 21	6.61	JAN 22	4.54	MAR 25	6.48	MAY 21	6.66	JUL 22	10.46	SEP 25	9.32

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.

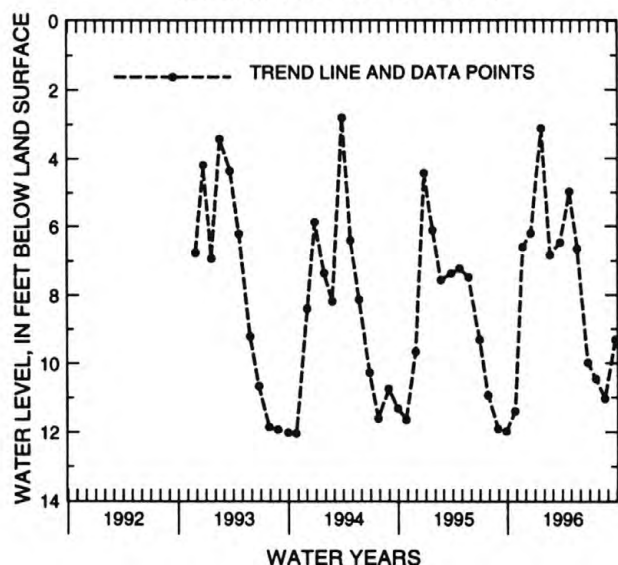
PERIOD OF RECORD.--December 1948 to current year.

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.

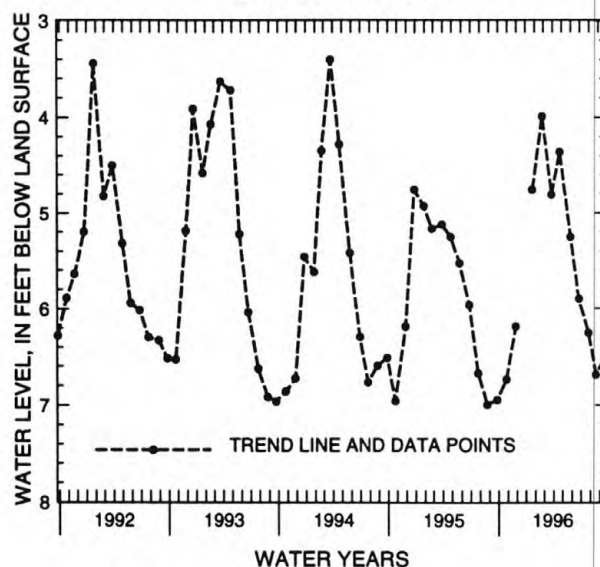
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	6.74	NOV 27	6.19	JAN 23	4.76	FEB 26	3.99	MAR 27	4.81	APR 24	4.36
MAY 29	5.26	JUN 25	5.90	JUL 27	6.26	AUG 21	6.69	SEP 25	6.48		

CHARLESTOWN 587 WELL



EXETER 6 WELL



WASHINGTON COUNTY--Continued

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, Oct. 26 and Nov. 27, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	DRY	JAN 23	5.29	MAR 27	6.03	MAY 29	7.56	JUL 27	13.96	SEP 25	16.13
NOV 27	12.08	FEB 26	4.51	APR 24	4.98	JUN 25	11.44	AUG 21	15.30		

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.

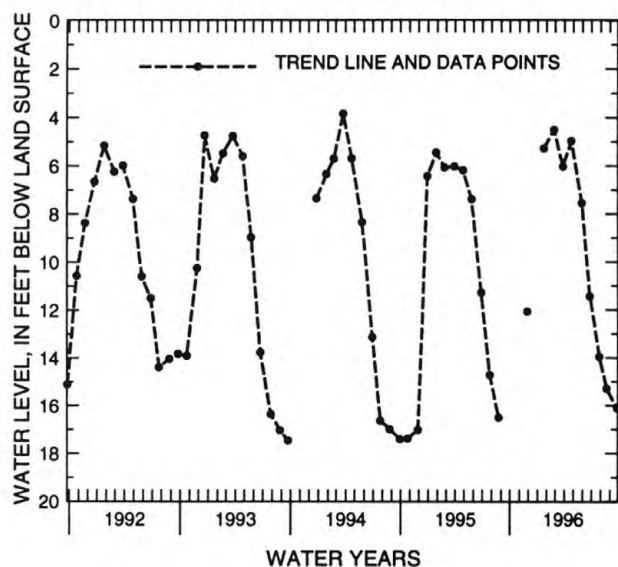
PERIOD OF RECORD.--October 1955 to June 1960, May 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.37 ft below land-surface datum Oct. 17, 1955; lowest measured, 13.43 ft below land-surface datum, Oct. 2, 1957, Aug. 23, 1995.

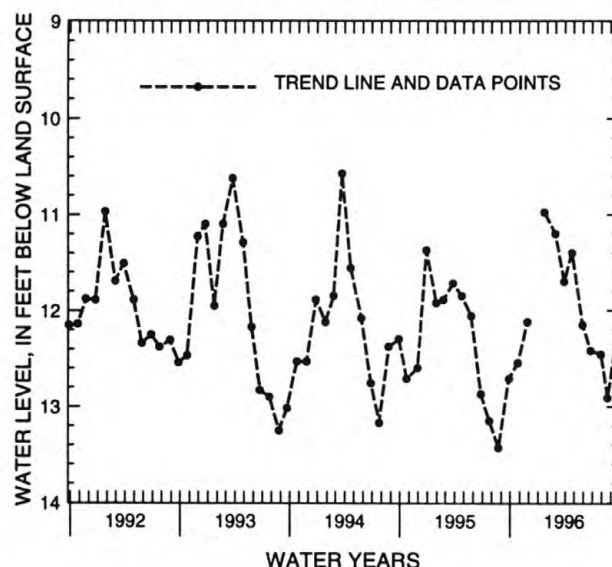
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	12.55	JAN 23	10.98	MAR 27	11.70	APR 24	11.40	JUN 25	12.42	AUG 21	12.91
NOV 27	12.12	FEB 28	11.20	28	11.70	MAY 29	12.15	JUL 29	12.46	SEP 25	12.15

EXETER 158 WELL



EXETER 238 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

353

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 miles 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 23.9ft, 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.

