

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; 1995.

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

REMARKS.--Records good except those for estimated daily discharge, 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.--61 years, 46.8 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.--Maximum discharge, 402 ft³/s, Apr. 22, gage height, 2.60 ft; minimum, 8.2 ft³/s, July 25.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 25 | 22 | 24 | 30 | 62 | 71 | 80 | 83 | 41 | 24 | 35 | 9.4 |
| 2 | 18 | 22 | 23 | 29 | 46 | 65 | 73 | 81 | 37 | 22 | 28 | 39 |
| 3 | 14 | 132 | 23 | 31 | 38 | 59 | 69 | 78 | 47 | 19 | 24 | 55 |
| 4 | 17 | 109 | 24 | 36 | 36 | 55 | 70 | 71 | 39 | 19 | 23 | 30 |
| 5 | 27 | 70 | 23 | 105 | 34 | 52 | 79 | 68 | 33 | 19 | 19 | 22 |
| 6 | 23 | 52 | 30 | 80 | 32 | 50 | 69 | 67 | 74 | 16 | 16 | 16 |
| 7 | 17 | 42 | 93 | 58 | 31 | 48 | 64 | 65 | 258 | 15 | 29 | 14 |
| 8 | 14 | 37 | 89 | 47 | 31 | 46 | 59 | 61 | 163 | 14 | 27 | 12 |
| 9 | 13 | 35 | 60 | 42 | 31 | 46 | 71 | 59 | 98 | 14 | 20 | 12 |
| 10 | 14 | 33 | 46 | 56 | 33 | 47 | 69 | 60 | 71 | 13 | 28 | 13 |
| 11 | 21 | 32 | 41 | 135 | 37 | 57 | 60 | 87 | 60 | 12 | 22 | 11 |
| 12 | 18 | 31 | 37 | 96 | 39 | 250 | 58 | 74 | 101 | 11 | 17 | 11 |
| 13 | 15 | 30 | 35 | 68 | 35 | 198 | 55 | 64 | 96 | 10 | 15 | 12 |
| 14 | 41 | 30 | 36 | 54 | 174 | 123 | 53 | 80 | 76 | 9.8 | 38 | 11 |
| 15 | 30 | 30 | 54 | 44 | 184 | 93 | 53 | 69 | 64 | 11 | 31 | 37 |
| 16 | 24 | 29 | 58 | e40 | 104 | 79 | 68 | 57 | 59 | 29 | 30 | 35 |
| 17 | 20 | 27 | 49 | e37 | 70 | 140 | 75 | 52 | 53 | 19 | 33 | 24 |
| 18 | 55 | 26 | 43 | e35 | 55 | 137 | 75 | 48 | 50 | 15 | 25 | 18 |
| 19 | 50 | 26 | 39 | e33 | 55 | 107 | 94 | 63 | 46 | 13 | 22 | 17 |
| 20 | 56 | 27 | 35 | e31 | 53 | 89 | 84 | 73 | 42 | 12 | 19 | 51 |
| 21 | 83 | 29 | 43 | e30 | 49 | 80 | 74 | 63 | 37 | 11 | 15 | 32 |
| 22 | 55 | 27 | 42 | e29 | 48 | 74 | 318 | 58 | 35 | 11 | 13 | 22 |
| 23 | 44 | 25 | 38 | 30 | 51 | 70 | 282 | 68 | 32 | 11 | 12 | 18 |
| 24 | 36 | 22 | 36 | 32 | 70 | 65 | 191 | 88 | 30 | 9.9 | 15 | 17 |
| 25 | 30 | 24 | 33 | 36 | 80 | 62 | 141 | 141 | 28 | 8.9 | 17 | 15 |
| 26 | 27 | 28 | 31 | 40 | 121 | 61 | 121 | 100 | 26 | 13 | 14 | 14 |
| 27 | 25 | 31 | 32 | 35 | 112 | 59 | 121 | 73 | 26 | 36 | 12 | 16 |
| 28 | 24 | 36 | 31 | 31 | 96 | 140 | 107 | 61 | 29 | 30 | 11 | 15 |
| 29 | 23 | 30 | 30 | 31 | 84 | 176 | 100 | 55 | 26 | 24 | 9.7 | 12 |
| 30 | 22 | 26 | 30 | 30 | --- | 120 | 91 | 50 | 25 | 19 | 9.4 | 12 |
| 31 | 22 | --- | 30 | 70 | --- | 92 | --- | 48 | --- | 31 | 9.4 | --- |
| TOTAL | 903 | 1120 | 1238 | 1481 | 1891 | 2811 | 2924 | 2165 | 1802 | 521.6 | 638.5 | 622.4 |
| MEAN | 29.1 | 37.3 | 39.9 | 47.8 | 65.2 | 90.7 | 97.5 | 69.8 | 60.1 | 16.8 | 20.6 | 20.7 |
| MAX | 83 | 132 | 93 | 135 | 184 | 250 | 318 | 141 | 258 | 36 | 38 | 55 |
| MIN | 13 | 22 | 23 | 29 | 31 | 46 | 53 | 48 | 25 | 8.9 | 9.4 | 9.4 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2000, BY WATER YEAR (WY)

| | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| (WY) | 1956 | 1956 | 1956 | 1987 | 1987 | 1987 | 1979 | 1979 | 1979 | 1970 | 1970 | 1970 |
| (WY) | 1969 | 1950 | 1966 | 1966 | 1944 | 1981 | 1966 | 1992 | 1957 | 1994 | 1965 | 1968 |

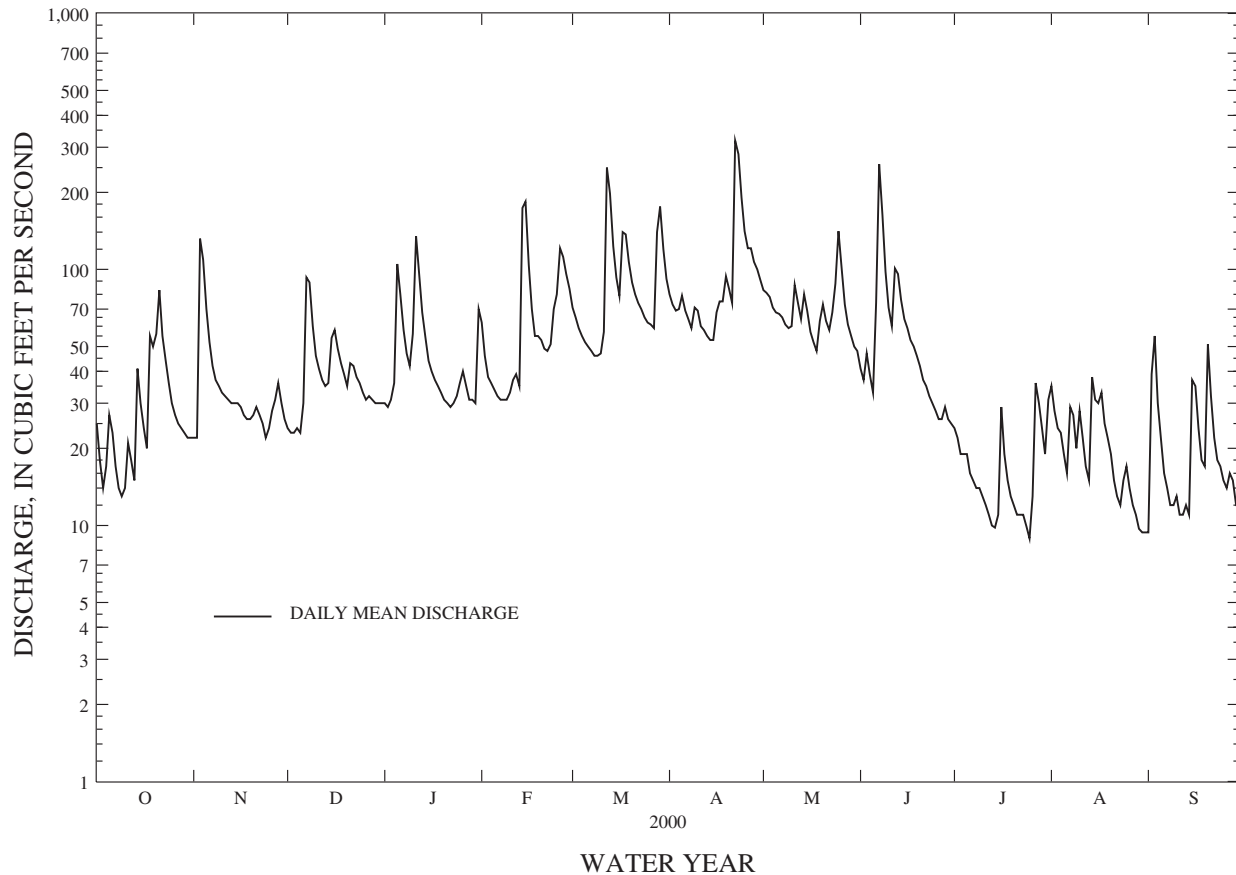
POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1940 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 16199.8 | | 18117.5 | | | |
| ANNUAL MEAN | 44.4 | | 49.5 | | 46.8 | |
| HIGHEST ANNUAL MEAN | | | | | 81.5 1984 | |
| LOWEST ANNUAL MEAN | | | | | 17.7 1966 | |
| HIGHEST DAILY MEAN | 392 | Feb 3 | 318 | Apr 22 | 861 | Jun 6 1982 |
| LOWEST DAILY MEAN | 2.3 | Aug 5 | 8.9 | Jul 25 | .00 | Oct 25 1947 |
| ANNUAL SEVEN-DAY MINIMUM | 2.4 | Aug 1 | 11 | Aug 26 | .10 | Sep 13 1943 |
| INSTANTANEOUS PEAK FLOW | | | 402 | Apr 22 | 1020 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 2.60 | Apr 22 | 6.78 | Aug 31 1954 |
| INSTANTANEOUS LOW FLOW | | | 8.2 | Jul 25 | .00 | Oct 24 1947 |
| 10 PERCENT EXCEEDS | 95 | | 93 | | 101 | |
| 50 PERCENT EXCEEDS | 32 | | 36 | | 34 | |
| 90 PERCENT EXCEEDS | 3.8 | | 14 | | 6.1 | |

e Estimated

HUNT RIVER NEAR EAST GREENWICH, RI 01117000



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 fair except those for estimated daily discharge, which are poor. Diversion upstream for supply of University of Rhode Island.

AVERAGE DISCHARGE.--28 years (water years 1959, 1974-current year), 21.2 ft³/s.

EXTREMES FOR PERIOD OF RECORD 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, 100 ft³/s, Apr. 23, gage height, 6.33 ft; minimum, 2.9 ft³/s, July 21.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 5.7 | 6.9 | 9.5 | 11 | 21 | 30 | 36 | 36 | 18 | 14 | 21 | 7.5 |
| 2 | 6.1 | 7.1 | 9.0 | 11 | 19 | 27 | 33 | 36 | 18 | 13 | 22 | 7.6 |
| 3 | 7.0 | 20 | 8.9 | 11 | 16 | 23 | 32 | 36 | 20 | 13 | 20 | 13 |
| 4 | 8.0 | 30 | 9.1 | 12 | 15 | 21 | 30 | 35 | 19 | 12 | 18 | 15 |
| 5 | 8.1 | 26 | 9.1 | 17 | 14 | 20 | 30 | 36 | 18 | 12 | 17 | 15 |
| 6 | 8.5 | 20 | 10 | 19 | 14 | 19 | 29 | 35 | 23 | 12 | 14 | 13 |
| 7 | 7.7 | 16 | 16 | 18 | 13 | 18 | 28 | 32 | 41 | 11 | 14 | 12 |
| 8 | 6.9 | 13 | 21 | 16 | 12 | 18 | 26 | 30 | 51 | 9.9 | 14 | 10 |
| 9 | 6.2 | 11 | 20 | 15 | 12 | 17 | 26 | 29 | 43 | 9.7 | 14 | 10 |
| 10 | 5.8 | 11 | 17 | 17 | 12 | 17 | 27 | 27 | 36 | 9.6 | 16 | 13 |
| 11 | 8.6 | 11 | 15 | 23 | 13 | 20 | 26 | 28 | 31 | 8.3 | 16 | 14 |
| 12 | 7.3 | 10 | 14 | 26 | 13 | 47 | 25 | 29 | 33 | 7.3 | 15 | 14 |
| 13 | 5.4 | 10 | 13 | 23 | 13 | 71 | 24 | 28 | 33 | 7.1 | 14 | 13 |
| 14 | 7.2 | 10 | 13 | 20 | 25 | 61 | 24 | 28 | 33 | 7.0 | 16 | 12 |
| 15 | 9.3 | 9.8 | 14 | 16 | 41 | 48 | 24 | 27 | 31 | 7.4 | 16 | 16 |
| 16 | 9.1 | 9.3 | 15 | 15 | 37 | 40 | 26 | 25 | 29 | 9.1 | 18 | 21 |
| 17 | 8.6 | 9.8 | 15 | 14 | 29 | 45 | 28 | 24 | 27 | 9.2 | 20 | 21 |
| 18 | 12 | 9.5 | 14 | 13 | 24 | 50 | 29 | 23 | 25 | 8.1 | 20 | 18 |
| 19 | 13 | 9.4 | 13 | 12 | 23 | 46 | 33 | 24 | 23 | 5.0 | 19 | 16 |
| 20 | 16 | 9.4 | 13 | 12 | 20 | 41 | 35 | 25 | 22 | 4.2 | 17 | 25 |
| 21 | 18 | 9.7 | 13 | 12 | 18 | 36 | 34 | 26 | 20 | 4.1 | 15 | 28 |
| 22 | 17 | 9.5 | 13 | 11 | 16 | 33 | 64 | 25 | 19 | 4.8 | 13 | 26 |
| 23 | 15 | 9.4 | 12 | 12 | 16 | 31 | 98 | 26 | 18 | 5.3 | 13 | 22 |
| 24 | 13 | 9.8 | 12 | 12 | 19 | 29 | 88 | 29 | 17 | e5.1 | 12 | 19 |
| 25 | 11 | 10 | 11 | 13 | 23 | 27 | 71 | 30 | 16 | e4.8 | 13 | 17 |
| 26 | 9.5 | 10 | 11 | 14 | 33 | 27 | 57 | 29 | 15 | 7.1 | 11 | 15 |
| 27 | 8.8 | 11 | 11 | 14 | 39 | 26 | 51 | 26 | 15 | 11 | 9.7 | 15 |
| 28 | 8.2 | 10 | 11 | 13 | 39 | 36 | 46 | 23 | 15 | 13 | 8.7 | 14 |
| 29 | 7.9 | 10 | 10 | 12 | 35 | 50 | 43 | 21 | 15 | 12 | 7.4 | 13 |
| 30 | 7.7 | 10 | 11 | 12 | --- | 49 | 40 | 20 | 15 | 12 | 7.6 | 12 |
| 31 | 7.2 | --- | 11 | 17 | --- | 42 | --- | 18 | --- | 16 | 7.4 | --- |
| TOTAL | 289.8 | 358.6 | 394.6 | 463 | 624 | 1065 | 1163 | 866 | 739 | 284.1 | 458.8 | 467.1 |
| MEAN | 9.35 | 12.0 | 12.7 | 14.9 | 21.5 | 34.4 | 38.8 | 27.9 | 24.6 | 9.16 | 14.8 | 15.6 |
| MAX | 18 | 30 | 21 | 26 | 41 | 71 | 98 | 36 | 51 | 16 | 22 | 28 |
| MIN | 5.4 | 6.9 | 8.9 | 11 | 12 | 17 | 24 | 18 | 15 | 4.1 | 7.4 | 7.5 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2000, BY WATER YEAR (WY)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 9.50 | 14.7 | 21.9 | 27.8 | 29.7 | 36.1 | 35.4 | 27.6 | 21.2 | 13.1 | 10.7 | 9.39 |
| MAX | 29.1 | 43.4 | 59.4 | 64.2 | 48.4 | 64.0 | 85.4 | 47.6 | 70.4 | 35.3 | 24.5 | 32.4 |
| (WY) | 1990 | 1990 | 1987 | 1979 | 1998 | 1983 | 1983 | 1982 | 1982 | 1982 | 1982 | 1985 |
| MIN | 2.88 | 4.32 | 5.11 | 3.54 | 10.4 | 9.14 | 12.7 | 11.5 | 7.89 | 3.94 | 1.65 | 1.50 |
| (WY) | 1998 | 1995 | 1981 | 1981 | 1981 | 1981 | 1985 | 1981 | 1976 | 1976 | 1993 | 1993 |

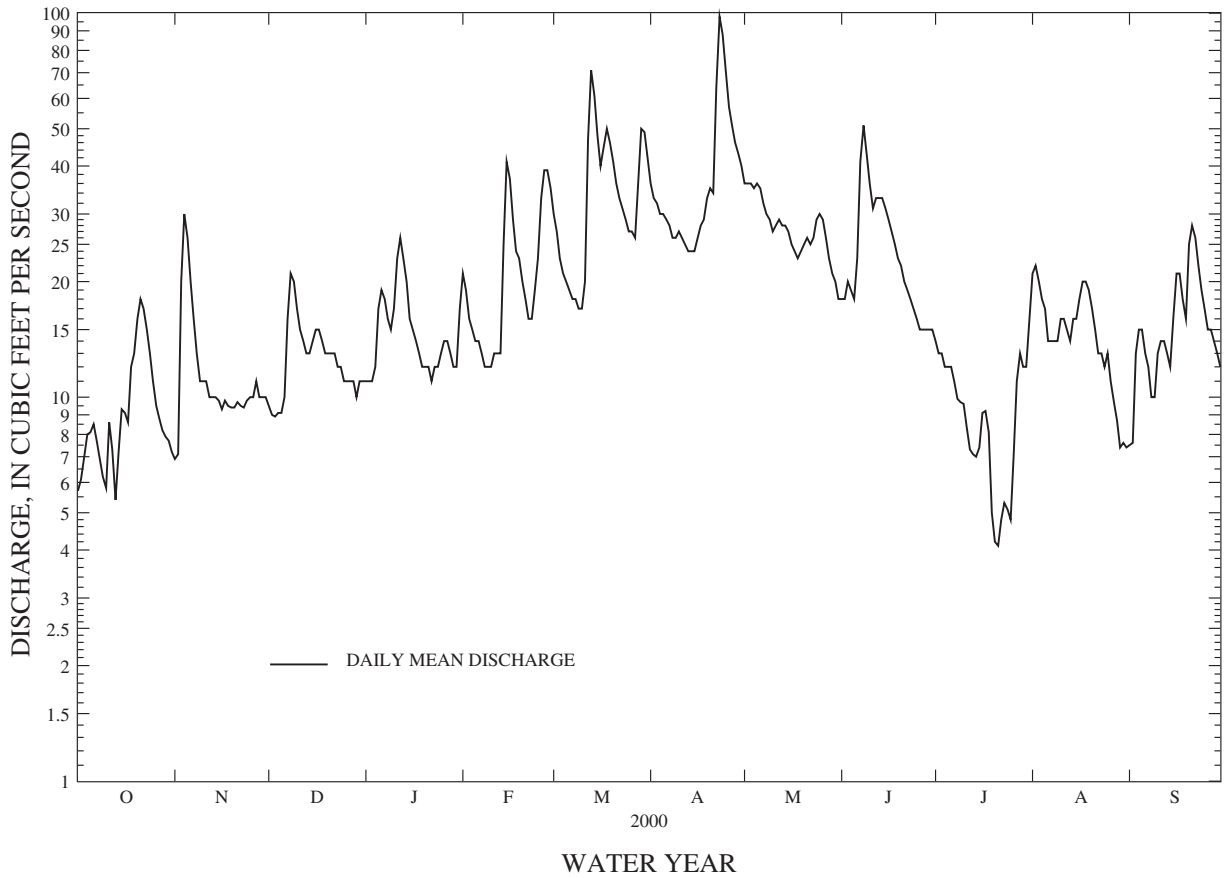
PAWCATUCK RIVER BASIN

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1958 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL | 6323.1 | | 7173.0 | | | |
| ANNUAL MEAN | 17.3 | | 19.6 | | 21.2 | |
| HIGHEST ANNUAL MEAN | | | | | 32.8 1984 | |
| LOWEST ANNUAL MEAN | | | | | 6.89 1981 | |
| HIGHEST DAILY MEAN | 100 | Feb 4 | 98 | Apr 23 | 235 | Jun 6 1982 |
| LOWEST DAILY MEAN | 1.0 | Aug 2 | 4.1 | Jul 21 | .51 | Nov 6 1994 |
| ANNUAL SEVEN-DAY MINIMUM | 1.7 | Aug 2 | 4.8 | Jul 19 | .57 | Nov 3 1994 |
| INSTANTANEOUS PEAK FLOW | | | 100 | Apr 23 | 250 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 6.33 | Apr 23 | 6.92 | Apr 1 1997 |
| INSTANTANEOUS LOW FLOW | | | 2.9 | Jul 21 | .47 | Nov 6 1994 |
| 10 PERCENT EXCEEDS | 37 | | 35 | | 43 | |
| 50 PERCENT EXCEEDS | 12 | | 16 | | 17 | |
| 90 PERCENT EXCEEDS | 3.1 | | 8.3 | | 5.5 | |

e Estimated

CHIPUXET RIVER AT WEST KINGSTON, RI 01117350



PAWCATUCK RIVER BASIN

011173545 QUEEN RIVER, 1,400 FT UPSTREAM OF WILLIAMS REYNOLD ROAD, AT EXETER, RI--Continued

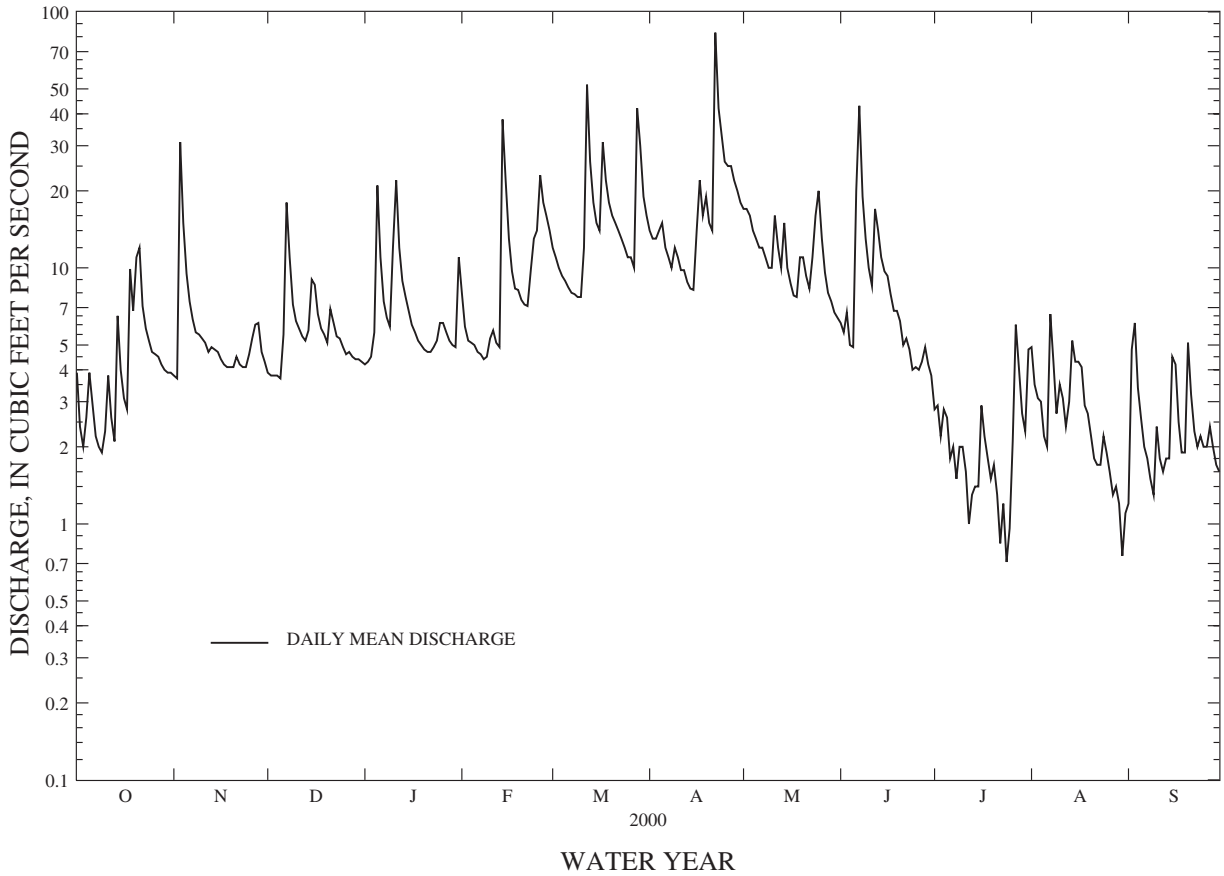
SUMMARY STATISTICS

FOR 2000 WATER YEAR

| | | |
|--------------------------|---------|--------|
| ANNUAL TOTAL | 2968.86 | |
| ANNUAL MEAN | 8.11 | |
| HIGHEST DAILY MEAN | 83 | Apr 22 |
| LOWEST DAILY MEAN | .71 | Jul 24 |
| ANNUAL SEVEN-DAY MINIMUM | 1.2 | Jul 19 |
| INSTANTANEOUS PEAK FLOW | 130 | Apr 22 |
| INSTANTANEOUS PEAK STAGE | 2.99 | Apr 22 |
| INSTANTANEOUS LOW FLOW | 0.68 | Jul 24 |
| ANNUAL RUNOFF (CFSM) | 2.20 | |
| ANNUAL RUNOFF (INCHES) | 29.93 | |
| 10 PERCENT EXCEEDS | 16 | |
| 50 PERCENT EXCEEDS | 5.3 | |
| 90 PERCENT EXCEEDS | 1.9 | |

e Estimated

QUEEN RIVER, 1400 FT UPSTREAM FROM WILLIAM REYNOLDS ROAD
AT EXETER, RI 011173545



PAWCATUCK RIVER BASIN

01117370 QUEEN RIVER AT LIBERTY ROAD AT LIBERTY, RI

LOCATION.--Lat 41°32'20", long 71°34'09", Washington County, Hydrologic Unit 01090005, on left bank 2ft downstream from bridge on Liberty Road, at Liberty, RI.

DRAINAGE AREA.--19.1 mi².

PERIOD OF RECORD.--Discharge: October 1998 to current year..

GAGE.--Water-stage-recorder. Datum of gage is 120 ft above sea level, from topographic map.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189 ft³/s, Feb. 3, 1999, gage height, 4.57 ft³/s; minimum 1.60 ft³/s, Aug. 4, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 175 ft³/s, Apr. 22, gage height, 4.32 ft; minimum, 6.7 ft³/s, Aug. 31, Sept. 1, 2.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 20 | 24 | 23 | 23 | 42 | 61 | 70 | 72 | 32 | 21 | 31 | 6.1 |
| 2 | 13 | 24 | 21 | 23 | 33 | 56 | 64 | 70 | 31 | 20 | 23 | 11 |
| 3 | 10 | 84 | 21 | 25 | 30 | 51 | 61 | 67 | 37 | 19 | 19 | 33 |
| 4 | 15 | 78 | 21 | 26 | 29 | 48 | 63 | 62 | 31 | 19 | 18 | 22 |
| 5 | 20 | 51 | 21 | 64 | 27 | 45 | 69 | 59 | 28 | 19 | 15 | 17 |
| 6 | 18 | 40 | 27 | 56 | 26 | 44 | 61 | 56 | 48 | 16 | 12 | 13 |
| 7 | 13 | 35 | 61 | 41 | 25 | 43 | 55 | 52 | 129 | 16 | 26 | 11 |
| 8 | 11 | 32 | 61 | 34 | 24 | 42 | 52 | 49 | 96 | 14 | 28 | 9.6 |
| 9 | 11 | 31 | 42 | 32 | 24 | 42 | 56 | 47 | 64 | 14 | 18 | 9.3 |
| 10 | 12 | 31 | 35 | 40 | 26 | 41 | 63 | 45 | 50 | 14 | 17 | 13 |
| 11 | 18 | 31 | 33 | 80 | 29 | 46 | 60 | 62 | 42 | 13 | 18 | 11 |
| 12 | 16 | 29 | 30 | 61 | 29 | 138 | 50 | 60 | 62 | 11 | 14 | 9.3 |
| 13 | 13 | 29 | 29 | 47 | 26 | 132 | 46 | 50 | 64 | 11 | 14 | 9.5 |
| 14 | 32 | 29 | 31 | 40 | 91 | 98 | 43 | 59 | 54 | 10 | 27 | 9.7 |
| 15 | 25 | 29 | 39 | 35 | 111 | 79 | 42 | 50 | 46 | 11 | 29 | 18 |
| 16 | 31 | 28 | 43 | e32 | 69 | 70 | 52 | 42 | 44 | 18 | 25 | 24 |
| 17 | 20 | 27 | 36 | e30 | 54 | 108 | 66 | 40 | 40 | 15 | 26 | 15 |
| 18 | 40 | 26 | 32 | e28 | 44 | 111 | 61 | 38 | 37 | 13 | 19 | 13 |
| 19 | 43 | 26 | 30 | e27 | 46 | 90 | 70 | 45 | 35 | 12 | 17 | 10 |
| 20 | 45 | 26 | 29 | e26 | 42 | 79 | 65 | 51 | 33 | 12 | 14 | 22 |
| 21 | 62 | 27 | 34 | e25 | 40 | 72 | 58 | 45 | 30 | 11 | 12 | 20 |
| 22 | 46 | 26 | 34 | e25 | 39 | 68 | 149 | 41 | 29 | 9.6 | 11 | 13 |
| 23 | 38 | 25 | 30 | e26 | 41 | 64 | 165 | 47 | 28 | 9.0 | 10 | 11 |
| 24 | 33 | 24 | 28 | 28 | 56 | 59 | 136 | 59 | 25 | 8.7 | 13 | 11 |
| 25 | 30 | 25 | 25 | 31 | 62 | 56 | 114 | 70 | 25 | 8.2 | 11 | 10 |
| 26 | 28 | 29 | 25 | 33 | 93 | 55 | 104 | 56 | 24 | 13 | 9.7 | 10 |
| 27 | 28 | 31 | 25 | 30 | 89 | 52 | 104 | 44 | 24 | 28 | 8.3 | 12 |
| 28 | 26 | 33 | 24 | 28 | 78 | 104 | 95 | 39 | 27 | 26 | 7.1 | 10 |
| 29 | 25 | 28 | 24 | 26 | 71 | 134 | 87 | 36 | 26 | 18 | 6.9 | 9.0 |
| 30 | 25 | 25 | 24 | 26 | --- | 100 | 80 | 34 | 24 | 15 | 6.4 | 8.1 |
| 31 | 25 | --- | 24 | 41 | --- | 81 | --- | 33 | --- | 26 | 6.1 | --- |
| TOTAL | 792 | 983 | 962 | 1089 | 1396 | 2269 | 2261 | 1580 | 1265 | 470.5 | 511.5 | 400.6 |
| MEAN | 25.5 | 32.8 | 31.0 | 35.1 | 48.1 | 73.2 | 75.4 | 51.0 | 42.2 | 15.2 | 16.5 | 13.4 |
| MAX | 62 | 84 | 61 | 80 | 111 | 138 | 165 | 72 | 129 | 28 | 31 | 33 |
| MIN | 10 | 24 | 21 | 23 | 24 | 41 | 42 | 33 | 24 | 8.2 | 6.1 | 6.1 |
| CFSM | 1.34 | 1.72 | 1.62 | 1.84 | 2.52 | 3.83 | 3.95 | 2.67 | 2.21 | .79 | .86 | .70 |
| IN. | 1.54 | 1.91 | 1.87 | 2.12 | 2.72 | 4.42 | 4.40 | 3.08 | 2.46 | .92 | 1.00 | .78 |

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

| | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 18.7 | 23.9 | 20.6 | 44.7 | 60.4 | 76.4 | 57.1 | 42.5 | 29.1 | 10.4 | 10.1 | 15.7 |
| MAX | 25.5 | 32.8 | 31.0 | 54.3 | 73.2 | 79.5 | 75.4 | 51.0 | 42.2 | 15.2 | 16.5 | 18.0 |
| (WY) | 2000 | 2000 | 2000 | 1999 | 1999 | 1999 | 2000 | 2000 | 2000 | 2000 | 2000 | 1999 |
| MIN | 11.8 | 15.1 | 10.2 | 35.1 | 48.1 | 73.2 | 38.8 | 33.9 | 16.0 | 5.70 | 3.78 | 13.4 |
| (WY) | 1999 | 1999 | 1999 | 2000 | 2000 | 2000 | 1999 | 1999 | 1999 | 1999 | 1999 | 2000 |

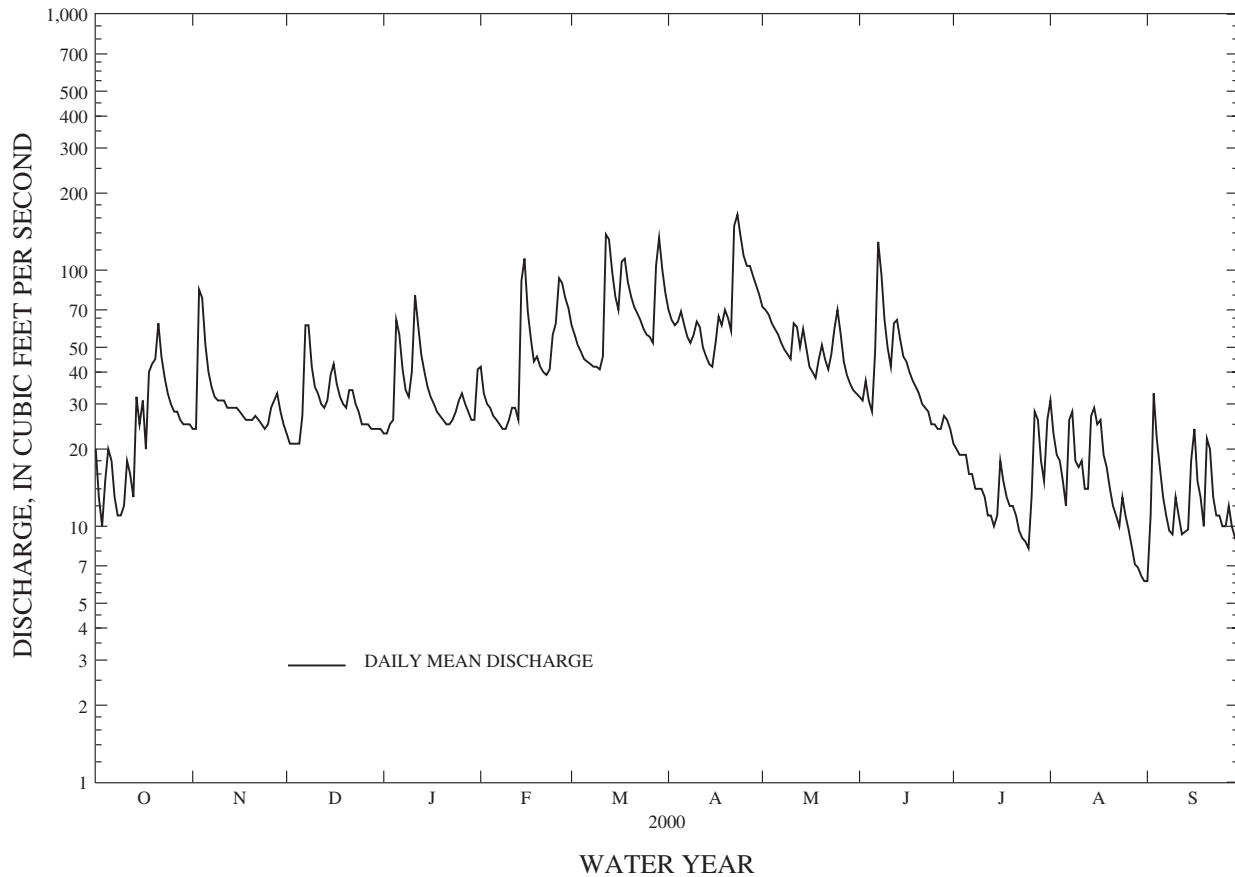
PAWCATUCK RIVER BASIN

01117370 QUEEN RIVER AT LIBERTY ROAD AT LIBERTY, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1999 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL | 12464.5 | | 13979.6 | | 34.0 | |
| ANNUAL MEAN | 34.1 | | 38.2 | | 29.8 | |
| HIGHEST ANNUAL MEAN | | | | | 38.2 | |
| LOWEST ANNUAL MEAN | | | | | 29.8 | |
| HIGHEST DAILY MEAN | 169 | Feb 3 | 165 | Apr 23 | 169 | Feb 3 1999 |
| LOWEST DAILY MEAN | 1.7 | Aug 7 | 6.1 | Aug 31 | 1.7 | Aug 7 1999 |
| ANNUAL SEVEN-DAY MINIMUM | 1.9 | Aug 1 | 7.2 | Aug 26 | 1.9 | Aug 1 1999 |
| INSTANTANEOUS PEAK FLOW | | | 175 | Apr 22 | 189 | Feb 3 1999 |
| INSTANTANEOUS PEAK STAGE | | | 4.32 | Apr 22 | 4.57 | Feb 3 1999 |
| INSTANTANEOUS LOW FLOW | | | 6.7 | Aug 31 | 1.6 | Aug 4 1999 |
| ANNUAL RUNOFF (CFSM) | 1.79 | | 2.00 | | 1.78 | |
| ANNUAL RUNOFF (INCHES) | 24.28 | | 27.23 | | 24.18 | |
| 10 PERCENT EXCEEDS | 75 | | 70 | | 71 | |
| 50 PERCENT EXCEEDS | 27 | | 30 | | 26 | |
| 90 PERCENT EXCEEDS | 3.2 | | 11 | | 6.6 | |

e Estimated

QUEEN RIVER AT LIBERTY ROAD AT LIBERTY, RI 01117370



PAWCATUCK RIVER BASIN

01117410 USQUEPAUG RIVER AT RT. 138, AT USQUEPAUG, RI

LOCATION.--Lat 41°30'09", long 71°36'30", Washington County, Hydrologic Unit 01090005, on right bank on upstream side of bridge on State Route 138, 700 ft downstream from Glen Rock Reservoir, and 0.1 mi south of Usquepaug.

DRAINAGE AREA.--32.8 mi².

PERIOD OF RECORD.--July 1999 to September 2000.

GAGE.--Water-stage recorder. Datum of gage is 110 ft above sea level, from topographic map.

REMARKS.--Records good except those for estimated daily discharge, which are poor. Flow occasionally affected by upstream withdrawals.

EXTREMES FOR THE PERIOD JULY 1999 TO SEPTEMBER 2000.--Maximum discharge, 370 ft³/s, Apr. 23, 2000, gage height, 5.79 ft, minimum, 4.2 ft³/s, Aug. 5, 1999.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|-------|
| 1 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.7 | 5.8 |
| 2 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.3 | 5.2 |
| 3 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.7 | 5.2 |
| 4 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.5 | 5.5 |
| 5 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.4 | 5.5 |
| 6 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.6 | 7.0 |
| 7 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.6 | 8.4 |
| 8 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.2 | 15 |
| 9 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 13 | 16 |
| 10 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.3 | 48 |
| 11 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.0 | 142 |
| 12 | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.1 | 67 |
| 13 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 12 | 6.8 | 27 |
| 14 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 13 | 7.4 | 19 |
| 15 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 11 | 12 | 17 |
| 16 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 10 | 15 | 68 |
| 17 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.7 | 9.8 | 142 |
| 18 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 9.4 | 8.0 | 87 |
| 19 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.8 | 6.6 | 44 |
| 20 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.8 | 5.8 | 31 |
| 21 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.1 | 6.7 | 26 |
| 22 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.9 | 7.0 | 24 |
| 23 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.2 | 6.8 | 23 |
| 24 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.2 | 6.2 | 20 |
| 25 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 8.3 | 5.4 | 19 |
| 26 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.9 | 6.0 | 18 |
| 27 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.3 | 13 | 17 |
| 28 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 6.2 | 12 | 16 |
| 29 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.7 | 9.3 | 16 |
| 30 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.7 | 7.4 | 28 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 5.7 | 6.5 | --- |
| TOTAL | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 236.1 | 972.6 |
| MEAN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.62 | 32.4 |
| MAX | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 15 | 142 |
| MIN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 4.4 | 5.2 |
| CFSM | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .23 | .99 |
| IN. | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | .27 | 1.10 |

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

| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| MEAN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.62 | 32.4 |
| MAX | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.62 | 32.4 |
| (WY) | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1999 | 1999 |
| MIN | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 7.62 | 32.4 |
| (WY) | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | 1999 | 1999 |

PAWCATUCK RIVER BASIN

01117410 USQUEPAUG RIVER AT RT. 138, AT USQUEPAUG, RI--Continued

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 36 | 42 | 40 | e39 | 72 | 104 | 120 | 120 | 53 | 36 | 59 | 15 |
| 2 | 26 | 41 | 39 | e38 | 58 | 93 | 110 | 117 | 52 | 34 | 44 | 19 |
| 3 | 20 | 139 | 39 | e39 | 50 | 85 | 104 | 113 | 71 | 32 | 40 | 47 |
| 4 | 28 | 145 | 38 | e40 | 48 | 79 | 104 | 104 | 55 | 31 | 36 | 44 |
| 5 | 39 | 98 | 38 | e90 | 47 | 74 | 115 | 98 | 49 | 31 | 30 | 33 |
| 6 | 32 | 73 | 47 | e95 | 45 | 71 | 105 | 93 | 80 | 29 | 25 | 26 |
| 7 | 25 | 62 | 103 | e70 | 43 | 68 | 95 | 87 | 213 | 27 | 39 | 22 |
| 8 | 22 | 56 | 107 | e60 | 42 | 66 | 88 | 83 | 182 | 25 | 45 | 20 |
| 9 | 21 | 54 | 78 | e50 | 40 | 65 | 95 | 78 | 119 | 24 | 33 | 24 |
| 10 | 22 | 53 | 62 | e60 | 42 | 65 | 97 | 75 | e86 | 24 | 31 | 37 |
| 11 | 35 | 53 | 58 | e120 | 47 | 75 | 99 | 101 | e72 | 23 | 31 | 27 |
| 12 | 30 | 50 | 53 | e130 | 48 | 255 | 87 | 98 | e109 | 20 | 26 | 22 |
| 13 | 25 | 49 | 50 | e90 | 44 | 253 | 78 | 85 | e110 | 19 | 24 | 22 |
| 14 | 58 | 49 | 54 | e70 | 149 | 182 | 73 | 98 | e94 | 19 | 39 | 20 |
| 15 | 47 | 49 | 65 | e58 | 207 | 139 | 71 | 88 | e83 | 20 | 44 | 34 |
| 16 | 37 | 47 | 70 | e52 | 133 | 120 | 89 | 73 | e76 | 32 | 43 | 41 |
| 17 | 44 | 45 | 62 | e48 | 94 | 189 | 99 | 67 | e70 | 28 | 49 | 29 |
| 18 | 75 | 43 | 55 | e46 | 76 | 199 | 99 | 63 | e64 | 24 | 37 | 22 |
| 19 | 74 | 43 | 51 | e44 | 75 | 161 | 109 | 74 | e59 | 22 | 33 | 19 |
| 20 | 81 | 43 | 49 | e42 | 70 | 137 | 106 | 84 | e55 | 22 | 28 | 42 |
| 21 | 113 | 45 | 57 | e42 | 65 | 123 | 95 | 78 | e52 | 20 | 24 | 34 |
| 22 | 87 | 44 | 57 | e41 | 62 | 114 | 300 | 69 | e49 | 18 | 21 | 23 |
| 23 | 71 | 43 | 54 | e42 | 64 | 107 | 354 | 78 | 47 | 17 | 20 | 19 |
| 24 | 64 | 43 | 49 | 46 | 86 | 101 | 275 | 99 | 43 | 16 | 25 | 20 |
| 25 | 55 | 44 | 45 | 51 | 100 | 94 | 212 | 112 | 41 | 15 | 23 | 18 |
| 26 | 51 | 49 | e45 | 56 | 162 | 92 | 185 | 94 | 40 | 23 | 20 | 17 |
| 27 | 49 | e53 | 43 | e50 | 159 | 86 | 178 | 74 | 40 | 44 | 18 | 20 |
| 28 | 46 | 57 | 42 | e48 | 136 | 183 | 163 | 65 | 44 | 42 | 17 | 18 |
| 29 | 45 | 49 | 41 | e45 | 121 | 242 | 146 | 60 | 42 | 33 | 16 | 16 |
| 30 | 44 | 44 | 41 | e44 | --- | 185 | 134 | 56 | 40 | 29 | 16 | 15 |
| 31 | 43 | --- | e41 | 70 | --- | 141 | --- | 54 | --- | 59 | 16 | --- |
| TOTAL | 1445 | 1705 | 1673 | 1816 | 2385 | 3948 | 3985 | 2638 | 2190 | 838 | 952 | 765 |
| MEAN | 46.6 | 56.8 | 54.0 | 58.6 | 82.2 | 127 | 133 | 85.1 | 73.0 | 27.0 | 30.7 | 25.5 |
| MAX | 113 | 145 | 107 | 130 | 207 | 255 | 354 | 120 | 213 | 59 | 59 | 47 |
| MIN | 20 | 41 | 38 | 38 | 40 | 65 | 71 | 54 | 40 | 15 | 16 | 15 |
| CFSM | 1.42 | 1.74 | 1.65 | 1.79 | 2.51 | 3.89 | 4.06 | 2.60 | 2.23 | .83 | .94 | .78 |
| IN. | 1.64 | 1.94 | 1.90 | 2.06 | 2.71 | 4.48 | 4.53 | 3.00 | 2.49 | .95 | 1.08 | .87 |

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

| | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 | 1999 | 2000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 46.6 | 56.8 | 54.0 | 58.6 | 82.2 | 127 | 133 | 85.1 | 73.0 | 27.0 | 19.2 | 29.0 |
| MAX | 46.6 | 56.8 | 54.0 | 58.6 | 82.2 | 127 | 133 | 85.1 | 73.0 | 27.0 | 30.7 | 32.4 |
| (WY) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 1999 |
| MIN | 46.6 | 56.8 | 54.0 | 58.6 | 82.2 | 127 | 133 | 85.1 | 73.0 | 27.0 | 7.62 | 25.5 |
| (WY) | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 1999 | 2000 |

SUMMARY STATISTICS

FOR 2000 WATER YEAR

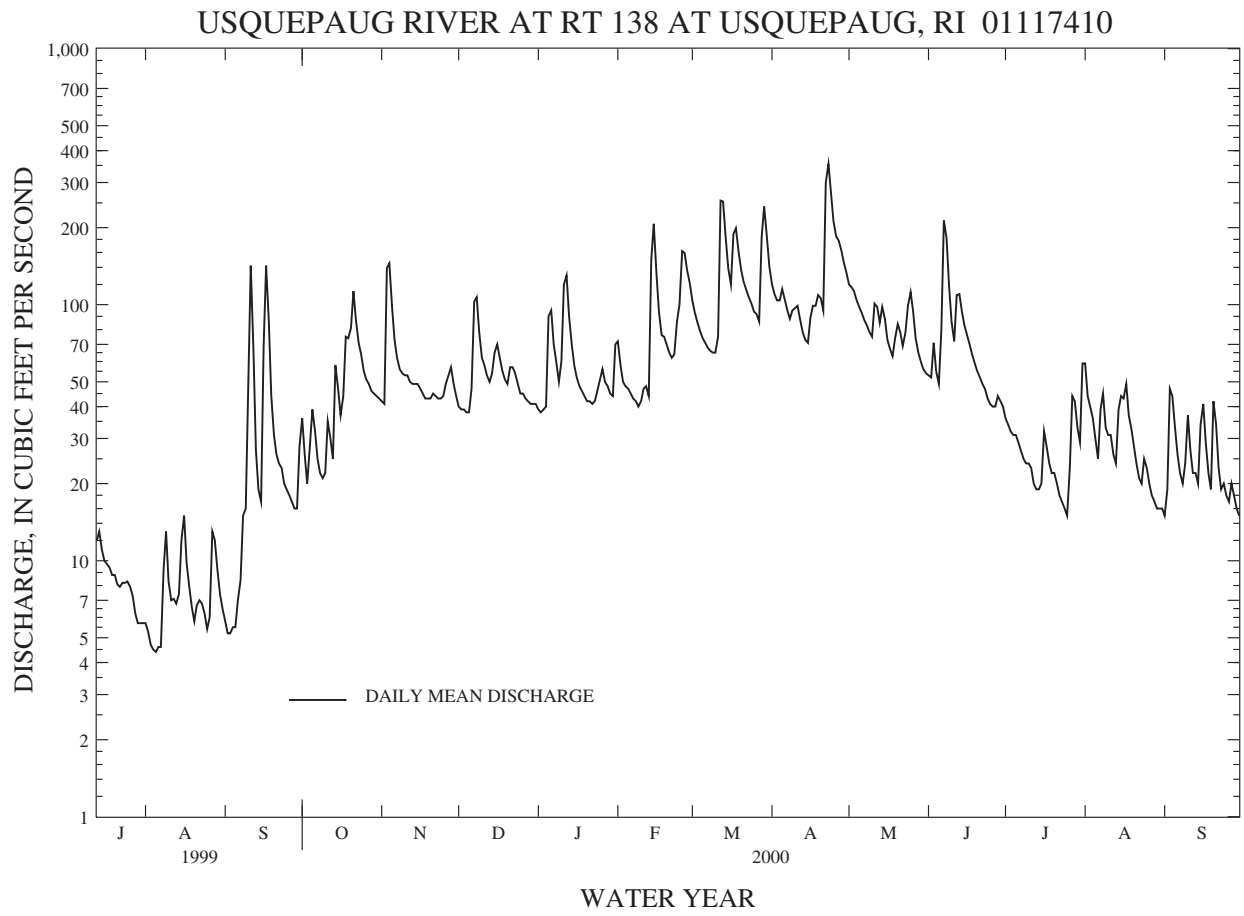
WATER YEARS 1999 - 2000

| | | |
|--------------------------|-------|-------------|
| ANNUAL TOTAL | 24340 | |
| ANNUAL MEAN | 66.5 | 66.5 |
| HIGHEST ANNUAL MEAN | | 66.5 |
| LOWEST ANNUAL MEAN | | 66.5 |
| HIGHEST DAILY MEAN | 354 | Apr 23 2000 |
| LOWEST DAILY MEAN | 15 | Jul 25 1999 |
| ANNUAL SEVEN-DAY MINIMUM | 17 | Aug 27 1999 |
| INSTANTANEOUS PEAK FLOW | 370 | Apr 23 2000 |
| INSTANTANEOUS PEAK STAGE | 5.79 | Apr 23 2000 |
| INSTANTANEOUS LOW FLOW | 14 | Sep 30 1999 |
| ANNUAL RUNOFF (CFSM) | 2.03 | 2.03 |
| ANNUAL RUNOFF (INCHES) | 27.65 | 27.59 |
| 10 PERCENT EXCEEDS | 120 | 113 |
| 50 PERCENT EXCEEDS | 50 | 45 |
| 90 PERCENT EXCEEDS | 22 | 9.3 |

e Estimated

PAWCATUCK RIVER BASIN

01117410 USQUEPAUG RIVER AT RT. 138, AT USQUEPAUG, RI--Continued





Massachusetts Data Section staff install new walkway to gage house on Westfield River at Westfield, MA, 01183500. (photo by T.R. Driskell)

