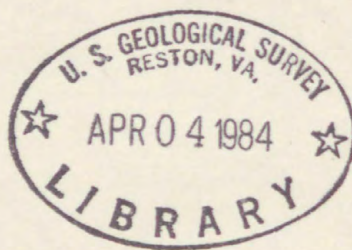




Water Resources Data Massachusetts and Rhode Island Water Year 1982



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-82-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

CALENDAR FOR WATER YEAR 1982

1981

OCTOBER

S	M	T	W	T	F	S
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1982

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SEPTEMBER

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26	27	28	29	30		



Water Resources Data Massachusetts and Rhode Island Water Year 1982

by R.A. Gadoury, G.G. Girouard, and D.F. Letty



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-82-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

WILLIAM P. CLARK, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

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U.S. Geological Survey
150 Causeway Street
Boston, MA 02114

PREFACE

This volume of the annual hydrologic data report of Massachusetts and Rhode Island is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Massachusetts and Rhode Island are contained in one volume.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data: R. J. Brock, D. G. Johnson, W. J. McDonough, Jr., M. S. Peterson, K. G. Ries III, J. P. Russell, and H. L. White.

Maggie Jordan and Janet A. LeBlanc coordinated the word processing and publishing phases of the report.

This report was prepared in cooperation with the States of Massachusetts and Rhode Island and with other agencies under the general supervision of I. C. James, II, Chief, New England District, M. H. Frimpter, Chief, Massachusetts Office, and H. E. Johnston, Chief, Rhode Island Office.

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Letter after station name designates type of data;
 (d) discharge, (l) contents of lake, (c) chemical, (b) biological,
 (m) microbiological, (t) water temperature, (s) sediment

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INTRODUCTION

Water-resources data for the 1982 water year for Massachusetts and Rhode Island consist of records of stage, discharge, and water quality of streams; contents of lakes and reservoirs; and ground-water levels. This report contains discharge records for 97 gaging stations, monthend contents for 30 lakes and reservoirs, water quality for 10 gaging stations, and water levels for 107 observation wells. Also included are data for 3 low-flow and 18 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Locations of gaging stations, partial-record stations, and observation wells are shown in figures 1, 2, and 3, respectively. A few pertinent stations (not included above) in bordering States are also included in this report. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Massachusetts and Rhode Island.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers titled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers titled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1939 to 1974 in a series of water-supply papers titled, "Ground-Water Levels in the United States." Water-supply papers may be consulted in libraries of the principal cities of the United States or may be purchased from Eastern Distribution Branch, Text Products Section, U.S. Geological Survey, 604 South Pickett Street, Alexandria, VA 22304.

For water years 1961 through 1974, streamflow data were released by the Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 were similarly released either in separate reports or in conjunction with streamflow records. Beginning with the 1975 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey water-data report MA-RI-82-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

COOPERATION

The U.S. Geological Survey and organizations of the States of Massachusetts and Rhode Island have had cooperative agreements for the systematic collection of streamflow records since 1909 and 1941, respectively; and for water-quality records since 1954. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Massachusetts: State Water Resources Commission, W. F. M. Hicks and A. D. Cortese, co-chairmen, C. F. Kennedy, director and chief engineer, Division of Water Resources, and T. C. McMahon, director, Division of Water Pollution Control; State Department of Public Works, D. P. Amidon, commissioner, F. W. Holden, research and materials engineer, and R. T. Tierney, chief engineer, Division of Highways; Metropolitan District Commission, T. J. Geoghegan, commissioner, succeeded by Richard Nylen, and W. A. Brutsch, director and chief engineer, Water Division.

Rhode Island: State Department of Environmental Management, W. E. Wood, director, succeeded by R. C. Bendick; Division of Water Resources, J. W. Fester, chief; State Water Resources Board, W. M. Stetson, chairman, and R. B. Russ, general manager, city of Providence, Department of Public Works, J. C. DiSanto, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 14 gaging stations published in this report.

Organizations supplying data are acknowledged in the station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Runoff for the year was excessive (in the upper quartile of record for the reference period 1951-80) in Rhode Island and Massachusetts east of the Connecticut River, and was in the normal range west of the Connecticut River. The deficient (lower quartile of record in the reference period 1951-80) runoff that occurred in most of the 1981 water year carried over into the first 2 months of the 1982 water year in Rhode Island and southeastern Massachusetts. Elsewhere in Massachusetts, runoff was above median or excessive in October. Mixed trends occurred in the next few months. West of the Connecticut River, runoff was generally below median through January. Elsewhere, runoff was above median or excessive. High water about February 4 produced excessive monthly runoff in most areas of both States. Runoff in March and April was generally in the normal range, although there were scattered areas of excessive or deficient runoff. Runoff in May was deficient throughout both States.

Nearly 8 inches of rain fell in Rhode Island during storms on June 2 and June 4-6. Significant high water occurred as a result of the June 4-6 storm. All areas received some rain, but the storm, most severe in Connecticut, greatly affected southern Rhode Island. This storm produced flooding that caused an estimated \$3.3 million in damages to homes and businesses. Governor Garrahy (Rhode Island) declared a state of emergency. The storm caused the loss of two lives in a boating accident, washed out bridges, closed

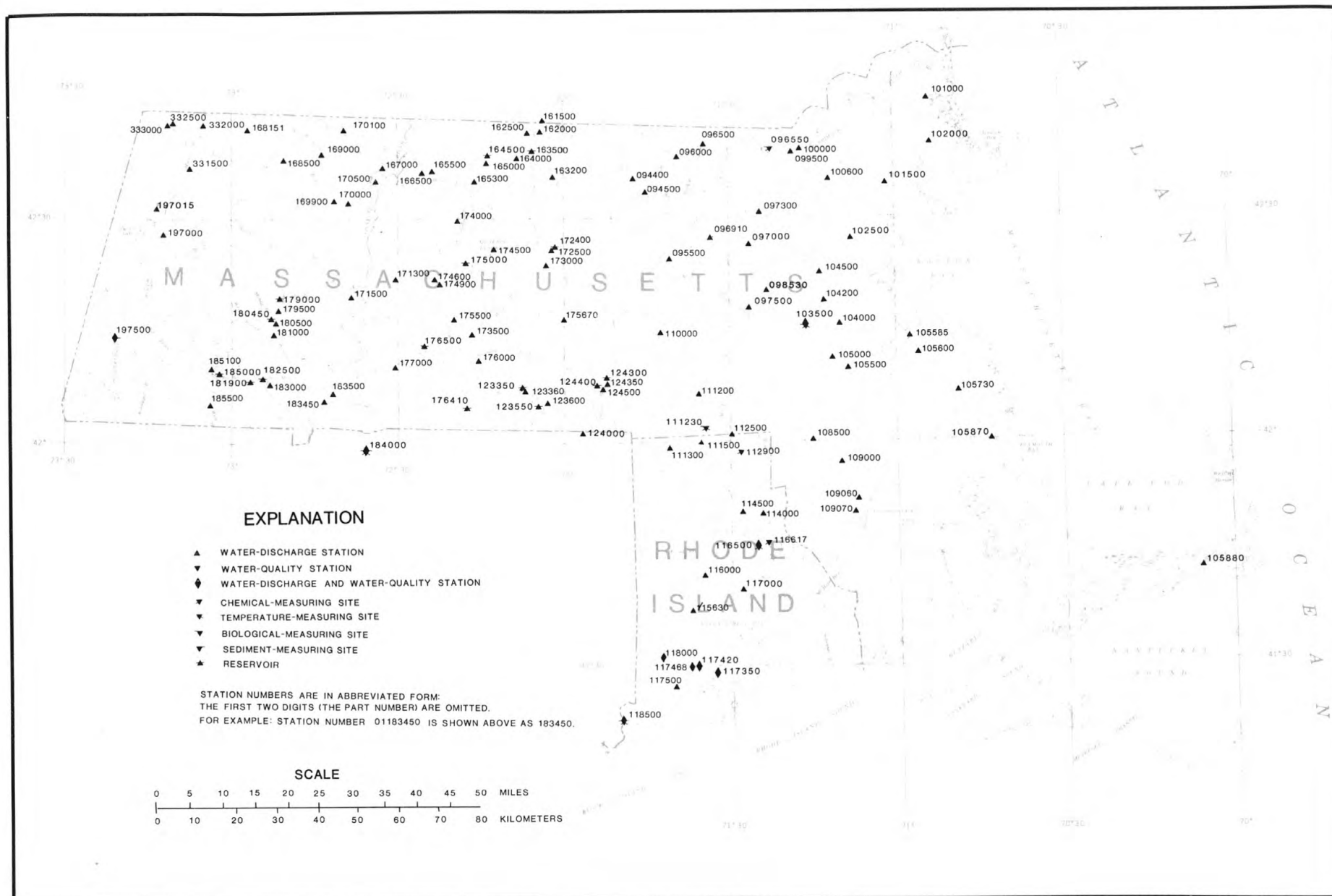


FIGURE 1. LOCATION OF GAGING STATIONS

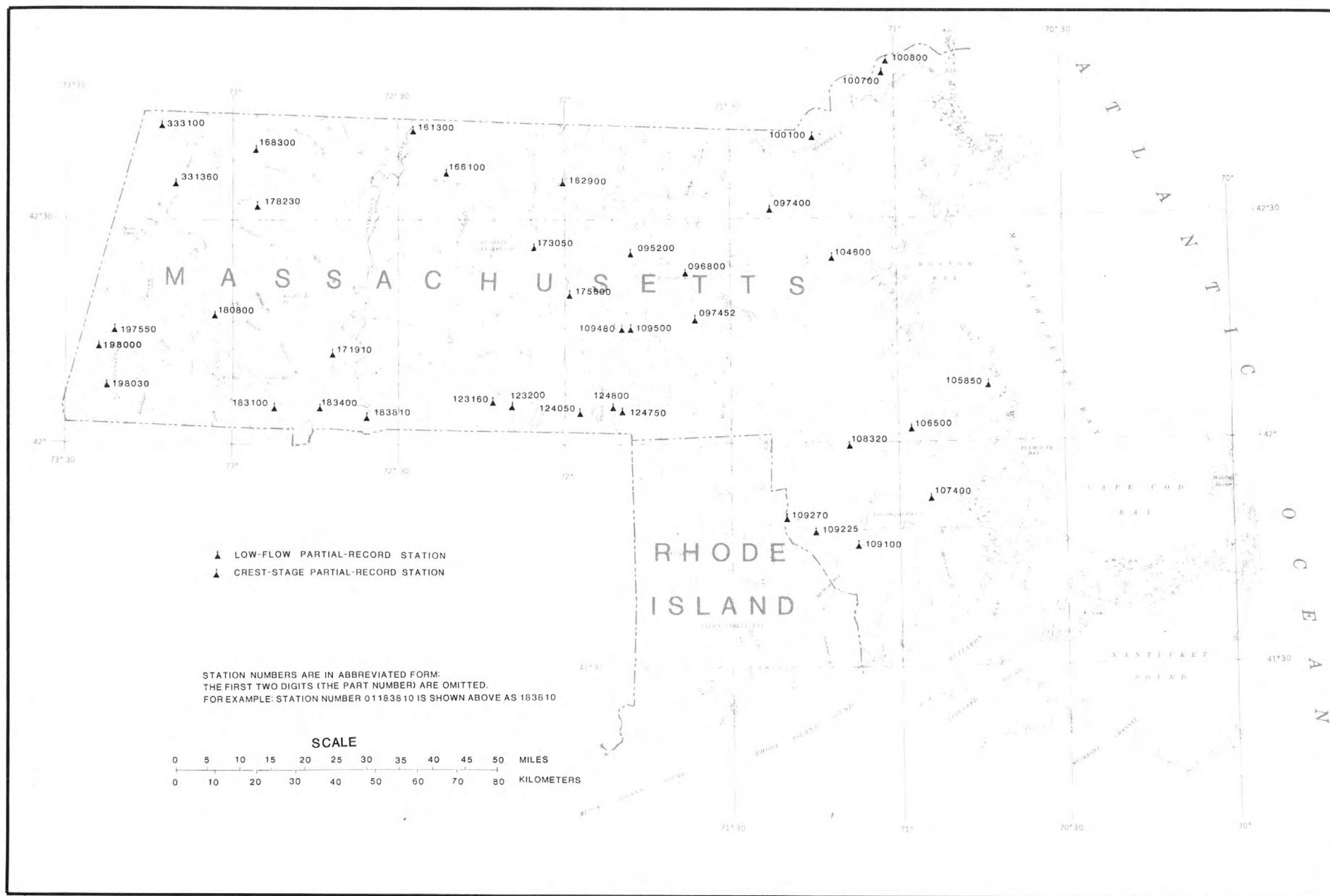


FIGURE 2. LOCATION OF PARTIAL-RECORD STATIONS

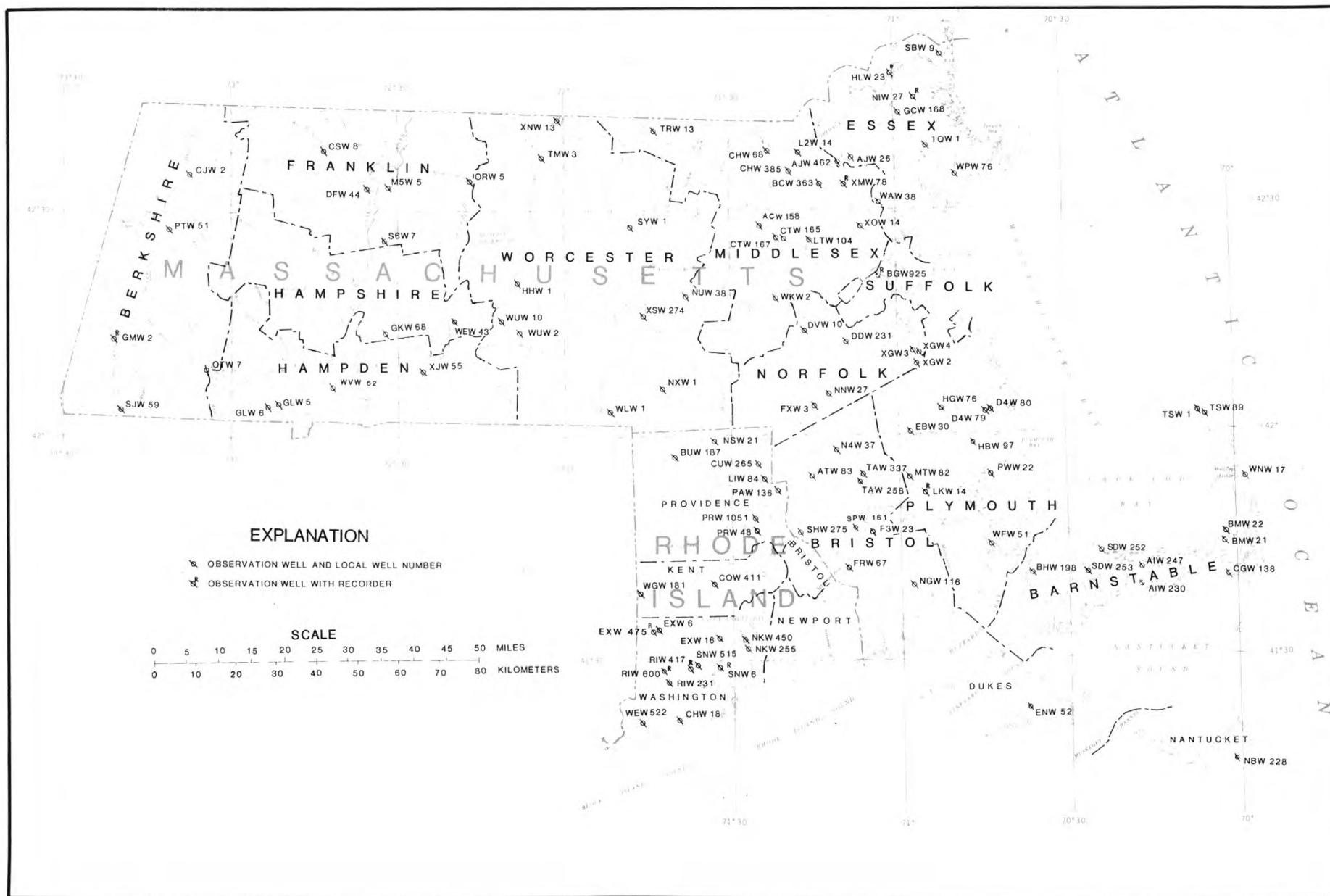


FIGURE 3. LOCATION OF OBSERVATION WELLS

roads and railroads, and flooded wastewater-treatment facilities. Flooding along the Massachusetts-Rhode Island border occurred mostly as a consequence of construction in the flood plains. Damage in southerly areas was a result of the severity of the storm. A sampling of peak discharges at gaging stations indicated the June storm produced peaks with recurrence intervals of 5-40 years in parts of Massachusetts. At the Massachusetts-Rhode Island border, peaks were in the 10-30 year range. In southern Rhode Island, peaks exceeded the 100-year flood event. The following table provides flood data at selected stations within and near the area of greatest flooding. Years given in parentheses indicate the earliest dates of known floods.

Runoff for July, August and September declined and ranged from excessive to deficient, depending on the proximity of the area to Long Island Sound--the area most severely affected by the June storm. At the close of the water year, streamflow was deficient in western Massachusetts, about median in central Massachusetts, and above median in eastern Massachusetts and southern Rhode Island. Figure 4 compares monthly mean discharges for the 1982 water year with median discharges for the reference period 1951-80 for three index gaging stations.

Generally, ground-water levels were below average at the start of the water year. In Rhode Island and western and eastern Massachusetts (especially southeast and Cape Cod), water levels were generally in the deficient range (lowest 20 percent of recorded range) during the first 3 months of the year. Levels then increased each month through April, except in Rhode Island where levels declined in March. Levels declined seasonally during May, increased in June in response to the storm, then declined through the remainder of the year. June levels were in the excessive range (highest 20 percent of recorded range), and were normal or excessive during the last 3 months. Levels in central Massachusetts were generally above average or in the excessive range throughout the year, except for south-central Massachusetts where they were in the deficient range in May. At the close of the water year, levels were generally above average in Rhode Island and eastern and central Massachusetts and slightly below average in western Massachusetts.

Depleted water-supply reservoirs were benefited by the excessive June runoff. Quabbin Reservoir in Massachusetts was 78 percent full at the beginning of the water year, increased to 99 percent full by the end of June, and declined to 94 percent full at the end of the year. Combined storage in Borden Brook and Cobble Mountain Reservoirs was 69 percent of capacity in October, filled in June, and was 79 percent full at the end of the year. On June 6-8, Cobble Mountain Reservoir spilled for the first time since 1955. Scituate Reservoir in Rhode Island declined to 54 percent full at the end of October, filled in June, and declined to 77 percent full by the end of the year.

Stages and discharges for the flood of June 5-9, 1982, at selected sites

Station number	Stream and place of determination	Drain- age area (mi ²)	Period of known floods	Outstanding floods known			Maximum during June 1982 flood				
				Date	Gage height (feet)	Dis- charge (ft ³ /s)	Day	Gage height (feet)	Dis- charge (ft ³ /s)	Dis- charge (ft ³ /s/ mi ²)	Recur- rence interval (years)
MERRIMACK RIVER BASIN											
01094500	North Nashua River near Leominster, MA	110	(1850) 1935-	3/18/36	20.53	*16,300	6	7.35	4,240	39	7
01096500	Nashua River at East Pepperell, MA	316	1935-	3/20/36	19.1	*20,900	8	11.40	6,660	21	(a)
CHARLES RIVER BASIN											
01103500	Charles River at Dover, MA	184	(1886) 1937-	8/23/55 3/22/68	9.24 8.72	*3,220 *3,220	9	7.32	2,290	12	15
BLACKSTONE RIVER BASIN											
01111300	Nipmuc River near Harrisville, RI	16.0	1964-	1/25/79	8.53	*1,840	6	7.15	1,190	74	12
01111500	Branch River at Forestdale, RI	91.2	(1886) 1940-	3/19/36 1/25/79	-- 11.80	*5,800 5,470	6	11.12	4,770	52	30
01112500	Blackstone River at Woonsocket, RI	416	1929-	8/19/55	21.8	*32,900	7	13.16	12,600	30	a20
PAWTUXET RIVER BASIN											
01116500	Pawtuxet River at Cranston, RI	200	1939-	1/26/79	13.26	4,000	7	b14.5	*5,440	27	(a)
PAWCATUCK RIVER BASIN											
01117500	Pawcatuck River at Wood River Junction, RI	100	1940-	3/19/68	7.80	1,700	7	8.75	*1,860	19	125
01118000	Wood River at Hope Valley, RI	72.4	(1711) 1927 1936	2/1886 11/1927 3/1936	12.4 11.7 --	1,540	--	--	--	--	--
01118500	Pawcatuck River at Westerly, RI	295	(1886) 1936 1940-	3/22/80 11/1927 3/1936 3/18/68	8.67 discharge possibly twice that of March 1936 -- 10.49	1,770 3,150 4,470	6	10.26	*2,390 *7,070	33 24	100 350
CONNECTICUT RIVER BASIN											
01171500	Mill River at Northampton, MA	54.0	1938-	8/19/55	11.78	*6,300	6	c10.98	4,790	89	40
01181000	West Branch Westfield River at Huntington, MA	93.7	1935-	8/19/55	15.27	*26,100	6	8.43	8,120	87	5

a = influence of regulation can severely affect validity of the statistics. b = estimated. c = from high-water mark in well. * = maximum known discharge.

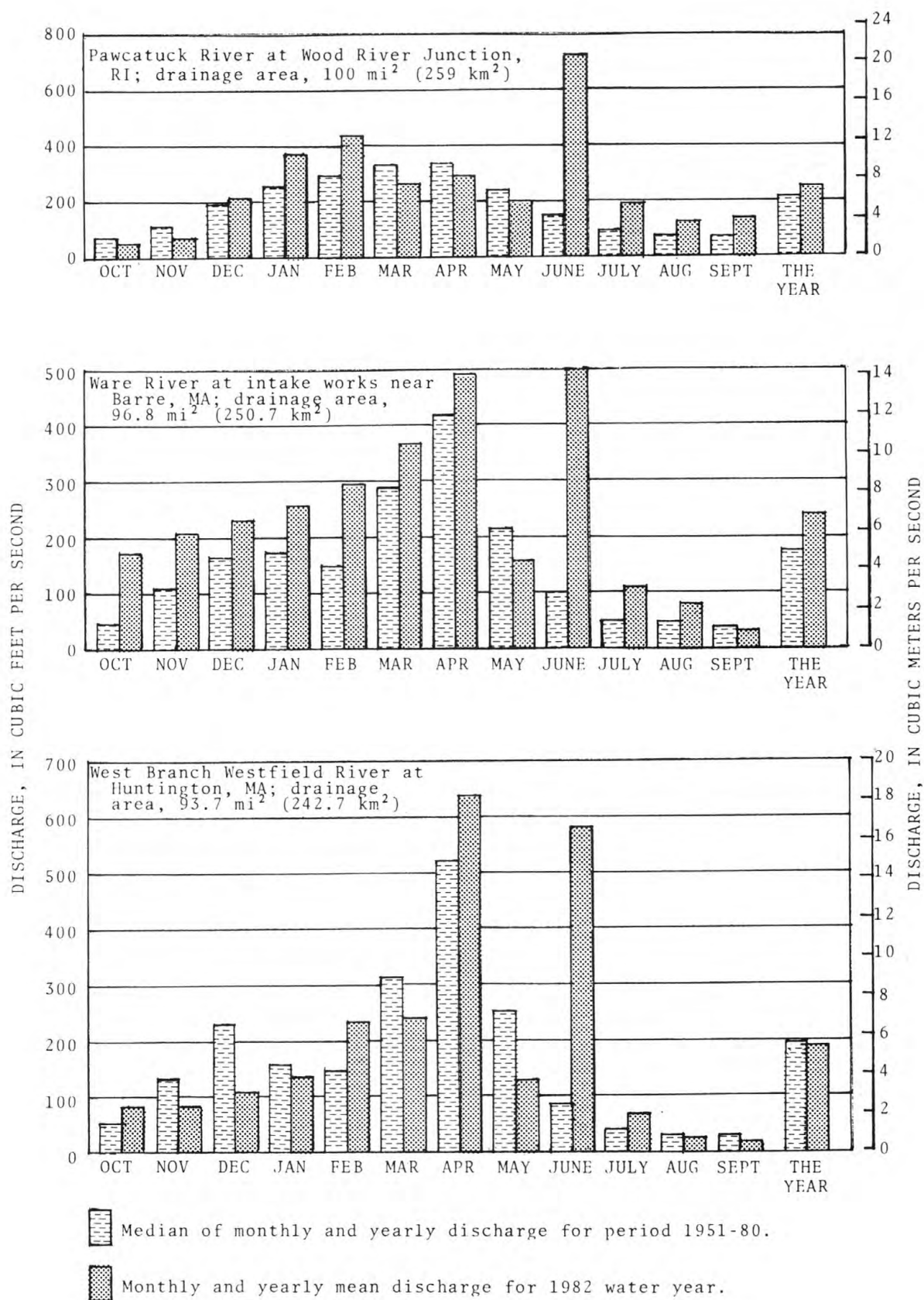


Figure 4.--Comparison of discharge at three long-term index gaging stations during 1982 water year with median discharge for period 1951-80.

DEFINITION OF TERMS

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

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

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestines or feces of warmblooded animals. They are often used as indicators of the sanitary quality of water. These bacteria are defined as all organisms which produce blue colonies within 24 hours when incubated at 44.5°C +0.2°C on M-FC medium (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found in the intestines of warmblooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. These bacteria are defined as all organisms which produce red or pink colonies within 48 hours at 35°C +1.0°C on KF Streptococcus agar (nutrient medium for bacterial growth). Concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the unconsolidated material of which the bottom of a stream, lake, pond, reservoir, or estuary is composed.

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

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

Ash mass is the mass or amount of residue present after the residue from the dry-mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. Ash-mass values of zooplankton and phytoplankton are expressed in g/m³ (grams per cubic meter), and ash-mass values of periphyton and benthic organisms are expressed in g/m² (grams per square meter).

Biomass pigment ratio is the ratio of organic mass in mg/m² (milligrams per square meter) to the mass of chlorophyll *a*, mg/m².

Dry mass is the mass of residue present after drying in an oven at 60°C for zooplankton and 105°C for periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash, and sediment in the sample. Dry-mass values are expressed in the same units as ash mass.

Bottom material: See Bed material.

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

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

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

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, about 646,000 gallons, or 2,447 cubic meters.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in water, and gives an approximation of the amount of organic and reducing material present.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the most commonly reported green pigments in plants.

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

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

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

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

Cubic foot per second (FT³/S, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.2832 cubic meters per second.

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

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

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

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

Diversity index is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$-\frac{1}{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

Where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Diversity index values range from zero, when all the organisms in the sample are the same, to a positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

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

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

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO₃).

Hydrologic unit is a geographic area representing part of all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

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

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

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Micrograms per kilogram (UG/KG, ug/kg) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of sediment.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in a sample as the mass (micrograms) of constituent per unit volume (liter) of sample. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in a sample. Milligrams per liter represents the mass of constituent per unit volume of sample. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of sediment per liter of water-sediment mixture.

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

Organism count/area refers to the number of organisms enumerated in a sample and adjusted to the number per unit area of habitat, usually square meters (m^2). Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organisms count/volume refers to the number of organisms enumerated in a sample and adjusted to the number per unit volume, usually in cells per milliliter (mL) or liter (L). Numbers of planktonic organisms are expressed in these terms.

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

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

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

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation.
Silt.....	.004 - .062	Sedimentation.
Sand.....	.062 - 2	Sedimentation or sieve.
Gravel.....	2.0 - 64.0	Sieve.

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

Periphyton refers to the assemblage of organisms attached to and growing upon submerged surfaces. While primarily consisting of algae, the assemblage may include bacteria, fungi, protozoa, rotifer, and other small organisms.

Pesticides are chemical compounds used to control undesirable plants and animals. The major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides. Insecticides and herbicides are the two categories reported.

pH is a symbol denoting the negative logarithm (base 10) of the hydrogen ion concentration of a solution; pH values range from 0 to 14--the lower the value, the more acid is the solution; i.e., the more hydrogen ions it contains.

Phytoplankton are the plant part of the plankton communities which exist in standing waters. They are the primary source of food in their aquatic environments, and are commonly known as algae.

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

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

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

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

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight or by volume, that passes a section in a given time. It is computed by multiplying discharge times mg/L times 0.0027.

Suspended-sediment load is quantity of suspended sediment passing a section in a specified period.

Total sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bedload discharge. It is the total quantity of sediment, as measured by dry weight or volume, that is discharged during a given time.

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

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for estimating the dissolved-solids content of the water. Commonly, concentration of dissolved solids (in milligrams per liter) is about 65 percent of specific conductance (in micromhos per cm at 25°C). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lived.

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

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of the total concentration in a water-sediment mixture. The water-sediment mixture is associated with (or sorbed on) that material retained on a 0.45 micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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

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

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

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

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

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

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour day.

Total (as used in tables of chemical analysis):

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

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

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to previously published District annual basic-data reports.

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

DOWNSTREAM ORDER AND STATION NUMBER

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

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 01094400, which appears just to the left of the station name includes the 2-digit part number "01" plus the 6-digit downstream-order number "094400."

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The well and miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote degrees, minutes, and seconds of latitude, the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify wells or other sites within a 1-second grid. See figure 5 below.

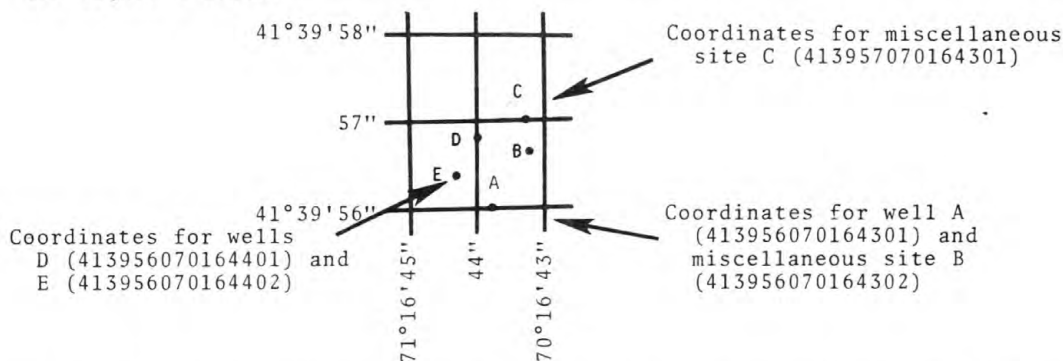


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude)

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

SPECIAL NETWORKS AND PROGRAMS

National stream-quality accounting network (NASQAN) is a collection network designed by the U.S. Geological Survey to meet many of the information demands of agencies or groups involved in national or regional water-quality planning and management. Both accounting and broad-scale monitoring objectives have been incorporated in the network design. Areal configuration of the network is based on river-basin accounting units (identified by 8-digit hydrologic-unit numbers) designated by the Office of Water Data Coordination in consultation with the Water Resources Council. Primary objectives of the network are (1) to depict areal variability of streamflow and water-quality conditions nationwide on a year-by-year basis and (2) to detect and assess long-term changes in streamflow and stream quality.

Pesticide program is a network of regularly sampled water-quality stations where samples are collected to determine the concentration and distribution of pesticides in streams where potential contamination could result from the application of the commonly used insecticides and herbicides. Operation of the network is a Federal interagency activity.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams, and stage, surface area, and contents of lakes and reservoirs. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage recorder that gives either a tape punched at selected time intervals or a continuous graph of the fluctuations. Measurements of discharge are made with a current meter, using the general methods adopted by the U.S. Geological Survey. These methods are described in standard textbooks and in the U.S. Geological Survey Techniques of Water Resources Investigations, book 3, chapter A6.

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables; then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors, based on individual discharge measurements and notes by hydrologists and observers, are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some stream-gaging stations the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by hydrologists and observers, and comparable records of discharge for other stations in the same or nearby basins.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins.

The data in this report generally comprise a description of the station and tabulations of daily and monthly figures. For gaging stations on streams a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of contents is given. Records are published for the water year, which begins on October 1 and ends on September 30.

The description of the gaging station gives the location, drainage area, period of record, notations of revisions of previously published records, type and history of gages, general remarks, average discharge, and extremes of discharge and stage. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" for some stations, is that determined and used by the Corps of Engineers or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD."

Previously published streamflow records of some stations have been found to be in error on the basis of data or information obtained later. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISED RECORDS" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing water years only one number is given; for instance, 1965 stands for the water year October 1, 1964, to September 30, 1965. If no daily, monthly, or annual figures of discharge are effected by the revision, the fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS."

Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and to supplemental water-quality data collected during the year is given under "REMARKS." Attention is called to periods for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage site are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. Methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs.

The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE;" it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance.

Under "EXTREMES" are given first, extremes for the period of record, second, information available outside the period of record, and last, those for the current year. Unless otherwise qualified, maximum discharge is the instantaneous maximum corresponding to the crest stage obtained by use of a water-stage recorder, a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur on the same day as the maximum discharge, it is given separately. Similarly, minimum is the instantaneous minimum unless otherwise qualified. For some stations, supplemental peak discharges are listed with "EXTREMES FOR THE CURRENT YEAR." If they are, all independent peaks, including the maximum for the year, above the selected base with the time of occurrence and corresponding gage height are published in tabular format. Base discharge, which is given in the table heading, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330. Minimums for these stations are published in a separate paragraph following the table of peaks.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), and in inches (line headed "IN."). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations and miscellaneous sites are contained in three tables following the information for continuous record sites. The first is a table of discharge measurements at low-flow partial-record stations, the second is a table of annual maximum stage and discharge at crest-stage stations, and the third is a table of discharge measurements at miscellaneous sites.

Accuracy of Field Data and Computed Results

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

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent of true value; "good," within 10 percent; and "fair," within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

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

Other Data Available

Information of a more detailed nature than that published for most gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Also, most gaging-station records are available in computer-usable form, and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the district office.

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analyses usually are collected at or near gaging stations. Quality-of-water records are given immediately following the discharge records for these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data, the period of daily record for parameters that are measured on a daily basis (specific conductance, pH, dissolved oxygen, and water temperature), extremes for the period of daily record, extremes for the current year, and general remarks.

Water Analysis

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations listed on a following page.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based on hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the district office.

Water Temperature

Water temperatures are measured at most water-quality stations. In addition, water temperatures are taken at time of most discharge measurements for surface-water stations. Large streams have a small diurnal temperature change while small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published.

Sediment

Suspended-sediment concentrations are determined periodically from samples collected by using depth-integrating samplers. Although data collected periodically may represent conditions only at the time of observation, such data are useful in establishing seasonal relations between quality and streamflow when predicting long-term sediment discharge characteristics of the stream.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Collection of the Data

Only ground-water-level data from a basic network of observation wells are published herein. This basic network contains observation wells so located that the most significant data are obtained from the fewest wells in the most important aquifers.

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude, and (2) a local number that is provided for local needs.

Measurements are made in many types of wells, under varying conditions of access, and at different temperatures; hence, neither the method of measurement nor the equipment are standardized. At each observation well, however, the equipment and techniques used are those that will insure that measurements at each well are of consistent accuracy and reliability.

Water-level measurements are reported to the nearest hundredth of a foot with reference to land-surface datum (lsd), which is a datum plane that is approximately at land surface at each well. If known, the altitude of land-surface datum above National Geodetic Vertical Datum of 1929 is given in the well description. Height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month; water levels in wells not equipped with recording gages are reported for near the end of each month.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Forty manuals by the U.S. Geological Survey have been published to date in the series on techniques describing procedures for planning and executing specialized work in water-resources investigations. Material is grouped under major subject headings called books and further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) is on surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises. Reports listed below are sold by U.S. Geological Survey, Branch of Distribution, 604 South Pickett Street, Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices, effective November 1983, are subject to change. When ordering, please give the series (U.S. Geological Survey Techniques of Water-Resources Investigations), title, book number, and chapter number.