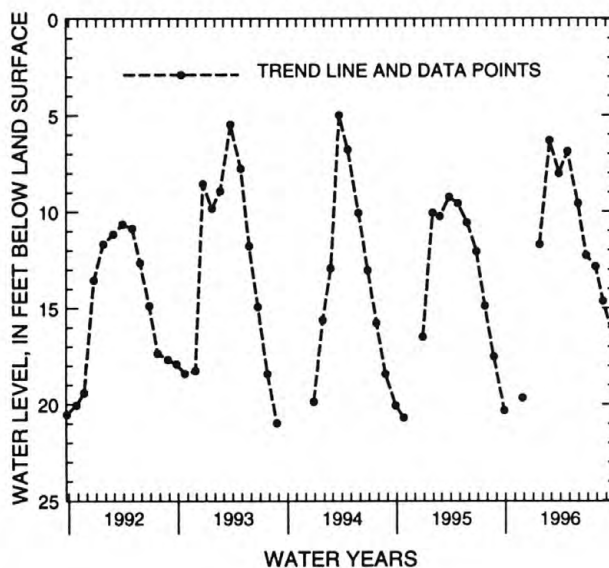
PERIOD OF RECORD.--August 1954 to June 1960, March 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.06 ft below land-surface datum, May 29, 1991; lowest measured, dry, Sept. 23, Oct. 25, and Nov. 26, 1993.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	DRY	JAN 23	11.70	MAR 27	8.01	APR 25	6.89	JUN 26	12.27	AUG 22	14.63
NOV 27	19.67	FEB 26	6.32	MAR 28	8.01	MAY 30	9.59	JUL 29	12.85	SEP 26	16.51

EXETER 278 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

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 minute 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.

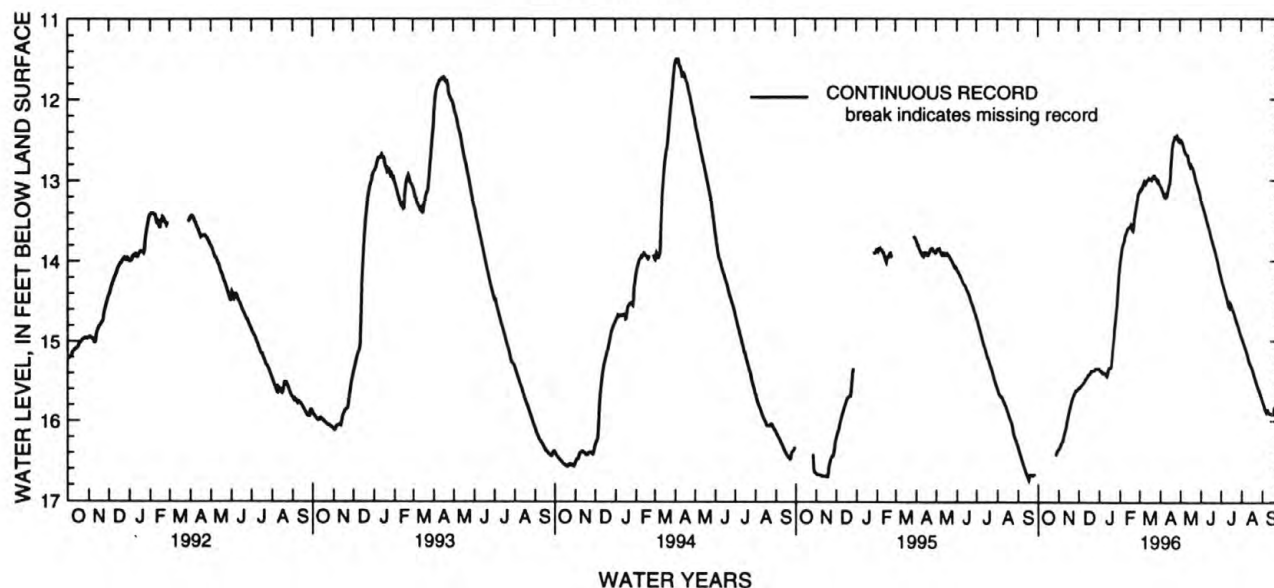
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	16.35	15.59	15.36	14.02	13.14	13.07	12.50	13.25	14.21	14.97	15.75
2	---	16.34	15.59	15.37	13.95	13.11	13.08	12.50	13.28	14.24	14.99	15.78
3	---	16.32	15.58	15.37	13.89	13.10	13.10	12.53	13.30	14.28	15.02	15.80
4	---	16.30	15.57	15.38	13.84	13.11	13.12	12.53	13.33	14.30	15.04	15.83
5	---	16.28	15.56	15.40	13.80	13.09	13.15	12.56	13.36	14.34	15.07	15.85
6	---	16.26	15.55	15.41	13.78	13.06	13.18	12.59	13.39	14.36	15.09	15.87
7	---	16.25	15.54	15.41	13.75	13.03	13.20	12.63	13.42	14.40	15.12	15.89
8	---	16.21	15.53	15.40	13.70	13.01	13.21	12.64	13.45	14.43	15.15	15.88
9	---	16.17	15.52	15.41	13.67	13.02	13.21	12.67	13.49	14.46	15.17	15.87
10	---	16.14	15.50	15.41	13.65	13.04	13.17	12.68	13.52	14.50	15.20	15.89
11	---	16.11	15.48	15.43	13.62	13.02	13.18	12.68	13.54	14.54	15.24	15.90
12	---	16.08	15.47	15.44	13.60	13.00	13.14	12.69	13.58	14.57	15.27	15.90
13	---	16.03	15.46	15.41	13.59	12.99	13.11	12.74	13.60	14.58	15.29	15.91
14	---	15.99	15.45	15.36	13.58	12.99	13.06	12.78	13.63	14.52	15.30	15.91
15	---	15.95	15.43	15.34	13.57	12.97	13.05	12.81	13.67	14.53	15.32	15.91
16	---	15.91	15.42	15.34	13.57	12.98	12.96	12.83	13.71	14.56	15.35	15.92
17	---	15.87	15.42	15.34	13.55	12.98	12.81	12.81	13.74	14.59	15.37	15.92
18	---	15.84	15.40	15.33	13.57	12.98	12.70	12.83	13.77	14.61	15.40	15.88
19	---	15.80	15.39	15.30	13.61	12.99	12.61	12.84	13.81	14.63	15.43	15.84
20	---	15.77	15.37	15.19	13.62	12.96	12.54	12.86	13.83	14.66	15.46	15.83
21	---	15.73	15.37	15.09	13.59	12.95	12.51	12.89	13.86	14.68	15.48	15.82
22	---	15.71	15.37	15.00	13.47	12.94	12.49	12.92	13.89	14.71	15.51	15.82
23	---	15.69	15.37	14.92	13.43	12.94	12.46	12.96	13.92	14.74	15.54	15.81
24	---	15.67	15.37	14.83	13.38	12.97	12.46	13.00	13.96	14.77	15.56	15.80
25	---	15.65	15.36	14.75	13.32	12.97	12.46	13.03	13.99	14.79	15.59	15.79
26	---	15.64	15.35	14.67	13.27	12.97	12.45	13.05	14.03	14.81	15.61	15.80
27	e16.42	15.62	15.35	14.58	13.22	13.01	12.48	13.08	14.07	14.84	15.63	15.80
28	16.42	15.62	15.35	14.46	13.17	13.02	12.51	13.11	14.11	14.87	15.66	15.79
29	16.39	15.61	15.35	14.32	13.15	13.01	12.52	13.14	14.15	14.90	15.68	15.79
30	16.37	15.60	15.35	14.20	---	13.04	12.49	13.17	14.18	14.93	15.70	15.79
31	16.36	---	15.35	14.10	---	13.05	---	13.21	---	14.95	15.73	---
MEAN	---	15.95	15.44	15.11	13.58	13.01	12.85	12.81	13.69	14.59	15.35	15.84
LOW	---	16.35	15.59	15.44	14.02	13.14	13.21	13.21	14.18	14.95	15.73	15.92
HIGH	---	15.60	15.35	14.10	13.15	12.94	12.45	12.50	13.25	14.21	14.97	15.75