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

AVERAGE DISCHARGE.--26 years (water years 1959, 1976-current year), 76.7 ft³/s, 28.85 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, 393 ft³/s, Apr. 23, gage height, 6.66 ft; minimum, 16.0 ft³/s, July 24.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 47 | 53 | 47 | 42 | 77 | 114 | 143 | 140 | 62 | 41 | 68 | 20 |
| 2 | 39 | 52 | 45 | 42 | 64 | 101 | 126 | 134 | 61 | 39 | 52 | 22 |
| 3 | 33 | 101 | 45 | 43 | 59 | 91 | 116 | 130 | 76 | 36 | 45 | 46 |
| 4 | 37 | 151 | 44 | 45 | 57 | 84 | 112 | 121 | 64 | 35 | 41 | 51 |
| 5 | 49 | 135 | 43 | 85 | 54 | 79 | 119 | 112 | 60 | 35 | 35 | 40 |
| 6 | 45 | 93 | 49 | 102 | 52 | 75 | 118 | 107 | 70 | 32 | 30 | 32 |
| 7 | 39 | 75 | 87 | 81 | 50 | 72 | 108 | 100 | 159 | 30 | e34 | 28 |
| 8 | 35 | 69 | 110 | 65 | 49 | 69 | 99 | 95 | 207 | 28 | e48 | 26 |
| 9 | 33 | 66 | 93 | 58 | 46 | 68 | 99 | 89 | 160 | 26 | 38 | 27 |
| 10 | 34 | 64 | 72 | 65 | 49 | 68 | 103 | 84 | 110 | 27 | 36 | 42 |
| 11 | 45 | 64 | 66 | 118 | 54 | 72 | 102 | 100 | 84 | 25 | 35 | 33 |
| 12 | 42 | 61 | 61 | 133 | 56 | 173 | 98 | 109 | 106 | 22 | 31 | 28 |
| 13 | 38 | 60 | 58 | 106 | 51 | 270 | 88 | 100 | 119 | 21 | 28 | 28 |
| 14 | 61 | 59 | 60 | 78 | 98 | 225 | 80 | 101 | 111 | 21 | 40 | 27 |
| 15 | 63 | 59 | 68 | 65 | 183 | 170 | 78 | 102 | 98 | 22 | 49 | 37 |
| 16 | 50 | 58 | 74 | e60 | 167 | 140 | 89 | 85 | 86 | 35 | 49 | 49 |
| 17 | 56 | 56 | 69 | e58 | 115 | 162 | 100 | 75 | 78 | 32 | 56 | 38 |
| 18 | 73 | 54 | 62 | e54 | 86 | 210 | 104 | 71 | 71 | 28 | 43 | 31 |
| 19 | 83 | 53 | 57 | e52 | 79 | 188 | 109 | 79 | 65 | 26 | 38 | 28 |
| 20 | 78 | 52 | 54 | e49 | 75 | 158 | 114 | 91 | 63 | 26 | 33 | 49 |
| 21 | 109 | 53 | 61 | e48 | 70 | 140 | 107 | 88 | 60 | 23 | 29 | 45 |
| 22 | 103 | 53 | 62 | e47 | 67 | 128 | 229 | 78 | 58 | 21 | 26 | 35 |
| 23 | 83 | 52 | 59 | e48 | 68 | 119 | 373 | 83 | 55 | 20 | 24 | 29 |
| 24 | 75 | 51 | 55 | 52 | 84 | 112 | 337 | 97 | 50 | 18 | 29 | 29 |
| 25 | 67 | 51 | 50 | 56 | 97 | 105 | 254 | 118 | 47 | 18 | 28 | 27 |
| 26 | 62 | 55 | 48 | 62 | 128 | 102 | 212 | 111 | 47 | 24 | 25 | 26 |
| 27 | 60 | 58 | 48 | 58 | 160 | 98 | 198 | 88 | 45 | 45 | 23 | 29 |
| 28 | 58 | 63 | 47 | e54 | 147 | 134 | 187 | 74 | 49 | 46 | 22 | 26 |
| 29 | 56 | 56 | 43 | 52 | 131 | 241 | 171 | 68 | 48 | 37 | 20 | 23 |
| 30 | 55 | 50 | 43 | 49 | --- | 224 | 154 | 64 | 46 | 32 | 20 | 21 |
| 31 | 54 | --- | 44 | 71 | --- | 173 | --- | 62 | --- | 56 | 21 | --- |
| TOTAL | 1762 | 1977 | 1824 | 1998 | 2473 | 4165 | 4327 | 2956 | 2415 | 927 | 1096 | 972 |
| MEAN | 56.8 | 65.9 | 58.8 | 64.5 | 85.3 | 134 | 144 | 95.4 | 80.5 | 29.9 | 35.4 | 32.4 |
| MAX | 109 | 151 | 110 | 133 | 183 | 270 | 373 | 140 | 207 | 56 | 68 | 51 |
| MIN | 33 | 50 | 43 | 42 | 46 | 68 | 78 | 62 | 45 | 18 | 20 | 20 |
| CFSM | 1.57 | 1.83 | 1.63 | 1.79 | 2.36 | 3.72 | 4.00 | 2.64 | 2.23 | .83 | .98 | .90 |
| IN. | 1.82 | 2.04 | 1.88 | 2.06 | 2.55 | 4.29 | 4.46 | 3.05 | 2.49 | .96 | 1.13 | 1.00 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2000, BY WATER YEAR (WY)

| | MEAN | 36.9 | 60.3 | 85.6 | 105 | 110 | 133 | 135 | 95.4 | 70.0 | 35.5 | 29.8 | 26.6 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MAX | 85.7 | 150 | 212 | 266 | 180 | 250 | 335 | 179 | 276 | 80.1 | 56.1 | 75.7 | |
| (WY) | 1990 | 1990 | 1987 | 1979 | 1982 | 1998 | 1983 | 1978 | 1982 | 1998 | 1979 | 1985 | |
| MIN | 12.1 | 20.8 | 21.1 | 16.9 | 39.1 | 56.2 | 46.3 | 45.5 | 30.4 | 13.3 | 10.6 | 7.40 | |
| (WY) | 1995 | 1981 | 1981 | 1981 | 1980 | 1981 | 1985 | 1981 | 1994 | 1994 | 1999 | 1980 | |

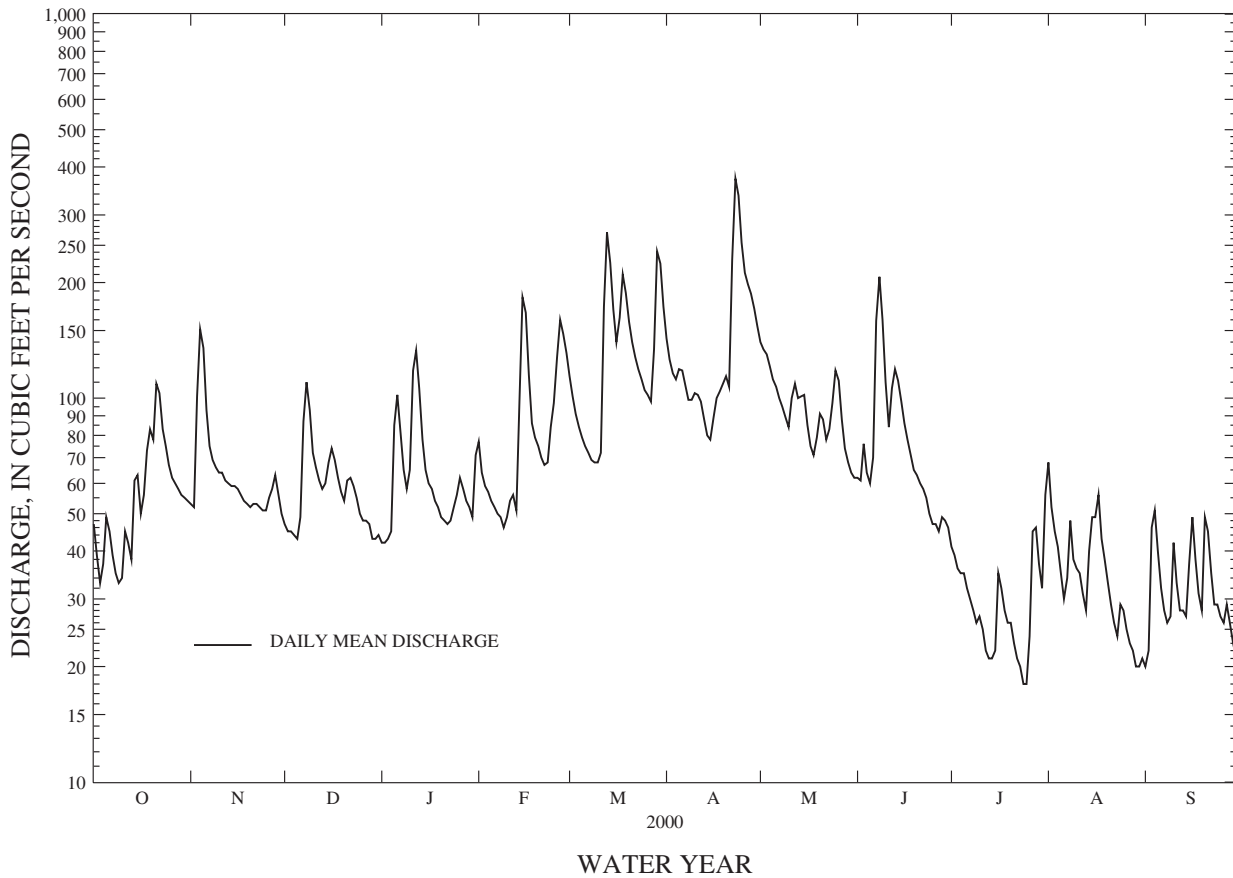
PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1958 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 24843.8 | | 26892 | | | |
| ANNUAL MEAN | 68.1 | | 73.5 | | 76.7 | |
| HIGHEST ANNUAL MEAN | | | | | 110 | 1984 |
| LOWEST ANNUAL MEAN | | | | | 30.6 | 1981 |
| HIGHEST DAILY MEAN | 445 | Feb 4 | 373 | Apr 23 | 1020 | Jun 7 1982 |
| LOWEST DAILY MEAN | 5.1 | Aug 7 | 18 | Jul 24 | 1.1 | Sep 14 1993 |
| ANNUAL SEVEN-DAY MINIMUM | 6.2 | Aug 1 | 21 | Aug 27 | 3.8 | Sep 6 1995 |
| INSTANTANEOUS PEAK FLOW | | | 393 | Apr 23 | 1060 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 6.66 | Apr 23 | 9.23 | Jun 6 1982 |
| INSTANTANEOUS LOW FLOW | | | 16 | Jul 24 | .00 | Sep 13 1995 |
| ANNUAL RUNOFF (CFSM) | 1.89 | | 2.04 | | 2.12 | |
| ANNUAL RUNOFF (INCHES) | 25.60 | | 27.71 | | 28.85 | |
| 10 PERCENT EXCEEDS | 142 | | 132 | | 159 | |
| 50 PERCENT EXCEEDS | 55 | | 59 | | 59 | |
| 90 PERCENT EXCEEDS | 11 | | 28 | | 18 | |

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 discharge, which are fair.

AVERAGE DISCHARGE.--25 years (water years 1976-current year), 21.3 ft³/s, 32.63 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.--Maximum discharge, 120 ft³/s, Apr. 22, gage height, 2.74 ft; minimum, 4.2 ft³/s, Sept. 1.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 9.4 | 13 | 12 | 13 | 19 | 31 | 35 | 42 | 21 | 14 | e19 | 4.8 |
| 2 | 7.2 | 17 | 12 | 13 | 17 | 30 | 33 | 42 | 21 | 14 | 15 | 6.4 |
| 3 | 6.5 | 51 | 12 | 14 | 15 | 28 | 32 | 40 | 29 | 12 | 13 | 12 |
| 4 | 8.3 | 39 | 12 | 14 | 14 | 26 | 33 | 37 | 22 | 12 | 12 | 11 |
| 5 | 9.6 | 26 | 11 | 35 | 14 | 25 | 37 | 36 | 19 | 11 | 10 | 7.8 |
| 6 | 8.1 | 21 | 17 | 22 | 13 | 24 | 32 | 35 | 32 | 11 | 8.7 | 6.3 |
| 7 | 7.3 | 19 | 33 | 19 | 13 | 23 | 30 | 33 | 62 | 10 | 13 | 5.9 |
| 8 | 8.0 | 18 | 25 | 17 | 12 | 22 | 28 | 31 | 38 | 9.5 | 13 | 5.5 |
| 9 | 7.0 | 17 | 19 | 16 | 13 | 22 | 33 | 30 | 31 | 9.2 | 10 | 7.7 |
| 10 | 7.2 | 17 | 20 | 24 | 12 | 22 | 31 | 29 | 27 | 8.9 | 11 | 13 |
| 11 | 9.4 | 17 | 20 | 41 | 13 | 26 | 28 | 42 | 27 | 8.4 | 9.9 | 9.7 |
| 12 | 7.8 | 15 | 18 | 28 | 15 | 83 | 28 | 34 | 45 | 7.9 | 8.8 | 7.6 |
| 13 | 7.2 | 16 | 17 | 24 | 14 | 64 | 26 | 31 | 35 | 7.6 | 7.8 | 7.3 |
| 14 | 14 | 15 | 17 | 22 | 45 | 44 | 25 | 37 | 34 | 7.2 | 9.7 | 6.7 |
| 15 | 10 | 15 | 21 | e19 | 50 | 37 | 24 | 31 | 30 | 7.8 | 9.8 | 11 |
| 16 | 8.3 | 14 | 20 | e17 | 31 | 35 | 32 | 28 | 29 | 15 | 12 | 11 |
| 17 | 7.9 | 18 | 18 | e16 | 26 | 59 | 30 | 26 | 26 | 10 | 12 | 8.5 |
| 18 | 21 | 18 | 16 | e15 | 22 | 52 | 30 | 26 | 25 | 8.9 | 9.5 | 7.0 |
| 19 | 17 | 17 | 16 | e14 | 23 | 43 | 33 | 30 | 24 | 8.3 | 8.4 | 6.8 |
| 20 | 26 | 15 | 15 | e13 | 21 | 39 | 29 | 30 | 23 | 8.4 | 7.4 | 12 |
| 21 | 31 | 14 | 19 | e13 | 20 | 36 | 29 | 28 | 21 | 8.1 | 6.7 | 9.7 |
| 22 | 19 | 13 | 17 | e13 | 19 | 35 | 98 | 26 | 20 | 7.7 | 6.5 | 7.8 |
| 23 | 18 | 12 | 16 | e13 | 20 | 34 | 97 | 29 | 19 | 7.6 | 6.4 | 7.0 |
| 24 | 17 | 13 | 15 | e14 | 26 | 32 | 77 | 38 | 18 | 6.8 | 7.1 | 7.1 |
| 25 | 15 | 14 | 15 | e15 | 30 | 31 | 61 | 36 | 17 | 6.7 | 6.6 | 6.7 |
| 26 | 15 | 15 | 14 | e16 | 51 | 31 | 57 | 29 | 16 | 8.2 | 6.2 | 6.6 |
| 27 | 14 | 16 | 14 | e15 | 43 | 29 | 56 | 26 | 17 | 14 | 5.8 | 6.8 |
| 28 | 14 | 18 | 13 | e14 | 39 | 58 | 51 | 24 | 18 | 12 | 5.7 | 6.4 |
| 29 | 14 | 15 | 14 | e13 | 36 | 61 | 48 | 23 | 17 | 9.6 | 5.2 | 6.4 |
| 30 | 15 | 13 | 13 | 15 | --- | 44 | 45 | 22 | 16 | 9.2 | 5.2 | 5.9 |
| 31 | 14 | --- | 12 | 21 | --- | 38 | --- | 21 | --- | e13 | 5.2 | --- |
| TOTAL | 393.2 | 541 | 513 | 558 | 686 | 1164 | 1228 | 972 | 779 | 304.0 | 286.6 | 238.4 |
| MEAN | 12.7 | 18.0 | 16.5 | 18.0 | 23.7 | 37.5 | 40.9 | 31.4 | 26.0 | 9.81 | 9.25 | 7.95 |
| MAX | 31 | 51 | 33 | 41 | 51 | 83 | 98 | 42 | 62 | 15 | 19 | 13 |
| MIN | 6.5 | 12 | 11 | 13 | 12 | 22 | 24 | 21 | 16 | 6.7 | 5.2 | 4.8 |
| CFSM | 1.43 | 2.03 | 1.87 | 2.03 | 2.67 | 4.23 | 4.61 | 3.53 | 2.93 | 1.11 | 1.04 | .90 |
| IN. | 1.65 | 2.27 | 2.15 | 2.34 | 2.88 | 4.88 | 5.15 | 4.08 | 3.27 | 1.27 | 1.20 | 1.00 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 9.02 | 16.6 | 24.3 | 28.9 | 29.2 | 36.4 | 37.3 | 27.8 | 21.0 | 10.2 | 8.00 | 6.96 |
| MAX | 25.5 | 43.5 | 60.8 | 74.0 | 46.2 | 62.9 | 102 | 48.3 | 82.1 | 23.9 | 16.4 | 25.2 |
| (WY) | 1990 | 1990 | 1987 | 1979 | 1982 | 1983 | 1983 | 1979 | 1982 | 1998 | 1989 | 1985 |
| MIN | 3.01 | 4.59 | 4.43 | 3.17 | 11.5 | 18.9 | 13.9 | 13.7 | 9.02 | 3.70 | 2.21 | 1.90 |
| (WY) | 1995 | 1981 | 1981 | 1981 | 1985 | 1981 | 1985 | 1981 | 1994 | 1994 | 1993 | 1980 |

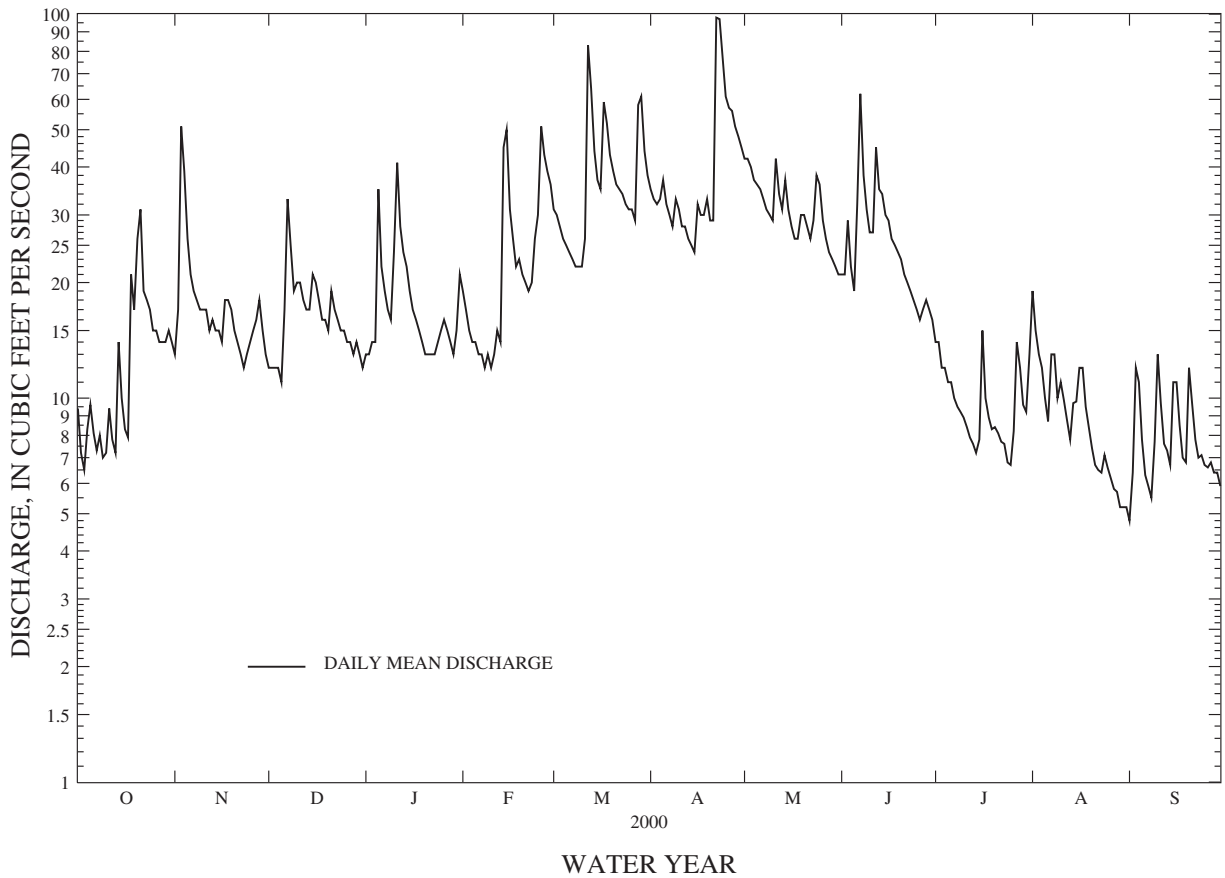
PAWCATUCK RIVER BASIN

01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1975 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|------------|
| ANNUAL TOTAL | 6907.1 | | 7663.2 | | | |
| ANNUAL MEAN | 18.9 | | 20.9 | | 21.3 | |
| HIGHEST ANNUAL MEAN | | | | | 30.4 | |
| LOWEST ANNUAL MEAN | | | | | 8.67 | |
| HIGHEST DAILY MEAN | 135 | Feb 3 | 98 | Apr 22 | 324 | Jun 6 1982 |
| LOWEST DAILY MEAN | 1.7 | Aug 7 | 4.8 | Sep 1 | 1.2 | Sep 7 1993 |
| ANNUAL SEVEN-DAY MINIMUM | 2.0 | Aug 1 | 5.4 | Aug 26 | 1.3 | Sep 1 1993 |
| INSTANTANEOUS PEAK FLOW | | | 120 | Apr 22 | 370 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 2.74 | Apr 22 | 3.83 | Jun 6 1982 |
| INSTANTANEOUS LOW FLOW | | | 4.2 | Sep 1 | 1.1 | Sep 7 1993 |
| ANNUAL RUNOFF (CFSM) | 2.13 | | 2.36 | | 2.40 | |
| ANNUAL RUNOFF (INCHES) | 28.97 | | 32.14 | | 32.63 | |
| 10 PERCENT EXCEEDS | 38 | | 37 | | 43 | |
| 50 PERCENT EXCEEDS | 15 | | 17 | | 17 | |
| 90 PERCENT EXCEEDS | 3.0 | | 7.3 | | 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. 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.--59 years, 196 ft³/s, 26.60 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, 941 ft³/s, Apr. 24, gage height, 5.41 ft; minimum, 61 ft³/s, Oct. 4.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|------|------|------|------|------|
| 1 | 82 | 105 | 118 | 117 | 179 | 353 | 437 | 433 | 188 | 132 | 216 | 72 |
| 2 | 79 | 103 | 111 | 118 | 180 | 327 | 383 | 401 | 183 | 125 | 187 | 70 |
| 3 | 67 | 192 | 111 | 123 | 155 | 294 | 352 | 381 | 209 | 117 | 153 | 82 |
| 4 | 77 | 246 | 109 | 126 | 150 | 268 | 337 | 364 | 208 | 113 | 138 | 111 |
| 5 | 97 | 255 | 108 | 174 | 145 | 252 | 343 | 347 | 185 | 109 | 122 | 122 |
| 6 | 93 | 226 | 118 | 201 | 141 | 237 | 333 | 337 | 201 | 101 | 107 | 101 |
| 7 | 81 | 188 | 186 | 199 | 138 | 224 | 317 | 320 | 346 | 96 | 119 | 88 |
| 8 | 73 | 161 | 227 | 176 | 134 | 215 | 297 | 300 | 407 | 94 | 127 | 81 |
| 9 | 67 | 147 | 220 | 157 | 130 | 208 | 294 | 284 | 411 | 90 | 121 | 82 |
| 10 | 67 | 141 | 195 | 166 | 133 | 206 | 290 | 274 | 364 | 89 | 121 | 103 |
| 11 | 79 | 138 | 173 | 238 | 139 | 215 | 278 | 294 | 312 | 83 | 116 | 106 |
| 12 | 78 | 134 | 157 | 264 | 144 | 419 | 276 | 300 | 375 | 79 | 105 | 91 |
| 13 | 72 | 132 | 150 | 255 | 140 | 582 | 263 | 292 | 397 | 76 | 97 | 91 |
| 14 | 99 | 131 | 152 | 218 | 241 | 623 | 246 | 303 | 373 | 75 | 110 | 90 |
| 15 | 110 | 129 | 164 | 171 | 346 | 562 | 237 | 295 | 346 | 77 | 125 | 112 |
| 16 | 101 | 125 | 173 | 163 | 341 | 472 | 261 | 275 | 312 | 108 | 138 | 137 |
| 17 | 90 | 122 | 172 | 155 | 315 | 509 | 283 | 251 | 280 | 103 | 163 | 126 |
| 18 | 133 | 123 | 162 | 143 | 239 | 556 | 295 | 234 | 260 | 93 | 150 | 106 |
| 19 | 149 | 120 | 151 | 141 | 212 | 544 | 316 | 239 | 238 | 86 | 131 | 96 |
| 20 | 166 | 117 | 143 | 135 | 207 | 494 | 317 | 256 | 222 | 82 | 120 | 147 |
| 21 | 195 | 119 | 147 | 135 | 200 | 435 | 310 | 264 | 205 | 78 | 107 | 167 |
| 22 | 196 | 119 | 150 | 124 | 192 | 393 | 569 | 254 | 189 | 75 | 98 | 146 |
| 23 | 177 | 117 | 147 | 125 | 192 | 362 | 812 | 254 | 177 | 71 | 93 | 126 |
| 24 | 157 | 116 | 142 | 128 | 215 | 340 | 928 | 285 | 166 | 69 | 99 | 117 |
| 25 | 140 | 116 | 131 | 135 | 259 | 319 | 888 | 318 | 156 | 68 | 97 | 109 |
| 26 | 129 | 119 | 125 | 146 | 346 | 308 | 784 | 303 | 149 | 80 | 89 | 103 |
| 27 | 120 | 129 | 125 | 147 | 388 | 295 | 681 | 275 | 143 | 116 | 84 | 103 |
| 28 | 115 | 137 | 123 | 134 | 400 | 373 | 599 | 243 | 143 | 121 | 79 | 100 |
| 29 | 111 | 135 | 120 | 131 | 383 | 503 | 538 | 223 | 142 | 110 | 75 | 95 |
| 30 | 109 | 126 | 119 | 128 | --- | 549 | 482 | 208 | 137 | 97 | 74 | 90 |
| 31 | 108 | --- | 120 | 163 | --- | 514 | --- | 198 | --- | 146 | 73 | --- |
| TOTAL | 3417 | 4268 | 4549 | 4936 | 6384 | 11951 | 12746 | 9005 | 7424 | 2959 | 3634 | 3170 |
| MEAN | 110 | 142 | 147 | 159 | 220 | 386 | 425 | 290 | 247 | 95.5 | 117 | 106 |
| MAX | 196 | 255 | 227 | 264 | 400 | 623 | 928 | 433 | 411 | 146 | 216 | 167 |
| MIN | 67 | 103 | 108 | 117 | 130 | 206 | 237 | 198 | 137 | 68 | 73 | 70 |
| CFSM | 1.10 | 1.42 | 1.47 | 1.59 | 2.20 | 3.86 | 4.25 | 2.90 | 2.47 | .95 | 1.17 | 1.06 |
| IN. | 1.27 | 1.59 | 1.69 | 1.84 | 2.37 | 4.45 | 4.74 | 3.35 | 2.76 | 1.10 | 1.35 | 1.18 |

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

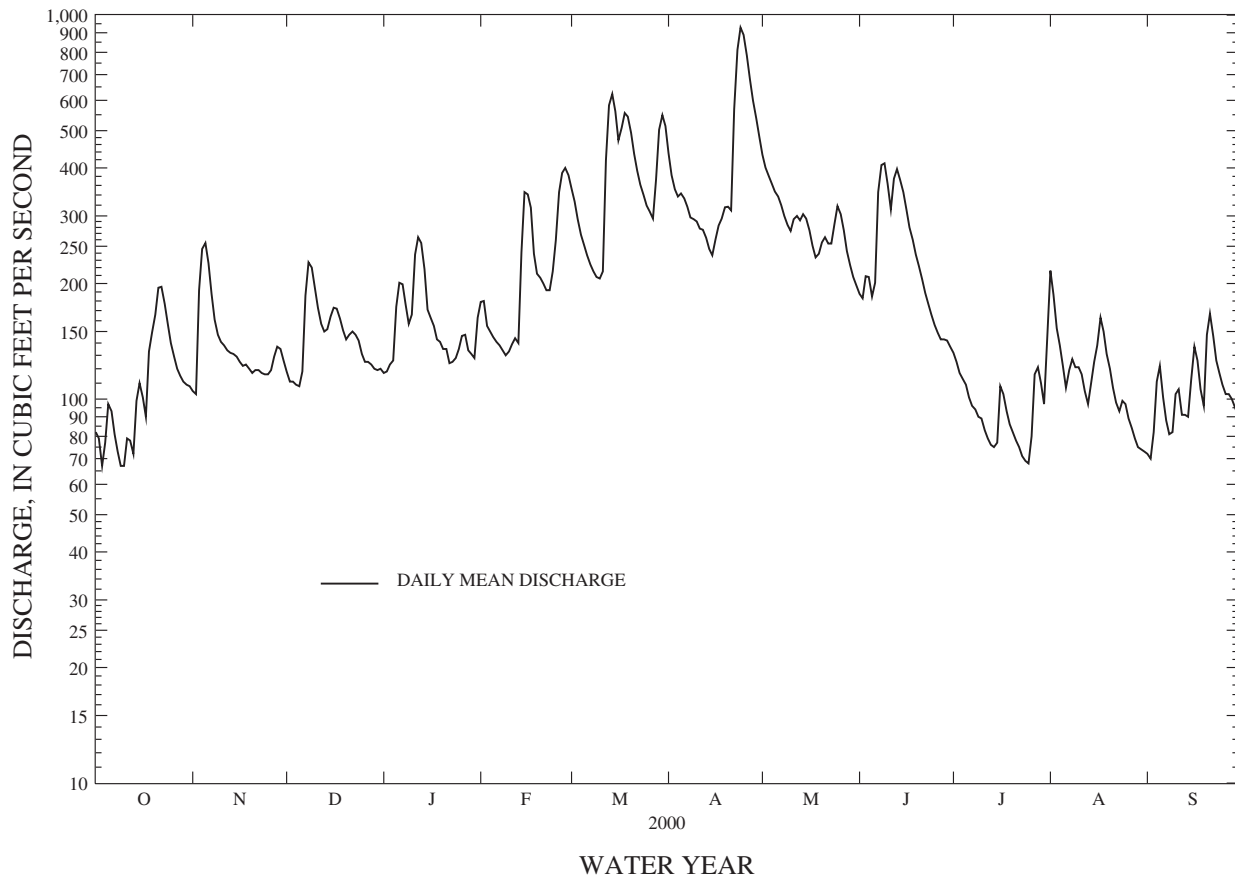
| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 88.6 | 144 | 208 | 246 | 275 | 348 | 336 | 254 | 182 | 99.5 | 85.0 | 79.1 |
| MAX | 332 | 471 | 543 | 655 | 453 | 598 | 908 | 464 | 718 | 249 | 275 | 374 |
| (WY) | 1956 | 1956 | 1987 | 1979 | 1970 | 1953 | 1983 | 1983 | 1982 | 1984 | 1946 | 1954 |
| MIN | 31.1 | 42.2 | 49.8 | 51.8 | 104 | 145 | 124 | 130 | 82.3 | 38.2 | 28.8 | 29.5 |
| (WY) | 1950 | 1966 | 1966 | 1981 | 1944 | 1981 | 1985 | 1981 | 1957 | 1957 | 1999 | 1980 |

PAWCATUCK RIVER BASIN

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

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1941 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 61564 | | 74443 | | | |
| ANNUAL MEAN | 169 | | 203 | | 196 | |
| HIGHEST ANNUAL MEAN | | | | | 311 1984 | |
| LOWEST ANNUAL MEAN | | | | | 84.4 1981 | |
| HIGHEST DAILY MEAN | 815 | Feb 5 | 928 | Apr 24 | 1830 | Jun 7 1982 |
| LOWEST DAILY MEAN | 18 | Sep 4 | 67 | Oct 3 | 15 | Oct 11 1947 |
| ANNUAL SEVEN-DAY MINIMUM | 22 | Aug 31 | 74 | Oct 7 | 20 | Sep 1 1995 |
| INSTANTANEOUS PEAK FLOW | | | 941 | Apr 24 | 1860 | Jun 7 1982 |
| INSTANTANEOUS PEAK STAGE | | | 5.41 | Apr 24 | 8.75 | Jun 7 1982 |
| INSTANTANEOUS LOW FLOW | | | 61 | Oct 4 | 7.4 | Oct 10 1947 |
| ANNUAL RUNOFF (CFSM) | 1.69 | | 2.03 | | 1.96 | |
| ANNUAL RUNOFF (INCHES) | 22.90 | | 27.69 | | 26.60 | |
| 10 PERCENT EXCEEDS | 344 | | 373 | | 396 | |
| 50 PERCENT EXCEEDS | 138 | | 149 | | 155 | |
| 90 PERCENT EXCEEDS | 33 | | 89 | | 50 | |

PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI 01117500



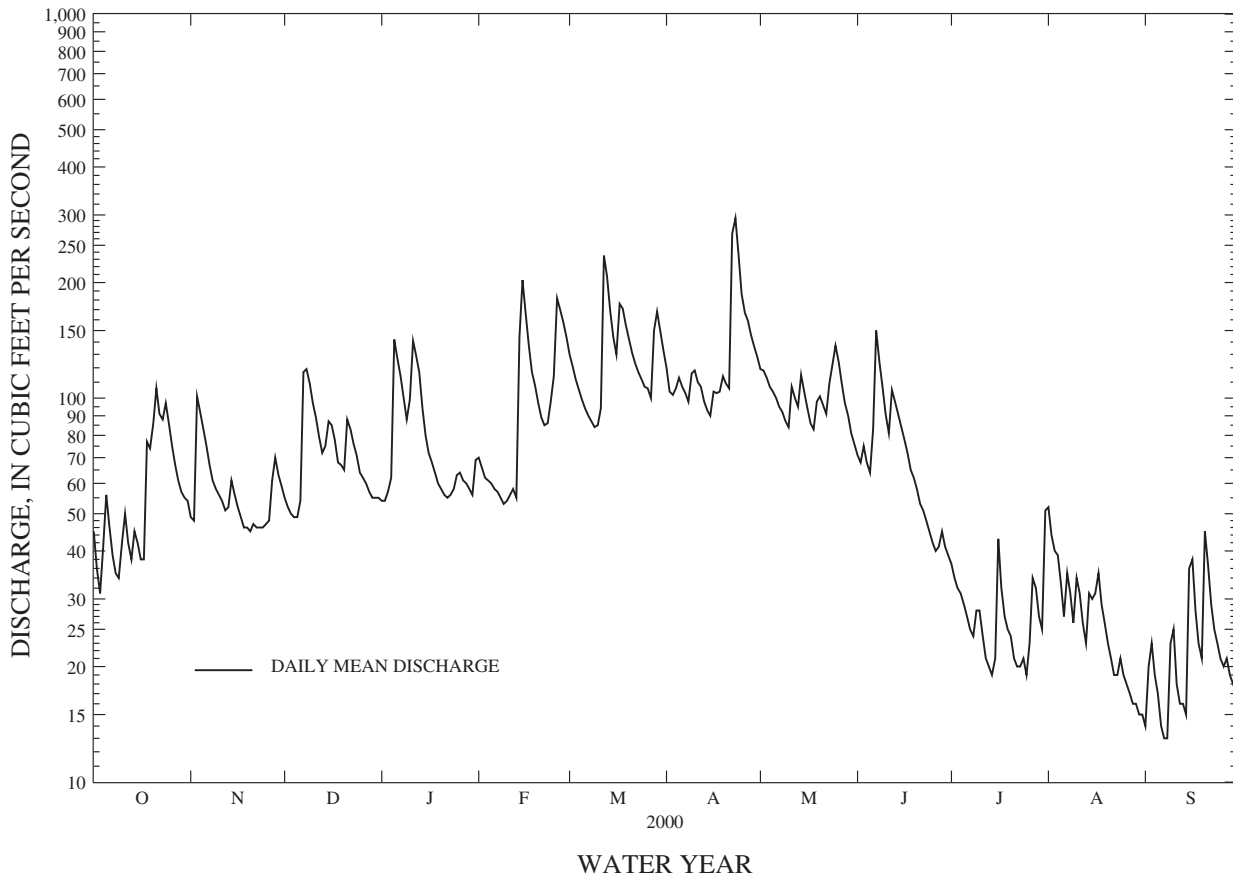
PAWCATUCK RIVER BASIN

01117800 WOOD RIVER NEAR ARCADIA, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1964 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 26173.7 | | 26647 | | | |
| ANNUAL MEAN | 71.7 | | 72.8 | | 76.6 | |
| HIGHEST ANNUAL MEAN | | | | | 114 | 1973 |
| LOWEST ANNUAL MEAN | | | | | 33.3 | 1966 |
| HIGHEST DAILY MEAN | 376 | Feb 3 | 294 | Apr 23 | 826 | Jan 27 1978 |
| LOWEST DAILY MEAN | 5.5 | Aug 7 | 13 | Sep 7 | 4.2 | Sep 1 1995 |
| ANNUAL SEVEN-DAY MINIMUM | 6.0 | Aug 1 | 16 | Aug 26 | 4.2 | Aug 31 1995 |
| INSTANTANEOUS PEAK FLOW | | | 312 | Apr 22 | 896 | Mar 18 1968 |
| INSTANTANEOUS PEAK STAGE | | | 5.41 | Apr 22 | 8.64 | Mar 18 1968 |
| INSTANTANEOUS LOW FLOW | | | 12 | Sep 8 | 4.1 | Sep 1 1995 |
| ANNUAL RUNOFF (CFSM) | 2.04 | | 2.07 | | 2.18 | |
| ANNUAL RUNOFF (INCHES) | 27.66 | | 28.16 | | 29.57 | |
| 10 PERCENT EXCEEDS | 146 | | 128 | | 157 | |
| 50 PERCENT EXCEEDS | 59 | | 62 | | 59 | |
| 90 PERCENT EXCEEDS | 9.1 | | 21 | | 15 | |

e Estimated

WOOD RIVER NEAR ARCADIA, RI 01117800



PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI

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.

DRAINAGE AREA.--72.4 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: August to December 1909 (gage heights only), March 1941 to current year. Records of daily discharge for August to December 1909, published in WSP 261, have been found to be unreliable and should not be used.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 61.11 ft above sea level. August to December 1909, nonrecording gage at site 1,000 ft upstream at different datum.

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

AVERAGE DISCHARGE.--59 years, 156 ft³/s, 29.25 in/yr.

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 OUTSIDE PERIOD OF RECORD.--Maximum stage since 1711, at least 12.4 ft in February 1886. Flood in November 1927 reached a stage of 11.7 ft, and flood in March 1936 reached a discharge of 1,540 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 828 ft³/s, Apr. 23, gage height, 5.48 ft; minimum, 31 ft³/s, Sept. 2.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 93 | 100 | 102 | 97 | e131 | 257 | 239 | 241 | 131 | 72 | 162 | 32 |
| 2 | 78 | 95 | 95 | 94 | e128 | 235 | 216 | 235 | 125 | 67 | 120 | 47 |
| 3 | 66 | 214 | 91 | 102 | e125 | 217 | 201 | 226 | 155 | 63 | 102 | 92 |
| 4 | 78 | 231 | 98 | 111 | e115 | 201 | 205 | 210 | 135 | 62 | 93 | 81 |
| 5 | 117 | 175 | 103 | 273 | e110 | 190 | 226 | 201 | 120 | 61 | 81 | 63 |
| 6 | 106 | 160 | 109 | 278 | e107 | 179 | 212 | 194 | 151 | 55 | 66 | 51 |
| 7 | 86 | 143 | 202 | 222 | e100 | 168 | 198 | 185 | 369 | 53 | 86 | 42 |
| 8 | 74 | 129 | 283 | 193 | 88 | 163 | 188 | 168 | 296 | 49 | 92 | 39 |
| 9 | 68 | 121 | 227 | 173 | 89 | 156 | 212 | 160 | 223 | 48 | 73 | 53 |
| 10 | 73 | 118 | 194 | 184 | 89 | 157 | 235 | 160 | 187 | 52 | 82 | 126 |
| 11 | 94 | 103 | 179 | 317 | 98 | 172 | 211 | 208 | 172 | 48 | 85 | 88 |
| 12 | 88 | 90 | 159 | 283 | 116 | 554 | 202 | 201 | 250 | 43 | 67 | 62 |
| 13 | 76 | 97 | 145 | 237 | 113 | 557 | 189 | 186 | 241 | 41 | 58 | 59 |
| 14 | 90 | 107 | 146 | 197 | 265 | 389 | 176 | 218 | 217 | 40 | 65 | 54 |
| 15 | 87 | 105 | 166 | 172 | 503 | 310 | 172 | 209 | 195 | 42 | 71 | 81 |
| 16 | 87 | 98 | 174 | e160 | 344 | 272 | 200 | 181 | 180 | 84 | 70 | 127 |
| 17 | 83 | 92 | 162 | e140 | 268 | 399 | 213 | 162 | 160 | 75 | 70 | 92 |
| 18 | 127 | 88 | 143 | e130 | 226 | 429 | 207 | 152 | 140 | 61 | 63 | 72 |
| 19 | 174 | 87 | 134 | e120 | 214 | 340 | 224 | 173 | 133 | 54 | 57 | 66 |
| 20 | 183 | 85 | 129 | e118 | 194 | 298 | 221 | 197 | 127 | 52 | 51 | 111 |
| 21 | 255 | 90 | 156 | e117 | 177 | 270 | 210 | 186 | 115 | 48 | 46 | 119 |
| 22 | 211 | 90 | 168 | e115 | 166 | 250 | 634 | 173 | 104 | 46 | 43 | 89 |
| 23 | 189 | 87 | 152 | e117 | 165 | 231 | 774 | 197 | 99 | 43 | 42 | 73 |
| 24 | 185 | 87 | 141 | e120 | 189 | e222 | 625 | 246 | 91 | 42 | 48 | 70 |
| 25 | 170 | 89 | 128 | 122 | 223 | e210 | 469 | 280 | 85 | 41 | 44 | 69 |
| 26 | 148 | 92 | 124 | 131 | 362 | e200 | 389 | 234 | 82 | 50 | 40 | 62 |
| 27 | 134 | 112 | 118 | e122 | 377 | e190 | 362 | 199 | 84 | 76 | 38 | 59 |
| 28 | 122 | 151 | 94 | e118 | 323 | e270 | 319 | 178 | 90 | 77 | 36 | 58 |
| 29 | 114 | 126 | 106 | e112 | 294 | e380 | 288 | 164 | 85 | 63 | 35 | 50 |
| 30 | 107 | 108 | 109 | e110 | --- | e320 | 263 | 149 | 79 | 58 | 34 | 51 |
| 31 | 105 | --- | 98 | e135 | --- | e280 | --- | 137 | --- | 115 | 33 | --- |
| TOTAL | 3668 | 3470 | 4435 | 4920 | 5699 | 8466 | 8480 | 6010 | 4621 | 1781 | 2053 | 2138 |
| MEAN | 118 | 116 | 143 | 159 | 197 | 273 | 283 | 194 | 154 | 57.5 | 66.2 | 71.3 |
| MAX | 255 | 231 | 283 | 317 | 503 | 557 | 774 | 280 | 369 | 115 | 162 | 127 |
| MIN | 66 | 85 | 91 | 94 | 88 | 156 | 172 | 137 | 79 | 40 | 33 | 32 |
| CFSM | 1.63 | 1.60 | 1.98 | 2.19 | 2.71 | 3.77 | 3.90 | 2.68 | 2.13 | .79 | .91 | .98 |
| IN. | 1.88 | 1.78 | 2.28 | 2.53 | 2.93 | 4.35 | 4.36 | 3.09 | 2.37 | .92 | 1.05 | 1.10 |

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

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 76.4 | 129 | 185 | 205 | 220 | 279 | 263 | 191 | 130 | 69.8 | 61.8 | 59.7 |
| MAX | 341 | 386 | 477 | 666 | 398 | 465 | 664 | 365 | 540 | 178 | 183 | 311 |
| (WY) | 1956 | 1956 | 1987 | 1979 | 1970 | 1972 | 1983 | 1979 | 1982 | 1998 | 1979 | 1954 |
| MIN | 22.6 | 24.9 | 35.1 | 36.8 | 87.6 | 147 | 89.4 | 91.9 | 48.3 | 23.8 | 19.9 | 17.4 |
| (WY) | 1958 | 1966 | 1966 | 1981 | 1980 | 1981 | 1966 | 1986 | 1957 | 1999 | 1999 | 1957 |

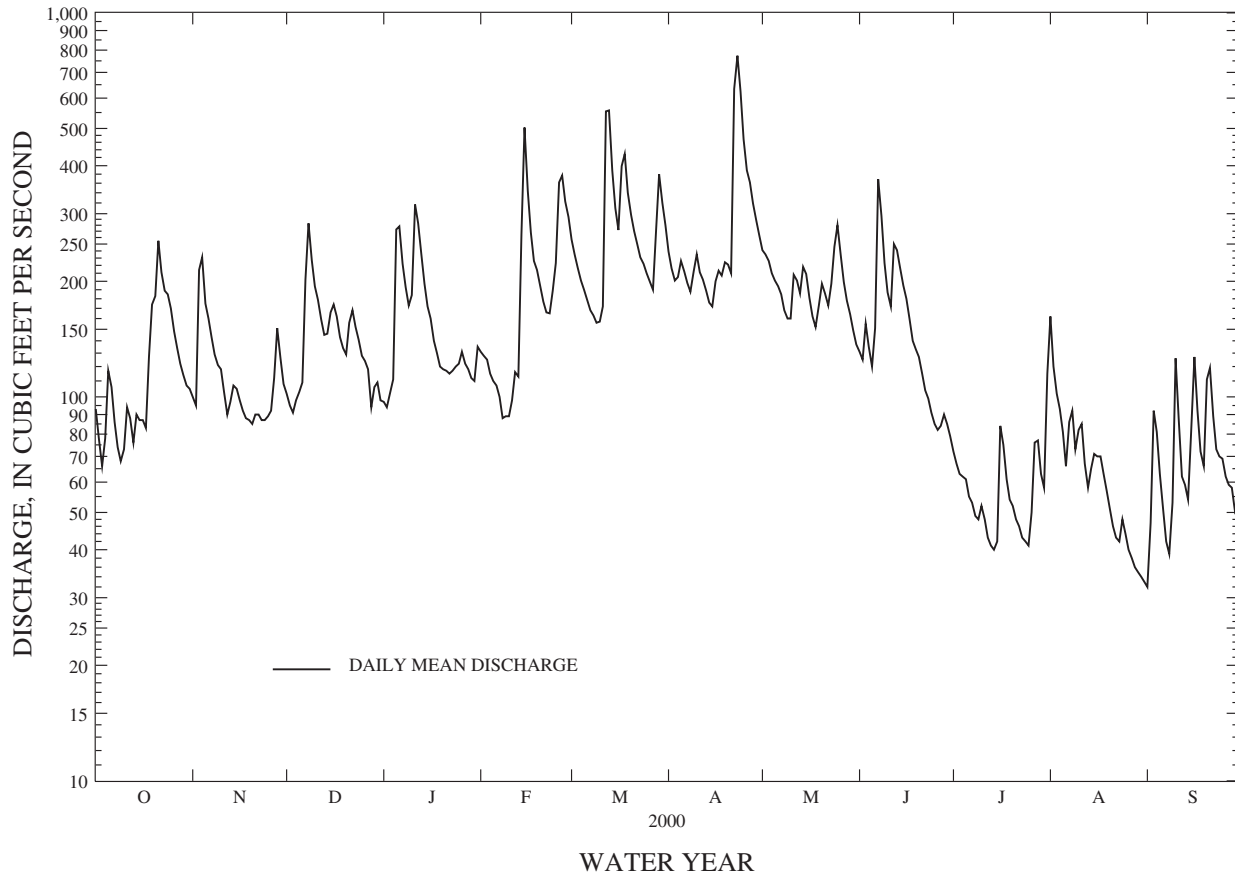
PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1941 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 53930 | | 55741 | | | |
| ANNUAL MEAN | 148 | | 152 | | 156 | |
| HIGHEST ANNUAL MEAN | | | | | 235 | |
| LOWEST ANNUAL MEAN | | | | | 71.2 | |
| HIGHEST DAILY MEAN | 943 | Feb 3 | 774 | Apr 23 | 2200 | Jun 6 1982 |
| LOWEST DAILY MEAN | 12 | Aug 4 | 32 | Sep 1 | 10 | Oct 13 1941 |
| ANNUAL SEVEN-DAY MINIMUM | 13 | Aug 1 | 35 | Aug 26 | 13 | Aug 1 1999 |
| INSTANTANEOUS PEAK FLOW | | | 828 | Apr 23 | 2390 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 5.48 | Apr 23 | 10.26 | Jun 6 1982 |
| INSTANTANEOUS LOW FLOW | | | 31 | Sep 2 | 4.0 | Sep 9 1987 |
| ANNUAL RUNOFF (CFSM) | 2.04 | | 2.10 | | 2.15 | |
| ANNUAL RUNOFF (INCHES) | 27.71 | | 28.64 | | 29.25 | |
| 10 PERCENT EXCEEDS | 289 | | 269 | | 315 | |
| 50 PERCENT EXCEEDS | 118 | | 126 | | 120 | |
| 90 PERCENT EXCEEDS | 19 | | 54 | | 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 TEMPERATURE: October 1977 to current year.