- 1-D1 Water temperature-influential factors, field measurement, and data presentation, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: Book 1, Chapter D1. 1975. 65 pages. \$2.50.
- 1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: Book 1, Chapter D2. 1976. 24 pages. \$2.50.
- 2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: Book 2, Chapter D1. 1974. 116 pages. \$6.50.
- 2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: Book 2, Chapter E1. 1971. 126 pages. \$5.50.
- 3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: Book 3, Chapter A1. 1967. 30 pages. \$1.75.
- 3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: Book 3, Chapter A2. 1967. 12 pages. \$1.75.
- 3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: Book 3, Chapter A3. 1968. 60 pages. \$5.00.
- 3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: Book 3, Chapter A4. 1967. 44 pages. \$1.75.
- 3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chapter A5. 1967. 29 pages. \$1.75.
- 3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: Book 3, Chapter A6. 1968. 13 pages. \$1.75.
- 3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chapter A7. 1968. 28 pages. \$4.50.
- 3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chapter A8. 1969. 65 pages. \$2.00.
- 3-A9 Measurement of time-of-travel and dispersion in streams by dye tracing, by E. F. Hubbard, F.A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: Book 3, Chapter A9. 1982. 44 pages. \$5.00.
- 3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: Book 3, Chapter A11. 1969. 22 pages. \$2.00.
- 3-A13 Computation of continuous records of streamflow, by E. J. Kennedy: Book 3, Chapter A13. 1983. \$4.50.
- 3-B1 Aquifer-test design, observation, and data analysis, by R. W. Stallman: Book 3, Chapter B1. 1971. 26 pages. \$3.50.
- 3-B2 Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: Book 3, Chapter B2. 1976. 172 pages. \$3.75.
- 3-B3 Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: Book 3, Chapter B3. 1980. 106 pages. \$6.00.
- 3-C1 Fluvial sediment concepts, by H. P. Guy: Book 3, Chapter C1. 1970. 55 pages. \$3.75.
- 3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: Book 3, Chapter C2. 1970. 59 pages. \$5.50.
- 3-C3 Computation of fluvial-sediment discharge, by George Porterfield: Book 3, Chapter C3. 1972. 66 pages. \$3.25.
- 4-A1 Some statistical tools in hydrology, by H. C. Riggs: Book 4, Chapter A1. 1968. 39 pages. \$2.50.
- 4-A2 Frequency curves, by H. C. Riggs: Book 4, Chapter A2. 1968. 15 pages. \$2.00.
- 4-B1 Low-flow investigations, by H. C. Riggs: Book 4, Chapter B1. 1972. 18 pages. \$3.50.
- 4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: Book 4, Chapter B2. 1973. 20 pages. \$3.25.
- 4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: Book 4, Chapter B3. 1973. 15 pages. \$3.50.
- 4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: Book 4, Chapter D1. 1970. 17 pages. \$1.75.
- 5-A1 Methods for determination of inorganic substances in water and fluvial sediments, by M. W. Skougstad, M. J. Fishman, L. C. Friedman, D. E. Erdmann, and S. S. Duncan, editors: Book 5, Chapter A1. 1979. 626 pages. \$11.00.
- 5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: Book 5, Chapter A2. 1971. 31 pages. \$2.75.
- 5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: Book 5, Chapter A3. 1972. 40 pages. \$1.75.
- 5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: Book 5, Chapter A4. 1977. 332 pages. \$10.00.
- 5-A5 Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: Book 5, Chapter A5. 1977. 95 pages. \$6.50.
- 5-A6 Quality assurance practices for the chemical and biological analyses of water and fluvial sediments, by L. C. Friedman and D. E. Erdmann: Book 5, Chapter A6. 1982. 181 pages. \$6.50.
- 5-C1 Laboratory theory and methods for sediment analysis, by H. P. Guy: Book 5, Chapter C1. 1969. 58 pages. \$3.25.
- 7-C1 Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: Book 7, Chapter C1. 1976. 116 pages. \$2.75.
- 7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J. D. Bredehoeft: Book 7, Chapter C2. 1978. 90 pages. \$5.00.
- 7-C3 A model for simulation of flow in singular and interconnected channels by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: Book 7, Chapter C3. 1981. 110 pages. \$7.50.
- 8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: Book 8, Chapter A1. 1968. 23 pages. \$2.00.
- 8-A2 Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: Book 8, Chapter A2. 1983. 57 pages. \$6.00.
- 8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: Book 8, Chapter B2. 1968. 15 pages. \$1.75.

01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

LOCATION.--Lat 42°34'34", long 71°47'19", Worcester County, Hydrologic Unit 01070004, on right bank 400 ft (100 m) upstream from Fifth Street Bridge at Fitchburg and 1.8 mi (2.9 km) upstream from Baker Brook.

DRAINAGE AREA.--63.6 mi² (164.7 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 400 ft (122 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record, May 8 to June 6, which are poor. Flow regulated by mills and reservoirs upstream. Flow affected by diversions for municipal use. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--10 years, 123 ft³/s (3.483 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Dec. 21, 1973, gage height, 6.22 ft (1.896 m) and Mar. 14, 1977, gage height, 6.23 ft (1.899 m), but may have been greater June 6, 1982; minimum, 6.7 ft³/s (0.19 m³/s) Oct. 19, 1980, but may have been slightly lower about Sept. 8, 1980; minimum daily, 9.0 ft³/s (0.25 m³/s) Sept. 8, 15, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0345	881 24.9	4.49 1.369	June 2	--	a --	-- --
Feb. 4	--	1100 31	-- --	June 6	--	*b --	-- --
Mar. 26	1915	761 21.6	4.29 1.308				

a Not determined.

b Not determined, but may have been greatest for period of record.

Minimum discharge, 11 ft³/s (0.31 m³/s) Sept. 20; minimum daily, 16 ft³/s (0.45 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	101	74	157	190	84	644	185	100	170	75	110
2	62	91	266	275	150	91	483	171	850	126	59	90
3	57	82	251	186	410	87	402	168	520	106	47	69
4	49	76	176	345	850	83	600	157	300	93	44	50
5	42	70	137	713	500	116	418	143	800	82	42	41
6	37	79	141	423	360	114	327	132	1700	74	35	35
7	39	87	125	313	258	115	280	122	1260	67	29	31
8	39	77	113	238	223	162	272	115	822	64	26	27
9	33	69	107	175	184	129	251	110	510	57	219	25
10	30	63	100	150	169	118	243	110	351	52	251	24
11	29	62	93	137	135	117	273	100	265	46	142	23
12	27	59	89	137	128	228	326	95	217	45	95	23
13	26	56	82	135	134	301	330	90	193	46	76	23
14	26	56	82	130	120	386	373	85	290	42	70	24
15	26	71	120	128	117	341	356	82	248	36	58	23
16	26	134	330	119	140	299	309	78	202	33	45	23
17	26	204	230	104	149	304	294	76	256	33	48	23
18	41	256	180	90	129	264	310	74	234	30	43	23
19	179	218	140	95	123	280	269	72	187	39	34	16
20	109	201	110	95	124	293	233	78	181	134	32	24
21	82	255	100	90	122	327	210	80	159	117	31	27
22	66	200	100	85	116	349	187	70	150	71	26	34
23	71	145	130	80	110	370	168	80	175	59	24	36
24	240	120	150	90	108	363	165	140	143	46	24	34
25	168	105	125	85	98	400	153	135	119	39	29	27
26	195	95	105	80	89	695	145	110	104	36	30	24
27	235	94	100	76	94	564	378	88	95	32	25	40
28	298	94	100	74	95	362	347	75	142	205	23	42
29	208	89	95	72	---	291	284	110	220	206	22	34
30	145	79	90	70	---	270	217	120	261	122	21	32
31	116	---	89	75	---	323	---	110	---	86	20	---
TOTAL	2753	3388	4130	5022	5425	8226	9247	3361	11054	2394	1745	1057
MEAN	88.8	113	133	162	194	265	308	108	368	77.2	56.3	35.2
MAX	298	256	330	713	850	695	644	185	1700	206	251	110
MIN	26	56	74	70	89	83	145	70	95	30	20	16
CAL YR 1981	TOTAL	36297	MEAN	99.4	MAX	872	MIN	15				
WTR YR 1982	TOTAL	57802	MEAN	158	MAX	1700	MIN	16				

01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA

LOCATION.--Lat 42°30'06", long 71°43'23", Worcester County, Hydrologic Unit 01070004, on right bank 1.3 mi (2.1 km) upstream from Wekepeke Brook, 2.5 mi (4.0 km) southeast of Leominster, and 6.1 mi (9.8 km) upstream from confluence with Nashua River.

DRAINAGE AREA.--110 mi² (285 km²), includes 2.1 mi² (5.4 km²) above outlet of Ashby (Fitchburg) Reservoir.

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

Water-quality records: Water years 1955, 1958.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 270.04 ft (82.308 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Feb. 25 to Mar. 29, which are fair.

Regulation at low flow by mills upstream. Flow includes diversion to basin for municipal supplies, for Fitchburg from Mare Meadow Reservoir since 1955, for Leominster from Wachusett Reservoir since 1966, and for the Southeast Well Field since 1958. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 193 ft³/s (5.466 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft³/s (462 m³/s) Mar. 18, 1936, gage height, 20.53 ft (6.258 m), from floodmarks, by computation of peak flow over dam; minimum, 11 ft³/s (0.31 m³/s) Aug. 29, 1948; minimum daily, 22 ft³/s (0.62 m³/s) Sept. 27, 1936, Sept. 2, 1957.

Maximum discharge since at least 1850, that of Mar. 18, 1936.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,100 ft³/s (31 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0130	1730 49.0	4.70 1.433	June 2	1030	2270 64.3	5.34 1.628
Feb. 4	1100	1530 43.3	4.45 1.356	June 6	1115	*4240 120	7.35 2.240
Mar. 26	--	1170 33.1	a3.93 1.198				

a From peak-stage indicator.

Minimum, 39 ft³/s (1.10 m³/s) Sept. 20; minimum daily, 44 ft³/s (1.25 m³/s) Sept. 19.

REVISIONS.--The maximum discharge for water year 1981 has been revised to 1,840 ft³/s (52.1 m³/s) Feb. 25, 1981, gage height, 4.84 ft (1.475 m); revised daily discharges, in cubic feet per second, for the high-water period in February 1981 are given below. These figures supersede those published in the report for 1981.

Feb. 21.....1220	Feb. 22.....883	Feb. 16.....516	Feb. 24.....1060	
Feb. 25.....1590	Feb. 26.....1640	Feb. 27.....1270	Feb. 28.....793	
Month	Total	Mean	Max	Min
February 1981	12334	441	1640	46
Wtr Yr 1981	51909	142	1640	43

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	175	146	253	331	140	894	259	141	259	130	232
2	148	163	538	507	259	150	693	229	1360	193	117	156
3	115	148	494	310	698	140	575	248	739	165	105	115
4	100	135	339	687	1390	130	953	227	383	146	98	89
5	89	141	271	1380	876	180	647	204	1190	130	94	74
6	85	148	281	745	599	180	490	186	3520	121	87	67
7	89	156	253	547	427	240	427	173	2620	113	79	64
8	83	135	224	419	339	240	399	165	1590	107	74	61
9	76	124	212	335	291	190	361	156	900	100	353	59
10	69	113	196	275	268	170	357	156	594	93	403	57
11	65	109	183	235	227	170	411	144	431	87	232	56
12	65	107	173	220	218	340	511	132	342	85	163	57
13	65	103	163	207	218	450	507	128	318	87	137	57
14	64	98	160	229	196	580	561	124	503	81	130	57
15	61	141	210	227	186	520	511	119	403	78	107	56
16	59	271	632	204	244	450	431	113	342	78	94	54
17	57	399	447	190	247	460	399	109	431	74	100	53
18	69	494	335	165	207	400	431	105	380	71	91	57
19	328	399	271	170	193	420	364	98	294	89	79	44
20	183	376	210	180	199	440	314	111	287	271	76	61
21	137	490	199	156	191	490	287	113	253	193	72	93
22	113	364	199	135	183	530	262	98	241	128	65	87
23	121	271	256	130	173	550	232	113	261	107	65	79
24	376	227	287	156	165	540	221	204	241	91	67	72
25	253	202	238	140	150	600	210	196	202	79	76	61
26	325	178	207	130	145	1100	212	153	180	78	74	56
27	372	186	196	125	150	860	561	124	156	74	65	94
28	490	183	199	126	150	550	503	107	232	342	62	85
29	342	168	188	124	---	440	399	156	328	342	57	71
30	250	153	173	115	---	387	307	165	399	193	57	67
31	204	---	156	126	---	435	---	153	---	146	56	---
TOTAL	4918	6357	8036	8948	8920	12472	13430	4768	19261	4201	3465	2291
MEAN	159	212	259	289	319	402	448	154	642	136	112	76.4
MAX	490	494	632	1380	1390	1100	953	259	3520	342	403	232
MIN	57	98	146	115	145	130	210	98	141	71	56	44
CAL YR 1981	TOTAL	63646	MEAN	174	MAX	1640	MIN	43				
WTR YR 1982	TOTAL	97067	MEAN	266	MAX	3520	MIN	44				

01095500 NASHUA RIVER AT CLINTON, MA

LOCATION.--Lat 42°24'12", long 71°41'19", Worcester County, Hydrologic Unit 01070004, at Wachusett Dam 1 mi (1.6 km) south of Clinton.

DRAINAGE AREA.--107.69 mi² (278.92 km²), since July 1937.

PERIOD OF RECORD.--Discharge: July 1896 to current year. Prior to October 1978, published as South Branch Nashua River.

Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1051: 1928. WDR MA-RI-78-1: 1977.

REMARKS.--Flow regulated by Wachusett Reservoir and several ponds. Records adjusted for change in contents in and wastage from Wachusett Reservoir and diversions from Ware River and Quabbin Reservoir on Swift River. Entire flow, except wastage, diverted for use of Boston metropolitan district and other municipalities.

COOPERATION.--Records furnished by Water Division of Metropolitan District Commission.

AVERAGE DISCHARGE.--86 years, 188 ft³/s (5.324 m³/s), 23.71 in/yr (602 mm/yr), adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	Mean	Per square mile	Runoff, in inches	Rainfall, in inches
October.....	139	1.29	1.49	5.10
November.....	215	2.00	2.22	3.48
December.....	286	2.66	3.06	5.44

Calendar year 1981.....	156	1.45	19.70	46.98

January.....	317	2.94	3.39	5.88
February.....	355	3.30	3.43	2.71
March.....	420	3.90	4.50	3.91
April.....	438	4.07	4.54	4.20
May.....	171	1.59	1.83	2.94
June.....	712	6.61	7.38	12.01
July.....	150	1.39	1.61	4.42
August.....	67.7	.63	.73	3.18
September.....	71.8	.67	.74	2.44

Water year 1982.....	277	2.57	34.93	55.71

MERRIMACK RIVER BASIN

01096000 SQUANNACOOK RIVER NEAR WEST GROTON, MA

LOCATION.--Lat 42°38'03", long 71°39'30", Middlesex County, Hydrologic Unit 01070004, on left bank 0.7 mi (1.1 km) downstream from Trout Brook and 2.7 mi (4.3 km) northwest of West Groton.

DRAINAGE AREA.--62.8 mi² (162.7 km²), excludes 2.10 mi² (5.44 km²) above outlet of Ashby Reservoir.

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

GAGE.--Water-stage recorder. Datum of gage is 244.27 (74.453 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for winter period, which are good, and those for period of no gage-height record, Sept. 15-30, which are poor. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.10 mi² (5.44 km²) upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except during water years 1964, 1967-81. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--33 years, 110 ft³/s (3.115 m³/s), 23.79 in/yr (604 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,010 ft³/s (114 m³/s) Oct. 16, 1955, gage height, 8.04 ft (2.451 m), from rating curve extended above 2,200 ft³/s (62 m³/s); minimum daily, 2.0 ft³/s (0.057 m³/s) Sept. 7, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 700 ft³/s (20 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
June 3	0400	838 23.7	5.14 1.567	June 6	2300	*1900 53.8	6.48 1.975

Minimum daily discharge, 17 ft³/s (0.48 m³/s) Sept. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	108	98	111	118	81	407	151	84	151	61	32
2	40	97	189	210	156	88	457	136	368	106	56	52
3	53	88	340	205	189	80	325	146	674	85	48	54
4	46	80	247	210	452	76	428	142	301	76	49	43
5	40	78	184	503	601	90	430	129	299	69	46	32
6	36	77	164	482	415	110	294	116	1110	62	39	27
7	36	92	153	318	266	107	205	107	1470	57	35	24
8	36	85	144	234	220	162	220	101	990	53	31	22
9	33	74	135	180	188	145	223	99	536	48	51	21
10	30	67	126	160	171	130	222	118	343	44	208	20
11	28	63	116	140	148	116	251	104	247	42	139	19
12	27	61	110	120	138	154	296	92	199	40	81	18
13	26	58	101	110	136	243	302	85	175	39	61	18
14	26	56	95	105	126	313	300	80	217	36	57	18
15	26	64	103	105	117	331	281	74	249	35	50	18
16	25	124	216	105	126	285	238	69	196	34	44	18
17	24	307	297	100	138	293	215	65	189	32	41	18
18	24	367	216	98	124	266	215	61	217	29	38	17
19	99	362	170	95	116	294	199	55	176	28	33	17
20	132	258	140	92	117	321	174	52	153	44	31	19
21	81	326	115	90	117	369	159	59	138	109	31	25
22	61	311	114	88	114	370	152	55	142	78	28	30
23	51	222	128	85	109	419	140	53	142	55	27	32
24	115	174	172	92	105	393	132	74	149	44	27	29
25	171	147	161	90	97	400	125	123	118	36	28	25
26	135	131	138	85	90	492	119	95	102	32	28	25
27	206	125	121	81	89	591	218	71	92	33	27	33
28	265	129	115	79	90	368	277	59	90	59	25	35
29	249	120	110	79	---	281	229	62	103	202	25	32
30	168	108	104	77	---	252	179	92	188	129	22	28
31	129	---	97	80	---	267	---	93	---	75	20	---
TOTAL	2450	4359	4719	4609	4873	7887	7412	2818	9457	1962	1485	797
MEAN	79.0	145	152	149	174	254	247	90.9	315	63.3	47.9	26.6
MAX	265	367	340	503	601	591	457	151	1470	202	208	54
MIN	24	56	95	77	89	76	119	52	84	28	20	17
CFSM	1.26	2.31	2.42	2.37	2.77	4.05	3.93	1.45	5.02	1.01	.76	.42
IN.	1.45	2.58	2.80	2.73	2.89	4.67	4.39	1.67	5.60	1.16	.88	.47

CAL YR 1981	TOTAL	36357	MEAN	99.6	MAX	871	MIN	17	CFSM	1.59	IN	21.54
WTR YR 1982	TOTAL	52828	MEAN	145	MAX	1470	MIN	17	CFSM	2.31	IN	31.29

01096500 NASHUA RIVER AT EAST PEPPERELL, MA

LOCATION.--Lat 42°40'03", long 71°34'32", Middlesex County, Hydrologic Unit 01070004, on right bank 200 ft (60 m) downstream from powerplant of James River-Pepperell Co. at East Pepperell and 0.8 mi (1.3 km) upstream from Nissitissit River.

DRAINAGE AREA.--Total above gage, 433 mi² (1,121 km²); net above gage, 316 mi² (818 km²), flow diverted from 117 mi² (303 km²) for use of Boston metropolitan district and city of Worcester.

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

REVISED RECORDS.--WSP 801: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 169.04 ft (51.523 m) National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--47 years, 563 ft³/s (15.94 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft³/s (592 m³/s) Mar. 20, 1936, gage height, 19.1 ft (5.82 m), from floodmarks, from rating curve extended above 12,000 ft³/s (340 m³/s) on basis of velocity-area studies; minimum daily, 1.1 ft³/s (0.031 m³/s) Aug. 13, 1939.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,660 ft³/s (189 m³/s) June 8, gage height, 11.40 ft (3.475 m); minimum daily, 76 ft³/s (1.22 m³/s) Sept. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	245	502	751	597	552	459	1570	749	574	931	370	272
2	234	609	744	1090	838	464	1970	702	1380	582	423	344
3	139	617	1270	1240	1030	456	1620	804	3080	551	390	360
4	105	470	1430	1320	1750	429	1670	775	2860	505	369	372
5	366	495	945	2240	2550	452	2080	741	2090	463	329	298
6	343	461	802	2820	2690	560	1760	718	3650	429	317	256
7	317	190	924	2470	2040	555	1370	681	5630	409	271	275
8	309	233	854	1830	1400	772	1230	408	6570	387	249	316
9	242	596	774	1320	1140	799	1180	327	5840	371	251	276
10	146	623	763	1090	1010	654	985	683	4170	362	760	240
11	97	340	740	920	881	594	1120	761	2560	354	847	153
12	190	338	408	799	781	773	1440	520	1770	269	577	76
13	254	330	362	755	782	1240	1500	434	1370	175	465	203
14	245	170	656	722	738	1510	1480	434	1490	190	425	280
15	238	350	754	399	702	1730	1460	240	1640	227	399	166
16	150	650	768	642	722	1580	1330	174	1400	248	334	82
17	97	1300	1380	635	790	1500	1190	455	1440	157	298	83
18	99	1400	1320	574	725	1490	1150	412	1400	149	282	83
19	485	1400	904	572	656	1460	1150	375	1250	262	310	85
20	565	1300	782	570	632	1520	1030	360	1110	391	262	85
21	732	1400	812	546	642	1630	918	354	1130	673	190	246
22	438	1400	768	491	620	1700	861	297	931	622	92	284
23	359	1100	761	449	596	1760	824	125	928	508	239	234
24	328	850	714	458	569	1750	601	394	870	405	306	195
25	598	590	885	467	537	1680	587	709	637	364	273	209
26	768	586	796	436	485	1910	772	755	508	346	243	231
27	791	576	703	417	480	2250	834	455	529	270	258	270
28	1040	578	676	408	476	2110	1200	274	793	366	144	264
29	1160	556	652	406	---	1660	1250	132	809	721	106	272
30	959	774	621	399	---	1400	1070	435	858	782	197	331
31	567	---	565	406	---	1290	---	517	---	525	234	---
TOTAL	12606	20784	25284	27488	26814	38137	37202	15200	59267	12994	10210	6841
MEAN	407	693	816	887	958	1230	1240	490	1976	419	329	228
MAX	1160	1400	1430	2820	2690	2250	2080	804	6570	931	847	372
MIN	97	170	362	399	476	429	587	125	508	149	92	76
CAL YR 1981	TOTAL	185733	MEAN	509	MAX	3880	MIN	70				
WTR YR 1982	TOTAL	292827	MEAN	802	MAX	6570	MIN	76				

MERRIMACK RIVER BASIN

01096550 MERRIMACK RIVER ABOVE LOWELL, MA
(National stream-quality accounting network station)

LOCATION.--Lat 42°38'20", long 71°22'17", Middlesex County, Hydrologic Unit 01070002, on left bank at intake of Lowell water treatment plant, 2.7 mi (4.3 km) upstream from Pawtucket Dam, and 6 mi (10 km) downstream from Massachusetts-New Hampshire State line.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to September 1973.

WATER TEMPERATURES: January to September 1973.

REMARKS.--Discharge computed on basis of records for gaging station below Concord River (station 01100000) and gaging station on Concord River (station 01099500).

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)
NOV 04...	1030	10100	54	5.8	8.5	1.6	9.8	84	1800	1500	12	2
JAN 02...	1330	--	--	--	--	--	--	--	--	--	--	--
20...	1330	7420	84	5.7	.5	--	13.7	96	2800	3500	--	--
MAR 10...	0800	6380	133	6.6	.5	1.6	13.1	92	4500	4100	20	8
MAY 12...	1100	10200	69	5.9	14.0	2.2	11.5	110	710	89	12	1
12...	1155	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	0830	10200	77	5.9	17.0	1.5	10.6	111	830	440	15	5
JUL 14...	0915	3280	105	6.6	25.0	1.3	7.2	87	1100	110	20	8
SEP 01...	0945	3070	116	7.5	20.0	<1.0	7.1	78	80	35	20	7

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)
NOV 04...	3.6	.7	5.5	48	.7	1.0	10	6.3	8.7	.1	5.7
JAN 02...	--	--	--	--	--	--	--	--	--	--	--
20...	--	--	--	--	--	--	--	--	--	--	--
MAR 10...	6.0	1.1	20	68	2.1	1.1	12	9.5	25	<.1	7.5
MAY 12...	3.8	.7	7.4	55	.9	.7	11	7.0	9.5	.2	4.6
12...	--	--	--	--	--	--	--	--	--	--	--
JUN 16...	4.8	.8	10	57	1.2	.8	10	8.0	13	.1	4.9
JUL 14...	5.9	1.2	12	56	1.2	.7	12	10	14	.1	4.7
SEP 01...	6.2	1.1	12	55	1.2	1.0	13	11	17	.2	3.6

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	SEDI- MENT, DIS- SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. FINER THAN .062 MM
NOV 04...	42	38	.15	.000	.55	.000	.21	.000	5	136	75
JAN 02...	--	--	--	--	--	--	--	--	4	--	60
20...	--	--	.25	.240	.84	.080	.25	.050	--	--	--
MAR 10...	86	78	.33	.290	.57	.090	.28	.060	8	138	69
MAY 12...	54	41	.33	.130	.74	.080	.25	.040	--	--	--
12...	--	--	--	--	--	--	--	--	12	--	86
JUN 16...	62	49	--	--	--	--	--	--	9	248	73
JUL 14...	79	56	.28	.210	.70	.080	.25	.040	5	44	92
SEP 01...	74	61	.43	.280	.80	.310	.95	.260	--	--	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)
NOV 04...	1	0	1	100	80	18	<1	<1	10	--
MAR 10...	2	0	2	<100	--	19	<1	<1	10	0
JUN 16...	1	0	1	<100	--	17	1	<1	10	--
SEP 01...	1	0	1	<100	--	17	1	<1	10	0

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
NOV 04...	<10	1	0	1	12	2	10	360	250	110
MAR 10...	10	1	--	<1	11	0	11	390	200	190
JUN 16...	<10	1	0	1	6	0	7	540	360	180
SEP 01...	10	<1	--	<1	11	2	9	370	160	210

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDED RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDED RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
NOV 04...	3	--	<1	50	20	34	<.1	<.1	5
MAR 10...	4	2	2	70	1	69	.1	<.1	3
JUN 16...	3	0	4	50	9	41	<.1	<.1	3
SEP 01...	3	2	1	60	30	35	<.1	<.1	2

MERRIMACK RIVER BASIN

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 04...	4	1	<1	<1	<1	<1	50	40	14
MAR 10...	0	3	<1	<1	<1	<1	30	1	29
JUN 16...	2	1	<1	<1	<1	<1	20	7	13
SEP 01...	--	<1	<1	<1	<1	<1	10	0	10

DATE	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)
NOV , 1981 04...	--	--	--	<.1	--	6.0	--	--	--
MAY , 1982 12...	<.10	<.10	<.01	<.1	<.10	4.0	<.01	<.01	<.01
JUL 14...	<.10	<.10	<.01	--	<.10	--	<.01	<.01	<.01

DATE	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)
NOV , 1981 04...	--	<.1	--	--	<.1	--	<.1	--	<.1
MAY , 1982 12...	<.01	.3	<.01	<.01	<.1	<.01	<.1	<.01	<.1
JUL 14...	<.01	--	<.01	<.01	--	<.01	--	<.01	--

DATE	LINDANE TOTAL (UG/L)	LINDANE TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL (UG/KG)
NOV , 1981 04...	--	<.1	--	<.1	--	--	--	<1.0
MAY , 1982 12...	<.01	<.1	<.01	<.1	<.01	<.10	<1	<10
JUL 14...	<.01	--	<.01	--	<.01	<.10	<1	--

01096910 BOULDER BROOK AT EAST BOLTON, MA

LOCATION.--Lat 42°27'04", long 71°34'39", Worcester County, Hydrologic Unit 01070005, on right bank 900 ft (250 m) downstream from Interstate Highway 495, 0.9 mi (1.4 km) west of East Bolton, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--1.54 mi² (3.99 km²).

PERIOD OF RECORD.--Discharge: June 1971 to current year.
Specific conductance: June 1971 to September 1978.
Water temperatures: June 1971 to September 1978.

REVISED RECORDS.--WDR MA-NH-RI-VT-74-1: Drainage area. WDR MA-RI 78-1: 1972-77(P).

GAGE.--Water-stage recorder. Altitude of gage is 290 ft (88 m), from topographic map.

REMARKS.--Records fair except those for periods of no-gage height record, Apr. 3 to May 11 and June 26 to Aug. 2, which are poor. Daily and monthly figures may be influenced by stored or released water at trash screen just upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--11 years, 3.27 ft³/s (0.093 m³/s), 28.84 in/yr (733 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 208 ft³/s (5.89 m³/s) Jan. 25, 1979, gage height, 3.69 ft (1.125 m); minimum, 0.01 ft³/s (0.001 m³/s) July 20, 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 25 ft³/s (0.71 m³/s), and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2145	26 0.74	2.61 0.796	June 2	0800	*67 1.90	2.84 0.866
Feb. 4	1445	26 .74	2.49 .759	June 6	0600	62 1.76	2.81 .856

Minimum discharge, 0.25 ft³/s (0.007 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	1.1	2.0	5.8	11	4.3	7.2	3.6	4.3	4.2	1.6	1.4
2	1.5	1.0	8.1	8.8	7.5	4.6	4.8	3.4	25	3.5	1.4	1.6
3	.96	1.1	6.3	5.5	13	4.4	8.0	4.0	13	3.1	1.3	1.1
4	.60	1.0	4.2	13	17	4.3	7.0	3.7	10	2.7	1.2	.79
5	.60	.96	3.8	15	13	6.1	5.2	3.4	28	2.2	1.1	.63
6	.46	1.1	4.0	12	12	6.2	4.2	3.2	48	1.9	1.1	.54
7	.46	1.2	4.0	9.9	11	6.9	3.5	3.1	37	1.8	.89	.46
8	.46	1.0	4.0	8.1	10	9.9	3.1	3.0	24	1.6	.82	.42
9	.46	.90	4.0	7.2	9.9	7.2	3.0	3.0	19	1.5	5.7	.42
10	.38	.77	3.8	6.3	9.8	6.2	2.8	4.0	16	1.4	3.8	.41
11	.34	.77	3.6	4.8	8.2	5.5	3.1	6.0	14	1.4	2.0	.37
12	.31	.71	3.6	4.4	7.1	6.6	3.4	3.2	12	1.3	1.7	.34
13	.31	.71	2.9	4.0	7.4	6.3	3.2	2.8	11	1.3	1.5	.34
14	.31	.71	2.6	4.6	7.2	7.5	3.0	2.6	14	1.2	1.4	.34
15	.28	1.5	4.6	4.6	7.1	6.3	2.8	2.4	11	1.2	1.1	.34
16	.28	3.8	9.9	4.4	9.1	6.3	2.7	2.4	11	1.1	.99	.34
17	.28	4.8	6.6	4.2	8.5	6.9	2.6	2.2	14	1.0	1.0	.34
18	.31	5.5	5.5	3.8	7.6	6.9	2.9	2.0	10	1.0	1.1	.35
19	1.9	3.6	4.8	3.6	6.6	7.5	2.6	1.8	8.7	1.5	.85	.34
20	.77	4.4	4.2	3.6	6.7	7.5	2.5	1.8	8.5	10	.71	.40
21	.55	5.3	3.6	3.6	6.6	7.8	2.7	1.8	7.3	6.0	.70	1.2
22	.50	3.4	4.0	3.1	6.2	7.8	2.5	1.7	7.8	4.5	.64	1.2
23	.50	2.9	5.3	3.1	5.9	7.2	2.4	2.0	6.1	3.7	.60	1.2
24	2.0	2.6	6.6	4.0	5.8	6.6	2.3	4.7	5.3	3.0	.63	1.0
25	1.1	2.5	4.8	3.6	6.1	6.3	2.2	3.8	4.8	2.5	.73	.73
26	2.3	2.3	3.8	3.2	5.3	7.8	3.0	2.6	4.3	2.1	.94	.64
27	2.0	2.6	3.8	3.4	4.6	7.2	3.5	2.0	3.8	1.8	.70	.82
28	2.6	2.8	3.8	3.2	4.8	5.5	4.5	1.7	4.5	5.0	.61	1.0
29	1.7	2.8	3.8	3.4	---	5.3	4.1	8.0	6.0	3.5	.50	.83
30	1.4	2.1	3.2	3.6	---	4.8	3.8	9.5	5.0	2.5	.45	.76
31	1.2	---	2.8	4.2	---	4.6	---	5.4	---	2.0	.42	---
TOTAL	27.10	65.93	138.0	172.0	235.0	198.3	108.6	104.8	393.4	81.5	38.18	20.65
MEAN	.87	2.20	4.45	5.55	8.39	6.40	3.62	3.38	13.1	2.63	1.23	.69
MAX	2.6	5.5	9.9	15	17	9.9	8.0	9.5	48	10	5.7	1.6
MIN	.28	.71	2.0	3.1	4.6	4.3	2.2	1.7	3.8	1.0	.42	.34
CFSM	.57	1.43	2.89	3.60	5.45	4.16	2.35	2.20	8.51	1.71	.80	.45
IN.	.65	1.59	3.33	4.15	5.67	4.79	2.62	2.53	9.50	1.97	.92	.50

CAL YR 1981 TOTAL 894.07 MEAN 2.45 MAX 19 MIN .12 CFSM 1.59 IN 21.58
WTR YR 1982 TOTAL 1583.46 MEAN 4.34 MAX 48 MIN .28 CFSM 2.82 IN 38.22

MERRIMACK RIVER BASIN

01097000 ASSABET RIVER AT MAYNARD, MA

LOCATION.--Lat 42°25'55", long 71°27'01", Middlesex County, Hydrologic Unit 01070005, on right bank at Maynard, 150 ft (46 m) upstream from bridge on State Highway 27, 1.7 mi (2.7 km) downstream from Assabet Brook, and 7.1 mi (11.4 km) upstream from confluence with Sudbury River.

DRAINAGE AREA.--116 mi² (300 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 142.12 ft (43.318 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Occasional diurnal fluctuation at low flow by mills upstream; greater regulation prior to 1969. Since 1962, high flow affected by retarding reservoirs and, since 1970, occasional release at low flow by these reservoirs. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--41 years, 184 ft³/s (5.211 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,250 ft³/s (120 m³/s) Aug. 20, 1955, gage height, 8.94 ft (2.725 m); maximum gage height, 8.96 ft (2.731 m) Aug. 20, 1955 (backwater from debris); minimum daily discharge, 0.20 ft³/s (0.006 m³/s) Feb. 7, 1965.
Maximum discharge since at least 1886, that of Aug. 20 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,300 ft³/s (65.1 m³/s) June 7, gage height, 6.68 ft (2.036 m); minimum daily, 19 ft³/s (0.54 m³/s) Sept. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	113	151	244	327	208	360	254	394	269	149	55
2	100	100	211	400	426	208	375	225	595	234	125	62
3	110	90	321	459	534	206	363	211	900	197	108	64
4	100	81	387	542	788	195	446	204	959	171	97	57
5	85	76	336	862	949	220	545	199	1060	155	87	48
6	90	79	296	994	876	283	509	186	1640	140	75	19
7	82	77	264	944	680	299	426	175	2230	128	69	41
8	74	75	249	775	568	378	400	165	2150	118	64	51
9	65	71	246	635	477	397	394	165	1850	111	111	48
10	58	63	234	576	429	339	387	206	1570	100	171	25
11	54	63	217	553	390	307	406	244	1270	91	197	36
12	50	60	204	520	357	360	456	229	989	86	177	36
13	48	59	193	420	330	446	484	206	793	84	144	37
14	46	57	184	340	316	516	463	188	705	76	121	38
15	44	76	217	310	296	545	429	171	722	69	105	39
16	42	137	345	310	321	519	390	165	688	64	91	44
17	40	249	446	300	375	494	357	157	643	62	81	42
18	60	333	456	290	363	491	336	151	603	59	72	39
19	72	336	387	280	327	480	330	144	538	52	66	35
20	90	313	316	270	302	477	316	140	470	84	62	39
21	84	307	272	260	302	466	296	146	413	193	59	55
22	66	296	262	300	299	463	277	144	378	234	55	76
23	58	269	264	413	285	453	264	144	354	234	55	83
24	86	220	296	333	272	436	249	204	304	184	55	80
25	107	195	310	293	257	403	234	262	264	148	69	75
26	126	177	288	267	227	406	225	262	232	123	47	64
27	149	171	264	257	225	439	252	229	211	107	50	63
28	193	173	254	217	213	429	296	201	215	138	49	66
29	197	169	249	204	---	381	307	234	239	190	47	66
30	182	159	237	201	---	348	285	357	272	197	45	69
31	137	---	225	206	---	333	---	413	---	177	50	---
TOTAL	2760	4644	8581	12975	11511	11925	10857	6381	23651	4275	2753	1552
MEAN	89.0	155	277	419	411	385	362	206	788	138	88.8	51.7
MAX	197	336	456	994	949	545	545	413	2230	269	197	83
MIN	40	57	151	201	213	195	225	140	211	52	45	19
CAL YR 1981	TOTAL	53213.2	MEAN	146	MAX	838	MIN	5.2				
WTR YR 1982	TOTAL	101865.0	MEAN	279	MAX	2230	MIN	19				

01097300 NASHOBA BROOK NEAR ACTON, MA

LOCATION.--Lat 42°30'39", long 71°24'25" Middlesex County, Hydrologic Unit 01070005, on right bank 1,500 ft (450 m) downstream from dam at North Acton, 2.2 mi (3.5 km) northeast of Acton, and 5 mi (8 km) upstream from mouth.

DRAINAGE AREA.--12.7 mi² (32.9 km²).

PERIOD OF RECORD.--Discharge: Occasional low-flow measurements, water years 1962-63. July 1963 to current year. Specific conductance: October 1971 to September 1974, October 1975 to October 1977. Water temperatures: October 1971 to September 1974, October 1975 to October 1977.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (47 m), from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 18 to Feb. 25 and Mar. 15 to Apr. 13, which are poor. Occasional regulation since 1967 by pond upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years, 21.1 ft³/s (0.598 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 679 ft³/s (19.2 m³/s) Jan. 26, 1979, gage height, 5.57 ft (1.698 m); maximum gage height, 5.73 ft (1.747 m), Jan. 26, 1979 (ice jam); minimum discharge, 0.02 ft³/s (0.001 m³/s) Sept. 6, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 301 ft³/s (8.52 m³/s) June 7, gage height, 4.80 ft (1.463 m); minimum, 2.8 ft³/s (0.079 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	20	17	26	41	17	42	19	23	39	11	5.9
2	8.4	15	29	63	78	16	40	17	63	26	10	11
3	14	13	65	94	120	16	43	16	151	19	9.1	10
4	12	12	56	89	140	15	62	15	86	16	8.2	7.7
5	9.6	11	42	165	120	16	56	15	85	14	7.8	6.3
6	8.0	10	33	145	90	25	52	14	219	13	7.4	5.6
7	7.8	8.2	27	94	65	28	47	13	285	11	6.7	5.1
8	9.1	9.0	31	76	47	44	43	13	226	11	6.0	5.0
9	7.8	9.0	33	62	38	48	41	13	131	10	7.8	4.6
10	6.8	8.5	32	52	34	37	42	33	89	10	26	4.4
11	6.3	8.2	29	41	31	30	45	43	69	10	25	4.2
12	6.2	8.1	26	32	28	48	52	28	56	9.6	13	3.8
13	6.0	7.8	24	27	26	74	56	21	48	12	8.9	3.4
14	5.7	7.4	21	26	24	79	49	17	52	9.1	7.6	3.4
15	5.8	8.8	23	28	22	79	42	15	64	8.5	7.6	3.5
16	5.4	19	48	30	26	68	35	14	53	8.5	6.9	3.5
17	4.7	49	75	33	35	64	34	13	52	8.0	6.2	3.5
18	5.5	66	66	32	35	62	30	12	56	7.4	6.3	3.5
19	8.1	58	50	31	30	62	29	11	45	7.4	6.5	3.4
20	14	48	40	30	26	61	26	11	38	14	6.5	3.0
21	11	56	33	29	24	58	23	14	36	73	6.3	4.1
22	9.6	60	27	28	22	56	22	13	33	59	5.4	5.9
23	8.6	47	28	27	21	54	21	11	34	38	4.7	8.1
24	12	36	36	26	20	50	19	15	29	29	4.6	8.7
25	20	28	41	25	20	47	18	23	24	21	4.6	7.5
26	20	24	35	24	20	50	16	20	20	15	5.1	6.2
27	29	22	30	23	19	48	21	15	18	12	5.5	5.5
28	36	22	27	22	18	42	29	12	19	12	5.4	5.8
29	37	22	27	21	---	38	28	13	27	27	5.0	5.9
30	27	20	26	21	---	35	23	30	44	29	4.3	5.7
31	21	---	24	21	---	35	---	31	---	16	4.1	---
TOTAL	388.7	733.0	1101	1443	1220	1402	1086	550	2175	594.5	249.5	164.2
MEAN	12.5	24.4	35.5	46.5	43.6	45.2	36.2	17.7	72.5	19.2	8.05	5.47
MAX	37	66	75	165	140	79	62	43	285	73	26	11
MIN	4.7	7.4	17	21	18	15	16	11	18	7.4	4.1	3.0
CAL YR 1981	TOTAL	6085.24	MEAN	16.7	MAX	170	MIN	.94				
WTR YR 1982	TOTAL	11106.90	MEAN	30.4	MAX	285	MIN	3.0				

MERRIMACK RIVER BASIN

01097500 SUDBURY RIVER AT FRAMINGHAM CENTER, MA

LOCATION.--Lat 42°17'29", long 71°26'35", Middlesex County, Hydrologic Unit 01070005, at dam of Framingham Reservoir No. 1, 0.5 mi (0.8 km) upstream from outlet of Farm Pond, and 0.8 mi (1.3 km) southwest of Framingham Center.