WTR YR 1996 HIGH 12.44 APR 24, LOW 16.42 OCT 27 (but may have been lower during period of no record)

e Estimated

EXETER 475 WELL



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 1500 ft south of fire station at Exeter State (Dr. Joseph H. Ladd) School. One half mile West of Rt. 2 on Dawley Rd. and approx. 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, 8.22 ft below land-surface datum, Mar. 25, 1993; lowest measured, 12.20 ft below land-surface datum, Nov. 29, 1994.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	11.50	JAN 23	9.17	MAR 28	9.21	MAY 30	9.76	JUL 29	10.40	SEP 26	10.58
NOV 28	10.56	FEB 26	9.00	APR 25	8.92	JUN 26	10.26	AUG 22	10.46		

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.

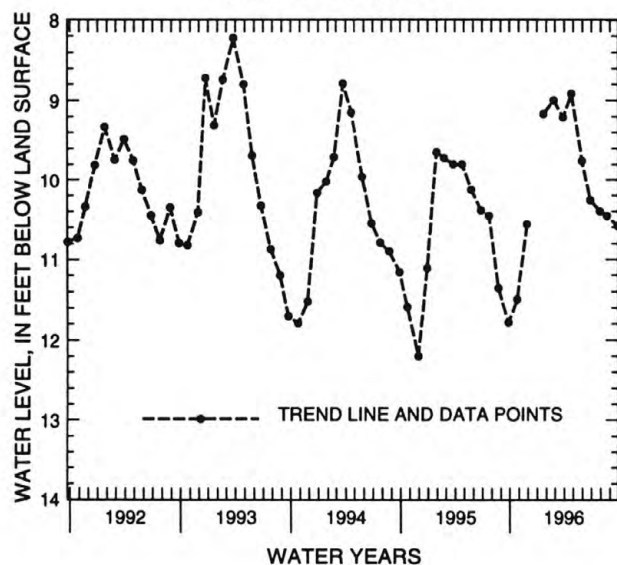
PERIOD OF RECORD.--August 1953 to February 1959, November 1990 to current year..

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.46 ft below land-surface datum, Mar. 24, 1994; lowest measured, dry, Oct. 29, 1957.

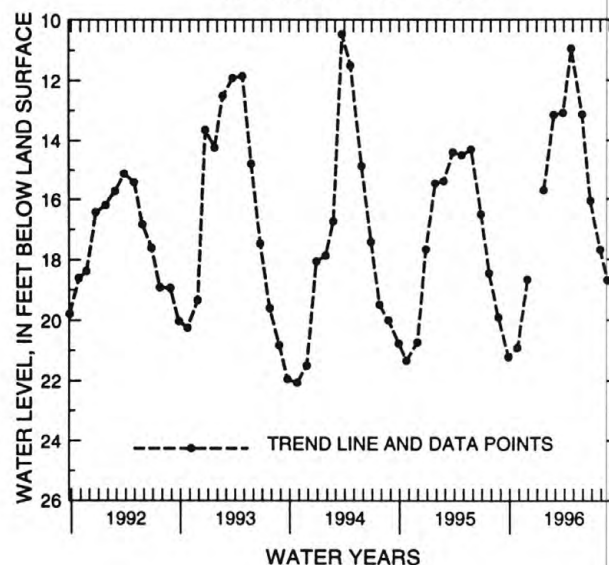
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	20.92	JAN 23	15.70	MAR 28	13.09	MAY 30	13.14	JUL 28	17.68	SEP 26	19.12
NOV 28	18.68	FEB 26	13.15	APR 25	10.95	JUN 26	16.06	AUG 22	18.70		

EXETER 554 WELL



HOPKINTON 67 WELL



WASHINGTON COUNTY--Continued

410947071344803. New Shoreham well NHW 258.

LOCATION.--Lat 41°09'47", long 71°34'48", Washington County, Hydrologic Unit 01090005, town of New Shoreham, Lakeside Drive near Indian Cemetery.