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

REMARKS.--Records good except those for estimated values, which are fair. Interruptions in the record are due to malfunctions of the instrument. Extremes for period of daily record and current year are for those values reported.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 288 µS/cm, Jan. 15; minimum, 32 µS/cm, Jan. 2.
 WATER TEMPERATURE: Maximum recorded, 28.1°C, July 6; minimum, 0.7°C, Jan. 1.

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

| DAY | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
|-------|---------|-----|------|----------|-----|------|----------|-----|------|---------|------|------|
| | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| 1 | 98 | 95 | 96 | 84 | 82 | 83 | 82 | 80 | 81 | 97 | 85 | 92 |
| 2 | 96 | 94 | 95 | 85 | 81 | 83 | 82 | 81 | 81 | 97 | 93 | 95 |
| 3 | 99 | 96 | 98 | 89 | 79 | 84 | 82 | 81 | 81 | 94 | 91 | 92 |
| 4 | e99 | e96 | e98 | 85 | 82 | 84 | 82 | 74 | 79 | 91 | 84 | 89 |
| 5 | 96 | 88 | 92 | 84 | 79 | 82 | 77 | 76 | 77 | 94 | 71 | 81 |
| 6 | 90 | 87 | 89 | 79 | 74 | 77 | 82 | 73 | 76 | 73 | 71 | 72 |
| 7 | 93 | 90 | 91 | 76 | 76 | 76 | 82 | 70 | 77 | 74 | 72 | 73 |
| 8 | 94 | 91 | 92 | 76 | 75 | 76 | 70 | 63 | 65 | 75 | 73 | 74 |
| 9 | 93 | 92 | 92 | 77 | 76 | 76 | 65 | 65 | 65 | 78 | 75 | 77 |
| 10 | 94 | 92 | 93 | 79 | 77 | 78 | 65 | 64 | 65 | 85 | 75 | 80 |
| 11 | 95 | 92 | 93 | 87 | 79 | 83 | 67 | 64 | 66 | 81 | 73 | 77 |
| 12 | 92 | 91 | 91 | 86 | 85 | 86 | 68 | 67 | 67 | 75 | 74 | 75 |
| 13 | 93 | 91 | 92 | 85 | 81 | 83 | 69 | 68 | 68 | 89 | 74 | 79 |
| 14 | 96 | 91 | 93 | 81 | 80 | 81 | 70 | 67 | 69 | 78 | 72 | 74 |
| 15 | 96 | 93 | 94 | 81 | 79 | 80 | 70 | 67 | 68 | 82 | 73 | 78 |
| 16 | 94 | 88 | 92 | 81 | 79 | 80 | 77 | 61 | 64 | 88 | 80 | 83 |
| 17 | 92 | 90 | 91 | 83 | 81 | 82 | 65 | 62 | 64 | 86 | 81 | 84 |
| 18 | 99 | 90 | 94 | 83 | 82 | 83 | 68 | 65 | 66 | 93 | 86 | 90 |
| 19 | 94 | 86 | 88 | 83 | 82 | 83 | 71 | 68 | 69 | 96 | 91 | 94 |
| 20 | 88 | 82 | 86 | 83 | 81 | 82 | 71 | 69 | 70 | 102 | 95 | 98 |
| 21 | 85 | 80 | 82 | 83 | 82 | 82 | 73 | 69 | 71 | 104 | 98 | 101 |
| 22 | 84 | 80 | 81 | 82 | 80 | 82 | 69 | 67 | 68 | 110 | 99 | 102 |
| 23 | 81 | 78 | 80 | 84 | 81 | 83 | 72 | 69 | 70 | 114 | 106 | 110 |
| 24 | 79 | 77 | 78 | 85 | 82 | 84 | 73 | 71 | 72 | 118 | 111 | 114 |
| 25 | 77 | 76 | 76 | 86 | 84 | 85 | 74 | 71 | 73 | 193 | 110 | 130 |
| 26 | 78 | 76 | 77 | 86 | 83 | 85 | 79 | 73 | 76 | 194 | 131 | 155 |
| 27 | 78 | 76 | 77 | 87 | 83 | 85 | 86 | 78 | 80 | 131 | 117 | 123 |
| 28 | 80 | 77 | 78 | 83 | 76 | 80 | 89 | 84 | 87 | 121 | 116 | 118 |
| 29 | 80 | 78 | 79 | 83 | 76 | 79 | 89 | 82 | 85 | 122 | 115 | 118 |
| 30 | 81 | 79 | 80 | 82 | 79 | 80 | 95 | 84 | 87 | 122 | 115 | 118 |
| 31 | 83 | 80 | 82 | --- | --- | --- | 95 | 84 | 92 | e248 | e119 | e180 |
| MONTH | 99 | 76 | 88 | 89 | 74 | 82 | 95 | 61 | 74 | 248 | 71 | 98 |

e Estimated

PAWCATUCK RIVER BASIN

295

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SPECIFIC CONDUCTANCE ($\mu\text{S}/\text{CM}$ AT 25°C), WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000

| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
|-------|----------|------|------|-------|------|------|--------|------|------|-----------|------|------|
| | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| 1 | 157 | 136 | 148 | 82 | 81 | 81 | e79 | e77 | e78 | 82 | 80 | 81 |
| 2 | 136 | 124 | 130 | 83 | 80 | 82 | 82 | 79 | 80 | 84 | 82 | 83 |
| 3 | 129 | 125 | 126 | 84 | 82 | 83 | 82 | 82 | 82 | 85 | 83 | 84 |
| 4 | 149 | 125 | 133 | 84 | 83 | 84 | 86 | 82 | 83 | 86 | 84 | 85 |
| 5 | 132 | 126 | 129 | 85 | 84 | 84 | 84 | 82 | 83 | 88 | 86 | 86 |
| 6 | 131 | 127 | 129 | 86 | 84 | 85 | 82 | 82 | 82 | 90 | 88 | 89 |
| 7 | 132 | 101 | 115 | 86 | 84 | 85 | 84 | 80 | 83 | 92 | 90 | 91 |
| 8 | 103 | 100 | 102 | 86 | 85 | 85 | 88 | 84 | 86 | 97 | 92 | 94 |
| 9 | 104 | 100 | 102 | 87 | 85 | 86 | 90 | 86 | 88 | 96 | 93 | 95 |
| 10 | 105 | 102 | 103 | 89 | 87 | 88 | 86 | 80 | 82 | 95 | 92 | 94 |
| 11 | 103 | 101 | 102 | 98 | 86 | 88 | 82 | 80 | 81 | 95 | 90 | 92 |
| 12 | 102 | 99 | 100 | 96 | 76 | 86 | 83 | 81 | 82 | 92 | 89 | 90 |
| 13 | 100 | 99 | 100 | 76 | 71 | 73 | 84 | 82 | 83 | 92 | 89 | 90 |
| 14 | 122 | 95 | 104 | 72 | 70 | 71 | 85 | 82 | 84 | 91 | 88 | 89 |
| 15 | 95 | 88 | 91 | 72 | 70 | 71 | 85 | 83 | 84 | 88 | 86 | 87 |
| 16 | 89 | 87 | 87 | 74 | 72 | 73 | 89 | 84 | 86 | 89 | 87 | 88 |
| 17 | 87 | 85 | 87 | 87 | 72 | 80 | 88 | 84 | 85 | 90 | 89 | 89 |
| 18 | 93 | 85 | 87 | 77 | 73 | 74 | 85 | 83 | 84 | 92 | 90 | 91 |
| 19 | 108 | 91 | 95 | 75 | 72 | 74 | 84 | 81 | 83 | e92 | e89 | e90 |
| 20 | 95 | 90 | 91 | 73 | 72 | 72 | 83 | 81 | 82 | 89 | 85 | 87 |
| 21 | 92 | 90 | 91 | 74 | 73 | 74 | 83 | 80 | 83 | 87 | 86 | 87 |
| 22 | 92 | 91 | 92 | 76 | 73 | 75 | 82 | 71 | 76 | 88 | 86 | 87 |
| 23 | 95 | 91 | 92 | 79 | 76 | 77 | 72 | 63 | 66 | 87 | 84 | 86 |
| 24 | 94 | 92 | 93 | --- | --- | --- | 66 | 63 | 64 | 85 | 79 | 83 |
| 25 | 105 | 91 | 94 | --- | --- | --- | 69 | 65 | 67 | 85 | 81 | 82 |
| 26 | 99 | 87 | 91 | --- | --- | --- | 69 | 68 | 69 | 83 | 81 | 82 |
| 27 | 88 | 84 | 86 | --- | --- | --- | 72 | 69 | 70 | 83 | 81 | 82 |
| 28 | 84 | 83 | 84 | --- | --- | --- | 73 | 72 | 73 | 85 | 82 | 82 |
| 29 | 83 | 81 | 82 | --- | --- | --- | 77 | 73 | 75 | 83 | 82 | 82 |
| 30 | --- | --- | --- | --- | --- | --- | 80 | 76 | 78 | 84 | 83 | 83 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 87 | 84 | 86 |
| MONTH | 157 | 81 | 102 | --- | --- | --- | 90 | 63 | 79 | 97 | 79 | 87 |
| DAY | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
| 1 | 90 | 87 | 88 | --- | --- | --- | e93 | e88 | e91 | 114 | 113 | 113 |
| 2 | 92 | 87 | 90 | --- | --- | --- | e94 | e89 | e92 | e115 | e106 | e112 |
| 3 | 94 | 88 | 91 | 114 | 102 | 106 | e96 | e93 | e94 | e109 | e100 | e105 |
| 4 | 93 | 91 | 92 | e105 | e104 | e104 | 97 | 94 | 95 | e104 | e99 | e101 |
| 5 | e93 | e92 | e93 | e106 | e104 | e105 | 97 | 95 | 96 | 109 | 104 | 107 |
| 6 | e93 | e84 | e91 | --- | --- | --- | 100 | 95 | 98 | 113 | 109 | 111 |
| 7 | 84 | 80 | 82 | --- | --- | --- | e100 | e94 | e98 | 115 | 113 | 114 |
| 8 | 81 | 80 | 80 | e111 | e106 | e108 | 98 | 94 | 95 | 116 | 114 | 115 |
| 9 | 80 | 79 | 80 | 114 | 106 | 108 | 102 | 98 | 99 | e116 | e106 | e113 |
| 10 | 82 | 80 | 81 | 109 | 105 | 107 | e102 | e96 | e100 | 109 | 93 | 100 |
| 11 | e84 | e81 | e82 | 112 | 103 | 105 | 99 | 96 | 97 | 104 | 93 | 98 |
| 12 | e81 | e77 | e79 | 110 | 104 | 106 | 99 | 96 | 97 | 112 | 104 | 108 |
| 13 | 79 | 76 | 77 | 109 | 105 | 107 | 102 | 99 | 100 | 114 | 110 | 112 |
| 14 | 79 | 77 | 78 | 110 | 108 | 109 | e102 | e100 | e101 | 114 | 110 | 112 |
| 15 | 79 | 78 | 79 | e110 | e105 | e109 | e100 | e99 | e98 | e111 | e107 | e107 |
| 16 | e81 | e79 | e80 | e109 | e100 | e105 | 98 | 95 | 96 | 104 | 92 | 99 |
| 17 | e92 | e81 | e83 | 102 | 100 | 101 | 101 | 98 | 99 | 95 | 91 | 93 |
| 18 | 98 | 85 | 90 | 107 | 102 | 104 | e101 | e100 | e100 | 97 | 94 | 96 |
| 19 | 97 | 86 | 90 | 107 | 106 | 107 | e104 | e99 | e100 | 98 | 92 | 97 |
| 20 | 99 | 87 | 90 | 107 | 106 | 107 | 104 | 100 | 101 | 95 | 92 | 94 |
| 21 | 101 | 88 | 93 | 107 | 105 | 106 | 104 | 102 | 103 | 93 | 88 | 91 |
| 22 | 104 | 91 | 98 | 107 | 106 | 107 | 104 | 103 | 103 | 91 | 88 | 90 |
| 23 | e111 | e92 | e103 | 110 | 106 | 108 | 105 | 103 | 104 | 93 | 91 | 92 |
| 24 | 108 | 96 | 104 | 110 | 109 | 110 | e107 | e102 | e105 | 95 | 93 | 94 |
| 25 | 108 | 96 | 101 | e110 | e109 | e109 | 105 | 103 | 104 | 100 | 94 | 96 |
| 26 | 100 | 98 | 99 | e109 | e106 | e108 | 106 | 104 | 105 | 100 | 96 | 98 |
| 27 | e100 | e99 | e99 | e109 | e103 | e106 | 109 | 106 | 107 | 104 | 96 | 101 |
| 28 | 101 | 100 | 101 | 103 | 101 | 102 | 111 | 109 | 110 | 102 | 99 | 100 |
| 29 | e102 | e100 | e101 | 105 | 102 | 104 | 112 | 110 | 111 | 100 | 97 | 98 |
| 30 | 111 | 101 | 102 | e106 | e102 | e105 | e112 | e111 | e112 | 100 | 90 | 96 |
| 31 | --- | --- | --- | --- | --- | --- | e114 | e112 | e113 | --- | --- | --- |
| MONTH | 111 | 76 | 90 | --- | --- | --- | 114 | 88 | 101 | 116 | 88 | 102 |

e Estimated

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

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

| DAY | OCTOBER | | | NOVEMBER | | | DECEMBER | | | JANUARY | | |
|-------|----------|------|------|----------|------|------|----------|------|-------|---------|------|------|
| | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| 1 | 17.2 | 15.2 | 16.1 | 12.7 | 11.2 | 11.8 | 4.9 | 2.7 | 3.8 | 3.4 | 1.8 | 2.5 |
| 2 | 17.0 | 15.0 | 15.8 | 12.9 | 11.0 | 11.8 | 3.2 | 2.2 | 2.6 | 3.6 | 2.3 | 2.9 |
| 3 | 17.1 | 15.1 | 16.0 | 13.4 | 12.6 | 13.0 | 3.6 | 2.4 | 3.0 | 5.0 | 3.6 | 4.4 |
| 4 | 16.4 | 15.0 | 15.9 | 12.6 | 10.1 | 11.5 | 4.6 | 3.1 | 3.8 | 7.2 | 4.9 | 5.9 |
| 5 | 15.0 | 13.6 | 14.2 | 10.5 | 9.4 | 9.9 | 5.5 | 4.0 | 4.7 | 7.1 | 4.8 | 6.3 |
| 6 | 14.1 | 12.5 | 13.2 | 10.7 | 9.2 | 9.9 | 6.8 | 5.3 | 6.0 | 4.8 | 2.6 | 3.4 |
| 7 | 13.0 | 11.6 | 12.3 | 10.2 | 8.7 | 9.6 | 8.0 | 6.8 | 7.5 | 3.1 | 2.2 | 2.6 |
| 8 | 12.4 | 10.7 | 11.5 | 8.7 | 7.1 | 8.0 | 7.5 | 5.8 | 6.7 | 2.9 | 2.1 | 2.4 |
| 9 | 13.2 | 11.4 | 12.3 | 7.7 | 6.7 | 7.2 | 5.8 | 4.3 | 5.1 | 3.2 | 2.3 | 2.7 |
| 10 | 13.3 | 12.3 | 12.8 | 9.4 | 7.5 | 8.4 | 5.2 | 4.0 | 4.5 | 4.5 | 3.0 | 3.6 |
| 11 | 15.3 | 13.3 | 14.2 | 9.4 | 8.2 | 9.1 | 5.2 | 4.4 | 4.9 | 5.3 | 4.5 | 4.8 |
| 12 | 14.9 | 13.1 | 13.9 | 8.4 | 7.5 | 7.9 | 4.5 | 3.6 | 4.1 | 4.7 | 3.7 | 4.3 |
| 13 | 14.5 | 12.9 | 13.7 | 8.3 | 7.1 | 7.6 | 4.1 | 3.1 | 3.7 | 3.7 | 1.7 | 3.0 |
| 14 | 14.3 | 12.9 | 14.0 | 7.9 | 6.7 | 7.3 | 4.5 | 4.1 | 4.2 | 1.7 | .2 | .8 |
| 15 | 13.3 | 11.8 | 12.5 | 7.4 | 6.3 | 6.9 | 5.4 | 4.5 | 5.1 | .7 | .1 | .3 |
| 16 | 13.6 | 11.2 | 12.2 | 6.3 | 4.9 | 5.7 | 6.3 | 5.4 | 5.9 | .9 | .3 | .6 |
| 17 | 13.9 | 12.3 | 13.0 | 5.0 | 4.0 | 4.5 | 5.7 | 4.6 | 5.3 | .6 | .1 | .3 |
| 18 | 13.8 | 12.9 | 13.5 | 5.1 | 3.7 | 4.3 | 4.6 | 3.7 | 4.3 | .9 | .3 | .5 |
| 19 | 13.1 | 11.9 | 12.5 | 5.8 | 4.2 | 4.9 | 3.7 | 2.7 | 3.2 | 1.1 | .4 | .7 |
| 20 | 12.1 | 11.6 | 11.9 | 7.2 | 5.3 | 6.2 | 3.6 | 2.3 | 2.8 | 1.0 | .5 | .7 |
| 21 | 12.6 | 11.4 | 11.9 | 8.6 | 7.2 | 7.8 | 4.8 | 3.6 | 4.3 | .8 | .3 | .6 |
| 22 | 11.7 | 11.1 | 11.4 | 9.1 | 7.9 | 8.5 | 5.1 | 4.0 | 4.8 | .8 | .1 | .4 |
| 23 | 12.1 | 11.1 | 11.5 | 10.0 | 8.9 | 9.4 | 4.0 | 3.0 | 3.4 | .8 | .1 | .3 |
| 24 | 12.0 | 10.7 | 11.3 | 10.6 | 9.5 | 10.1 | 3.0 | 1.6 | 2.3 | .7 | .2 | .4 |
| 25 | 11.1 | 10.0 | 10.5 | 11.0 | 10.5 | 10.8 | 1.9 | 1.1 | 1.4 | .9 | .2 | .5 |
| 26 | 10.9 | 9.3 | 10.1 | 11.6 | 10.7 | 11.0 | 2.0 | .9 | 1.4 | 1.3 | .3 | .9 |
| 27 | 11.3 | 9.8 | 10.5 | 11.5 | 10.7 | 11.3 | 1.9 | 1.0 | 1.4 | .8 | .2 | .4 |
| 28 | 11.1 | 9.7 | 10.3 | 10.7 | 8.8 | 10.0 | 1.4 | .6 | 1.0 | 1.0 | .2 | .5 |
| 29 | 11.1 | 9.2 | 10.1 | 8.8 | 6.7 | 7.8 | 2.2 | 1.0 | 1.5 | 1.1 | .5 | .7 |
| 30 | 10.9 | 9.4 | 10.1 | 6.7 | 4.9 | 5.9 | 2.8 | 1.8 | 2.2 | 1.3 | .4 | .8 |
| 31 | 12.0 | 10.2 | 11.1 | --- | --- | --- | 3.0 | 1.8 | 2.2 | 1.2 | .6 | 1.0 |
| MONTH | 17.2 | 9.2 | 12.6 | 13.4 | 3.7 | 8.6 | 8.0 | .6 | 3.8 | 7.2 | .1 | 1.9 |
| DAY | FEBRUARY | | | MARCH | | | APRIL | | | MAY | | |
| | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| 1 | 1.3 | 0.5 | 0.9 | 5.4 | 4.2 | 4.7 | e11.4 | e9.2 | e10.2 | 12.5 | 10.7 | 11.5 |
| 2 | 1.5 | .5 | 1.0 | 5.6 | 4.8 | 5.1 | 11.3 | 10.0 | 10.6 | 13.1 | 11.4 | 12.1 |
| 3 | 1.5 | .7 | 1.0 | 5.6 | 4.2 | 4.8 | 11.4 | 10.8 | 11.0 | 14.0 | 10.9 | 12.5 |
| 4 | 1.8 | 1.0 | 1.3 | 6.0 | 4.1 | 4.9 | 11.6 | 10.9 | 11.3 | 14.9 | 12.2 | 13.4 |
| 5 | 2.0 | 1.3 | 1.5 | 6.3 | 4.8 | 5.4 | 11.7 | 10.2 | 11.0 | 16.3 | 13.5 | 14.8 |
| 6 | 1.9 | 1.1 | 1.5 | 6.7 | 4.7 | 5.6 | 10.2 | 9.3 | 9.7 | 18.0 | 15.5 | 16.6 |
| 7 | 2.0 | 1.0 | 1.5 | 6.8 | 4.6 | 5.7 | 11.5 | 8.6 | 10.0 | 19.3 | 16.1 | 17.6 |
| 8 | 1.7 | .5 | 1.0 | 8.0 | 5.9 | 6.9 | 13.6 | 10.3 | 11.8 | 20.9 | 18.1 | 19.4 |
| 9 | 2.0 | .4 | 1.1 | 9.4 | 7.1 | 8.2 | 13.6 | 11.5 | 13.0 | 22.2 | 19.1 | 20.5 |
| 10 | 2.5 | .9 | 1.6 | 10.4 | 8.5 | 9.3 | 11.5 | 10.0 | 10.7 | 20.5 | 16.9 | 18.9 |
| 11 | 2.9 | 1.9 | 2.4 | 9.2 | 7.5 | 8.5 | 10.2 | 9.1 | 9.6 | 16.9 | 15.2 | 15.9 |
| 12 | 3.2 | 1.7 | 2.4 | 7.6 | 7.0 | 7.2 | 11.2 | 8.9 | 9.8 | 15.8 | 14.7 | 15.3 |
| 13 | 3.1 | 1.6 | 2.3 | 7.0 | 6.0 | 6.5 | 11.6 | 9.0 | 10.1 | 15.2 | 14.5 | 14.9 |
| 14 | 3.0 | 2.3 | 2.6 | 6.5 | 5.3 | 5.9 | 11.5 | 8.6 | 9.9 | 17.0 | 14.0 | 15.4 |
| 15 | 2.3 | 1.1 | 1.6 | 7.5 | 5.8 | 6.7 | 11.1 | 9.5 | 10.3 | 17.4 | 15.7 | 16.4 |
| 16 | 1.7 | 1.0 | 1.4 | 9.3 | 7.2 | 8.4 | 12.4 | 10.6 | 11.4 | 16.9 | 14.6 | 15.6 |
| 17 | 2.1 | 1.2 | 1.5 | 9.3 | 6.1 | 8.1 | 12.2 | 11.1 | 11.8 | 17.3 | 14.6 | 15.8 |
| 18 | 1.4 | .4 | 1.0 | 6.1 | 4.5 | 5.1 | 11.1 | 9.2 | 10.2 | 17.0 | 15.8 | 16.3 |
| 19 | 1.2 | .8 | 1.1 | 5.9 | 4.2 | 5.0 | 9.2 | 8.7 | 8.9 | 16.3 | 14.1 | 15.4 |
| 20 | 2.6 | 1.2 | 1.8 | 6.8 | 5.1 | 5.9 | 11.2 | 8.6 | 9.8 | 14.1 | 13.0 | 13.5 |
| 21 | 3.2 | 1.6 | 2.3 | 6.7 | 6.2 | 6.4 | 11.1 | 10.1 | 10.7 | 13.3 | 12.9 | 13.1 |
| 22 | 3.4 | 1.5 | 2.3 | 7.1 | 6.1 | 6.5 | 10.1 | 9.2 | 9.5 | 13.1 | 12.7 | 12.9 |
| 23 | 4.1 | 2.0 | 2.9 | 8.7 | 6.3 | 7.3 | 9.2 | 8.7 | 8.9 | 13.6 | 12.6 | 13.1 |
| 24 | 5.1 | 3.3 | 4.1 | --- | --- | --- | 9.8 | 8.4 | 9.1 | 15.2 | 13.2 | 13.9 |
| 25 | 4.5 | 3.7 | 4.2 | --- | --- | --- | 10.7 | 9.1 | 9.9 | 17.0 | 14.6 | 15.7 |
| 26 | 3.7 | 3.2 | 3.4 | --- | --- | --- | 10.1 | 8.5 | 9.4 | 18.0 | 15.9 | 16.9 |
| 27 | 4.1 | 3.1 | 3.5 | --- | --- | --- | 8.9 | 8.1 | 8.5 | 18.2 | 16.4 | 17.3 |
| 28 | 5.1 | 4.1 | 4.6 | --- | --- | --- | 8.9 | 8.3 | 8.6 | 17.2 | 16.0 | 16.7 |
| 29 | 5.2 | 3.9 | 4.5 | --- | --- | --- | 10.4 | 8.3 | 9.2 | 16.2 | 15.2 | 15.7 |
| 30 | --- | --- | --- | --- | --- | --- | 12.4 | 9.6 | 10.9 | 16.4 | 14.6 | 15.3 |
| 31 | --- | --- | --- | --- | --- | --- | --- | --- | --- | 17.0 | 14.3 | 15.4 |
| MONTH | 5.2 | .4 | 2.1 | --- | --- | --- | 13.6 | 8.1 | 10.2 | 22.2 | 10.7 | 15.4 |

e Estimated

PAWCATUCK RIVER BASIN

297

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

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

| DAY | MAX | MIN | MEAN | JUNE | | | JULY | | | AUGUST | | | SEPTEMBER | | |
|-------|------|------|------|------|------|------|------|------|------|--------|------|------|-----------|-----|------|
| | | | | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN | MAX | MIN | MEAN |
| 1 | 19.3 | 15.5 | 17.0 | 22.9 | 19.6 | 21.2 | 19.7 | 19.0 | 19.3 | 22.6 | 20.3 | 21.5 | | | |
| 2 | 20.3 | 17.6 | 18.8 | 23.0 | 19.6 | 21.2 | 21.3 | 19.4 | 20.1 | 22.6 | 20.9 | 21.7 | | | |
| 3 | 21.3 | 18.9 | 20.0 | 22.9 | 20.1 | 21.4 | 21.4 | 20.2 | 20.8 | 21.6 | 21.0 | 21.4 | | | |
| 4 | 20.9 | 18.3 | 19.4 | 23.3 | 21.1 | 22.0 | 23.3 | 20.9 | 21.8 | 22.0 | 20.9 | 21.3 | | | |
| 5 | 20.3 | 18.2 | 19.1 | 24.0 | 21.2 | 22.5 | 23.8 | 21.1 | 22.4 | 20.9 | 18.9 | 19.9 | | | |
| 6 | 18.5 | 15.9 | 17.1 | 23.4 | 20.6 | 22.0 | 22.4 | 20.5 | 21.5 | 19.6 | 17.5 | 18.6 | | | |
| 7 | 16.0 | 14.5 | 15.4 | 22.5 | 20.6 | 21.6 | 22.9 | 20.9 | 21.6 | 18.8 | 16.7 | 17.9 | | | |
| 8 | 16.5 | 15.2 | 15.9 | 21.7 | 19.2 | 20.6 | 24.2 | 21.6 | 22.7 | 18.7 | 15.9 | 17.4 | | | |
| 9 | 17.9 | 16.0 | 17.0 | 21.0 | 19.1 | 20.2 | 24.0 | 22.1 | 22.9 | 19.9 | 17.4 | 18.4 | | | |
| 10 | 21.0 | 17.8 | 19.4 | 22.1 | 19.2 | 20.5 | 25.3 | 22.5 | 23.7 | 20.5 | 17.9 | 19.0 | | | |
| 11 | 22.6 | 20.1 | 21.0 | 22.4 | 19.8 | 21.1 | 24.5 | 22.5 | 23.5 | 20.7 | 18.9 | 19.7 | | | |
| 12 | 20.6 | 17.4 | 19.2 | 22.5 | 19.6 | 21.1 | 23.2 | 21.8 | 22.4 | 21.4 | 19.2 | 20.2 | | | |
| 13 | 17.4 | 16.5 | 16.8 | 22.4 | 20.0 | 21.4 | 21.8 | 20.6 | 20.9 | 21.9 | 19.7 | 20.6 | | | |
| 14 | 17.2 | 16.3 | 16.6 | 22.6 | 19.7 | 21.2 | 20.6 | 19.7 | 19.9 | 21.1 | 19.3 | 20.3 | | | |
| 15 | 16.5 | 16.3 | 16.4 | 21.9 | 20.4 | 21.0 | 20.3 | 19.2 | 19.7 | 20.4 | 19.2 | 19.9 | | | |
| 16 | 18.4 | 16.2 | 17.2 | 22.3 | 20.2 | 21.1 | 20.8 | 19.3 | 19.8 | 19.4 | 17.6 | 18.6 | | | |
| 17 | 21.5 | 18.1 | 19.8 | 22.5 | 20.4 | 21.2 | 21.2 | 18.5 | 19.7 | 18.5 | 16.6 | 17.4 | | | |
| 18 | 21.6 | 20.5 | 21.1 | 23.5 | 20.9 | 22.0 | 19.6 | 18.2 | 18.9 | 18.7 | 16.2 | 17.3 | | | |
| 19 | 20.6 | 19.4 | 20.1 | 22.1 | 20.4 | 20.8 | 20.8 | 18.3 | 19.4 | 18.0 | 16.6 | 17.3 | | | |
| 20 | 21.5 | 18.5 | 20.0 | 21.7 | 19.5 | 20.5 | 20.0 | 17.8 | 18.9 | 20.0 | 17.7 | 18.5 | | | |
| 21 | 20.9 | 18.9 | 19.9 | 21.6 | 19.0 | 20.4 | 19.9 | 17.1 | 18.5 | 20.2 | 18.3 | 19.1 | | | |
| 22 | 21.4 | 19.7 | 20.3 | 22.5 | 19.8 | 21.0 | 20.1 | 17.6 | 18.9 | 19.7 | 17.7 | 18.6 | | | |
| 23 | 22.4 | 19.8 | 20.9 | 21.8 | 19.4 | 20.6 | 19.4 | 17.4 | 18.4 | 18.0 | 16.7 | 17.4 | | | |
| 24 | 22.9 | 20.0 | 21.3 | 21.7 | 19.7 | 20.8 | 20.7 | 17.7 | 19.1 | 18.2 | 17.3 | 17.7 | | | |
| 25 | 22.8 | 20.1 | 21.3 | 21.4 | 19.9 | 20.4 | 20.8 | 18.2 | 19.6 | 17.5 | 15.9 | 16.7 | | | |
| 26 | 23.4 | 21.1 | 22.0 | 19.9 | 19.1 | 19.4 | 20.9 | 18.4 | 19.8 | 16.5 | 15.0 | 15.7 | | | |
| 27 | 24.1 | 21.6 | 22.6 | 19.2 | 18.6 | 18.9 | 21.4 | 18.5 | 20.0 | 16.5 | 14.1 | 15.2 | | | |
| 28 | 24.0 | 21.7 | 22.6 | 19.5 | 18.0 | 18.7 | 21.4 | 19.7 | 20.6 | 15.9 | 13.7 | 14.8 | | | |
| 29 | 22.1 | 21.1 | 21.7 | 19.7 | 18.4 | 19.0 | 21.1 | 19.5 | 20.4 | 14.8 | 12.7 | 13.8 | | | |
| 30 | 22.6 | 20.0 | 21.2 | 20.1 | 18.4 | 19.2 | 20.4 | 19.2 | 19.8 | 14.6 | 12.0 | 13.3 | | | |
| 31 | --- | --- | --- | 19.7 | 19.2 | 19.3 | 21.8 | 19.9 | 20.8 | --- | --- | --- | | | |
| MONTH | 24.1 | 14.5 | 19.4 | 24.0 | 18.0 | 20.7 | 25.3 | 17.1 | 20.5 | 22.6 | 12.0 | 18.3 | | | |

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, many days are adjusted for tidal backwater, which lasts as much as 4 hours during times of high tide. Diurnal fluctuation at low flow prior to 1962 by mills upstream; regulation much greater prior to 1958. Diversion upstream for municipal supply of Westerly.

AVERAGE DISCHARGE.--59 years (water years 1942-current year), 577 ft³/s, 26.58 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, 2,520 ft³/s, Apr 24, gage height, 7.41 ft; minimum, 140 ft³/s, Sept. 2.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1 | 210 | 323 | 337 | 329 | e510 | 1010 | 1080 | 1190 | 544 | 396 | 648 | 147 |
| 2 | 216 | 312 | 315 | 325 | e500 | 904 | 949 | 1080 | 526 | 368 | 637 | 141 |
| 3 | 194 | 465 | 299 | 336 | e490 | 815 | 852 | 1020 | 635 | 344 | 518 | 176 |
| 4 | 193 | 641 | 293 | 367 | 437 | 744 | 796 | 950 | 654 | 326 | 446 | 249 |
| 5 | 262 | 653 | 297 | 536 | 416 | 689 | 827 | 891 | 580 | 319 | 379 | 295 |
| 6 | 283 | 584 | 327 | 702 | 421 | 642 | 821 | 850 | 602 | 304 | 311 | 257 |
| 7 | 252 | 527 | 568 | 686 | 383 | 605 | 770 | 811 | 1160 | 280 | 393 | 211 |
| 8 | 216 | 472 | 794 | 602 | 367 | 579 | 722 | 767 | 1320 | 268 | 425 | 179 |
| 9 | 194 | 419 | 782 | 539 | 344 | 564 | 719 | 731 | 1190 | 281 | 375 | 167 |
| 10 | 190 | 391 | 676 | 534 | 340 | 556 | 763 | 708 | 1020 | 260 | 362 | 233 |
| 11 | 227 | 383 | 589 | 784 | 366 | 581 | 744 | 796 | 887 | 241 | 365 | 295 |
| 12 | 238 | 357 | 536 | 886 | 386 | 1380 | 704 | 850 | 1390 | 208 | 322 | 252 |
| 13 | 220 | 338 | 492 | 828 | 389 | 1780 | 673 | 801 | 1570 | 187 | 282 | 229 |
| 14 | 245 | 345 | 485 | 712 | 718 | 1710 | 634 | 822 | 1320 | 178 | 281 | 226 |
| 15 | 278 | 340 | 519 | 575 | 1210 | 1520 | 605 | 834 | 1140 | 183 | 305 | 267 |
| 16 | 264 | 333 | 543 | e500 | 1170 | 1310 | 669 | 775 | 1020 | 244 | 322 | 398 |
| 17 | 248 | 319 | 535 | e460 | 970 | 1460 | 763 | 697 | 920 | 278 | 335 | 394 |
| 18 | 346 | 306 | 502 | e440 | 806 | 1640 | 785 | 641 | 845 | 252 | 328 | 318 |
| 19 | 450 | 299 | 466 | e420 | 687 | 1570 | 823 | 655 | 765 | 221 | 300 | 263 |
| 20 | 478 | 296 | 441 | e400 | 633 | 1380 | 841 | 722 | 699 | 204 | 268 | 329 |
| 21 | 626 | 303 | 448 | e390 | 586 | 1230 | 830 | 745 | 646 | 188 | 238 | 417 |
| 22 | 662 | 303 | 475 | e370 | 553 | 1100 | 1780 | 716 | 597 | 176 | 213 | 399 |
| 23 | 611 | 300 | 471 | e360 | 543 | 995 | 2320 | 746 | 556 | 166 | 196 | 331 |
| 24 | 552 | 296 | 441 | e370 | 592 | 909 | 2490 | 869 | 517 | 151 | 209 | 297 |
| 25 | 505 | 295 | 409 | e390 | 710 | 845 | 2400 | 1010 | 485 | 142 | 209 | 275 |
| 26 | 456 | 309 | 382 | e420 | 949 | 812 | 2180 | 960 | 460 | 170 | 191 | 258 |
| 27 | 408 | 338 | 372 | e410 | 1120 | 776 | 1940 | 842 | 441 | 257 | 179 | 255 |
| 28 | 378 | 399 | 360 | e390 | 1160 | 868 | 1720 | 741 | 452 | 287 | 170 | 253 |
| 29 | 355 | 414 | 335 | e370 | 1110 | 1140 | 1520 | 666 | 438 | 270 | 162 | 244 |
| 30 | 337 | 375 | 339 | e400 | --- | 1250 | 1340 | 614 | 421 | 236 | 151 | 212 |
| 31 | 328 | --- | 339 | e460 | --- | 1200 | --- | 576 | --- | 353 | 153 | --- |
| TOTAL | 10422 | 11435 | 14167 | 15291 | 18866 | 32564 | 34060 | 25076 | 23800 | 7738 | 9673 | 7967 |
| MEAN | 336 | 381 | 457 | 493 | 651 | 1050 | 1135 | 809 | 793 | 250 | 312 | 266 |
| MAX | 662 | 653 | 794 | 886 | 1210 | 1780 | 2490 | 1190 | 1570 | 396 | 648 | 417 |
| MIN | 190 | 295 | 293 | 325 | 340 | 556 | 605 | 576 | 421 | 142 | 151 | 141 |
| CFSM | 1.14 | 1.29 | 1.55 | 1.67 | 2.21 | 3.56 | 3.85 | 2.74 | 2.69 | .85 | 1.06 | .90 |
| IN. | 1.31 | 1.44 | 1.79 | 1.93 | 2.38 | 4.11 | 4.30 | 3.16 | 3.00 | .98 | 1.22 | 1.00 |

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

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 260 | 449 | 656 | 757 | 823 | 1046 | 984 | 716 | 500 | 264 | 233 | 219 |
| MAX | 1186 | 1450 | 1789 | 2151 | 1377 | 1775 | 2603 | 1274 | 2246 | 642 | 763 | 1233 |
| (WY) | 1956 | 1956 | 1987 | 1979 | 1982 | 1994 | 1983 | 1948 | 1959 | 1959 | 1946 | 1954 |
| MIN | 87.2 | 93.2 | 115 | 131 | 325 | 495 | 371 | 325 | 210 | 98.5 | 71.9 | 65.7 |
| (WY) | 1950 | 1966 | 1966 | 1981 | 1980 | 1981 | 1966 | 1986 | 1942 | 1957 | 1999 | 1964 |

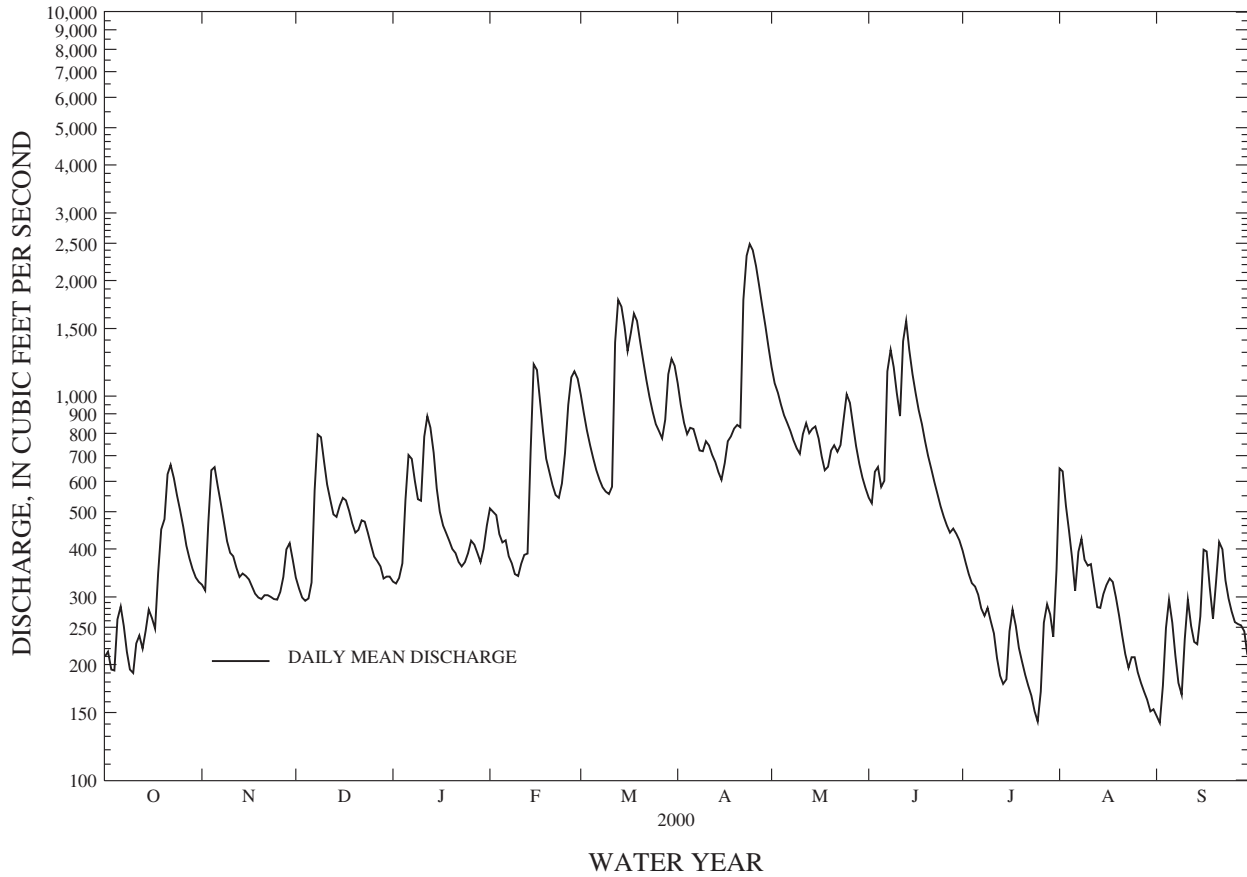
PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1941 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 185293 | | 211059 | | | |
| ANNUAL MEAN | 508 | | 577 | | 577 | |
| HIGHEST ANNUAL MEAN | | | | | 871 1973 | |
| LOWEST ANNUAL MEAN | | | | | 251 1981 | |
| HIGHEST DAILY MEAN | 2490 | Feb 5 | 2490 | Apr 24 | 6220 | Jun 6 1982 |
| LOWEST DAILY MEAN | 44 | Sep 3 | 141 | Sep 2 | 25 | Aug 17 1941 |
| ANNUAL SEVEN-DAY MINIMUM | 48 | Sep 1 | 157 | Aug 28 | 47 | Sep 2 1995 |
| INSTANTANEOUS PEAK FLOW | | | 2520 | Apr 24 | 7070 | Jun 6 1982 |
| INSTANTANEOUS PEAK STAGE | | | 7.41 | Apr 24 | 12.86 | Jun 6 1982 |
| INSTANTANEOUS LOW FLOW | | | 140 | Sep 2 | | |
| ANNUAL RUNOFF (CFSM) | 1.72 | | 1.95 | | 1.96 | |
| ANNUAL RUNOFF (INCHES) | 23.37 | | 26.61 | | 26.58 | |
| 10 PERCENT EXCEEDS | 1050 | | 1090 | | 1200 | |
| 50 PERCENT EXCEEDS | 383 | | 451 | | 450 | |
| 90 PERCENT EXCEEDS | 83 | | 221 | | 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 TEMPERATURE: June 1978 to September 1992.

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

REMARKS.--Instantaneous records are representative of the cross section while continuous records are based on point samples.

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

WATER TEMPERATURE: Maximum recorded, 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 1999 TO SEPTEMBER 2000

| DATE | TIME | DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061) | OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301) | OXYGEN, DIS-SOLVED (MG/L) (00300) | PH WATER WHOLE FIELD (STANDARD UNITS) (00400) | SPECIFIC CONDUCTANCE (US/CM) (00095) | TEMPERATURE AIR (DEG C) (00020) | TEMPERATURE WATER (DEG C) (00010) | HARDNESS TOTAL (MG/L AS CACO3) (00900) | CALCIUM DIS-SOLVED (MG/L AS CA) (00915) | MAGNESIUM DIS-SOLVED (MG/L AS MG) (00925) | POTASSIUM DIS-SOLVED (MG/L AS K) (00935) | |
|------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|------------------------------------------|-------------------------------------------|---------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|------|
| NOV | 17... | 1050 | 318 | 92 | 11.6 | 6.9 | 105 | 7.0 | 5.5 | 17 | 4.36 | 1.42 | 1.3 |
| MAR | 13... | 1120 | 1,780 | 94 | 11.6 | 6.6 | 81 | 5.5 | 6.5 | 12 | 3.20 | 1.00 | 1.0 |
| JUN | 26... | 1105 | 459 | 93 | 8.1 | 7.6 | 96 | 22.0 | 22.0 | 17 | 4.69 | 1.30 | 1.1 |
| AUG | 23... | 1030 | 193 | 100 | 9.2 | 7.0 | 118 | 22.5 | 19.5 | 19 | 5.21 | 1.42 | 1.1 |
| DATE | SODIUM, DIS-SOLVED (MG/L AS NA) (00930) | ALKALINITY WAT DIS TOT IT FIELD (MG/L AS) (39086) | BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453) | CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452) | CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940) | FLUORIDE, DIS-SOLVED (MG/L AS F) (00950) | SILICA, DIS-SOLVED (MG/L AS SIO2) (00955) | SULFATE DIS-SOLVED (MG/L AS SO4) (00945) | NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623) | NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625) | NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608) | NITROGEN, TOTAL (MG/L AS N) (00600) | |
| NOV | 17... | 11.2 | 8 | 10 | 0 | 15.8 | 0.1 | 9.8 | 9.2 | 0.31 | 0.33 | 0.036 | 0.63 |
| MAR | 13... | 10.1 | 4 | 4 | 0 | 12.1 | <.1 | 5.8 | 8.3 | .28 | .39 | .027 | .62 |
| JUN | 26... | 10.9 | 8 | 10 | 0 | 15.3 | <.1 | 6.9 | 7.3 | .35 | .38 | .039 | .79 |
| AUG | 23... | 14.5 | 11 | 13 | 0 | 15.5 | .1 | 9.0 | 11.5 | .38 | .38 | <.020 | .78 |
| DATE | NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631) | NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613) | NITROGEN, ORGANIC TOTAL (MG/L AS N) (00605) | PHOSPHORUS DIS-SOLVED (MG/L AS P) (00666) | PHOSPHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671) | PHOSPHORUS TOTAL (MG/L AS P) (00665) | CARBON, ORGANIC TOTAL (MG/L AS C) (00680) | OXYGEN DEMAND, BIO-CHEMICAL, 5 DAY LEVEL (MG/L) (00310) | OXYGEN DEMAND, CHEMICAL (HIGH LEVEL) (MG/L) (00340) | COLOR (PLATINUM-COBALT UNITS) (00080) | RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530) | SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300) | |
| NOV | 17... | 0.294 | <0.010 | 0.30 | 0.010 | <0.010 | 0.018 | 8.4 | 1.0 | 40 | 75 | <1 | 75 |
| MAR | 13... | .224 | <.010 | .37 | .012 | <.010 | .038 | 7.8 | 1.0 | 16 | 60 | 6 | 55 |
| JUN | 26... | .405 | <.010 | .34 | .036 | .022 | .049 | 9.3 | 1.0 | -- | 100 | <10 | 71 |
| AUG | 23... | .401 | <.010 | -- | .027 | .010 | .035 | 9.8 | 1.0 | -- | 100 | <10 | 86 |

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

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

| DATE | SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L) (00500) | TUR- BID- ITY (NTU) (00076) | COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML) (31616) | ENTERO- COCCI ME, MF WATER TOTAL (COL / 100 ML) (31649) | ENTERO- COCCI (MEI) MF 24 HOUR (COL / 100 ML) (90909) | ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106) | ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL) (01105) | ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095) | ARSENIC TOTAL (UG/L AS AS) (01002) | BARIUM, DIS- SOLVED (UG/L AS BA) (01005) | BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010) |
|--------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| NOV 17... | 75 | 1.4 | K15 | K8 | -- | 95 | 121 | <1 | <3 | 11 | <1 |
| MAR 13... | 67 | 3.0 | 900 | 84 | -- | 97 | 194 | <1 | <3 | 10 | <1 |
| JUN 26... | 75 | 2.1 | 100 | -- | 28 | 82 | 116 | <1 | <3 | 12 | <1 |
| AUG 23... | 90 | 1.3 | 56 | -- | K16 | 76 | 92 | <1 | <3 | 11 | <1 |
| DATE | CADMIUM DIS- SOLVED (UG/L AS CD) (01025) | CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030) | COBALT, DIS- SOLVED (UG/L AS CO) (01035) | COPPER, DIS- SOLVED (UG/L AS CU) (01040) | IRON, DIS- SOLVED (UG/L AS FE) (01046) | IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045) | LEAD, DIS- SOLVED (UG/L AS PB) (01049) | MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056) | MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055) | MERCURY TOTAL RECOV- ERABLE (UG/L AS HG) (71900) | MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060) |
| NOV 17... | <0.1 | <0.8 | <1 | <1 | 270 | 380 | <1 | 34 | 38 | <0.3 | <1 |
| MAR 13... | <.1 | <1.0 | <1 | <1 | 140 | 310 | <1 | 33 | 47 | <.3 | <1 |
| JUN 26... | <.1 | <.8 | <1 | <1 | 390 | 710 | <1 | 41 | 55 | <.3 | <1 |
| AUG 23... | <.1 | E.6 | <1 | <1 | 420 | 590 | <1 | 25 | 31 | <.3 | <1 |
| DATE | NICKEL, DIS- SOLVED (UG/L AS NI) (01065) | SILVER, DIS- SOLVED (UG/L AS AG) (01075) | ZINC, DIS- SOLVED (UG/L AS ZN) (01090) | ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39333) | CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39351) | DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39383) | ENDO- SULFAN I TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39389) | ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39393) | HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39413) | LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39343) | METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39481) |
| NOV 17... | <1 | <1 | 5 | -- | -- | -- | -- | -- | -- | -- | -- |
| MAR 13... | 1 | <1 | 7 | -- | -- | -- | -- | -- | -- | -- | -- |
| JUN 26... | <1 | <1 | 3 | -- | -- | -- | -- | -- | -- | -- | -- |
| AUG 23... | <1 | <1 | 2 | <0.2 | <3 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <2 |
| DATE | MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39758) | P, P'- DDD, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39363) | P, P'- DDE, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39368) | P, P'- DDT, RECOVER IN BOT- TOM MA- TERIAL (UG/KG) (39373) | PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39519) | PHENOLS TOTAL IN BOT- TOM MA- TERIAL (UG/L) (32730) | TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG) (39403) | URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703) | 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) |
| NOV 17... | -- | -- | -- | -- | -- | 6 | -- | <1 | 9 | 8.0 | 38 |
| MAR 13... | -- | -- | -- | -- | -- | <4 | -- | <1 | 25 | 120 | 24 |
| JUN 26... | -- | -- | -- | -- | -- | -- | -- | <1 | 6 | 7.3 | 78 |
| AUG 23... | <0.2 | <0.5 | <0.2 | <0.5 | <5 | -- | <50 | <1 | 2 | 1.1 | 78 |

CONNECTICUT RIVER BASIN

01162000 MILLERS RIVER NEAR WINCHENDON, MA

LOCATION.--Lat 42°41'03", long 72°05'02", Worcester County, Hydrologic Unit 01080202, on right bank 10 ft downstream from Nolan Bridge, 0.3 mi downstream from Tarbell Brook, 2 mi west of Winchendon, and at mile 32.8.