DRAINAGE AREA.--75.2 mi² (194.8 km²) since January 1881.

PERIOD OF RECORD.--Discharge: January 1875 to current year.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 1051: 1937. WDR MA-RI-77-1: 1976.

REMARKS.--Records adjusted for change in reservoir contents, diversions, and wastage. Flow diverted as needed for use of Boston metropolitan district. Part of flow from Wachusett Reservoir on Nashua River is diverted into Sudbury Reservoir en route to Boston metropolitan district.

COOPERATION.--Records furnished by Water Division of Metropolitan District Commission.

AVERAGE DISCHARGE.--107 years, 116 ft³/s (3.285 m³/s), 20.95 in/yr (532 mm/yr), adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Month	Mean	Per square mile	Runoff in inches	Rainfall in inches
October.....	63.1	0.84	0.97	4.64
November.....	100	1.33	1.48	3.44
December.....	204	2.71	3.13	5.70
Calendar year 1981.....	99.7	1.33	18.01	40.28
January.....	304	4.04	4.66	6.81
February.....	298	3.96	4.12	1.76
March.....	241	3.20	3.69	2.89
April.....	206	2.74	3.06	2.64
May.....	83.9	1.12	1.29	2.86
June.....	598	7.95	8.88	10.40
July.....	50.9	.68	.78	3.14
August.....	23.8	.32	.37	2.40
September.....	5.86	.08	.09	1.50
Water year 1982.....	180	2.39	32.51	48.18

LOCATION.--Lat 42°19'31", lng 71°23'53", Middlesex County, Hydrologic Unit 01070005, on left bank at upstream side of Danforth Street Bridge at Saxonville, 600 ft (180 m) east of Elm Street, 700 ft (210 m) downstream from confluence with Lake Cochituate Outlet, and 0.7 mi (1.1 km) downstream from Saxonville Dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft³/s (68.5 m³/s) June 7, gage height, 13.30 ft (4.054 m); minimum daily, 35 ft³/s (0.99 m³/s) Oct. 1, 13, 14.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	123	208	345	372	184	296	153	112	158	80	94
2	103	117	332	431	324	173	278	143	459	137	73	88
3	73	116	313	381	457	160	277	129	512	117	67	78
4	57	118	282	573	729	149	395	97	525	102	65	73
5	50	116	270	1140	712	200	336	72	944	96	66	70
6	49	120	304	917	660	173	334	79	1420	91	60	65
7	49	117	286	974	608	185	329	83	2250	86	58	63
8	49	110	284	968	612	208	328	94	2100	84	56	60
9	52	100	274	846	573	205	308	112	1650	79	138	60
10	47	85	264	753	540	202	310	183	1430	77	136	60
11	42	85	260	673	503	198	340	156	1200	73	109	65
12	37	84	258	614	478	230	370	138	1010	70	100	63
13	35	84	252	568	459	252	369	127	854	65	92	59
14	35	81	235	564	439	266	365	124	836	58	97	58
15	36	97	265	544	421	269	323	115	722	57	92	59
16	36	180	409	518	431	272	293	108	658	55	88	62
17	36	255	360	498	421	288	278	104	662	55	90	58
18	39	244	382	455	369	286	273	100	637	56	97	55
19	96	282	360	336	289	278	260	95	603	62	91	55
20	59	286	334	274	266	273	252	89	578	104	90	56
21	62	308	310	235	256	268	244	81	542	131	88	60
22	67	292	296	230	244	268	227	71	469	112	79	84
23	77	288	317	220	227	256	164	75	442	106	75	83
24	135	288	319	212	218	247	130	119	412	91	78	74
25	97	277	310	200	205	238	147	125	324	75	81	64
26	126	265	297	196	199	257	143	109	158	68	78	62
27	132	260	293	198	195	252	176	97	120	63	74	65
28	173	253	297	188	194	227	179	89	184	132	72	75
29	155	245	292	185	---	213	174	113	181	109	67	70
30	142	232	284	181	---	225	163	123	185	89	66	65
31	132	---	277	183	---	281	---	118	---	84	66	---
TOTAL	2313	5508	9224	14600	11401	7183	8061	3421	22179	2742	2569	2003
MEAN	74.6	184	298	471	407	232	269	110	739	88.5	82.9	66.8
MAX	173	308	409	1140	729	288	395	183	2250	158	138	94
MIN	35	81	208	181	194	149	130	71	112	55	56	55
CAL YR 1981	TOTAL	48936	MEAN	134	MAX	785	MIN	21				
WTR YR 1982	TOTAL	91204	MEAN	250	MAX	2250	MIN	35				

MERRIMACK RIVER BASIN

01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA

LOCATION.--Lat 42°38'12", long 71°18'09", Middlesex County, Hydrologic Unit 01070005, on right bank 300 ft (90 m) downstream from Rogers Street Bridge at Lowell, 0.3 mi (0.5 km) downstream from River Meadow Brook, and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--Total above gage, 405 mi² (1,049 km²); net above gage, 312 mi² (808 km²) - diversion as needed from 92.6 mi² (239.8 km²) for use of Boston metropolitan district.

PERIOD OF RECORD.--Discharge: October 1936 to current year. October, November 1936 monthly discharge only, published in WSP 1301.

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

GAGE.--Water-stage recorder. Datum of gage is 67.41 ft (20.547 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. No gage-height record Jan. 27 to Mar. 2. Daily discharge includes water released from 92.6 mi² (239.8 km²) in basins of Sudbury River and Lake Cochituate. Prior to December 1961, water diverted upstream for use of city of Lowell. Low flow regulated by mills upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 626 ft³/s (17.73 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,410 ft³/s (153 m³/s) Jan. 28, 1979, gage height, 9.60 ft (2.926 m); minimum daily, 4.0 ft³/s (0.11 m³/s) Sept. 29, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,390 ft³/s (124 m³/s) June 10, gage height, 8.85 ft (2.697 m); minimum daily, 127 ft³/s (3.60 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	242	601	787	1000	600	780	1180	830	653	1250	546	207
2	268	570	879	1210	700	720	1130	799	1070	1160	500	245
3	293	535	951	1300	900	713	1130	771	1330	1070	445	252
4	318	494	994	1430	1400	684	1250	734	1500	969	398	242
5	321	460	1010	1860	1800	710	1270	700	1860	883	351	227
6	309	440	1020	2080	1900	769	1310	660	2520	805	310	208
7	293	420	1030	2320	1900	819	1320	616	3270	733	290	178
8	266	401	1020	2450	1800	943	1310	580	3920	657	270	170
9	244	382	997	2420	1700	982	1320	607	4270	587	300	169
10	232	359	976	2280	1600	995	1310	752	4340	521	450	163
11	219	341	952	2110	1500	981	1350	743	4250	460	700	146
12	206	308	922	1930	1400	1060	1390	758	4040	408	800	139
13	199	293	886	1680	1300	1150	1430	747	3770	364	850	136
14	189	279	857	1470	1250	1260	1440	712	3560	320	850	136
15	176	297	872	1340	1200	1330	1420	671	3330	294	800	134
16	165	389	1040	1240	1150	1380	1390	628	3130	295	750	129
17	151	666	1130	1150	1100	1420	1370	584	2970	273	700	131
18	158	826	1180	1000	1150	1430	1310	543	2810	247	650	134
19	214	918	1230	900	1200	1440	1240	508	2620	226	550	127
20	245	977	1220	780	1300	1440	1190	470	2460	326	450	127
21	273	1060	1150	720	1300	1430	1130	433	2340	493	400	146
22	280	1070	1120	650	1200	1420	1070	403	2250	585	350	172
23	283	1060	1130	570	1100	1390	1020	380	2060	665	300	211
24	332	1030	1130	500	1050	1370	971	414	1890	674	250	230
25	371	982	1120	440	1000	1330	919	498	1750	643	230	225
26	437	951	1100	400	950	1310	874	538	1600	588	220	210
27	502	919	1070	430	900	1290	875	545	1460	525	202	206
28	574	886	1050	450	850	1250	845	521	1340	527	186	206
29	606	849	1030	470	---	1220	847	515	1360	568	178	195
30	620	816	983	500	---	1180	841	552	1340	574	174	194
31	623	---	956	550	---	1150	---	598	---	570	166	---
TOTAL	9609	19579	31792	37630	35200	35346	35452	18810	75063	18260	13616	5395
MEAN	310	653	1026	1214	1257	1140	1182	607	2502	589	439	180
MAX	623	1070	1230	2450	1900	1440	1440	830	4340	1250	850	252
MIN	151	279	787	400	600	684	841	380	653	226	166	127
CAL YR 1981	TOTAL	186168	MEAN	510	MAX	2300	MIN	75				
WTR YR 1982	TOTAL	335752	MEAN	920	MAX	4340	MIN	127				

01100000 MERRIMACK RIVER BELOW CONCORD RIVER, AT LOWELL, MA

LOCATION.--Lat 42°38'45", long 71°17'56", Middlesex County, Hydrologic Unit 01070002, on right bank at Lowell, 1,100 ft (350 m) downstream from Concord River.

DRAINAGE AREA.--Total above gage, 4,635 mi² (12,005 km²); net above gage, 4,425 mi² (11,461 km²) - diversions as needed from 210 mi² (544 km²) for use of Boston metropolitan district and city of Worcester.

PERIOD OF RECORD.--Discharge: June 1923 to current year.

Water-quality records: Water years 1954, 1966-74.

Water temperatures: January 1966 to September 1967.

Sediment records: April 1967 to September 1972.

GAGE.--Water-stage recorder. Datum of gage is 5.18 ft (1.579 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 7, 1934, at Boott Mills, 1,800 ft (550 m) upstream and 700 ft (200 m) above mouth of Concord River, in same gage pool and at same datum; gage-height record (furnished by Proprietors of the Locks and Canals on Merrimack River) was indicative of flow including that of Concord River.

REMARKS.--Records good. Daily discharge includes water released from 210 mi² (544 km²) in basins of Sudbury and Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnepesaukee, Winnisquam, and other lakes and reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--59 years, 7,497 ft³/s (212.3 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 173,000 ft³/s (4,900 m³/s) Mar. 20, 1936, gage height, 68.4 ft (20.85 m), from floodmarks; minimum daily, 199 ft³/s (5.64 m³/s) Sept. 23, 1923.
Maximum discharge since 1735, that of Mar. 20, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 36,400 ft³/s (1,030 m³/s) Apr. 20, gage height, 50.02 ft (15.246 m); minimum daily, 649 ft³/s (18.4 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6440	16000	9360	8000	6530	5990	19200	23900	6310	13400	4460	2160
2	5540	13300	10000	9000	6800	5930	24000	19300	9830	13500	4370	2190
3	5570	11600	12800	9590	8080	5660	26500	17800	19400	10500	4240	2340
4	5740	10600	14100	10900	11000	5400	26100	15800	20000	9100	4140	1820
5	5810	9510	13100	13800	14500	5350	25800	14500	18000	8020	4030	2140
6	5340	8900	12000	16400	17000	5830	23800	13200	21500	7400	3460	1890
7	5280	8380	11100	17300	17200	5550	20600	11600	29500	6870	2410	2160
8	5570	8830	11100	16500	15200	6530	17300	10700	34100	6250	3410	2010
9	5510	9090	10600	14600	13500	7090	17200	10600	32600	5150	3620	1900
10	5410	8470	10000	13200	12400	7280	17700	11100	28200	4420	5510	1960
11	4570	7790	9720	12600	11800	6800	17300	11400	21900	3560	7820	1290
12	4280	7470	9320	12700	10800	7150	18000	10700	17300	3580	6660	1170
13	4250	6570	8720	12900	9890	8580	19200	8740	14500	3910	5450	1940
14	4090	5990	8540	10600	9600	10600	19700	7370	13800	3420	4650	1800
15	3760	5940	8640	9250	9280	11800	20400	7810	13900	2830	4830	1600
16	4000	6550	9670	9880	8890	12700	20300	6890	13200	2210	4530	1570
17	3880	8540	10700	9840	9000	13300	21100	7400	12600	1900	3960	1620
18	3540	13300	11100	10300	8910	13200	24600	7080	11800	2600	3550	1070
19	4720	15900	10100	9800	8720	13000	32000	6370	11000	2760	3350	649
20	8350	15500	9450	9080	8330	13400	35400	6240	11400	2880	3370	1580
21	9780	16400	8390	8750	8130	14500	33200	6510	11200	3760	2920	2280
22	8380	18500	8600	8340	7900	16000	32600	7250	10100	4460	1560	2440
23	7560	17900	9020	8910	7790	16500	33400	6570	10100	4770	2410	1430
24	9510	16200	9130	7700	7740	16400	30000	5960	9950	4380	2660	1830
25	14700	14100	9870	7900	7270	16900	24500	6690	9800	3450	2390	1030
26	14800	12600	9190	7430	6650	18700	23000	6640	9860	3470	2130	831
27	14600	11800	8980	7280	6540	22600	25200	6560	9280	3020	1990	2070
28	19400	11000	8820	6940	6450	22200	30200	6050	8180	3110	1430	2050
29	24600	10400	8360	6220	---	19800	34000	6050	7970	3990	1620	2060
30	24700	9920	8500	6170	---	18000	30500	5490	9540	4880	2480	2570
31	20300	---	7780	6030	---	17600	---	5950	---	4460	2080	---
TOTAL	269980	337050	306760	317910	275900	370340	742800	298220	456820	158010	111490	53450
MEAN	8709	11240	9895	10260	9854	11950	24760	9620	15230	5097	3596	1782
MAX	24700	18500	14100	17300	17200	22600	35400	23900	34100	13500	7820	2570
MIN	3540	5940	7780	6030	6450	5350	17200	5490	6310	1900	1430	649
CAL YR 1981	TOTAL	2979590	MEAN	8163	MAX	46700	MIN	1470				
WTR YR 1982	TOTAL	3698730	MEAN	10130	MAX	35400	MIN	649				

MERRIMACK RIVER BASIN

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA

LOCATION.--Lat 42°34'05", long 71°12'55", Middlesex County, Hydrologic Unit 01070002, on right bank at downstream side of bridge on State Highway 129, 1 mi (1.6 km) upstream from Content Brook, and 2.5 mi (4.0 km) northwest of Wilmington.

DRAINAGE AREA.--36.5 mi² (94.5 km²).

PERIOD OF RECORD.--Discharge: November 1963 to current year.

Water-quality records: Water year 1973.

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

GAGE.--Water-stage recorder. Datum of gage is 80.44 ft (24.518 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, Dec. 4 to Jan. 6, which are poor. Diversion upstream at times each year since 1973 for municipal supply of Burlington; see table below for figures of diversion. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1965-82), 59.1 ft³/s (1.674 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,660 ft³/s (47.0 m³/s) Jan. 26, 1979, gage height, 9.85 ft (3.002 m), mean of recorded surge; 10.00 ft (3.048 m), maximum recorded surge; and about 10.4 ft (3.17 m) in river, based on outside gage readings at slightly lower stages; minimum discharge, 1.2 ft³/s (0.034 m³/s) Aug. 30, 31, Sept. 1, 2-4, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 300 ft³/s (8.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	--	769 21.8	a7.42 2.262	June 3	1400	576 16.3	6.52 1.987
Feb. 4	1945	637 18.0	6.83 2.082	June 6	2345	*881 24.9	7.87 2.399

a From high water mark.

Minimum discharge, 3.5 ft³/s (0.099 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	54	38	80	118	51	82	63	88	200	69	40
2	20	38	69	200	270	50	86	56	181	135	59	68
3	36	32	119	300	353	49	82	56	532	92	39	86
4	38	29	190	500	570	42	170	58	413	68	28	68
5	26	26	180	700	549	60	140	59	364	54	24	46
6	15	26	115	630	369	85	110	54	730	45	20	31
7	14	34	85	384	237	95	100	49	838	37	19	21
8	11	30	80	275	200	150	95	45	676	31	16	16
9	12	26	85	231	151	180	95	49	478	26	35	13
10	7.5	24	80	190	135	140	110	93	342	23	119	12
11	6.6	23	75	164	123	105	130	115	252	21	191	11
12	7.5	22	70	122	111	110	150	113	197	22	132	9.7
13	5.5	21	65	98	101	130	160	80	162	30	87	8.1
14	6.6	20	60	88	90	140	160	53	165	28	69	14
15	4.6	26	70	86	84	150	140	41	200	28	51	15
16	5.1	57	140	86	102	140	122	35	187	33	40	6.2
17	4.9	160	210	86	143	121	107	36	169	36	42	5.5
18	3.7	270	180	84	145	117	98	40	193	34	39	4.8
19	19	250	150	82	121	113	92	38	171	31	37	4.2
20	32	189	120	80	104	111	80	37	141	48	34	9.7
21	22	180	100	78	98	105	64	49	124	119	31	12
22	15	176	85	76	89	102	62	41	112	194	28	26
23	15	151	80	73	80	100	56	37	125	161	26	37
24	24	113	95	75	70	94	53	55	112	117	24	41
25	41	77	105	79	67	86	52	86	94	92	26	34
26	53	58	95	77	71	85	47	96	79	74	31	25
27	59	49	85	72	66	95	61	73	67	60	31	19
28	79	47	80	68	56	93	74	45	65	60	26	18
29	102	45	77	67	---	90	72	44	91	78	23	17
30	105	38	75	66	---	80	66	70	174	105	21	13
31	86	---	70	70	---	72	---	87	---	85	20	---
TOTAL	882.8	2291	3128	5267	4673	3141	2916	1853	7522	2167	1437	731.2
MEAN	28.5	76.4	101	170	167	101	97.2	59.8	251	69.9	46.4	24.4
MAX	105	270	210	700	570	180	170	115	838	200	191	86
MIN	3.7	20	38	66	56	42	47	35	65	21	16	4.2
(†)	11.2	4.41	2.49	.40	7.21	3.45	3.82	2.72	2.37	5.81	5.07	8.66

CAL YR 1981 TOTAL 16307.6 MEAN 44.7 MAX 400 MIN 1.9
WTR YR 1982 TOTAL 36009.0 MEAN 98.7 MAX 838 MIN 3.7

† Diversion, in cubic feet per second, for municipal supply of Burlington; records furnished by town of Burlington.

PARKER RIVER BASIN

33

01101000 PARKER RIVER AT BYFIELD, MA

LOCATION.--Lat 42°45'10", long 70°56'46", Essex County, Hydrologic Unit 01090001, on left bank 1,400 ft (450 m) downstream from dam, 0.5 mi (0.8 km) south of Byfield, 0.7 mi (1.1 km) upstream from Wheeler Brook, and 5.5 mi (8.8 km) southwest of Newburyport.

DRAINAGE AREA.--21.6 mi² (55.9 km²).

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 23.46 ft (7.151 m) National Geodetic Vertical Datum of 1929 (levels by Massachusetts Department of Public Works).

REMARKS.--Records good. Some regulation at low flow by mill and ponds upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--37 years, 36.0 ft³/s (1.020 m³/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 489 ft³/s (13.8 m³/s) Mar. 19, 1968, gage height, 5.61 ft (1.710 m); maximum gage height, 5.70 ft (1.737 m), Oct. 29, 1975 (backwater from coffer dam); minimum daily discharge, 0.09 ft³/s (0.003 m³/s) Sept. 25-30, Oct. 3-6, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 343 ft³/s (9.71 m³/s) June 8, gage height, 4.72 ft (1.439 m); minimum daily, 3.0 ft³/s (0.085 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	26	34	51	36	31	80	43	34	49	19	7.5
2	13	22	43	68	40	30	78	40	60	48	18	7.7
3	13	23	48	73	51	28	76	39	89	44	21	7.7
4	12	21	52	88	70	27	84	40	110	40	20	7.2
5	11	20	52	143	91	30	85	40	140	37	19	6.9
6	10	19	49	162	105	33	83	40	193	34	17	6.6
7	10	19	47	165	105	38	73	39	273	31	16	6.2
8	9.0	18	49	153	96	45	76	38	338	29	15	5.6
9	8.0	17	50	136	87	50	78	37	319	26	22	4.8
10	7.0	15	50	118	80	50	83	39	279	23	28	4.6
11	7.0	14	48	100	73	51	89	40	248	22	31	4.4
12	6.0	13	46	85	68	60	93	40	221	19	31	4.2
13	5.5	12	44	75	61	74	96	39	199	18	29	3.9
14	5.2	11	40	67	56	91	97	38	185	16	26	3.8
15	5.0	14	41	62	52	102	94	36	169	14	24	3.6
16	4.8	21	52	57	51	106	90	34	150	13	23	3.4
17	4.6	32	57	53	51	108	86	32	136	12	22	3.3
18	4.4	42	62	50	49	108	83	31	123	12	19	3.2
19	7.0	49	66	50	46	109	79	28	111	11	19	3.0
20	8.5	54	64	48	45	109	74	27	100	13	17	3.1
21	10	59	60	44	45	110	69	26	92	17	16	3.8
22	10	61	57	43	45	112	64	25	86	19	14	5.1
23	10	60	58	42	44	111	60	24	81	21	13	6.3
24	14	58	59	40	44	107	56	26	75	20	12	7.6
25	16	53	58	39	42	102	52	27	68	19	12	8.0
26	19	49	55	38	40	100	49	27	61	18	11	7.9
27	21	46	52	36	36	97	49	26	54	15	10	8.3
28	26	44	51	35	33	91	49	24	49	18	10	8.6
29	28	41	50	33	---	85	48	26	48	20	9.2	8.6
30	27	38	49	32	---	80	46	30	49	21	8.3	8.5
31	27	---	47	31	---	76	---	33	---	21	7.4	---
TOTAL	365.1	971	1590	2217	1642	2351	2219	1034	4140	720	558.9	173.4
MEAN	11.8	32.4	51.3	71.5	58.6	75.8	74.0	33.4	138	23.2	18.0	5.78
MAX	28	61	66	165	105	112	97	43	338	49	31	8.6
MIN	4.4	11	34	31	33	27	46	24	34	11	7.4	3.0
CFSM	.55	1.50	2.38	3.31	2.71	3.51	3.43	1.55	6.39	1.07	.83	.27
IN.	.63	1.67	2.74	3.82	2.83	4.05	3.82	1.78	7.13	1.24	.96	.30
CAL YR 1981	TOTAL	9733.05	MEAN	26.7	MAX	240	MIN	.51	CFSM	1.24	IN	16.76
WTR YR 1982	TOTAL	17981.40	MEAN	49.3	MAX	338	MIN	3.0	CFSM	2.28	IN	30.97

IPSWICH RIVER BASIN

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA

LOCATION.--Lat 42°34'10", long 71°01'39", Essex County, Hydrologic Unit 01090001, on right bank in Peabody, 700 ft (200 m) downstream from Boston Street Bridge at South Middleton, 1.3 mi (2.1 km) downstream from Wills Brook, and 2 mi (3 km) south of Middleton.

DRAINAGE AREA.--43.4 mi² (112.4 km²).

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

REVISED RECORDS.--WSP 1301: 1942(M). WSP 1621: 1938-58 (monthly runoff).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 44.97 ft (13.707 m) Massachusetts Geodetic Survey datum.

REMARKS.--Records excellent. Diversions upstream for municipal supply of Reading, Lynn, and Peabody. Occasional regulation by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 61.2 ft³/s (1.733 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 839 ft³/s (23.8 m³/s) Jan. 26, 1979, gage height, 7.12 ft (2.170 m); minimum, 0.1 ft³/s (0.003 m³/s) Sept. 24, Oct. 1, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 697 ft³/s (19.7 m³/s) June 7, gage height, 6.55 ft (1.996 m); minimum, 0.52 ft³/s (0.015 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	37	51	88	70	68	100	65	69	150	48	19
2	8.3	35	71	166	77	64	97	62	168	120	41	26
3	2.6	30	89	165	118	61	93	62	280	100	35	24
4	6.4	25	84	201	229	58	117	62	243	90	30	23
5	11	20	81	379	217	68	119	59	349	80	26	21
6	7.0	18	96	352	240	80	114	55	558	75	23	18
7	8.9	17	92	342	231	85	99	41	677	70	20	17
8	5.0	14	95	291	193	107	100	26	674	62	18	15
9	7.0	11	95	231	159	108	107	31	598	56	41	13
10	1.6	9.3	93	188	141	107	117	93	509	49	75	11
11	10	7.5	87	160	134	108	134	108	428	42	69	9.5
12	4.7	5.7	72	140	121	132	144	99	356	36	63	8.8
13	3.9	3.9	64	120	111	151	143	96	297	31	61	8.3
14	4.4	2.7	61	105	105	169	138	93	277	27	60	7.8
15	3.6	6.4	80	90	100	175	129	87	246	23	57	7.2
16	2.7	44	106	85	99	173	121	79	213	21	53	6.9
17	3.3	91	116	80	106	175	115	72	195	19	49	6.1
18	8.8	110	115	75	102	162	111	65	175	16	43	5.8
19	10	123	111	70	98	153	103	59	160	14	36	5.3
20	9.1	130	109	65	96	135	96	47	142	43	30	5.8
21	11	158	102	62	98	127	86	43	134	87	26	8.5
22	4.0	160	91	59	98	123	69	40	150	84	22	15
23	7.9	143	91	56	95	117	63	42	140	82	19	24
24	7.3	118	97	54	93	109	58	49	130	76	18	22
25	11	103	93	52	90	111	59	59	115	69	17	18
26	16	89	86	50	83	118	66	55	100	61	17	15
27	30	79	83	48	74	118	71	52	90	55	15	15
28	51	72	86	44	70	108	73	48	90	59	14	18
29	52	64	85	40	---	102	70	53	95	68	12	18
30	44	56	79	37	---	97	67	70	200	61	11	17
31	39	---	72	36	---	94	---	71	---	55	10	---
TOTAL	392.7	1782.5	2733	3931	3448	3563	2979	1943	7858	1881	1059	429.0
MEAN	12.7	59.4	88.2	127	123	115	99.3	62.7	262	60.7	34.2	14.3
MAX	52	160	116	379	240	175	144	108	677	150	75	26
MIN	1.2	2.7	51	36	70	58	58	26	69	14	10	5.5
CAL YR 1981	TOTAL	14441.15	MEAN	39.6	MAX	387	MIN	.83				
WTR YR 1982	TOTAL	31999.20	MEAN	87.7	MAX	677	MIN	1.2				

01102000 IPSWICH RIVER NEAR IPSWICH, MA

LOCATION.--Lat 42°39'35", long 70°53'39", Essex County, Hydrologic Unit 01090001, on left bank 200 ft (60 m) downstream from Willowdale Dam, 1.5 mi (2.4 km) downstream from Howlett Brook, and 4 mi (6 km) upstream from Ipswich.

DRAINAGE AREA.--124 mi² (321 km²).

PERIOD OF RECORD.--Discharge: June 1930 to current year.

Water-quality records: Water years 1954, 1976-79.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1621: 1930-58 (monthly runoff).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 20.63 ft (6.288 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for period of doubtful gage height record, Oct. 23 to Dec. 11, which are fair. Diversions upstream for municipal supply of Reading, Lynn, Peabody, Danvers, Salem, and Beverly. Some regulation by reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 185 ft³/s (5.239 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft³/s (75.9 m³/s) Mar. 20, 21, 1968, gage height, 8.41 ft (2.563 m); minimum, 0.34 ft³/s (0.010 m³/s) Sept. 20, 1978.
Maximum discharge since 1886, that of Mar. 20, 21, 1968.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) June 8, gage height, 7.78 ft (2.371 m); minimum, 2.0 ft³/s (0.057 m³/s) July 19; minimum daily, 19 ft³/s (0.54 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	144	184	234	155	191	296	187	114	293	129	36
2	40	137	190	291	173	177	282	180	172	298	121	46
3	47	127	203	317	204	171	277	174	280	293	112	54
4	53	115	214	414	310	162	298	167	430	278	103	57
5	51	107	227	787	428	171	306	162	681	256	92	54
6	49	99	227	803	625	192	319	159	1090	233	81	48
7	50	93	223	1040	664	211	291	156	1720	210	70	43
8	46	86	223	1020	640	245	329	152	2190	190	61	39
9	43	80	220	908	556	268	303	147	2240	174	81	35
10	38	74	216	739	486	278	308	155	2060	158	122	32
11	35	67	203	588	431	291	330	168	1760	147	138	30
12	30	60	206	452	382	323	355	193	1480	133	145	28
13	30	55	203	368	343	360	398	216	1240	120	148	25
14	29	51	184	313	317	422	421	223	1090	109	145	24
15	27	57	181	279	293	487	424	215	975	98	136	23
16	27	84	215	255	290	531	403	203	856	87	126	23
17	25	137	241	232	288	546	375	192	762	75	116	22
18	21	187	265	214	276	530	350	181	681	61	109	21
19	33	260	300	201	268	524	328	170	606	41	100	19
20	48	329	317	195	258	493	307	157	541	66	92	19
21	55	394	304	190	258	475	287	146	491	120	81	24
22	53	416	285	180	260	458	270	134	462	150	71	30
23	51	421	275	172	260	442	254	124	433	173	62	41
24	57	405	272	168	259	417	238	123	404	183	55	53
25	66	368	270	164	252	387	219	124	375	179	50	57
26	75	334	265	159	236	371	202	125	343	169	48	56
27	84	302	258	155	214	359	193	121	309	154	45	51
28	105	272	260	149	202	346	189	110	278	148	43	49
29	113	241	260	144	---	337	189	103	275	144	39	45
30	129	213	261	140	---	319	188	105	285	140	36	43
31	142	---	239	136	---	303	---	111	---	135	33	---
TOTAL	1688	5715	7391	11407	9328	10787	8929	4883	24623	5015	2790	1127
MEAN	54.5	191	238	368	333	348	298	158	821	162	90.0	37.6
MAX	142	421	317	1040	664	546	424	223	2240	298	148	57
MIN	21	51	181	136	155	162	188	103	114	41	33	19
CAL YR 1981	TOTAL	44404	MEAN 122	MAX 1230	MIN 13							
WTR YR 1982	TOTAL	93683	MEAN 257	MAX 2240	MIN 19							

MYSTIC RIVER BASIN

01102500 ABERJONA RIVER AT WINCHESTER, MA

LOCATION.--Lat 42°26'50", long 71°08'22", Middlesex County, Hydrologic Unit 01090001, on left bank at Winchester, 0.5 mi (0.8 km) upstream from head of Mystic Lakes.

DRAINAGE AREA.--24.2 mi² (62.7 km²), excludes 0.6 mi² (1.6 km²) drained by Winchester North Reservoir.

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

REVISED RECORDS.--WDR MA-NH-RI-VT-74-1: Drainage area. WDR MA-RI-79-1: 1955.

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by diversions for industrial use and for municipal supply of Woburn and Winchester, and by wastage and leakage from Winchester North Reservoir. Some regulation by Winchester at dam 1,800 ft (550 m) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 27.7 ft³/s (0.784 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,330 ft³/s (37.7 m³/s) Jan. 25, 1979, gage height, 15.46 ft (4.712 m), from rating curve extended above 400 ft³/s (11 m³/s) on basis of slope-area measurement of peak flow; no flow for part of Oct. 10, 12, 1950, caused by pumpage from gage pool; minimum daily discharge, 0.25 ft³/s (0.007 m³/s) Oct. 10, 1950.
Maximum discharge since 1886, that of Jan. 25, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 850 ft³/s (24.1 m³/s) June 6, gage height, 14.12 ft (4.304 m), from rating curve extended as explained above; minimum, 1.3 ft³/s (0.037 m³/s) July 14, minimum daily, 2.5 ft³/s (0.071 m³/s) Oct. 10, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	9.9	19	93	174	20	36	18	26	62	18	59
2	39	8.9	82	197	110	22	30	17	343	60	16	28
3	17	7.9	72	114	170	21	30	18	314	44	15	17
4	9.1	6.9	45	204	248	19	69	18	144	34	14	12
5	5.8	6.4	35	367	155	65	48	17	293	29	14	9.0
6	4.9	12	37	216	96	60	37	15	690	33	14	7.7
7	6.1	11	36	130	70	51	33	14	668	18	13	7.1
8	4.6	7.8	37	84	59	71	32	13	431	28	16	6.8
9	3.7	6.6	34	77	53	49	35	17	248	16	72	6.4
10	2.5	5.3	30	68	49	38	40	80	160	16	78	6.2
11	2.8	5.6	27	58	43	34	48	51	113	17	40	5.5
12	3.1	6.2	26	49	40	38	54	31	67	24	27	5.3
13	2.7	5.3	25	43	37	45	48	25	65	17	23	5.3
14	3.2	5.0	23	42	34	47	36	20	129	8.2	24	5.6
15	2.7	15	53	41	34	42	31	16	118	15	21	5.7
16	2.5	50	128	38	53	37	28	14	96	16	16	5.3
17	2.6	118	93	36	56	38	26	14	84	14	14	5.4
18	3.1	99	64	30	41	37	28	13	61	12	13	5.0
19	32	62	51	29	35	34	24	12	50	12	12	4.6
20	13	59	42	29	41	33	22	16	56	74	11	6.0
21	6.5	77	36	28	44	31	22	15	67	100	10	18
22	4.4	53	34	36	37	33	21	12	110	71	8.9	23
23	6.5	39	48	54	32	31	19	13	89	48	8.6	20
24	36	32	52	39	29	30	19	34	57	32	8.9	16
25	17	28	42	32	25	28	18	40	31	25	11	11
26	27	25	35	27	23	36	17	22	26	21	11	7.9
27	32	25	38	23	23	35	29	16	25	18	9.1	10
28	57	24	51	22	21	29	30	13	40	51	7.7	11
29	29	22	46	21	---	25	25	32	90	44	6.7	8.0
30	16	19	40	20	---	24	21	58	80	27	6.3	7.2
31	12	---	33	24	---	26	---	34	---	21	6.5	---
TOTAL	406.7	851.8	1414	2271	1832	1129	956	728	4771	1007.2	565.7	345.0
MEAN	13.1	28.4	45.6	73.3	65.4	36.4	31.9	23.5	159	32.5	18.2	11.5
MAX	57	118	128	367	248	71	69	80	690	100	78	59
MIN	2.5	5.0	19	20	21	19	17	12	25	8.2	6.3	4.6
CAL YR 1981	TOTAL	7547.6	MEAN	20.7	MAX	263	MIN	1.3				
WTR YR 1982	TOTAL	16277.4	MEAN	44.6	MAX	690	MIN	2.5				

01103500 CHARLES RIVER AT DOVER, MA
(National stream-quality accounting network station)

LOCATION.--Lat 42°15'22", long 71°15'38", Norfolk County, Hydrologic Unit 01090001, on right bank 0.3 mi (0.5 km) downstream from highway bridge, 0.8 mi (1.3 km) downstream from Noanet Brook, and 1.3 mi (2.1 km) northeast of intersection of Centre and Walpole Streets in Dover.

DRAINAGE AREA.--184 mi² (477 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1937 to current year. Prior to October 1977, published as "at Charles River Village."

GAGE.--Water-stage recorder and concrete control. Datum of gage is 89.76 ft (27.359 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. Flow affected by diversions to and from basin for municipal supplies.