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 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	13.47	FEB 26	10.55	APR 30	10.35	JUN 20	11.35	AUG 28	11.70	SEP 25	11.34
JAN 22	11.35	MAR 22	10.45	MAY 19	10.50	JUL 31	12.05				

413148071281601. North Kingstown well NKW 255.

LOCATION.--Lat 41°31'48", long 71°28'16", Washington County, Hydrologic Unit 01090004, town of North Kingstown, 100 ft east of Pendar Road, 0.6 mi south of intersection of Pendar and Tower Hill Roads, and 1.0 mi south of Allenton.

Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 14 ft, cased with concrete to 14 ft, open end.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface datum is 50 ft. Measuring point: Hole in top of concrete cover, 0.24 ft above land-surface datum.

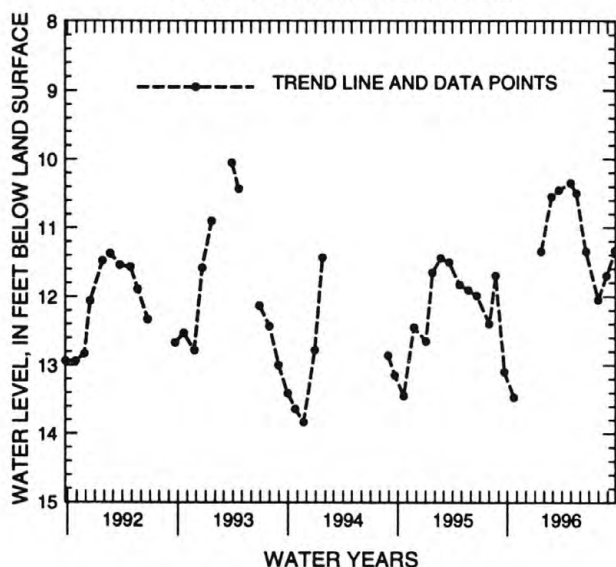
PERIOD OF RECORD.--August 1954 to December 1963, January 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.81 ft below land-surface datum, Mar. 26, 1968; lowest measured, 13.03 ft below land-surface datum, Oct. 26, 1981.

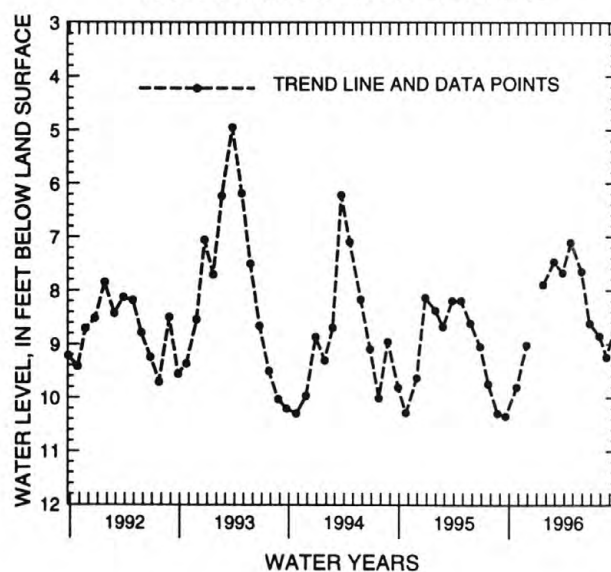
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.81	JAN 23	7.90	MAR 28	7.68	MAY 30	7.65	JUL 29	8.85	SEP 26	8.51
NOV 28	9.03	FEB 28	7.47	APR 25	7.11	JUN 26	8.62	AUG 22	9.25		

NEW SHOREHAM 258 WELL



NORTH KINGSTOWN 255 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

357

WASHINGTON COUNTY--Continued

412932071374302. Richmond well RIW 417.

LOCATION.--Lat 41°29'32", long 71°37'43", Washington County, Hydrologic Unit 01090005, town of Richmond, about 50 ft south of State Highway 138, about 75 ft west of Beaver River, and 3.3 mi north of Kenyon.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 40 ft, cased to 37 ft, screened 37 to 40 ft.

INSTRUMENTATION.--Continuous graphic recorder December 1975 to May 1988, digital recorder (60 minute) June 1988 to current year.

DATUM.--Land-surface datum is 115.56 ft, above sea level. Measuring point: Floor of recorder shelter, 0.60 ft above land-surface datum.

REMARKS.--Water level affected by stage of nearby Beaver River.

PERIOD OF RECORD.--December 1975 to current year.