DRAINAGE AREA.--81.8 mi².

PERIOD OF RECORD.--Discharge: June 1916 to current year. March to May 1917, monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1957, 1965-66, 1994-95.

REVISED RECORDS.--WSP 451: 1916. WSP 1051: 1919, 1920-21(M), 1922-24, 1928(M), 1933-34.

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

GAGE.--Water-stage recorder. Concrete control since Oct. 6, 1933. Datum of gage is 826.66 ft above sea level. Prior to July 27, 1916, nonrecording gage at bridge at same datum.

REMARKS.--Records fair for flows 200 ft³/s and greater; records poor for flows less than 200 ft³/s and those for estimated daily discharge. Flow affected for most of year by backwater from beaver dam located approximately 0.5 mi downstream from gage. Flow regulated by powerplant and by Lake Monomac and other reservoirs upstream.

AVERAGE DISCHARGE.--84 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, 621 ft³/s, Apr.24; gage height, 7.03 ft ; minimum, 15 ft³/s, Sept. 12.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|------|------|------|------|------|
| 1 | 245 | 174 | e210 | e80 | e85 | 509 | 330 | 320 | e95 | e55 | 209 | 23 |
| 2 | 230 | 167 | e180 | e80 | e80 | 477 | 307 | 284 | e85 | e50 | 196 | 35 |
| 3 | 212 | 249 | e165 | e90 | e75 | 435 | 290 | 255 | e100 | e45 | 199 | 37 |
| 4 | 255 | 251 | e155 | e110 | e70 | 409 | 308 | 223 | e105 | e50 | 210 | 34 |
| 5 | 356 | 229 | e150 | e180 | e66 | 384 | 334 | 197 | e100 | e45 | 173 | 33 |
| 6 | 285 | e200 | e160 | 202 | e62 | 364 | 315 | e175 | 140 | e40 | 143 | 30 |
| 7 | 277 | e180 | 230 | e170 | e60 | 346 | 299 | e160 | 415 | e37 | 124 | 26 |
| 8 | 264 | e160 | 241 | e150 | e58 | 340 | 278 | e140 | 518 | e35 | 98 | 24 |
| 9 | 277 | e150 | e200 | e130 | e58 | 346 | 351 | e120 | 484 | e33 | 77 | 22 |
| 10 | 281 | e140 | e180 | e120 | e60 | 406 | 445 | 161 | 392 | e37 | 65 | 22 |
| 11 | 291 | e130 | e185 | e140 | e60 | 415 | 409 | 300 | 312 | e35 | 58 | 19 |
| 12 | 274 | e125 | e170 | e170 | e62 | 509 | 377 | 327 | 271 | e32 | 214 | 18 |
| 13 | 282 | e120 | e150 | e160 | e60 | 544 | 346 | 306 | 247 | e30 | 258 | e27 |
| 14 | 289 | e115 | e145 | e150 | e120 | 486 | 314 | 292 | 226 | e29 | 227 | e25 |
| 15 | 281 | e110 | e150 | e130 | e220 | 448 | 263 | 252 | e190 | e28 | 184 | e32 |
| 16 | 326 | e110 | e160 | e110 | e210 | 424 | 230 | e180 | e170 | e35 | 153 | e45 |
| 17 | 312 | e105 | e150 | e100 | e200 | 564 | 190 | e160 | e150 | e32 | 126 | e60 |
| 18 | 308 | e100 | e145 | e95 | e190 | 603 | 157 | e140 | e170 | e30 | 98 | e50 |
| 19 | 291 | e95 | e135 | e90 | e180 | 550 | 147 | e180 | e180 | e28 | 82 | e45 |
| 20 | 285 | e90 | e130 | e85 | e160 | 491 | 142 | 229 | e150 | e25 | 70 | e150 |
| 21 | 300 | e100 | e160 | e80 | e150 | 436 | 166 | 209 | e140 | 30 | 58 | 265 |
| 22 | 281 | e98 | e170 | e75 | e140 | 410 | 427 | 194 | e150 | 42 | 53 | e150 |
| 23 | 298 | e95 | e160 | e70 | e130 | 526 | 557 | e160 | e170 | 44 | 51 | e120 |
| 24 | 298 | e92 | e150 | e68 | e140 | 366 | 614 | 197 | e150 | 43 | 51 | e100 |
| 25 | 275 | e90 | e130 | e70 | e200 | 359 | 554 | 240 | e130 | 38 | 43 | e90 |
| 26 | 254 | e120 | e120 | e74 | e250 | 348 | 463 | 244 | e110 | 35 | 38 | e80 |
| 27 | 256 | 240 | e110 | e72 | 293 | 336 | 445 | 217 | e90 | 60 | 34 | e82 |
| 28 | 225 | 301 | e100 | e75 | 437 | 352 | 432 | 192 | e80 | 113 | 31 | e80 |
| 29 | 210 | 269 | e95 | e80 | 525 | 392 | 406 | e150 | e70 | 84 | 27 | e70 |
| 30 | 198 | e230 | e90 | e85 | --- | 379 | 365 | e120 | e60 | 68 | 25 | e60 |
| 31 | 187 | --- | e85 | e90 | --- | 358 | --- | e110 | --- | 148 | 23 | --- |
| TOTAL | 8403 | 4635 | 4761 | 3381 | 4401 | 13312 | 10261 | 6434 | 5650 | 1436 | 3398 | 1854 |
| MEAN | 271 | 154 | 154 | 109 | 152 | 429 | 342 | 208 | 188 | 46.3 | 110 | 61.8 |
| MAX | 356 | 301 | 241 | 202 | 525 | 603 | 614 | 327 | 518 | 148 | 258 | 265 |
| MIN | 187 | 90 | 85 | 68 | 58 | 336 | 142 | 110 | 60 | 25 | 23 | 18 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2000, BY WATER YEAR (WY)

| | 95.9 | 119 | 141 | 141 | 137 | 263 | 374 | 181 | 113 | 61.3 | 52.1 | 66.4 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 95.9 | 119 | 141 | 141 | 137 | 263 | 374 | 181 | 113 | 61.3 | 52.1 | 66.4 |
| MAX | 520 | 416 | 500 | 385 | 400 | 931 | 788 | 412 | 515 | 261 | 249 | 752 |
| (WY) | 1956 | 1956 | 1997 | 1996 | 1976 | 1936 | 1960 | 1967 | 1984 | 1938 | 1928 | 1938 |
| MIN | 11.6 | 15.7 | 30.7 | 13.3 | 24.4 | 39.0 | 83.3 | 44.7 | 14.1 | 8.17 | 8.24 | 5.75 |
| (WY) | 1948 | 1979 | 1979 | 1981 | 1980 | 1965 | 1999 | 1999 | 1964 | 1965 | 1965 | 1964 |

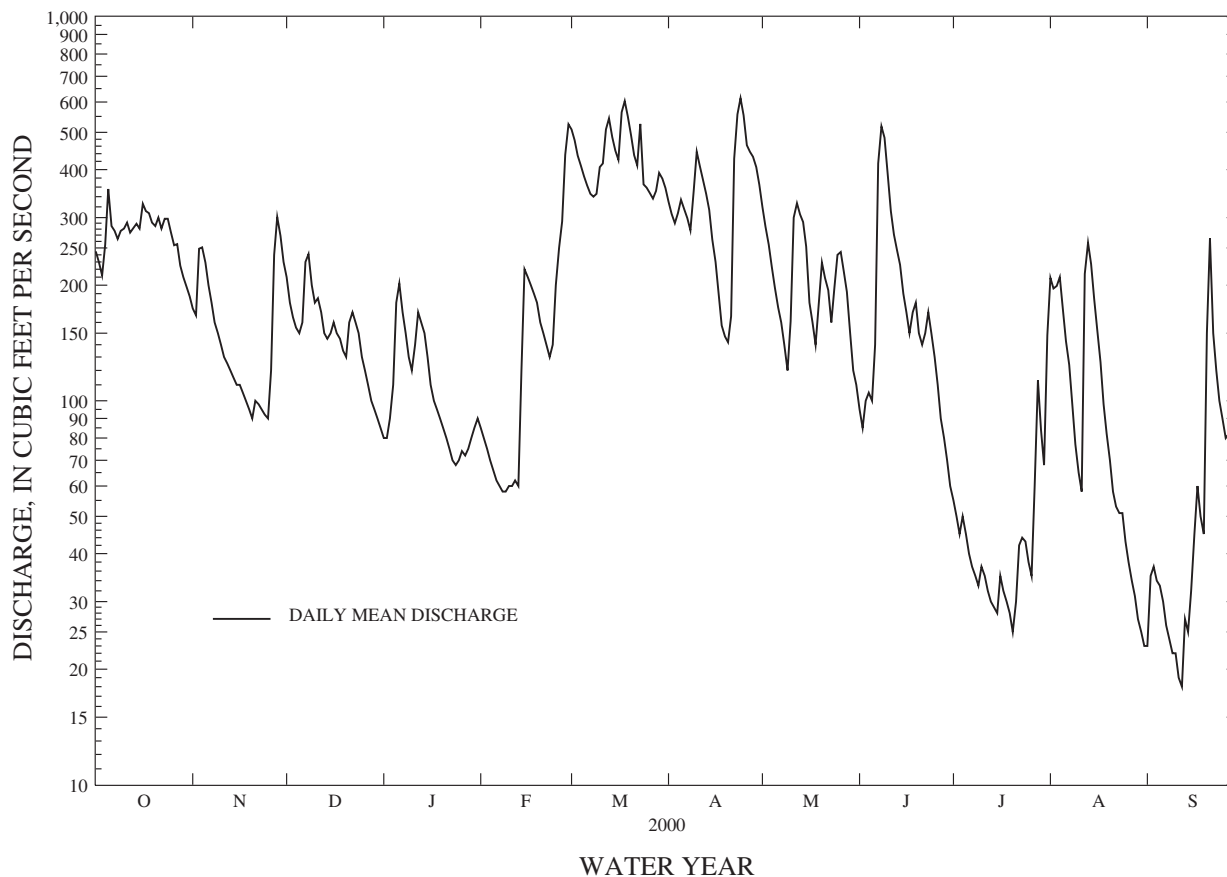
CONNECTICUT RIVER BASIN

01162000 MILLERS RIVER NEAR WINCHENDON, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1916 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 46724.3 | | 67926 | | | |
| ANNUAL MEAN | 128 | | 186 | | 145 | |
| HIGHEST ANNUAL MEAN | | | | | 238 | |
| LOWEST ANNUAL MEAN | | | | | 38.5 | |
| HIGHEST DAILY MEAN | 650 | Sep 18 | 614 | Apr 24 | 6130 | Sep 22 1938 |
| LOWEST DAILY MEAN | 7.2 | Jun 27 | 18 | Sep 12 | 3.1 | Oct 4 1930 |
| ANNUAL SEVEN-DAY MINIMUM | 8.8 | Jun 21 | 22 | Sep 8 | 4.5 | Sep 24 1939 |
| INSTANTANEOUS PEAK FLOW | | | 621 | Apr 24 | 8500 | Sep 22 1938 |
| INSTANTANEOUS PEAK STAGE | | | 7.03 | Apr 24 | 21.55 | Sep 22 1938 |
| INSTANTANEOUS LOW FLOW | | | 15 | Sep 12 | .00 | Sep 20 1918 |
| 10 PERCENT EXCEEDS | 283 | | 380 | | 337 | |
| 50 PERCENT EXCEEDS | 100 | | 150 | | 89 | |
| 90 PERCENT EXCEEDS | 13 | | 38 | | 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.--84 years, 33.1 ft³/s, 23.16 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.--Maximum discharge, 203 ft³/s, Mar 17, gage height, 4.15 ft; minimum, 2.0 ft³/s, July 15.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|-------|--------|-------|
| 1 | 40 | 24 | e50 | 17 | e17 | 153 | 57 | 57 | 16 | 8.6 | 39 | 4.4 |
| 2 | 39 | 24 | e45 | 17 | e16 | 132 | 49 | 48 | 15 | 6.8 | 35 | 6.0 |
| 3 | 32 | 53 | e38 | 21 | e15 | 111 | 44 | 41 | 22 | 5.9 | 28 | 10 |
| 4 | 33 | 69 | 34 | 28 | e14 | 99 | 54 | 35 | 21 | 6.9 | 26 | 14 |
| 5 | 55 | 52 | 32 | 56 | e13 | 82 | 71 | 30 | 17 | 5.7 | 22 | 21 |
| 6 | 47 | 42 | 32 | e62 | e13 | 76 | 64 | 23 | 20 | 4.4 | 18 | 17 |
| 7 | 36 | 36 | 43 | 48 | e12 | 66 | 55 | 20 | 81 | 3.8 | 16 | 11 |
| 8 | 29 | 32 | 52 | e36 | e12 | 63 | 47 | 18 | 108 | 3.4 | 15 | 8.0 |
| 9 | 28 | 29 | 45 | 32 | 13 | 71 | 76 | 17 | 84 | 3.4 | 14 | 5.8 |
| 10 | 32 | 27 | 39 | e30 | 13 | 106 | 146 | 19 | 63 | 5.0 | 14 | 4.9 |
| 11 | 37 | 26 | 41 | e36 | 13 | 118 | 120 | 72 | 41 | 4.0 | 17 | 4.0 |
| 12 | 33 | 27 | 36 | e50 | 14 | 133 | 97 | 85 | 33 | 3.4 | 94 | 3.8 |
| 13 | 28 | 25 | 37 | e65 | 13 | 154 | 80 | 66 | 33 | 3.1 | 177 | 7.2 |
| 14 | 33 | 24 | 33 | e60 | 23 | 125 | 65 | 57 | 33 | 2.8 | 129 | 10 |
| 15 | 40 | 24 | 35 | e38 | 42 | 107 | 54 | 46 | 34 | 2.4 | 91 | 16 |
| 16 | 38 | 23 | 40 | e28 | 48 | 102 | 47 | 35 | 30 | 6.2 | 67 | 36 |
| 17 | 36 | 21 | 41 | e24 | 43 | 169 | 42 | 26 | 25 | 6.3 | 51 | 27 |
| 18 | 35 | 19 | 37 | e21 | 36 | 175 | 37 | 23 | 26 | 7.3 | 38 | 19 |
| 19 | 35 | 19 | 31 | e20 | 33 | 145 | 34 | 30 | 30 | 24 | 30 | 15 |
| 20 | 35 | 19 | 27 | e17 | 30 | 115 | 32 | 39 | 26 | 31 | 24 | 32 |
| 21 | 44 | 20 | 41 | e16 | 26 | 96 | 34 | 37 | 20 | 23 | 18 | 53 |
| 22 | 41 | 21 | 48 | e14 | 23 | 84 | 118 | 34 | 20 | 19 | 14 | 49 |
| 23 | 46 | 22 | e40 | e13 | 22 | 77 | 168 | 31 | 29 | 15 | 12 | 38 |
| 24 | 59 | 20 | 36 | e13 | 25 | 73 | 146 | 37 | 26 | 10 | 13 | 28 |
| 25 | 49 | 19 | 28 | e15 | 37 | 68 | 118 | 58 | 20 | 8.5 | 12 | 21 |
| 26 | 42 | 20 | 25 | e15 | 50 | 65 | 93 | 58 | 17 | 7.2 | 11 | 17 |
| 27 | 38 | 53 | 23 | e15 | 54 | 61 | 87 | 45 | 16 | 12 | 8.8 | 15 |
| 28 | 33 | 90 | 21 | e16 | 104 | 64 | 86 | 34 | 14 | 24 | 6.9 | 13 |
| 29 | 30 | 68 | 19 | e17 | 171 | 81 | 81 | 27 | 12 | 21 | 5.9 | 11 |
| 30 | 27 | e58 | 19 | 17 | --- | 77 | 68 | 23 | 10 | 17 | 5.3 | 9.1 |
| 31 | 26 | --- | 18 | 18 | --- | 66 | --- | 19 | --- | 25 | 4.5 | --- |
| TOTAL | 1156 | 1006 | 1086 | 875 | 945 | 3114 | 2270 | 1190 | 942 | 326.1 | 1056.4 | 526.2 |
| MEAN | 37.3 | 33.5 | 35.0 | 28.2 | 32.6 | 100 | 75.7 | 38.4 | 31.4 | 10.5 | 34.1 | 17.5 |
| MAX | 59 | 90 | 52 | 65 | 171 | 175 | 168 | 85 | 108 | 31 | 177 | 53 |
| MIN | 26 | 19 | 18 | 13 | 12 | 61 | 32 | 17 | 10 | 2.4 | 4.5 | 3.8 |
| CFSM | 1.92 | 1.73 | 1.81 | 1.45 | 1.68 | 5.18 | 3.90 | 1.98 | 1.62 | .54 | 1.76 | .90 |
| IN. | 2.22 | 1.93 | 2.08 | 1.68 | 1.81 | 5.97 | 4.35 | 2.28 | 1.81 | .63 | 2.03 | 1.01 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 16.2 | 29.1 | 34.4 | 31.0 | 28.3 | 64.3 | 92.1 | 42.7 | 25.0 | 12.4 | 10.1 | 12.4 |
| MAX | 69.2 | 124 | 120 | 90.3 | 102 | 162 | 225 | 93.9 | 125 | 62.5 | 68.8 | 178 |
| (WY) | 1976 | 1928 | 1997 | 1996 | 1984 | 1979 | 1940 | 1989 | 1922 | 1922 | 1928 | 1938 |
| MIN | .55 | 1.38 | 4.67 | 1.23 | 5.28 | 13.6 | 21.8 | 12.6 | 2.53 | 1.04 | .47 | .29 |
| (WY) | 1965 | 1965 | 1930 | 1925 | 1980 | 1940 | 1985 | 1999 | 1964 | 1965 | 1964 | 1964 |

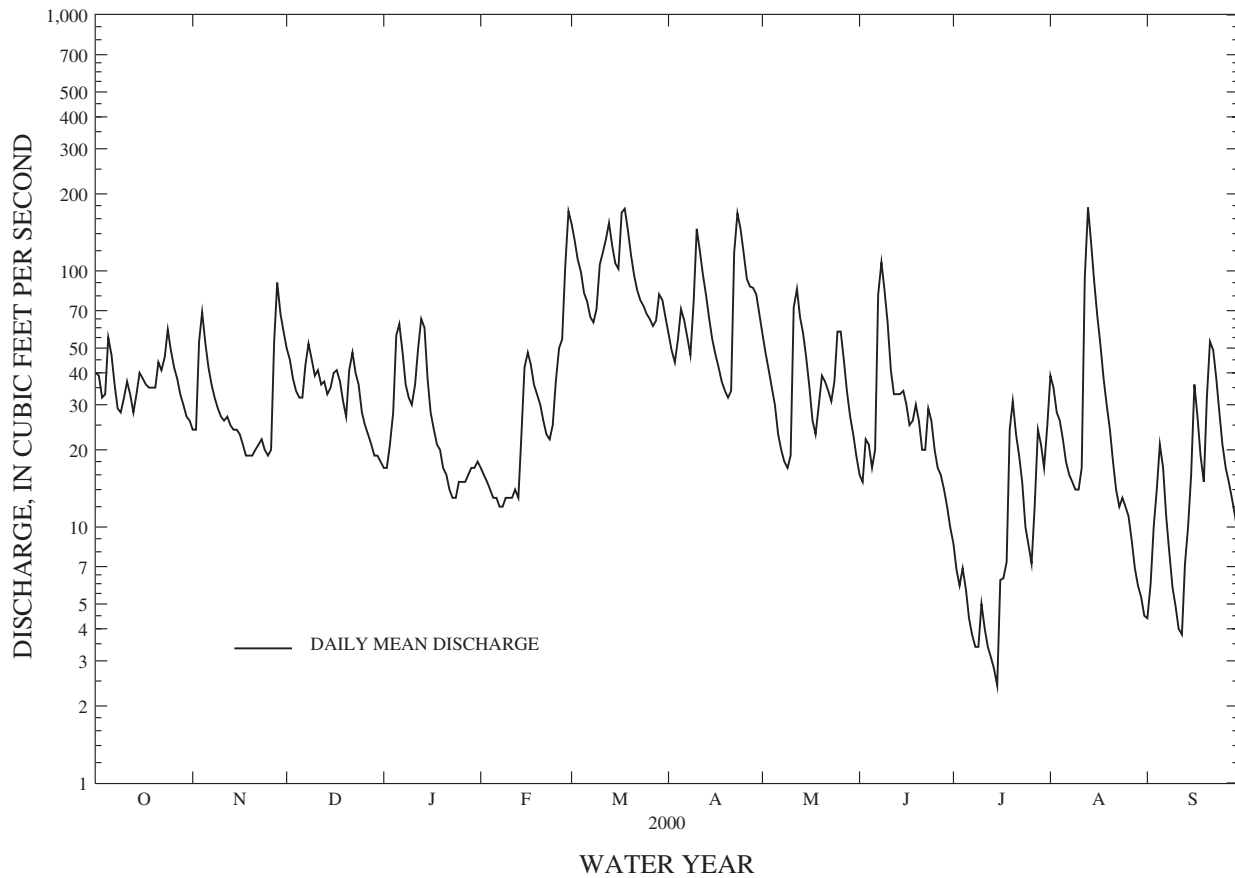
CONNECTICUT RIVER BASIN

01162500 PRIEST BROOK NEAR WINCHENDON, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1916 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 12546.03 | | 14492.7 | | | |
| ANNUAL MEAN | 34.4 | | 39.6 | | 33.1 | |
| HIGHEST ANNUAL MEAN | | | | | 55.0 | |
| LOWEST ANNUAL MEAN | | | | | 8.19 | |
| HIGHEST DAILY MEAN | 264 | Jun 29 | 177 | Aug 13 | 2280 | Sep 21 1938 |
| LOWEST DAILY MEAN | .57 | Jun 27 | 2.4 | Jul 15 | .10 | Sep 4 1929 |
| ANNUAL SEVEN-DAY MINIMUM | .72 | Jun 21 | 3.4 | Jul 9 | .19 | Sep 2 1929 |
| INSTANTANEOUS PEAK FLOW | | | 203 | Mar 17 | 3000 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 4.15 | Mar 17 | 9.90 | Sep 21 1938 |
| INSTANTANEOUS LOW FLOW | | | 2.0 | Jul 15 | .08 | Sep 18 1929 |
| ANNUAL RUNOFF (CFSM) | 1.77 | | 2.04 | | 1.70 | |
| ANNUAL RUNOFF (INCHES) | 24.06 | | 27.79 | | 23.16 | |
| 10 PERCENT EXCEEDS | 77 | | 84 | | 81 | |
| 50 PERCENT EXCEEDS | 24 | | 30 | | 17 | |
| 90 PERCENT EXCEEDS | 1.7 | | 10 | | 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 poor.

AVERAGE DISCHARGE.--35 years (water years 1966-2000), 62.8 ft³/s, 25.03 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, 396 ft³/s, Apr. 23, gage height, 3.31 ft; minimum, 8.7 ft³/s, Sept. 12.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 37 | 36 | 53 | e28 | 41 | 220 | 92 | 115 | 44 | 28 | 85 | 15 |
| 2 | 37 | 36 | 44 | 28 | e34 | 176 | 80 | 101 | 47 | 25 | 73 | 16 |
| 3 | 30 | 68 | 41 | 32 | e32 | 148 | 71 | 93 | 69 | 24 | 61 | 18 |
| 4 | 33 | 86 | 40 | 41 | e30 | 126 | 86 | 84 | 58 | 26 | 91 | 17 |
| 5 | 57 | 91 | 43 | 74 | e28 | 111 | 118 | 76 | 52 | 22 | 74 | 16 |
| 6 | 52 | 83 | 47 | 83 | e26 | 99 | 109 | 71 | 59 | 21 | 51 | 14 |
| 7 | 41 | 59 | 81 | 67 | e25 | 92 | 96 | 67 | 247 | 18 | 45 | 12 |
| 8 | 34 | 47 | 100 | 55 | e24 | 89 | 84 | 64 | 322 | 17 | 41 | 11 |
| 9 | 30 | 39 | 84 | 48 | e24 | 95 | 126 | 72 | 240 | 16 | 36 | 10 |
| 10 | 32 | 37 | 70 | 45 | e24 | 123 | 218 | 71 | 162 | 17 | 31 | 11 |
| 11 | 38 | 36 | 76 | 69 | e26 | 135 | 193 | 108 | 115 | e15 | 28 | 10 |
| 12 | 43 | 33 | 65 | 74 | 31 | 194 | 163 | 122 | 104 | 14 | 80 | 10 |
| 13 | 50 | 33 | 59 | e64 | 29 | 243 | 135 | 108 | 106 | 14 | 131 | 38 |
| 14 | 36 | 31 | 54 | e58 | 50 | 208 | 105 | 100 | 103 | 13 | 94 | 43 |
| 15 | 33 | 30 | 55 | e52 | 92 | 166 | 93 | 89 | 97 | 13 | 66 | 42 |
| 16 | 31 | 33 | 59 | 45 | e84 | 147 | 85 | 74 | 90 | 30 | 63 | 45 |
| 17 | 29 | 31 | 58 | e45 | e72 | 197 | 78 | 62 | 87 | 32 | 60 | 35 |
| 18 | 37 | 28 | 53 | e42 | e58 | 232 | 72 | 62 | 117 | 25 | 47 | 29 |
| 19 | 51 | 28 | 47 | e38 | e50 | 188 | 75 | 107 | 123 | 19 | 41 | 25 |
| 20 | 57 | 30 | 42 | e36 | e42 | 149 | 73 | 130 | 104 | 17 | 35 | 59 |
| 21 | 67 | 33 | 63 | e34 | e40 | 129 | 73 | 116 | 81 | 17 | 29 | 86 |
| 22 | 60 | 30 | 74 | e32 | e38 | 118 | 266 | 97 | 69 | 52 | 24 | 69 |
| 23 | 63 | 30 | 66 | e30 | 43 | 109 | 379 | 83 | 81 | 42 | 23 | 51 |
| 24 | 63 | 29 | 55 | e28 | 51 | 99 | 323 | 91 | 74 | 31 | 26 | 41 |
| 25 | 55 | 28 | 46 | e30 | 88 | 91 | 245 | 120 | 55 | 23 | 25 | 34 |
| 26 | 56 | 28 | 40 | e40 | 124 | 86 | 187 | 121 | 48 | 20 | 22 | 29 |
| 27 | 57 | 59 | 37 | e35 | 130 | 82 | 170 | 99 | 45 | 38 | 19 | 33 |
| 28 | 42 | 94 | 34 | e32 | 205 | 97 | 164 | 79 | 40 | 59 | 18 | 32 |
| 29 | 41 | 79 | 32 | e34 | 257 | 129 | 150 | 66 | 34 | 49 | 16 | 28 |
| 30 | 41 | 63 | 29 | e38 | --- | 125 | 131 | 56 | 31 | 41 | 15 | 23 |
| 31 | 39 | --- | 30 | 42 | --- | 105 | --- | 50 | --- | 64 | 15 | --- |
| TOTAL | 1372 | 1368 | 1677 | 1399 | 1798 | 4308 | 4240 | 2754 | 2904 | 842 | 1465 | 902 |
| MEAN | 44.3 | 45.6 | 54.1 | 45.1 | 62.0 | 139 | 141 | 88.8 | 96.8 | 27.2 | 47.3 | 30.1 |
| MAX | 67 | 94 | 100 | 83 | 257 | 243 | 379 | 130 | 322 | 64 | 131 | 86 |
| MIN | 29 | 28 | 29 | 28 | 24 | 82 | 71 | 50 | 31 | 13 | 15 | 10 |
| CFSM | 1.30 | 1.34 | 1.59 | 1.32 | 1.82 | 4.08 | 4.14 | 2.61 | 2.84 | .80 | 1.39 | .88 |
| IN. | 1.50 | 1.49 | 1.83 | 1.53 | 1.96 | 4.70 | 4.63 | 3.00 | 3.17 | .92 | 1.60 | .98 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 41.7 | 58.5 | 68.1 | 63.8 | 67.5 | 112 | 126 | 74.8 | 53.0 | 26.7 | 25.8 | 25.4 |
| MAX | 117 | 123 | 200 | 149 | 153 | 223 | 279 | 139 | 155 | 58.2 | 87.5 | 85.5 |
| (WY) | 1980 | 1996 | 1997 | 1979 | 1976 | 1979 | 1987 | 1984 | 1998 | 1967 | 1991 | 1991 |
| MIN | 8.27 | 14.7 | 18.1 | 9.64 | 17.3 | 38.4 | 45.0 | 27.6 | 9.22 | 8.20 | 4.44 | 5.48 |
| (WY) | 1969 | 1979 | 1965 | 1981 | 1977 | 1965 | 1985 | 1965 | 1999 | 1966 | 1966 | 1995 |

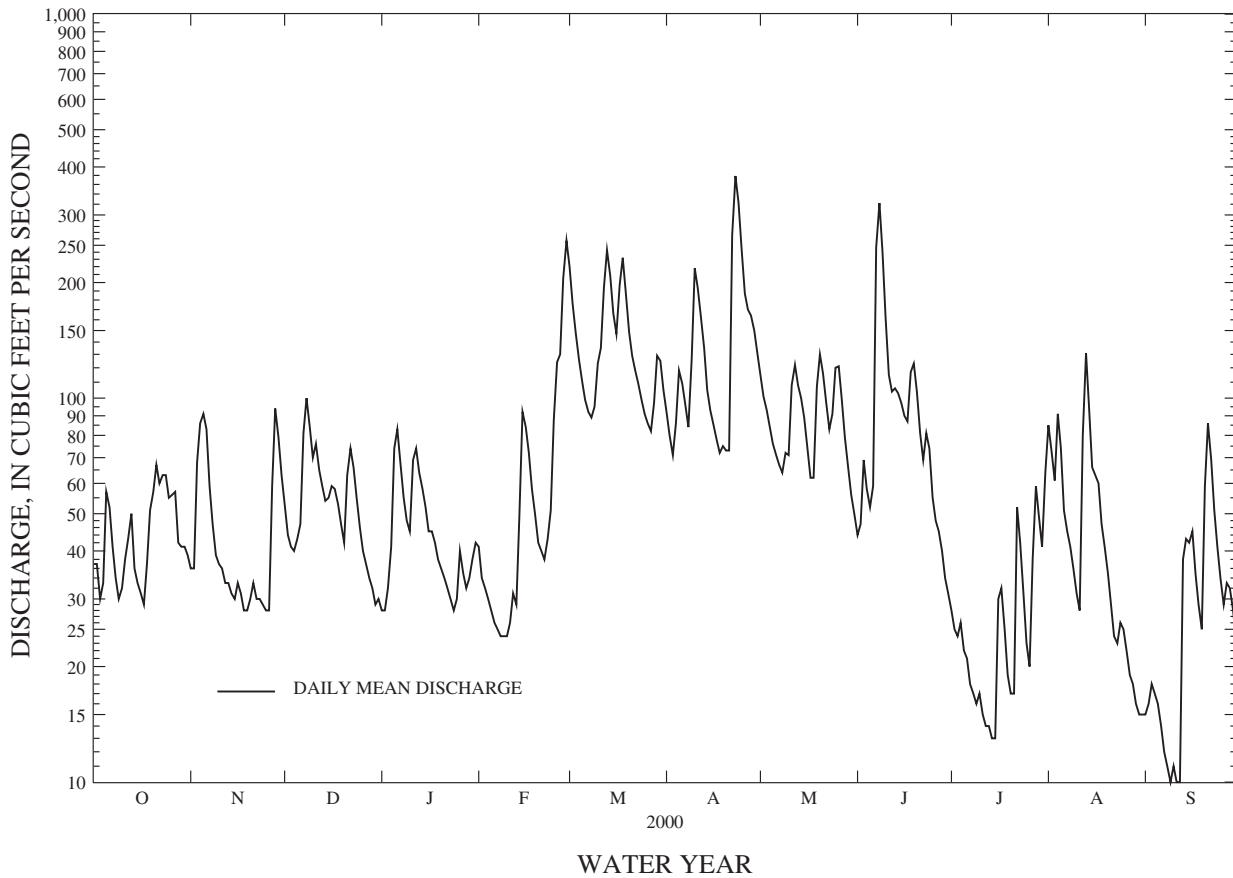
CONNECTICUT RIVER BASIN

01163200 OTTER RIVER AT OTTER RIVER, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1965 - 2000 | |
|--------------------------|------------------------|-------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 17127.2 | | 25029 | | | |
| ANNUAL MEAN | 46.9 | | 68.4 | | 62.8 | |
| HIGHEST ANNUAL MEAN | | | | | 90.0 1984 | |
| LOWEST ANNUAL MEAN | | | | | 30.2 1966 | |
| HIGHEST DAILY MEAN | 281 | Mar 5 | 379 | Apr 23 | 883 | Mar 7 1979 |
| LOWEST DAILY MEAN | 3.2 | Sep 6 | 10 | Sep 9 | 2.4 | Sep 12 1995 |
| ANNUAL SEVEN-DAY MINIMUM | 4.3 | Sep 3 | 11 | Sep 6 | 2.6 | Sep 7 1995 |
| INSTANTANEOUS PEAK FLOW | | | 396 | Apr 23 | 948 | Mar 7 1979 |
| INSTANTANEOUS PEAK STAGE | | | 3.31 | Apr 23 | 5.02 | Mar 7 1979 |
| INSTANTANEOUS LOW FLOW | | | 8.7 | Sep 12 | 2.0 | Sep 5 1995 |
| ANNUAL RUNOFF (CFSM) | 1.38 | | 2.01 | | 1.84 | |
| ANNUAL RUNOFF (INCHES) | 18.68 | | 27.30 | | 25.03 | |
| 10 PERCENT EXCEEDS | 98 | | 129 | | 137 | |
| 50 PERCENT EXCEEDS | 36 | | 52 | | 41 | |
| 90 PERCENT EXCEEDS | 5.6 | | 24 | | 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, nonrecording 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 discharge, 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.--85 years, 640 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 ft³/s, Sept. 22, 1938, gage height, 13.37 ft, from floodmarks, 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, 2,860 ft³/s, Apr. 24, gage height, 5.31 ft; minimum daily, 155 ft³/s, July 15.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|------|
| 1 | 573 | 478 | 909 | 448 | e410 | 2190 | 1810 | 1210 | 438 | 332 | 608 | 185 |
| 2 | 588 | 465 | 821 | 399 | e430 | 2220 | 1820 | 984 | 434 | 308 | 636 | 211 |
| 3 | 528 | 845 | 751 | 417 | e400 | 1990 | 562 | 911 | 487 | 292 | 637 | 239 |
| 4 | 591 | 997 | 657 | 484 | e380 | 1740 | 611 | 847 | 486 | 298 | 994 | 226 |
| 5 | 922 | 954 | 626 | 707 | e360 | 1510 | 701 | 713 | 443 | 265 | 775 | 213 |
| 6 | 901 | 799 | 625 | 807 | e350 | 1150 | 630 | 672 | 589 | 236 | 623 | 202 |
| 7 | 763 | 708 | 703 | 755 | e330 | 1010 | 639 | 645 | 2220 | 217 | 519 | 195 |
| 8 | 644 | 613 | 791 | 671 | e320 | 1020 | 1820 | 611 | 2270 | 198 | 464 | 187 |
| 9 | 533 | 581 | 768 | 606 | e330 | 969 | 2380 | 632 | 2140 | 204 | 398 | 175 |
| 10 | 584 | 526 | 753 | 612 | e350 | 1130 | 2250 | 610 | 1650 | 200 | 349 | 175 |
| 11 | 656 | 521 | 720 | 933 | e370 | 1360 | 2600 | 1050 | 1240 | 192 | 335 | 170 |
| 12 | 637 | 515 | 683 | 913 | e400 | 2050 | 2400 | 1180 | 1020 | 180 | 1710 | 167 |
| 13 | 666 | 496 | 615 | 850 | e500 | 2150 | 1560 | 1170 | 982 | 170 | 1690 | 242 |
| 14 | 625 | 467 | 613 | 638 | e600 | 2390 | 1280 | 1120 | 949 | 163 | 1510 | 259 |
| 15 | 748 | 451 | 663 | 610 | e900 | 2220 | 1060 | 1030 | 882 | 155 | 1170 | 327 |
| 16 | 593 | 432 | 708 | 614 | e940 | 2010 | 919 | 774 | 779 | 250 | 980 | 401 |
| 17 | 615 | 418 | 702 | 538 | e890 | 1880 | 791 | 695 | 693 | 695 | 837 | 372 |
| 18 | 619 | 420 | 656 | 497 | e800 | 2050 | 751 | 667 | 761 | 480 | 716 | 328 |
| 19 | 719 | 413 | 601 | e460 | e750 | 1890 | 663 | 799 | 843 | 292 | 603 | 268 |
| 20 | 660 | 390 | 561 | e440 | e700 | 1750 | 643 | 852 | 783 | 296 | 453 | 361 |
| 21 | 732 | 400 | 683 | e420 | e660 | 1690 | 727 | 905 | 679 | 266 | 370 | 521 |
| 22 | 771 | 377 | 763 | e410 | e620 | 1550 | 1690 | 871 | 584 | 301 | 309 | 562 |
| 23 | 818 | 363 | 720 | e420 | 613 | 1400 | 2060 | 762 | 677 | 310 | 289 | 466 |
| 24 | 910 | 391 | 655 | e430 | 623 | 1270 | 2560 | 768 | 642 | 302 | 331 | 395 |
| 25 | 856 | 410 | 541 | e440 | 911 | 1050 | 2660 | 917 | 542 | 273 | 291 | 342 |
| 26 | 734 | 433 | 574 | e480 | 1210 | 1020 | 2040 | 943 | 587 | 258 | 269 | 313 |
| 27 | 677 | 740 | 542 | e500 | 1250 | 968 | 1800 | 872 | 592 | 432 | 242 | 298 |
| 28 | 610 | 1080 | 551 | e520 | 1980 | 815 | 1750 | 771 | 520 | 500 | 226 | 271 |
| 29 | 591 | 1050 | 590 | e500 | 2380 | 778 | 1620 | 680 | 436 | 494 | 218 | 255 |
| 30 | 518 | 1020 | 609 | e480 | --- | 677 | 1450 | 585 | 386 | 422 | 194 | 238 |
| 31 | 486 | --- | 485 | e450 | --- | 629 | --- | 499 | --- | 475 | 189 | --- |
| TOTAL | 20868 | 17753 | 20639 | 17449 | 20757 | 46526 | 44247 | 25745 | 25734 | 9456 | 18935 | 8564 |
| MEAN | 673 | 592 | 666 | 563 | 716 | 1501 | 1475 | 830 | 858 | 305 | 611 | 285 |
| MAX | 922 | 1080 | 909 | 933 | 2380 | 2390 | 2660 | 1210 | 2270 | 695 | 1710 | 562 |
| MIN | 486 | 363 | 485 | 399 | 320 | 629 | 562 | 499 | 386 | 155 | 189 | 167 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2000, BY WATER YEAR (WY)

| | 1916 | 1917 | 1918 | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 351 | 530 | 653 | 625 | 619 | 1175 | 1582 | 836 | 529 | 290 | 233 | 271 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MAX | 1622 | 1617 | 2324 | 1444 | 1894 | 3989 | 3584 | 1687 | 1932 | 1118 | 1052 | 3030 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (WY) | 1976 | 1928 | 1997 | 1978 | 1984 | 1936 | 1940 | 1996 | 1984 | 1938 | 1928 | 1938 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MIN | 74.0 | 79.7 | 143 | 69.5 | 132 | 362 | 443 | 286 | 92.5 | 61.7 | 52.6 | 43.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (WY) | 1940 | 1965 | 1931 | 1981 | 1931 | 1989 | 1985 | 1999 | 1964 | 1966 | 1964 | 1964 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

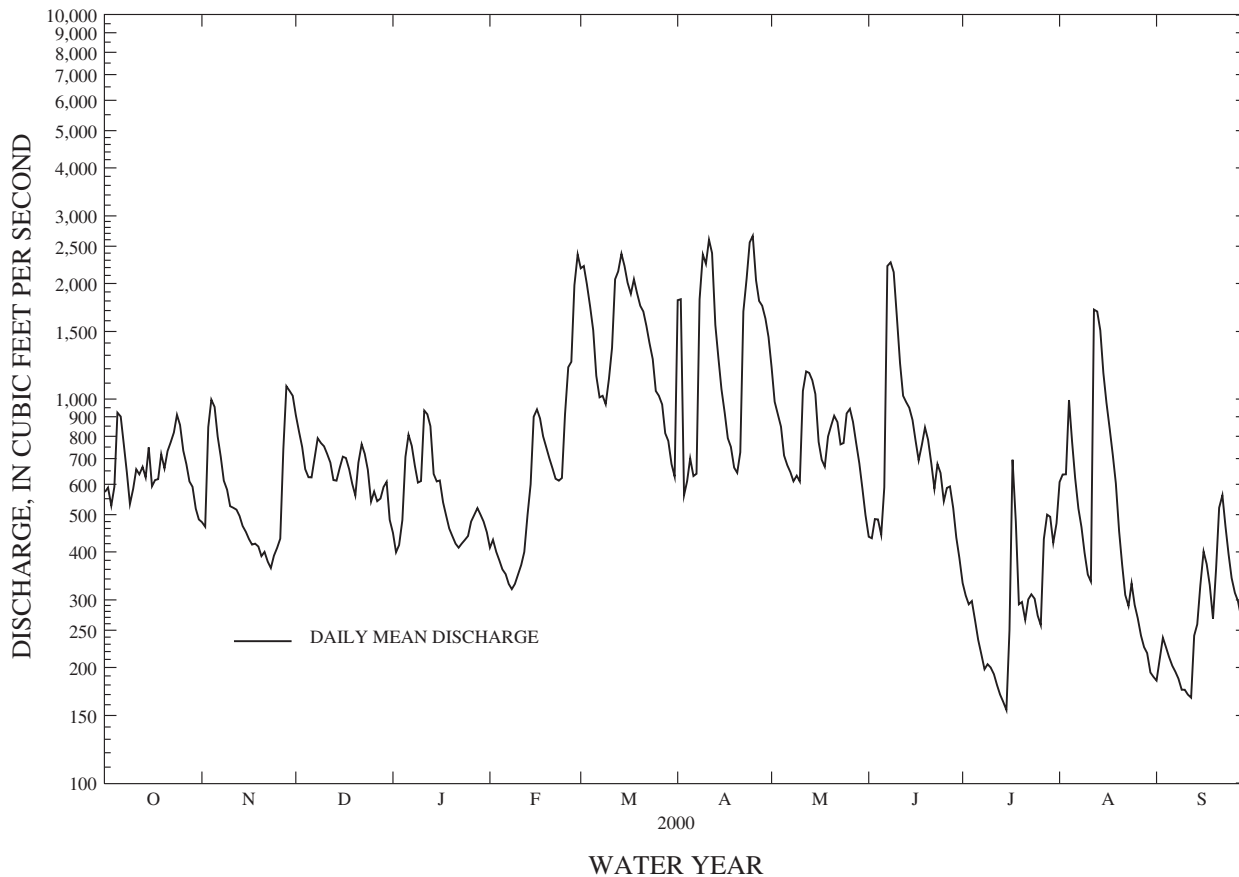
CONNECTICUT RIVER BASIN

01166500 MILLERS RIVER AT ERVING, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1916 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 219959 | | 276673 | | 640 | |
| ANNUAL MEAN | 603 | | 756 | | 1044 | |
| HIGHEST ANNUAL MEAN | | | | | 1965 | |
| LOWEST ANNUAL MEAN | | | | | 196 | |
| HIGHEST DAILY MEAN | 4380 | Sep 17 | 2660 | Apr 25 | 22000 | Sep 22 1938 |
| LOWEST DAILY MEAN | 39 | Jun 27 | 155 | Jul 15 | 8.0 | Sep 6 1926 |
| ANNUAL SEVEN-DAY MINIMUM | 48 | Aug 5 | 181 | Jul 9 | 31 | Aug 25 1995 |
| INSTANTANEOUS PEAK FLOW | | | 2860 | Apr 24 | 29000 | Sep 22 1938 |
| INSTANTANEOUS PEAK STAGE | | | 5.31 | Apr 24 | 13.37 | Sep 22 1938 |
| INSTANTANEOUS LOW FLOW | | | 103 | Jul 15 | | |
| 10 PERCENT EXCEEDS | 1200 | | 1630 | | 1500 | |
| 50 PERCENT EXCEEDS | 513 | | 623 | | 404 | |
| 90 PERCENT EXCEEDS | 70 | | 269 | | 105 | |

e Estimated

MILLERS RIVER AT ERVING, MA 01166500



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 for estimated daily discharge and those above 1,000 ft³/s, which are fair. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir, and by several powerplants upstream. Telephone and satellite gage-height telemeter at station. Measurements of water temperature and air temperature were made during the year.