AVERAGE DISCHARGE.--45 years, 300 ft³/s (8.496 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft³/s (91.2 m³/s) Aug. 23, 1955, gage height, 9.24 ft (2.816 m) and Mar. 22, 1968, gage height, 8.72 ft (2.658 m); minimum, 0.5 ft³/s (0.014 m³/s) Oct. 24, 1952 (caused by unusual regulation); minimum daily, 0.9 ft³/s (0.025 m³/s) Oct. 24, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since flood in 1886, that of August 1955 and March 1968. Flood in March 1936 reached a discharge of 3,170 ft³/s (89.8 m³/s), by computation of flow over dam at site 0.2 mi (0.3 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,290 ft³/s (64.9 m³/s) June 9, gage height, 7.32 ft (2.231 m); minimum, 40 ft³/s (1.13 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	251	227	446	330	289	361	361	195	377	224	77
2	77	210	306	700	470	280	336	342	419	342	191	82
3	94	173	382	620	650	264	342	318	523	312	161	91
4	123	147	439	730	820	254	411	297	585	283	139	97
5	136	133	484	1150	950	300	427	280	962	254	129	97
6	126	129	523	1210	1050	363	484	267	1440	230	119	88
7	110	126	510	1520	1150	424	510	251	1880	206	113	77
8	97	123	486	1600	1100	489	507	234	2150	188	107	72
9	85	123	468	1450	1050	505	521	227	2270	173	143	69
10	80	116	455	1300	934	507	523	286	2230	161	191	62
11	72	116	439	1100	843	497	542	283	2070	147	217	58
12	65	110	419	1000	734	510	561	289	1850	139	230	54
13	62	103	396	900	637	521	574	286	1620	133	224	54
14	58	97	371	820	588	539	580	273	1500	123	199	51
15	56	107	401	720	534	545	572	251	1330	119	169	50
16	54	177	497	630	502	545	556	230	1240	116	143	46
17	50	303	529	560	494	547	529	210	1300	113	126	46
18	50	380	585	500	497	537	507	195	1220	110	119	44
19	82	427	620	460	478	523	471	181	1170	110	103	46
20	80	473	620	420	465	510	445	173	1110	136	97	42
21	88	484	610	390	471	497	416	165	1030	206	91	48
22	91	465	583	380	455	481	382	161	950	260	85	56
23	85	447	550	360	434	452	361	158	855	297	82	60
24	116	424	526	350	414	437	336	181	742	297	82	62
25	133	393	505	340	386	416	312	195	665	267	85	65
26	173	355	481	330	355	411	294	202	602	227	85	62
27	202	321	476	320	333	404	306	199	556	184	80	65
28	270	292	476	300	309	391	333	184	513	202	74	65
29	273	264	460	290		385	355	181	463	224	69	60
30	283	241	445	285	---	374	366	181	421	237	67	60
31	276	---	419	280	---	363	---	184	---	241	65	---
TOTAL	3597	7510	14688	21461	17433	13560	13220	7225	33861	6414	4009	1906
MEAN	116	250	474	692	623	437	441	233	1129	207	129	63.5
MAX	283	484	620	1600	1150	547	580	361	2270	377	230	97
MIN	50	97	227	280	309	254	294	158	195	110	65	42
CAL YR 1981	TOTAL	73245	MEAN 201	MAX 1230	MIN 16							
WTR YR 1982	TOTAL	144884	MEAN 397	MAX 2270	MIN 42							

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURES: November 1974 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 to SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 07...	1425	110	262	--	12.0	--	--	--	--	--
NOV 03...	1345	169	191	5.9	8.5	1.7	11.1	95	34	68
17...	1110	300	277	--	8.0	--	--	--	--	--
JAN 05...	1240	1160	117	--	1.5	--	--	--	--	--
20...	0915	420	164	5.6	.5	--	12.8	89	2000	27
FEB 25...	1255	388	162	--	1.0	--	--	--	--	--
MAR 10...	1030	507	183	6.7	.5	1.1	12.7	88	93	83
APR 16...	0730	561	147	--	8.0	--	--	--	--	--
MAY 12...	0800	289	164	6.0	15.0	1.9	9.6	97	77	220
JUN 15...	0800	1360	104	5.5	14.5	1.5	9.5	94	410	480
15...	0950	1350	188	--	14.0	--	--	--	--	--
JUL 13...	1500	133	178	7.2	25.0	1.6	7.9	96	41	1900
AUG 24...	1815	80	195	8.5	19.4	--	10.5	114	--	--
31...	1445	65	180	7.8	20.5	2.4	9.9	111	23	2000
SEP 15...	0900	51	174	--	21.0	--	--	--	--	--

[illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

[illegible][illegible]

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS)		ARSENIC SUS-PENDED TOTAL (UG/L AS AS)		ARSENIC DIS-SOLVED (UG/L AS AS)		BARIUM, TOTAL RECOVERABLE (UG/L AS BA)		BARIUM, SUS-PENDED RECOVERABLE (UG/L AS BA)		BARIUM DIS-SOLVED (UG/L AS BA)		CADMIUM TOTAL RECOVERABLE (UG/L AS CD)		CADMIUM SUS-PENDED RECOVERABLE (UG/L AS CD)		CADMIUM DIS-SOLVED (UG/L AS CD)		CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	
NOV 03...		2		1		1		100		70		34		< 1		--		<1		< 10
MAR 10...		2		0		2		< 100		--		30		< 1		--		<1		< 10
JUN 15...		1		0		1		< 100		--		27		1		--		<1		10
AUG 24...		--		--		--		--		--		--		--		--		--		--
31...		1		0		1		< 100		--		26		1		0		2		10

DATE	CHROMIUM, SUSPENDED RECOV. (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUSPENDED RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUSPENDED RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUSPENDED RECOVERABLE (UG/L AS FE)
NOV 03...	--	<10	1	0	1	10	7	3	450	220
MAR 10...	--	<10	<1	--	<1	6	0	6	210	100
JUN 15...	--	<10	1	0	1	6	0	9	520	220
AUG 24...	--	--	--	--	--	--	--	--	560	--
31...	0	10	<1	--	<1	7	0	7	350	240

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)
NOV 03...	230	3	--	<1	50	10	37	.4	--	<.1
MAR 10...	110	4	2	2	40	2	38	.2	.0	.2
JUN 15...	300	3	0	4	40	7	33	<.1	--	<.1
AUG 24...	--	--	--	--	100	--	--	--	--	--
31...	110	2	--	<1	80	70	8	<.	--	<.

DATE	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SUS- PENDED RECOVERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOVERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	SUS- PENDED RECOVERABLE (UG/L AS ZN)	ZINC DIS- SOLVED (UG/L AS ZN)
NOV 03...	6	5	1	<1	<1	<1	<1	50	30	21
MAR 10...	3	1	2	<1	<1	<1	<1	30	20	13
JUN 15...	3	0	3	<1	<1	<1	<1	20	0	23
AUG 24...	--	--	--	--	--	--	--	--	--	--
31...	2	--	<1	<1	<1	<1	<1	<10	--	--

01104000 MOTHER BROOK AT DEDHAM, MA

LOCATION---Lat 42°15'18", long 71°09'53", Norfolk County, Hydrologic Unit 01090001, on right bank 100 ft (30 m) upstream from Washington Street Bridge at Dedham and 0.4 mi (0.6 km) downstream from point of diversion from Charles River.

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

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

GAGE---Water-stage recorder. Concrete control since June 10, 1960. Datum of gage is 0.03 ft (0.009 m) below National Geodetic Vertical Datum of 1929. Dec. 9, 1931, to June 9, 1960, nonrecording gage at site 200 ft (60 m) upstream at same datum.

REMARKS---Records good. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE---51 years, 78.0 ft³/s (2.209 m³/s).

EXTREMES FOR PERIOD OF RECORD---Maximum discharge, 1,040 ft³/s (29.5 m³/s) Mar. 21, 1968, gage height, 87.18 ft (26.572 m); maximum gage height, 92.90 ft (28.316 m) Aug. 24, 1955, from graph based on gage readings; no flow at times.

EXTREMES FOR CURRENT YEAR---Maximum discharge, 598 ft³/s (16.9 m³/s) June 10, gage height, 85.52 ft (26.066 m); minimum, 0.34 ft³/s (0.010 m³/s) Sept. 15, 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	38	2.0	41	87	47	98	30	11	137	6.4	1.6
2	5.7	31	20	96	128	43	85	25	92	120	10	.97
3	2.2	18	32	72	168	33	68	22	148	130	31	.67
4	6.8	12	35	127	239	27	103	18	130	108	11	.77
5	6.7	17	47	276	268	44	106	14	263	77	12	1.0
6	6.2	15	85	292	295	58	112	12	439	59	9.0	.86
7	7.3	12	63	308	312	68	138	17	545	43	9.0	.51
8	4.8	8.4	51	350	304	95	129	45	572	31	6.3	.56
9	2.3	6.4	43	351	286	92	122	50	585	31	13	.56
10	1.1	4.4	36	344	260	90	124	92	588	57	26	.65
11	.61	2.8	30	317	230	86	126	90	576	48	21	.85
12	.64	2.1	24	262	195	93	137	84	527	35	21	.56
13	1.7	1.6	18	222	160	95	134	77	473	32	14	.56
14	1.5	1.5	14	222	130	106	144	77	441	43	8.9	.56
15	.72	3.6	23	182	107	102	133	63	395	38	5.4	.48
16	.58	15	63	138	103	99	124	48	361	37	3.2	.37
17	.59	50	70	119	106	100	111	36	365	27	1.4	.40
18	1.3	58	74	93	115	95	109	32	335	19	.97	.46
19	1.4	60	85	76	111	88	88	39	314	14	.79	.46
20	.49	70	77	68	109	82	76	37	292	19	.88	.93
21	.48	81	76	63	104	77	81	38	262	30	.86	.47
22	.48	69	81	56	95	101	69	30	269	37	.73	1.4
23	.97	59	77	48	88	157	56	26	332	38	.73	1.4
24	6.4	47	69	48	90	152	44	27	312	31	.88	1.0
25	2.6	39	59	47	84	142	35	36	263	23	1.1	2.1
26	8.0	25	51	43	58	137	28	36	220	15	1.1	1.7
27	27	16	46	41	66	138	30	19	185	7.2	2.3	1.4
28	43	10	47	38	58	126	35	21	176	11	2.0	.58
29	38	7.0	40	38	---	111	34	20	197	10	1.4	2.1
30	38	3.4	33	37	---	100	32	17	173	7.9	1.1	2.4
31	47	---	27	36	---	90	---	11	---	7.2	.61	---
TOTAL	266.76	783.2	1498.0	4451	4356	2874	2711	1189	9841	1322.3	224.05	28.33
MEAN	8.61	26.1	48.3	144	156	92.7	90.4	38.4	328	42.7	7.23	.94
MAX	47	81	85	351	312	157	144	92	588	137	31	2.4
MIN	.48	1.5	2.0	36	58	27	28	11	11	7.2	.61	.37
CAL YR 1981	TOTAL	10434.24	MEAN	28.6	MAX	356	MIN	.21				
WTR YR 1982	TOTAL	29544.64	MEAN	80.9	MAX	588	MIN	.37				

CHARLES RIVER BASIN

01104200 CHARLES RIVER AT WELLESLEY, MA

LOCATION.--Lat 42°18'59", long 71°13'42", Norfolk County, Hydrologic Unit 01090001, on left bank at east limits of Wellesley, 30 ft (9 m) upstream from a horseshoe-shaped dam and 50 ft (15 m) upstream from bridge on State Highway 9.

DRAINAGE AREA.--211 mi² (546 km²).

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

GAGE.--Water-stage recorder and masonry dam. Datum of gage is 67.92 ft (20.702 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by diversion to Mother Brook (station 01104000), and by diversions to and from basin for municipal supplies. Occasional regulation at dam 0.2 mi (0.3 m) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--23 years, 273 ft³/s (7.731 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,410 ft³/s (68.3 m³/s) Mar. 21, 1968, gage height, 6.20 ft (1.890 m); no flow Sept. 15, Oct. 6, 1959 (caused by closing of gates at dam at gage); minimum daily discharge, 1.0 ft³/s (0.028 m³/s) Aug. 24, 31, Sept. 8, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,770 ft³/s (50.1 m³/s) June 10, gage height, 5.59 ft (1.704 m); minimum, 4.2 ft³/s (0.12 m³/s) Aug. 2; minimum daily, 10 ft³/s (0.28 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	253	261	504	435	283	308	377	168	319	240	101
2	53	233	367	653	440	275	298	368	398	241	99	113
3	23	198	456	597	543	266	313	350	571	230	65	105
4	89	135	456	775	700	258	392	331	567	230	140	108
5	128	118	483	1060	750	317	384	310	888	226	140	115
6	109	128	495	1100	819	351	407	291	1330	213	130	110
7	109	128	501	1130	891	397	425	170	1610	199	110	100
8	106	128	514	1230	886	459	431	177	1680	189	140	92
9	103	128	483	1220	837	470	471	207	1720	113	220	85
10	100	128	469	1060	759	472	474	277	1720	115	230	77
11	91	128	456	840	698	468	499	250	1660	129	220	73
12	49	122	441	827	628	475	507	253	1550	130	210	67
13	51	118	421	789	573	487	526	235	1410	84	240	61
14	66	109	400	718	514	489	517	235	1330	87	250	59
15	67	122	443	642	472	497	523	257	1210	77	225	58
16	63	241	574	568	474	501	509	228	1120	84	200	56
17	58	397	584	508	428	504	499	213	1130	102	190	53
18	63	413	586	460	417	503	468	158	1080	108	200	52
19	103	429	603	434	417	497	455	154	1030	128	170	51
20	100	467	541	421	418	485	406	142	957	173	150	35
21	100	513	535	404	427	476	377	148	942	226	135	10
22	63	478	592	372	423	335	364	153	673	276	125	23
23	75	461	583	350	373	309	348	154	585	312	115	67
24	151	439	564	349	364	328	340	181	584	309	97	58
25	155	413	530	337	339	323	324	146	548	287	50	70
26	138	387	504	320	302	326	310	160	508	255	20	86
27	162	362	503	305	316	316	332	177	476	214	70	89
28	241	333	522	289	299	309	362	171	376	254	81	65
29	261	301	499	287	---	314	370	191	353	252	83	51
30	233	279	484	279	---	314	372	216	347	245	85	67
31	241	---	448	279	---	318	---	206	---	247	77	---
TOTAL	3411	8089	15298	19107	14942	12122	12311	6866	28521	6054	4507	2157
MEAN	110	270	493	616	534	391	410	221	951	195	145	71.9
MAX	261	513	603	1230	891	504	526	377	1720	319	250	115
MIN	23	109	261	279	299	258	298	142	168	77	20	10

CAL YR 1981 TOTAL 72481.8 MEAN 199 MAX 949 MIN 5.0
WTR YR 1982 TOTAL 135385.0 MEAN 365 MAX 1720 MIN 10

LOCATION.--Lat 42°22'20", long 71°14'03", Middlesex County, Hydrologic Unit 01090001, on right bank 800 ft (250 m) downstream from Moody Street Bridge in Waltham and 0.3 mi (0.5 km) upstream from Beaver Brook.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft (6.102 m) National Geodetic Vertical Datum of 1929. Prior to July 10, 1904, at dam 700 ft (200 m) upstream and July 10, 1904, to Oct. 2, 1909, at dam 0.7 mi (1.1 km) downstream at different datums; discharge computed from flow over dam and through wheels and gates of Boston Manufacturing Co. and Waltham Bleachery, respectively.

AVERAGE DISCHARGE.--51 years (water years 1932-82), 298 ft³/s (8.439 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,150 ft³/s (118 m³/s) Feb. 3, 1976, gage height, 6.54 ft (1.993 m), caused by release of water stored behind ice jam upstream; minimum, 0.1 ft³/s (0.003 m³/s) Oct. 1, 12, 1943; minimum daily, 0.2 ft³/s (0.006 m³/s) Oct. 4, 1943.
Maximum discharge since 1886, that of Feb. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,960 ft³/s (83.8 m³/s) June 7, gage height, 5.44 ft (1.658 m); minimum, 11 ft³/s (0.31 m³/s) Oct. 14; minimum daily, 29 ft³/s (0.82 m³/s) Sept 22.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	276	306	642	529	336	403	430	239	418	314	110
2	107	268	483	893	547	332	370	421	629	360	263	138
3	60	232	580	800	650	319	377	408	886	288	112	129
4	64	190	551	1030	950	310	513	392	852	287	162	123
5	108	135	548	1680	900	390	488	367	1550	280	158	129
6	139	158	587	1600	1000	428	508	343	2520	263	162	129
7	133	156	580	1530	1100	464	512	283	2910	248	141	121
8	124	149	603	1590	1050	551	493	192	2750	237	148	110
9	120	151	564	1540	1000	552	546	241	2570	208	248	101
10	116	145	540	1350	900	550	550	385	2430	118	271	93
11	110	148	525	1100	800	547	578	322	2250	145	263	85
12	96	140	506	1000	750	554	606	316	2020	155	255	79
13	68	137	489	950	700	558	637	327	1810	112	290	72
14	44	128	461	890	600	558	636	304	1770	68	294	70
15	48	150	539	782	556	558	633	298	1590	104	275	65
16	74	297	724	658	558	581	615	273	1460	93	240	61
17	72	534	710	582	537	607	595	259	1460	110	237	57
18	75	539	697	540	496	610	566	233	1370	121	255	57
19	135	509	700	520	497	597	535	187	1260	135	195	55
20	118	556	627	480	495	584	500	192	1180	205	172	55
21	110	604	618	450	502	572	449	183	1140	302	151	36
22	99	561	681	430	493	509	387	187	977	338	141	29
23	77	529	697	414	459	371	364	196	721	390	135	46
24	172	505	670	396	427	402	389	235	713	381	126	63
25	173	472	625	383	406	403	384	223	699	368	115	55
26	193	443	586	365	358	419	365	187	626	334	46	70
27	187	417	584	347	374	415	396	218	575	290	48	90
28	297	386	650	336	353	387	424	207	534	355	77	95
29	288	353	616	331	---	387	440	228	434	355	90	53
30	282	328	587	313	---	384	433	268	451	322	93	59
31	256	---	547	318	---	391	---	255	---	322	90	---
TOTAL	4020	9596	18181	24240	17987	14626	14692	8560	40376	7712	5567	2435
MEAN	130	320	586	782	642	472	490	276	1346	249	180	81.2
MAX	297	604	724	1680	1100	610	637	430	2910	418	314	138
MIN	44	128	306	313	353	310	364	183	239	68	46	29
CAL YR 1981	TOTAL	82856	MEAN	227	MAX	1180	MIN	13				
WTR YR 1982	TOTAL	167992	MEAN	460	MAX	2910	MIN	29				

NEPONSET RIVER BASIN

01105000 NEPONSET RIVER AT NORWOOD, MA

LOCATION.--Lat 42°10'39", long 71°12'05", Norfolk County, Hydrologic Unit 01090001, on left bank 200 ft (60 m) upstream from Pleasant Street Bridge, 200 ft (60 m) downstream from railroad bridge, 0.45 mi (0.72 km) downstream from Hawes Brook, and 0.5 mi (0.8 km) south of Norwood.

DRAINAGE AREA.--35.2 mi² (91.2 km²).

PERIOD OF RECORD.--Discharge: October 1939 to current year. October 1939 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1958-59, 1966-68.

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

GAGE.--Water-stage recorder. Datum of gage is 44.04 ft (13.423 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by mills and reservoirs upstream. Flow affected by several diversions upstream for municipal and industrial use. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 53.4 ft³/s (1.512 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft³/s (42.2 m³/s) Aug. 19, 1955, gage height, 14.65 ft (4.465 m), from floodmarks; minimum daily, 1.4 ft³/s (0.040 m³/s) Oct. 20, 1963.
Maximum discharge since 1886, that of Aug. 19, 1955. Flood of July 24, 1938, reached a stage of 11.05 ft (3.368 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 653 ft³/s (18.5 m³/s) June 7, gage height, 9.24 ft (2.816 m), at upstream side of railroad bridge; minimum daily, 4.3 ft³/s (0.122 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	24	30	116	203	51	77	62	39	69	44	18
2	18	22	133	201	182	49	69	56	170	58	38	21
3	29	19	171	182	229	49	74	56	204	53	29	25
4	21	18	130	262	303	45	148	53	149	49	22	22
5	15	15	102	487	255	111	132	51	352	45	33	19
6	12	17	102	358	207	120	111	46	560	41	19	17
7	11	21	83	289	174	115	101	43	580	36	27	15
8	9.4	24	80	252	141	128	96	41	463	33	25	14
9	6.8	20	80	209	132	111	96	47	358	31	51	15
10	5.6	17	76	185	121	96	101	71	295	29	93	15
11	5.6	15	71	152	108	88	108	72	238	29	63	8.9
12	6.0	15	66	124	99	91	115	60	210	24	37	8.3
13	5.6	14	62	101	92	99	113	52	191	25	32	9.4
14	4.9	14	57	106	88	105	108	49	242	24	36	9.4
15	4.9	21	104	104	83	94	94	43	231	18	32	9.4
16	4.6	63	191	99	94	86	83	36	223	19	28	9.4
17	4.3	115	186	89	102	86	80	32	259	19	24	9.4
18	6.0	111	162	86	89	88	81	32	232	19	22	8.9
19	15	84	133	80	80	84	73	32	197	26	20	8.9
20	12	84	111	77	84	80	62	32	178	55	19	11
21	8.3	80	97	76	92	73	61	36	148	75	17	12
22	10	71	86	71	84	65	58	33	141	108	13	17
23	6.8	66	89	68	76	61	51	33	122	102	17	14
24	26	56	99	75	67	57	46	47	108	80	17	14
25	31	47	99	71	63	56	47	38	98	61	17	14
26	30	42	86	63	56	66	45	41	79	51	16	14
27	30	42	81	60	55	73	65	37	80	43	15	17
28	41	40	89	54	55	70	84	31	75	80	16	17
29	38	38	89	53	---	63	80	37	77	76	16	16
30	30	30	86	53	---	60	69	44	77	64	14	16
31	26	---	78	60	---	63	---	43	---	66	13	---
TOTAL	479.4	1245	3109	4263	3414	2483	2528	1386	6376	1508	865	425.0
MEAN	15.5	41.5	100	138	122	80.1	84.3	44.7	213	48.6	27.9	14.2
MAX	41	115	191	487	303	128	148	72	580	108	93	25
MIN	4.3	14	30	53	55	45	45	31	39	18	13	8.3
CAL YR 1981	TOTAL	11749.9	MEAN	32.2	MAX	275	MIN	2.9				
WTR YR 1982	TOTAL	28081.4	MEAN	76.9	MAX	580	MIN	4.3				

01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MA

LOCATION.--Lat 42°09'16", long 71°08'47", Norfolk County, Hydrologic Unit 01090001, on right bank 100 ft (30 m) downstream from Washington Street Bridge at Canton, 200 ft (60 m) downstream from Forge Pond Dam, and 900 ft (250 m) downstream from Massapoag Brook.

DRAINAGE AREA.--27.2 mi² (70.4 km²).

PERIOD OF RECORD.--Discharge: October 1952 to current year.
Water-quality records: Water years 1959, 1967-68.

REVISED RECORDS.--WSP 1901: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 80.18 ft (24.439 m) Massachusetts Department of Public Works datum.

REMARKS.--Records good except those above 200 ft³/s (5.7 m³/s), which are fair. Flow regulated by Forge, Bolivar, Massapoag, and Reservoir Ponds, and other ponds upstream. Flow affected by diversion for municipal supply of Canton and Stoughton. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years, 51.1 ft³/s (1.447 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,790 ft³/s (50.7 m³/s) Aug. 19, 1955, gage height, 8.18 ft (2.493 m), from rating curve extended above 690 ft³/s (20 m³/s); minimum daily, 0.60 ft³/s (0.017 m³/s) July 7, Sept. 1, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 544 ft³/s (15.4 m³/s) June 6, gage height, 4.55 ft (1.387 m), from rating curve extended above 130 ft³/s (3.7 m³/s); minimum daily, 5.6 ft³/s (0.16 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	15	35	81	160	35	61	50	34	35	32	29
2	19	13	106	153	129	39	54	47	121	31	26	34
3	25	12	110	106	138	41	53	53	130	29	23	23
4	16	11	78	181	178	37	121	61	84	27	23	17
5	11	13	66	337	130	110	96	46	278	25	21	14
6	19	17	66	206	110	90	76	38	456	23	22	14
7	9.4	19	69	181	100	76	61	35	506	23	20	13
8	6.7	16	71	165	92	88	63	30	378	21	19	12
9	8.1	15	66	148	89	71	65	35	295	20	37	11
10	8.1	14	60	133	87	63	70	67	196	19	64	10
11	7.8	13	53	115	81	61	80	55	169	18	45	9.7
12	7.6	12	51	110	77	68	85	43	211	18	32	8.8
13	7.4	12	50	100	75	71	90	37	191	18	28	9.4
14	7.1	12	48	92	71	73	91	34	234	17	25	7.4
15	6.9	18	82	82	70	64	85	32	187	13	22	6.0
16	7.6	66	148	76	85	58	77	30	123	15	19	7.1
17	7.4	102	120	72	81	60	72	29	151	12	18	7.4
18	7.6	81	95	74	69	60	63	20	135	13	17	7.1
19	8.6	68	87	66	65	59	61	27	109	17	16	7.1
20	14	70	79	62	71	56	56	27	99	35	15	7.6
21	11	75	72	60	76	54	53	29	90	65	14	13
22	9.9	65	71	56	70	55	51	26	82	78	13	17
23	9.4	57	78	54	62	51	48	24	69	78	13	13
24	30	53	84	58	59	44	46	34	52	70	12	15
25	21	48	76	56	50	41	43	42	39	49	13	12
26	22	46	69	52	39	51	43	37	37	37	13	9.7
27	24	45	66	49	36	57	71	32	37	25	12	11
28	29	43	74	48	36	52	75	27	36	47	12	12
29	30	40	71	47	---	49	66	35	38	64	17	11
30	17	37	69	49	---	47	56	50	41	54	21	11
31	11	---	62	54	---	48	---	40	---	43	22	---
TOTAL	424.2	1108	2332	3123	2386	1829	2032	1172	4608	1039	686	379.3
MEAN	13.7	36.9	75.2	101	85.2	59.0	67.7	37.8	154	33.5	22.1	12.6
MAX	30	102	148	337	178	110	121	67	506	78	64	34
MIN	5.6	11	35	47	36	35	43	20	34	12	12	6.0
CAL YR 1981	TOTAL	10493.7	MEAN	28.7	MAX	224	MIN	1.8				
WTR YR 1982	TOTAL	21118.5	MEAN	57.9	MAX	506	MIN	5.6				

WEYMOUTH FORE RIVER BASIN

01105585 TOWN BROOK AT QUINCY, MA

LOCATION.--Lat 42°14'52", long 70°59'52", Norfolk County, Hydrologic Unit 01090001, on left bank 200 ft (61 m) downstream from Miller Stile Road at Quincy and 0.8 mi (1.3 km) upstream from Town River Bay.

DRAINAGE AREA.--4.25 mi² (11.01 km²).

PERIOD OF RECORD.--September 1972 to current year. Prior to October 1974 published as Town River at Quincy.

REVISED RECORDS.--WDR MA-RI-81-1: 1975-80 (P).

GAGE.--Water-stage recorder. Altitude of gage is 5 ft (2 m), from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, Oct. 1 to Dec. 10, which are poor. Diurnal fluctuation caused by plant upstream. Flow regulated by Old Quincy Reservoir 2.2 mi (3.5 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--10 years, 8.48 ft³/s (0.240 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 381 ft³/s (13.6 m³/s) May 13, 1975, gage height, 7.40 ft (2.256 m), from rating curve extended above 210 ft³/s (5.9 m³/s) on basis of Corps of Engineers computation of the backwater effect from culvert downstream; minimum daily, 0.62 ft³/s (0.018 m³/s) Sept. 25, 27, 29, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 300 ft³/s (8.50 m³/s) June 5, gage height, 6.07 ft (1.850 m); minimum daily, 0.98 ft³/s (0.028 m³/s) Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.4	20	55	56	5.5	7.7	5.8	2.7	13	6.2	3.8
2	10	2.5	30	32	20	5.5	6.2	6.0	53	13	4.2	9.1
3	2.5	2.7	20	24	43	5.5	19	6.3	7.9	12	2.4	1.8
4	2.3	2.5	13	75	23	6.0	18	6.2	16	13	2.8	1.8
5	1.9	3.4	12	34	18	9.8	13	6.1	122	12	3.3	1.8
6	1.7	6.0	14	27	17	5.7	12	6.0	163	11	1.4	1.6
7	2.0	5.6	14	27	15	10	11	6.1	99	12	1.7	1.6
8	1.5	4.0	19	21	15	7.7	15	6.2	48	11	2.4	1.7
9	1.2	3.5	19	18	15	6.4	21	8.8	36	9.4	23	2.5
10	1.1	3.0	16	18	14	6.7	27	11	25	3.8	8.3	2.4
11	1.0	3.1	18	17	13	7.2	30	6.1	21	3.1	3.5	1.4
12	1.0	3.3	13	15	16	8.8	29	5.9	19	3.1	3.1	1.4
13	1.0	2.9	5.4	11	16	9.4	28	5.8	22	3.1	2.7	1.3
14	1.0	4.0	5.2	12	14	7.7	28	5.6	36	2.7	2.8	1.2
15	1.0	25	44	11	13	7.2	24	5.7	19	2.8	2.5	1.1
16	1.0	60	37	11	12	6.9	19	5.4	16	2.7	2.2	1.5
17	1.1	50	13	11	12	8.8	18	5.5	42	2.7	1.3	1.2
18	2.0	30	13	10	14	7.4	15	5.5	21	2.7	1.5	1.2
19	2.5	25	10	10	16	8.0	6.5	5.3	19	10	3.8	1.1
20	1.4	40	8.3	10	16	7.7	5.9	6.2	18	19	1.2	6.4
21	1.2	20	9.5	10	14	8.0	5.9	4.7	23	12	1.1	1.8
22	1.1	13	14	9.8	6.0	8.3	5.6	4.5	18	21	1.5	9.1
23	1.9	11	22	10	6.0	7.7	5.4	6.3	16	5.9	7.7	1.6
24	8.0	10	16	10	6.0	7.7	5.5	10	16	3.8	15	1.1
25	6.0	9.0	15	9.4	6.0	8.0	5.4	4.8	14	3.7	15	.98
26	11	8.0	15	8.8	6.0	12	5.8	4.4	14	5.9	14	1.2
27	8.0	7.0	17	8.8	6.0	7.4	12	4.0	14	3.1	14	3.5
28	9.0	6.5	19	8.8	5.5	7.7	10	2.6	17	25	14	1.1
29	7.4	6.0	21	9.1	---	7.4	6.5	10	16	5.7	13	1.2
30	5.4	6.0	21	9.4	---	7.4	6.0	3.7	13	3.0	7.2	1.2
31	4.0	---	20	15	---	9.8	---	2.9	---	3.0	1.3	---
TOTAL	103.2	375.4	533.4	558.1	433.5	239.3	421.4	183.4	966.6	254.2	184.1	68.68
MEAN	3.33	12.5	17.2	18.0	15.5	7.72	14.0	5.92	32.2	8.20	5.94	2.29
MAX	11	60	44	75	56	12	30	11	163	25	23	9.1
MIN	1.0	2.4	5.2	8.8	5.5	5.5	5.4	2.6	2.7	2.7	1.1	.98
CAL YR 1981	TOTAL	2439.84	MEAN	6.68	MAX	77	MIN	.73				
WTR YR 1982	TOTAL	4321.28	MEAN	11.8	MAX	163	MIN	.98				

01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA

LOCATION.--Lat 42°11'25", long 70°56'43", Norfolk County, Hydrologic Unit 01090001, on left bank between divided lanes of State Highways 3 and 128, 100 ft (30 m) downstream from unnamed tributary entering from left, 0.4 mi (0.6 km) upstream from Whitmans Pond, and 1.2 mi (1.9 km) north of South Weymouth.

DRAINAGE AREA.--4.29 mi² (11.11 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 70 ft (21 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 9.11 ft³/s (0.258 m³/s), 28.84 in/yr (733 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 566 ft³/s (16.0 m³/s) Mar. 18, 1968, gage height, 5.22 ft (1.591 m); maximum gage height, 5.35 ft (1.631 m) Feb. 15, 1971 (ice jam); minimum discharge, 0.11 ft³/s (0.003 m³/s) Sept. 5, 6, 9, 10, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 90 ft³/s (2.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	0130	a111 3.14	3.90 1.189	June 2	1030	a128 3.62	3.43 1.045
Jan. 5	0230	a114 3.23	3.87 1.180	June 7	0315	a*468 13.3	4.44 1.353
Feb. 4	0430	a114 3.23	3.36 1.024				

a From rating curve extended above 42 ft³/s (1.19 m³/s).

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	4.1	6.2	19	46	5.0	11	6.9	7.6	6.3	4.4	3.5
2	6.8	3.9	20	49	55	5.2	8.3	6.3	46	4.9	3.9	5.2
3	4.5	3.9	40	20	46	5.4	8.7	6.3	45	4.4	3.5	3.7
4	3.3	3.9	20	43	96	6.9	31	6.0	17	3.9	3.5	2.6
5	2.5	3.9	15	84	31	33	20	6.0	133	3.7	3.5	2.3
6	2.2	5.5	14	23	16	18	14	5.7	322	3.3	3.3	2.0
7	2.6	4.8	13	14	13	15	21	5.4	322	2.9	3.1	1.7
8	1.8	5.0	11	10	11	20	12	5.4	137	2.9	2.9	1.5
9	1.7	4.8	10	8.6	9.9	14	11	6.0	44	2.8	6.3	1.3
10	1.5	4.3	9.0	8.3	9.5	9.5	13	11	22	2.6	9.5	1.2
11	1.4	4.3	7.7	7.6	8.3	9.1	17	9.1	15	2.3	5.7	1.1
12	1.3	4.3	7.2	5.8	8.0	11	19	7.6	12	2.4	4.4	.95
13	1.4	4.3	6.8	5.6	7.6	13	16	6.6	10	2.3	3.9	.90
14	1.3	4.3	6.6	5.6	6.9	14	14	6.3	32	2.1	3.7	.92
15	1.4	12	18	6.1	6.3	11	10	6.0	31	2.0	3.1	.86
16	1.4	52	74	5.9	9.4	8.7	8.7	5.7	24	2.0	2.8	.80
17	1.5	87	38	5.9	11	8.3	7.6	5.4	41	1.8	2.4	.62
18	1.5	35	19	5.6	8.0	8.3	7.3	5.4	22	1.7	2.6	.56
19	6.2	21	13	5.8	7.2	7.6	6.6	5.2	14	5.7	2.4	.56
20	6.5	15	10	6.5	9.0	6.9	6.3	5.2	12	12	2.3	.82
21	3.9	17	8.2	6.2	10	6.9	6.0	5.7	9.9	28	2.1	1.3
22	2.6	12	7.6	6.4	9.0	6.9	6.0	5.2	9.5	18	2.0	2.3
23	2.3	9.8	9.1	7.0	8.0	6.6	5.7	5.4	8.3	13	1.8	2.3
24	7.4	8.6	10	8.6	7.0	6.0	5.4	9.1	6.9	8.0	1.8	1.6
25	6.0	7.7	9.1	7.2	6.3	6.0	5.4	8.3	6.0	5.4	2.0	1.2
26	5.7	7.4	7.9	6.8	6.0	6.9	5.2	7.3	5.2	4.2	2.1	1.1
27	5.5	7.4	7.6	6.2	5.6	7.3	16	5.7	4.9	3.9	1.6	.98
28	6.2	7.1	9.4	6.2	5.2	6.3	16	5.4	9.1	10	1.6	.90
29	5.2	6.8	9.7	6.1	---	5.7	12	11	8.0	11	1.5	.90
30	4.8	6.5	8.9	5.7	---	5.4	8.3	13	9.5	7.6	1.5	.98
31	4.3	---	7.4	5.9	---	6.3	---	9.5	---	5.2	1.3	---
TOTAL	105.66	373.6	453.4	411.6	472.2	300.2	348.5	213.1	1385.9	186.3	96.5	46.65
MEAN	3.41	12.5	14.6	13.3	16.9	9.68	11.6	6.87	46.2	6.01	3.11	1.56
MAX	7.4	87	74	84	96	33	31	13	322	28	9.5	5.2
MIN	.96	3.9	6.2	5.6	5.2	5.0	5.2	5.2	4.9	1.7	1.3	.56
CFSM	.80	2.91	3.40	3.10	3.94	2.26	2.70	1.60	10.8	1.40	.73	.36
IN.	.92	3.24	3.93	3.57	4.09	2.60	3.02	1.85	12.01	1.62	.84	.40
CAL YR 1981	TOTAL	2258.22	MEAN	6.19	MAX	117	MIN	.33	CFSM	1.44	IN	19.58
WTR YR 1982	TOTAL	4393.61	MEAN	12.0	MAX	322	MIN	.56	CFSM	2.80	IN	38.09

NORTH RIVER BASIN

01105730 INDIAN HEAD RIVER AT HANOVER, MA

LOCATION.--Lat 42°06'02", long 70°49'23", Plymouth County, Hydrologic Unit 01090002, on right bank at downstream side of Elm Street Bridge, 0.3 mi (0.5 km) upstream from Iron Mine Brook, and 1 mi (2 km) southwest of Hanover.

DRAINAGE AREA.--30.3 mi² (78.5 km²).

PERIOD OF RECORD.--Discharge: July 1966 to current year.

Water-quality records: Water years 1970-71.

Chemical analyses: November 1969 to September 1971.

Water temperatures: November 1969 to September 1971.