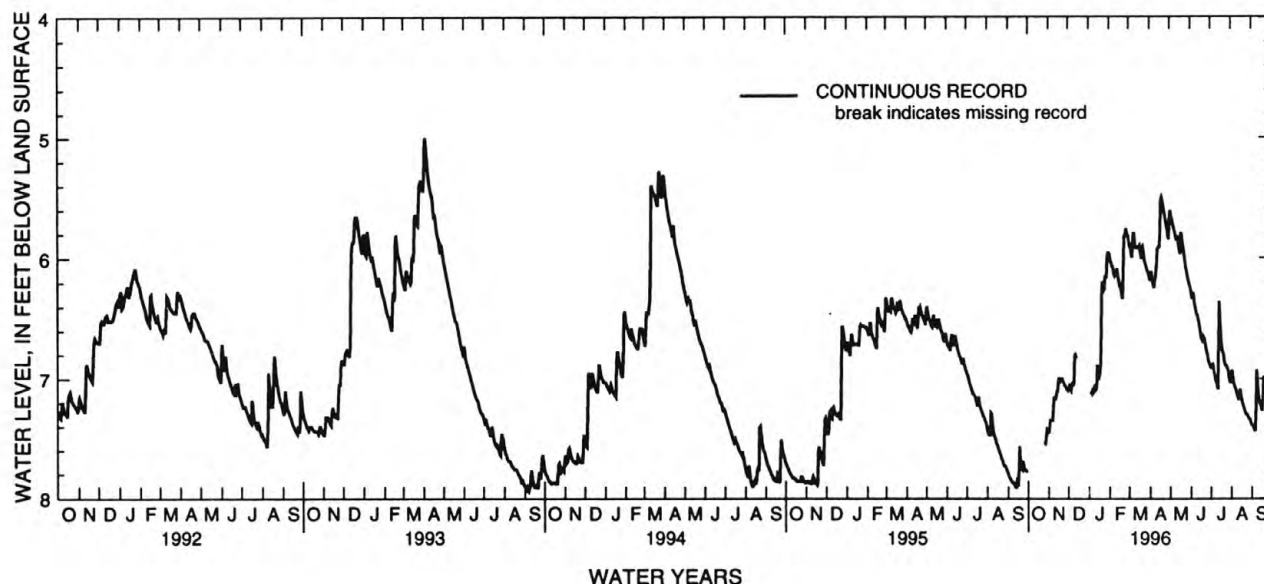
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.08 ft below land-surface datum, Apr. 25, 1983; lowest, 8.02 ft below land-surface datum, Oct. 3, 1980.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.46	7.09	---	6.00	5.90	6.19	5.61	6.27	6.91	6.97	7.39
2	---	7.42	7.07	---	6.03	5.92	6.12	5.63	6.31	6.91	6.93	7.39
3	---	7.35	7.09	---	6.04	5.93	6.12	5.70	6.34	6.91	6.98	7.40
4	---	7.35	7.09	e7.13	6.07	5.97	6.17	5.69	6.30	6.87	7.02	7.42
5	---	7.35	7.10	7.11	6.07	6.00	6.20	5.72	6.29	6.90	7.05	7.43
6	---	7.35	7.05	7.13	6.10	5.91	6.23	5.74	6.35	6.95	7.07	7.44
7	---	7.35	7.03	7.12	6.14	5.80	6.25	5.77	6.39	6.98	7.08	7.22
8	---	7.19	7.06	7.08	6.15	5.80	6.20	5.79	6.42	7.01	7.10	6.93
9	---	7.16	7.04	7.06	6.13	5.86	6.17	5.82	6.45	7.02	7.13	7.01
10	---	7.16	6.81	7.06	6.11	5.91	6.12	5.85	6.47	7.04	7.14	7.10
11	---	7.18	6.80	7.09	6.11	5.92	6.04	5.85	6.47	7.07	7.16	7.15
12	---	7.14	6.82	7.08	6.09	5.92	5.93	5.84	6.50	7.09	7.18	7.19
13	---	7.11	6.83	6.89	6.14	5.92	5.92	5.87	6.53	6.75	7.14	7.21
14	---	7.11	---	6.91	6.18	5.92	5.91	5.91	6.56	6.36	7.09	7.22
15	---	7.03	---	6.96	6.21	5.91	5.92	5.94	6.60	6.46	7.13	7.24
16	---	7.00	---	6.98	6.24	5.90	5.80	5.97	6.64	6.60	7.16	7.27
17	---	7.00	---	6.96	6.25	5.94	5.52	5.80	6.67	6.69	7.19	7.21
18	---	7.02	---	6.89	6.28	5.98	5.50	5.80	6.68	6.75	7.21	7.03
19	---	7.01	---	6.70	6.32	6.01	5.52	5.85	6.70	6.78	7.23	6.98
20	---	7.00	---	6.25	6.34	5.92	5.55	5.89	6.65	6.79	7.25	7.05
21	---	7.00	---	6.20	6.17	5.91	5.58	5.93	6.66	6.83	7.27	7.10
22	---	7.02	---	6.23	5.83	5.95	5.62	5.97	6.69	6.87	7.28	7.13
23	---	7.03	---	6.27	5.82	5.99	5.65	6.01	6.72	6.89	7.30	7.11
24	---	7.05	---	6.26	5.81	6.03	5.68	6.06	6.76	6.89	7.30	7.12
25	---	7.06	---	6.15	5.76	6.05	5.73	6.09	6.78	6.90	7.30	7.13
26	e7.55	7.06	---	6.16	5.79	6.07	5.75	6.12	6.81	6.92	7.32	7.15
27	7.55	7.08	---	6.16	5.82	6.09	5.79	6.15	6.84	6.93	7.33	7.17
28	7.49	e7.09	---	5.99	5.82	6.11	5.83	6.18	6.87	6.97	7.34	7.19
29	7.43	e7.09	---	5.96	5.86	6.12	5.85	6.20	6.88	7.01	7.34	7.19
30	7.44	e7.10	---	5.96	---	6.14	5.67	6.23	6.90	7.03	7.36	7.19
31	7.44	---	---	5.97	---	6.16	---	6.24	---	7.03	7.38	---
MEAN	---	7.14	---	---	6.06	5.97	5.88	5.91	6.58	6.87	7.18	7.19
LOW	---	7.46	---	---	6.34	6.16	6.25	6.24	6.90	7.09	7.38	7.44
HIGH	---	7.00	---	---	5.76	5.80	5.50	5.61	6.27	6.36	6.93	6.93

WTR YR 1996 HIGH 5.50 APR 17, 18, 19, LOW 7.55 OCT 26 (but may have been lower during periods of missing record)
e Estimated

RICHMOND 417 WELL



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.