AVERAGE DISCHARGE.--87 years, 903 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s, Sept. 21, 1938, gage height, 20.17 ft, from floodmarks, 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, 18,000 ft³/s, July 16, gage height, 11.19 ft; minimum daily, 220 ft³/s, Sept. 25.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1230 | e272 | 1300 | 516 | 1010 | 1550 | 1480 | 942 | 416 | 688 | 1480 | 1060 |
| 2 | 804 | e349 | 1190 | 555 | 877 | 1140 | 1340 | 952 | 452 | 578 | 1200 | 874 |
| 3 | 724 | 1790 | 1060 | 572 | 920 | 1170 | 1420 | 669 | 349 | 437 | 1680 | 1240 |
| 4 | 1030 | 873 | 748 | 1040 | 972 | 1060 | 2510 | 767 | 513 | 527 | 1590 | 1100 |
| 5 | 1270 | 822 | 882 | 1490 | 934 | 1020 | 2130 | 542 | 996 | 549 | 1470 | 1100 |
| 6 | 1130 | 638 | 1170 | 1240 | 949 | 987 | 1850 | 469 | 1330 | 524 | 1270 | 813 |
| 7 | 1030 | 638 | 934 | 1240 | 1050 | 882 | 1580 | 550 | 5160 | 564 | 1070 | 742 |
| 8 | 1040 | 812 | 909 | 870 | 1030 | 957 | 1410 | 821 | 2660 | 396 | 1360 | 782 |
| 9 | 973 | 922 | 1000 | 549 | 715 | 1210 | 1720 | 554 | 1680 | 294 | 1230 | 427 |
| 10 | 685 | 678 | 1200 | 1240 | 750 | 2400 | 1970 | 789 | 1130 | 573 | 1600 | 361 |
| 11 | 809 | 793 | 1220 | 1560 | 858 | 1810 | 1750 | 2570 | 1210 | 487 | 1460 | 347 |
| 12 | 1210 | 804 | 1150 | 1270 | 587 | 1810 | 1660 | 1710 | 1420 | 567 | 3230 | 562 |
| 13 | 1130 | 542 | 1090 | 1210 | 532 | 1540 | 1350 | 1470 | 1120 | 629 | 1730 | 803 |
| 14 | 1220 | 595 | 1040 | 1180 | 890 | 1510 | 782 | 1090 | 1470 | 297 | 1210 | 691 |
| 15 | 1170 | 643 | 1150 | 1350 | 811 | 1570 | 616 | 1230 | 1310 | 404 | 1520 | 941 |
| 16 | 847 | 818 | 995 | 1160 | 1070 | 1590 | 1120 | 898 | 1420 | 10800 | 1700 | 969 |
| 17 | 630 | 716 | 964 | 1060 | 1110 | 2820 | 1280 | 788 | 1240 | 6910 | 1510 | 386 |
| 18 | 665 | 852 | 771 | 1300 | 1010 | 1970 | 1260 | 812 | 1140 | 2540 | 1450 | 745 |
| 19 | 735 | 804 | 796 | 1340 | 615 | 1620 | 980 | 1200 | e1120 | 1450 | 1370 | 715 |
| 20 | 766 | 540 | 974 | 1420 | 557 | 1490 | 838 | 1320 | e1000 | 794 | 1180 | 869 |
| 21 | 602 | 463 | 1360 | 1210 | 682 | 1480 | 1050 | 1220 | e900 | 869 | 1190 | 683 |
| 22 | 755 | 746 | 1060 | 1290 | 768 | 1520 | 2870 | 1170 | e920 | 795 | 1260 | 645 |
| 23 | 1210 | 671 | 900 | 1350 | 838 | 1550 | 2570 | 1010 | 956 | 550 | 963 | 436 |
| 24 | 1200 | 829 | 862 | 1170 | 713 | 1590 | 1560 | 1330 | 673 | 1090 | 1340 | 485 |
| 25 | 995 | 481 | 1060 | 1100 | 1010 | 1530 | 1420 | 1880 | 763 | 988 | 1190 | 220 |
| 26 | 780 | 745 | 1040 | 1090 | 1190 | 1610 | 1370 | 1680 | 1960 | 902 | 1180 | 250 |
| 27 | 836 | 3070 | 987 | 1040 | 1160 | 1450 | 1110 | 1490 | 1580 | 2410 | 1110 | 325 |
| 28 | 846 | 2530 | 740 | 1150 | 2080 | 2310 | 1190 | 1210 | 1450 | 1430 | 832 | 273 |
| 29 | 837 | 2070 | 833 | 1130 | 1850 | 1960 | 726 | 919 | 1170 | 843 | 1070 | 271 |
| 30 | 698 | 1430 | 563 | 937 | --- | 1760 | 726 | 550 | 773 | 754 | 1060 | 286 |
| 31 | 364 | --- | 706 | 858 | --- | 1560 | --- | 540 | --- | 1290 | 1090 | --- |
| TOTAL | 28221 | 27936 | 30654 | 34487 | 27538 | 48426 | 43638 | 33142 | 38281 | 41929 | 42595 | 19401 |
| MEAN | 910 | 931 | 989 | 1112 | 950 | 1562 | 1455 | 1069 | 1276 | 1353 | 1374 | 647 |
| MAX | 1270 | 3070 | 1360 | 1560 | 2080 | 2820 | 2870 | 2570 | 5160 | 10800 | 3230 | 1240 |
| MIN | 364 | 272 | 563 | 516 | 532 | 882 | 616 | 469 | 349 | 294 | 832 | 220 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 606 | 839 | 990 | 997 | 990 | 1383 | 1852 | 1130 | 654 | 454 | 461 | 483 |
| MAX | 2766 | 2123 | 2026 | 2092 | 2450 | 3642 | 4106 | 2889 | 1820 | 1611 | 1886 | 2404 |
| (WY) | 1956 | 1956 | 1928 | 1978 | 1981 | 1921 | 1914 | 1943 | 1998 | 1915 | 1976 | 1938 |
| MIN | 90.8 | 177 | 133 | 363 | 268 | 429 | 529 | 280 | 188 | 78.1 | 131 | 74.0 |
| (WY) | 1915 | 1915 | 1915 | 1914 | 1919 | 1931 | 1995 | 1995 | 1941 | 1962 | 1964 | 1953 |

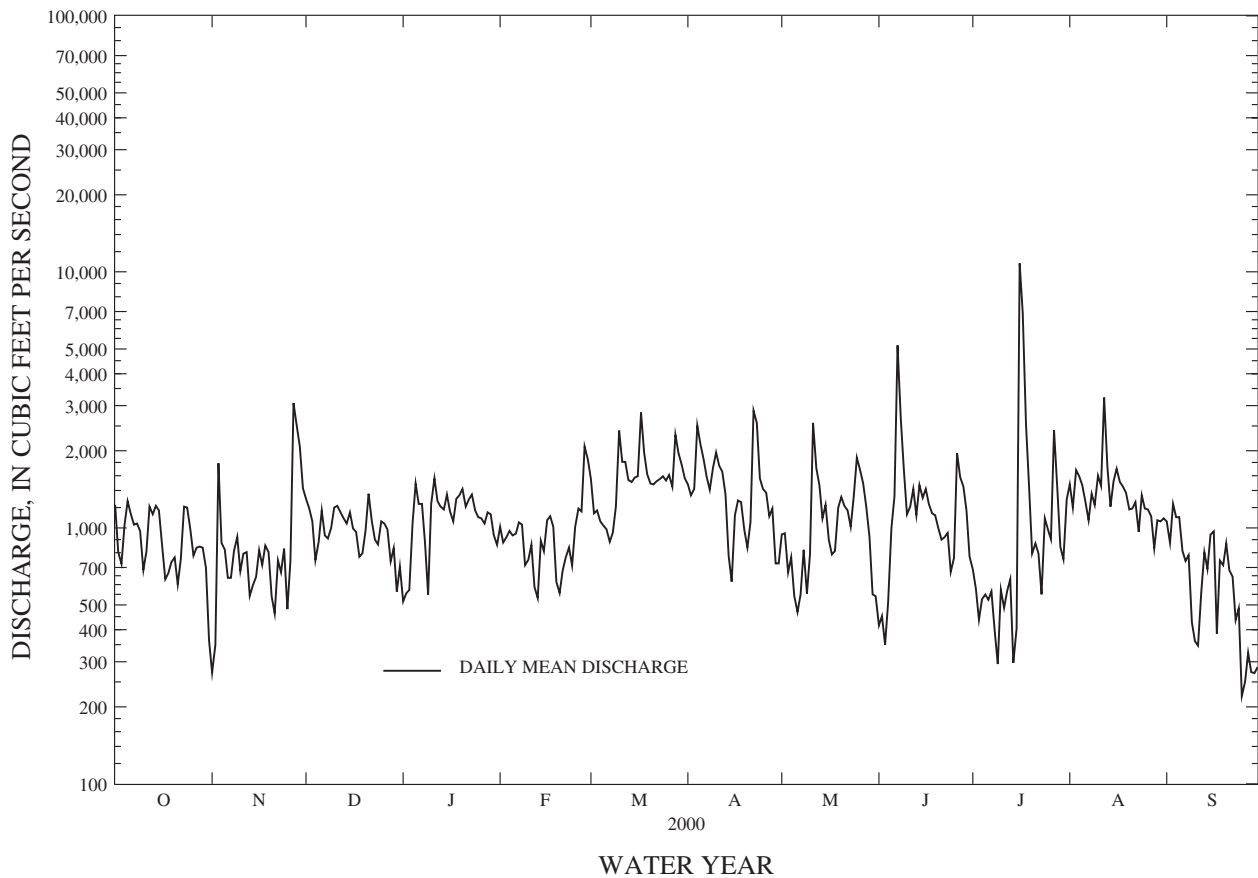
CONNECTICUT RIVER BASIN

01168500 DEERFIELD RIVER AT CHARLEMONT, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1913 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 306022 | | 416248 | | | |
| ANNUAL MEAN | 838 | | 1137 | | 903 | |
| HIGHEST ANNUAL MEAN | | | | | 1364 | 1928 |
| LOWEST ANNUAL MEAN | | | | | 455 | 1965 |
| HIGHEST DAILY MEAN | 4820 | Mar 22 | 10800 | Jul 16 | 31100 | Dec 31 1948 |
| LOWEST DAILY MEAN | 129 | Jun 21 | 220 | Sep 25 | 5.0 | Jun 17 1921 |
| ANNUAL SEVEN-DAY MINIMUM | 194 | Jun 15 | 301 | Sep 24 | 34 | Sep 19 1953 |
| INSTANTANEOUS PEAK FLOW | | | 18000 | Jul 16 | 56300 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 11.19 | Jul 16 | 20.17 | Sep 21 1938 |
| INSTANTANEOUS LOW FLOW | | | 220 | Sep 25 | | |
| 10 PERCENT EXCEEDS | 1570 | | 1680 | | 1690 | |
| 50 PERCENT EXCEEDS | 745 | | 1040 | | 686 | |
| 90 PERCENT EXCEEDS | 218 | | 547 | | 188 | |

e Estimated

DEERFIELD RIVER AT CHARLEMONT, MA 01168500



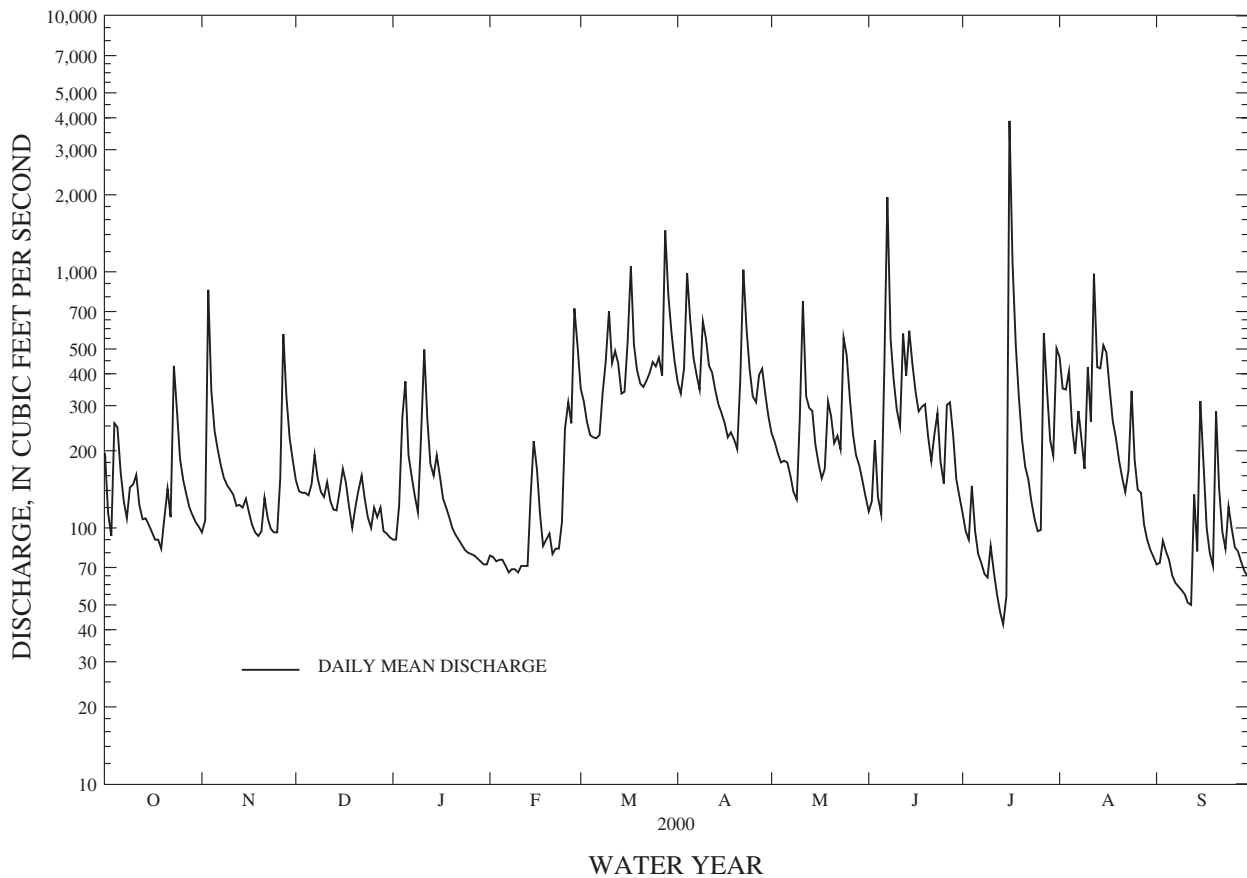
CONNECTICUT RIVER BASIN

01169000 NORTH RIVER AT SHATTUCKVILLE, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1940 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 60139.6 | | 89350 | | | |
| ANNUAL MEAN | 165 | | 244 | | 187 | |
| HIGHEST ANNUAL MEAN | | | | | 299 1984 | |
| LOWEST ANNUAL MEAN | | | | | 79.9 1965 | |
| HIGHEST DAILY MEAN | 2960 | Mar 22 | 3890 | Jul 16 | 8740 | Oct 15 1955 |
| LOWEST DAILY MEAN | 8.7 | Aug 11 | 42 | Jul 14 | 5.1 | Oct 3 1948 |
| ANNUAL SEVEN-DAY MINIMUM | 9.5 | Aug 7 | 57 | Sep 6 | 6.3 | Sep 1 1953 |
| INSTANTANEOUS PEAK FLOW | | | 10800 | Jul 16 | 14200 | Apr 5 1987 |
| INSTANTANEOUS PEAK STAGE | | | 10.15 | Jul 16 | 11.19 | Apr 5 1987 |
| INSTANTANEOUS LOW FLOW | | | 40 | Jul 15 | | |
| ANNUAL RUNOFF (CFSM) | 1.85 | | 2.74 | | 2.11 | |
| ANNUAL RUNOFF (INCHES) | 25.14 | | 37.35 | | 28.61 | |
| 10 PERCENT EXCEEDS | 353 | | 462 | | 429 | |
| 50 PERCENT EXCEEDS | 107 | | 160 | | 94 | |
| 90 PERCENT EXCEEDS | 19 | | 76 | | 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.--34 years, 53.2 ft³/s, 30.01 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 (estimated, Sept. 13, 1995, but may have been lower earlier in the month.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,300 ft³/s, July 16, gage height, 8.38 ft; minimum, 9.6 ft³/s, July 14, 15.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | e78 | 31 | 40 | e36 | e30 | 89 | 73 | 60 | 37 | 32 | 148 | 24 |
| 2 | e45 | 39 | 37 | e45 | e28 | 88 | 73 | 56 | 44 | 28 | 114 | 31 |
| 3 | e38 | 353 | 38 | 54 | e27 | 75 | 85 | 51 | 49 | 26 | 169 | 31 |
| 4 | e90 | 87 | 39 | 72 | e27 | 67 | 151 | 50 | 34 | 27 | 182 | 27 |
| 5 | e86 | 72 | 38 | 91 | e27 | 66 | 95 | 50 | 32 | 24 | 92 | 24 |
| 6 | e56 | 61 | 46 | 46 | e27 | 67 | 70 | 50 | 493 | 20 | 72 | 21 |
| 7 | e45 | 54 | 58 | 51 | e27 | 67 | 63 | 46 | 762 | 19 | 78 | 20 |
| 8 | e37 | 51 | 44 | 42 | e27 | 98 | 58 | 46 | 177 | 16 | 60 | 19 |
| 9 | e41 | 50 | 39 | 41 | e28 | 122 | 157 | 60 | 118 | 16 | 53 | 18 |
| 10 | e48 | 50 | 39 | 118 | e29 | 169 | 102 | 176 | 96 | 17 | 50 | 18 |
| 11 | e64 | 48 | 47 | 125 | e32 | 103 | 83 | 243 | 98 | 14 | 123 | 17 |
| 12 | e45 | 42 | 37 | e54 | e34 | 210 | 83 | 85 | 247 | 12 | 530 | 16 |
| 13 | e37 | 42 | 35 | e38 | e40 | 130 | 70 | 80 | 127 | 12 | 125 | 73 |
| 14 | e45 | 41 | 36 | e33 | e47 | 102 | 66 | 81 | 280 | 11 | 127 | 28 |
| 15 | e55 | 43 | 60 | e28 | e76 | 110 | 62 | 61 | 132 | 14 | 111 | 72 |
| 16 | e48 | 40 | 67 | e27 | e50 | 145 | 56 | 53 | 102 | 891 | 121 | 39 |
| 17 | e45 | 39 | 53 | e26 | e42 | 320 | 50 | 48 | 110 | 117 | 82 | 26 |
| 18 | e47 | 34 | 43 | e25 | e38 | 127 | 57 | 58 | 125 | 71 | 68 | 22 |
| 19 | e34 | 36 | 36 | e24 | e63 | 103 | 50 | 89 | 112 | 50 | 61 | 21 |
| 20 | e40 | 36 | 43 | e24 | e48 | 93 | 48 | 75 | 81 | 43 | 52 | 84 |
| 21 | e57 | 46 | 95 | e24 | e40 | 87 | 170 | 59 | 67 | 39 | 47 | 32 |
| 22 | e43 | 37 | 56 | e24 | e36 | 83 | 379 | 54 | 71 | 51 | 41 | 25 |
| 23 | e113 | 33 | 46 | e24 | e38 | 79 | 152 | 56 | 61 | 35 | e50 | 22 |
| 24 | e80 | 33 | e43 | e27 | e45 | 74 | 100 | 169 | 51 | 30 | 70 | 24 |
| 25 | e60 | 34 | e40 | e30 | e101 | 67 | 83 | 152 | 50 | 28 | e44 | 22 |
| 26 | e50 | 60 | e37 | e45 | e96 | 65 | 86 | 80 | 77 | 30 | 36 | 21 |
| 27 | e42 | 156 | e36 | e35 | e110 | 56 | 114 | 63 | 53 | 323 | 32 | 26 |
| 28 | 39 | 70 | e35 | e32 | e210 | 359 | 97 | 55 | 44 | 112 | 30 | 21 |
| 29 | 37 | 51 | e34 | e28 | 129 | 139 | 79 | 48 | 37 | 75 | 29 | 19 |
| 30 | 35 | 44 | e34 | e26 | --- | 98 | 67 | 44 | 42 | 67 | 26 | 18 |
| 31 | 33 | --- | e34 | e34 | --- | 81 | --- | 40 | --- | 251 | 26 | --- |
| TOTAL | 1613 | 1813 | 1365 | 1329 | 1552 | 3539 | 2879 | 2338 | 3809 | 2501 | 2849 | 861 |
| MEAN | 52.0 | 60.4 | 44.0 | 42.9 | 53.5 | 114 | 96.0 | 75.4 | 127 | 80.7 | 91.9 | 28.7 |
| MAX | 113 | 353 | 95 | 125 | 210 | 359 | 379 | 243 | 762 | 891 | 530 | 84 |
| MIN | 33 | 31 | 34 | 24 | 27 | 56 | 48 | 40 | 32 | 11 | 26 | 16 |
| CFSM | 2.16 | 2.51 | 1.83 | 1.78 | 2.22 | 4.74 | 3.98 | 3.13 | 5.27 | 3.35 | 3.81 | 1.19 |
| IN. | 2.49 | 2.80 | 2.11 | 2.05 | 2.40 | 5.46 | 4.44 | 3.61 | 5.88 | 3.86 | 4.40 | 1.33 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 29.7 | 50.3 | 53.3 | 48.1 | 52.7 | 97.5 | 127 | 72.7 | 47.5 | 22.6 | 18.8 | 18.9 |
| MAX | 85.5 | 142 | 142 | 135 | 163 | 183 | 253 | 171 | 144 | 80.7 | 91.9 | 101 |
| (WY) | 1976 | 1996 | 1974 | 1996 | 1981 | 1999 | 1993 | 1984 | 1982 | 2000 | 2000 | 1999 |
| MIN | 6.22 | 11.0 | 12.6 | 7.27 | 14.1 | 32.3 | 32.6 | 23.5 | 12.6 | 5.92 | 4.45 | 4.17 |
| (WY) | 1983 | 1983 | 1999 | 1981 | 1980 | 1967 | 1985 | 1995 | 1985 | 1991 | 1999 | 1995 |

SUMMARY STATISTICS FOR 1999 CALENDAR YEAR FOR 2000 WATER YEAR WATER YEARS 1966 - 2000

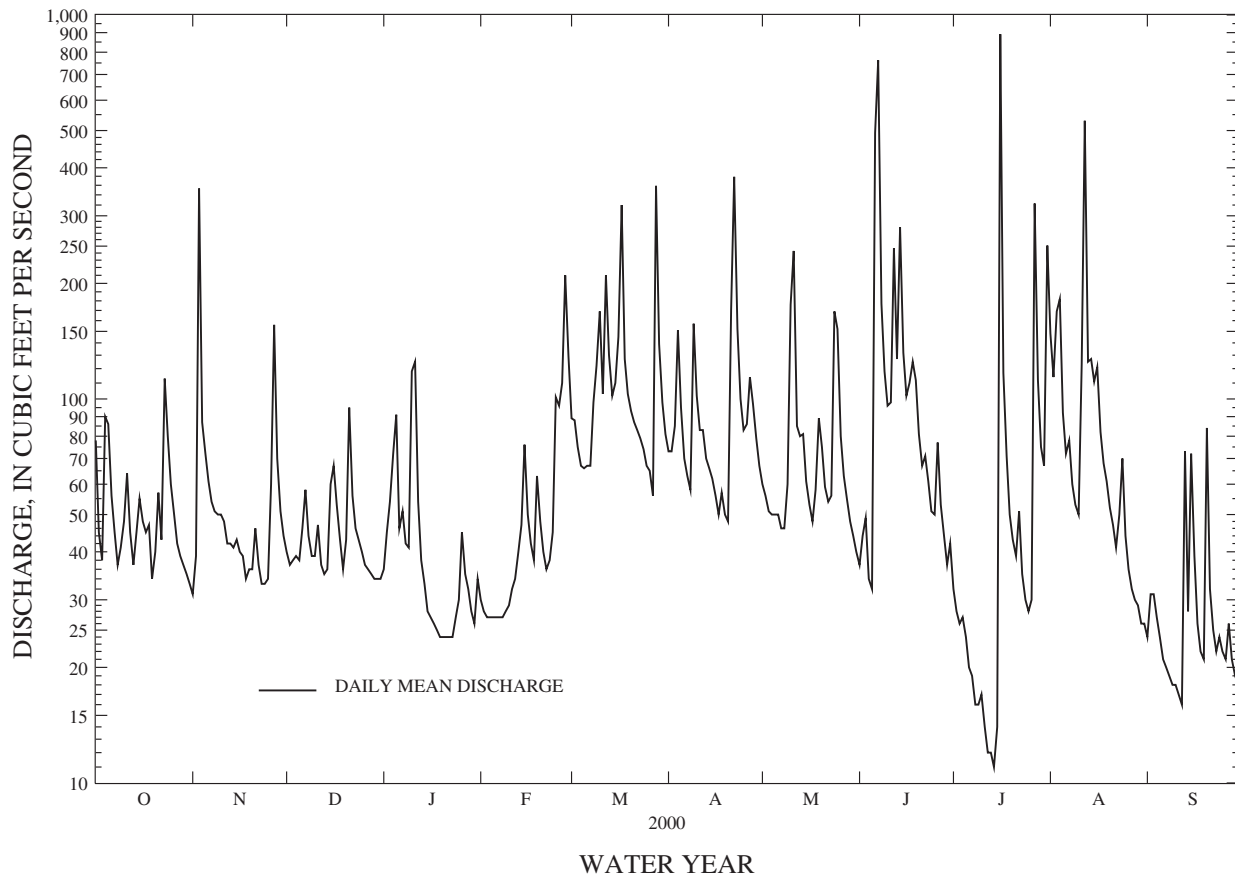
CONNECTICUT RIVER BASIN

01169900 SOUTH RIVER NEAR CONWAY, MA--Continued

| | | | | | | |
|--------------------------|---------|--------|-------|--------|-------|------------|
| ANNUAL TOTAL | 20146.8 | | 26448 | | | |
| ANNUAL MEAN | 55.2 | | 72.3 | | 53.2 | |
| HIGHEST ANNUAL MEAN | | | | | 82.6 | 1996 |
| LOWEST ANNUAL MEAN | | | | | 21.5 | 1985 |
| HIGHEST DAILY MEAN | 1120 | Mar 22 | 891 | Jul 16 | 1570 | Jun 6 1982 |
| LOWEST DAILY MEAN | 1.6 | Aug 8 | 11 | Jul 14 | 1.6 | Aug 8 1999 |
| ANNUAL SEVEN-DAY MINIMUM | 2.0 | Aug 5 | 14 | Jul 9 | 2.0 | Aug 5 1999 |
| INSTANTANEOUS PEAK FLOW | | | 3300 | Jul 16 | 5750 | Apr 4 1987 |
| INSTANTANEOUS PEAK STAGE | | | 8.38 | Jul 16 | 10.16 | Apr 4 1987 |
| INSTANTANEOUS LOW FLOW | | | 9.6 | Jul 14 | | |
| ANNUAL RUNOFF (CFSM) | 2.29 | | 3.00 | | 2.21 | |
| ANNUAL RUNOFF (INCHES) | 31.10 | | 40.82 | | 30.01 | |
| 10 PERCENT EXCEEDS | 93 | | 126 | | 112 | |
| 50 PERCENT EXCEEDS | 37 | | 50 | | 30 | |
| 90 PERCENT EXCEEDS | 4.9 | | 26 | | 7.3 | |

e Estimated

SOUTH RIVER NEAR CONWAY, MA 01169900



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 the period June 6 to July 9, which are fair, 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. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--60 years (water years 1941-2000), 1,318 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, 20,000 ft³/s (estimated), July 16, gage height, unknown; minimum daily, 405 ft³/s, Sept. 30.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 1900 | 625 | 1710 | 701 | 1580 | 2370 | 2140 | 1240 | 747 | 1090 | e2100 | 1200 |
| 2 | 1090 | 806 | 1610 | 755 | 1490 | 1830 | 1930 | 1500 | 765 | 935 | e1700 | 1070 |
| 3 | 986 | 3520 | 1460 | 829 | 1300 | 1770 | 1980 | 1190 | 944 | 812 | e2300 | 1500 |
| 4 | 1490 | 1810 | 1080 | 1410 | 1600 | 1620 | 3970 | 1270 | 805 | 793 | e2100 | 1370 |
| 5 | 2020 | 1260 | 1170 | 2340 | 1640 | 1530 | 3350 | 926 | 1080 | 903 | e2000 | 1220 |
| 6 | 1580 | 1150 | 1630 | 1620 | 1580 | 1560 | 2670 | 931 | 1880 | 777 | 1780 | 980 |
| 7 | 1420 | 995 | 1380 | 1680 | 1630 | 1400 | 2330 | 877 | 5650 | 770 | 1570 | 924 |
| 8 | 1380 | 1240 | 1370 | 1240 | 1540 | 1540 | 2050 | 1060 | 5060 | 709 | 1840 | 860 |
| 9 | 1270 | 1170 | 1310 | 948 | 1300 | 1900 | 2710 | 1000 | 3340 | 536 | 1590 | 701 |
| 10 | 1160 | 996 | 1590 | 1500 | 1450 | 3870 | 2880 | 1080 | 2230 | e600 | 2080 | 456 |
| 11 | 1100 | 1100 | 1620 | 2730 | 1460 | 2720 | 2590 | 4120 | 1900 | e810 | 1990 | 487 |
| 12 | 1570 | 1190 | 1590 | 1920 | 1590 | 2990 | 2410 | 2760 | 2390 | e720 | 5500 | 532 |
| 13 | 1450 | 885 | 1380 | 1710 | 987 | 2570 | 2000 | 2160 | 2270 | e900 | 2700 | 1140 |
| 14 | 1530 | 853 | 1390 | 1540 | 1490 | 2220 | 1440 | 1870 | 2420 | e600 | 1900 | 980 |
| 15 | 1570 | 871 | 1620 | 1660 | 1960 | 2320 | 1190 | 1690 | 2520 | e450 | 2490 | 1590 |
| 16 | 1090 | 1120 | 1460 | 1970 | 1830 | 2450 | 1380 | 1410 | 2330 | e11900 | 2580 | 1420 |
| 17 | 921 | 1090 | 1400 | 1780 | 1880 | 5140 | 1790 | 1160 | 2150 | e10000 | 2220 | 717 |
| 18 | 720 | 1000 | 1140 | 1870 | 1700 | 3100 | 1680 | 1210 | 2030 | e5000 | 1960 | 820 |
| 19 | 1030 | 1150 | 1130 | 1670 | 1380 | 2460 | 1490 | 1820 | 2010 | e3000 | 1840 | 870 |
| 20 | 1040 | 843 | 1230 | 1890 | 916 | 2170 | 1280 | 2060 | 1740 | e1500 | 1520 | 1540 |
| 21 | 1160 | 849 | 2070 | 1870 | 974 | 2110 | 1550 | 1750 | 1590 | e1200 | 1530 | 1050 |
| 22 | 893 | 860 | 1660 | 1810 | 1320 | 2180 | 4990 | 1660 | 1720 | e900 | 1560 | 843 |
| 23 | 2060 | 1060 | 1290 | 2080 | 1320 | 2170 | 4100 | 1470 | 1760 | e800 | 1240 | 736 |
| 24 | 1870 | 1050 | 1210 | 2100 | 1260 | 2280 | 2480 | 2270 | 1450 | e1600 | 1880 | 699 |
| 25 | 1530 | 825 | 1340 | 1740 | 1740 | 2240 | 2130 | 2900 | 1200 | e1500 | 1590 | 452 |
| 26 | 1280 | 958 | 1480 | 1810 | 2020 | 2280 | 2050 | 2440 | 1710 | e1300 | 1400 | 417 |
| 27 | 1100 | 3880 | 1300 | 1630 | 1820 | 2170 | 2000 | 2140 | 2190 | e3500 | 1380 | 476 |
| 28 | 1190 | 3600 | 1090 | 1510 | 3920 | 4650 | 1920 | 1800 | 2170 | e2500 | 992 | 449 |
| 29 | 1140 | 2760 | 1360 | 1620 | 3050 | 3390 | 1660 | 1390 | 1890 | e1500 | 1320 | 411 |
| 30 | 1080 | 2150 | 935 | 1630 | --- | 2840 | 1280 | 971 | 1410 | e1200 | 1270 | 405 |
| 31 | 720 | --- | 856 | 1360 | --- | 2320 | --- | 820 | --- | e1800 | 1330 | --- |
| TOTAL | 40340 | 41666 | 42861 | 50923 | 47727 | 76160 | 67420 | 50945 | 61351 | 60605 | 59252 | 26315 |
| MEAN | 1301 | 1389 | 1383 | 1643 | 1646 | 2457 | 2247 | 1643 | 2045 | 1955 | 1911 | 877 |
| MAX | 2060 | 3880 | 2070 | 2730 | 3920 | 5140 | 4990 | 4120 | 5650 | 11900 | 5500 | 1590 |
| MIN | 720 | 625 | 856 | 701 | 916 | 1400 | 1190 | 820 | 747 | 450 | 992 | 405 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 843 | 1218 | 1440 | 1418 | 1446 | 2135 | 2915 | 1710 | 963 | 586 | 573 | 611 |
| MAX | 4632 | 3302 | 3156 | 2801 | 3890 | 4771 | 5320 | 4094 | 2693 | 1955 | 2142 | 2112 |
| (WY) | 1956 | 1956 | 1997 | 1978 | 1981 | 1953 | 1993 | 1984 | 1998 | 2000 | 1976 | 1905 |
| MIN | 228 | 244 | 385 | 622 | 693 | 1083 | 928 | 484 | 307 | 119 | 167 | 94.5 |
| (WY) | 1983 | 1965 | 1965 | 1965 | 1944 | 1962 | 1995 | 1995 | 1964 | 1962 | 1964 | 1953 |

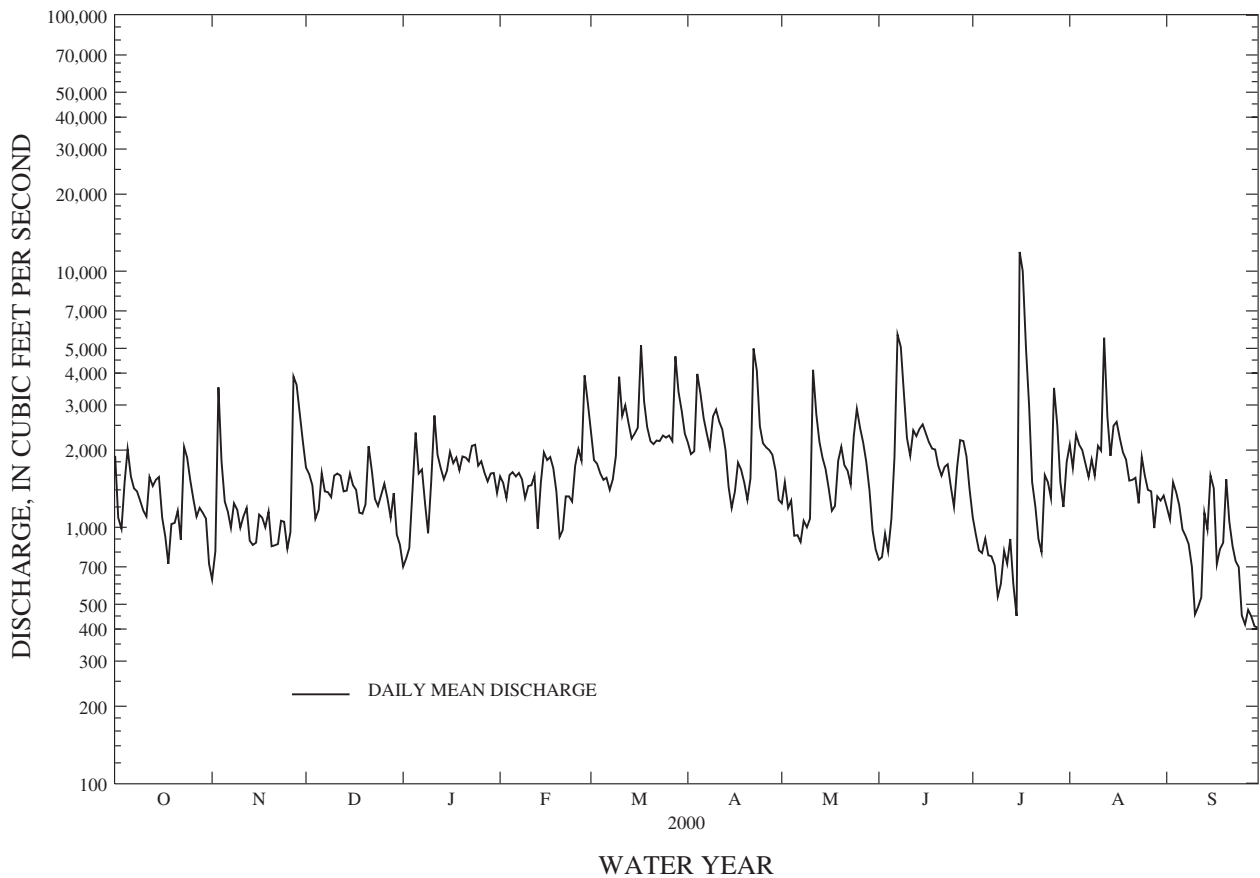
CONNECTICUT RIVER BASIN

01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1904 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 433668 | | 625565 | | | |
| ANNUAL MEAN | 1188 | | 1709 | | 1318 | |
| HIGHEST ANNUAL MEAN | | | | | 1840 | 1996 |
| LOWEST ANNUAL MEAN | | | | | 629 | 1965 |
| HIGHEST DAILY MEAN | 7000 | Mar 22 | e11900 | Jul 16 | 38300 | Dec 31 1948 |
| LOWEST DAILY MEAN | 242 | Aug 8 | 405 | Sep 30 | 28 | Jul 29 1962 |
| ANNUAL SEVEN-DAY MINIMUM | 260 | Aug 7 | 473 | Sep 24 | 39 | Jul 27 1962 |
| INSTANTANEOUS PEAK FLOW | | | e20000 | Jul 16 | 61700 | Apr 5 1987 |
| INSTANTANEOUS PEAK STAGE | | | | | 17.71 | Apr 5 1987 |
| INSTANTANEOUS LOW FLOW | | | 313 | Sep 11 | | |
| 10 PERCENT EXCEEDS | 2170 | | 2580 | | 2660 | |
| 50 PERCENT EXCEEDS | 1030 | | 1530 | | 974 | |
| 90 PERCENT EXCEEDS | 281 | | 824 | | 268 | |

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 estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--33 years, 90.4 ft³/s, 29.66 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, 12.71 ft, Feb. 23, 1997 (ice jam); minimum discharge, 1.9 ft³/s, Aug. 1, 1968, caused by unusual regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge 2,320 ft³/s, June 7, gage height, 5.87 ft, from rating curve extended above 1,100 ft³/s; minimum, 21 ft³/s, Sept. 11, but may have been less during period of ice effect.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 91 | 43 | 66 | 38 | e34 | 147 | 176 | 122 | 59 | 51 | 167 | 35 |
| 2 | 53 | 48 | 64 | 41 | e32 | 133 | 162 | 113 | 70 | 44 | 131 | 38 |
| 3 | 41 | 468 | 63 | 56 | e32 | 115 | 214 | 101 | 86 | 42 | 118 | 46 |
| 4 | 107 | 171 | 62 | 145 | e31 | 105 | 467 | 92 | 60 | 64 | 140 | 42 |
| 5 | 107 | 121 | 60 | 171 | e30 | 103 | 291 | 90 | 55 | 46 | 88 | 34 |
| 6 | 73 | 99 | 65 | 84 | e30 | 102 | 207 | 86 | 178 | 36 | 69 | 30 |
| 7 | 57 | 83 | 79 | e74 | e28 | 105 | 178 | 77 | 958 | 32 | 102 | 27 |
| 8 | 48 | 74 | 66 | 67 | e35 | 151 | 162 | 68 | 252 | 29 | 86 | e26 |
| 9 | 61 | 70 | 58 | 69 | e33 | 205 | 315 | 67 | 174 | 28 | 69 | 25 |
| 10 | 62 | 67 | 56 | 110 | e31 | 296 | 249 | 127 | 138 | 40 | 125 | 24 |
| 11 | 64 | 63 | 62 | 200 | e30 | 190 | 196 | 311 | 117 | 30 | 226 | 22 |
| 12 | 51 | 57 | 53 | 119 | e29 | 221 | 188 | 149 | 201 | 25 | 548 | 22 |
| 13 | 44 | 57 | 50 | 87 | e28 | 186 | 163 | 136 | 156 | 22 | 212 | 59 |
| 14 | 45 | 57 | 49 | 53 | e30 | 154 | 145 | 128 | 268 | 20 | 210 | 33 |
| 15 | 40 | 58 | 62 | e78 | e90 | 156 | 134 | 100 | 184 | 23 | 234 | 153 |
| 16 | 38 | 52 | 79 | e68 | e60 | 224 | 125 | 84 | 150 | 553 | 218 | 74 |
| 17 | 36 | 47 | 79 | e60 | e45 | 440 | 114 | 73 | 133 | 351 | 156 | 44 |
| 18 | 35 | 45 | 60 | e54 | e36 | 228 | 114 | 84 | 134 | 164 | 122 | 36 |
| 19 | e31 | 45 | 49 | e50 | e42 | 187 | 106 | 130 | 129 | 94 | 105 | 32 |
| 20 | 48 | 47 | e60 | e47 | e37 | 168 | 100 | 119 | 102 | 67 | 84 | 140 |
| 21 | 60 | 58 | e54 | e44 | e36 | 164 | 186 | 103 | 83 | 54 | 72 | 65 |
| 22 | 47 | 50 | e50 | e43 | 36 | 174 | 468 | 108 | 107 | 49 | 64 | 45 |
| 23 | 190 | 46 | e48 | e40 | 37 | 192 | 279 | 98 | 101 | 40 | 76 | 39 |
| 24 | 125 | 46 | e46 | e38 | 48 | 215 | 195 | 226 | 73 | 36 | 127 | 57 |
| 25 | 82 | 46 | e52 | e37 | 257 | 209 | 159 | 191 | 67 | 32 | 75 | 46 |
| 26 | 67 | 70 | e60 | e42 | 370 | 230 | 154 | 139 | 100 | 33 | 61 | 39 |
| 27 | 59 | 236 | e52 | e41 | 177 | 198 | 186 | 110 | 127 | 189 | 53 | 37 |
| 28 | 53 | 138 | e49 | e39 | e90 | 747 | 192 | 92 | 95 | 114 | 47 | 33 |
| 29 | 51 | 98 | e45 | e39 | 200 | 379 | 164 | 83 | 68 | 74 | 42 | 30 |
| 30 | 47 | 78 | e40 | e37 | --- | 262 | 138 | 72 | 59 | 65 | 39 | 29 |
| 31 | 46 | --- | e38 | e35 | --- | 204 | --- | 64 | --- | 163 | 36 | --- |
| TOTAL | 1959 | 2638 | 1776 | 2106 | 1994 | 6590 | 5927 | 3543 | 4484 | 2610 | 3902 | 1362 |
| MEAN | 63.2 | 87.9 | 57.3 | 67.9 | 68.8 | 213 | 198 | 114 | 149 | 84.2 | 126 | 45.4 |
| MAX | 190 | 468 | 79 | 200 | 370 | 747 | 468 | 311 | 958 | 553 | 548 | 153 |
| MIN | 31 | 43 | 38 | 35 | 28 | 102 | 100 | 64 | 55 | 20 | 36 | 22 |
| CFSM | 1.53 | 2.12 | 1.38 | 1.64 | 1.66 | 5.13 | 4.77 | 2.76 | 3.61 | 2.03 | 3.04 | 1.10 |
| IN. | 1.76 | 2.37 | 1.60 | 1.89 | 1.79 | 5.92 | 5.33 | 3.18 | 4.03 | 2.35 | 3.51 | 1.22 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 49.6 | 86.4 | 87.6 | 74.5 | 80.8 | 166 | 249 | 130 | 72.2 | 36.5 | 27.9 | 25.3 |
| MAX | 190 | 214 | 236 | 178 | 277 | 355 | 442 | 287 | 188 | 105 | 126 | 92.2 |
| (WY) | 1976 | 1996 | 1997 | 1996 | 1981 | 1979 | 1969 | 1984 | 1973 | 1973 | 2000 | 1975 |
| MIN | 11.4 | 17.8 | 21.9 | 11.6 | 18.1 | 53.2 | 77.6 | 42.1 | 21.7 | 10.6 | 6.32 | 6.55 |
| (WY) | 1983 | 1979 | 1999 | 1981 | 1980 | 1971 | 1995 | 1986 | 1999 | 1995 | 1999 | 1983 |

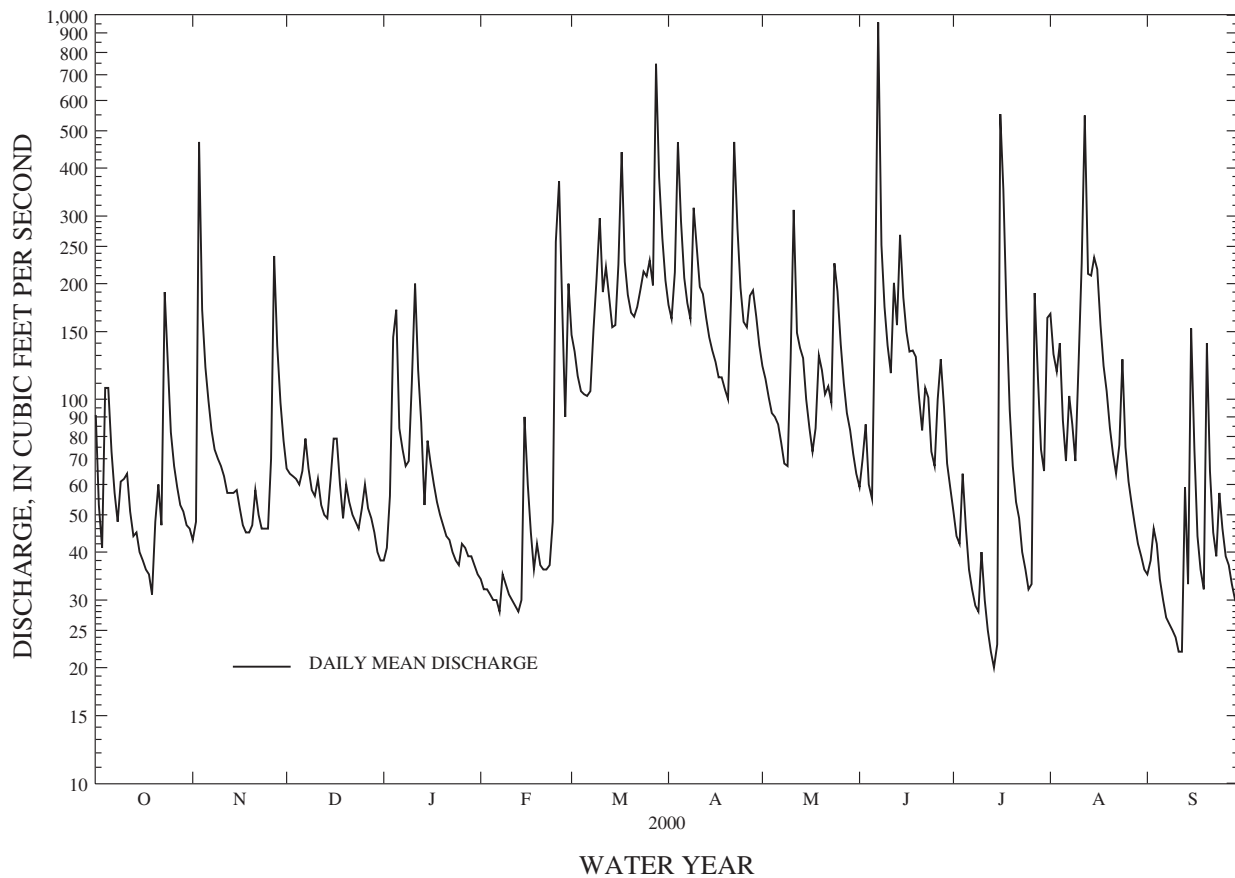
CONNECTICUT RIVER BASIN

01170100 GREEN RIVER NEAR COLRAIN, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1968 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 28870.1 | | 38891 | | | |
| ANNUAL MEAN | 79.1 | | 106 | | 90.4 | |
| HIGHEST ANNUAL MEAN | | | | | 136 | 1973 |
| LOWEST ANNUAL MEAN | | | | | 44.4 | 1985 |
| HIGHEST DAILY MEAN | 1730 | Mar 22 | 958 | Jun 7 | 2420 | Mar 31 1987 |
| LOWEST DAILY MEAN | 3.7 | Sep 4 | 20 | Jul 14 | 3.3 | Sep 16 1983 |
| ANNUAL SEVEN-DAY MINIMUM | 4.4 | Aug 7 | 25 | Sep 6 | 3.6 | Sep 11 1983 |
| INSTANTANEOUS PEAK FLOW | | | 2320 | Jun 7 | 4560 | Dec 21 1973 |
| INSTANTANEOUS PEAK STAGE | | | 5.87 | Jun 7 | 8.87 | Jan 27 1976 |
| INSTANTANEOUS LOW FLOW | | | 21 | Sep 11 | 1.9 | Aug 1 1968 |
| ANNUAL RUNOFF (CFSM) | 1.91 | | 2.57 | | 2.18 | |
| ANNUAL RUNOFF (INCHES) | 25.94 | | 34.95 | | 29.66 | |
| 10 PERCENT EXCEEDS | 154 | | 206 | | 205 | |
| 50 PERCENT EXCEEDS | 48 | | 70 | | 49 | |
| 90 PERCENT EXCEEDS | 7.6 | | 34 | | 11 | |

e Estimated

GREEN RIVER NEAR COLRAIN, MA 01170100



CONNECTICUT RIVER BASIN

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA

LOCATION.--Lat 42°34'43" (revised), long 72°34'30", Franklin County, Hydrologic Unit 01080201, on left bank 75 ft downstream from railroad bridge at Montague City, 1,000 ft downstream from Deerfield River, and at mile 119.0.

DRAINAGE AREA.--7,860 mi².

PERIOD OF RECORD.--Discharge: March 1904 to current year. Prior to October 1929, published as "at Sunderland." Records published for both sites October 1929 to September 1932.
Water-quality records: Water years 1994-95.

REVISED RECORDS.--WSP 471: 1904-17. WSP 741: 1930-32. WSP 781: 1928(M). WSP 1051: 1905, 1909-10, 1912-14, 1920, 1922-23, 1925-26, 1928, drainage area at Sunderland. WSP 1301: 1905(M), 1914-19(M), 1930-31(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 99.87 ft above sea level. Prior to Oct. 1, 1917, nonrecording gage; Oct. 1, 1917, to Oct. 8, 1921, water-stage recorder used for low stages, nonrecording gage otherwise; and Oct. 9, 1921, to Sept. 30, 1932, water-stage recorder; all at site 9 mi downstream at datum 1.00 ft lower. Since Oct. 1, 1929, water-stage recorder at present site and datum.