GAGE.--Water-stage recorder. Datum of gage is 3.16 ft (0.963 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those below 10 ft³/s (0.3 m³/s), which are good. Some regulation by mills and by Wampatuck, Indian Head, Maquan, and other ponds upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 61.2 ft³/s (1.733 m³/s) 27.43 in/yr (697 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Mar. 18, 1968, gage height, 7.13 ft (2.173 m); minimum, 0.14 ft³/s (0.004 m³/s) Sept. 26, 27, 1980; minimum daily, 0.18 ft³/s (0.005 m³/s) Sept. 27, 29, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 310 ft³/s (8.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Nov. 17	1630	320 9.06	4.06 1.237	Feb. 1	1545	362 10.3	4.25 1.295
Dec. 16	1915	371 10.5	4.29 1.308	Feb. 4	1230	351 9.94	4.20 1.280
Jan. 5	1415	449 12.7	4.60 1.402	June 7	0700	*973 27.6	6.16 1.878

Minimum discharge, 5.1 ft³/s (0.14 m³/s) Oct. 1; minimum daily, 5.2 ft³/s (0.15 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	21	42	107	264	42	66	61	40	62	31	22
2	18	20	124	266	258	42	58	54	147	46	27	42
3	24	18	192	209	236	42	53	52	183	39	25	38
4	19	17	141	221	336	40	150	50	117	35	23	27
5	14	15	127	422	239	135	131	46	255	32	23	19
6	13	21	123	303	165	138	99	42	636	29	24	16
7	14	26	114	194	123	124	74	38	945	26	20	14
8	11	22	105	157	104	151	84	36	737	31	18	12
9	9.4	20	93	123	92	117	90	39	427	23	23	11
10	8.3	18	83	101	86	92	96	67	247	19	51	9.4
11	7.7	17	72	79	74	83	119	57	179	18	47	8.7
12	7.5	16	65	63	69	96	128	46	145	18	33	7.8
13	7.3	15	61	54	67	110	119	41	126	18	28	7.3
14	7.0	14	56	56	64	116	107	37	216	15	24	7.5
15	6.7	55	143	57	61	98	88	34	238	14	21	7.7
16	6.7	174	331	58	81	81	75	32	183	12	18	7.3
17	7.3	304	310	58	101	78	68	30	192	12	16	7.4
18	7.3	253	203	54	77	82	65	28	166	12	16	6.4
19	15	207	163	56	68	73	58	26	131	18	16	6.1
20	16	149	126	55	80	67	53	31	112	91	15	6.7
21	13	152	97	50	91	63	53	36	94	137	13	13
22	11	132	87	48	92	64	49	29	82	124	12	25
23	9.6	101	105	47	78	60	45	27	77	113	12	32
24	29	81	134	62	70	55	42	36	68	73	15	24
25	34	69	115	62	61	53	41	47	58	49	15	17
26	30	60	94	54	50	54	39	38	52	37	15	14
27	35	55	87	48	45	59	112	30	48	30	13	14
28	49	55	113	44	44	50	126	27	47	46	9.9	16
29	39	49	116	42	---	46	102	39	55	80	11	13
30	29	45	107	45	---	45	74	65	87	57	10	14
31	24	---	84	49	---	45	---	49	---	39	10	---
TOTAL	527.0	2201	3813	3244	3176	2401	2464	1270	6090	1355	634.9	465.3
MEAN	17.0	73.4	123	105	113	77.5	82.1	41.0	203	43.7	20.5	15.5
MAX	49	304	331	422	336	151	150	67	945	137	51	42
MIN	5.2	14	42	42	44	40	39	26	40	12	9.9	6.1
CFSM	.56	2.42	4.06	3.47	3.73	2.56	2.71	1.35	6.70	1.44	.68	.51
IN.	.65	2.70	4.68	3.98	3.90	2.95	3.03	1.56	7.48	1.66	.78	.57
CAL YR 1981	TOTAL	15296.0	MEAN	41.9	MAX	509	MIN	1.2	CFSM	1.38	IN	18.78
WTR YR 1982	TOTAL	27641.2	MEAN	75.7	MAX	945	MIN	5.2	CFSM	2.50	IN	33.93

01105870 JONES RIVER AT KINGSTON, MA

LOCATION.--Lat 41°59'27", long 70°44'03", Plymouth County, Hydrologic Unit 01090002, on left bank 100 ft (30 m) downstream from Elm Street Bridge at Kingston and 2.8 mi (4.5 km) upstream from mouth.

DRAINAGE AREA.--15.8 mi² (40.9 km²), excludes 4.09 mi² (10.59 km²) above outlet of Silver Lake, from which flow is diverted for municipal supply of Brockton, Whitman, and Hanson.

PERIOD OF RECORD.--Discharge: August 1966 to current year.

Water-quality records: Water years 1970-71.

Chemical analyses: November 1969 to September 1971.

Water temperatures: November 1969 to September 1971.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 4.76 ft (1.451 m) National Geodetic Vertical Datum of 1929 (levels by Massachusetts Department of Public Works).

REMARKS.--Records fair. Flow regulated by pond upstream. Flow affected at times during springs of 1968-76, 1978-79 by wastage from 4.09 mi² (10.59 km²) upstream from outlet of Silver Lake. Surface flow may be affected by ground water that enters from or moves into adjacent basins. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 30.4 ft³/s (0.861 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 575 ft³/s (16.3 m³/s) Mar. 19, 1968, gage height, 4.60 ft (1.402 m); maximum gage height, 5.88 ft (1.792 m) Feb. 7, 1978, from peak-stage indicator (backwater from tide); minimum daily discharge, 0.59 ft³/s (0.017 m³/s) Aug. 11, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 320 ft³/s (9.06 m³/s) June 7, gage height, 4.56 ft (1.390 m); minimum daily, 5.6 ft³/s (0.16 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	11	16	33	137	23	20	31	16	19	20	33
2	7.3	11	28	59	128	23	21	24	31	19	19	66
3	8.6	11	44	59	121	23	20	23	55	19	18	71
4	7.9	11	45	62	121	24	37	24	42	19	18	59
5	7.3	11	42	100	95	33	45	21	73	19	18	39
6	7.3	11	44	79	73	39	42	19	214	15	21	31
7	7.3	14	45	61	57	44	37	19	296	11	21	24
8	7.3	14	42	45	47	57	37	19	236	11	21	20
9	7.3	11	37	44	44	62	37	19	169	11	22	16
10	7.3	10	33	36	39	48	36	19	123	10	24	14
11	7.9	10	27	30	34	47	36	18	82	9.3	26	13
12	7.3	10	24	24	30	45	39	15	54	8.6	26	12
13	6.7	11	23	22	30	42	40	13	40	8.6	24	12
14	6.7	10	21	22	30	45	40	13	71	8.6	23	12
15	6.7	20	39	22	34	40	36	13	93	7.3	22	12
16	7.3	48	100	23	40	36	31	12	68	6.7	21	12
17	7.3	80	106	24	42	36	27	11	61	6.7	21	12
18	7.3	88	82	26	39	31	27	10	54	6.7	21	13
19	11	71	61	23	39	28	24	10	40	8.6	19	13
20	11	57	44	26	52	27	22	9.3	36	23	18	13
21	10	55	36	26	59	26	22	8.6	31	52	18	13
22	10	40	30	24	50	24	23	8.6	26	57	18	19
23	10	33	30	24	44	24	22	8.6	22	59	18	20
24	15	30	33	28	33	24	20	11	27	45	33	20
25	15	24	33	28	30	22	20	13	23	31	33	18
26	14	23	31	27	27	20	20	11	19	23	31	16
27	14	21	30	24	26	20	37	9.3	19	18	28	17
28	17	20	28	21	23	20	55	8.6	19	20	24	16
29	17	18	30	21	---	19	54	12	19	23	22	14
30	14	17	31	21	---	18	40	18	20	23	21	14
31	12	---	28	36	---	18	---	17	---	22	21	---
TOTAL	300.4	801	1243	1100	1524	988	967	468.0	2079	620.1	690	664
MEAN	9.69	26.7	40.1	35.5	54.4	31.9	32.2	15.1	69.3	20.0	22.3	22.1
MAX	17	88	106	100	137	62	55	31	296	59	33	71
MIN	5.6	10	16	21	23	18	20	8.6	16	6.7	18	12
CAL YR 1981	TOTAL	6840.5	MEAN 18.7	MAX 167	MIN 3.9							
WTR YR 1982	TOTAL	11444.5	MEAN 31.4	MAX 296	MIN 5.6							

HERRING RIVER BASIN

01105880 HERRING RIVER AT NORTH HARWICH, MA

LOCATION.--Lat 41°42'00", long 70°06'27", Barnstable County, Hydrologic Unit 01090002, on left bank 30 ft (9 m) upstream from bridge on U.S. Route 6, 0.8 mi (1.3 km) northeast of North Harwich, 1.1 mi (1.8 km) downstream from Hinckleys Pond, and 2 mi (3 km) northwest of Harwich.

DRAINAGE AREA.--About 9.4 mi² (24.3 km²).

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 10 ft (3 m), from topographic map.

REMARKS.--Records poor. Shifting-control method used Oct. 1 to Sept. 30. Flow regulated by many ponds (some with no outlets) upstream. Surface flow may be affected by ground water that enters from or moves into adjacent basins. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 9.62 ft³/s (0.272 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59 ft³/s (1.67 m³/s) Sept. 3, 1972, gage height, 4.43 ft (1.350 m), from rating curve extended above 23 ft³/s (0.65 m³/s) and Aug. 7, 1978, gage height, 3.56 ft (1.085 m), from rating curve extended above 18 ft³/s (0.51 m³/s); maximum gage height, 4.88 ft (1.487 m) June 6, 1967; minimum discharge, 0.32 ft³/s (0.009 m³/s) Sept. 13-15, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40 ft³/s (1.13 m³/s) Sept. 2, gage height, 3.53 ft (1.076 m); maximum gage height, 3.79 (1.155 m) June 18; minimum discharge, 1.4 ft³/s (0.040 m³/s) Nov. 3-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	3.6	2.3	4.2	7.0	4.0	7.2	6.7	12	17	9.2	12
2	3.8	3.2	3.2	5.5	6.7	4.8	7.2	6.7	12	17	5.7	27
3	4.2	2.2	4.0	5.3	6.5	5.3	3.2	6.7	11	16	5.0	23
4	3.8	1.4	4.0	5.3	6.5	4.8	3.8	6.7	9.8	14	5.0	17
5	6.2	1.4	4.2	5.7	6.5	6.2	3.8	7.0	8.3	14	4.6	13
6	5.0	1.6	7.8	4.6	5.7	6.5	5.3	7.2	18	14	4.0	12
7	4.2	1.6	7.2	4.4	4.8	7.8	7.2	7.2	21	14	3.6	10
8	3.6	1.5	6.2	4.4	4.8	8.3	6.5	7.2	21	13	3.4	7.8
9	2.7	1.4	6.2	4.4	4.6	7.8	5.3	7.2	17	12	6.0	7.8
10	2.3	1.4	6.2	5.0	5.5	10	4.8	7.8	14	10	11	7.2
11	2.2	1.4	6.0	5.0	5.0	14	5.0	7.8	13	11	8.9	6.2
12	2.2	1.4	6.0	5.0	5.3	13	7.5	7.2	12	11	9.2	6.5
13	1.8	1.4	6.0	4.8	5.5	13	11	7.2	10	8.3	9.5	6.7
14	1.6	1.5	5.5	7.0	5.7	13	10	7.0	15	3.6	8.6	6.0
15	1.6	1.8	7.0	8.0	5.7	12	9.5	7.0	16	5.0	8.0	6.2
16	1.6	2.5	9.2	8.0	5.7	12	9.8	6.7	14	5.7	7.0	6.5
17	1.5	2.3	8.0	8.3	4.6	12	11	6.7	14	7.2	7.0	6.2
18	1.5	2.5	7.2	7.8	2.5	8.3	9.8	6.7	25	7.5	6.7	6.0
19	2.3	2.3	5.7	7.5	2.5	7.0	9.2	6.7	31	8.6	6.5	6.2
20	2.0	2.5	4.8	8.0	6.0	6.7	8.6	6.7	19	11	7.2	6.0
21	2.0	2.8	4.6	7.0	5.7	6.7	8.0	7.2	12	8.6	10	6.2
22	2.5	2.5	4.6	5.0	8.0	6.7	7.8	7.2	13	4.2	11	6.5
23	2.5	2.2	4.6	5.5	6.5	6.2	7.8	7.2	12	5.0	8.6	6.5
24	4.2	1.9	4.8	6.7	5.3	5.5	7.8	8.3	11	5.3	8.9	5.7
25	4.4	2.0	4.6	6.2	4.8	4.6	7.2	8.9	11	6.2	7.8	5.5
26	4.8	2.2	4.2	6.0	4.6	4.8	6.5	9.2	11	5.7	6.7	5.5
27	5.5	2.2	4.6	5.5	4.6	4.2	8.6	9.2	11	5.3	6.2	5.5
28	5.3	2.2	4.8	5.7	4.8	3.2	10	9.5	13	7.0	5.7	5.5
29	4.4	2.2	4.8	6.0	---	3.0	9.5	13	16	8.3	4.6	5.5
30	4.2	2.3	4.8	5.7	---	2.8	8.0	19	19	7.5	9.5	5.5
31	3.8	---	4.0	5.5	---	2.7	---	13	---	7.5	13	---
TOTAL	99.7	61.4	167.1	183.0	151.4	226.9	226.9	251.8	442.1	290.5	228.1	257.2
MEAN	3.22	2.05	5.39	5.90	5.41	7.32	7.56	8.12	14.7	9.37	7.36	8.57
MAX	6.2	3.6	9.2	8.3	8.0	14	11	19	31	17	13	27
MIN	1.5	1.4	2.3	4.2	2.5	2.7	3.2	6.7	8.3	3.6	3.4	5.5

CAL YR 1981 TOTAL 1391.33 MEAN 3.81 MAX 12 MIN .32
WTR YR 1982 TOTAL 2586.10 MEAN 7.09 MAX 31 MIN 1.4

01108500 WADING RIVER AT WEST MANSFIELD, MA

LOCATION.--Lat 42°00'00", long 71°15'38", Bristol County, Hydrologic Unit 01090004, on right bank 200 ft (60 m) downstream from Balcolm Street Bridge at West Mansfield, 2 mi (3 km) upstream from Hodges Brook, and 3 mi (5 km) southwest of Mansfield.

DRAINAGE AREA.--19.2 mi² (49.7 km²).

PERIOD OF RECORD.--Discharge: October 1953 to current year.
Water-quality records: Water years 1967-68.

REVISED RECORDS.--WSP 1621: 1953-58 (monthly runoff). WDR MA-NH-RI-VT-71-1: 1970.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 120.85 ft (36.835 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for period of no gage-height record, Jan. 9 to Feb. 16, which are poor. Flow regulated by Lake Mirimichi and other lakes and reservoirs upstream. Diversion upstream for municipal supply of Attleboro and small diversions to and from basin for other municipal supplies. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--29 years, 32.3 ft³/s (0.915 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 541 ft³/s (15.3 m³/s) Mar. 19, 1968, gage height, 6.60 ft (2.012 m); no flow Oct. 22-24, 1957, Sept. 12, 1981 (caused by temporary storage upstream).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 227 ft³/s (6.43 m³/s) June 7, gage height, 5.40 ft (1.646 m); minimum, 0.34 ft³/s (0.010 m³/s) Sept. 23; minimum daily, 1.4 ft³/s (0.040 m³/s) Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	5.2	11	56	100	26	37	41	24	43	17	7.1
2	3.0	5.2	35	83	120	27	36	37	51	38	14	17
3	7.3	5.3	63	83	140	29	36	34	76	34	10	18
4	5.7	4.1	65	112	150	28	55	35	65	31	8.1	14
5	4.3	3.3	62	196	160	45	57	34	106	29	8.5	9.9
6	3.8	3.0	78	209	130	52	54	32	185	26	12	7.3
7	3.8	5.5	78	195	110	52	60	30	225	24	11	6.5
8	4.1	5.3	68	183	90	57	57	29	217	23	10	6.7
9	3.7	5.4	61	150	75	55	51	29	187	22	14	6.7
10	3.4	8.8	54	115	70	52	52	32	158	20	23	9.9
11	3.3	8.3	48	95	64	48	55	34	133	15	23	5.3
12	3.3	4.1	44	80	58	48	57	33	110	12	21	3.9
13	3.3	2.4	41	65	52	48	55	33	97	10	19	3.5
14	3.3	1.7	39	54	47	49	53	30	113	8.5	17	4.3
15	3.4	2.6	54	50	44	49	51	28	121	6.3	15	4.3
16	3.5	8.8	84	49	47	47	49	27	108	4.8	13	3.1
17	3.6	15	90	47	49	47	48	26	97	4.2	11	3.1
18	3.6	16	89	45	48	47	47	24	93	3.7	8.3	3.1
19	4.3	14	84	43	45	45	46	22	85	3.5	6.3	3.1
20	8.1	13	74	40	45	45	44	22	80	9.0	5.1	3.2
21	5.7	14	68	38	45	43	40	24	73	26	4.8	5.0
22	4.8	12	63	36	44	41	37	22	67	32	4.5	7.1
23	4.8	9.8	68	36	42	38	34	21	62	34	3.9	3.5
24	6.3	8.3	70	40	41	34	32	24	56	31	4.5	1.4
25	12	8.0	64	43	39	33	31	27	51	27	5.1	2.1
26	8.7	8.3	59	41	34	36	31	26	47	24	5.5	2.5
27	10	9.4	57	37	29	40	41	24	44	19	5.0	2.9
28	4.6	11	58	34	28	38	46	23	45	20	4.5	3.6
29	8.9	12	58	32	---	36	48	22	44	24	4.2	3.1
30	7.8	12	55	31	---	34	46	24	45	24	3.5	3.7
31	6.3	---	51	32	---	34	---	24	---	21	2.9	---
TOTAL	161.2	241.8	1893	2350	1946	1303	1386	873	2865	649.0	314.7	174.9
MEAN	5.20	8.06	61.1	75.8	69.5	42.0	46.2	28.2	95.5	20.9	10.2	5.83
MAX	12	16	90	209	160	57	60	41	225	43	23	18
MIN	2.5	1.7	11	31	28	26	31	21	24	3.5	2.9	1.4
CAL YR 1981	TOTAL	5952.55	MEAN	16.3	MAX	92	MIN	.47				
WTR YR 1982	TOTAL	14157.60	MEAN	38.8	MAX	225	MIN	1.4				

01109000 WADING RIVER NEAR NORTON, MA

LOCATION.--Lat 41°56'51", long 71°10'38", Bristol County, Hydrologic Unit 01090004, on left bank 200 ft (60 m) downstream from bridge on State Highway 140, 0.9 mi (1.4 km) upstream from confluence with Rumford River, and 1.5 mi (2.4 km) southeast of Norton.

DRAINAGE AREA.--42.4 mi² (109.8 km²).

PERIOD OF RECORD.--Discharge: June 1925 to current year.
Water-quality records: Water year 1967-68.

REVISED RECORDS.--WSP 871: 1938. WSP 1301: 1929-33(M). WSP 1621: 1925-58 (monthly runoff).

GAGE.--Water-stage recorder. Datum of gage is 55.14 ft (15.127 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gage at same site at datum 0.62 ft (0.189 m) higher and Oct. 1, 1930, to May 5, 1933, at same site at present datum.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 5, Feb. 1-10, June 6-9, and period of backwater from aquatic vegetation, Aug. 7 to Sept. 30, which are fair. Flow regulated to some extent by Lake Mirimichi and other lakes and reservoirs upstream. Diversion upstream for municipal supply of Attleboro and small diversions to and from basin for other municipal supplies. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--57 years, 72.8 ft³/s (2.062 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,460 ft³/s (41.3 m³/s) Mar. 19, 1968, gage height, 11.47 ft (3.496 m); minimum, 0.3 ft³/s (0.008 m³/s) Sept. 10, 1926.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 280 ft³/s (7.9 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	--	516 14.6	a10.06 3.066	June 7	--	*640 18	-- --
Feb. 4	--	400 11	-- --				

a From high water mark.

Minimum discharge, 6.0 ft³/s (0.17 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	14	30	126	240	64	80	87	57	75	34	32
2	12	13	68	246	300	63	81	78	123	63	30	54
3	21	12	165	225	350	65	76	75	230	55	20	57
4	22	12	148	247	370	64	136	72	168	49	7.9	47
5	16	11	127	480	330	124	165	64	276	44	17	37
6	14	14	128	430	280	155	135	58	500	39	26	31
7	12	19	129	370	250	154	117	61	600	35	25	27
8	10	18	154	336	210	171	132	57	460	31	22	24
9	8.5	16	134	300	180	154	128	53	360	30	28	22
10	7.1	14	115	250	160	131	121	58	304	27	76	20
11	6.8	15	100	210	150	123	136	65	260	24	79	19
12	7.1	15	89	180	130	123	141	61	221	23	55	17
13	7.1	13	81	150	118	123	138	57	204	21	45	15
14	7.3	12	70	130	110	124	127	55	265	19	41	14
15	7.1	15	112	115	100	117	113	51	274	16	36	13
16	7.9	30	257	110	111	108	99	47	232	15	31	14
17	8.9	68	294	105	126	107	98	44	204	14	32	13
18	7.9	84	242	100	115	105	95	42	183	13	37	12
19	13	73	209	95	103	103	88	39	167	12	32	11
20	15	62	171	90	108	99	82	39	153	21	27	11
21	14	66	150	84	120	92	82	42	133	42	24	13
22	12	58	128	78	114	89	77	40	114	61	21	19
23	11	48	132	78	102	85	71	39	100	84	20	22
24	19	41	171	102	96	81	66	40	88	69	28	21
25	23	37	166	97	88	74	63	55	76	54	29	15
26	23	34	138	92	75	77	61	57	68	44	28	13
27	24	33	123	85	74	89	99	50	62	38	25	14
28	27	33	129	79	67	83	126	44	64	39	23	16
29	22	33	134	72	---	77	114	50	71	47	21	16
30	18	31	131	67	---	74	100	64	81	45	19	16
31	16	---	110	69	---	72	---	62	---	38	16	---
TOTAL	425.7	944	4335	5198	4577	3170	3147	1706	6098	1187	954.9	655
MEAN	13.7	31.5	140	168	163	102	105	55.0	203	38.3	30.8	21.8
MAX	27	84	294	480	370	171	165	87	600	84	79	57
MIN	6.0	11	30	67	67	63	61	39	57	12	7.9	11

CAL YR 1981 TOTAL 15289.4 MEAN 41.9 MAX 294 MIN 4.7
WTR YR 1982 TOTAL 32397.6 MEAN 88.8 MAX 600 MIN 6.0

TAUNTON RIVER BASIN

53

01109060 THREEMILE RIVER AT NORTH DIGHTON, MA

LOCATION.--Lat 41°51'58", long 71°07'24", Bristol County, Hydrologic Unit 01090004, on right bank 800 ft (250 m) downstream from Warner Boulevard at North Dighton and 1.4 mi (2.3 km) upstream from mouth.

DRAINAGE AREA.--83.8 mi² (217.0 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 11.38 ft (3.469 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Lake Mirimichi and other lakes and reservoirs upstream. Diversions to and from basin upstream for municipal supplies may be compensating. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 170 ft³/s (4.814 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) Mar. 19, 1968, gage height, 8.30 ft (2.530 m); minimum, 5.1 ft³/s (0.14 m³/s) Sept. 8, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 6	0730	1010 28.6	5.66 1.725	June 7	1730	*1330 37.7	6.31 1.923
Feb. 5	1230	790 22.4	5.17 1.576				

Minimum discharge, 13 ft³/s (0.37 m³/s) Oct. 11-16, 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	32	75	248	451	140	166	203	115	173	91	90
2	36	29	146	324	512	138	166	177	225	158	80	162
3	40	27	205	407	651	137	173	158	336	137	70	154
4	40	25	246	469	702	133	240	148	448	120	57	131
5	36	23	243	707	755	225	276	140	548	106	47	106
6	30	28	225	975	634	267	321	127	884	94	66	88
7	28	34	200	830	523	324	282	117	1270	84	66	77
8	22	35	220	698	441	340	265	114	1220	77	60	69
9	19	33	230	590	374	340	262	107	989	72	69	64
10	17	29	217	487	336	311	265	112	790	65	126	60
11	14	27	198	444	299	276	273	120	626	59	162	57
12	13	26	182	374	276	259	287	120	508	56	160	53
13	13	25	166	311	262	256	293	115	424	56	133	51
14	13	25	152	270	227	256	282	109	483	51	124	49
15	13	32	207	251	220	251	262	103	556	48	104	47
16	14	59	343	245	235	240	238	97	541	45	88	46
17	14	101	523	240	238	227	215	90	455	42	78	45
18	14	131	515	220	240	225	205	85	387	41	94	43
19	28	135	430	210	225	225	195	81	343	55	90	41
20	28	124	336	193	227	217	182	82	314	98	77	41
21	28	135	305	184	235	207	171	94	285	127	68	50
22	24	131	282	175	240	198	160	87	262	146	60	59
23	20	115	265	168	225	189	152	81	238	173	58	73
24	43	101	285	186	210	177	142	84	210	173	97	68
25	47	92	299	189	193	164	131	103	186	150	94	57
26	49	85	279	184	173	162	124	107	162	122	90	49
27	51	81	256	173	156	168	198	97	146	101	77	50
28	58	80	248	160	150	179	232	87	154	104	69	52
29	55	78	251	152	---	175	256	100	158	115	62	53
30	44	77	254	144	---	162	232	126	175	111	56	52
31	36	---	240	154	---	156	---	122	---	101	52	---
TOTAL	903	1955	8023	10362	9410	6724	6646	3493	13438	3060	2625	2037
MEAN	29.1	65.2	259	334	336	217	222	113	448	98.7	84.7	67.9
MAX	58	135	523	975	755	340	321	203	1270	173	162	162
MIN	13	23	75	144	150	133	124	81	115	41	47	41
CAL YR 1981	TOTAL	31133.8	MEAN	85.3	MAX	523	MIN	7.8				
WTR YR 1982	TOTAL	68676.0	MEAN	188	MAX	1270	MIN	13				

TAUNTON RIVER BASIN

01109070 SEGREGANSET RIVER NEAR DIGHTON, MA

LOCATION.--Lat 41°50'25", long 71°08'36", Bristol County, Hydrologic Unit 01090004, on left bank 50 ft (15 m) upstream from twin culverts on Center Street and 1.8 mi (2.9 km) northwest of Dighton.

DRAINAGE AREA.--10.6 mi² (27.5 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 30 ft (9 m), from topographic map.

REMARKS.--Records good. Occasional regulation by ponds upstream. Diversion upstream for Dighton Water District. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 22.3 ft³/s (0.632 m³/s), 28.57 in/yr (726 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s (24.6 m³/s) Mar. 18, 1968, gage height, 7.51 ft (2.289 m); no flow at times in water years 1966, 1969, 1974, 1980, 1981.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 170 ft³/s (4.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 16	1445	210 5.95	4.35 1.326	Feb. 4	0415	172 4.87	4.07 1.241
Jan. 5	1145	239 6.77	4.48 1.366	June 3	0745	172 4.87	4.09 1.247
Feb. 1	1430	*422 12.0	5.43 1.655	June 7	0215	324 9.18	4.98 1.518

Minimum discharge not determined; minimum daily, 0.80 ft³/s (0.023 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.80	4.7	6.9	39	267	12	21	26	19	20	11	17
2	2.0	4.1	40	103	265	14	21	21	84	14	7.7	69
3	4.0	3.4	84	88	144	16	19	18	151	9.4	6.0	69
4	3.0	3.1	55	91	165	15	69	16	73	7.4	5.5	40
5	2.3	2.9	34	220	103	46	74	15	143	6.0	5.2	23
6	2.0	4.5	26	135	62	67	44	13	295	5.0	8.7	15
7	2.3	6.3	27	75	49	56	32	12	274	3.8	8.0	11
8	2.0	5.0	26	53	38	64	31	11	143	3.4	6.3	9.0
9	1.7	4.1	25	42	29	49	31	10	76	2.9	8.7	7.4
10	1.3	3.4	22	33	28	36	33	11	47	2.4	27	6.6
11	1.2	3.2	20	24	26	32	45	11	32	2.0	30	5.7
12	.98	2.9	19	17	21	32	53	10	25	1.8	23	5.0
13	.98	2.4	17	13	19	31	46	10	20	1.8	16	4.5
14	.98	2.4	16	12	18	31	36	9.0	66	1.7	19	3.8
15	.98	4.1	49	13	17	29	29	8.0	104	1.4	27	3.6
16	.98	16	184	14	25	24	23	7.1	62	1.2	19	3.4
17	.90	32	150	14	31	23	20	6.6	40	.98	12	3.2
18	.90	39	77	15	29	26	16	5.7	31	.90	9.0	2.9
19	2.1	35	50	17	24	28	17	5.2	25	5.5	7.7	2.6
20	3.2	28	40	18	29	26	16	5.5	22	66	6.9	2.6
21	3.1	27	26	18	36	23	17	9.0	19	93	5.5	5.5
22	2.4	24	22	18	34	21	11	8.7	17	74	4.1	9.0
23	2.0	18	28	19	28	19	11	7.4	14	79	4.3	15
24	8.0	14	47	25	23	17	11	7.7	14	51	26	12
25	9.7	11	48	26	19	16	12	14	11	29	26	8.7
26	8.7	9.7	37	28	15	16	12	15	9.0	17	26	6.9
27	10	8.7	31	28	13	19	49	11	7.7	11	19	6.6
28	12	8.7	32	25	13	18	70	8.0	9.7	13	13	6.3
29	11	7.7	36	21	---	16	51	14	16	26	9.4	5.7
30	8.0	7.1	36	19	---	15	35	27	22	22	7.1	5.2
31	6.0	---	31	21	---	14	---	26	---	15	6.0	---
TOTAL	115.50	342.4	1341.9	1284	1570	851	955	378.9	1871.4	587.58	410.1	385.2
MEAN	3.73	11.4	43.3	41.4	56.1	27.5	31.8	12.2	62.4	19.0	13.2	12.8
MAX	12	39	184	220	267	67	74	27	295	93	30	69
MIN	.80	2.4	6.9	12	13	12	11	5.2	7.7	.90	4.1	2.6
CFSM	.35	1.08	4.09	3.91	5.29	2.59	3.00	1.15	5.89	1.79	1.25	1.21
IN.	.41	1.20	4.71	4.51	5.51	2.99	3.35	1.33	6.57	2.06	1.44	1.35
CAL YR 1981	TOTAL	4317.35	MEAN	11.8	MAX	184	MIN	.01	CFSM	1.11	IN	15.15
WTR YR 1982	TOTAL	10092.98	MEAN	27.7	MAX	295	MIN	.80	CFSM	2.61	IN	35.42

01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA

LOCATION.--Lat 42°13'49", long 71°42'41", Worcester County, Hydrologic Unit 01090003, on right bank 800 ft (250 m) downstream from dam at outlet of Hovey Pond at North Grafton and 0.3 mi (0.5 km) upstream from Bummett Brook.

DRAINAGE AREA.--25.5 mi² (66.0 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 335 ft (102 m), from topographic map. Prior to Dec. 7, 1939, staff gage at same site and datum.

REMARKS.--Records good except those for period of no gage-height record, Nov. 21 to Jan. 11, which are poor. Some regulation by Lake Quinsigamond 2.3 mi (3.7 km) upstream and by ponds upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 41.0 ft³/s (1.161 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 820 ft³/s (23.2 m³/s) Aug. 20, 1955, gage height, 5.15 ft (1.570 m); no flow Aug. 6-9, 22, 1966 (caused by unusual regulation), Sept. 13-17, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 429 ft³/s (12.1 m³/s) June 7, gage height, 3.72 ft (1.134 m); minimum daily, 3.2 ft³/s (0.091 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	32	40	56	67	35	65	53	41	54	22	10
2	25	30	53	70	72	37	63	48	99	47	19	13
3	28	31	81	98	99	35	59	46	132	41	17	12
4	25	29	92	110	158	34	92	48	121	37	15	12
5	21	27	81	190	155	41	90	50	183	34	14	10
6	19	26	77	210	139	45	85	48	327	31	13	9.6
7	20	27	64	190	121	49	91	46	420	28	11	9.9
8	18	25	61	145	105	65	82	44	378	27	10	8.2
9	16	23	59	125	95	60	74	43	307	26	25	7.7
10	14	21	55	110	87	57	72	45	241	23	49	7.5
11	13	21	51	100	76	55	72	43	196	21	44	6.6
12	13	20	48	87	69	59	77	39	166	19	36	5.6
13	12	18	45	78	64	64	75	37	141	19	31	6.2
14	11	18	41	76	60	70	79	35	154	17	27	5.8
15	10	20	50	72	56	67	73	33	143	16	22	5.4
16	10	31	70	65	58	65	70	30	128	15	19	5.3
17	10	50	91	63	60	69	69	29	130	14	16	5.2
18	9.3	60	100	58	57	70	74	27	117	13	15	3.6
19	20	64	82	54	55	70	71	25	103	13	13	3.2
20	18	61	70	52	54	68	64	26	102	23	12	4.0
21	16	65	63	49	53	67	62	27	90	46	12	8.3
22	15	61	60	47	51	69	60	25	87	39	10	11
23	15	53	69	46	49	66	56	25	80	33	8.7	12
24	26	46	71	48	47	62	52	31	72	28	8.7	12
25	25	41	69	45	45	59	49	34	64	24	9.3	11
26	32	38	65	41	41	66	46	32	58	21	11	9.6
27	36	36	61	39	38	72	58	30	54	20	8.8	11
28	45	34	57	37	37	66	61	28	54	25	8.4	16
29	40	32	54	36	---	59	61	37	52	40	7.9	15
30	38	30	53	34	---	55	63	46	58	34	6.2	14
31	36	---	51	35	---	54	---	44	---	28	5.6	---
TOTAL	651.3	1070	1984	2466	2068	1810	2065	1154	4298	856	526.6	270.7
MEAN	21.0	35.7	64.0	79.5	73.9	58.4	68.8	37.2	143	27.6	17.0	9.02
MAX	45	65	100	210	158	72	92	53	420	54	49	16
MIN	9.3	18	40	34	37	34	46	25	41	13	5.6	3.2
CAL YR 1981	TOTAL	10993.1	MEAN	30.1	MAX	203	MIN	1.6				
WTR YR 1982	TOTAL	19219.6	MEAN	52.7	MAX	420	MIN	3.2				

BLACKSTONE RIVER BASIN

0111200 WEST RIVER BELOW WEST HILL DAM, NEAR UXBRIDGE, MA

LOCATION.--Lat 42°06'17", long 71°36'28", Worcester County, Hydrologic Unit 01090003, on right bank 250 ft (76 m) downstream from West Hill Dam, 2.2 mi (3.5 km) northeast of Uxbridge, and 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--27.9 mi² (72.3 km²).

PERIOD OF RECORD.--March 1962 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 234.35 ft (71.430 m) Corps of Engineers datum.

REMARKS.--Records fair October to March, good thereafter. Flow regulated by West Hill Reservoir, usable capacity, 542,000,000 ft³ (15,350,000 m³). See table below for figures of monthend contents. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 46.6 ft³/s (1.320 m³/s), 22.68 in/yr (576 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 664 ft³/s (18.8 m³/s) June 10, 1982, gage height, 4.44 ft (1.353 m); no flow for part of Aug. 17, 1967, caused by unusual regulation; minimum daily discharge, 1.1 ft³/s (0.031 m³/s) Sept. 12, 1963, Aug. 12, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 664 ft³/s (18.8 m³/s) June 10, gage height, 4.44 ft (1.353 m); minimum, 4.2 ft³/s (0.12 m³/s) June 2, 3; minimum daily, 5.2 ft³/s (0.15 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	43	43	80	92	51	81	68	38	50	18	7.9
2	12	34	67	104	127	50	79	58	33	41	16	13
3	25	30	100	127	153	50	45	51	69	35	14	13
4	23	28	113	99	177	47	36	45	193	32	13	11
5	18	26	117	20	260	58	124	43	92	29	12	8.9
6	16	25	113	185	294	65	166	42	7.6	26	12	7.9
7	15	25	107	373	269	65	154	40	9.0	24	11	7.1
8	15	25	103	414	299	91	138	38	59	21	10	6.9
9	13	24	96	358	225	104	95	33	324	19	12	6.5
10	11	22	90	320	125	97	82	35	556	17	25	5.6
11	9.5	21	83	289	112	88	83	38	550	16	26	5.6
12	8.8	21	78	220	109	89	83	36	511	14	21	5.6
13	8.5	20	76	128	104	99	132	34	341	14	18	5.5
14	8.5	19	69	103	100	109	149	31	321	13	16	5.4
15	8.5	19	65	100	93	162	126	30	467	13	14	5.4
16	8.4	34	94	100	93	166	105	28	406	12	12	5.4
17	8.2	73	131	98	99	139	91	26	294	11	11	5.4
18	7.6	90	141	97	100	132	84	25	424	11	10	5.4
19	14	97	140	94	93	124	84	21	460	11	11	5.4
20	22	98	135	94	88	124	78	20	386	15	11	5.2
21	21	98	131	86	86	120	71	20	271	31	9.9	5.7
22	17	98	99	78	82	115	63	20	142	31	8.9	7.1
23	15	95	99	76	77	113	61	20	106	26	8.1	7.6
24	25	87	116	81	73	104	60	23	73	21	7.5	7.6
25	35	76	114	76	68	95	54	30	66	18	7.9	7.1
26	36	65	108	69	59	78	50	32	64	16	8.5	6.2
27	47	60	104	63	56	81	57	28	57	14	8.5	5.6
28	63	57	98	60	55	84	73	24	51	19	8.0	5.6
29	69	54	94	61	---	86	76	24	50	31	7.2	5.6
30	62	47	87	61	---	85	75	34	51	28	6.8	5.6
31	53	---	78	62	---	82	---	38	---	22	6.2	---
TOTAL	701.4	1511	3089	4176	3568	2953	2655	1035	6471.6	681	380.5	205.8
MEAN	22.6	50.4	99.6	135	127	95.3	88.5	33.4	216	22.0	12.3	6.86
MAX	69	98	141	414	299	166	166	68	556	50	26	13
MIN	6.4	19	43	20	55	47	36	20	7.6	11	6.2	5.2
(†)	3.4	3.0	5.8	5.8	4.1	14.6	5.8	4.1	6.5	2.2	1.1	.9
MEAN†	23.9	50.2	101	135	127	99.2	85.1	32.7	217	20.4	11.9	6.78
CFSM†	.86	1.80	3.62	4.84	4.55	3.56	3.05	1.17	7.78	.73	.43	.24
IN†	.99	2.01	4.16	5.57	4.73	4.10	3.40	1.35	8.67	.84	.49	.27

CAL YR 1981 TOTAL 14847.2 MEAN 40.7 MAX 367 MIN 2.0 MEAN† 40.8 CFSM† 1.46 IN† 19.86
WTR YR 1982 TOTAL 27427.3 MEAN 75.1 MAX 556 MIN 5.2 MEAN† 75.2 CFSM† 2.70 IN† 36.58

† Monthend contents, in millions of cubic feet, in West Hill Reservoir; records furnished by Corps of Engineers.
‡ Adjusted for change in contents in West Hill Reservoir.

BLACKSTONE RIVER BASIN

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01111230 BLACKSTONE RIVER AT MILLVILLE, MA
(National stream-quality accounting network station)

LOCATION.--Lat 42°01'16", long 71°34'04", Worcester County, Hydrologic Unit 01090003, on left bank 400 ft (100 m) above railroad bridge, 0.8 mi (1.3 km) southeast of Millville, and 1.4 mi (2.3 km) upstream from Branch River.

DRAINAGE AREA.--277 mi² (717 km²).

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to December 1980.

pH: July 1969 to December 1980.

WATER TEMPERATURES: July 1969 to December 1980.