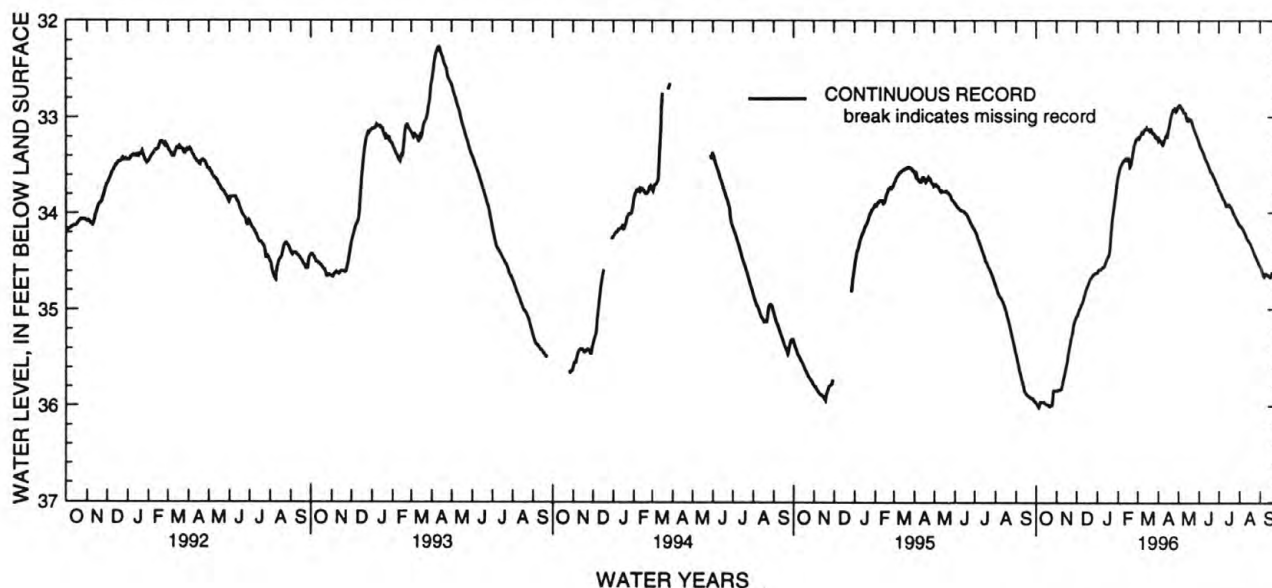
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35.97	35.84	35.07	34.62	33.63	33.22	33.24	32.89	33.26	33.76	34.13	34.55
2	35.98	35.84	35.06	34.60	33.59	33.21	33.22	32.88	33.29	33.77	34.14	34.56
3	35.99	35.83	35.04	34.59	33.56	33.21	33.23	32.89	33.30	33.78	34.14	34.58
4	36.00	35.83	35.02	34.59	33.54	33.22	33.24	32.88	33.32	33.80	34.15	34.61
5	36.01	35.83	35.00	34.59	33.52	33.20	33.25	32.89	33.33	33.81	34.16	34.63
6	35.99	35.83	34.99	34.59	33.50	33.19	33.27	32.90	33.35	33.83	34.17	34.65
7	35.96	35.83	34.97	34.58	33.49	33.17	33.28	32.92	33.36	33.85	34.19	34.66
8	35.96	35.82	34.95	34.57	33.47	33.15	33.29	32.92	33.38	33.86	34.20	34.64
9	35.96	35.78	34.94	34.56	33.46	33.15	33.28	32.95	33.40	33.87	34.22	34.63
10	35.96	35.75	34.92	34.56	33.46	33.16	33.24	32.95	33.43	33.89	34.23	34.63
11	35.96	35.72	34.90	34.56	33.44	33.14	33.23	32.95	33.44	33.91	34.25	34.64
12	35.96	35.69	34.87	34.55	33.44	33.13	33.20	32.96	33.45	33.93	34.27	34.64
13	35.96	35.66	34.85	34.53	33.43	33.12	33.20	33.00	33.47	33.93	34.28	34.65
14	35.97	35.63	34.82	34.51	33.43	33.12	33.18	33.03	33.48	33.92	34.29	34.65
15	35.98	35.59	34.80	34.49	33.45	33.11	33.19	33.04	33.50	33.91	34.30	34.66
16	35.98	35.57	34.78	34.48	33.45	33.13	33.15	33.04	33.52	33.91	34.31	34.67
17	35.98	35.53	34.76	34.46	33.44	33.13	33.11	33.02	33.54	33.92	34.32	34.67
18	35.98	35.47	34.75	34.45	33.47	33.13	33.08	33.03	33.56	33.94	34.34	34.65
19	35.99	35.43	34.73	34.43	33.52	33.14	33.04	33.02	33.58	33.94	34.35	34.62
20	35.99	35.39	34.71	34.38	33.51	33.12	33.00	33.02	33.58	33.96	34.37	34.62
21	36.00	35.36	34.69	34.29	33.49	33.12	32.97	33.04	33.59	33.97	34.38	34.62
22	35.99	35.32	34.68	34.19	33.43	33.13	32.95	33.07	33.61	33.99	34.40	34.62
23	35.99	35.28	34.67	34.11	33.39	33.15	32.93	33.09	33.62	34.01	34.42	34.61
24	35.99	35.26	34.66	34.05	33.35	33.17	32.92	33.11	33.64	34.02	34.44	34.62
25	35.99	35.23	34.65	34.00	33.30	33.17	32.92	33.13	33.65	34.04	34.45	34.62
26	35.91	35.17	34.64	33.95	33.28	33.17	32.91	33.15	33.67	34.05	34.46	34.64
27	35.84	35.15	34.63	33.89	33.26	33.20	32.92	33.17	33.69	34.06	34.48	34.66
28	35.84	35.12	34.63	33.84	33.23	33.21	32.94	33.18	33.70	34.08	34.50	34.66
29	35.84	35.10	34.63	33.78	33.23	33.20	32.93	33.20	33.72	34.09	34.51	34.66
30	35.84	35.08	34.62	33.72	---	33.22	32.90	33.22	33.74	34.11	34.53	34.67
31	35.84	---	34.62	33.67	---	33.22	---	33.24	---	34.12	34.54	---
MEAN	35.95	35.53	34.81	34.33	33.44	33.16	33.11	33.03	33.51	33.94	34.32	34.63
LOW	36.01	35.84	35.07	34.62	33.63	33.22	33.29	33.24	33.74	34.12	34.54	34.67
HIGH	35.84	35.08	34.62	33.67	33.23	33.11	32.90	32.88	33.26	33.76	34.13	34.55

WTR YR 1996 HIGH 32.88 MAY 2, 4 LOW 36.01 OCT 5

RICHMOND 600 WELL



GROUND-WATER LEVELS IN RHODE ISLAND

359

WASHINGTON COUNTY--Continued

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.