REMARKS.--Records good. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, and other reservoirs, combined usable capacity, about 43,400,000,000 ft³. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--96 years, 13,980 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236,000 ft³/s, Mar. 19, 1936, gage height, 49.2 ft, from floodmarks; minimum daily, 215 ft³/s, Aug. 31, Sept. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 69,100 ft³/s, Apr. 6, gage height, 26.04 ft; minimum daily, 2,680 ft³/s, Sept. 11.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| 1 | 13400 | 12000 | 22900 | 8150 | 10000 | 38600 | 43600 | 27300 | 13800 | 4280 | 26700 | 5200 |
| 2 | 12700 | 11700 | 20500 | 6300 | 6880 | 28200 | 37100 | 24700 | 14500 | 4790 | 21400 | 5930 |
| 3 | 13500 | 14900 | 13700 | 6290 | 9860 | 24800 | 34000 | 23300 | 9650 | 4620 | 16500 | 5210 |
| 4 | 12200 | 22300 | 11800 | 10600 | 9750 | 24800 | 48800 | 21800 | 10200 | 5430 | 14600 | 4340 |
| 5 | 11000 | 13800 | 12600 | 27500 | 4410 | 21200 | 64900 | 21000 | 10400 | 6190 | 10900 | 4080 |
| 6 | 14300 | 13100 | 14100 | 28500 | 4460 | 18800 | 65000 | 19500 | 13600 | 5390 | 10300 | 6110 |
| 7 | 14000 | 14100 | 14100 | 20000 | 6430 | 18100 | 56000 | 19500 | 35700 | 5990 | 11000 | 5430 |
| 8 | 12500 | 13000 | 14800 | 16500 | 7100 | 17500 | 47600 | 21800 | 30200 | 5580 | 14100 | 4400 |
| 9 | 8980 | 12600 | 15100 | 14300 | 6800 | 18700 | 43600 | 21300 | 21700 | 4610 | 12100 | 4100 |
| 10 | 9000 | 10900 | 14400 | 15500 | 9040 | 35100 | 58000 | 26700 | 18400 | 6360 | 14100 | 2960 |
| 11 | 10800 | 11300 | 13500 | 21600 | 7270 | 44000 | 62200 | 43200 | 15200 | 9520 | 15000 | 2680 |
| 12 | 12100 | 10500 | 13700 | 22200 | 5100 | 36000 | 56700 | 51500 | 14500 | 8480 | 22500 | 5030 |
| 13 | 10500 | 8190 | 14200 | 19700 | 2950 | 33800 | 45400 | 53100 | 14000 | 8470 | 17600 | 5980 |
| 14 | 11900 | 7710 | 10600 | 16200 | 7020 | 25300 | 35600 | 48500 | 17400 | 3890 | 14200 | 4470 |
| 15 | 13000 | 8590 | 11600 | 10100 | 10300 | 25300 | 33300 | 50200 | 14600 | 3890 | 14400 | 8330 |
| 16 | 10900 | 10900 | 14000 | 8860 | 8180 | 25700 | 32800 | 43700 | 16400 | 20900 | 13400 | 5250 |
| 17 | 11900 | 10500 | 10700 | 12500 | 8950 | 40500 | 30800 | 33900 | 13500 | 31900 | 15600 | 6710 |
| 18 | 11700 | 10200 | 12500 | 9170 | 8640 | 33100 | 30500 | 26700 | 11500 | 25800 | 11700 | 8660 |
| 19 | 11900 | 10000 | 13000 | 12400 | 7120 | 24900 | 29800 | 28400 | 10500 | 18500 | 11500 | 9790 |
| 20 | 11100 | 10900 | 12900 | 14100 | 5370 | 22800 | 25300 | 30100 | 13500 | 9700 | 8050 | 9590 |
| 21 | 12600 | 9790 | 11200 | 13700 | 7300 | 24900 | 26900 | 27400 | 13700 | 9660 | 9290 | 9150 |
| 22 | 12300 | 10400 | 13500 | 8370 | 7840 | 23500 | 39000 | 25500 | 10700 | 7510 | 7710 | 7180 |
| 23 | 12800 | 11000 | 13300 | 8860 | 6470 | 25800 | 43100 | 22000 | 10300 | 5120 | 8600 | 4200 |
| 24 | 17700 | 12300 | 13200 | 13100 | 7900 | 29300 | 47100 | 23100 | 5300 | 7290 | 7230 | 4260 |
| 25 | 28500 | 12900 | 13000 | 9570 | 9330 | 32300 | 44600 | 26000 | 4920 | 5620 | 10900 | 5630 |
| 26 | 24800 | 11900 | 9910 | 13700 | 12900 | 31600 | 39800 | 27100 | 12200 | 4870 | 7030 | 6960 |
| 27 | 22700 | 18000 | 8650 | 14500 | 15700 | 36100 | 35100 | 22800 | 13300 | 9650 | 7130 | 5850 |
| 28 | 18000 | 36300 | 8350 | 11300 | 21900 | 41300 | 36900 | 21000 | 14200 | 9140 | 8180 | 3680 |
| 29 | 14600 | 34000 | 9050 | 9230 | 37300 | 55200 | 33700 | 17700 | 12500 | 3960 | 4270 | 5060 |
| 30 | 12400 | 28300 | 6870 | 9760 | --- | 59400 | 26900 | 16700 | 5900 | 6890 | 6500 | 3770 |
| 31 | 12600 | --- | 6560 | 11100 | --- | 56500 | --- | 16300 | --- | 12800 | 7610 | --- |
| TOTAL | 426380 | 422080 | 394290 | 423660 | 272270 | 973100 | 1254100 | 881800 | 422270 | 276800 | 380100 | 169990 |
| MEAN | 13750 | 14070 | 12720 | 13670 | 9389 | 31390 | 41800 | 28450 | 14080 | 8929 | 12260 | 5666 |
| MAX | 28500 | 36300 | 22900 | 28500 | 37300 | 59400 | 65000 | 53100 | 35700 | 31900 | 26700 | 9790 |
| MIN | 8980 | 7710 | 6560 | 6290 | 2950 | 17500 | 25300 | 16300 | 4920 | 3890 | 4270 | 2680 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2000, BY WATER YEAR (WY)

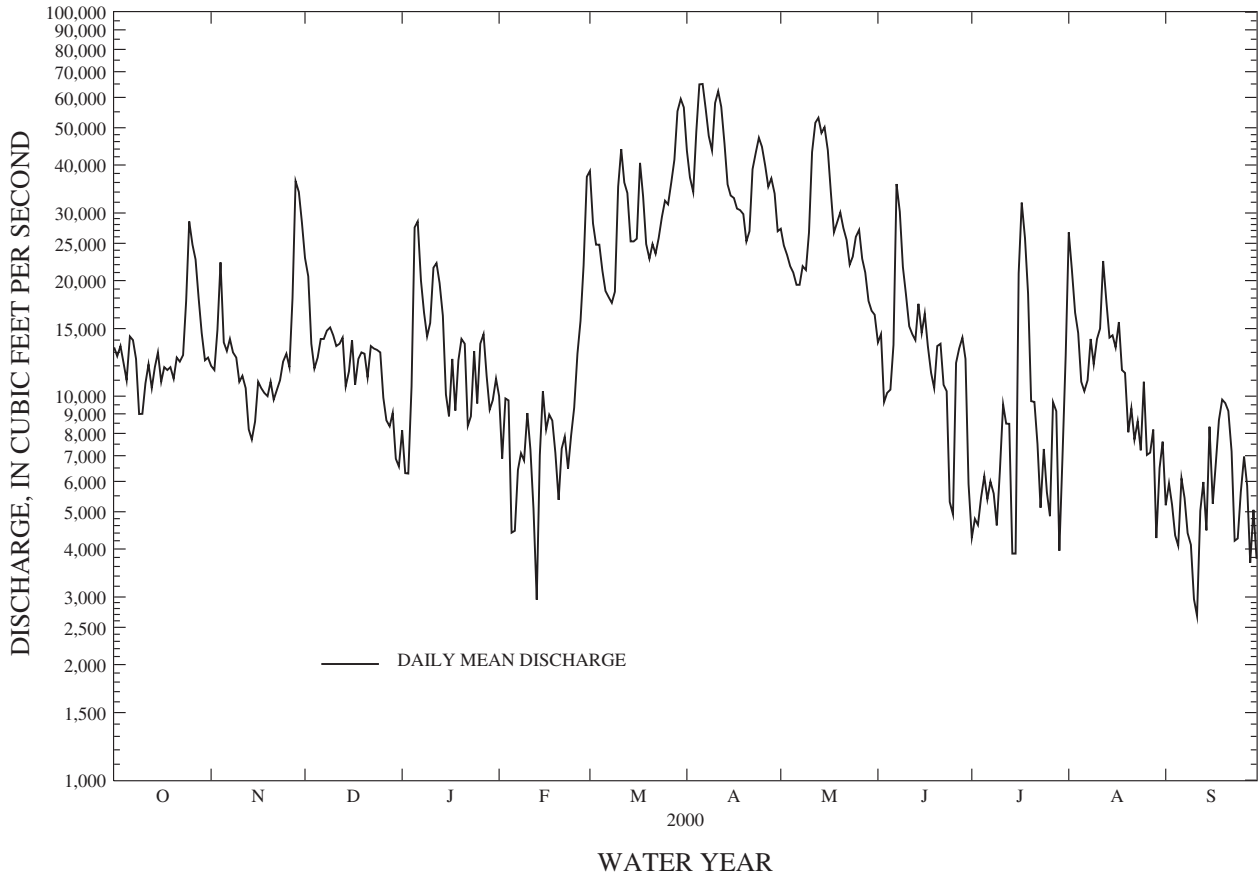
| | | | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MEAN | 8562 | 12380 | 12500 | 11110 | 10520 | 20910 | 38830 | 23330 | 11380 | 6713 | 5638 | 5972 |
| MAX | 25750 | 42270 | 31710 | 23890 | 33650 | 71920 | 66290 | 47000 | 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

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1904 - 2000 | |
|--------------------------|------------------------|--|---------------------|--|-------------------------|--|
| ANNUAL TOTAL | 4987050 | | 6296840 | | | |
| ANNUAL MEAN | 13660 | | 17200 | | 13980 | |
| HIGHEST ANNUAL MEAN | | | | | 20680 | |
| LOWEST ANNUAL MEAN | | | | | 6768 | |
| HIGHEST DAILY MEAN | 62200 | | 65000 | | 233000 | |
| LOWEST DAILY MEAN | 1650 | | 2680 | | 215 | |
| ANNUAL SEVEN-DAY MINIMUM | 2080 | | 4230 | | 1300 | |
| INSTANTANEOUS PEAK FLOW | | | 69100 | | 236000 | |
| INSTANTANEOUS PEAK STAGE | | | 26.04 | | 49.20 | |
| 10 PERCENT EXCEEDS | 29900 | | 35600 | | 31900 | |
| 50 PERCENT EXCEEDS | 11900 | | 13000 | | 9000 | |
| 90 PERCENT EXCEEDS | 2860 | | 5540 | | 3020 | |

CONNECTICUT RIVER AT MONTAGUE CITY, MA 01170500



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 fair. Flow regulated by mill upstream.

AVERAGE DISCHARGE.--61 years, 99.1 ft³/s, 24.95 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.--Maximum discharge, 2,050 ft³/s, July 16, gage height, 6.40 ft (from peak stage indicator); minimum, 32 ft³/s, Sept. 30.

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

| | | | | | | | | | | | | |
|-------|------|------|------|------|------|------|------|------|------|-------|------|------|
| 1 | 178 | 75 | 83 | 66 | e52 | 233 | e160 | 108 | 72 | 68 | 199 | 39 |
| 2 | 104 | 91 | 78 | 66 | e52 | 222 | e140 | 101 | 142 | 60 | 146 | 45 |
| 3 | 84 | 618 | 78 | 75 | e52 | 192 | e160 | 93 | 241 | 59 | 141 | 54 |
| 4 | 207 | 236 | 78 | 109 | e52 | 164 | e420 | 88 | 100 | 70 | 230 | 48 |
| 5 | 198 | 158 | 76 | 181 | e54 | 154 | e290 | 84 | 88 | 59 | 113 | 41 |
| 6 | 123 | 129 | 89 | 93 | e56 | 153 | e210 | 80 | 385 | 50 | 86 | e36 |
| 7 | 96 | 113 | 124 | 85 | e58 | 146 | e170 | 75 | 1200 | 45 | 96 | e35 |
| 8 | 85 | 102 | 93 | 78 | e47 | 190 | e160 | 74 | 402 | 41 | 80 | e33 |
| 9 | 95 | 95 | 83 | 72 | e48 | 211 | e210 | 99 | 265 | 40 | 69 | e32 |
| 10 | 104 | 93 | 81 | 141 | e53 | 263 | e185 | 168 | 209 | e40 | 64 | e31 |
| 11 | 148 | 88 | 95 | 314 | e54 | 232 | 163 | 418 | 169 | e34 | 107 | e28 |
| 12 | 99 | 82 | 81 | 151 | e54 | 574 | 146 | 174 | 757 | e30 | 624 | e35 |
| 13 | 86 | 82 | 76 | 111 | e72 | 351 | 127 | 140 | 378 | e25 | 198 | e119 |
| 14 | 124 | 81 | 79 | e96 | e82 | 239 | 116 | 168 | 598 | e30 | 147 | 61 |
| 15 | 125 | 81 | 165 | e100 | e120 | 227 | 108 | 118 | 345 | e35 | 134 | 82 |
| 16 | 107 | 77 | 159 | e105 | e110 | 234 | 102 | 97 | 266 | e1300 | 136 | 68 |
| 17 | 101 | 72 | 119 | e96 | e98 | 496 | 96 | 87 | 215 | e600 | 103 | 47 |
| 18 | 105 | 69 | 93 | e81 | e125 | 273 | 124 | 99 | 234 | e300 | 82 | 40 |
| 19 | 78 | 66 | 81 | e78 | e430 | 214 | 109 | 190 | 250 | e180 | 78 | 40 |
| 20 | 107 | 67 | 84 | e70 | e118 | 192 | 97 | 179 | 174 | e120 | 68 | 164 |
| 21 | 139 | 85 | 231 | e66 | 66 | 174 | 197 | 126 | 138 | e90 | 62 | 70 |
| 22 | 94 | 74 | 147 | e64 | e66 | 160 | 582 | 116 | 135 | e70 | 57 | 49 |
| 23 | 384 | 70 | e89 | e62 | e60 | 148 | 295 | 113 | 116 | e60 | 61 | 42 |
| 24 | 202 | 70 | e75 | e60 | 87 | 137 | 203 | 253 | 93 | e47 | 107 | 41 |
| 25 | 128 | 68 | e71 | e58 | 180 | 127 | 161 | 257 | 86 | 45 | 67 | 40 |
| 26 | 104 | 92 | e71 | e56 | 237 | 121 | 149 | 157 | 121 | 44 | 57 | 40 |
| 27 | 92 | 328 | e71 | e54 | 199 | 109 | 198 | 116 | 113 | 354 | 51 | 47 |
| 28 | 85 | 181 | e71 | e53 | 433 | e507 | 168 | 98 | 91 | 165 | 47 | 40 |
| 29 | 84 | 115 | e71 | e52 | 312 | e250 | 141 | 91 | 77 | 94 | 47 | 36 |
| 30 | 79 | 93 | e75 | e51 | --- | e220 | 122 | 83 | 79 | 85 | 41 | 33 |
| 31 | 78 | --- | 68 | e51 | --- | e180 | --- | 76 | --- | 280 | 41 | --- |
| TOTAL | 3823 | 3651 | 2935 | 2795 | 3427 | 7093 | 5509 | 4126 | 7539 | 4520 | 3539 | 1516 |
| MEAN | 123 | 122 | 94.7 | 90.2 | 118 | 229 | 184 | 133 | 251 | 146 | 114 | 50.5 |
| MAX | 384 | 618 | 231 | 314 | 433 | 574 | 582 | 418 | 1200 | 1300 | 624 | 164 |
| MIN | 78 | 66 | 68 | 51 | 47 | 109 | 96 | 74 | 72 | 25 | 41 | 28 |
| CFSM | 2.28 | 2.25 | 1.75 | 1.67 | 2.19 | 4.24 | 3.40 | 2.46 | 4.65 | 2.70 | 2.11 | .94 |
| IN. | 2.63 | 2.52 | 2.02 | 1.93 | 2.36 | 4.89 | 3.80 | 2.84 | 5.19 | 3.11 | 2.44 | 1.04 |

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

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 55.7 | 89.0 | 99.8 | 92.9 | 105 | 195 | 232 | 132 | 78.7 | 40.0 | 35.7 | 36.2 |
| MAX | 456 | 334 | 307 | 287 | 338 | 475 | 478 | 326 | 300 | 146 | 254 | 215 |
| (WY) | 1956 | 1956 | 1997 | 1978 | 1981 | 1953 | 1993 | 1984 | 1982 | 2000 | 1955 | 1999 |
| MIN | 8.52 | 13.2 | 23.9 | 15.5 | 24.1 | 63.9 | 53.5 | 45.9 | 15.9 | 9.13 | 4.96 | 5.48 |
| (WY) | 1965 | 1965 | 1947 | 1981 | 1940 | 1989 | 1985 | 1985 | 1964 | 1957 | 1957 | 1957 |

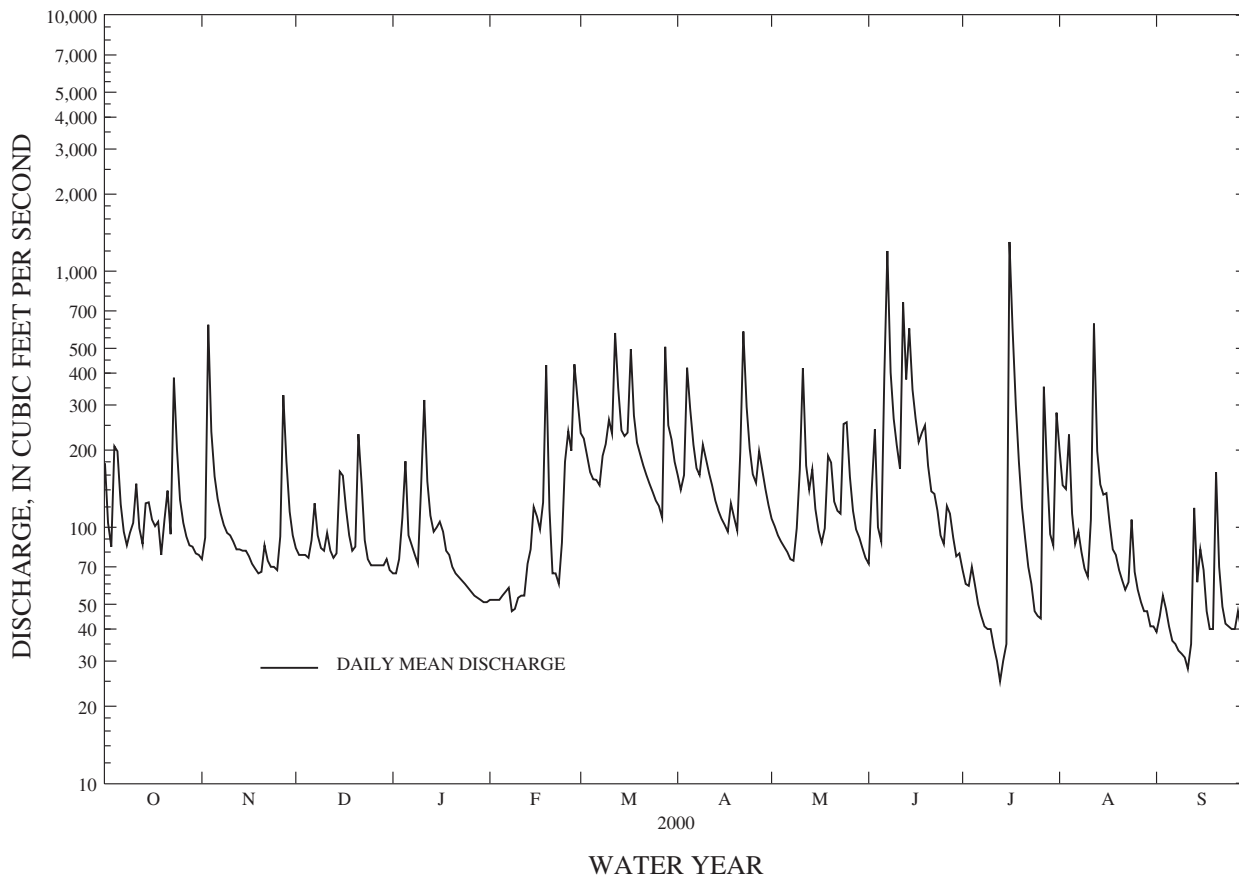
CONNECTICUT RIVER BASIN

01171500 MILL RIVER AT NORTHAMPTON, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1939 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 42349.8 | | 50473 | | | |
| ANNUAL MEAN | 116 | | 138 | | 99.1 | |
| HIGHEST ANNUAL MEAN | | | | | 157 1996 | |
| LOWEST ANNUAL MEAN | | | | | 39.1 1965 | |
| HIGHEST DAILY MEAN | 2200 | Mar 22 | 1300 | Jul 16 | 3870 | Aug 19 1955 |
| LOWEST DAILY MEAN | 3.8 | Aug 8 | 25 | Jul 13 | 3.8 | Aug 8 1999 |
| ANNUAL SEVEN-DAY MINIMUM | 4.3 | Aug 4 | 33 | Sep 6 | 4.3 | Aug 4 1999 |
| INSTANTANEOUS PEAK FLOW | | | 2050 | Jul 16 | 6300 | Aug 19 1955 |
| INSTANTANEOUS PEAK STAGE | | | 6.40 | Jul 16 | 11.78 | Aug 19 1955 |
| INSTANTANEOUS LOW FLOW | | | 32 | Sep 30 | 2.2 | Oct 1 1950 |
| ANNUAL RUNOFF (CFSM) | 2.15 | | 2.55 | | 1.84 | |
| ANNUAL RUNOFF (INCHES) | 29.17 | | 34.77 | | 24.95 | |
| 10 PERCENT EXCEEDS | 230 | | 250 | | 220 | |
| 50 PERCENT EXCEEDS | 81 | | 96 | | 57 | |
| 90 PERCENT EXCEEDS | 9.8 | | 47 | | 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. 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.--15 years (water years 1985-current year), 12,400 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, 70,500 ft³/s, Apr. 6, gage height, 15.67 ft; minimum daily, 931 ft³/s, Sept. 11.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|-------|
| 1 | 14100 | 10100 | 19800 | 7390 | 7530 | 38300 | 46100 | 21600 | 13100 | 4050 | 16000 | 4580 |
| 2 | 12200 | 7480 | 17600 | 7470 | 7030 | 28400 | 35400 | 20700 | 12800 | 3520 | 17600 | 3280 |
| 3 | 11700 | 8550 | 13700 | 5760 | 6320 | 22400 | 30400 | 18700 | 10500 | 4070 | 14100 | 3550 |
| 4 | 13400 | 17000 | 11400 | 9030 | 8660 | 20400 | 38800 | 18000 | 10400 | 4170 | 12900 | 3090 |
| 5 | 11000 | 15200 | 12000 | 16200 | 6820 | 18800 | 59000 | 16900 | 8500 | 5430 | 10200 | 2590 |
| 6 | 13000 | 11100 | 11900 | 26800 | 4500 | 15300 | 68200 | 15500 | 9640 | 4370 | 8670 | 2340 |
| 7 | 13600 | 12100 | 10600 | 19400 | 4960 | 13800 | 58400 | 15100 | 28900 | 4660 | 8730 | 2760 |
| 8 | 13400 | 10200 | 11600 | 15800 | 5710 | 13700 | 48000 | 16000 | 33600 | 4850 | 11900 | 2430 |
| 9 | 8490 | 11600 | 10800 | 12900 | 7070 | 14800 | 40500 | 16800 | 21400 | 4250 | 10200 | 1030 |
| 10 | 9710 | 10400 | 11000 | 11600 | 7700 | 22400 | 52000 | 18500 | 16200 | 3730 | 11500 | 1300 |
| 11 | 9650 | 10600 | 10100 | 15400 | 7760 | 39500 | 62000 | 33400 | 13000 | 7360 | 12000 | 931 |
| 12 | 11700 | 10500 | 11500 | 17500 | 6320 | 38400 | 57800 | 46000 | 13300 | 7380 | 17700 | 1640 |
| 13 | 10400 | 8300 | 11000 | 16300 | 5070 | 33500 | 47300 | 48500 | 12900 | 6330 | 17100 | 4450 |
| 14 | 11100 | 7880 | 9780 | 13900 | 4950 | 25700 | 34800 | 46400 | 14500 | 5030 | 12600 | 3860 |
| 15 | 12600 | 8200 | 10400 | 11600 | 9590 | 21000 | 29100 | 46200 | 12500 | 2600 | 11900 | 3520 |
| 16 | 11400 | 10100 | 10700 | 10700 | 9150 | 20600 | 28000 | 41900 | 13400 | 12300 | 10700 | 5010 |
| 17 | 11000 | 8470 | 11300 | 8210 | 9330 | 31300 | 26500 | 34200 | 12400 | 24400 | 12900 | 2840 |
| 18 | 11300 | 8790 | 11300 | 11000 | 8030 | 36200 | 25800 | 22800 | 12900 | 24300 | 10700 | 5080 |
| 19 | 11300 | 6870 | 10700 | 10200 | 7950 | 23100 | 25300 | 22300 | 10100 | 17000 | 9480 | 5300 |
| 20 | 10500 | 9570 | 11000 | 10900 | 7320 | 18400 | 22000 | 24900 | 11500 | 10300 | 6880 | 5850 |
| 21 | 11000 | 9790 | 11300 | 11000 | 5860 | 19900 | 20300 | 23500 | 11200 | 7460 | 6760 | 6000 |
| 22 | 9630 | 9520 | 10900 | 10200 | 7370 | 19200 | 32200 | 20700 | 9990 | 7200 | 6640 | 3920 |
| 23 | 9990 | 9440 | 12300 | 9990 | 7560 | 19900 | 40300 | 18000 | 9370 | 6420 | 4270 | 2140 |
| 24 | 11300 | 10700 | 11900 | 10100 | 7400 | 21600 | 43400 | 18700 | 7860 | 5470 | 5680 | 1500 |
| 25 | 19300 | 10700 | 11100 | 7260 | 8600 | 27100 | 44000 | 21100 | 3740 | 5350 | 5630 | 2390 |
| 26 | 22300 | 10300 | 9270 | 7220 | 12500 | 26800 | 39900 | 24000 | 8310 | 3000 | 5160 | 3720 |
| 27 | 19800 | 11400 | 9220 | 10700 | 14900 | 29500 | 35200 | 21000 | 11300 | 6500 | 5320 | 4260 |
| 28 | 15700 | 27400 | 7830 | 9690 | 17100 | 32900 | 33400 | 18100 | 10700 | 9650 | 5520 | 2220 |
| 29 | 12800 | 32000 | 7810 | 9480 | 30200 | 49000 | 30700 | 17300 | 10700 | 5090 | 3730 | 2710 |
| 30 | 11400 | 27100 | 7840 | 8250 | --- | 55500 | 24900 | 14900 | 5400 | 4390 | 2810 | 1580 |
| 31 | 10400 | --- | 6920 | 8250 | --- | 55700 | --- | 15200 | --- | 9730 | 5260 | --- |
| TOTAL | 385170 | 361360 | 344570 | 360200 | 253260 | 853100 | 1179700 | 756900 | 380110 | 230360 | 300540 | 95871 |
| MEAN | 12420 | 12050 | 11120 | 11620 | 8733 | 27520 | 39320 | 24420 | 12670 | 7431 | 9695 | 3196 |
| MAX | 22300 | 32000 | 19800 | 26800 | 30200 | 55700 | 68200 | 48500 | 33600 | 24400 | 17700 | 6000 |
| MIN | 8490 | 6870 | 6920 | 5760 | 4500 | 13700 | 20300 | 14900 | 3740 | 2600 | 2810 | 931 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000, BY WATER YEAR (WY)

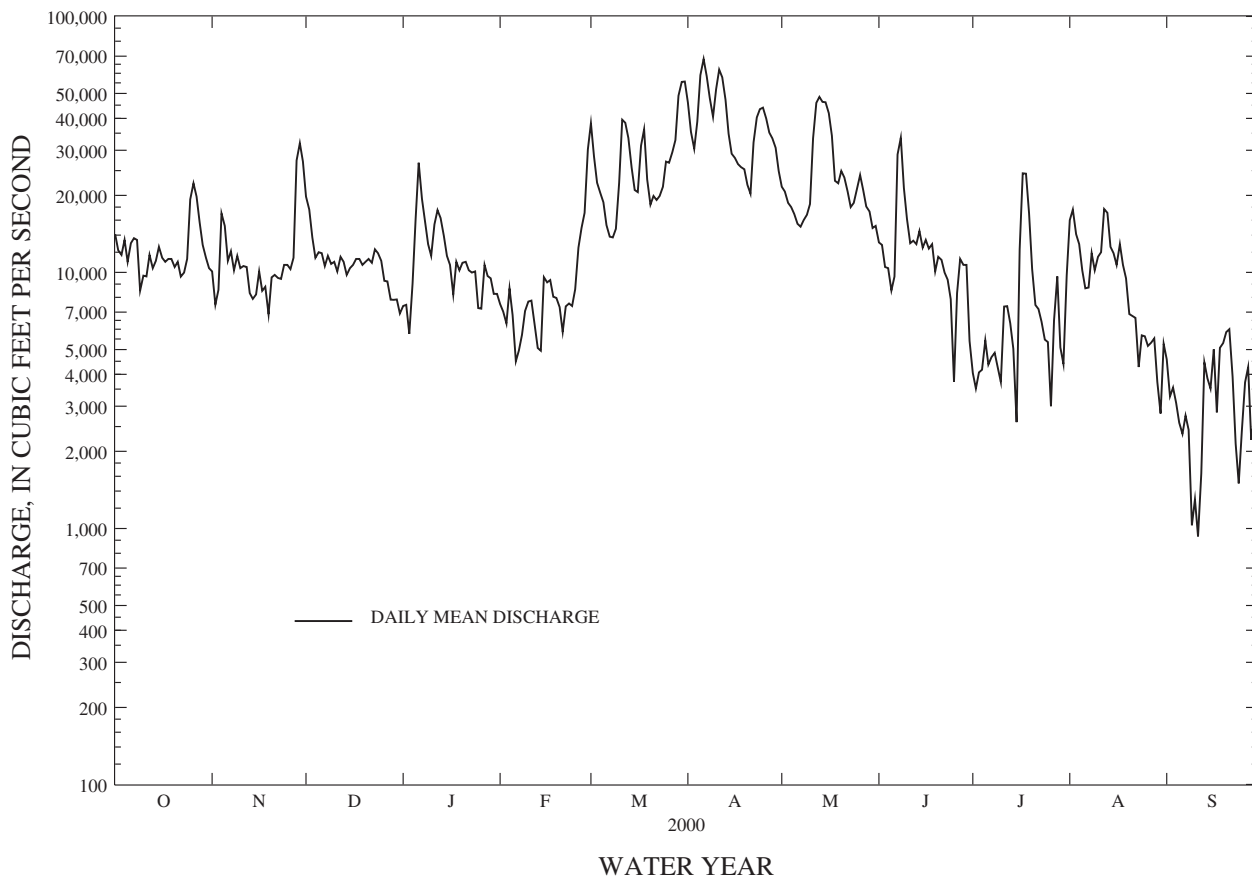
| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| MEAN | 9325 | 12020 | 11270 | 10630 | 9975 | 18740 | 33840 | 17640 | 10490 | 6436 | 5707 | 5027 | | | | | |
| MAX | 16340 | 25800 | 27410 | 23660 | 21890 | 34660 | 58300 | 40670 | 31100 | 16930 | 14780 | 13840 | | | | | |
| (WY) | 1991 | 1996 | 1997 | 1996 | 1984 | 1990 | 1993 | 1996 | 1984 | 1996 | 1990 | 1999 | | | | | |
| MIN | 1512 | 3540 | 5787 | 4760 | 4250 | 9579 | 10270 | 7366 | 4056 | 2578 | 2136 | 1378 | | | | | |
| (WY) | 1985 | 1985 | 1985 | 1989 | 1987 | 1989 | 1995 | 1987 | 1999 | 1991 | 1999 | 1984 | | | | | |

CONNECTICUT RIVER BASIN

01172003 CONNECTICUT RIVER BELOW HOLYOKE DAM AT HOLYOKE, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1984 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 4298800 | | 5501141 | | | |
| ANNUAL MEAN | 11780 | | 15030 | | 12400 | |
| HIGHEST ANNUAL MEAN | | | | | 19030 | |
| LOWEST ANNUAL MEAN | | | | | 6580 | |
| HIGHEST DAILY MEAN | 59700 | Sep 18 | 68200 | Apr 6 | 145000 | Jun 1 1984 |
| LOWEST DAILY MEAN | 1220 | Aug 17 | 931 | Sep 11 | 519 | Sep 30 1984 |
| ANNUAL SEVEN-DAY MINIMUM | 1380 | Aug 7 | 1780 | Sep 6 | 707 | Sep 18 1984 |
| INSTANTANEOUS PEAK FLOW | | | 70500 | | 153000 | |
| INSTANTANEOUS PEAK STAGE | | | 15.67 | | 25.62 | |
| INSTANTANEOUS LOW FLOW | | | 885 | | 200 | |
| 10 PERCENT EXCEEDS | 25600 | | 32400 | | 27600 | |
| 50 PERCENT EXCEEDS | 9990 | | 11000 | | 8280 | |
| 90 PERCENT EXCEEDS | 2270 | | 4380 | | 3030 | |

CONNECTICUT RIVER BL HOLYOKE DAM AT HOLYOKE, MA 01172003



CONNECTICUT RIVER BASIN

01172500 WARE RIVER NEAR BARRE, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | FOR 2000 WATER YEAR | WATER YEARS 1946 - 2000 | |
|-----------------------------|------------------------|---------------------|-------------------------|-------------|
| ANNUAL TOTAL | 25755.19 | 35330.0 | | |
| ANNUAL MEAN | 70.6 | 96.5 | 95.5 | |
| ADJUSTED ANNUAL MEAN | 70.8 | 96.5 | 95.5 | |
| HIGHEST ANNUAL MEAN | | | 157 | 1984 |
| LOWEST ANNUAL MEAN | | | 29.5 | 1965 |
| HIGHEST DAILY MEAN | 562 Jan 28 | 690 Apr 26 | 1520 | Oct 16 1955 |
| LOWEST DAILY MEAN | .57 Aug 13 | 6.6 Sep 12 | .10 | Sep 8 1995 |
| ANNUAL SEVEN-DAY MINIMUM | .66 Aug 7 | 8.3 Sep 6 | .11 | Sep 6 1995 |
| INSTANTANEOUS PEAK FLOW | | 725 Apr 25 | 1890 | Oct 16 1955 |
| INSTANTANEOUS PEAK STAGE | | 4.71 Apr 25 | 6.31 | Oct 16 1955 |
| INSTANTANEOUS LOW FLOW | | 1.4 Jun 7 | | |
| ADJUSTED RUNOFF (CFSM) †† | 1.28 | 1.75 | 1.73 | |
| ADJUSTED RUNOFF (INCHES) †† | 17.45 | 23.85 | 23.54 | |
| 10 PERCENT EXCEEDS | 162 | 196 | 220 | |
| 50 PERCENT EXCEEDS | 48 | 62 | 60 | |
| 90 PERCENT EXCEEDS | 2.0 | 23 | 7.3 | |

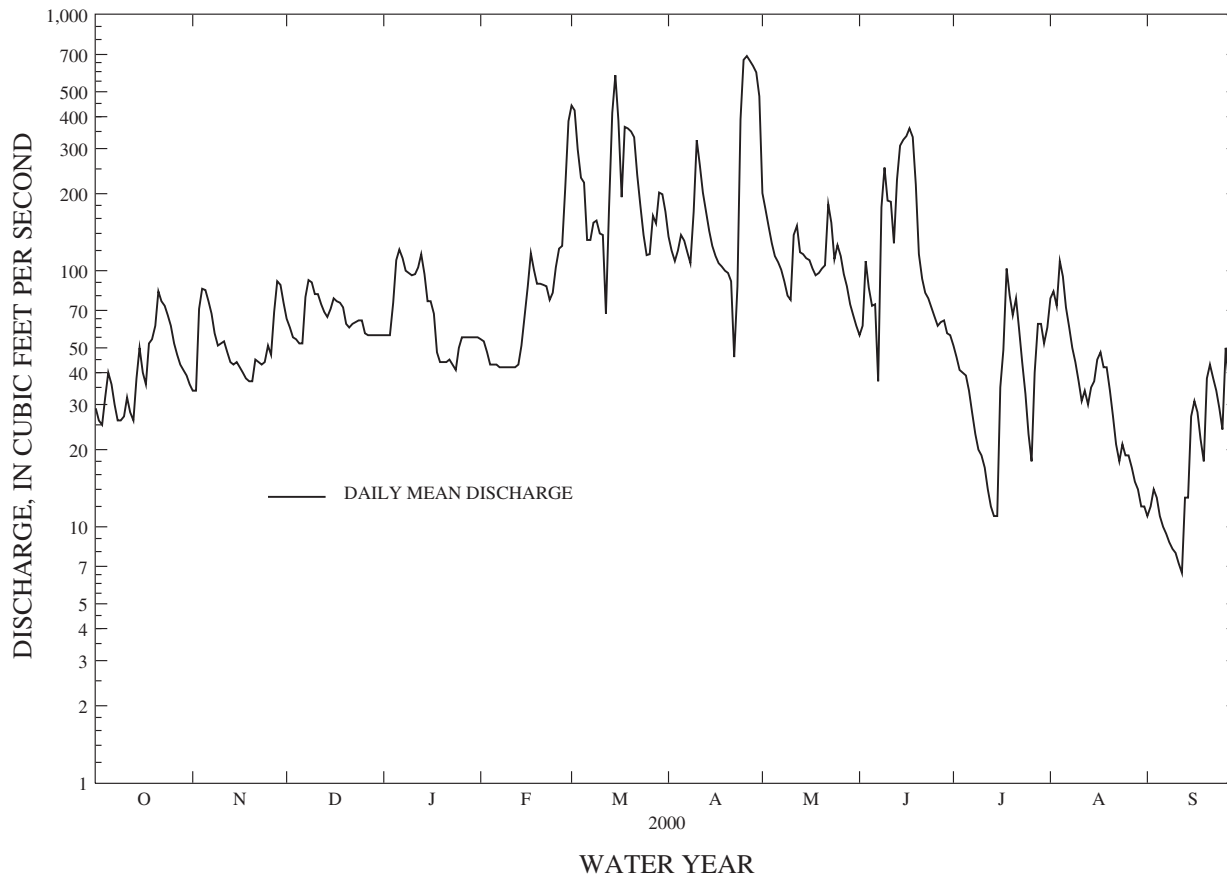
e Estimated

† 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, 1999, 2.4 mcf.

†† Adjusted for change in contents in Barre Falls Reservoir.

Note.--Except as footnoted, all statistics are based on unadjusted daily and monthly mean discharges.

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.--72 years, 169 ft³/s, 23.83 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, 882 ft³/s, Apr. 26; minimum daily, 17 ft³/s, Sept 12.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|----------|------|------|------|------|------|-------|-------|------|------|------|------|------|
| 1 | 57 | 69 | 147 | 107 | 110 | 590 | 225 | 370 | 106 | 81 | 130 | 24 |
| 2 | 51 | 80 | 144 | 110 | 110 | 555 | 203 | 315 | 135 | 73 | 138 | 25 |
| 3 | 45 | 177 | 141 | 117 | 109 | 425 | 195 | 277 | 185 | 64 | 117 | 29 |
| 4 | 71 | 198 | 127 | 138 | 109 | 355 | 228 | 247 | 147 | 66 | 189 | 29 |
| 5 | 82 | 181 | 113 | 207 | 108 | 334 | 250 | 225 | 134 | 62 | 169 | 26 |
| 6 | 71 | 158 | 118 | 196 | 105 | 231 | 228 | 210 | 211 | 54 | 125 | 24 |
| 7 | 59 | 144 | 171 | 183 | 107 | 236 | 207 | 195 | 360 | 48 | 99 | 22 |
| 8 | 51 | 143 | 191 | 168 | 102 | 255 | 191 | 194 | 345 | 42 | 83 | 21 |
| 9 | 51 | 130 | 178 | 164 | 98 | 265 | 405 | 185 | 512 | 38 | 68 | 20 |
| 10 | 67 | 124 | 173 | 175 | 92 | 273 | 508 | 208 | 303 | 40 | 61 | 20 |
| 11 | 71 | 116 | 180 | 199 | 88 | 306 | 421 | 312 | 270 | 37 | 49 | 18 |
| 12 | 62 | 111 | 162 | 188 | 88 | 358 | 339 | 281 | 297 | 55 | 52 | 17 |
| 13 | 48 | 111 | 153 | 180 | 87 | 425 | 285 | 260 | 306 | 51 | 65 | 27 |
| 14 | 68 | 111 | 145 | 170 | 121 | 578 | 246 | 299 | 472 | 49 | 67 | 41 |
| 15 | 93 | 107 | 154 | 144 | 185 | 659 | 218 | 265 | 479 | 31 | 66 | 54 |
| 16 | 77 | 107 | 164 | 144 | 209 | 464 | 205 | 212 | 450 | 46 | 66 | 70 |
| 17 | 71 | 104 | 156 | 139 | 201 | 472 | 189 | 178 | 480 | 66 | 70 | 58 |
| 18 | 124 | 95 | 156 | 132 | 153 | 543 | 184 | 174 | 456 | 102 | 71 | 47 |
| 19 | 127 | 75 | 142 | 132 | 149 | 504 | 182 | 215 | 350 | 118 | 70 | 38 |
| 20 | 127 | 84 | 142 | 90 | 144 | 469 | 177 | 180 | 190 | 95 | 69 | 60 |
| 21 | 144 | 85 | 163 | 93 | 144 | 477 | 306 | 211 | 153 | 96 | 60 | 87 |
| 22 | 153 | 90 | 159 | 91 | 146 | 375 | 541 | 288 | 134 | 94 | 38 | 73 |
| 23 | 163 | 86 | 149 | 87 | 144 | 303 | 449 | 231 | 132 | 85 | 38 | 62 |
| 24 | 153 | 85 | 142 | 87 | 158 | 254 | 666 | 236 | 117 | e40 | 42 | 54 |
| 25 | 144 | 91 | 142 | 98 | 219 | 224 | 858 | 244 | 104 | e34 | 40 | 47 |
| 26 | 143 | 97 | 138 | 111 | 260 | 229 | 882 | 211 | 99 | 39 | 37 | 50 |
| 27 | 100 | 164 | 127 | 110 | 268 | 147 | 859 | 182 | 111 | 73 | 35 | 78 |
| 28 | 95 | 217 | 113 | 114 | 441 | 233 | 821 | 165 | 109 | 118 | 31 | 49 |
| 29 | 84 | 189 | 111 | 115 | 584 | 331 | 752 | 144 | 93 | 107 | 29 | 40 |
| 30 | 82 | 164 | 110 | 116 | --- | 307 | 595 | 126 | 94 | 89 | 26 | 36 |
| 31 | 73 | --- | 108 | 94 | --- | 253 | --- | 115 | --- | 105 | 25 | --- |
| TOTAL | 2807 | 3693 | 4519 | 4199 | 4839 | 11430 | 11815 | 6955 | 7334 | 2098 | 2225 | 1246 |
| MEAN | 90.5 | 123 | 146 | 135 | 167 | 369 | 394 | 224 | 244 | 67.7 | 71.8 | 41.5 |
| MAX | 163 | 217 | 191 | 207 | 584 | 659 | 882 | 370 | 512 | 118 | 189 | 87 |
| MIN | 45 | 69 | 108 | 87 | 87 | 147 | 177 | 115 | 93 | 31 | 25 | 17 |
| MEAN†† | 90.6 | 123 | 157 | 131 | 181 | 350 | 394 | 224 | 244 | 68.0 | 71.1 | 41.6 |
| CFSM†† | 0.94 | 1.28 | 1.63 | 1.36 | 1.87 | 3.63 | 4.09 | 2.32 | 2.53 | 0.71 | 0.74 | 0.43 |
| INCHES†† | 1.09 | 1.43 | 1.87 | 1.57 | 2.02 | 4.19 | 4.57 | 2.68 | 2.83 | 0.81 | 0.85 | 0.48 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2000, BY WATER YEAR (WY)

| | MEAN | MAX | MIN | (WY) | MEAN | MAX | MIN | (WY) | MEAN | MAX | MIN | (WY) |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 88.5 | 137 | 171 | 180 | 180 | 327 | 405 | 219 | 139 | 68.4 | 54.2 | 64.7 |
| MAX | 465 | 445 | 570 | 499 | 488 | 1066 | 963 | 438 | 503 | 337 | 319 | 893 |
| (WY) | 1956 | 1956 | 1997 | 1979 | 1976 | 1936 | 1940 | 1989 | 1984 | 1938 | 1955 | 1938 |
| MIN | 7.86 | 13.9 | 29.1 | 17.2 | 37.5 | 118 | 129 | 73.8 | 18.2 | 9.00 | 4.94 | 6.12 |
| (WY) | 1965 | 1965 | 1966 | 1981 | 1980 | 1940 | 1985 | 1999 | 1999 | 1999 | 1999 | 1995 |

CONNECTICUT RIVER BASIN

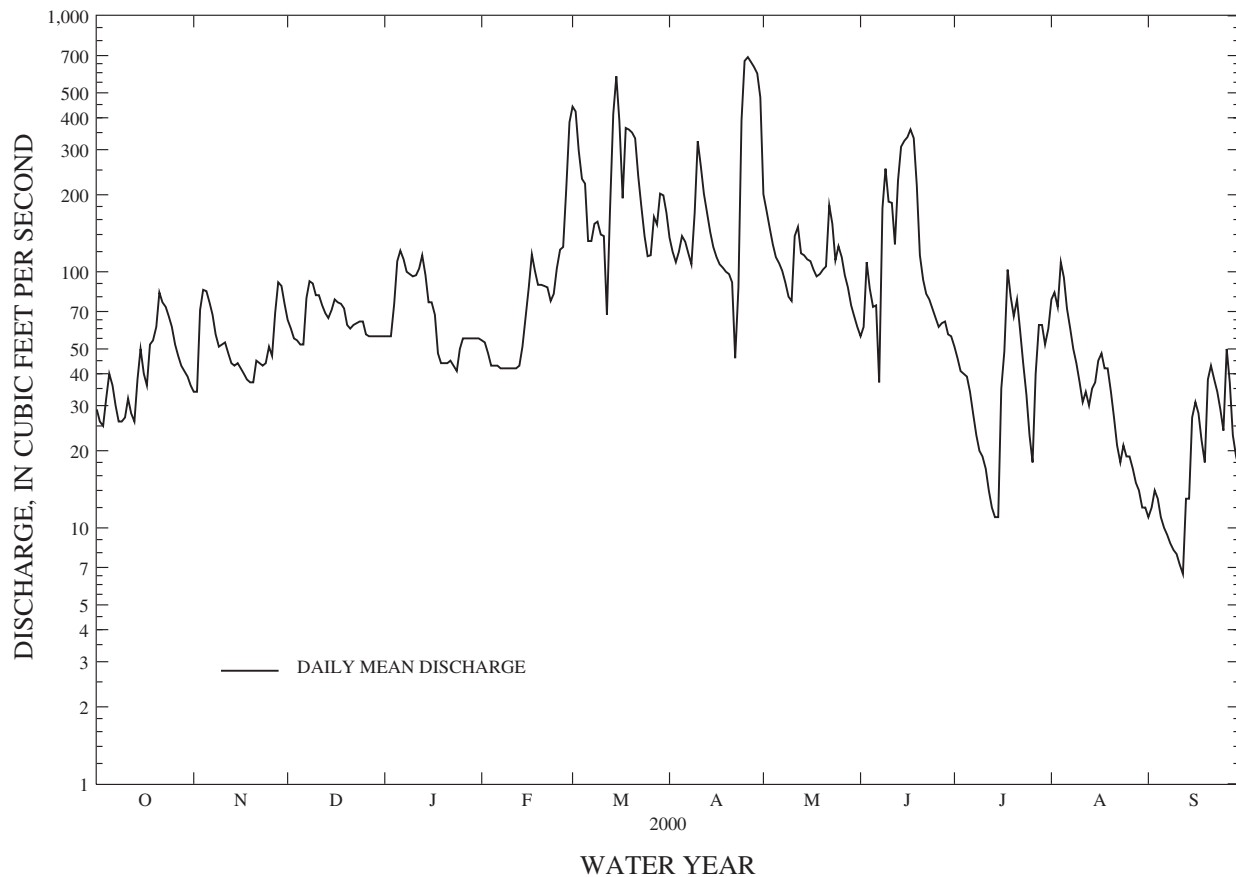
01173000 WARE RIVER AT INTAKE WORKS NEAR BARRE, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1928 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 46276.7 | | 63160 | | | |
| ANNUAL MEAN | 127 | | 173 | | 169 | |
| ANNUAL MEAN++ | 127 | | 173 | | 169 | |
| HIGHEST ANNUAL MEAN | | | | | 277 1938 | |
| LOWEST ANNUAL MEAN | | | | | 56.4 1965 | |
| HIGHEST DAILY MEAN | 637 | Jan 28 | 882 | Apr 26 | 8740 | Sep 21 1938 |
| LOWEST DAILY MEAN | 2.0 | Jul 22 | 17 | Sep 12 | .46 | Sep 15 1987 |
| ANNUAL SEVEN-DAY MINIMUM | 2.3 | Aug 7 | 20 | Sep 6 | 2.3 | Aug 7 1999 |
| INSTANTANEOUS PEAK FLOW | | | | | 14000 Sep 21 1938 | |
| INSTANTANEOUS PEAK STAGE | | | | | 664.28 Sep 21 1938 | |
| ANNUAL RUNOFF (CFSM)†† | 1.32 | | 1.79 | | 1.75 | |
| ANNUAL RUNOFF (INCHES)†† | 17.91 | | 24.40 | | 23.83 | |
| 10 PERCENT EXCEEDS | 277 | | 356 | | 385 | |
| 50 PERCENT EXCEEDS | 97 | | 132 | | 111 | |
| 90 PERCENT EXCEEDS | 4.3 | | 46 | | 20 | |

e Estimated

†† 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



CONNECTICUT RIVER BASIN

01173500 WARE RIVER AT GIBBS CROSSING, MA

LOCATION.--Lat 42°14'10", long 72°16'23", Hampshire County, Hydrologic Unit 01080204, on right bank 0.5 mi upstream from Gibbs Crossing, 1.8 mi upstream from Beaver Brook, 2.5 mi southwest of Ware, and 8.8 mi upstream from mouth.