DISSOLVED OXYGEN: July 1969 to December 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT 14...	1030	150	295	6.6	8.0	2.5	--	8.2	70	--
NOV 03...	0930	696	221	6.2	9.5	2.5	--	8.9	78	--
DEC 15...	1435	1090	210	6.4	.5	3.5	--	14.4	101	35
JAN 19...	1015	610	225	7.0	.5	--	--	13.6	97	--
FEB 09...	1045	1350	160	5.9	.5	--	--	13.1	94	--
MAR 09...	1000	778	240	7.3	1.0	4.1	15	13.9	98	48
APR 13...	1015	1060	243	6.5	6.0	--	--	12.3	100	--
MAY 11...	0900	418	250	6.0	15.0	2.7	--	6.8	69	--
JUN 10...	0930	2280	137	6.9	16.0	4.1	--	8.5	88	16
15...	1330	1880	134	5.9	16.0	3.1	--	10.4	--	--
JUL 13...	0845	238	258	6.6	23.0	1.8	--	6.7	80	--
AUG 11...	0845	370	192	6.9	--	--	--	6.1	--	--
31...	1015	83	348	7.1	17.5	1.6	16	8.4	88	110

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM AD- SORP- TION RATIO	PERCENT SODIUM
OCT 14...	1400	130	190	--	--	--	--	--	--	--
NOV 03...	8200	570	230	38	16	12	2.0	20	1.5	51
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 19...	12000	2000	2100	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 09...	12000	630	390	30	18	9.3	1.6	29	2.4	66
APR 13...	--	--	--	--	--	--	--	--	--	--
MAY 11...	13000	86	160	32	15	10	1.7	23	1.8	59
JUN 10...	--	--	--	--	--	--	--	--	--	--
15...	--	290	240	25	13	7.8	1.4	17	1.5	58
JUL 13...	2500	120	2500	45	26	14	2.5	33	2.2	60
AUG 11...	--	--	--	--	--	--	--	--	--	--
31...	1700	1030	2100	59	38	19	2.8	39	2.3	57

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 14...	--	--	--	--	--	--	2.8	.110	2.9	.720
NOV 03...	2.3	22	17	35	--	--	1.6	.060	1.7	.310
DEC 15...	--	--	--	--	6	133	.70	.010	.71	.770
JAN 19...	--	--	--	--	--	--	--	.010	--	.990
FEB 09...	--	--	--	--	--	--	.58	.010	.59	.490
MAR 09...	2.0	12	17	45	6	150	--	.040	--	.630
APR 13...	--	--	--	--	--	--	.60	.020	.62	.690
MAY 11...	2.7	17	10	28	--	--	--	.110	--	.790
JUN 10...	--	--	--	--	6	93	.43	.020	.45	.230
JUN 15...	1.5	12	13	25	--	--	--	--	--	--
JUL 13...	2.7	19	19	44	--	--	--	.090	--	.090
AUG 11...	--	--	--	--	--	--	2.8	.100	2.9	.570
AUG 31...	4.9	21	31	60	1	232	--	--	--	--

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS PO4)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 14...	.78	1.50	4.4	19	.360	1.1	.310	--	--
NOV 03...	.50	.81	2.5	11	.220	.67	.140	--	--
DEC 15...	.53	1.30	2.0	8.9	.090	.28	.080	--	--
JAN 19...	.00	.91	--	--	.120	.37	.080	--	--
FEB 09...	23	23.0	24	104	.100	.31	.060	--	--
MAR 09...	.13	.76	--	--	.140	.43	.120	1	1
APR 13...	1.3	2.00	2.6	12	.160	.49	.090	--	--
MAY 11...	1.0	1.80	--	--	.240	.74	.120	--	--
JUN 10...	.87	1.10	1.6	6.9	.110	.34	.050	--	--
JUN 15...	--	--	--	--	--	--	--	--	--
JUL 13...	1.7	1.80	--	--	.350	1.1	.270	--	--
AUG 11...	.23	.80	3.7	16	.340	1.0	.230	--	--
AUG 31...	--	.70	--	--	.390	1.2	--	3	1

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
NOV 03...	2	4	10	26	830	8	100	.1	32	<1	<1	100
MAR 09...	2	1	10	19	730	12	110	.1	13	<1	<1	80
JUN 15...	2	1	20	26	820	8	90	<.1	17	<1	<1	70
AUG 31...	4	3	20	19	490	4	30	<.1	40	<1	<1	60

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
AUG 31...	<.10	57	<1.0	<.10	<.01	<.1	<.10	4.0	<.01	2.5	<.01	<.1

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
AUG 31...	<.01	<.1	<.01	2.7	<.01	<.1	<.01	<.1	<.01	<.1	<.01

DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
AUG 31...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.10	<1.00	<1	<10

BLACKSTONE RIVER BASIN

01111300 NIPMUC RIVER NEAR HARRISVILLE, RI

LOCATION.--Lat 41°58'52", long 71°41'11", Providence County, Hydrologic Unit 01090003, on left bank 1.0 mi (1.6 km) upstream from mouth and 1.2 mi (1.9 km) northwest of Harrisville.

DRAINAGE AREA.--16.0 mi² (41.4 km²).

PERIOD OF RECORD.--Discharge: March 1964 to current year.
Water-quality records: Water year 1968.

GAGE.--Water-stage recorder. Altitude of gage is 340 ft (104 m), from topographic map.

REMARKS.--Records fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 30.0 ft³/s (0.850 m³/s), 25.46 in/yr (647 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,840 ft³/s (52.1 m³/s) Jan. 25, 1979, gage height, 8.53 ft (2.600 m), from rating curve extended above 530 ft³/s (15 m³/s); minimum, 0.09 ft³/s (0.003 m³/s) Sept. 10, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 270 ft³/s (7.6 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 5	0130	793	22.5	6.99	2.131	June 6	1430	*1190	33.7	*7.15	2.179
June 5	1200	539	15.3	6.38	1.945						

Minimum discharge, 1.3 ft³/s (0.037 m³/s) Sept. 11-21, 27, 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	16	18	54	100	25	56	32	16	21	4.1	4.1
2	17	14	116	125	120	22	44	29	155	16	3.6	6.6
3	22	13	109	66	120	24	43	27	106	14	3.6	5.5
4	13	12	61	188	220	20	154	27	51	13	2.8	4.4
5	9.6	11	45	445	150	45	94	26	338	11	2.8	3.6
6	7.5	11	44	170	120	48	62	25	754	10	2.8	2.6
7	7.5	13	43	127	100	47	62	24	364	8.3	2.4	2.6
8	7.5	13	40	102	80	64	65	20	188	7.8	2.2	2.0
9	6.1	11	38	82	70	47	50	21	126	6.6	4.8	2.0
10	5.6	10	36	69	64	40	51	27	90	6.2	10	2.0
11	4.8	10	34	65	56	41	67	23	69	5.5	7.4	1.8
12	4.8	9.2	31	60	50	65	81	20	59	5.1	5.5	1.3
13	4.8	8.5	30	50	48	74	74	19	55	5.1	4.8	1.3
14	4.0	8.5	28	55	45	82	62	19	156	5.1	3.6	1.3
15	4.0	13	65	48	45	66	50	16	121	4.8	3.6	1.3
16	4.0	44	160	42	54	54	46	16	76	4.4	3.1	1.3
17	4.0	89	96	38	50	55	43	14	73	3.3	2.4	1.3
18	4.0	74	67	35	42	57	52	13	61	3.3	2.4	1.3
19	17	58	56	33	40	67	49	13	50	3.1	2.2	1.3
20	15	46	52	31	39	61	40	13	48	7.0	2.0	1.3
21	9.6	63	44	29	39	56	36	16	43	17	2.0	1.8
22	8.0	47	39	28	37	54	35	13	42	11	2.0	2.4
23	8.0	35	54	32	34	49	32	13	37	8.3	2.0	3.1
24	26	30	72	40	32	44	30	15	31	6.2	2.0	2.4
25	21	26	53	32	29	39	29	20	27	4.8	2.0	2.2
26	26	24	44	28	26	54	27	16	22	3.9	2.2	1.5
27	35	24	39	26	26	57	54	13	21	3.3	2.2	1.3
28	53	23	39	24	26	42	53	11	29	7.0	2.0	1.5
29	32	21	36	23	---	36	45	16	29	12	1.7	1.3
30	23	19	36	23	---	35	37	25	29	7.0	1.7	1.3
31	19	---	35	25	---	37	---	20	---	5.8	1.7	---
TOTAL	425.3	796.2	1660	2195	1862	1507	1623	602	3266	246.9	97.6	67.7
MEAN	13.7	26.5	53.5	70.8	66.5	48.6	54.1	19.4	109	7.96	3.15	2.26
MAX	53	89	160	445	220	82	154	32	754	21	10	6.6
MIN	2.5	8.5	18	23	26	20	27	11	16	3.1	1.7	1.3
CFSM	.86	1.66	3.34	4.43	4.16	3.04	3.38	1.21	6.81	.50	.20	.14
IN.	.99	1.85	3.86	5.10	4.33	3.50	3.77	1.40	7.59	.57	.23	.16

CAL YR 1981	TOTAL	8478.62	MEAN	23.2	MAX	208	MIN	.47	CFSM	1.45	IN	19.71
WTR YR 1982	TOTAL	14348.70	MEAN	39.3	MAX	754	MIN	1.3	CFSM	2.46	IN	33.36

01111500 BRANCH RIVER AT FORESTDALE, RI

LOCATION.--Lat 41°59'47", long 71°33'47", Providence County, Hydrologic Unit 01090003, on left bank 20 ft (6 m) upstream from abandoned bridge site, 400 ft (100 m) downstream from milldam at Forestdale, 1 mi (2 km) east of Slatersville, and 1.6 mi (2.6 km) upstream from mouth.
DRAINAGE AREA.--91.2 mi² (236.2 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Discharge: September to December 1909 and January 1912 to July 1913 (gage heights only; published as "at Branch Village"), January 1940 to current year.

REVISED RECORDS.--WSP 2101: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 180 ft (55 m), from topographic map. Prior to July 28, 1913, nonrecording gage at site 1 mi (2 km) downstream at different datum.

REMARKS.--Records good. Prior to 1957, flow regulated by mills and reservoirs upstream.

AVERAGE DISCHARGE.--42 years, 170 ft³/s (4.814 m³/s), 25.31 in/yr (643 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,470 ft³/s (155 m³/s) Jan. 25, 1979, gage height, 11.80 ft (3.597 m); maximum gage height, 11.90 ft (3.627 m) Mar. 18, 1968; minimum daily discharge, 5.2 ft³/s (0.15 m³/s) Oct. 7, 1948.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, about 5,800 ft³/s (160 m³/s) Mar. 19, 1936, by computation of flow over dam 1 mi (2 km) upstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 880 ft³/s (25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0945	3050 86.4	9.09 2.771	June 2	2230	1080 30.6	5.47 1.667
Feb. 4	1600	1340 37.9	6.08 1.853	June 6	1600	*4770 135	11.12 3.389

Minimum daily discharge, 26 ft³/s (0.74 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	111	142	232	560	140	255	180	123	144	62	41
2	116	103	389	569	680	137	242	165	549	121	56	58
3	144	98	572	431	684	132	228	165	818	107	50	64
4	118	90	348	698	1220	133	599	159	450	95	45	57
5	96	85	263	2460	999	234	551	148	1610	89	46	49
6	79	88	270	1300	721	269	415	139	4020	80	45	45
7	75	91	247	800	555	232	327	121	3070	72	45	39
8	78	86	223	600	460	309	280	105	2360	69	43	35
9	59	71	208	500	422	247	277	102	974	68	79	35
10	50	59	180	450	391	207	263	105	680	63	142	32
11	46	56	167	370	321	198	306	102	524	63	104	30
12	43	53	160	310	280	237	355	93	435	62	80	29
13	41	50	153	280	271	277	349	89	365	62	69	31
14	40	48	155	290	263	312	309	90	668	58	62	34
15	39	59	271	260	252	283	266	93	766	57	56	34
16	38	131	656	250	283	250	232	92	584	52	50	32
17	39	352	569	230	321	269	217	89	520	51	48	31
18	42	325	404	210	271	274	229	84	398	49	45	30
19	85	288	322	190	250	303	234	83	324	66	44	26
20	99	222	260	180	252	300	205	87	297	125	39	26
21	82	257	225	178	258	283	180	182	250	182	37	37
22	74	242	222	162	244	242	167	165	234	137	35	67
23	72	197	294	161	227	217	159	150	219	104	35	75
24	123	166	371	187	217	207	151	155	200	87	37	71
25	134	148	297	183	205	200	130	189	157	75	40	76
26	129	136	244	167	189	239	118	157	135	63	41	62
27	163	136	227	150	180	280	184	123	126	54	43	49
28	235	133	223	144	176	227	242	102	140	70	39	48
29	206	124	215	142	---	203	242	105	157	100	35	45
30	149	131	207	140	---	191	205	140	153	84	34	43
31	125	---	185	163	---	191	---	135	---	70	30	---
TOTAL	2881	4136	8669	12387	11152	7223	7917	3894	21306	2579	1616	1331
MEAN	92.9	138	280	400	398	233	264	126	710	83.2	52.1	44.4
MAX	235	352	656	2460	1220	312	599	189	4020	182	142	76
MIN	38	48	142	140	176	132	118	83	123	49	30	26
CFSM	1.02	1.51	3.07	4.39	4.36	2.56	2.90	1.38	7.79	.91	.57	.49
IN.	1.18	1.69	3.54	5.05	4.55	2.95	3.23	1.59	8.69	1.05	.66	.54
CAL YR 1981	TOTAL	48607	MEAN 133	MAX 1120	MIN 17	CFSM 1.46	IN 19.83					
WTR YR 1982	TOTAL	85091	MEAN 233	MAX 4020	MIN 26	CFSM 2.56	IN 34.71					

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 14...	1145	40	80	6.8	10.0	1.5	--	12.8	--	--	1300	230
NOV 03...	1150	95	70	6.6	9.0	1.6	--	11.6	--	1.0	2300	230
DEC 15...	1325	270	78	6.4	.5	1.0	--	14.6	200	--	--	--
JAN 19...	1440	165	73	7.2	.5	--	--	13.2	--	1.0	660	120
FEB 09...	1230	405	54	7.2	1.0	--	--	14.2	--	--	--	--
MAR 09...	1240	227	83	7.8	1.0	1.7	7	14.3	11	1.0	180	47
APR 13...	1230	337	85	6.5	6.0	--	--	12.4	--	--	--	--
MAY 11...	1245	102	77	5.8	16.0	--	--	9.5	--	2.0	3100	440
JUN 10...	1140	676	47	6.4	16.0	1.7	--	10.6	14	--	--	--
JUL 13...	1100	64	83	6.6	24.5	--	--	8.4	--	1.0	15000	310
AUG 11...	1200	102	92	7.0	24.0	--	--	8.7	--	--	--	--
31...	1245	30	96	7.1	19.0	2.1	22	9.0	21	1.0	2600	340

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 14...	52	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	540	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	1	66
JAN 19...	490	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	22	13	8	3.9	.9	13	1.0	5.0	7.8	14	4	32
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	140	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	7	52
JUL 13...	230	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--	--	--
31...	96	17	6	5.1	1.0	11	1.0	11	8.0	18	1	51

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 14...	.32	.020	.34	.320	.58	.90	1.2	.030	.020	--	--
NOV 03...	--	<.010	.21	.010	--	.45	.66	.040	.010	--	--
DEC 15...	--	<.010	.38	.250	.51	.76	1.1	.020	.010	--	--
JAN 19...	--	<.010	.45	.100	1.9	2.00	2.5	.020	.010	--	--
FEB 09...	--	<.010	.24	.040	.27	.31	.55	.030	.010	--	--
MAR 09...	--	<.010	.39	.090	.52	.61	1.0	.020	.030	<1	<1
APR 13...	--	<.010	.24	.090	1.3	1.40	1.6	.020	<.010	--	--
MAY 11...	--	<.010	.27	.130	.54	.67	.94	.030	.010	--	--
JUN 10...	--	<.010	.10	.050	.55	.60	.70	.020	<.010	--	--
JUL 13...	.23	.010	.24	.150	.25	.40	.64	.030	<.010	--	--
AUG 11...	.32	.010	.33	.210	.49	.70	1.0	.040	.020	--	--
31...	.62	.030	.65	.620	.00	.60	1.3	.030	.010	<1	<1
			ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)		
			DATE								
			AUG 31...	1	40	2	10	5	780	5	
				MANGANESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)		
			DATE								
			AUG 31...	70	<.1	5	<1	<1	10		
			PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPHTHA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLORDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD TOTAL (UG/L)	DDD TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE	PCB, TOTAL (UG/L)										
AUG 31...	<.10	21	<1.0	<.10	<.01	<.1	<.10	8.0	<.01	<.1	<.01 5.1
			DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDOSULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	
DATE	DDT, TOTAL (UG/L)										
AUG 31...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01
			HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	PER- THANE TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
DATE											
AUG 31...	<.1	<.01	<.1	<.01	<.1	<.01	<.01	120	<.10	<1.00	<1 <10

BLACKSTONE RIVER BASIN

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

LOCATION.--Lat 42°00'22", long 71°30'13", Providence County, Hydrologic Unit 01090003, on right bank 50 ft (15 m) upstream from Peters River pressure conduit at Woonsocket. Records include flow of Peters River.

DRAINAGE AREA.--416 mi² (1,077 km²).

PERIOD OF RECORD.--Discharge: February 1929 to current year.

Water-quality records: Water years 1952-53, 1957-58.

Water temperatures: November 1961 to October 1964, April 1966 to March 1967.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1931(M). WSP 871: 1938. WSP 1051: 1931.

GAGE.--Water-stage recorder. Datum of gage is 107.42 ft (32.742 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for January, which are fair. Flow regulated by powerplants, by West Hill Reservoir since May 1961, and by other reservoirs upstream. Extremes and figures of daily discharge include flow diverted from Nashua River basin and, at times since January 1966, from Quabbin Reservoir for supply of Worcester, MA, and, prior to July 1964, flow diverted around station in Hamlet Trench. See table with station 01111200 for monthend contents of West Hill Reservoir. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--53 years, 758 ft³/s (21.47 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,900 ft³/s (932 m³/s) Aug. 19, 1955, gage height, 21.8 ft (6.64 m), from floodmarks, from rating curve extended above 15,000 ft³/s (420 m³/s) on basis of slope-area measurement of peak flow (affected by failure of Horseshoe Dam on Mill River); minimum daily, 21 ft³/s (0.59 m³/s) Aug. 11, 1934 (flow diverted around station in Hamlet Trench not included).
Maximum discharge since at least 1645, that of Aug. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 12,600 ft³/s (357 m³/s) June 7, gage height, 13.16 ft (4.011 m); minimum daily, 99 ft³/s (2.78 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	247	583	616	1050	1990	673	1230	1000	602	830	309	202
2	474	516	1430	2190	2270	703	1170	894	1780	708	280	355
3	597	597	2080	1950	2320	678	1050	900	3390	556	244	268
4	542	503	1540	2500	4370	649	2170	813	2190	588	222	212
5	422	438	1320	7000	4140	979	2250	733	4390	547	239	188
6	366	474	1280	5000	2990	1280	1880	698	10100	470	222	188
7	345	458	1210	4000	2410	1100	1660	644	10900	560	222	164
8	335	491	1110	3200	2080	1530	1480	592	6740	414	168	286
9	293	268	1070	2500	1880	1330	1410	583	4630	283	410	113
10	271	512	991	2100	1670	1110	1320	578	3530	244	848	113
11	219	345	906	1800	1430	1040	1480	654	2840	348	503	164
12	239	383	871	1500	1310	1200	1670	503	2450	312	454	142
13	219	268	754	1300	1230	1440	1690	542	2170	293	338	136
14	209	286	775	1400	1160	1620	1650	521	2740	293	286	158
15	214	402	1160	1300	1110	1580	1460	462	3140	277	296	162
16	244	635	2270	1200	1250	1480	1330	434	2650	239	219	162
17	219	1410	2330	1100	1430	1430	1220	414	2540	256	247	146
18	207	1470	1840	1100	1230	1450	1250	410	2370	230	222	136
19	395	1510	1550	1000	1120	1480	1240	383	2130	239	197	132
20	442	1280	1300	950	1090	1480	1120	399	1960	521	212	99
21	372	1400	1170	900	1110	1410	1020	503	1750	991	162	247
22	315	1280	1100	850	1070	1330	960	482	1630	723	186	244
23	293	1060	1180	800	991	1240	900	450	1420	482	148	335
24	547	936	1500	880	930	1170	825	525	1250	391	179	244
25	602	825	1360	870	882	1100	775	630	1040	352	197	230
26	592	728	1190	850	786	1230	738	574	918	286	172	247
27	997	703	1100	819	744	1450	888	478	836	268	168	241
28	966	698	1080	708	733	1280	1270	422	865	355	166	293
29	1060	659	1050	542	---	1130	1320	406	882	678	144	188
30	797	625	997	512	---	1010	1200	775	942	450	138	241
31	654	---	918	556	---	991	---	635	---	342	174	---
TOTAL	13694	21743	39048	52427	45726	37573	39626	18037	84775	13526	7972	6036
MEAN	442	725	1260	1691	1633	1212	1321	582	2826	436	257	201
MAX	1060	1510	2330	7000	4370	1620	2250	1000	10900	991	848	355
MIN	207	268	616	512	733	649	738	383	602	230	138	99
CAL YR 1981	TOTAL	226144	MEAN	620	MAX	4130	MIN	101				
WTR YR 1982	TOTAL	380183	MEAN	1042	MAX	10900	MIN	99				

BLACKSTONE RIVER BASIN

65

01112900 BLACKSTONE RIVER AT MANVILLE, RI

LOCATION.--Lat 41°58'18", long 71°28'14", Providence County, Hydrologic Unit 01090003, on left bank 15 ft (5 m) upstream from milldam at Manville, and 400 ft (120 m) upstream from Manville Road Bridge.

PERIOD OF RECORD.--Water years 1970, 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN OXYGEN, DIS- SOLVED (MG/L)	COLI- DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	COLI- DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	FORM, TOTAL, IMMED. PER 100 ML	FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 14...	1245	225	275	6.8	10.0	3.1	--	11.2	--	--	120	K2
NOV 03...	1245	510	170	6.6	9.0	3.3	--	10.3	--	2.0	3500	370
DEC 15...	1140	1170	280	6.8	.5	2.6	--	14.4	99	--	--	--
JAN 19...	1245	830	175	7.2	.5	--	--	13.3	--	1.0	170	K7
FEB 09...	1330	1920	134	7.3	.5	--	--	13.6	--	--	--	--
MAR 09...	1445	1300	178	7.4	1.0	4.7	18	14.4	14	2.0	3200	460
APR 13...	1300	1730	200	7.0	6.0	--	--	11.7	--	--	--	--
MAY 11...	1330	760	177	6.0	16.0	--	--	8.9	--	3.0	1400	63
JUN 10...	1225	3560	117	6.7	16.0	2.8	--	9.4	14	--	--	--
JUL 13...	1200	335	250	6.8	25.0	--	--	7.7	--	3.0	14000	--
AUG 11...	1300	615	160	6.8	23.0	--	--	6.9	--	--	--	--
31...	1430	198	300	6.2	17.5	4.8	17	8.9	31	2.0	260	K28

DATE	STREP- TOCOC- CI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 14...	K4	--	--	--	--	--	--	--	--	--	--	--
NOV 03...	42	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	5	136
JAN 19...	71	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	97	26	16	7.8	1.5	27	2.1	10	12	37	4	127
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	38	--	--	--	--	--	--	--	--	--	--	--
JUN 10...	--	--	--	--	--	--	--	--	--	--	6	100
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	--	--	--	--
31...	K22	47	26	15	2.4	33	3.9	21	28	48	2	194

K, NON-IDEAL COLONY COUNT.

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	
OCT 14...	2.1	.090	2.2	1.30	.60	1.90	4.1	.480	.450	--	--	
NOV 03...	1.2	.030	1.2	.420	.58	1.00	2.2	.250	.160	--	--	
DEC 15...	.69	.040	.73	.650	.45	1.10	1.8	.140	.110	--	--	
JAN 19...	--	<.010	.73	.770	.15	.92	1.7	.110	.080	--	--	
FEB 09...	.52	.020	.54	.350	2.0	2.30	2.8	.120	.080	--	--	
MAR 09...	.58	.020	.60	.550	.23	.78	1.4	.160	.130	<1	<1	
APR 13...	.46	.010	.47	.380	.72	1.10	1.6	.150	.080	--	--	
MAY 11...	.93	.070	1.0	.480	1.0	1.50	2.5	.220	.180	--	--	
JUN 10...	.38	.020	.40	.190	.81	1.00	1.4	.110	.050	--	--	
JUL 13...	1.4	.080	1.5	.340	.66	1.00	2.5	.330	.220	--	--	
AUG 11...	1.1	.070	1.2	.280	.82	1.10	2.3	.250	.180	--	--	
AUG 31...	--	<.010	.15	.040	1.1	1.10	1.3	.390	.240	45	<1	
			ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROMIUM TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)			
AUG 31...			3	150	4	20	13	570	7			
			MANGANESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)				
AUG 31...			100	1.8	33	<1	<1	50				
DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPHTHA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	
AUG 31...	<.10	70	<1.0	<.10	<.01	<.1	<.10	<1.0	<.01	<.1	<.01	3.8
DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DIELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	
AUG 31...	<.01	5.0	.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	
DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	PER- THANE IN BOTTOM MATERIL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	
AUG 31...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.10	<1.00	<1	<10	

01114000 MOSHASSUCK RIVER AT PROVIDENCE, RI

LOCATION.--Lat 41°50'02", long 71°24'42", Providence County, Hydrologic Unit 01090004, on left bank 800 ft (250 m) upstream from bridge on U.S. Highway 44 at Providence and 0.5 mi (0.8 km) above mouth.

DRAINAGE AREA.--23.1 mi² (59.8 km²).

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 8.19 ft (2.496 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 7, 1973, at datum 0.88 ft (0.268 m) lower. Mar. 10, 1972, to Nov. 7, 1973, stage record obtained at site 200 ft upstream.

REMARKS.--Records good except those for period of no gage-height record, Mar. 18 to May 2, which are poor. Occasional regulation at low flow. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years, 40.5 ft³/s (1.147 m³/s), 23.81 in/yr (605 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s (67.7 m³/s) Mar. 18, 1968, gage height, 3.46 ft (1.055 m), present datum, from rating curve extended above 460 ft³/s (13 m³/s); maximum gage height, 5.81 ft (1.771 m) July 30, 1976; minimum discharge, 1.3 ft³/s (0.037 m³/s) Aug. 23, 1970; minimum daily, 1.7 ft³/s (0.048 m³/s) Aug. 10, 1970.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 600 ft³/s (17 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	1700	719 20.4	4.36 1.329	June 6	1245	858 24.3	4.61 1.405
Feb. 1	0500	*941 26.6	4.78 1.457	July 19	1900	630 17.8	4.15 1.265
June 2	0730	901 25.5	4.69 1.430	Sept. 1	0530	695 19.7	4.29 1.308

Minimum discharge, 6.0 ft³/s (0.17 m³/s) Oct. 1, 10-13, minimum daily, 6.0 ft³/s (0.17 m³/s) Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	12	29	114	468	29	70	45	27	37	18	134
2	53	11	192	123	126	34	50	42	280	31	17	81
3	23	11	93	70	196	31	130	40	106	28	17	29
4	14	11	58	333	168	80	150	35	67	26	17	20
5	10	10	48	392	100	108	90	35	345	24	17	16
6	16	25	54	148	78	58	75	33	729	22	17	15
7	13	16	51	118	63	78	68	32	399	21	15	14
8	11	14	45	92	56	69	60	30	196	21	14	12
9	9.1	10	45	72	54	49	60	67	134	20	60	12
10	7.6	10	41	62	54	45	62	48	102	18	73	12
11	6.0	10	39	54	45	45	72	32	85	17	23	11
12	6.0	9.5	38	45	43	45	72	30	74	16	19	10
13	6.3	9.9	35	42	42	51	66	28	74	16	24	10
14	6.6	10	34	50	40	48	60	26	201	16	16	10
15	7.0	23	143	49	43	40	56	26	120	15	14	11
16	7.0	111	162	45	53	39	50	23	78	15	14	11
17	6.6	83	90	42	52	55	45	23	67	15	18	11
18	11	61	68	56	42	60	50	22	58	15	23	9.5
19	37	41	57	68	43	52	43	21	55	69	19	8.7
20	13	51	49	68	48	48	40	88	53	128	16	18
21	9.9	43	45	60	45	45	37	45	50	84	13	16
22	8.7	33	43	36	40	42	35	30	47	58	12	30
23	8.4	29	73	39	37	40	33	26	55	41	23	30
24	57	28	67	54	35	39	32	41	40	29	53	26
25	18	27	53	38	33	38	30	47	37	23	27	13
26	29	25	52	32	29	50	35	32	33	21	18	10
27	22	25	53	31	29	47	80	27	32	20	15	18
28	30	24	58	29	29	44	75	23	88	48	14	12
29	19	23	57	29	---	42	60	37	53	30	13	11
30	15	21	53	29	---	40	50	32	58	23	12	11
31	14	---	45	56	---	60	---	28	---	20	12	---
TOTAL	503.3	817.4	1970	2476	2091	1551	1836	1094	3743	967	663	632.2
MEAN	16.2	27.2	63.5	79.9	74.7	50.0	61.2	35.3	125	31.2	21.4	21.1
MAX	57	111	192	392	468	108	150	88	729	128	73	134
MIN	0.0	9.5	29	29	29	29	30	21	27	15	12	8.7
CFSM	.70	1.18	2.75	3.46	3.23	2.17	2.65	1.53	5.41	1.35	.93	.91
IN.	.81	1.32	3.17	3.99	3.37	2.50	2.96	1.76	6.03	1.56	1.07	1.02

CAL YR 1981 TOTAL 9326.0 MEAN 25.6 MAX 192 MIN 3.1 CFSM 1.11 IN 15.02
WTR YR 1982 TOTAL 18343.9 MEAN 50.3 MAX 729 MIN 6.0 CFSM 2.18 IN 29.54

WOONASQUATUCKET RIVER BASIN

01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI

LOCATION.--Lat 41°51'32", long 71°29'16", Providence County, Hydrologic Unit 01090004, on right bank 75 ft (23 m) downstream from bridge on U.S. Highway 44 at Centerdale and 6.5 mi (10.5 km) upstream from mouth.

DRAINAGE AREA.--38.3 mi² (99.2 km²).

PERIOD OF RECORD.--Discharge: July 1941 to current year.
Water-quality records: Water years 1955-56.

GAGE.--Water-stage recorder. Altitude of gage is 95 ft (29 m), from topographic map.

REMARKS.--Records fair October to January, poor thereafter. Some regulation by reservoirs upstream; regulation greater prior to 1956. Discharge figures prior to 1966 included leakage around station through bypass canal; leakage negligible subsequently.

AVERAGE DISCHARGE.--41 years, 72.0 ft³/s (2.039 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft³/s (40.8 m³/s) Mar. 18, 1968, gage height, 7.75 ft (2.362 m), from floodmarks; minimum daily, 2.1 ft³/s (0.059 m³/s) Aug. 26, 1963.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge during March 1936, 1,000 ft³/s (28.3 m³/s), by computation of flow over dam 0.7 mi (1.1 km) downstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,140 ft³/s (32.3 m³/s) June 6, gage height, 7.33 ft (2.234 m); minimum daily, 10 ft³/s (0.28 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	70	61	168	333	71	82	92	59	44	23	52
2	52	62	198	226	225	75	71	84	250	38	20	51
3	40	55	182	193	280	72	81	83	191	35	10	37
4	28	49	146	433	341	70	161	77	164	31	13	35
5	23	45	130	731	275	143	115	79	425	28	14	31
6	25	53	147	506	240	115	118	85	1030	26	16	26
7	26	51	130	374	209	126	123	66	883	25	17	22
8	23	44	119	293	182	142	119	37	584	23	16	20
9	21	42	112	237	167	121	115	40	388	22	24	20
10	24	40	106	200	156	111	117	44	275	19	30	19
11	28	40	102	168	141	104	129	45	213	18	24	19
12	30	39	98	142	130	104	134	52	172	17	22	19
13	33	37	96	125	124	107	129	47	150	17	20	19
14	36	38	92	129	119	113	125	43	219	16	19	19
15	38	54	170	125	126	103	115	40	198	14	18	19
16	40	113	265	118	134	95	107	39	168	13	16	19
17	43	136	224	112	127	105	103	35	146	13	17	19
18	49	119	209	105	109	107	104	23	128	13	16	19
19	80	104	193	111	93	109	95	23	114	30	13	19
20	59	103	173	114	103	103	88	39	103	70	13	21
21	53	105	156	102	104	99	84	55	91	74	13	22
22	49	93	147	94	99	97	80	44	74	56	11	25
23	51	90	162	96	93	90	75	43	41	49	13	24
24	95	83	178	108	90	85	71	50	44	39	19	22
25	72	76	164	95	85	82	67	71	47	32	17	22
26	81	71	156	91	80	96	63	73	46	27	16	22
27	83	70	150	86	76	93	73	60	44	23	14	24
28	104	67	155	83	75	82	92	53	63	32	13	27
29	86	63	153	81	---	75	105	66	53	38	12	29
30	80	60	147	79	---	72	100	67	54	27	12	31
31	75	---	138	89	---	73	---	62	---	25	12	---
TOTAL	1544	2072	4659	5614	4316	3040	3041	1717	6417	934	513	753
MEAN	49.8	69.1	150	181	154	98.1	101	55.4	214	30.1	16.5	25.1
MAX	104	136	265	731	341	143	161	92	1030	74	30	52
MIN	17	37	61	79	75	70	63	23	41	13	10	19
CAL YR 1981	TOTAL	19913.0	MEAN	54.6	MAX	265	MIN	9.5				
WTR YR 1982	TOTAL	34620.0	MEAN	94.8	MAX	1030	MIN	10				

01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI

LOCATION.--Lat 41°41'24", long 71°33'59", Kent County, Hydrologic Unit 01090004, on right bank 150 ft (46 m) downstream from highway bridge at Washington and 0.9 mi (1.4 km) upstream from outlet of Tiogue Lake.

DRAINAGE AREA.--63.8 mi² (165.2 km²).

PERIOD OF RECORD.--Discharge: October 1940 to current year.
Water-quality records: Water years 1955-1956, 1963.

GAGE.--Water-stage recorder. Datum of gage is 217.76 ft (66.373 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1 to Nov. 12, which are poor.
Flow regulated by Flat River Reservoir 2 mi (3 km) upstream (see table below), usable capacity, 250,000,000 ft³ (7,080,000 m³), and smaller reservoirs. Prior to May 1972, diversion from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years 129 ft³/s (3.653 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,980 ft³/s (56.1 m³/s) June 6, 1982, gage height, 5.30 ft (1.615 m); minimum daily, 2.8 ft³/s (0.079 m³/s) Aug. 27, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 1,810 ft³/s (51.3 m³/s), by computation of flow over dam just upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,980 ft³/s (56.1 m³/s) June 6, gage height, 5.30 ft (1.615 m); minimum daily, 26 ft³/s (0.74 m³/s) Oct. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	50	69	183	243	46	204	173	157	183	85	96
2	45	40	166	190	280	46	203	182	200	106	83	106
3	38	30	170	183	416	51	203	214	248	124	80	98
4	32	28	173	217	547	112	220	214	307	166	76	146
5	30	32	210	355	529	173	213	214	468	112	71	159
6	29	35	236	529	511	228	212	203	1490	146	69	153
7	35	29	261	506	484	316	211	108	1680	143	65	93
8	32	37	254	489	463	347	210	101	1100	104	63	83
9	29	48	243	467	375	308	190	182	776	96	98	83
10	28	60	180	371	276	134	151	154	597	106	115	80
11	27	64	173	272	221	166	153	130	425	109	101	69
12	26	68	170	254	180	170	155	63	339	96	101	65
13	26	67	170	254	203	170	155	56	324	93	98	63
14	26	67	156	247	239	173	153	55	379	93	101	63
15	26	69	98	232	214	174	160	49	437	90	98	61
16	27	83	118	228	115	173	207	48	416	88	96	61
17	27	90	257	217	112	175	206	48	450	88	88	59
18	27	124	261	221	109	174	187	49	425	85	74	57
19	30	153	269	221	109	174	129	49	420	80	71	53
20	33	156	284	221	127	173	127	50	408	93	69	51
21	45	153	276	217	173	173	181	52	375	203	67	49
22	50	149	269	217	173	173	180	51	254	214	65	63
23	58	146	269	217	173	171	126	52	247	104	63	115
24	60	137	265	130	170	149	121	55	243	88	90	69
25	62	69	225	104	170	117	102	60	207	85	93	69
26	60	63	173	104	170	120	68	56	166	85	93	67
27	58	63	170	104	149	119	179	54	156	83	90	65
28	58	65	173	104	90	118	180	53	186	93	85	65
29	54	63	173	109	---	116	175	72	196	90	85	65
30	54	63	176	183	---	120	173	154	236	88	85	63
31	50	---	173	190	---	189	---	158	---	85	85	---
TOTAL	1209	2301	6260	7536	7021	5048	5134	3159	13312	3419	2603	2389
MEAN	39.0	76.7	202	243	251	163	171	102	444	110	84.0	79.6
MAX	62	156	284	529	547	347	220	214	1680	214	115	159
MIN	26	28	69	104	90	46	68	48	156	80	63	49
(†)	194.5	168	131	157	126.5	149	176.5	216	210	210	206.5	197.5
CAL YR 1981	TOTAL	28764	MEAN	78.8	MAX	425	MIN	26				
WTR YR 1982	TOTAL	59391	MEAN	163	MAX	1680	MIN	26				

† Monthend contents, in millions of cubic feet, in Flat River Reservoir; records furnished by Quidnick Reservoir Co.

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI

LOCATION.--Lat 41°45'03", long 71°26'44", Providence County, Hydrologic Unit 01090004, on left bank at Cranston 0.7 mi (1.1 km) upstream from Pocasset River.

DRAINAGE AREA.--200 mi² (518 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 971: 1940-42. WSP 1381: 1940-41(M). WDR-MA-NH-RI-VT-73-1: 1972 (adjusted monthly and yearly figures only).