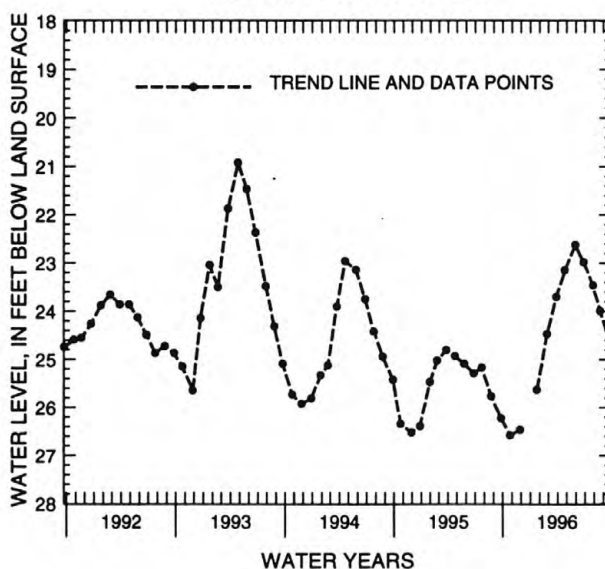
PERIOD OF RECORD.-- October 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.92 ft below land-surface datum, Apr. 27, 1993 lowest measured, 26.58 ft below land-surface datum, Oct. 26, 1995.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	26.58	JAN 23	25.63	MAR 28	23.70	MAY 30	22.62	JUL 28	23.46	SEP 26	24.68
NOV 28	26.46	FEB 26	24.47	APR 25	23.15	JUN 26	22.98	AUG 22	23.99		

RICHMOND 785 WELL



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.

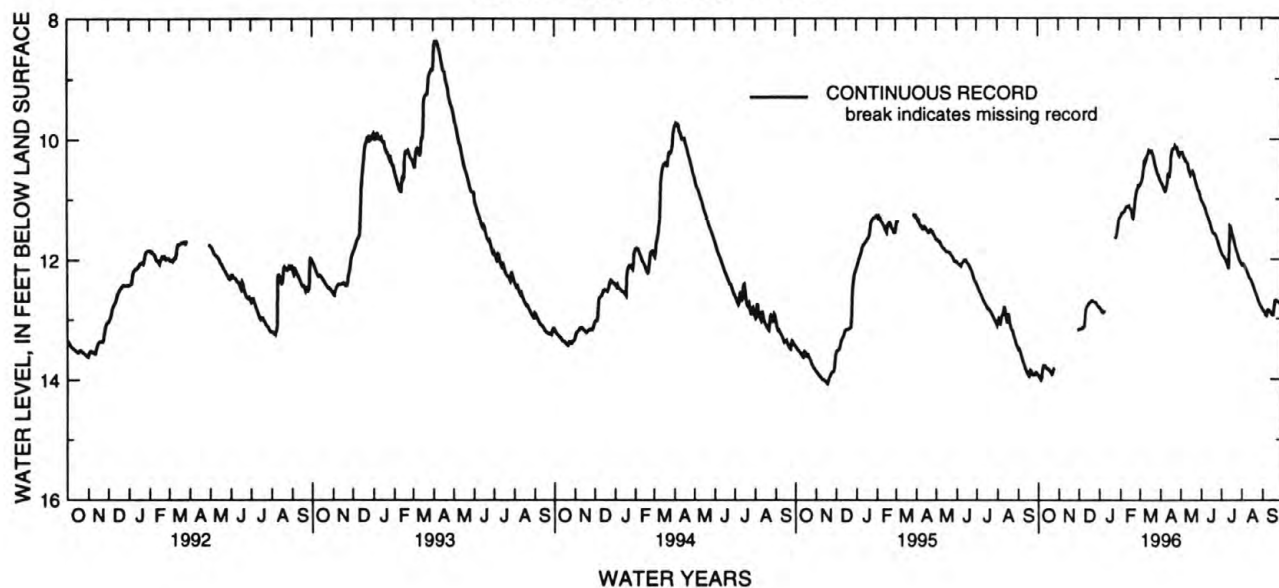
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.91 ft below land-surface datum, Apr. 25, 26, 1983; lowest, 15.06 ft below land-surface datum, Dec. 29, 1965.

 DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13.94	---	13.17	12.82	11.29	10.77	10.69	10.21	11.00	11.88	12.09	12.84
2	13.96	---	13.17	12.83	11.26	10.74	10.71	10.21	11.03	11.91	12.07	12.86
3	13.97	---	13.17	12.84	11.23	10.72	10.73	10.23	11.04	11.93	12.07	12.87
4	13.99	---	13.16	12.87	11.22	10.70	10.75	10.22	11.07	11.94	12.09	12.89
5	14.01	---	13.16	12.89	11.22	10.64	10.78	10.25	11.09	11.96	12.11	12.91
6	13.98	---	13.15	12.90	11.21	10.59	10.82	10.29	11.12	11.98	12.13	12.94
7	13.86	---	13.14	12.89	11.20	10.49	10.84	10.32	11.15	12.00	12.16	12.95
8	13.79	---	13.14	12.86	11.17	10.36	10.86	10.32	11.18	12.03	12.18	12.90
9	13.77	---	13.12	---	11.14	10.34	10.85	10.36	11.23	12.06	12.21	12.85
10	13.77	---	12.98	---	11.13	10.37	10.80	10.37	11.26	12.09	12.24	12.85
11	13.78	---	12.85	---	11.11	10.33	10.75	10.38	11.29	12.13	12.27	12.86
12	13.80	---	12.81	---	11.11	10.28	10.60	10.41	11.32	12.16	12.30	12.88
13	13.81	---	12.79	---	11.11	10.25	10.57	10.48	11.35	11.85	12.32	12.89
14	13.83	---	12.78	---	11.10	10.22	10.57	10.52	11.38	11.44	12.33	12.90
15	13.84	---	12.77	---	11.14	10.19	10.59	10.56	11.42	11.45	12.35	12.92
16	13.83	---	12.74	---	11.15	10.21	10.51	10.59	11.47	11.50	12.38	12.94
17	13.84	---	12.73	---	11.16	10.21	10.29	10.56	11.51	11.56	12.41	12.94
18	13.86	---	12.72	---	11.22	10.19	10.21	10.53	11.54	11.61	12.44	12.86
19	13.88	---	12.71	---	11.29	10.19	10.18	10.52	11.56	11.64	12.48	12.76
20	13.90	---	12.69	---	11.31	10.23	10.15	10.54	11.57	11.69	12.51	12.70
21	13.92	---	12.69	---	11.27	10.26	10.14	10.58	11.57	11.73	12.54	12.69
22	13.91	---	12.70	---	11.14	10.31	10.14	10.63	11.59	11.78	12.57	12.69
23	13.85	---	12.71	---	11.03	10.36	10.11	10.67	11.60	11.82	12.60	12.71
24	13.83	---	12.72	11.62	10.97	10.42	10.13	10.71	11.64	11.86	12.63	12.71
25	13.82	---	12.72	11.63	10.88	10.47	10.15	10.75	11.67	11.89	12.67	12.71
26	---	---	12.72	11.61	10.84	10.49	10.14	10.79	11.71	11.92	12.70	12.73
27	---	---	12.74	11.55	10.82	10.55	10.19	10.83	11.75	11.96	12.73	12.74
28	---	---	12.76	11.48	10.77	10.58	10.25	10.85	11.78	12.00	12.76	12.75
29	---	13.18	12.78	11.38	10.78	10.59	10.27	10.86	11.82	12.02	12.78	12.77
30	---	13.18	12.79	11.32	---	10.63	10.22	10.91	11.85	12.05	12.80	12.79
31	---	---	12.80	11.30	---	10.66	---	10.98	---	12.07	12.82	---
MEAN	---	---	12.87	---	11.11	10.43	10.47	10.53	11.42	11.87	12.41	12.83
LOW	---	---	13.17	---	11.31	10.77	10.86	10.98	11.85	12.16	12.82	12.95
HIGH	---	---	12.69	---	10.77	10.19	10.11	10.21	11.00	11.44	12.07	12.69