DRAINAGE AREA.--197 mi².

PERIOD OF RECORD.--Discharge: August 1912 to current year.
Water-quality records: Water years 1953-54.

REVISED RECORDS.--WSP 1031: 1944.

WSP 1301: 1914 (M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 379.79 ft above sea level. Prior to Mar. 1, 1930, at site 0.5 mi downstream at different datum.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Diversion at times: Since March 1931 from 96.3 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.

AVERAGE DISCHARGE.--18 years (water years 1913-30), 313 ft³/s, 21.36 in/yr; 70 years (water years 1931-2000), affected by diversion and storage, 294 ft³/s.

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.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,770 ft³/s, Apr. 22, gage height, 5.94 ft; minimum daily, 56 ft³/s, Sept. 11.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|------|
| 1 | 121 | 164 | 321 | e200 | e170 | 1290 | 461 | 867 | 278 | 356 | 293 | 69 |
| 2 | 116 | 160 | 287 | e200 | e160 | 1200 | 408 | 656 | 202 | 192 | 286 | 78 |
| 3 | 110 | 488 | 276 | e210 | e160 | 1020 | 371 | 552 | 419 | 149 | 267 | 70 |
| 4 | 138 | 535 | 273 | e250 | e150 | 785 | 449 | 490 | 374 | 216 | 529 | 75 |
| 5 | 187 | 387 | 258 | e270 | e150 | 711 | 590 | 457 | 297 | 192 | 404 | 85 |
| 6 | 195 | 335 | 237 | e350 | e150 | 642 | 528 | 432 | 356 | 167 | 315 | 87 |
| 7 | 142 | 286 | 375 | e300 | e150 | 485 | 449 | 352 | 1240 | 165 | 245 | 79 |
| 8 | 115 | 252 | 432 | e270 | e150 | 485 | 417 | 377 | 1060 | 145 | 229 | 70 |
| 9 | 125 | 257 | 397 | e250 | e160 | 518 | 769 | 400 | 880 | 131 | 171 | 77 |
| 10 | 127 | 205 | 355 | 337 | e165 | 553 | 1110 | 374 | 690 | 133 | 158 | 59 |
| 11 | 167 | 223 | 392 | e430 | 170 | 584 | 961 | 653 | 572 | 148 | 145 | 56 |
| 12 | 163 | 197 | 356 | e370 | 203 | 1350 | 759 | 660 | 882 | 101 | 802 | 111 |
| 13 | 144 | 195 | 327 | e330 | 214 | 1340 | 618 | 561 | 775 | 84 | 426 | 124 |
| 14 | 153 | 180 | 316 | e280 | 268 | 1050 | 552 | 662 | 856 | 131 | 346 | 85 |
| 15 | 205 | 218 | 337 | e250 | e510 | 1080 | 444 | 602 | 851 | 122 | 319 | 85 |
| 16 | 194 | 194 | 373 | e240 | e450 | 1100 | 450 | 501 | 788 | 192 | 350 | 117 |
| 17 | 135 | 184 | 365 | e210 | e390 | 1200 | 406 | 406 | 746 | 176 | 345 | 111 |
| 18 | 274 | 176 | 325 | e180 | e330 | 1220 | 377 | 404 | 733 | 217 | 255 | 144 |
| 19 | 308 | 135 | 283 | e170 | e300 | 1070 | 394 | 497 | 696 | 265 | 257 | 156 |
| 20 | 253 | 177 | 278 | e160 | e290 | 954 | 384 | 576 | 518 | 199 | 219 | 156 |
| 21 | 339 | 218 | 419 | e150 | e280 | 859 | 432 | 499 | 380 | 178 | 190 | 165 |
| 22 | 287 | 203 | 423 | e149 | e290 | 562 | 2300 | 444 | 356 | 178 | 153 | 151 |
| 23 | 317 | 184 | 379 | e149 | e300 | 378 | 1700 | 548 | 355 | 159 | 108 | 142 |
| 24 | 361 | 191 | 308 | e150 | 337 | 371 | 1230 | 513 | 315 | 150 | 196 | 136 |
| 25 | 271 | 183 | e280 | e160 | 569 | 382 | 1290 | 657 | 199 | 124 | 180 | 122 |
| 26 | 278 | 213 | e260 | e180 | 901 | 441 | 1360 | 564 | 224 | 125 | 97 | 100 |
| 27 | 259 | 411 | e240 | e190 | 837 | 432 | 1450 | 432 | 346 | 296 | 126 | 82 |
| 28 | 212 | 596 | e220 | e200 | 1230 | 407 | 1380 | 382 | 393 | 352 | 84 | 133 |
| 29 | 145 | 461 | e210 | e190 | 1380 | 595 | 1270 | 322 | 320 | 279 | 124 | 106 |
| 30 | 177 | 383 | e200 | e180 | --- | 617 | 1130 | 293 | 339 | 241 | 103 | 101 |
| 31 | 180 | --- | e200 | e170 | --- | 554 | --- | 273 | --- | 233 | 86 | --- |
| TOTAL | 6198 | 7991 | 9702 | 7125 | 10814 | 24235 | 24439 | 15406 | 16440 | 5796 | 7808 | 3132 |
| MEAN | 200 | 266 | 313 | 230 | 373 | 782 | 815 | 497 | 548 | 187 | 252 | 104 |
| MAX | 361 | 596 | 432 | 430 | 1380 | 1350 | 2300 | 867 | 1240 | 356 | 802 | 165 |
| MIN | 110 | 135 | 200 | 149 | 150 | 371 | 371 | 273 | 199 | 84 | 84 | 56 |

CONNECTICUT RIVER BASIN

01173500 WARE RIVER AT GIBBS CROSSING, MA--Continued

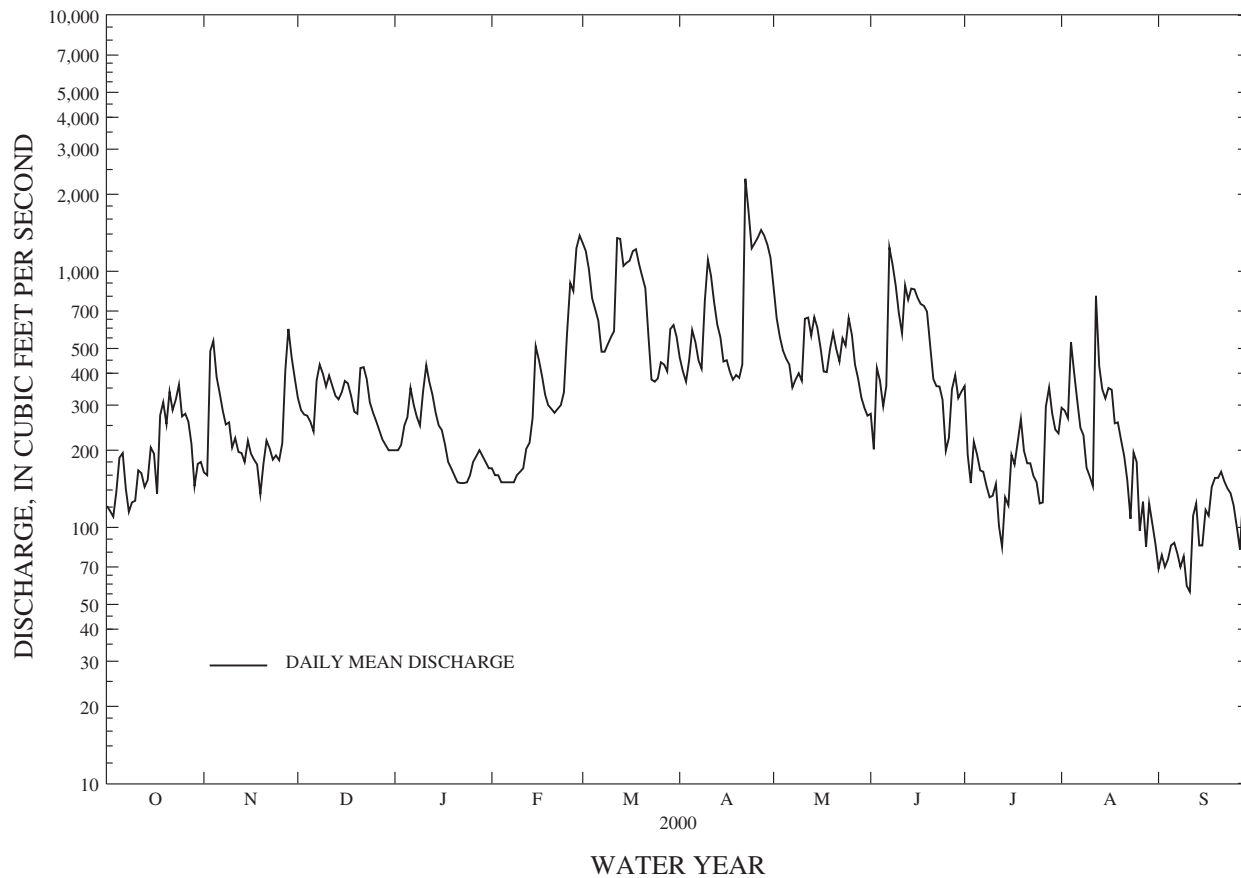
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 169 | 254 | 304 | 331 | 328 | 523 | 593 | 376 | 252 | 141 | 123 | 137 |
| MAX | 750 | 922 | 1295 | 794 | 802 | 1838 | 1394 | 830 | 746 | 714 | 890 | 1707 |
| (WY) | 1956 | 1956 | 1997 | 1996 | 1976 | 1936 | 1956 | 1996 | 1984 | 1938 | 1955 | 1938 |
| MIN | 29.0 | 39.0 | 68.5 | 29.6 | 77.7 | 210 | 231 | 167 | 60.4 | 30.9 | 16.0 | 14.5 |
| (WY) | 1965 | 1965 | 1966 | 1981 | 1980 | 1989 | 1966 | 1965 | 1999 | 1999 | 1999 | 1953 |

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1931 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 101481.2 | | 139086 | | | |
| ANNUAL MEAN | 278 | | 380 | | 294 | |
| HIGHEST ANNUAL MEAN | | | | | 581 | |
| LOWEST ANNUAL MEAN | | | | | 107 | |
| HIGHEST DAILY MEAN | 2070 | Jan 25 | 2300 | Apr 22 | 16700 | Sep 21 1938 |
| LOWEST DAILY MEAN | 9.2 | Aug 26 | 56 | Sep 11 | 7.0 | Sep 12 1953 |
| ANNUAL SEVEN-DAY MINIMUM | 10 | Aug 20 | 73 | Sep 5 | 9.4 | Sep 8 1953 |
| INSTANTANEOUS PEAK FLOW | | | 2770 | Apr 22 | 22700 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 5.94 | Apr 22 | 18.20 | Sep 21 1938 |
| INSTANTANEOUS LOW FLOW | | | 47 | Oct 17 | 4.2 | Aug 24 1995 |
| 10 PERCENT EXCEEDS | 617 | | 792 | | 615 | |
| 50 PERCENT EXCEEDS | 206 | | 284 | | 215 | |
| 90 PERCENT EXCEEDS | 18 | | 125 | | 48 | |

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 discharge, which are poor. No flow at times during several years. Satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--63 years, 72.1 ft³/s, 22.41 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.--Maximum discharge, 538 ft³/s, Apr. 22, gage height, 20.50 ft; minimum, 10 ft³/s, Sept. 11,12.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | 36 | 21 | 50 | 25 | 25 | 234 | 90 | 112 | 49 | 42 | 101 | 12 |
| 2 | 31 | 28 | 35 | 33 | 21 | 183 | 81 | 103 | 49 | 35 | 116 | 26 |
| 3 | 27 | 109 | 45 | 70 | 18 | 151 | 77 | 92 | 73 | 31 | 109 | 40 |
| 4 | 47 | 112 | 55 | 76 | 22 | 131 | 102 | 84 | 65 | 33 | 152 | 37 |
| 5 | 155 | 80 | 68 | 94 | 23 | 111 | 139 | 83 | 56 | 30 | 114 | 19 |
| 6 | 158 | 57 | 68 | 72 | 18 | 91 | 126 | 80 | 70 | 25 | 79 | 15 |
| 7 | 80 | 41 | 94 | 68 | 15 | 84 | 108 | 72 | 408 | 22 | 82 | 14 |
| 8 | 50 | 31 | 97 | 60 | 13 | 80 | 90 | 66 | 350 | 19 | 56 | 13 |
| 9 | 59 | 25 | 86 | 42 | 13 | 87 | 199 | 64 | 206 | 17 | 41 | 13 |
| 10 | 67 | 29 | 84 | 50 | 14 | 113 | 291 | 65 | 149 | 19 | 34 | 12 |
| 11 | 107 | 27 | 88 | 77 | 17 | 127 | 204 | 177 | 111 | 18 | 28 | 11 |
| 12 | 68 | 21 | 71 | 68 | 18 | 290 | 157 | 174 | 168 | 17 | 132 | 10 |
| 13 | 59 | 21 | 67 | 55 | 17 | 336 | 126 | 137 | 170 | 15 | 136 | 35 |
| 14 | 55 | 24 | 71 | 32 | 43 | 231 | 105 | 137 | 160 | 13 | 113 | 52 |
| 15 | 47 | 23 | 83 | 21 | 87 | 170 | 97 | 113 | 153 | 13 | 108 | 57 |
| 16 | 45 | 18 | 100 | e19 | 86 | 143 | 95 | 92 | 170 | 33 | 92 | 55 |
| 17 | 39 | 17 | 85 | e17 | 69 | 250 | 81 | 77 | 126 | 53 | 68 | 39 |
| 18 | 54 | 15 | 70 | e15 | 52 | 267 | 78 | 73 | 114 | 57 | 53 | 32 |
| 19 | 59 | 15 | 56 | e15 | 58 | 198 | 77 | 102 | 115 | 40 | 48 | 27 |
| 20 | 74 | 15 | 48 | e14 | 63 | 162 | 78 | 133 | 94 | 32 | 34 | 45 |
| 21 | 126 | 44 | 103 | e14 | 57 | 138 | 87 | 121 | 75 | 25 | 28 | 42 |
| 22 | 113 | 36 | 117 | e14 | 43 | 123 | 425 | 109 | 74 | 23 | 24 | 32 |
| 23 | 117 | 36 | 99 | 13 | 40 | 114 | 431 | 94 | 72 | 22 | 22 | 31 |
| 24 | 107 | 34 | 78 | 15 | 48 | 103 | 299 | 111 | 62 | 21 | 31 | 38 |
| 25 | 93 | 28 | 47 | 22 | 69 | 92 | 208 | 144 | 51 | 19 | 25 | 28 |
| 26 | 68 | 46 | 36 | 28 | 111 | 91 | 165 | 122 | 69 | 17 | 22 | 27 |
| 27 | 46 | 157 | 33 | 22 | 132 | 84 | 185 | 99 | 101 | 42 | 19 | 34 |
| 28 | 35 | 206 | 26 | 18 | 224 | 100 | 192 | 82 | 76 | 68 | 17 | 30 |
| 29 | 34 | 138 | 27 | 17 | 317 | 125 | 173 | 71 | 58 | 66 | 15 | 22 |
| 30 | 31 | 91 | 24 | 17 | --- | 120 | 141 | 59 | 55 | 59 | 13 | 21 |
| 31 | 29 | --- | 27 | 28 | --- | 104 | --- | 52 | --- | 77 | 13 | --- |
| TOTAL | 2116 | 1545 | 2038 | 1131 | 1733 | 4633 | 4707 | 3100 | 3549 | 1003 | 1925 | 869 |
| MEAN | 68.3 | 51.5 | 65.7 | 36.5 | 59.8 | 149 | 157 | 100 | 118 | 32.4 | 62.1 | 29.0 |
| MAX | 158 | 206 | 117 | 94 | 317 | 336 | 431 | 177 | 408 | 77 | 152 | 57 |
| MIN | 27 | 15 | 24 | 13 | 13 | 80 | 77 | 52 | 49 | 13 | 13 | 10 |
| CFSM | 1.56 | 1.18 | 1.50 | .83 | 1.37 | 3.42 | 3.59 | 2.29 | 2.71 | .74 | 1.42 | .66 |
| IN. | 1.80 | 1.32 | 1.73 | .96 | 1.48 | 3.94 | 4.01 | 2.64 | 3.02 | .85 | 1.64 | .74 |

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

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 39.1 | 63.4 | 76.6 | 81.7 | 81.7 | 136 | 160 | 91.9 | 59.4 | 29.1 | 23.2 | 26.4 |
| MAX | 155 | 177 | 264 | 240 | 207 | 266 | 420 | 189 | 175 | 179 | 127 | 390 |
| (WY) | 1980 | 1956 | 1997 | 1999 | 1984 | 1979 | 1940 | 1984 | 1984 | 1938 | 1955 | 1938 |
| MIN | 2.55 | 6.93 | 19.9 | 5.30 | 18.5 | 48.2 | 34.8 | 30.5 | 6.87 | 3.23 | .000 | .000 |
| (WY) | 1965 | 1965 | 1981 | 1981 | 1940 | 1965 | 1985 | 1985 | 1999 | 1949 | 1999 | 1995 |

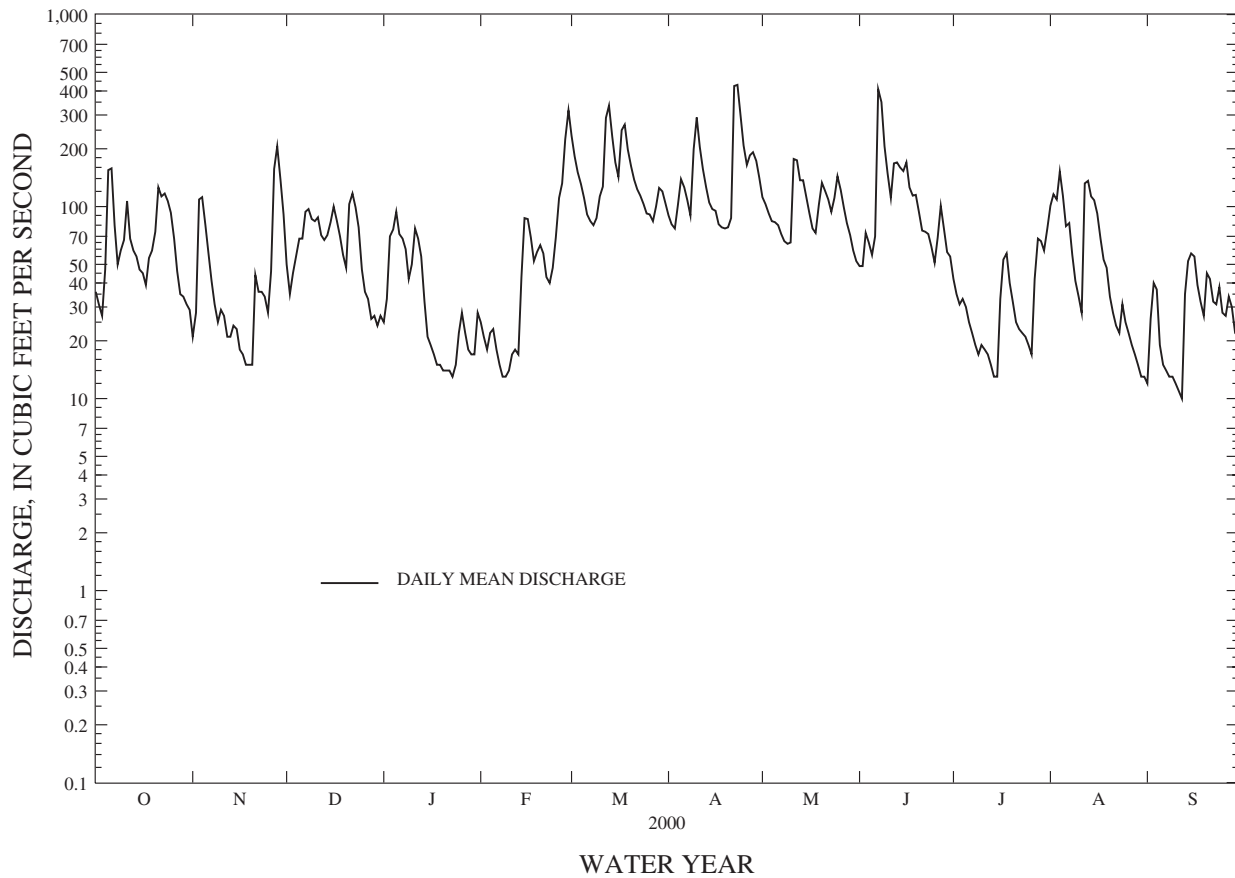
CONNECTICUT RIVER BASIN

01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1937 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 28768.21 | | 28349 | | 72.1 | |
| ANNUAL MEAN | 78.8 | | 77.5 | | 123 | |
| HIGHEST ANNUAL MEAN | | | | | 1938 | |
| LOWEST ANNUAL MEAN | | | | | 22.8 | |
| HIGHEST DAILY MEAN | 979 | Jan 25 | 431 | Apr 23 | 4690 | Sep 21 1938 |
| LOWEST DAILY MEAN | .00 | Jul 25 | 10 | Sep 12 | .00 | Aug 15 1939 |
| ANNUAL SEVEN-DAY MINIMUM | .00 | Jul 25 | 13 | Sep 6 | .00 | Aug 31 1953 |
| INSTANTANEOUS PEAK FLOW | | | 538 | Apr 22 | 6780 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 20.50 | Apr 22 | 22.49 | Jun 25 1944 |
| INSTANTANEOUS LOW FLOW | | | 10 | Sep 11 | .00 | Aug 7 1939 |
| ANNUAL RUNOFF (CFSM) | 1.80 | | 1.77 | | 1.65 | |
| ANNUAL RUNOFF (INCHES) | 24.49 | | 24.13 | | 22.41 | |
| 10 PERCENT EXCEEDS | 197 | | 156 | | 163 | |
| 50 PERCENT EXCEEDS | 43 | | 62 | | 45 | |
| 90 PERCENT EXCEEDS | .00 | | 17 | | 6.9 | |

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 1995 to current year.

GAGE.--Water-stage recorder. Elevation of gage is 540 ft above sea level, from topographic map.

REMARKS.--Records fair except those for estimated daily discharges and those for discharges greater than 500 ft³/s, which are poor.

AVERAGE DISCHARGE.--6 years (water years, 1985, 1996-current year) 24.1 ft³/s, 25.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft³/s, Sept. 17, 1999, gage height, 5.96 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.--Maximum discharge, 594 ft³/s, June 6, gage height, 4.12 ft; minimum, 4.8 ft³/s, Sept. 11-13.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|------|------|------|------|-------|-------|-------|
| 1 | 40 | 19 | 22 | e10 | 12 | 63 | 27 | 29 | 20 | 14 | 23 | 8.9 |
| 2 | 27 | 18 | 20 | e11 | 11 | 55 | 25 | 26 | 36 | 13 | 18 | 9.3 |
| 3 | 22 | 59 | 20 | 15 | e10 | 47 | 25 | 25 | 24 | 14 | 55 | 9.5 |
| 4 | 32 | 48 | 20 | 22 | e10 | 40 | 41 | 24 | 20 | 20 | 103 | 8.7 |
| 5 | 49 | 31 | 19 | 39 | 10 | 38 | 40 | 24 | 114 | 17 | 38 | 7.5 |
| 6 | 32 | 27 | 20 | 26 | 10 | 36 | 31 | 22 | 315 | 13 | 24 | 6.8 |
| 7 | 25 | 23 | 26 | 22 | 10 | 34 | 28 | 22 | 94 | 11 | 23 | 6.3 |
| 8 | 21 | 21 | 23 | 19 | e10 | 40 | 26 | 28 | 60 | 10 | 19 | 6.1 |
| 9 | 22 | 20 | 20 | 18 | e11 | 48 | 66 | 33 | 47 | 9.8 | 16 | 6.0 |
| 10 | 24 | 20 | 20 | 27 | e11 | 68 | 64 | 76 | 41 | 9.9 | 15 | 5.6 |
| 11 | 35 | 19 | 24 | 53 | e11 | 62 | 44 | 46 | 84 | 9.0 | 15 | 5.3 |
| 12 | 27 | 17 | 20 | 36 | 11 | 155 | 38 | 37 | 65 | 8.2 | 154 | 5.0 |
| 13 | 22 | 17 | 18 | 28 | 14 | 103 | 32 | 39 | 57 | 7.6 | 58 | 18 |
| 14 | 34 | 17 | 18 | e24 | 26 | e75 | 29 | 29 | 66 | 7.2 | 41 | 11 |
| 15 | 34 | 17 | 27 | e20 | 33 | 60 | 28 | 26 | 54 | 7.4 | 34 | 16 |
| 16 | 27 | 16 | 29 | e18 | 30 | 61 | 26 | 23 | 44 | 21 | 35 | 14 |
| 17 | 24 | 15 | 26 | e16 | 23 | 120 | 24 | 24 | 36 | 28 | 30 | 9.9 |
| 18 | 26 | 14 | 22 | e14 | e18 | 77 | 24 | 42 | 40 | 19 | 24 | 8.2 |
| 19 | 24 | 14 | 19 | e13 | 17 | 59 | 23 | 45 | 47 | 13 | 22 | 7.3 |
| 20 | 25 | 14 | 18 | e12 | 15 | 52 | 23 | 33 | 35 | 10 | 18 | 14 |
| 21 | 39 | 17 | 28 | e12 | 14 | 47 | 34 | 31 | 27 | 9.0 | 16 | 11 |
| 22 | 29 | 16 | 26 | e11 | 13 | 42 | 127 | 28 | 27 | 10 | 15 | 8.2 |
| 23 | 49 | 16 | 22 | e11 | 13 | 38 | 77 | 45 | 23 | 8.9 | 15 | 7.1 |
| 24 | 53 | 16 | 20 | e12 | 17 | 35 | 53 | 51 | 21 | 8.0 | 17 | 7.6 |
| 25 | 35 | 15 | e16 | e12 | 32 | 32 | 41 | 38 | 19 | 7.5 | 15 | 7.0 |
| 26 | 28 | 17 | e15 | e13 | 45 | 30 | 39 | 28 | 24 | 7.1 | 13 | 6.9 |
| 27 | 25 | 58 | e14 | e12 | 42 | 28 | 53 | 25 | 31 | 26 | 12 | 7.3 |
| 28 | 23 | 58 | e13 | e11 | 109 | 42 | 52 | 22 | 23 | 26 | 11 | 7.0 |
| 29 | 21 | 35 | e12 | e10 | 91 | 44 | 36 | 20 | 18 | 17 | 10 | 5.7 |
| 30 | 21 | 27 | e11 | e11 | --- | 35 | 31 | 19 | 17 | 14 | 9.6 | 5.5 |
| 31 | 20 | --- | e10 | 13 | --- | 30 | --- | 17 | --- | 24 | 9.2 | --- |
| TOTAL | 915 | 721 | 618 | 571 | 679 | 1696 | 1207 | 977 | 1529 | 419.6 | 907.8 | 256.7 |
| MEAN | 29.5 | 24.0 | 19.9 | 18.4 | 23.4 | 54.7 | 40.2 | 31.5 | 51.0 | 13.5 | 29.3 | 8.56 |
| MAX | 53 | 59 | 29 | 53 | 109 | 155 | 127 | 76 | 315 | 28 | 154 | 18 |
| MIN | 20 | 14 | 10 | 10 | 10 | 28 | 23 | 17 | 17 | 7.1 | 9.2 | 5.0 |
| CFSM | 2.34 | 1.91 | 1.58 | 1.46 | 1.86 | 4.34 | 3.19 | 2.50 | 4.04 | 1.07 | 2.32 | .68 |
| IN. | 2.70 | 2.13 | 1.82 | 1.69 | 2.00 | 5.01 | 3.56 | 2.88 | 4.51 | 1.24 | 2.68 | .76 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2000, BY WATER YEAR (WY)

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 14.3 | 21.6 | 28.6 | 30.7 | 35.7 | 44.7 | 38.9 | 31.3 | 25.7 | 10.6 | 6.98 | 10.6 | | | | | |
| MAX | 29.5 | 39.2 | 75.3 | 51.0 | 70.6 | 60.1 | 83.0 | 78.1 | 52.8 | 24.3 | 29.3 | 52.9 | | | | | |
| (WY) | 2000 | 1996 | 1997 | 1996 | 1984 | 1999 | 1984 | 1984 | 1998 | 1996 | 2000 | 1999 | | | | | |
| MIN | 2.58 | 6.98 | 7.19 | 11.1 | 13.6 | 30.5 | 15.3 | 10.5 | 3.73 | 1.98 | 2.03 | 1.02 | | | | | |
| (WY) | 1985 | 1999 | 1999 | 1985 | 1985 | 1985 | 1985 | 1985 | 1999 | 1999 | 1995 | 1998 | | | | | |

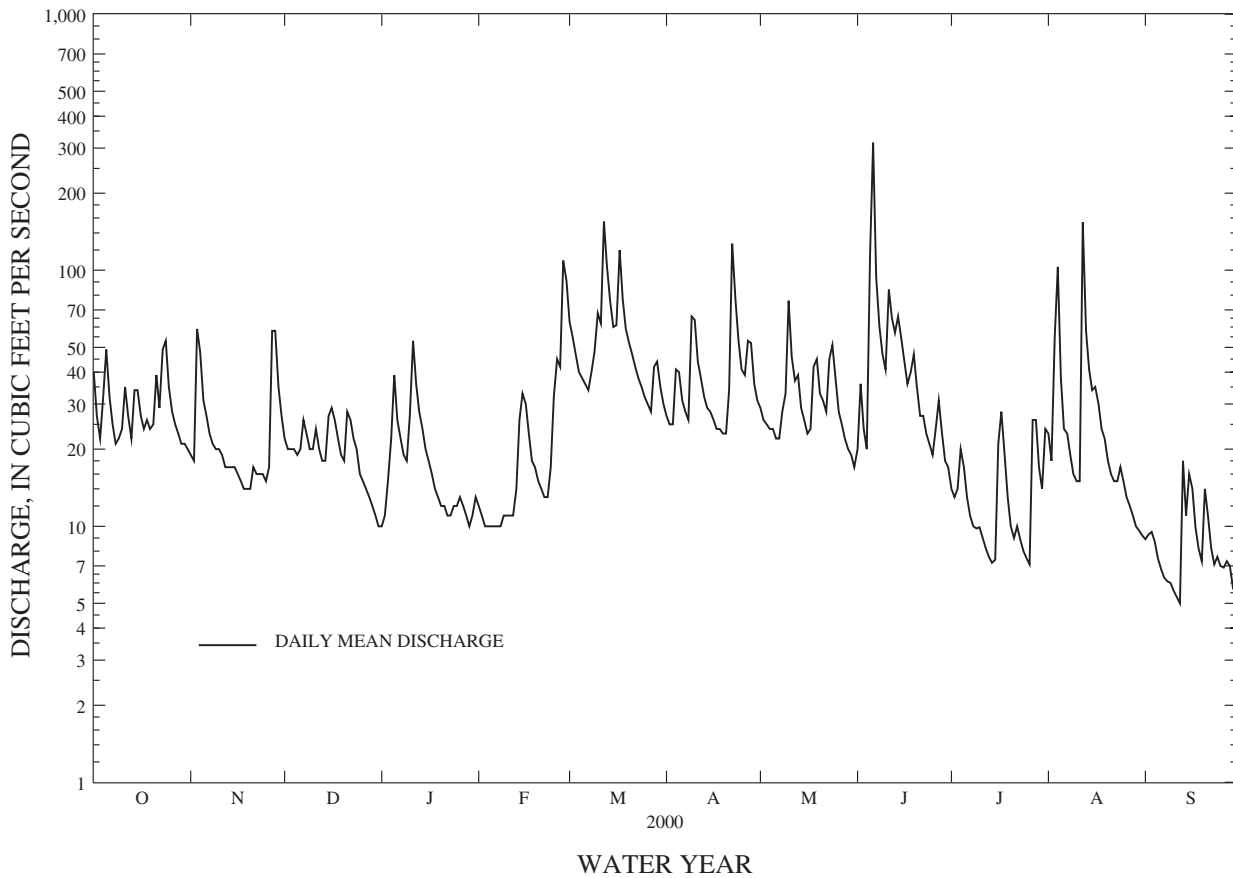
CONNECTICUT RIVER BASIN

01174565 WEST BRANCH SWIFT RIVER NEAR SHUTESBURY, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1984 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 9622.76 | | 10497.1 | | | |
| ANNUAL MEAN | 26.4 | | 28.7 | | 24.1 | |
| HIGHEST ANNUAL MEAN | | | | | 33.0 | |
| LOWEST ANNUAL MEAN | | | | | 11.3 | |
| HIGHEST DAILY MEAN | 636 | Sep 17 | 315 | Jun 6 | 636 | Sep 17 1999 |
| LOWEST DAILY MEAN | .49 | Aug 4 | 5.0 | Sep 12 | .35 | Sep 7 1995 |
| ANNUAL SEVEN-DAY MINIMUM | .51 | Jul 31 | 5.9 | Sep 6 | .38 | Sep 7 1995 |
| INSTANTANEOUS PEAK FLOW | | | 594 | Jun 6 | 1490 | Sep 17 1999 |
| INSTANTANEOUS PEAK STAGE | | | 4.12 | Jun 6 | 5.87 | Jun 14 1996 |
| INSTANTANEOUS LOW FLOW | | | 4.8 | Sep 11 | .35 | Sep 7 1995 |
| ANNUAL RUNOFF (CFSM) | 2.09 | | 2.28 | | 1.91 | |
| ANNUAL RUNOFF (INCHES) | 28.41 | | 30.99 | | 25.94 | |
| 10 PERCENT EXCEEDS | 52 | | 53 | | 53 | |
| 50 PERCENT EXCEEDS | 19 | | 23 | | 15 | |
| 90 PERCENT EXCEEDS | 1.2 | | 9.9 | | 1.9 | |

e Estimated

WEST BRANCH SWIFT RIVER NEAR SHUTESBURY, MA 01174565



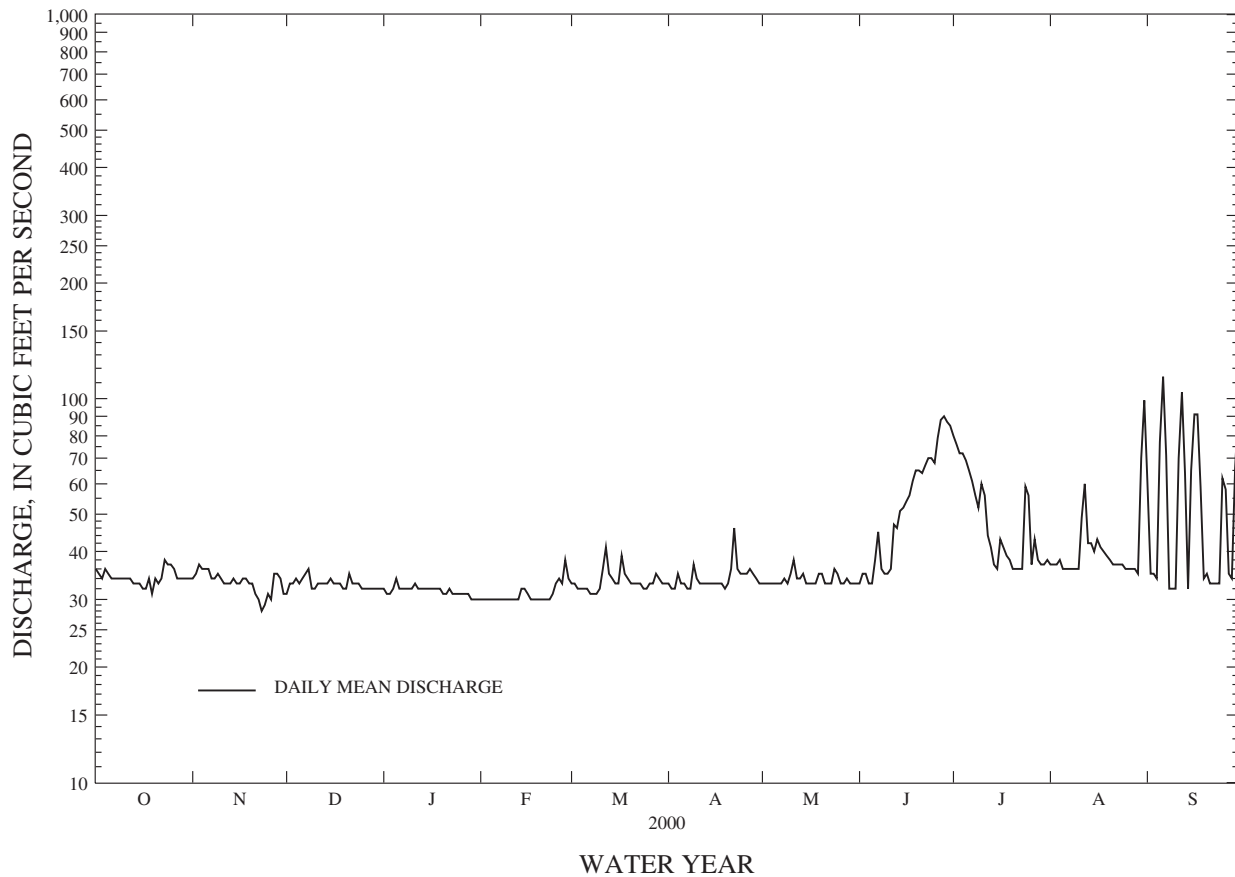
CONNECTICUT RIVER BASIN

01175500 SWIFT RIVER AT WEST WARE, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1940 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 18320 | | 14189 | | 96.3 | |
| ANNUAL MEAN | 50.2 | | 38.8 | | 30.7 | |
| HIGHEST ANNUAL MEAN | | | | | 369 1997 | |
| LOWEST ANNUAL MEAN | | | | | 30.7 1945 | |
| HIGHEST DAILY MEAN | 131 | Sep 10 | 114 | Sep 6 | 3040 | Jun 1 1984 |
| LOWEST DAILY MEAN | 28 | Nov 23 | 28 | Nov 23 | 9.1 | Dec 15 1968 |
| ANNUAL SEVEN-DAY MINIMUM | 30 | Nov 20 | 30 | Jan 29 | 24 | Nov 11 1996 |
| INSTANTANEOUS PEAK FLOW | | | 227 | Aug 11 | 3070 | Jun 1 1984 |
| INSTANTANEOUS PEAK STAGE | | | 3.19 | Aug 11 | 11.58 | Jun 1 1984 |
| INSTANTANEOUS LOW FLOW | | | 28 | Nov 23 | | |
| 10 PERCENT EXCEEDS | 114 | | 60 | | 150 | |
| 50 PERCENT EXCEEDS | 35 | | 34 | | 45 | |
| 90 PERCENT EXCEEDS | 33 | | 31 | | 32 | |

† Monthend contents, in millions of cubic feet (mcf) in Quabbin Reservoir. Records furnished by Watershed Management Division of Metropolitan District Commission.
 e Estimated

SWIFT RIVER AT WEST WARE, MA 01175500



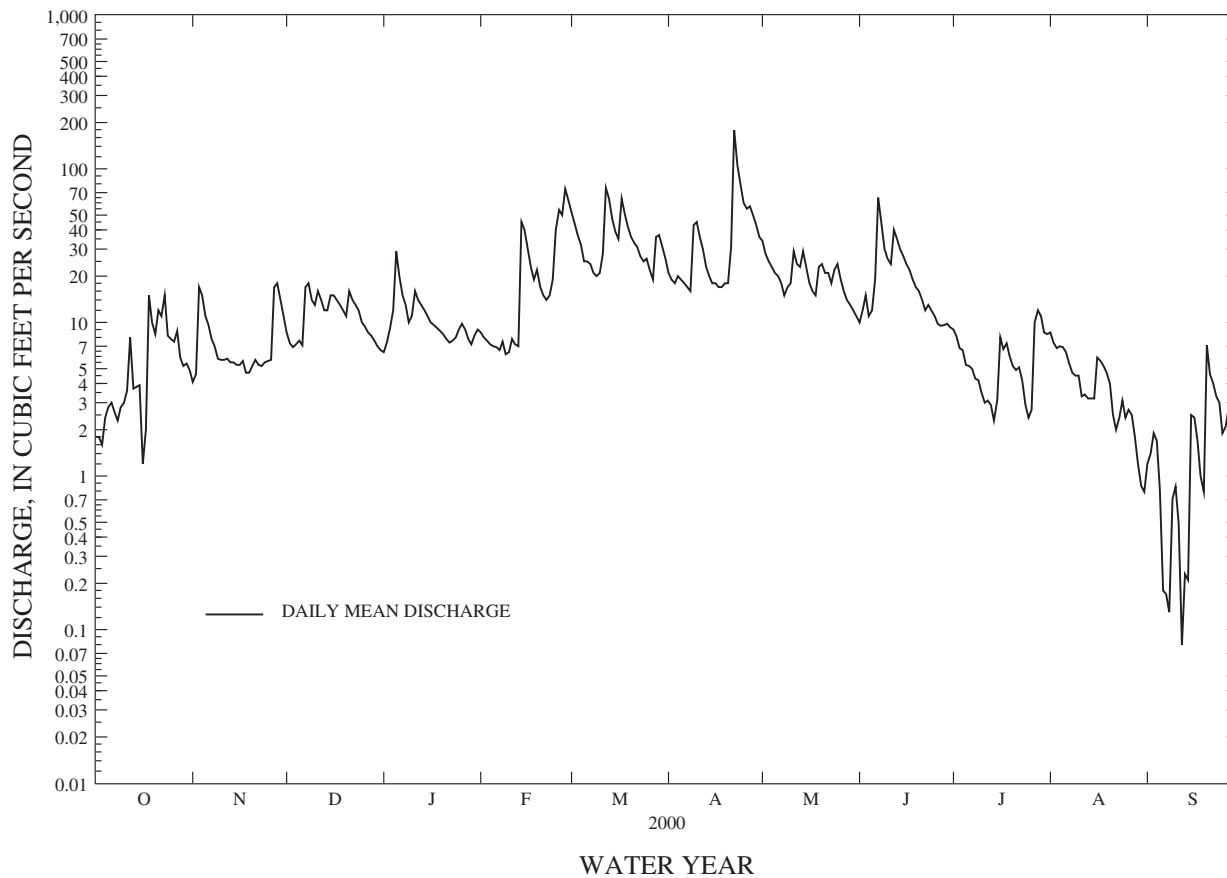
CONNECTICUT RIVER BASIN

01175670 SEVENMILE RIVER NEAR SPENCER, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1961 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 4303.49 | | 5572.21 | | | |
| ANNUAL MEAN | 11.8 | | 15.2 | | 15.1 | |
| HIGHEST ANNUAL MEAN | | | | | 22.3 | 1996 |
| LOWEST ANNUAL MEAN | | | | | 5.40 | 1965 |
| HIGHEST DAILY MEAN | 110 | Jan 16 | 179 | Apr 22 | 284 | Mar 19 1968 |
| LOWEST DAILY MEAN | .12 | Aug 31 | .08 | Sep 12 | .08 | Sep 12 2000 |
| ANNUAL SEVEN-DAY MINIMUM | .15 | Aug 30 | .37 | Sep 6 | .15 | Aug 30 1999 |
| INSTANTANEOUS PEAK FLOW | | | 235 | Apr 22 | 412 | Mar 18 1968 |
| INSTANTANEOUS PEAK STAGE | | | 11.98 | Apr 22 | 13.39 | Jan 25 1992 |
| INSTANTANEOUS LOW FLOW | | | .03 | Sep 8 | .02 | Sep 22 1997 |
| ANNUAL RUNOFF (CFSM) | 1.36 | | 1.75 | | 1.74 | |
| ANNUAL RUNOFF (INCHES) | 18.44 | | 23.88 | | 23.59 | |
| 10 PERCENT EXCEEDS | 29 | | 35 | | 35 | |
| 50 PERCENT EXCEEDS | 6.1 | | 9.7 | | 9.5 | |
| 90 PERCENT EXCEEDS | .47 | | 2.4 | | 1.1 | |

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 fair. 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.--88 years water years 1913-current year, 248 ft³/s, 22.51 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.--Maximum discharge, 1,320 ft³/s, Apr.22, gage height, 6.13 ft ; minimum, 35 ft³/s, Sept. 11-15.