GAGE.--Water-stage recorder. Datum of gage is 8.00 ft (2.438 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. No gage-height record June 7. Flow regulated by powerplants and by Scituate Reservoir 13 mi (21 km) upstream, Flat River Reservoir, and other reservoirs, combined usable capacity, about 6,000,000,000 ft³ (170,000,000 m³). Diversion from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, Warwick, West Warwick, and Coventry. See table below for figures of diversion and monthend contents in Scituate Reservoir and five smaller reservoirs, and see table with station 01116000 for monthend contents in Flat River Reservoir.

AVERAGE DISCHARGE.--42 years (water years 1941-82), 341 ft³/s (9.657 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,440 ft³/s (154 m³/s) June 7, 1982, gage height, 14.5 ft (4.42 m), from floodmark; minimum daily, 22 ft³/s (0.62 m³/s) Sept. 4, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,440 ft³/s (154 m³/s) June 7, gage height, 14.5 ft (4.42 m), from floodmark; minimum daily, 67 ft³/s (1.90 m³/s) Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	135	127	412	1400	215	558	477	316	527	174	420
2	157	138	515	581	897	239	519	369	810	348	205	489
3	107	122	416	356	974	221	561	438	666	365	221	360
4	81	88	293	781	1090	260	675	527	597	348	205	336
5	75	81	312	1290	957	675	519	519	1310	282	195	301
6	86	105	348	1040	885	500	597	515	3190	305	195	340
7	95	93	373	948	825	591	597	420	5170	305	189	373
8	84	79	373	885	767	752	585	369	3980	297	135	360
9	79	75	369	835	715	717	573	332	2650	253	267	356
10	79	88	309	835	550	515	515	324	1800	249	215	352
11	75	114	260	485	461	515	443	328	1350	215	305	328
12	67	117	256	416	373	550	438	246	1000	235	293	218
13	75	117	242	348	360	542	527	221	1000	235	286	186
14	73	117	242	407	425	456	496	221	1250	242	282	208
15	75	130	394	403	465	425	500	215	1310	232	201	218
16	77	264	632	386	365	511	538	154	1190	235	232	235
17	75	289	492	369	320	550	558	186	1130	232	253	232
18	71	228	496	324	297	554	456	205	987	171	232	201
19	132	239	438	228	293	546	369	205	920	205	208	143
20	90	256	434	205	320	527	420	201	785	470	198	195
21	81	256	407	201	336	416	465	218	795	515	192	305
22	79	225	403	198	373	369	481	201	717	452	135	348
23	90	218	465	215	394	492	429	146	624	356	174	403
24	174	215	515	297	390	481	390	205	595	264	324	365
25	119	171	434	239	373	407	305	267	534	189	320	332
26	143	132	312	215	369	461	235	221	412	232	301	256
27	146	135	293	208	352	438	616	205	309	232	271	228
28	171	132	312	201	242	328	561	205	534	301	256	249
29	151	125	320	205	---	316	515	232	581	282	198	239
30	149	122	312	267	---	394	500	239	588	264	221	235
31	143	---	289	348	---	500	---	312	---	246	246	---
TOTAL	3172	4606	11383	14128	15568	14463	14941	8923	37100	9084	7129	8811
MEAN	102	154	367	456	556	467	498	288	1237	293	230	294
MAX	174	289	632	1290	1400	752	675	527	5170	527	324	489
MIN	67	75	127	198	242	215	235	146	309	171	135	143
†	3111	3198	3851	4713	5309	5336	5378	5117	5450	5009	4603	4129
‡	97.6	92.3	91.5	93.1	89.8	90.3	90.6	98.0	97.3	121	105	99.8

CAL YR 1981 TOTAL 61747 MEAN 169 MAX 647 MIN 59
WTR YR 1982 TOTAL 149308 MEAN 409 MAX 5170 MIN 67

† Monthend contents, in millions of cubic feet, of Scituate Reservoir and five smaller reservoirs.

‡ Diversion, in cubic feet per second, from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, Warwick, West Warwick, and Coventry. Figures of diversion and monthend contents furnished by Providence Water Supply Board.

01116500 PAWTUXET RIVER AT CRANSTON, RI

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to September 1981.

WATER TEMPERATURES: November 1961 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 15...	0925	71	455	6.6	9.0	2.9	--	7.4	--	--	110	K8
NOV 04...	1045	81	300	6.7	9.0	2.6	--	8.4	--	3.0	600	K15
DEC 16...	1020	669	152	6.7	1.0	3.8	--	14.2	170	--	--	--
JAN 20...	1030	211	246	6.8	.5	--	--	13.8	--	2.0	<4	<1
FEB 10...	1010	554	150	6.2	1.0	--	--	13.9	--	--	--	--
MAR 12...	1330	394	165	7.3	6.0	3.5	12	12.5	19	1.0	100	56
APR 12...	1130	360	185	7.3	6.5	--	--	12.2	--	--	--	--
MAY 12...	0830	174	180	5.7	14.0	--	--	7.6	--	3.0	5400	90
JUN 09...	1200	2220	77	6.3	15.0	1.8	--	10.2	37	--	--	--
JUL 14...	1050	177	225	6.7	22.5	--	--	6.9	--	1.0	3200	K3
AUG 10...	1050	348	130	6.5	21.0	--	--	11.0	--	--	--	--
SEP 01...	1315	348	159	6.7	20.0	4.5	18	7.1	22	2.0	>.29000	>.1800

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 15...	K15	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	K16	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	--	--	--	--	--	--	--	--	--	--	4	114
JAN 20...	K7	--	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	K14	27	16	7.7	1.8	22	3.0	11	17	30	4	116
APR 12...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	84	--	--	--	--	--	--	--	--	--	--	--
JUN 09...	--	--	--	--	--	--	--	--	--	--	9	70
JUL 14...	99	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	580	27	18	7.3	2.1	19	2.2	9.0	20	27	8	100

K, NON-IDEAL COLONY COUNT.

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	
OCT 15...	1.3	.130	1.4	1.50	.80	2.30	3.7	.880	.830	--	--	
NOV 04...	.65	.050	.70	1.10	.90	2.00	2.7	.500	.340	--	--	
DEC 16...	--	<.010	.59	.460	.29	.75	1.3	.220	.140	--	--	
JAN 20...	.81	.020	.83	1.00	.00	.98	1.8	.250	.170	--	--	
FEB 10...	--	<.010	.48	.320	.09	.41	.89	.180	.090	--	--	
MAR 12...	--	<.010	.47	.590	.10	.69	1.2	.210	.180	<1	<1	
APR 12...	.55	.010	.56	.530	.00	.41	.97	.190	.130	--	--	
MAY 12...	.42	.020	.44	.690	1.0	1.70	2.1	.310	.250	--	--	
JUN 09...	--	<.010	.19	.140	.66	.80	.99	.090	.040	--	--	
JUL 14...	.48	.060	.54	.590	.00	.20	.74	.270	.200	--	--	
AUG 10...	.37	.030	.40	.570	.63	1.20	1.6	.240	.190	--	--	
SEP 01...	.53	.030	.56	1.10	.20	1.30	1.9	.300	.230	4	<1	
			ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROMIUM TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)			
SEP 01...			1	40	3	10	19	720	16			
			MANGANESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)				
SEP 01...			110	<.1	14	<1	<1	110				
DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLORDANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 01...	<.10	6	<1.0	<.10	<.01	<.1	<.10	4.0	<.01	<.1	<.01	<.1
DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DIELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTACHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	
SEP 01...	<.01	<.1	.01	.2	<.01	<.1	<.01	<.1	<.01	<.1	<.01	
DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METHOXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXAPHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	
SEP 01...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.10	<1.00	<1	<10	

01116617 PAWTUXET RIVER AT PAWTUXET, RI

LOCATION.--Lat 41°45'51" Long 71° 23'45", Providence County, Hydrologic Unit 01090004, on right bank 1300 ft (400 m) upstream from Narragansett Parkway Bridge at Pawtuxet.

PERIOD OF RECORD.--Water years 1979 to current year.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT 15...	1055	153	500	6.9	11.5	3.3	--	3.5	--	--	330000	190
NOV 04...	0945	165	400	6.9	10.0	3.9	--	6.2	--	16	64000	K32
DEC 16...	1130	799	205	6.6	2.0	3.0	--	12.9	89	--	--	--
JAN 20...	1145	331	265	6.8	.5	--	--	12.7	--	9.0	28000	K16
FEB 10...	1100	675	190	6.4	1.0	--	--	12.8	--	--	--	--
MAR 12...	1145	526	235	7.1	6.0	3.0	20	12.2	18	4.0	28000	170
APR 12...	1230	484	250	6.7	7.0	--	--	1.0	--	--	--	--
MAY 12...	0930	253	270	5.9	14.0	--	--	6.9	--	12	>280000	210
JUN 09...	1310	3370	78	6.6	15.0	5.5	--	9.6	<10	--	--	--
JUL 14...	0920	231	275	6.9	22.5	--	--	5.5	--	6.0	64000	380
AUG 10...	1230	457	138	6.5	23.0	--	--	9.6	--	--	--	--
SEP 01...	1015	649	138	6.3	20.0	15	19	6.8	27	7.0	33000	>600

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
OCT 15...	59	--	--	--	--	--	--	--	--	--	--	--
NOV 04...	260	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	--	--	--	--	--	--	--	--	--	--	20	142
JAN 20...	37	--	--	--	--	--	--	--	--	--	--	--
FEB 10...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	400	34	22	10	2.3	30	3.3	12	23	35	4	130
APR 12...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 12...	170	--	--	--	--	--	--	--	--	--	--	--
JUN 09...	--	--	--	--	--	--	--	--	--	--	13	78
JUL 14...	290	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 01...	1000	25	16	7.0	1.8	17	2.4	9.0	18	22	32	110

K, NON-IDEAL COLONY COUNT.

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 15...	1.3	.260	1.6	4.80	3.1	7.90	9.5	.220	1.30	--	--
NOV 04...	.69	.120	.81	3.30	.90	4.20	5.0	1.20	1.00	--	--
DEC 16...	.74	.010	.75	.670	.63	1.30	2.1	.270	.190	--	--
JAN 20...	.91	.030	.94	1.40	.00	1.00	1.9	.380	.260	--	--
FEB 10...	--	<.010	.59	.590	.28	.87	1.5	.220	.150	--	--
MAR 12...	.70	.010	.71	.690	.28	.97	1.7	.200	.160	2	<1
APR 12...	.83	.010	.84	.770	.43	1.20	2.0	.300	.240	--	--
MAY 12...	.49	.030	.52	1.20	1.1	2.30	2.8	.470	.420	--	--
JUN 09...	.19	.010	.20	.190	.81	1.00	1.2	.100	.040	--	--
JUL 14...	.61	.090	.70	.950	.00	.80	1.5	.460	.400	--	--
AUG 10...	.07	.040	.11	.260	.84	1.10	1.2	.130	.020	--	--
SEP 01...	.64	.030	.67	.610	.89	1.50	2.2	.520	.370	27	<1
			ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHROMIUM TOTAL RECOV- ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)		
SEP 01...			2	40	5	10	30	1400	25		
				MANGANESE TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)		
SEP 01...				140	<.1	17	<1	<1	80		
	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPHTHA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLORDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 01...	<.10	49	<1.0	<.10	<.01	<.1	<.10	10	<.01	<.1	<.01
		DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DIELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
SEP 01...	<.01	<.1	<.01	22	<.01	<.1	<.01	<.1	<.01	<.1	<.01
	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)		LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE IN BOTTOM MATERIL (UG/KG)	PER- THANE IN BOTTOM MATERIL (UG/KG)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 01...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.10	<1.00	<1	<10

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 (14 m) upstream from Old Forge Dam in North Kingstown, 1.5 mi (2.4 km) south of East Greenwich, and 2.5 mi (4.0 km) upstream from mouth.

DRAINAGE AREA.--23.0 mi² (59.6 km²).

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

SPECIFIC CONDUCTANCE: July 1977 to September 1981.

WATER TEMPERATURES: July 1977 to September 1981.

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

GAGE.--Water-stage recorder. Datum of gage is 5.42 ft (1.652 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Flow affected by diversions for supply of East Greenwich, North Kingstown, Warwick, and Quonset Point (formerly U.S. Naval establishments).

AVERAGE DISCHARGE.--42 years 44.8 ft³/s (1.269 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s (28.9 m³/s) June 6, 1982, gage height, 3.73 ft

(1.137 m), from rating curve extended above 440 ft³/s (12 m³/s); maximum gage height, 6.78 ft (2.067 m)

Aug. 31, 1954 (backwater from hurricane tidal wave); no flow Oct. 25, 1947, Aug. 28-30, 1960, parts of Oct. 1, 2, 1971, July 25, 1975, June 24, 1976, and Aug. 26, 1977, due to closing of gate at Old Forge Dam.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1915, about 8.5 ft (2.6 m) Sept. 21, 1938

(backwater from hurricane tidal wave).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 230 ft³/s (6.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)	Date	Time	Discharge (ft ³ /s)	Discharge (m ³ /s)	Gage height (ft)	Gage height (m)
Jan. 5	0230	389	11.0	2.60	0.792	June 6	1000	a*1020	28.9	3.73	1.137
Feb. 1	1330	693	19.6	3.22	.981	June 14	1430	249	7.05	2.11	.643
June 2	1600	337	9.54	2.38	.725						

a From rating curve extended above 440 ft³/s (12 m³/s).

Minimum discharge, 4.2 ft³/s (0.12 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	13	14	66	450	48	74	55	38	87	35	33
2	8.5	11	94	137	297	52	61	49	195	72	30	119
3	9.6	9.6	114	99	233	50	57	47	187	66	28	96
4	9.6	8.5	70	155	243	48	130	45	109	64	26	62
5	7.5	8.5	49	337	184	116	105	45	323	61	28	47
6	6.5	16	45	199	150	100	83	42	861	57	30	38
7	6.5	20	42	139	130	96	72	42	532	53	26	30
8	6.5	16	38	114	120	112	68	40	326	49	23	25
9	6.5	13	36	94	110	87	66	40	243	49	43	23
10	6.5	9.6	33	81	105	75	68	38	187	45	89	23
11	6.5	11	32	70	100	68	81	36	153	43	62	20
12	6.5	11	30	62	95	68	81	35	135	42	47	18
13	6.5	8.5	27	56	90	66	72	35	128	42	38	16
14	6.5	7.5	26	62	86	66	68	33	212	38	35	14
15	5.6	9.6	83	58	92	59	61	33	212	35	30	15
16	5.6	30	161	54	85	55	57	31	163	33	23	14
17	6.5	70	129	52	78	61	55	28	166	33	22	14
18	7.5	54	88	58	74	68	59	28	143	30	28	14
19	13	40	66	64	72	64	55	28	126	30	23	14
20	12	33	52	57	70	61	47	30	121	51	20	13
21	13	35	43	50	78	57	45	35	109	94	19	19
22	12	28	43	56	70	57	43	30	100	68	17	30
23	11	23	56	64	65	51	42	30	96	57	20	31
24	27	19	76	72	60	47	40	40	89	45	42	23
25	33	16	64	74	56	45	38	51	83	38	49	20
26	28	16	54	67	54	51	36	42	79	31	59	17
27	26	16	50	62	52	55	116	33	76	26	40	20
28	27	16	56	56	50	47	109	25	85	47	33	22
29	21	14	58	50	---	43	81	38	91	66	30	18
30	17	14	56	48	---	43	64	47	100	47	22	16
31	19	---	47	70	---	43	---	42	---	38	19	---
TOTAL	382.8	596.8	1832	2683	3349	1959	2034	1173	5468	1537	1036	864
MEAN	12.3	19.9	59.1	86.5	120	63.2	67.8	37.8	182	49.6	33.4	28.8
MAX	33	70	161	337	450	116	130	55	861	94	89	119
MIN	4.9	7.5	14	48	50	43	36	25	38	26	17	13

CAL YR 1981 TOTAL 8451.9 MEAN 23.2 MAX 161 MIN 3.6
WTR YR 1982 TOTAL 22914.6 MEAN 62.8 MAX 861 MIN 4.9

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 (2.4 km) west of Kingston, and 3.1 mi (5.0 km) upstream from Worden Pond.

DRAINAGE AREA.--9.99 mi² (25.87 km²).

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder. Datum of gage is 89.80 ft (27.371 m), Rhode Island State Board of Public Roads datum.

REMARKS.--Records fair except those for period of no gage-height record, May 27 to June 9, which are poor. Diversion upstream for supply of University of Rhode Island.

AVERAGE DISCHARGE.--10 years (water years 1959, 1974-82), 20.5 ft³/s (0.581 m³/s).

EXTREMES FOR PERIOD OF RECORD (SINCE 1973).--Maximum discharge, about 250 ft³/s (7.1 m³/s), June 6, 1982; minimum, 2.1 ft³/s (0.059 m³/s) Aug. 27-31, Sept. 2, 1981.
Instantaneous maximum and minimum discharges not available prior to Sept. 14, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 250 ft³/s (7.1 m³/s), June 6; minimum discharge, 2.7 ft³/s (0.076 m³/s) Oct. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	4.1	5.5	22	45	20	22	32	21	44	31	20
2	4.9	3.5	8.6	26	96	19	24	29	22	44	30	28
3	5.3	3.1	14	33	92	19	24	26	30	43	29	36
4	5.3	3.1	19	38	84	19	28	24	40	42	28	38
5	5.3	2.9	19	58	79	22	32	23	90	41	27	33
6	4.8	3.1	22	71	66	27	33	23	235	40	27	29
7	5.1	3.2	22	64	55	30	34	22	180	39	26	25
8	4.8	3.4	20	57	50	33	30	22	145	38	26	22
9	4.4	3.2	18	47	45	34	28	21	125	37	27	20
10	4.1	3.2	15	40	39	34	26	21	105	37	29	19
11	3.5	3.2	13	35	35	33	25	20	83	36	29	18
12	3.2	3.2	12	32	34	32	27	20	70	35	29	16
13	3.5	3.1	10	31	31	28	28	19	63	35	28	12
14	3.2	3.2	9.5	29	29	28	28	19	66	35	27	14
15	2.8	3.8	13	29	28	28	27	19	74	34	25	14
16	2.9	4.8	20	28	28	26	25	19	73	33	24	14
17	3.2	7.6	28	26	28	25	24	19	67	33	23	13
18	3.1	11	33	25	28	25	23	18	63	32	22	13
19	3.8	13	31	24	26	26	23	18	58	32	21	12
20	3.5	13	27	23	26	26	22	18	54	32	20	12
21	3.2	13	24	22	26	25	22	18	52	33	19	14
22	2.9	12	21	21	26	24	21	18	49	33	18	13
23	2.9	10	19	22	25	24	20	18	47	33	17	13
24	4.1	8.9	20	25	24	24	19	19	45	33	18	13
25	4.1	7.8	21	32	24	24	19	21	43	32	19	13
26	4.3	7.2	22	33	22	23	19	22	42	31	22	13
27	4.4	6.8	22	32	21	22	25	21	42	30	25	13
28	4.6	6.6	22	28	20	22	36	19	42	31	25	12
29	4.6	6.6	21	26	---	20	39	20	42	32	24	12
30	4.6	5.9	20	24	---	20	36	21	43	32	22	12
31	4.3	---	20	24	---	19	---	22	---	31	21	---
TOTAL	123.8	183.5	591.6	1027	1132	781	789	651	2111	1093	758	536
MEAN	3.99	6.12	19.1	33.1	40.4	25.2	26.3	21.0	70.4	35.3	24.5	17.9
MAX	5.3	13	33	71	96	34	39	32	235	44	31	38
MIN	2.8	2.9	5.5	21	20	19	19	18	21	30	17	12
CAL YR 1981	TOTAL	2978.7	MEAN	8.16	MAX	33	MIN	2.1				
WTR YR 1982	TOTAL	9776.9	MEAN	26.8	MAX	235	MIN	2.8				

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURES: October 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1973.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 180 micromhos May 7, 1977, June 11, 1979; minimum recorded, 37 micromhos Jan. 22, 23, 1979.

WATER TEMPERATURES: Maximum recorded, 30.5°C July 8, 9, 1981; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 114 micromhos Oct. 19; minimum recorded, 58 micromhos June 8.

WATER TEMPERATURES: Maximum recorded, 28.0°C July 19; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
SEP 02...	1330	88	6.0	20.0	40	8.4	20	11	5.4

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
SEP 02...	1.6	6.5	1.4	9.0	10	12	.1	2.5	60

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
SEP 02...	<.010	.24	.18	.010	.39	.40	.64	.020	<.010

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 02...	260	32

PAWCATUCK RIVER BASIN

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	106	104	105	104	102	103	91	88	89	86	77	83
2	107	103	105	105	103	104	91	85	88	81	78	80
3	106	102	104	105	103	104	88	84	87	79	78	78
4	105	103	104	105	103	104	86	83	85	79	72	76
5	106	105	106	106	103	105	85	81	84	74	71	73
6	108	106	106	108	104	106	80	79	80	72	70	71
7	108	105	106	104	101	103	81	80	81	72	71	71
8	106	103	105	103	101	102	83	81	82	69	67	68
9	106	104	105	103	101	102	83	83	83	69	67	68
10	107	104	105	102	101	101	84	83	83	69	67	68
11	107	104	106	104	101	102	85	83	84	71	69	70
12	107	97	103	102	99	101	86	84	85	73	71	72
13	102	97	100	102	99	101	87	84	85	74	72	73
14	103	99	101	103	101	102	88	85	87	79	72	73
15	109	100	104	104	102	103	87	71	80	73	72	73
16	108	105	107	103	100	102	79	78	78	75	72	74
17	111	105	107	100	96	98	78	76	77	75	73	74
18	113	108	110	95	93	94	77	77	77	76	75	75
19	114	108	111	93	91	92	77	75	76	78	76	76
20	109	108	108	92	91	91	78	75	77	79	77	78
21	111	108	109	91	88	89	81	78	80	79	78	78
22	111	108	110	88	86	87	82	81	82	81	78	79
23	113	110	112	87	86	86	83	81	82	83	79	81
24	111	105	108	86	85	86	82	80	81	82	76	79
25	106	105	105	86	85	85	81	80	81	79	77	78
26	107	105	106	87	85	86	82	80	81	80	78	79
27	108	106	107	91	88	90	83	82	82	81	79	80
28	109	105	107	89	88	89	84	82	83	83	80	82
29	106	101	102	89	87	88	84	82	83	85	81	83
30	103	101	102	89	87	88	83	81	82	87	83	86
31	104	102	103	---	---	---	84	82	84	87	86	86
MONTH	114	97	106	108	85	96	91	71	82	87	67	76

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	87	76	80	83	80	81	92	87	89	92	89	91
2	76	65	70	83	81	82	90	86	88	93	90	91
3	65	63	64	82	80	80	90	86	88	91	89	91
4	64	60	62	83	80	81	89	86	87	91	89	90
5	62	59	60	85	77	80	88	85	86	92	89	90
6	62	60	61	77	76	77	86	80	83	92	88	90
7	62	60	61	76	74	75	83	81	82	91	89	90
8	65	62	64	76	74	75	86	82	84	91	88	89
9	65	64	65	75	74	75	87	84	85	91	89	90
10	66	64	65	77	75	76	91	86	88	90	88	89
11	67	65	66	79	76	78	90	88	89	90	87	88
12	69	66	68	80	78	79	91	88	89	90	86	88
13	69	67	69	80	79	80	91	89	90	88	86	87
14	71	69	70	82	79	80	93	90	91	89	86	88
15	73	70	71	83	79	81	93	89	91	89	86	87
16	74	70	72	82	80	81	94	91	92	89	86	87
17	73	72	73	82	80	81	94	93	94	92	87	89
18	74	72	73	84	80	81	95	93	95	89	87	88
19	75	73	74	84	81	82	95	93	94	89	87	88
20	77	74	75	85	81	83	96	93	95	92	89	90
21	76	75	76	84	82	83	96	94	95	89	87	89
22	75	74	75	85	82	84	97	94	95	88	86	87
23	76	74	75	86	82	84	99	95	97	87	86	86
24	76	74	75	87	82	84	101	97	98	87	84	86
25	79	76	77	88	84	86	101	97	98	86	84	85
26	83	79	82	87	85	86	100	97	99	85	82	84
27	84	81	83	87	85	86	100	95	96	86	84	85
28	84	80	82	89	85	86	94	90	92	89	86	88
29	---	---	---	91	86	88	92	88	90	91	87	89
30	---	---	---	92	88	89	92	87	90	92	90	91
31	---	---	---	92	89	91	---	---	---	93	91	92
MONTH	87	59	71	92	74	82	101	80	91	93	82	88

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	95	93	94							---	---	---
2	96	83	89							---	---	---
3	91	88	90							---	---	---
4	91	86	89							---	---	---
5	86	76	80							---	---	---
6	79	68	75							---	---	---
7	69	59	63							---	---	---
8	62	58	60							---	---	---
9	64	59	61							---	---	---
10	66	62	64							---	---	---
11	68	63	66							---	---	---
12	70	66	68							---	---	---
13	72	70	71							---	---	---
14	---	---	---							---	---	---
15	---	---	---							---	---	---
16	---	---	---							---	---	---
17	---	---	---							104	103	104
18	---	---	---							105	104	104
19	---	---	---							105	103	104
20	---	---	---							104	103	103
21	---	---	---							103	102	103
22	---	---	---							103	102	103
23	---	---	---							103	102	103
24	---	---	---							104	102	103
25	---	---	---							104	103	103
26	---	---	---							104	102	103
27	---	---	---							102	101	102
28	---	---	---							102	101	101
29	---	---	---							101	101	101
30	---	---	---							101	100	101
31	---	---	---							---	---	---
MONTH	96	58	75							105	100	103
YEAR	114	58	87									

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20 PERCENT OF YEAR

TEMPERATURE WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	13.5	12.0	12.5	10.0	8.0	9.5	3.5	.0	1.5	2.5	1.5	2.0
2	14.5	12.0	13.0	11.0	8.0	10.0	7.0	3.5	5.5	2.0	.5	1.0
3	14.5	12.5	13.5	11.0	8.5	9.5	5.0	4.0	4.5	1.5	.0	.5
4	15.5	11.0	13.0	10.0	7.5	9.0	5.0	3.0	4.0	3.5	1.5	2.0
5	15.5	13.5	14.5	10.5	8.0	9.0	4.0	1.5	3.0	3.0	1.0	2.0
6	15.0	13.5	14.0	11.5	10.0	11.0	2.0	.5	1.0	1.5	.0	1.0
7	15.0	14.0	14.5	11.0	8.5	9.5	2.5	1.0	1.5	2.5	1.5	1.5
8	14.0	12.0	13.5	8.5	6.5	7.5	2.0	1.0	1.5	1.5	.0	.5
9	13.5	11.0	12.5	9.5	6.5	8.0	2.5	1.0	1.5	1.0	.0	.5
10	13.0	11.0	12.0	9.0	7.0	7.5	2.5	.5	1.5	.5	.0	.0
11	12.5	10.0	11.5	9.0	7.0	8.0	2.0	.5	1.0	.0	.0	.0
12	12.0	9.5	11.0	7.5	5.5	6.0	2.5	.0	1.0	.5	.0	.0
13	12.5	9.0	11.0	5.5	3.5	4.5	2.5	.0	1.0	1.0	.0	.5
14	13.0	10.0	11.5	7.5	5.0	6.0	2.5	.0	1.0	.5	.0	.5
15	13.0	10.5	12.0	8.0	6.5	7.0	2.0	1.0	1.5	1.0	.0	.5
16	13.0	11.0	12.0	8.0	8.0	8.0	2.0	.5	1.5	1.0	.0	.5
17	13.5	11.5	12.5	9.5	8.0	8.5	1.5	.0	.5	.5	.0	.0
18	12.5	10.5	11.5	8.5	7.5	8.0	1.0	.5	.5	.0	.0	.0
19	14.0	12.0	13.0	9.0	6.5	7.5	1.0	.0	.0	1.0	.0	.0
20	12.5	9.5	11.0	8.5	7.5	8.0	.5	.0	.0	1.5	.0	.5
21	13.0	10.0	11.5	8.0	6.5	7.5	1.0	.0	.5	1.0	.0	.0
22	14.0	10.5	12.5	7.0	5.5	6.0	1.0	.5	1.0	.5	.0	.0
23	15.5	13.5	14.5	6.5	4.5	5.0	2.0	.5	1.0	.5	.0	.0
24	15.5	13.0	14.0	6.0	3.5	4.5	2.0	.0	1.0	.5	.0	.0
25	12.5	10.5	11.5	4.5	3.0	3.5	1.5	.0	1.0	.0	.0	.0
26	12.5	11.5	12.0	5.5	1.5	3.5	2.0	.0	1.0	.5	.0	.0
27	13.5	12.5	13.0	7.5	4.0	5.5	1.5	1.0	1.0	.5	.0	.0
28	16.0	14.0	14.5	5.5	3.5	4.5	2.5	1.0	1.5	1.0	.0	.5
29	14.5	10.0	11.0	4.5	3.0	3.5	3.0	1.0	2.0	1.5	.0	.5
30	10.0	9.0	10.0	4.0	1.5	2.5	2.5	.0	1.0	1.5	.0	1.0
31	11.5	9.0	10.0	---	---	---	2.5	.0	1.0	2.0	1.0	1.5
MONTH	16.0	9.0	12.5	11.5	1.5	7.0	7.0	.0	1.5	3.5	.0	.5

TEMPERATURE WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	2.5	.5	2.0	5.0	.0	2.5	12.0	8.5	10.0	19.0	14.5	16.5
2	1.0	.0	.5	6.0	2.0	4.5	12.5	7.5	9.5	19.5	15.0	17.0
3	2.0	.5	1.0	7.0	.0	3.0	10.0	8.0	9.0	18.0	15.5	17.0
4	2.0	.5	1.5	---	---	---	10.0	7.5	9.0	17.5	15.0	16.5
5	2.0	.0	1.0	7.5	4.0	5.5	10.5	6.5	8.0	20.0	15.0	17.5
6	2.0	.5	1.5	5.0	1.5	4.0	8.0	3.5	5.5	21.0	15.5	18.0
7	2.0	.0	1.0	5.0	4.5	5.0	5.5	3.5	4.5	21.5	16.5	18.5
8	3.5	.5	1.5	7.0	.0	4.5	8.0	3.5	5.0	21.0	16.5	18.5
9	2.0	1.5	2.0	4.5	.0	2.0	7.0	4.0	5.0	20.0	17.0	18.5
10	4.0	.0	2.0	---	---	---	10.0	4.0	6.5	18.0	16.0	17.0
11	4.0	.0	1.5	8.0	4.0	6.0	9.5	6.0	7.5	18.0	15.0	16.0
12	4.5	.0	2.0	7.0	6.0	6.5	10.0	6.0	8.0	20.5	14.5	17.0
13	3.0	.0	2.0	7.0	6.5	7.0	9.0	6.5	7.5	19.0	16.0	17.5
14	4.5	.0	2.0	9.5	5.5	7.0	12.5	7.0	9.5	21.0	16.5	18.5
15	5.0	.0	3.0	9.5	5.0	7.0	13.0	7.5	10.0	22.0	16.0	18.5
16	6.5	4.0	5.0	9.5	5.0	7.0	14.0	8.5	11.0	21.5	16.5	19.0
17	4.5	1.0	3.0	6.5	5.0	6.0	12.5	10.5	11.5	23.0	17.5	20.0
18	4.0	1.0	2.0	9.5	4.5	7.0	15.5	11.0	12.5	22.5	17.5	20.0
19	4.0	.0	3.0	10.0	6.5	8.0	16.0	10.5	13.0	21.0	18.5	19.5
20	6.0	3.5	4.5	10.5	6.5	8.5	16.0	11.0	13.0	23.0	18.5	20.0
21	5.5	1.0	4.0	8.0	7.5	8.0	13.5	12.5	13.0	22.5	19.0	20.5
22	4.5	3.5	4.0	11.0	7.0	8.5	16.0	10.5	12.5	21.0	18.0	19.5
23	6.0	1.0	4.0	11.5	7.0	8.5	16.0	10.0	13.0	18.5	17.0	18.0
24	4.5	1.0	3.0	11.5	7.0	9.0	18.0	12.0	14.5	16.5	15.5	16.0
25	5.5	.0	2.0	13.0	8.0	10.5	18.5	13.0	15.5	20.5	16.0	17.5
26	5.5	.0	1.5	10.5	8.5	10.0	16.0	14.0	15.0	21.5	16.5	19.0
27	6.0	.0	2.5	11.0	6.5	8.5	17.5	14.0	15.5	23.0	17.0	20.0
28	6.5	.0	2.5	10.0	5.5	7.5	15.5	13.0	14.0	20.5	18.0	19.0
29	---	---	---	11.0	5.5	8.0	17.0	12.0	14.0	19.0	17.5	18.0
30	---	---	---	12.0	6.5	8.5	18.0	12.5	15.0	19.0	17.0	18.0
31	---	---	---	9.5	7.5	8.5	---	---	---	18.5	17.5	18.0
MONTH	6.5	.0	2.5	13.0	.0	7.0	18.5	3.5	10.5	23.0	14.5	18.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	19.5	17.0	18.0	24.5	21.0	22.5	24.5	22.0	23.0	19.5	18.5	19.0
2	21.5	17.0	19.0	24.5	20.5	22.5	24.0	21.5	22.5	19.5	18.5	19.0
3	21.5	17.5	19.5	23.0	21.0	22.0	22.5	21.5	22.0	21.5	19.0	20.0

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 (1.9 km) upstream from Chickasheen Brook, 1.8 mi (2.9 km) south of Usquepaug, and 2.6 mi (4.2 km) west of West Kingston.

DRAINAGE AREA.--36.1 mi² (93.5 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1958 to July 1960 in Rhode Island Water Resources Board Geologic Bulletin 13. December 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 81.28 ft (24.774 m) state of Rhode Island datum.

REMARKS.--Records good except those for period of backwater from debris, June 23 to Sept. 30, which are fair. Flow affected at times by irrigation upstream.

AVERAGE DISCHARGE.--8 years (water years 1959, 1976-82), 76.2 ft³/s (2.158 m³/s), 28.66 in/yr (728 mm/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1974).--Maximum discharge, 1,060 ft³/s (30.0 m³/s) June 6, 1982, gage height, 9.23 ft (2.813 m); minimum, 3.9 ft³/s (0.11 m³/s) Sept. 10, 1977, Sept. 30, 1980. Instantaneous maximum and minimum discharges not available prior to Dec. 5, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s (30.0 m³/s) June 6, gage height, 9.23 ft (2.813 m); minimum, 11 ft³/s (0.31 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	21	28	95	289	81	94	106	62	118	45	34
2	21	20	66	120	511	83	101	96	91	108	43	82
3	25	19	108	144	501	86	94	89	178	99	41	115
4	22	19	111	155	426	82	112	85	163	92	39	103
5	18	18	90	369	347	103	142	83	301	87	39	71
6	17	20	77	412	263	128	133	80	959	82	39	50
7	18	24	76	317	204	134	119	76	1020	78	36	44
8	17	23	71	234	173	139	111	74	754	75	35	40
9	16	21	66	186	158	136	106	72	522	71	42	38
10	15	19	62	175	154	122	104	71	386	67	66	36
11	14	18	60	153	145	112	107	69	312	65	70	34
12	14	18	57	134	134	108	114	67	259	62	58	33
13	13	17	55	125	126	105	116	66	229	62	48	32
14	13	17	53	123	122	104	111	65	270	60	43	30
15	13	20	80	126	118	101	106	63	335	56	39	30
16	13	36	130	126	118	96	100	61	303	53	36	30
17	13	64	182	123	121	93	94	59	243	52	34	30
18	13	64	154	117	117	97	93	56	234	50	39	29
19	18	58	127	113	111	100	95	56	206	48	39	28
20	19	49	111	112	112	97	91	56	184	47	36	28
21	19	51	98	111	114	92	87	60	164	66	36	34
22	17	44	91	109	111	92	85	57	152	67	36	38
23	17	39	92	109	106	90	81	56	142	58	36	41
24	27	35	103	139	100	84	78	61	132	52	45	37
25	30	33	109	171	96	81	75	71	127	50	52	32
26	30	31	106	163	91	81	73	65	118	46	69	29
27	32	30	99	136	87	83	107	58	113	43	58	30
28	33	30	96	120	84	80	154	52	109	49	46	33
29	30	30	98	115	---	76	142	57	106	70	40	32
30	26	29	100	111	---	73	120	72	114	60	36	31
31	23	---	96	116	---	74	---	65	---	49	35	---
TOTAL	607	917	2852	4859	5039	3013	3145	2124	8288	2042	1356	1254
MEAN	19.6	30.6	92.0	157	180	97.2	105	68.5	276	65.9	43.7	41.8
MAX	33	64	182	412	511	139	154	106	1020	118	70	115
MIN	11	17	28	95	84	73	73	52	62	43	34	28
CFSM	.54	.85	2.55	4.35	4.99	2.69	2.91	1.90	7.65	1.83	1.21	1.16
IN.	.63	.94	2.94	5.01	5.19	3.10	3.24	2.19	8.54	2.10	1.40	1.29
CAL YR 1981	TOTAL	13840.0	MEAN	37.9	MAX	182	MIN	7.6	CFSM	1.05	IN	14.26
WTR YR 1982	TOTAL	35496.0	MEAN	97.2	MAX	1020	MIN	11	CFSM	2.69	IN	36.58

PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water year 1975 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1974 to current year.

WATER TEMPERATURES: December 1974 to current year.

INSTRUMENTATION.--Water-quality monitor since December 1974.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 250 micromhos June 4, 1977; minimum recorded, 21 micromhos May 15, 16, 1978, Jan. 22, 1979.

WATER TEMPERATURES: Maximum recorded, 27.0°C Aug. 3, 1975; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 82 micromhos Oct. 31 to Nov. 6, June 30; minimum recorded, 29 micromhos Jan. 7.