WTR YR 1996 HIGH 10.10 APR 23 LOW 14.02 OCT 5

SOUTH KINGSTOWN 6 WELL



WASHINGTON COUNTY--Continued

412923071361601. South Kingstown well SNW 515.

LOCATION.--Lat 41°29'23", long 71°36'16", Washington County, Hydrologic Unit 01090005, town of South Kingstown, at Laurel Lane Golf Course, 2.7 mi west of West Kingston.
 Owner: Private owner.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in, depth 30 ft, lined with stone to 30 ft, shored.

INSTRUMENTATION.--Monthly measurement with chalked tape by U.S. Geological Survey personnel.

DATUM.--Land-surface datum is 127.84 ft above sea level. Measuring point: Top edge of concrete casing on south rim of well, 2.11 ft above land-surface datum. Dec. 27, 1975, to Apr. 25, 1981, measuring point 1.61 ft lower.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.44 ft below land-surface datum, May 26, 1966. Dry several times in water years 1978, 1980-85, 1987-88, 1991, and 1994-95.

WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	DRY	JAN 23	27.11	MAR 28	26.08	MAY 30	26.37	JUL 28	27.58	SEP 26	27.99
NOV 28	28.08	FEB 26	26.01	APR 25	25.56	JUN 26	27.34	AUG 22	28.86		

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.

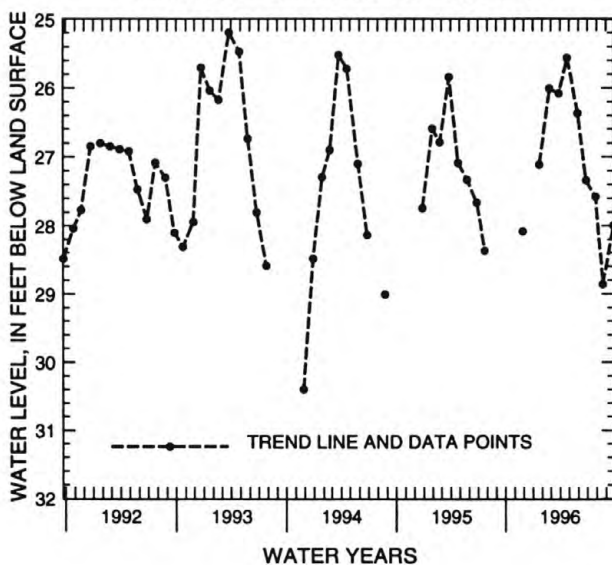
PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land-surface datum, Apr. 23, 1983; lowest measured, 14.69 ft below land-surface datum, Sept. 23, 1993.

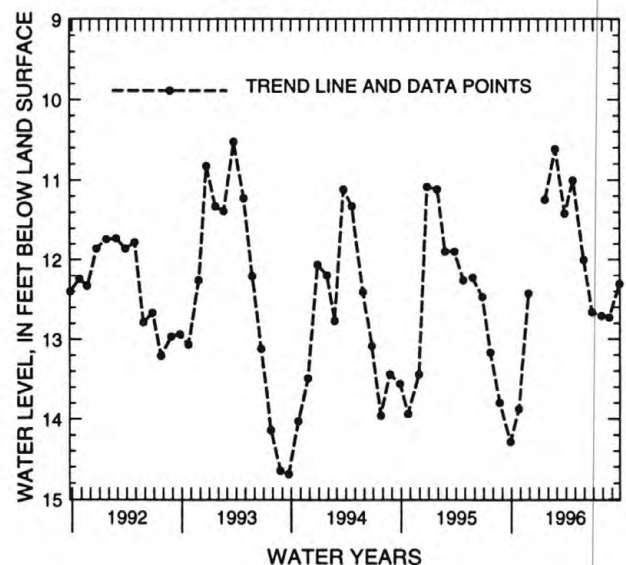
WATER LEVELS, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	13.88	JAN 23	11.25	MAR 28	11.42	MAY 30	12.01	JUL 28	12.71	SEP 25	12.31
NOV 28	12.43	FEB 26	10.62	APR 25	11.01	JUN 26	12.66	AUG 22	12.73		

SOUTH KINGSTOWN 515 WELL



WESTERLY 522 WELL



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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-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.

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