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

| | | | | | | | | | | | | |
|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|
| 1 | 82 | 130 | 220 | 177 | e150 | 668 | 472 | 765 | 223 | 161 | 157 | 53 |
| 2 | 80 | 135 | 214 | 172 | e140 | 642 | 456 | 715 | 235 | 139 | 150 | 53 |
| 3 | 75 | 277 | 211 | 174 | e130 | 598 | 433 | 666 | 285 | 122 | 145 | 53 |
| 4 | 83 | 228 | 203 | e240 | e125 | 567 | 436 | 613 | 250 | 118 | 140 | 52 |
| 5 | 85 | 232 | 198 | 269 | e115 | 534 | 397 | 558 | 234 | 108 | 133 | 47 |
| 6 | 85 | 221 | 191 | e280 | e110 | 487 | 377 | 513 | 308 | 100 | 126 | 45 |
| 7 | 81 | 212 | 234 | e250 | e110 | 456 | 361 | 463 | 600 | 95 | 120 | 42 |
| 8 | 84 | 207 | 245 | e220 | e110 | 433 | 342 | 425 | 483 | 78 | 110 | 39 |
| 9 | 89 | 207 | 245 | e215 | e115 | 405 | 540 | 394 | 468 | 72 | 104 | 36 |
| 10 | 93 | 203 | 249 | e250 | e120 | 395 | 536 | 388 | 462 | 70 | 99 | 36 |
| 11 | 99 | 197 | 232 | e320 | e140 | 432 | 531 | 476 | 429 | 64 | 92 | 35 |
| 12 | 104 | 192 | 245 | e290 | e150 | 665 | 521 | 445 | 545 | 59 | 195 | 36 |
| 13 | 114 | 184 | 251 | e260 | e170 | 676 | 492 | 440 | 510 | 57 | 142 | 38 |
| 14 | 120 | 180 | 252 | e230 | e200 | 677 | 471 | 463 | 540 | 55 | 114 | 35 |
| 15 | 122 | 162 | 285 | e210 | e230 | 665 | 437 | 435 | 498 | 53 | 119 | 50 |
| 16 | 123 | 162 | 280 | e200 | e200 | 632 | 406 | 406 | 466 | 108 | 112 | 52 |
| 17 | 122 | 159 | 269 | e190 | e190 | 760 | 385 | 377 | 417 | 93 | 88 | 46 |
| 18 | 164 | 168 | 263 | e170 | e180 | 754 | 373 | 367 | 395 | 83 | 89 | 46 |
| 19 | 170 | 165 | 255 | e160 | e170 | 749 | 355 | 408 | 372 | 75 | 94 | 43 |
| 20 | 181 | 162 | 248 | e150 | e160 | 738 | 337 | 430 | 339 | 73 | 87 | 73 |
| 21 | 194 | 161 | 303 | e140 | e150 | 708 | 411 | 406 | 307 | 71 | 78 | 73 |
| 22 | 194 | 157 | 297 | e140 | e140 | 667 | 1140 | 392 | 285 | 68 | 73 | 67 |
| 23 | 201 | 153 | 292 | e140 | e130 | 625 | 1090 | 368 | 286 | 62 | 72 | 68 |
| 24 | 200 | 147 | 274 | e145 | 255 | 581 | 1110 | 396 | 253 | 60 | 75 | 68 |
| 25 | 189 | 139 | e260 | e150 | 344 | 543 | 1100 | 412 | 228 | 58 | 70 | 64 |
| 26 | 181 | 148 | e240 | e155 | 467 | 503 | 1060 | 389 | 205 | 57 | 70 | 65 |
| 27 | 171 | 225 | e220 | e160 | 515 | 471 | e1030 | 369 | 194 | 197 | 66 | 69 |
| 28 | 163 | 239 | e205 | e170 | 652 | 523 | e960 | 343 | 176 | 191 | 63 | 65 |
| 29 | 157 | 235 | e200 | e155 | 671 | 518 | 901 | 320 | 207 | 153 | 62 | 63 |
| 30 | 146 | 230 | e190 | e160 | --- | 505 | 825 | 292 | 217 | 147 | 59 | 62 |
| 31 | 137 | --- | 186 | e160 | --- | 490 | --- | 260 | --- | 159 | 57 | --- |
| TOTAL | 4089 | 5617 | 7457 | 6102 | 6339 | 18067 | 18285 | 13694 | 10417 | 3006 | 3161 | 1574 |
| MEAN | 132 | 187 | 241 | 197 | 219 | 583 | 610 | 442 | 347 | 97.0 | 102 | 52.5 |
| MAX | 201 | 277 | 303 | 320 | 671 | 760 | 1140 | 765 | 600 | 197 | 195 | 73 |
| MIN | 75 | 130 | 186 | 140 | 110 | 395 | 337 | 260 | 176 | 53 | 57 | 35 |
| CFSM | .88 | 1.25 | 1.60 | 1.31 | 1.46 | 3.89 | 4.06 | 2.94 | 2.31 | .65 | .68 | .35 |
| IN. | 1.01 | 1.39 | 1.85 | 1.51 | 1.57 | 4.48 | 4.53 | 3.40 | 2.58 | .75 | .78 | .39 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 129 | 189 | 253 | 276 | 283 | 490 | 545 | 317 | 190 | 104 | 105 | 105 |
| MAX | 607 | 693 | 911 | 821 | 748 | 1399 | 1352 | 573 | 789 | 524 | 1440 | 1369 |
| (WY) | 1956 | 1956 | 1997 | 1979 | 1970 | 1936 | 1940 | 1943 | 1984 | 1938 | 1955 | 1938 |
| MIN | 11.9 | 26.9 | 48.5 | 46.6 | 65.2 | 169 | 173 | 108 | 35.2 | 17.6 | 12.8 | 12.0 |
| (WY) | 1958 | 1950 | 1931 | 1981 | 1977 | 1989 | 1915 | 1930 | 1999 | 1965 | 1957 | 1957 |

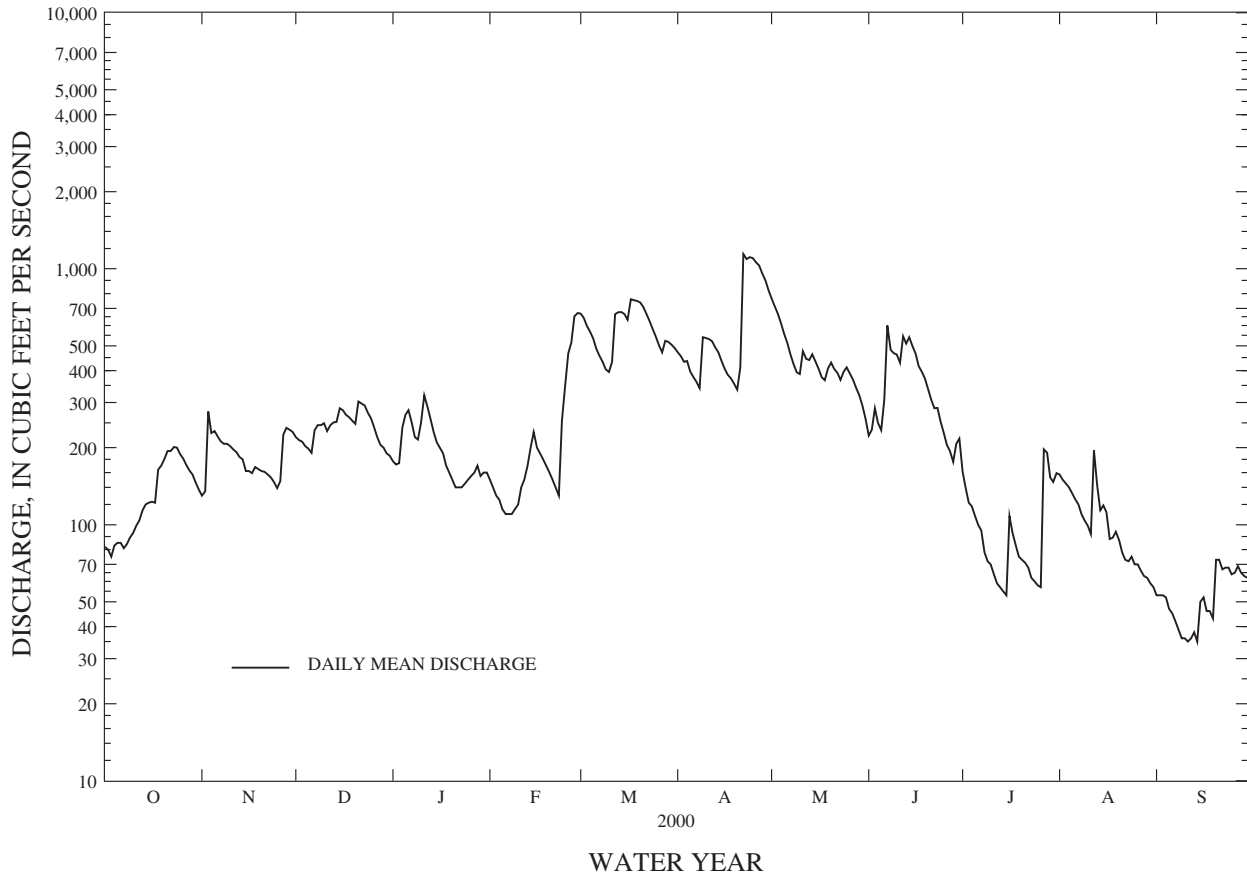
CONNECTICUT RIVER BASIN

01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1912 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 75794.2 | | 97808 | | | |
| ANNUAL MEAN | 208 | | 267 | | 248 | |
| HIGHEST ANNUAL MEAN | | | | | 430 1938 | |
| LOWEST ANNUAL MEAN | | | | | 104 1965 | |
| HIGHEST DAILY MEAN | 1000 | Jan 25 | 1140 | Apr 22 | 7800 | Sep 21 1938 |
| LOWEST DAILY MEAN | 8.5 | Sep 5 | 35 | Sep 11 | 4.6 | Oct 17 1997 |
| ANNUAL SEVEN-DAY MINIMUM | 10 | Sep 2 | 36 | Sep 8 | 6.3 | Oct 13 1997 |
| INSTANTANEOUS PEAK FLOW | | | 1320 | Apr 22 | 12800 | Aug 19 1955 |
| INSTANTANEOUS PEAK STAGE | | | 6.13 | Apr 22 | 15.36 | Aug 19 1955 |
| INSTANTANEOUS LOW FLOW | | | 35 | Sep 11 | | |
| ANNUAL RUNOFF (CFSM) | 1.38 | | 1.78 | | 1.66 | |
| ANNUAL RUNOFF (INCHES) | 18.80 | | 24.26 | | 22.51 | |
| 10 PERCENT EXCEEDS | 505 | | 541 | | 552 | |
| 50 PERCENT EXCEEDS | 162 | | 199 | | 168 | |
| 90 PERCENT EXCEEDS | 15 | | 65 | | 40 | |

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.--72 years, 914 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, 5,330 ft³/s, Apr. 22, gage height, 9.31 ft; minimum daily, 229 ft³/s, Sept. 11.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 376 | 462 | 858 | 566 | 541 | 2450 | 1300 | 2050 | 752 | 819 | 717 | 382 |
| 2 | 351 | 395 | 740 | 568 | 557 | 2240 | 1120 | 1770 | 738 | 777 | 678 | 299 |
| 3 | 338 | 900 | 688 | 599 | 522 | 2040 | 1150 | 1630 | 871 | 502 | 725 | 316 |
| 4 | 482 | 1180 | 716 | 602 | 495 | 1760 | 1190 | 1380 | 932 | 542 | 751 | 309 |
| 5 | 494 | 837 | 678 | 1070 | 480 | 1590 | 1370 | 1370 | 815 | 616 | 888 | 369 |
| 6 | 452 | 783 | 681 | 1130 | 457 | 1490 | 1220 | 1240 | 964 | 551 | 711 | 288 |
| 7 | 418 | 759 | 692 | 920 | 399 | 1290 | 1170 | 1170 | 2900 | 469 | 602 | 372 |
| 8 | 269 | 738 | 940 | 854 | 438 | 1280 | 1080 | 960 | 2690 | 445 | 546 | 304 |
| 9 | 338 | 708 | 1010 | 765 | 463 | 1210 | 1560 | 1090 | 1960 | 420 | 508 | 264 |
| 10 | 380 | 616 | 788 | 862 | 459 | 1270 | 2360 | 1020 | 1710 | 370 | 449 | 247 |
| 11 | 442 | 577 | 852 | 1120 | 463 | 1270 | 2010 | 1590 | 1450 | 375 | 458 | 229 |
| 12 | 477 | 572 | 843 | 1050 | 460 | 2610 | 1760 | 1650 | 1880 | 377 | 1670 | 243 |
| 13 | 400 | 550 | 831 | 954 | 467 | 2880 | 1580 | 1380 | 1970 | 233 | 1350 | 421 |
| 14 | 449 | 473 | 796 | 723 | 669 | 2290 | 1410 | 1440 | 1990 | 296 | 922 | 315 |
| 15 | 492 | 559 | 941 | 611 | 1050 | 2100 | 1230 | 1490 | 1920 | 363 | 883 | 319 |
| 16 | 496 | 533 | 972 | 701 | 1100 | 2100 | 1150 | 1240 | 1690 | 959 | 807 | 396 |
| 17 | 410 | 493 | 900 | 761 | 995 | 2550 | 1100 | 1050 | 1540 | 868 | 835 | 420 |
| 18 | 544 | 497 | 863 | 575 | 899 | 2560 | 1080 | 1060 | 1650 | 596 | 592 | 406 |
| 19 | 690 | 473 | 815 | 586 | 878 | 2350 | 1040 | 1340 | 1490 | 523 | 686 | 374 |
| 20 | 735 | 460 | 691 | 529 | 821 | 2120 | 1050 | 1520 | 1280 | 544 | 600 | 482 |
| 21 | 713 | 510 | 1100 | 524 | 741 | 1970 | 1090 | 1380 | 1070 | 420 | 476 | 458 |
| 22 | 703 | 548 | 1070 | 560 | 719 | 1730 | 4270 | 1180 | 985 | 468 | 478 | 416 |
| 23 | 751 | 536 | 924 | 495 | 700 | 1500 | 4250 | 1260 | 1020 | 450 | 405 | 383 |
| 24 | 854 | 485 | 887 | 503 | 821 | 1130 | 3140 | 1230 | 905 | 356 | 477 | 380 |
| 25 | 776 | 502 | 732 | 531 | 1200 | 1210 | 2830 | 1690 | 814 | 476 | 478 | 379 |
| 26 | 733 | 519 | 730 | 552 | 1930 | 1240 | 2790 | 1520 | 675 | 383 | 435 | 480 |
| 27 | 652 | 846 | 690 | 563 | 1890 | 1190 | 2910 | 1180 | 741 | 1060 | 364 | 334 |
| 28 | 600 | 1480 | 651 | 645 | 2430 | 1440 | 2800 | 1050 | 836 | 1400 | 356 | 311 |
| 29 | 516 | 1090 | 597 | 609 | 2700 | 1500 | 2590 | 950 | 812 | 910 | 321 | 330 |
| 30 | 403 | 919 | 610 | 532 | --- | 1520 | 2370 | 804 | 906 | 652 | 319 | 321 |
| 31 | 503 | --- | 625 | 545 | --- | 1380 | --- | 825 | --- | 795 | 400 | --- |
| TOTAL | 16237 | 20000 | 24911 | 21605 | 25744 | 55260 | 55970 | 40509 | 39956 | 18015 | 19887 | 10547 |
| MEAN | 524 | 667 | 804 | 697 | 888 | 1783 | 1866 | 1307 | 1332 | 581 | 642 | 352 |
| MAX | 854 | 1480 | 1100 | 1130 | 2700 | 2880 | 4270 | 2050 | 2900 | 1400 | 1670 | 482 |
| MIN | 269 | 395 | 597 | 495 | 399 | 1130 | 1040 | 804 | 675 | 233 | 319 | 229 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2000, BY WATER YEAR (WY)

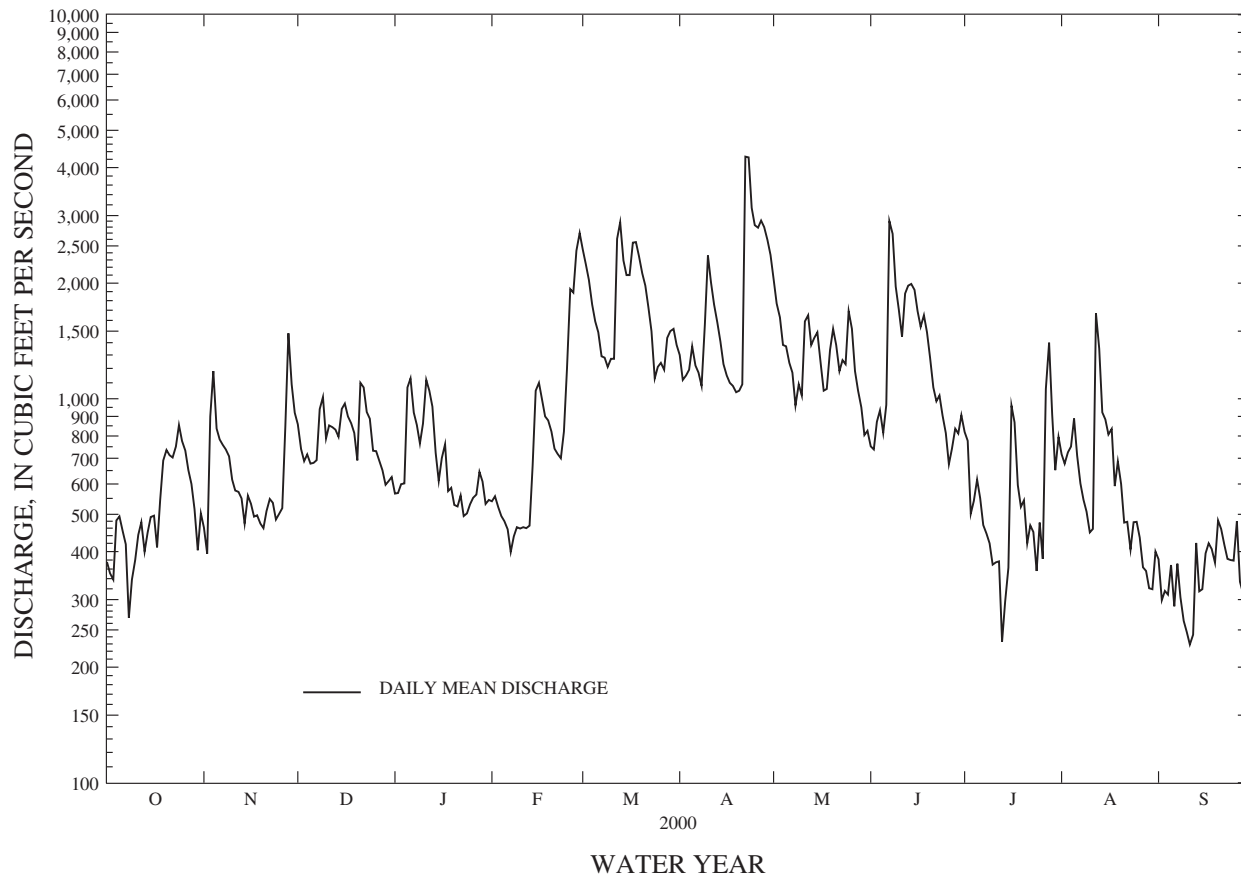
| | 531 | 733 | 899 | 985 | 1012 | 1595 | 1814 | 1191 | 812 | 481 | 448 | 482 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 531 | 733 | 899 | 985 | 1012 | 1595 | 1814 | 1191 | 812 | 481 | 448 | 482 |
| MAX | 1953 | 3022 | 3207 | 2447 | 2374 | 5993 | 4117 | 2680 | 3519 | 2458 | 3719 | 5474 |
| (WY) | 1956 | 1956 | 1997 | 1937 | 1976 | 1936 | 1933 | 1953 | 1984 | 1938 | 1955 | 1938 |
| MIN | 131 | 154 | 241 | 191 | 332 | 634 | 636 | 471 | 229 | 159 | 176 | 160 |
| (WY) | 1942 | 1966 | 1966 | 1981 | 1931 | 1989 | 1966 | 1965 | 1964 | 1966 | 1949 | 1953 |

CONNECTICUT RIVER BASIN

01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1928 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 267721 | | 348641 | | | |
| ANNUAL MEAN | 733 | | 953 | | 914 | |
| HIGHEST ANNUAL MEAN | | | | | 1952 | 1938 |
| LOWEST ANNUAL MEAN | | | | | 376 | 1966 |
| HIGHEST DAILY MEAN | 4020 | Jan 25 | 4270 | Apr 22 | 37000 | Sep 21 1938 |
| LOWEST DAILY MEAN | 80 | Aug 20 | 229 | Sep 11 | 16 | Sep 1 1929 |
| ANNUAL SEVEN-DAY MINIMUM | 116 | Jul 29 | 278 | Sep 6 | 96 | Oct 31 1965 |
| INSTANTANEOUS PEAK FLOW | | | 5330 | Apr 22 | 45200 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 9.31 | Apr 22 | .00 | Sep 21 1938 |
| INSTANTANEOUS LOW FLOW | | | 88 | May 8 | | |
| 10 PERCENT EXCEEDS | 1530 | | 1800 | | 1860 | |
| 50 PERCENT EXCEEDS | 578 | | 756 | | 660 | |
| 90 PERCENT EXCEEDS | 167 | | 380 | | 220 | |

CHICOPEE RIVER AT INDIAN ORCHARD, MA 01177000



CONNECTICUT RIVER BASIN

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA

LOCATION.--Lat 42°17'16", long 72°51'53", Hampshire County, Hydrologic Unit 01080206, on left bank at Knightville, 0.2 mi downstream from Knightville Dam, 0.2 mi upstream from Sykes Brook, 2.4 mi upstream from Middle branch, 3.5 mi north of Huntington, and at mile 29.7.

DRAINAGE AREA.--161 mi².

PERIOD OF RECORD.--Discharge: August 1909 to September 1990, October 1995 to current year.
Water-quality records: Water year 1953.

REVISED RECORDS.--WSP 415: 1909-12. WSP 1001: 1941-43. WSP 1231: 1910, 1912, 1913(M), 1914-15, 1916-19(M), 1921-23(M), 1925-27(M), 1929-33(M), 1935(M). WDR MA-RI-84-1: Drainage area.

GAGE.--Water-stage recorder. Concrete control since Dec. 20, 1940. Datum of gage is 461.25 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Jan. 11, 1936, nonrecording gage at site 0.5 mi upstream at different datum. Jan. 11, 1935, to May 20, 1940, water-stage recorder at site 700 ft upstream at datum 10.57 ft higher. May 21 to Dec. 19, 1940, nonrecording gage at site 700 ft upstream at datum 18.75 ft higher.

REMARKS.--Records good. Flow regulated by Knightville reservoir since 1941. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--86 years (water years 1910-90, 1996-current year), 333 ft³/s, 28.09 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 floodmarks, 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, 3,680 ft³/s, June 9, gage height, 7.41 ft; minimum 13 ft³/s, Apr. 27; minimum daily, 69 ft³/s, Dec. 1.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|---------------------------------------------------------------------------------|------|-------|------|------|------|-------|-------|-------|-------|------|-------|------|
| 1 | 456 | 190 | 69 | 143 | 163 | 1080 | 584 | 377 | 228 | 246 | 724 | 128 |
| 2 | 261 | 189 | 152 | 143 | 164 | 612 | 439 | 348 | 273 | 209 | 529 | 148 |
| 3 | 192 | 1320 | 240 | 146 | 163 | 574 | 188 | 318 | 617 | 189 | 430 | 302 |
| 4 | 321 | 795 | 240 | 150 | 163 | 479 | 596 | 293 | 326 | 210 | 1070 | 215 |
| 5 | 564 | 448 | 241 | 162 | 163 | 405 | 1010 | 274 | 276 | 192 | 507 | 167 |
| 6 | 336 | 361 | 137 | 303 | 161 | 258 | 869 | 261 | 522 | 157 | 338 | 136 |
| 7 | 254 | 311 | 155 | 483 | 160 | 274 | 538 | 245 | 1560 | 139 | 343 | 122 |
| 8 | 210 | 278 | 601 | 463 | 159 | 393 | 429 | 230 | 2640 | 123 | 309 | 111 |
| 9 | 227 | 258 | 710 | 438 | 157 | 559 | 444 | 258 | 3240 | 113 | 245 | 106 |
| 10 | 287 | 247 | 260 | 339 | 153 | 1350 | 501 | 416 | 908 | 118 | 328 | 105 |
| 11 | 389 | 257 | 215 | 337 | 151 | 1460 | 627 | 1490 | 460 | 113 | 275 | 81 |
| 12 | 292 | 235 | 237 | 610 | 150 | 1300 | 536 | 669 | 1760 | 101 | 2180 | 86 |
| 13 | 234 | 223 | 240 | 567 | 150 | 1090 | 393 | 502 | 1170 | 92 | 1010 | 445 |
| 14 | 241 | 217 | 242 | 414 | 149 | 525 | 361 | 545 | 1620 | 85 | 597 | 311 |
| 15 | 284 | 220 | 251 | 285 | 163 | 370 | 513 | 408 | 1160 | 107 | 676 | 679 |
| 16 | 224 | 208 | 309 | 228 | 225 | 908 | 824 | 335 | 760 | 1540 | 546 | 674 |
| 17 | 201 | 193 | 351 | 190 | 269 | 1890 | 543 | 292 | 601 | 1200 | 452 | 306 |
| 18 | 193 | 182 | 352 | 173 | 266 | 1760 | 405 | 288 | 857 | 432 | 343 | 217 |
| 19 | 179 | 179 | 344 | 171 | 261 | 760 | 382 | 587 | 881 | 274 | 303 | 183 |
| 20 | 205 | 182 | 329 | 171 | 257 | 296 | 340 | 607 | 561 | 211 | 257 | 399 |
| 21 | 317 | 258 | 366 | 171 | 252 | 599 | 366 | 445 | 448 | 175 | 223 | 317 |
| 22 | 248 | 232 | 459 | 120 | 242 | 806 | 695 | 407 | 444 | 163 | 199 | 217 |
| 23 | 625 | 204 | 414 | 88 | 233 | 545 | 791 | 385 | 401 | 146 | 198 | 178 |
| 24 | 655 | 196 | 345 | 132 | 193 | 542 | 1830 | 711 | 320 | 128 | 518 | 189 |
| 25 | 383 | 193 | 320 | 160 | 148 | 512 | 1090 | 1010 | 276 | 117 | 313 | 204 |
| 26 | 302 | 240 | 175 | 162 | 165 | 526 | 492 | 641 | 717 | 109 | 228 | 183 |
| 27 | 262 | 985 | 130 | 163 | 267 | 441 | 545 | 446 | 553 | 737 | 190 | 207 |
| 28 | 151 | 704 | 134 | 167 | 1080 | 556 | 633 | 362 | 398 | 748 | 168 | 178 |
| 29 | 245 | 434 | 136 | 165 | 2460 | 1510 | 524 | 321 | 305 | 372 | 155 | 152 |
| 30 | 209 | 235 | 138 | 164 | --- | 660 | 435 | 289 | 295 | 302 | 142 | 142 |
| 31 | 196 | --- | 141 | 163 | --- | 477 | --- | 258 | --- | 744 | 137 | --- |
| TOTAL | 9143 | 10174 | 8433 | 7571 | 8687 | 23517 | 17923 | 14018 | 24577 | 9592 | 13933 | 6888 |
| MEAN | 295 | 339 | 272 | 244 | 300 | 759 | 597 | 452 | 819 | 309 | 449 | 230 |
| MAX | 655 | 1320 | 710 | 610 | 2460 | 1890 | 1830 | 1490 | 3240 | 1540 | 2180 | 679 |
| MIN | 151 | 179 | 69 | 88 | 148 | 258 | 188 | 230 | 228 | 85 | 137 | 81 |
| (†) | .4 | 11.1 | 36.7 | 32.8 | 46.0 | 40.4 | 1.1 | .6 | .8 | 2.8 | .3 | .3 |
| MEAN†† | 295 | 343 | 282 | 243 | 305 | 756 | 582 | 452 | 819 | 310 | 448 | 230 |
| CFSM†† | 1.83 | 2.13 | 1.75 | 1.51 | 1.89 | 4.7 | 3.61 | 2.81 | 5.09 | 1.92 | 2.78 | 1.43 |
| IN.†† | 2.11 | 2.38 | 2.02 | 1.74 | 2.04 | 5.42 | 4.04 | 3.24 | 5.68 | 2.22 | 3.21 | 1.59 |
| STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1909 - 2000, BY WATER YEAR (WY) | | | | | | | | | | | | |
| MEAN | 181 | 306 | 306 | 299 | 291 | 621 | 933 | 444 | 257 | 130 | 109 | 126 |
| MAX | 1394 | 1155 | 989 | 1305 | 1001 | 2050 | 1853 | 912 | 1158 | 494 | 745 | 986 |
| (WY) | 1956 | 1956 | 1974 | 1949 | 1984 | 1936 | 1987 | 1972 | 1984 | 1972 | 1955 | 1938 |
| MIN | 18.3 | 36.4 | 68.5 | 44.7 | 65.0 | 158 | 283 | 143 | 41.1 | 20.7 | 15.7 | 14.8 |
| (WY) | 1965 | 1965 | 1915 | 1981 | 1920 | 1940 | 1985 | 1986 | 1964 | 1913 | 1913 | 1953 |

CONNECTICUT RIVER BASIN

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA--Continued

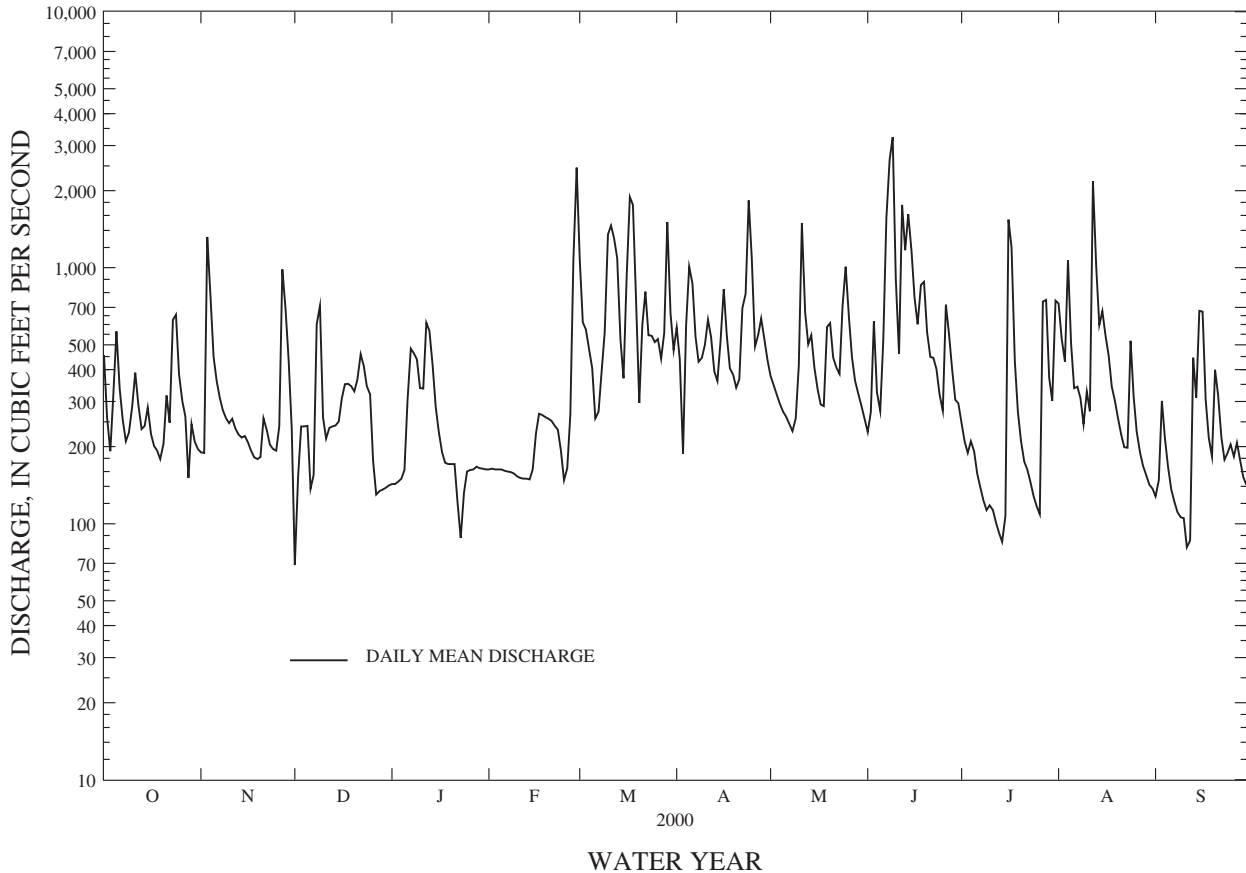
| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1909 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 117438 | | 154456 | | | |
| ANNUAL MEAN | 322 | | 422 | | 333 | |
| ANNUAL MEAN†† | 322 | | 422 | | 333 | |
| HIGHEST ANNUAL MEAN | | | | | 538 | |
| LOWEST ANNUAL MEAN | | | | | 137 | |
| HIGHEST DAILY MEAN | 3190 | Mar 24 | 3240 | Jun 9 | 13400 | Mar 18 1936 |
| LOWEST DAILY MEAN | 17 | Aug 10 | 69 | Dec 1 | 1.1 | Apr 2 1965 |
| ANNUAL SEVEN-DAY MINIMUM | 17 | Aug 7 | 104 | Jul 9 | 8.9 | Aug 29 1953 |
| INSTANTANEOUS PEAK FLOW | | | 3680 | Jun 9 | 37900 | Sep 21 1938 |
| INSTANTANEOUS PEAK STAGE | | | 7.41 | Jun 9 | 29.58 | Sep 21 1938 |
| ANNUAL RUNOFF (CFSM)†† | 2.00 | | 2.62 | | 2.07 | |
| ANNUAL RUNOFF (INCHES)†† | 27.18 | | 35.69 | | 28.09 | |
| INSTANTANEOUS LOW FLOW | | | 13 | Apr 27 | | |
| 10 PERCENT EXCEEDS | 706 | | 798 | | 808 | |
| 50 PERCENT EXCEEDS | 218 | | 292 | | 167 | |
| 90 PERCENT EXCEEDS | 33 | | 146 | | 35 | |

† Monthend contents, in millions of cubic feet (mcf), in Knightville Reservoir; records furnished by U.S. Army Corps of Engineers. Monthend contents on Sept. 30, 1999, 0.2 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



CONNECTICUT RIVER BASIN

01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA

LOCATION.--Lat 42°14'14", long 72°53'46", Hampshire County, Hydrologic Unit 01080206, on left bank at Huntington, 0.4 mi downstream from Roaring Brook, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--94.0 mi².

PERIOD OF RECORD.--Discharge: September 1935 to current year.
Water-quality records: Water years 1957, 1967-74.

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

GAGE.--Water-stage recorder. Datum of gage is 383.60 ft above sea level. Prior to Oct. 1, 1989, at datum 5.00 ft higher.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Prior to 1950, some diurnal fluctuation at low flow caused by small mill upstream. Telephone and satellite gage-height telemeter at station.

AVERAGE DISCHARGE.--65 years, 193 ft³/s, 27.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s, Aug. 19, 1955, gage height, 15.27 ft, datum then in use, from rating curve extended above 9,500 ft³/s on basis of slope-area measurement of peak flow; minimum, 3.3 ft³/s, Aug. 9, 1955, Nov. 27, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,510 ft³/s, June 7, gage height, 8.22 ft; minimum, 35 ft³/s, July 14, 15.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|
| 1 | 238 | 102 | 164 | 97 | 91 | 521 | 253 | 210 | 132 | 143 | 250 | 52 |
| 2 | 134 | 103 | 142 | 98 | 87 | 463 | 230 | 189 | 160 | 107 | 206 | 70 |
| 3 | 99 | 1030 | 135 | 124 | 84 | 358 | 222 | 173 | 351 | 94 | 200 | 269 |
| 4 | 234 | 403 | 137 | 154 | 80 | 282 | 460 | 158 | 186 | 107 | 424 | 132 |
| 5 | 279 | 262 | 138 | 290 | 76 | 256 | 438 | 146 | 161 | 101 | 183 | 93 |
| 6 | 173 | 207 | 150 | e120 | 74 | 241 | 296 | 143 | 885 | 80 | 128 | 71 |
| 7 | 129 | 175 | 223 | e96 | 71 | 238 | 264 | 131 | 2830 | 68 | 167 | 62 |
| 8 | 108 | 154 | 177 | e83 | e67 | 343 | 239 | 118 | 853 | 59 | 137 | 56 |
| 9 | 118 | 141 | 148 | e80 | e64 | 521 | 398 | 133 | 481 | 59 | 112 | 59 |
| 10 | 137 | 135 | 141 | e130 | 67 | 1000 | 379 | 629 | 329 | 56 | 100 | 59 |
| 11 | 240 | 137 | 206 | 425 | 68 | 716 | 318 | 1130 | 250 | 50 | 94 | 54 |
| 12 | 159 | 122 | 155 | e200 | e64 | 1350 | 275 | 463 | 1030 | 44 | 970 | 46 |
| 13 | 123 | 116 | 142 | e130 | e55 | 868 | 242 | 349 | 550 | 41 | e370 | 294 |
| 14 | 151 | 110 | 145 | e88 | 128 | 546 | 228 | 451 | 927 | 37 | e233 | 156 |
| 15 | 155 | 107 | 276 | e88 | e320 | 458 | 214 | 287 | 553 | 57 | 310 | 562 |
| 16 | 121 | 100 | 299 | e92 | e200 | 429 | 200 | 231 | 393 | 1240 | 226 | 335 |
| 17 | 106 | 93 | 246 | e100 | e150 | 1060 | 181 | 198 | 312 | 385 | 176 | 173 |
| 18 | 102 | 89 | 190 | e100 | e140 | 610 | 225 | 208 | 327 | 191 | 134 | 119 |
| 19 | 95 | 87 | 151 | e92 | e110 | 443 | 208 | 535 | 364 | 128 | 123 | 100 |
| 20 | 129 | 88 | 145 | e90 | 109 | 370 | 186 | 514 | 254 | 102 | 104 | 261 |
| 21 | 171 | 134 | 381 | e100 | 101 | 324 | 475 | 355 | 194 | 84 | 89 | 162 |
| 22 | 132 | 111 | e245 | e115 | e94 | 288 | 1260 | 309 | 204 | 72 | 79 | 111 |
| 23 | 412 | 100 | e160 | 121 | 103 | 260 | 696 | 260 | 217 | 63 | 80 | 92 |
| 24 | 308 | 98 | e110 | 89 | 135 | 238 | 457 | 558 | 163 | 57 | 212 | 92 |
| 25 | 203 | 97 | e100 | 91 | 287 | 216 | 342 | 706 | 131 | 53 | 117 | 89 |
| 26 | 164 | 141 | e100 | 100 | 434 | 216 | 288 | 425 | 151 | 51 | 88 | 86 |
| 27 | 142 | 712 | e100 | 102 | 441 | 191 | 348 | 290 | 145 | 489 | 75 | 113 |
| 28 | 128 | 397 | e96 | e100 | 1390 | 733 | 342 | 234 | 128 | 280 | 69 | 91 |
| 29 | 124 | 250 | e100 | 92 | 802 | 590 | 288 | 204 | 116 | 161 | 64 | 77 |
| 30 | 114 | 199 | 112 | 86 | --- | 387 | 239 | 177 | 244 | 133 | 56 | 71 |
| 31 | 108 | --- | 105 | 90 | --- | 295 | --- | 153 | --- | 222 | 54 | --- |
| TOTAL | 5036 | 6000 | 5119 | 3763 | 5892 | 14811 | 10191 | 10067 | 13021 | 4814 | 5630 | 4007 |
| MEAN | 162 | 200 | 165 | 121 | 203 | 478 | 340 | 325 | 434 | 155 | 182 | 134 |
| MAX | 412 | 1030 | 381 | 425 | 1390 | 1350 | 1260 | 1130 | 2830 | 1240 | 970 | 562 |
| MIN | 95 | 87 | 96 | 80 | 55 | 191 | 181 | 118 | 116 | 37 | 54 | 46 |
| CFSM | 1.73 | 2.13 | 1.76 | 1.29 | 2.16 | 5.08 | 3.61 | 3.45 | 4.62 | 1.65 | 1.93 | 1.42 |
| IN. | 1.99 | 2.37 | 2.03 | 1.49 | 2.33 | 5.86 | 4.03 | 3.98 | 5.15 | 1.91 | 2.23 | 1.59 |

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

| | 1935 | 1936 | 1937 | 1938 | 1939 | 1940 | 1941 | 1942 | 1943 | 1944 | 1945 | 1946 | 1947 | 1948 | 1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 1956 | 1957 | 1958 | 1959 | 1960 | 1961 | 1962 | 1963 | 1964 | 1965 | 1966 | 1967 | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 107 | 180 | 200 | 183 | 188 | 374 | 493 | 259 | 140 | 68.2 | 59.1 | 64.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

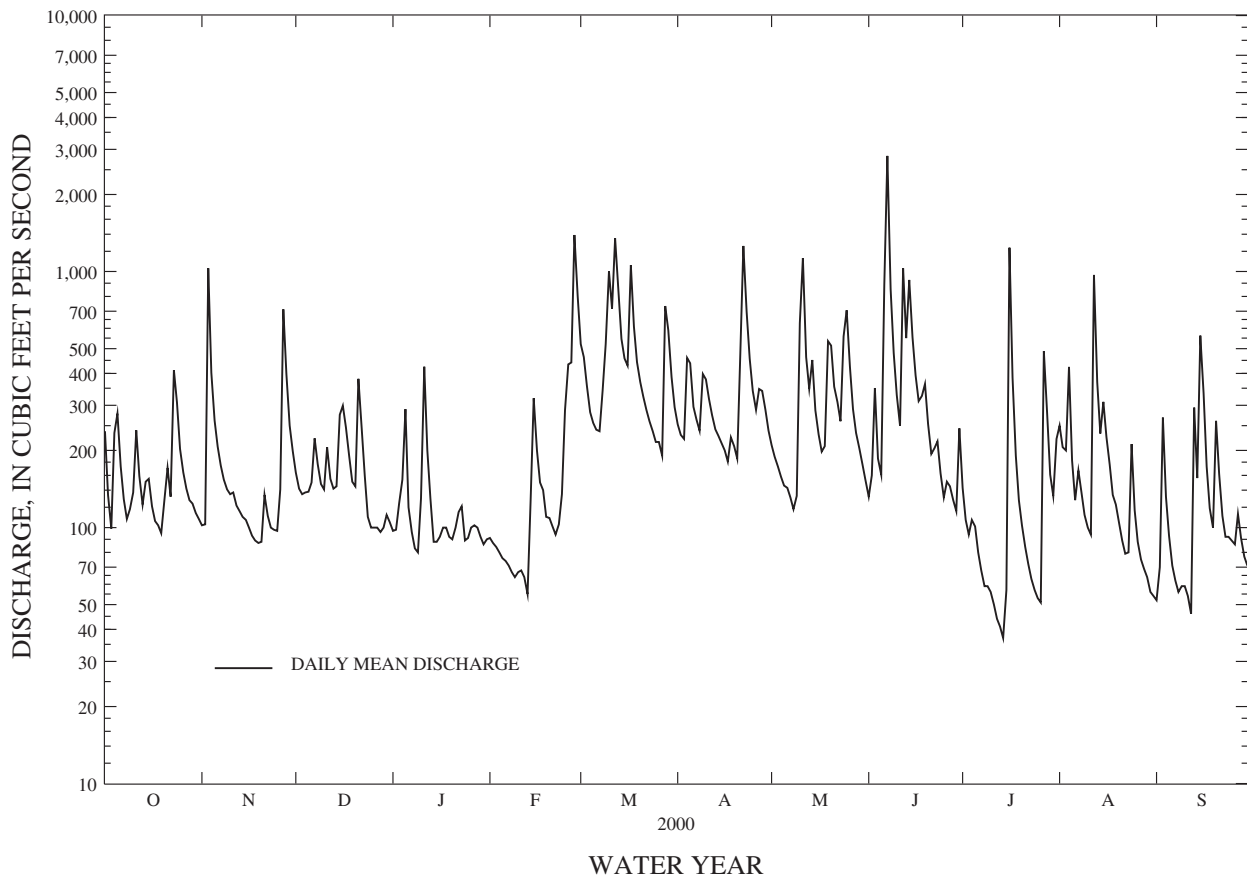
CONNECTICUT RIVER BASIN

01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1935 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 71022.1 | | 88351 | | | |
| ANNUAL MEAN | 195 | | 241 | | 193 | |
| HIGHEST ANNUAL MEAN | | | | | 302 1996 | |
| LOWEST ANNUAL MEAN | | | | | 73.6 1965 | |
| HIGHEST DAILY MEAN | 3400 | Mar 22 | 2830 | Jun 7 | 10500 | Aug 19 1955 |
| LOWEST DAILY MEAN | 6.2 | Aug 10 | 37 | Jul 14 | 3.3 | Aug 9 1955 |
| ANNUAL SEVEN-DAY MINIMUM | 6.5 | Aug 7 | 49 | Jul 9 | 3.8 | Aug 4 1955 |
| INSTANTANEOUS PEAK FLOW | | | 4510 | Jun 7 | 26100 | Aug 19 1955 |
| INSTANTANEOUS PEAK STAGE | | | 8.22 | Jun 7 | 15.27 | Aug 19 1955 |
| INSTANTANEOUS LOW FLOW | | | 35 | Jul 14 | 3.3 | Aug 9 1955 |
| ANNUAL RUNOFF (CFSM) | 2.07 | | 2.57 | | 2.05 | |
| ANNUAL RUNOFF (INCHES) | 28.11 | | 34.96 | | 27.85 | |
| 10 PERCENT EXCEEDS | 407 | | 467 | | 441 | |
| 50 PERCENT EXCEEDS | 123 | | 154 | | 98 | |
| 90 PERCENT EXCEEDS | 14 | | 75 | | 18 | |

e Estimated

WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA 01181000



CONNECTICUT RIVER BASIN

01183500 WESTFIELD RIVER NEAR WESTFIELD, MA

LOCATION.--Lat 42°06'24", long 72°41'58", Hampden County, Hydrologic Unit 01080206, on left bank 0.7 mi downstream from Great Brook, 3 mi east of Westfield, and 8.1 mi upstream from mouth.

DRAINAGE AREA.--497 mi².

PERIOD OF RECORD.--Discharge: June 1914 to current year.
Water Quality: Water years 1952-53, 1957, 1967-74, 1994.

REVISED RECORDS.--WSP 601: 1924(M). WSP 756: Drainage area. WSP 1051: 1919-21(M), 1925(M). WSP 1231: 1915-16(M), 1920.

GAGE.--Water-stage recorder. Datum of gage is 98.25 ft above sea level. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records fair except those for estimated daily discharge, which are poor. Flow regulated by Borden Brook Reservoir, Cobble Mountain Reservoir since 1931, Knightville Reservoir since 1941, and Littleville Lake since 1965. High flow slightly affected by retarding reservoirs since 1963. Diversion from Little River for municipal supply of Springfield. Telephone and satellite gage-height telemeters at station.

AVERAGE DISCHARGE.--86 years, 936 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, 10,500 ft³/s, June 7, gage height, 12.55 ft; minimum, 229 ft³/s, Sept. 12; minimum daily, 256 ft³/s, Sept.12.

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

| DAY | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1270 | 525 | 518 | 476 | 473 | 3210 | 1620 | 1170 | 799 | 879 | 1780 | 534 |
| 2 | 838 | 515 | 587 | 470 | 450 | 1840 | 1190 | 1100 | 802 | 669 | 1470 | 419 |
| 3 | 628 | 2900 | 761 | 572 | 438 | 1730 | 826 | 973 | 1530 | 591 | 1220 | 759 |
| 4 | 724 | 2230 | 690 | 590 | 436 | 1360 | 1630 | 953 | 1020 | 647 | 2100 | 654 |
| 5 | 1440 | 1300 | 667 | 803 | 426 | 1220 | 2120 | 906 | 805 | 589 | 1310 | 569 |
| 6 | 1020 | 1040 | 664 | 764 | 418 | 1030 | 1950 | 741 | 1290 | 495 | 853 | 460 |
| 7 | 781 | 886 | 573 | 936 | 441 | 1050 | 1530 | 684 | 7620 | 432 | 849 | 376 |
| 8 | 639 | 831 | 1040 | 882 | 465 | 1280 | 1180 | 911 | 4950 | 382 | 1050 | 422 |
| 9 | 603 | 843 | 1260 | 820 | e482 | 1550 | 1400 | 1100 | 5520 | 355 | 885 | 331 |
| 10 | 731 | 883 | 854 | 923 | e549 | 2750 | 1680 | 1060 | 3470 | 347 | 761 | 321 |
| 11 | 944 | 794 | 723 | 1320 | 591 | 2920 | 1720 | 3500 | 1910 | 330 | 764 | 349 |
| 12 | 857 | 737 | e729 | 1300 | 470 | 4240 | 1580 | 2030 | 3610 | 305 | 2850 | 256 |
| 13 | 694 | 812 | e690 | 1360 | 437 | 3460 | 1300 | 1420 | 3270 | 281 | 2340 | 743 |
| 14 | 712 | 675 | 739 | e948 | 710 | 2360 | 1150 | 1520 | 3680 | 263 | 1430 | 939 |
| 15 | 795 | 664 | 996 | 948 | 1030 | 1780 | 1540 | 1220 | 3120 | 319 | 1490 | 1130 |
| 16 | 670 | 618 | 1050 | 775 | 962 | 1830 | 1460 | 986 | 2510 | 3000 | 1220 | 1690 |
| 17 | 596 | 547 | 1030 | 877 | 918 | 3600 | 1790 | 850 | 1830 | 2720 | 1110 | 879 |
| 18 | 599 | 664 | 929 | 1020 | 811 | 3550 | 1210 | 798 | 1700 | 1320 | 1060 | 616 |
| 19 | 551 | 685 | 839 | 1280 | 708 | 2040 | 1200 | 1400 | 2050 | 878 | 830 | 514 |
| 20 | 583 | 499 | 850 | 1120 | 672 | 1650 | 1090 | 1810 | 1760 | 674 | 627 | 927 |
| 21 | 851 | 599 | 1220 | 884 | 631 | 1490 | 1180 | 1380 | 1350 | 576 | 586 | 828 |
| 22 | 736 | 701 | 1240 | 1010 | 717 | 1910 | 3050 | 1210 | 1170 | 483 | 567 | 626 |
| 23 | 1330 | 643 | 1090 | 988 | 802 | 1500 | 2370 | 1110 | 1210 | 421 | 545 | 476 |
| 24 | 1620 | 586 | 877 | 635 | 848 | 1360 | 3020 | 1570 | 939 | 371 | 982 | 445 |
| 25 | 1080 | 545 | 738 | 526 | 1070 | 1230 | 2970 | 2550 | 747 | 336 | 1010 | 474 |
| 26 | 868 | 626 | 637 | 512 | 1350 | 1220 | 1550 | 1930 | 1030 | 331 | 646 | 445 |
| 27 | 834 | 1930 | 577 | 486 | 1270 | 1230 | 1620 | 1320 | 1430 | 1660 | 484 | 498 |
| 28 | 691 | 1960 | 567 | e479 | 3190 | 3430 | 1740 | 1060 | 966 | 2060 | 601 | 474 |
| 29 | 525 | 1220 | 491 | e495 | 4290 | 3710 | 1540 | 923 | 868 | 1120 | 566 | 406 |
| 30 | 647 | 945 | 529 | e490 | --- | 2310 | 1190 | 833 | 1620 | 859 | 517 | 369 |
| 31 | 552 | --- | 531 | e489 | --- | 1490 | --- | 869 | --- | 1350 | 561 | --- |
| TOTAL | 25409 | 28403 | 24686 | 25178 | 26055 | 65330 | 49396 | 39887 | 64576 | 25043 | 33064 | 17929 |
| MEAN | 820 | 947 | 796 | 812 | 898 | 2107 | 1647 | 1287 | 2153 | 808 | 1067 | 598 |
| MAX | 1620 | 2900 | 1260 | 1360 | 4290 | 4240 | 3050 | 3500 | 7620 | 3000 | 2850 | 1690 |
| MIN | 525 | 499 | 491 | 470 | 418 | 1030 | 826 | 684 | 747 | 263 | 484 | 256 |

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1914 - 2000, BY WATER YEAR (WY)

| | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|
| MEAN | 528 | 833 | 907 | 893 | 903 | 1697 | 2304 | 1230 | 746 | 409 | 390 | 401 |
| MAX | 4587 | 3344 | 2623 | 2635 | 2663 | 5064 | 5225 | 2630 | 2792 | 1738 | 3237 | 2938 |
| (WY) | 1956 | 1928 | 1997 | 1949 | 1984 | 1936 | 1993 | 1989 | 1982 | 1972 | 1955 | 1938 |
| MIN | 96.7 | 140 | 206 | 155 | 215 | 597 | 586 | 408 | 186 | 118 | 91.2 | 85.0 |
| (WY) | 1965 | 1965 | 1915 | 1981 | 1920 | 1941 | 1985 | 1985 | 1964 | 1962 | 1957 | 1995 |

CONNECTICUT RIVER BASIN

01183500 WESTFIELD RIVER NEAR WESTFIELD, MA--Continued

| SUMMARY STATISTICS | FOR 1999 CALENDAR YEAR | | FOR 2000 WATER YEAR | | WATER YEARS 1914 - 2000 | |
|--------------------------|------------------------|--------|---------------------|--------|-------------------------|-------------|
| ANNUAL TOTAL | 347575 | | 424956 | | | |
| ANNUAL MEAN | 952 | | 1161 | | 936 | |
| HIGHEST ANNUAL MEAN | | | | | 1594 1928 | |
| LOWEST ANNUAL MEAN | | | | | 368 1965 | |
| HIGHEST DAILY MEAN | 6810 | Mar 22 | 7620 | Jun 7 | 37400 | Aug 19 1955 |
| LOWEST DAILY MEAN | 91 | Sep 5 | 256 | Sep 12 | 40 | Dec 28 1914 |
| ANNUAL SEVEN-DAY MINIMUM | 104 | Aug 2 | 314 | Jul 9 | 50 | Sep 3 1995 |
| INSTANTANEOUS PEAK FLOW | | | 10500 | Jun 7 | 70300 | Aug 19 1955 |
| INSTANTANEOUS PEAK STAGE | | | 12.55 | Jun 7 | 34.20 | Aug 19 1955 |
| INSTANTANEOUS LOW FLOW | | | 229 | Sep 12 | 9.0 | Oct 2 1921 |
| 10 PERCENT EXCEEDS | 2150 | | 2070 | | 2140 | |
| 50 PERCENT EXCEEDS | 678 | | 884 | | 550 | |
| 90 PERCENT EXCEEDS | 151 | | 474 | | 160 | |

e Estimated

WESTFIELD RIVER NEAR WESTFIELD, MA 01183500