WATER TEMPERATURES: Maximum recorded, 25.5°C July 19; minimum recorded, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
SEP 02...	1410	52	5.9	19.0	54	8.4	0	4	2.6

DATE	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINEITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)
SEP 02...	.7	4.1	.6	6.0	7.0	7.2	.2	7.2	49

DATE	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
SEP 02...	<.010	.19	.15	.010	.39	.40	.59	.040	.020

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 02...	200	17

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	77	76	77	82	79	81	70	67	70	52	49	51
2	76	69	72	82	79	81	66	52	59	49	41	44
3	71	67	69	82	79	81	51	48	49	44	41	42
4	71	66	69	82	79	81	---	---	---	44	33	39
5	72	69	71	82	79	81	---	---	---	37	35	36
6	74	71	72	82	78	80	---	---	---	39	36	37
7	73	71	72	80	75	78	---	---	---	42	29	40
8	73	70	72	79	75	77	---	---	---	45	42	43
9	74	69	72	79	75	78	---	---	---	46	42	44
10	74	70	73	80	79	80	---	---	---	51	47	49
11	79	72	74	81	77	79	---	---	---	54	51	53
12	82	72	76	81	77	79	---	---	---	57	52	55
13	76	71	74	80	76	79	---	---	---	57	53	55
14	77	72	74	80	76	78	---	---	---	55	51	53
15	76	72	74	78	74	76	---	---	---	53	49	51
16	77	72	75	74	69	71	---	---	---	53	49	51
17	77	72	75	68	63	64	---	---	---	54	50	53
18	76	73	75	66	64	65	---	---	---	56	54	55
19	75	72	74	69	65	66	---	---	---	56	52	55
20	73	70	72	69	67	68	---	---	---	56	52	54
21	74	70	72	68	66	66	---	---	---	55	51	54
22	74	70	73	69	65	68	---	---	---	56	51	55
23	74	72	73	70	66	69	53	50	52	57	50	54
24	76	70	72	70	66	69	55	47	49	58	46	52
25	71	67	68	70	66	69	52	47	49	60	50	56
26	68	66	67	70	66	69	51	48	50	61	57	60
27	66	63	64	70	67	69	50	48	49	61	56	59
28	71	64	67	71	68	70	50	48	49	59	55	57
29	79	71	78	70	68	69	50	49	50	59	54	56
30	81	78	79	71	67	70	52	48	50	58	54	56
31	82	79	80	---	---	---	53	49	52	55	53	54
MONTH	82	63	73	82	63	74	70	47	52	61	29	51

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	53	35	43	60	59	60	60	56	58	61	58	59
2	39	35	38	59	56	57	61	57	59	72	60	62
3	38	35	37	60	55	58	62	59	61	78	60	63
4	38	35	36	60	56	59	59	55	56	62	59	61
5	41	38	39	61	50	54	56	52	55	62	59	60
6	43	41	42	53	49	51	57	55	56	62	60	61
7	47	43	44	50	47	49	55	53	55	63	61	62
8	47	44	45	51	48	48	59	55	56	63	61	62
9	47	46	47	51	47	49	59	58	58	63	61	62
10	50	46	47	52	48	51	60	57	58	63	62	63
11	53	47	50	52	50	51	60	55	58	63	61	62
12	55	49	52	53	52	53	58	54	57	64	60	62
13	53	49	51	54	53	53	58	55	57	63	61	62
14	55	49	52	54	53	53	60	55	58	63	61	62
15	55	50	52	57	53	55	62	58	60	64	61	63
16	52	51	51	58	54	56	62	59	61	64	61	62
17	53	50	52	58	54	57	62	60	61	64	61	62
18	54	50	52	57	52	54	64	61	61	64	61	63
19	54	50	52	57	53	55	64	61	63	64	62	63
20	53	51	51	58	54	56	65	62	63	63	61	62
21	53	51	52	59	56	57	66	63	64	63	60	61
22	54	51	52	59	56	56	66	63	65	63	61	62
23	55	51	53	61	57	59	66	64	65	63	61	61
24	56	52	55	62	46	59	67	65	66	61	57	59
25	58	53	56	62	59	61	68	66	67	57	54	55
26	59	55	57	62	59	61	69	67	68	58	54	56
27	60	56	59	62	59	61	68	47	56	59	56	58
28	60	56	59	62	60	62	55	52	54	61	59	60
29	---	---	---	63	60	62	58	54	55	62	56	60
30	---	---	---	64	61	63	59	56	58	56	55	56
31	---	---	---	65	60	63	---	---	---	56	55	56
MONTH	60	35	49	65	46	56	69	47	60	78	54	61

PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	57	56	57	63	59	61	75	72	74	68	63	65
2	57	38	49	64	56	64	77	73	75	65	44	52
3	38	34	36	67	64	65	77	75	76	48	42	44
4	40	37	39	68	65	67	79	76	78	48	43	46
5	---	---	---	68	66	68	79	76	78	52	46	49
6	---	---	---	70	67	69	79	76	78	55	50	53
7	---	---	---	71	68	70	79	76	78	57	53	55
8	35	30	32	75	70	72	81	77	79	57	56	57
9	40	35	38	76	73	74	79	74	78	62	59	61
10	44	40	42	77	73	75	74	67	71	65	61	63
11	49	45	47	77	74	75	68	66	67	66	62	64
12	48	46	47	76	74	75	71	68	70	67	63	65
13	49	46	48	75	72	73	74	70	72	67	64	66
14	47	42	44	75	72	74	75	72	74	67	66	66
15	44	41	43	76	72	74	78	74	76	72	66	68
16	47	45	46	76	73	75	79	76	78	80	67	70
17	49	47	48	76	72	74	80	77	79	78	66	71
18	50	48	49	76	73	74	79	76	78	73	67	71
19	55	49	51	77	73	75	78	74	77	77	68	71
20	52	49	51	75	72	75	78	76	77	75	68	70
21	66	51	54	71	66	68	79	77	78	73	65	68
22	61	54	56	66	65	66	79	75	78	70	65	67
23	70	56	59	67	64	66	79	77	78	73	62	65
24	64	57	59	71	67	69	78	74	76	70	61	65
25	77	58	61	72	68	71	77	61	69	70	64	66
26	77	60	63	74	70	72	63	52	55	70	64	67
27	75	61	64	76	73	74	58	52	55	72	64	67
28	80	63	68	74	68	72	59	55	57	68	62	65
29	78	64	66	67	64	66	64	57	59	79	63	65
30	82	48	64	70	65	68	67	60	63	66	62	64
31	---	---	---	73	69	71	67	60	63	---	---	---
MONTH	82	30	51	77	56	71	81	52	72	80	42	63
YEAR	82	29	62									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	11.5	12.0	10.5	9.0	10.0	4.0	1.5	3.0	2.0	1.0	1.5
2	13.0	12.0	12.5	11.0	9.0	10.0	5.5	4.0	4.5	2.0	1.0	1.5
3	13.0	11.5	12.0	10.0	8.5	9.5	7.0	6.0	7.0	.5	.0	.5
4	11.5	10.0	11.0	10.0	8.0	9.0	---	---	---	3.5	.5	1.5
5	12.0	11.5	12.0	10.0	8.0	9.0	---	---	---	4.0	3.0	3.5
6	12.5	11.5	12.0	11.0	9.5	10.0	---	---	---	3.0	1.5	2.0
7	12.5	11.5	12.0	10.0	8.5	9.5	---	---	---	3.0	2.0	2.5
8	12.0	11.0	11.5	8.5	7.5	8.0	---	---	---	2.5	.0	1.5
9	11.5	10.5	11.0	9.0	6.5	8.0	---	---	---	.5	.0	.0
10	11.5	10.5	11.0	9.0	7.5	8.0	---	---	---	.0	.0	.0
11	10.5	9.0	10.0	8.5	7.5	8.0	---	---	---	.0	.0	.0
12	10.0	9.0	9.5	7.0	5.5	6.5	---	---	---	.0	.0	.0
13	9.5	8.0	9.0	6.0	4.5	5.0	---	---	---	.0	.0	.0
14	10.0	8.5	9.0	7.0	5.0	6.0	---	---	---	.0	.0	.0
15	10.5	9.0	9.5	8.0	7.0	7.5	---	---	---	.0	.0	.0
16	10.5	9.0	10.0	8.0	7.5	8.0	---	---	---	.0	.0	.0
17	11.0	10.0	10.5	9.0	8.0	8.5	---	---	---	.0	.0	.0
18	11.0	9.0	9.5	9.5	9.0	9.0	---	---	---	.0	.0	.0
19	12.0	10.5	11.0	9.0	8.0	8.5	---	---	---	.0	.0	.0
20	10.5	8.5	9.5	8.5	8.0	8.5	---	---	---	.0	.0	.0
21	11.5	9.5	10.5	8.5	8.0	8.0	---	---	---	.0	.0	.0
22	12.0	9.5	11.0	7.5	6.5	7.0	---	---	---	.0	.0	.0
23	14.0	12.0	13.0	6.5	5.0	5.5	1.5	1.0	1.5	.0	.0	.0
24	13.5	11.5	12.5	5.0	4.0	4.5	2.0	1.0	1.5	.0	.0	.0
25	12.0	11.0	11.5	4.0	3.5	3.5	2.0	1.0	1.5	.0	.0	.0
26	12.0	11.5	11.5	4.0	2.5	3.0	1.5	1.0	1.0	.0	.0	.0
27	11.5	11.0	11.5	5.5	4.0	4.5	2.0	1.0	1.5	.0	.0	.0
28	12.5	11.5	12.0	5.0	4.0	4.5	3.0	2.0	2.5	.0	.0	.0
29	12.5	11.5	12.0	4.0	3.5	4.0	3.5	3.0	3.0	.0	.0	.0
30	11.5	11.0	11.0	3.5	3.0	3.0	3.0	2.0	2.5	.0	.0	.0
31	11.0	10.5	10.5	---	---	---	1.5	1.0	1.5	.0	.0	.0
MONTH	14.0	8.0	11.0	11.0	2.5	7.0	7.0	1.0	2.5	4.0	.0	.5

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	.0	.0	.0	3.5	2.0	2.5	9.5	7.5	8.5	15.5	12.0	13.5
2	.0	.0	.0	3.5	2.5	3.0	10.0	8.0	9.0	16.5	13.5	15.0
3	.0	.0	.0	4.0	2.5	3.5	8.5	7.5	8.0	15.5	14.5	15.0
4	.0	.0	.0	3.5	2.0	2.5	8.0	6.0	7.5	14.5	13.0	13.5
5	1.0	.0	.5	3.5	1.5	2.5	7.0	4.0	5.5	15.0	12.0	13.5
6	2.0	1.0	1.5	3.0	2.5	3.0	5.0	.5	3.0	16.0	12.5	14.0
7	1.0	.0	.5	3.5	2.5	3.0	.5	.0	.0	16.5	14.0	15.0
8	1.5	.0	.5	4.5	3.0	3.5	3.0	.0	1.0	16.5	14.0	15.0
9	1.5	.5	1.0	3.0	1.5	2.5	3.5	1.5	2.5	15.5	14.5	15.0
10	1.5	.5	1.0	3.5	.5	2.0	6.0	2.0	4.0	15.5	14.5	14.5
11	1.0	.0	.5	5.0	2.5	4.0	7.5	4.5	6.0	14.5	13.0	13.5
12	1.0	.0	.5	7.0	5.0	6.0	8.0	5.5	7.0	15.5	12.5	14.0
13	.5	.5	.5	7.0	6.5	7.0	7.5	6.0	7.0	15.0	13.5	14.0
14	1.0	.0	.5	8.0	6.0	7.0	10.0	6.5	8.0	16.0	13.5	14.5
15	1.5	.0	1.0	7.5	6.5	7.0	11.5	8.5	9.5	17.0	14.0	15.5
16	4.0	1.5	3.0	7.5	5.5	6.5	11.5	8.5	10.0	16.5	14.5	15.5
17	3.5	2.0	3.0	6.5	5.0	5.5	12.0	10.5	11.5	18.0	15.0	16.5
18	2.0	1.0	1.5	6.0	4.0	5.0	13.5	11.5	12.5	17.0	15.5	16.0
19	2.0	1.0	1.5	7.0	5.5	6.5	14.0	12.0	13.0	16.5	15.5	16.0
20	3.5	1.5	2.5	8.0	6.0	7.0	13.5	11.0	12.5	17.5	15.5	16.0
21	4.0	3.0	3.5	7.5	6.5	7.0	13.0	12.0	12.5	18.0	16.5	17.0
22	3.5	3.0	3.5	8.0	6.0	7.0	12.0	10.0	11.0	17.0	16.0	16.0
23	3.5	2.0	3.0	8.5	7.0	7.5	12.0	9.0	10.5	15.5	14.0	14.5
24	3.5	3.0	3.5	8.5	6.5	7.5	13.5	10.5	12.0	14.0	12.5	13.0
25	3.0	1.5	2.5	9.5	7.0	8.5	15.0	12.0	13.5	13.5	12.0	12.5
26	2.5	.5	1.5	9.5	8.5	9.0	14.5	13.5	14.0	14.5	13.0	13.5
27	3.0	1.0	2.0	8.5	6.0	7.5	14.0	13.0	14.0	18.5	15.0	16.5
28	3.5	1.5	2.5	6.0	4.5	5.5	13.5	11.0	12.5	18.5	16.5	17.5
29	---	---	---	6.5	3.5	5.0	13.0	9.5	11.0	18.0	16.5	17.0
30	---	---	---	7.5	2.5	6.0	14.0	10.5	12.0	16.5	15.5	16.0
31	---	---	---	8.0	6.5	7.5	---	---	---	16.0	15.5	15.5
MONTH	4.0	.0	1.5	9.5	.5	5.5	15.0	.0	9.0	18.5	12.0	15.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	16.0	15.5	15.5	22.0	20.5	21.5	22.0	18.0	20.0	18.0	16.0	17.0
2	17.5	16.0	16.5	22.0	17.0	21.5	21.5	18.5	20.0	17.5	16.5	17.0
3	18.0	16.5	17.0	21.5	21.0	21.5	20.0	18.5	19.5	19.0	17.0	18.0
4	18.0	16.5	17.5	21.0	20.0	20.5	20.0	18.0	19.5	18.5	17.0	18.0
5	16.5	14.5	15.5	21.0	19.0	20.0	19.0	17.5	18.5	18.0	16.0	17.0
6	15.0	14.5	15.0	21.5	20.0	20.5	20.5	18.5	19.5	17.5	15.5	16.5
7	14.5	13.0	14.0	22.0	20.5	21.5	19.5	17.5	18.5	17.0	15.5	16.0
8	14.5	13.0	13.5	24.0	21.5	22.5	20.5	17.5	19.0	16.5	15.5	16.0
9	16.0	13.5	14.5	25.0	22.5	23.5	19.5	18.5	19.0	17.0	15.5	16.5
10	17.0	15.5	16.5	25.0	22.0	23.5	21.0	19.0	20.0	18.5	16.0	17.0
11	17.0	16.0	16.5	24.0	21.5	22.5	20.5	19.5	20.0	19.0	16.5	17.5
12	17.0	16.0	16.5	23.0	21.5	22.5	19.5	18.5	19.0	19.5	17.0	18.0
13	16.5	14.5	15.5	24.0	21.0	22.0	19.5	17.5	18.5	20.0	17.5	18.5
14	14.5	14.0	14.0	24.0	20.5	22.5	19.5	17.0	18.0	20.0	18.0	19.0
15	16.5	13.5	15.0	23.5	21.0	22.0	21.0	17.0	18.5	20.0	18.0	19.0
16	18.0	16.0	17.0	24.0	21.5	22.5	20.0	17.5	19.0	19.5	18.0	19.0
17	19.5	18.0	18.5	25.0	21.5	23.0	20.0	17.5	18.5	19.0	17.5	18.0
18	20.0	19.0	19.5	25.0	22.5	23.5	21.0	18.0	19.5	18.0	16.0	17.0
19	19.5	18.0	19.0	25.5	23.0	24.5	20.0	17.5	19.0	17.5	16.0	16.5
20	19.5	18.0	18.5	24.5	23.5	24.0	20.0	18.0	19.0	16.5	14.5	15.0
21	19.5	18.0	18.5	23.0	21.0	22.0	19.5	18.5	19.0	15.5	15.0	15.0
22	19.5	18.0	18.5	21.0	20.0	20.0	19.0	16.5	17.5	14.5	14.0	14.0
23	21.0	19.5	20.0	20.0	18.5	19.5	17.0	16.0	16.5	15.0	14.0	14.0
24	21.0	19.5	20.0	22.5	18.5	20.0	19.5	16.0	17.5	16.0	13.5	14.5
25	20.5	19.0	19.5	21.0	19.0	20.0	18.0	16.5	17.0	16.0	13.5	15.0
26	21.0	20.0	20.5	22.5	19.0	21.0	17.5	15.5	17.0	16.0	14.5	15.5
27	22.0	21.0	21.5	23.0	20.5	21.5	17.0	16.5	17.0	16.0	15.0	15.5
28	21.5	21.0	21.0	20.0	19.0	19.5	18.0	16.0	17.0	16.5	15.0	15.5
29	21.5	21.0	21.0	20.5	18.5	19.5	17.0	15.0	16.0	16.0	15.5	15.5
30	22.5	20.5	21.5	20.0	18.5	19.0	16.5	15.0	16.0	15.5	15.0	15.0
31	---	---	---	20.5	18.5	19.0	17.0	15.0	16.0	---	---	---
MONTH YEAR	22.5 25.5	13.0 .0	17.5 11.0	25.5	17.0	21.5	22.0	15.0	18.5	20.0	13.5	16.5

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 (3 m) downstream from Beaver River Bridge on State Highway 138 in Richmond, 1.2 mi (1.9 km) southwest of Usquepaug, 3.3 mi (5.3 km) north of Kenyon, and 3.6 mi (5.8 km) upstream from mouth.
DRAINAGE AREA.--8.87 mi² (23.0 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1974 to current year.

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 (32.821 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

AVERAGE DISCHARGE.--7 years (water years 1976-82), 21.6 ft³/s (0.612 m³/s), 33.07 in/yr (840 mm/yr).EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 370 ft³/s (10.5 m³/s) June 6, 1982, gage height, 3.83 ft (1.167 m); minimum, 1.7 ft³/s (0.048 m³/s) Sept. 10, 12, 13, 24, 25, 28, 29, 30, Oct. 1, 1980.EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft³/s (2.0 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0415	126 3.57	2.72 0.829	June 6	0730	*370 10.5	3.83 1.167
Feb. 1	0700	151 4.28	2.87 .875	June 14	1300	108 3.06	2.60 .792
June 2	1545	92 2.61	2.49 .759				

Minimum discharge, 2.1 ft³/s (0.059 m³/s) Oct. 1.DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	4.3	7.7	31	119	26	32	29	22	37	13	9.6
2	7.0	4.6	35	44	83	30	26	28	65	33	13	42
3	5.2	4.1	38	35	96	26	25	26	65	31	12	30
4	4.3	3.9	28	58	76	28	45	27	43	30	12	18
5	4.3	4.1	25	115	65	48	36	29	141	29	11	14
6	4.1	6.2	23	79	57	40	30	26	324	28	11	13
7	5.0	5.0	22	66	54	42	27	25	215	28	11	12
8	4.1	3.9	20	54	51	44	29	24	162	26	10	11
9	3.4	4.5	19	52	50	34	28	23	126	25	13	11
10	2.9	4.3	18	45	47	32	29	23	108	24	21	11
11	2.6	4.6	16	41	40	35	32	24	95	23	17	10
12	2.7	4.0	15	34	40	36	32	24	83	22	13	10
13	2.8	3.9	14	35	39	33	33	22	74	22	13	9.6
14	2.9	4.7	13	38	36	32	32	22	99	21	11	9.3
15	3.2	5.5	28	39	39	29	26	22	93	20	10	9.6
16	3.2	9.9	52	33	38	28	25	21	75	20	9.3	9.3
17	2.6	18	47	31	32	27	26	20	71	20	9.0	9.3
18	2.7	17	40	28	32	30	29	20	65	19	12	9.0
19	4.1	13	30	28	32	30	26	20	58	18	10	8.7
20	3.8	13	26	28	37	29	23	20	56	21	9.6	8.7
21	3.8	15	25	24	36	27	23	22	52	29	9.0	9.3
22	3.6	11	27	24	32	30	22	20	49	23	8.7	10
23	3.9	7.9	32	38	30	28	25	20	47	20	8.7	11
24	5.2	7.7	35	38	28	26	24	22	45	18	13	10
25	6.5	7.7	31	31	26	25	23	25	41	17	17	9.3
26	6.7	7.6	26	26	27	24	23	20	40	16	20	8.7
27	7.8	10	29	25	26	25	51	19	37	14	13	8.7
28	8.1	9.3	30	25	26	22	47	18	35	18	11	8.7
29	5.4	9.2	30	23	---	22	37	22	36	22	11	8.7
30	4.5	7.8	25	25	---	22	31	24	41	16	10	8.7
31	4.5	---	22	38	---	21	---	21	---	14	9.6	---
TOTAL	133.2	231.7	828.7	1231	1294	931	897	708	2463	704	371.9	358.2
MEAN	4.30	7.72	26.7	39.7	46.2	30.0	29.9	22.8	82.1	22.7	12.0	11.9
MAX	8.1	18	52	115	119	48	51	29	324	37	21	42
MIN	2.3	3.9	7.7	23	26	21	22	18	22	14	8.7	8.7
CFSM	.49	.87	3.01	4.48	5.21	3.38	3.37	2.57	9.26	2.56	1.35	1.34
IN.	.56	.97	3.48	5.16	5.43	3.90	3.76	2.97	10.33	2.95	1.56	1.50
CAL YR 1981	TOTAL	3977.5	MEAN	10.9	MAX	52	MIN	2.1	CFSM	1.23	IN	16.68
WTR YR 1982	TOTAL	10151.7	MEAN	27.8	MAX	324	MIN	2.3	CFSM	3.13	IN	42.57

01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1979 to September 1980, May to September 1982.

WATER TEMPERATURES: June 1979 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1979.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE (Water years 1979-80, 1982): Maximum recorded, 69 micromhos Feb. 16, 1980; minimum recorded, 28 micromhos Dec. 1, 1981, Jan. 12, 13, 16-18, 20, 1982.

WATER TEMPERATURES: Maximum recorded, 26.0°C July 10, 1980, minimum recorded, 0.0°C on several days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 63 micromhos July 18; minimum recorded, 28 micromhos Dec. 1, Jan. 12, 13, 16-18, 20.

WATER TEMPERATURES: Maximum recorded, 21.0°C May 27; minimum recorded, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)
SEP 02...	1245	38	5.5	17.5	210	7.8	7	4	2.0

DATE	MAGNE- SIUM DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG C DIS- SOLVED (MG/L)
SEP 02...	.5	3.3	.4	3.0	6.0	6.0	.2	6.9	60

DATE	NITRO- GEN NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN AMMONIA TOTAL (MG/L AS N)	NITRO- GEN ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
SEP 02...	<.010	<.10	<.10	.020	.58	.60	.020	.020

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)
SEP 02...	470	27

PAWCATUCK RIVER BASIN

0117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	49	43	45	55	53	54	49	28	44	45	38	42
2	53	47	50	54	50	52	46	38	40	41	36	39
3	55	52	53	51	48	49	50	40	44	44	41	43
4	58	55	56	51	48	49	51	48	49	48	31	38
5	58	57	58	50	46	49	49	45	48	40	33	37
6	58	55	56	49	46	48	45	36	40	44	41	43
7	59	55	55	49	47	48	48	41	45	43	42	42
8	54	53	54	51	42	48	48	46	47	44	42	43
9	54	52	53	53	46	51	47	45	46	43	41	42
10	54	53	54	52	50	51	47	44	46	44	42	43
11	54	43	48	50	49	50	47	45	46	47	29	38
12	45	43	44	49	36	46	47	46	47	47	28	36
13	44	43	44	47	29	43	48	45	46	44	28	36
14	44	42	43	48	37	45	51	46	47	44	36	40
15	43	42	43	48	45	46	46	35	39	52	41	47
16	43	42	43	50	46	48	41	36	38	49	28	38
17	43	42	42	54	49	51	45	41	44	52	28	40
18	46	41	42	55	53	54	45	44	45	47	28	38
19	51	48	50	55	51	53	45	37	43	44	31	37
20	49	46	48	54	48	51	45	40	44	50	28	39
21	50	45	48	51	47	49	47	44	46	46	39	42
22	49	47	48	52	49	51	46	40	45	59	39	49
23	54	48	49	51	45	49	45	39	43	---	---	---
24	55	52	54	50	43	47	45	42	43	50	33	42
25	57	46	53	50	47	49	46	45	46	41	32	36
26	59	50	56	50	47	49	46	44	45	43	38	40
27	59	51	57	50	47	49	45	44	45	41	38	40
28	60	58	59	50	48	49	44	42	44	44	41	42
29	60	56	59	49	46	48	45	43	44	53	41	47
30	58	42	54	49	41	47	45	41	44	---	---	---
31	57	55	56	---	---	---	45	44	45	---	---	---
MONTH	60	41	51	55	29	49	51	28	44	59	28	41
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1										---	---	---
2										---	---	---
3										---	---	---
4										---	---	---
5										---	---	---
6										---	---	---
7										---	---	---
8										---	---	---
9										---	---	---
10										---	---	---
11										---	---	---
12										---	---	---
13										---	---	---
14										---	---	---
15										---	---	---
16										---	---	---
17										---	---	---
18										---	---	---
19										---	---	---
20										---	---	---
21										---	---	---
22										---	---	---
23										---	---	---
24										---	---	---
25										---	---	---
26										---	---	---
27										59	55	57
28										57	55	56
29										56	52	54
30										56	52	54
31										57	56	56
MONTH										59	52	55

0117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	57	55	56	58	52	55	61	59	60	60	53	57
2	56	40	44	59	53	56	61	58	59	57	48	50
3	52	36	45	58	56	57	60	58	59	57	52	55
4	50	35	45	58	55	56	61	58	59	56	54	55
5	47	38	39	59	55	57	60	57	58	56	54	55
6	45	38	41	59	55	57	60	54	58	57	54	55
7	50	45	49	59	56	57	61	53	57	56	55	56
8	52	50	51	60	57	58	57	53	55	57	55	56
9	54	51	53	60	57	58	61	49	58	57	55	56
10	56	53	54	61	55	58	58	55	57	58	55	56
11	56	53	54	60	57	58	60	57	59	58	55	57
12	55	52	54	59	57	58	59	52	57	57	53	56
13	53	51	52	60	57	59	60	54	57	58	52	55
14	52	50	51	60	57	59	60	58	59	59	54	57
15	56	51	53	61	57	59	61	54	58	59	55	57
16	55	53	54	61	58	60	58	50	55	58	55	57
17	55	50	53	62	58	60	55	49	54	57	52	55
18	55	50	53	63	59	60	60	56	58	54	51	53
19	53	49	52	61	59	60	61	57	59	55	52	53
20	54	49	52	60	57	59	60	53	57	58	51	54
21	55	49	52	59	56	58	54	35	52	57	55	56
22	55	47	51	60	59	59	54	42	52	58	54	56
23	55	49	52	61	58	59	60	52	56	58	52	56
24	56	49	53	61	58	59	58	54	58	59	56	58
25	57	50	55	61	58	59	60	49	57	59	53	56
26	58	50	55	62	59	60	59	51	56	57	52	55
27	58	55	57	61	59	60	59	52	57	59	55	57
28	59	55	57	60	57	58	59	55	58	59	53	57
29	57	44	55	60	56	58	58	57	57	58	53	56
30	57	46	54	61	58	59	59	54	57	58	54	57
31	---	---	---	61	58	60	58	53	55	---	---	---
MONTH	59	35	52	63	52	58	61	35	57	60	48	56
YEAR	63	28	51									

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20 PERCENT OF YEAR

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	9.0	6.5	7.5	9.0	5.0	7.5	2.5	.0	1.0	3.0	1.5	2.5
2	11.5	9.0	10.5	10.5	5.5	8.0	7.5	3.0	6.0	2.5	.5	1.5
3	10.5	8.5	9.5	9.5	5.5	7.5	7.0	5.5	6.5	1.0	.0	.5
4	10.5	6.5	8.5	9.0	3.5	6.5	5.0	4.0	4.5	5.0	1.5	3.0
5	11.5	9.5	10.5	9.0	3.5	7.0	4.5	2.5	4.0	4.5	1.5	3.5
6	12.0	9.5	10.5	11.0	8.5	9.5	2.0	.0	.5	2.5	.5	1.5
7	12.0	10.0	11.0	9.0	5.5	7.5	1.5	.5	1.0	3.5	3.5	3.5
8	11.5	9.0	10.0	7.5	4.0	5.5	2.5	1.0	1.5	3.0	3.5	3.5
9	11.0	7.0	9.0	8.0	2.5	6.0	2.5	2.0	2.0	.5	.0	.0
10	10.0	6.5	8.5	7.0	5.5	6.0	2.0	1.0	1.5	.0	.0	.0
11	9.5	4.5	7.0	9.0	5.0	7.0	2.5	1.0	2.0	---	---	---
12	9.0	4.0	6.5	6.0	1.5	4.0	3.0	1.5	2.0	---	---	---
13	9.5	3.0	6.0	5.0	.5	3.0	1.5	.0	1.0	.0	.0	.0
14	10.0	3.0	6.5	7.0	3.0	5.5	1.5	.0	1.0	.0	.0	.0
15	10.0	3.5	7.0	8.0	6.0	7.5	1.5	1.5	1.5	.0	.0	.0
16	11.0	5.5	8.5	8.5	8.0	8.0	2.0	1.0	1.5	1.0	.0	.0
17	12.0	6.0	9.0	9.5	8.5	9.0	1.5	.5	1.0	.5	.0	.0
18	12.0	4.5	8.5	9.0	8.0	8.5	2.5	1.5	2.0	---	---	---
19	12.0	7.0	10.0	8.5	7.0	7.5	2.0	.0	1.0	1.5	.5	1.0
20	9.0	4.0	7.5	8.5	7.0	8.0	.0	.0	.0	.0	.0	.0
21	11.5	6.0	9.0	8.5	6.5	8.0	.0	.0	.0	---	---	---
22	12.5	5.5	10.0	6.5	4.5	6.0	2.0	.0	1.5	.5	.0	.0
23	15.0	12.0	13.5	4.5	2.5	3.5	3.0	2.0	2.5	---	---	---
24	12.5	7.5	10.5	3.5	1.0	2.0	2.5	1.0	2.0	3.0	.5	2.0
25	9.5	7.0	8.5	3.0	1.0	2.0	3.0	1.5	2.5	---	---	---
26	10.5	9.0	10.0	3.0	.5	2.0	2.0	.0	1.0	3.0	.0	1.5
27	12.0	10.0	11.0	6.5	3.0	5.0	3.0	2.0	2.5	4.5	2.0	3.0
28	14.0	12.0	13.0	5.5	3.5	4.5	3.5	2.5	3.0	3.5	1.5	2.5
29	12.0	9.5	11.0	4.0	2.0	3.5	4.0	2.5	3.5	2.5	1.0	2.0
30	10.0	9.0	9.5	2.5	.5	2.0	2.5	.5	1.5	---	---	---
31	11.0	7.0	9.5	---	---	---	1.5	.0	.5	---	---	---
MONTH	15.0	3.0	9.5	11.0	.5	6.0	7.5	.0	2.0	5.0	.0	1.5

PAWCATUCK RIVER BASIN

0117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	3.5	.5	2.0	---	---	---	---	---	---
2	---	---	---	5.0	2.5	3.5	---	---	---	---	---	---
3	---	---	---	4.5	1.5	3.0	---	---	---	---	---	---
4	---	---	---	2.5	.0	1.0	---	---	---	---	---	---
5	---	---	---	4.5	2.5	3.0	---	---	---	---	---	---
6	---	---	---	3.5	1.5	2.5	---	---	---	---	---	---
7	---	---	---	4.0	3.0	3.5	---	---	---	---	---	---
8	---	---	---	5.0	2.5	3.5	---	---	---	---	---	---
9	---	---	---	2.5	.5	2.0	---	---	---	---	---	---
10	---	---	---	4.0	.5	2.5	---	---	---	---	---	---
11	2.0	.5	1.5	7.0	3.0	5.0	---	---	---	---	---	---
12	2.0	.0	1.0	7.0	5.5	6.5	---	---	---	---	---	---
13	2.0	1.5	1.5	7.0	5.5	6.5	---	---	---	---	---	---
14	2.5	.5	1.5	8.5	5.0	6.5	---	---	---	---	---	---
15	3.5	.5	2.0	7.5	4.0	5.5	---	---	---	---	---	---
16	6.0	3.5	4.5	7.0	3.0	5.5	---	---	---	---	---	---
17	4.0	2.0	3.0	5.5	3.5	5.0	---	---	---	---	---	---
18	3.0	1.5	2.0	---	---	---	---	---	---	---	---	---
19	3.0	1.5	2.5	---	---	---	---	---	---	---	---	---
20	5.0	3.0	4.0	---	---	---	---	---	---	---	---	---
21	4.5	3.5	4.0	---	---	---	---	---	---	---	---	---
22	4.0	3.0	3.5	---	---	---	---	---	---	---	---	---
23	4.5	2.0	3.5	---	---	---	---	---	---	---	---	---
24	4.0	3.0	3.5	---	---	---	---	---	---	---	---	---
25	3.5	.5	2.0	---	---	---	---	---	---	---	---	---
26	3.0	.0	1.0	---	---	---	---	---	---	---	---	---
27	3.5	.0	2.0	---	---	---	---	---	---	21.0	16.5	18.5
28	4.5	1.0	2.5	---	---	---	---	---	---	19.5	17.0	18.0
29	---	---	---	---	---	---	---	---	---	17.5	16.5	17.0
30	---	---	---	---	---	---	---	---	---	17.0	16.0	17.0
31	---	---	---	---	---	---	---	---	---	16.5	16.0	16.5
MONTH	6.0	.0	2.5	8.5	.0	4.0	---	---	---	21.0	16.0	17.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.5	15.5	16.0	16.0	13.5	15.0	17.5	15.0	16.0	15.0	13.5	14.0
2	18.0	15.5	17.0	16.0	12.5	14.5	17.0	14.0	15.5	16.0	14.5	16.0
3	17.5	16.0	17.0	15.0	14.0	14.5	16.0	14.5	15.0	17.5	15.5	16.5
4	17.0	15.5	16.0	15.0	13.0	14.0	17.0	13.5	15.0	16.0	13.5	14.5
5	15.5	15.0	15.0	15.5	12.0	13.5	16.5	13.5	15.0	15.0	11.5	13.5
6	16.0	15.5	15.5	16.5	12.5	14.5	16.5	14.0	15.5	14.5	11.5	13.0
7	15.5	14.0	15.0	17.0	13.0	15.0	16.5	12.5	14.5	14.5	12.0	13.0
8	15.0	13.5	14.5	18.5	14.5	16.5	18.0	13.5	16.0	14.0	12.0	13.0
9	16.0	13.5	15.0	18.0	15.5	16.5	16.0	15.0	15.5	14.5	11.0	13.0
10	17.0	15.0	16.0	17.5	14.0	15.5	18.5	15.5	17.0	15.5	12.0	13.5
11	16.0	14.0	15.0	18.0	14.0	16.0	17.0	15.5	16.0	15.5	12.0	13.5
12	15.0	14.0	14.5	16.0	14.5	15.0	16.0	14.5	15.0	16.5	12.5	14.5
13	14.0	12.0	13.0	18.5	15.0	16.5	16.0	13.0	14.5	16.5	14.0	15.0
14	13.0	12.5	13.0	17.5	15.0	16.0	16.0	12.5	14.0	16.0	14.5	15.0
15	14.5	11.5	13.0	18.0	14.0	16.0	17.0	12.0	14.5	16.5	13.5	15.0
16	16.0	14.0	15.0	18.5	15.0	17.0	17.5	12.5	15.0	15.0	13.5	14.5
17	16.0	15.0	15.5	19.0	15.5	17.0	18.0	13.0	15.5	15.0	12.0	13.5
18	16.0	15.0	15.5	19.5	16.0	17.5	16.5	14.5	15.5	14.5	9.5	12.0
19	15.5	14.0	14.5	20.0	16.0	18.0	16.5	13.0	15.0	13.5	9.5	11.5
20	16.0	14.0	15.0	17.5	16.5	17.0	17.5	14.5	16.0	11.0	8.0	10.0
21	14.5	13.0	13.5	17.5	16.0	16.5	16.5	11.5	14.5	11.5	10.5	11.0
22	15.5	13.0	14.5	16.0	15.0	15.5	14.5	9.0	12.0	12.0	11.0	11.5
23	16.0	14.5	15.0	16.5	14.0	15.5	14.0	11.0	12.5	13.0	11.5	12.0
24	16.0	13.5	14.5	17.5	14.0	16.0	16.5	13.5	14.5	13.5	10.5	12.0
25	16.0	12.5	14.5	17.5	13.0	15.0	15.0	13.5	14.5	13.5	9.5	11.5
26	16.0	14.5	15.0	18.5	14.5	16.5	16.0	13.5	15.0	13.5	10.0	12.0
27	16.5	15.0	15.5	18.0	15.0	16.5	14.5	13.5	14.0	14.0	12.0	13.0
28	16.5	14.5	15.5	16.0	15.0	15.5	15.5	13.0	14.0	14.5	12.0	13.0
29	16.0	15.0	15.5	17.5	15.0	16.0	14.0	10.5	12.0	12.5	12.0	12.5
30	17.0	15.0	16.0	16.5	13.5	15.0	14.5	10.5	12.5	12.5	11.5	12.0
31	---	---	---	17.0	14.0	15.5	15.5	10.5	13.0	---	---	---
MONTH	18.0	11.5	15.0	20.0	12.0	16.0	18.5	9.0	14.5	17.5	8.0	13.0
YEAR	21.0	.0	9.0	---	---	---	---	---	---	---	---	---

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20 PERCENT OF YEAR

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 at downstream side of bridge on Alton-Carolina road, 0.8 mi (1.3 km) northeast of Wood River Junction, 1.5 mi (2.4 km) southwest of Carolina, and 2.9 mi (4.7 km) upstream from Wood River.

DRAINAGE AREA.--100 mi² (259 km²).

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 (13.369 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. 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. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 192 ft³/s (5.437 m³/s), 26.07 in/yr (662 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) June 7, 1982, gage height, 8.75 ft (2.667 m); minimum, 7.4 ft³/s (0.21 m³/s) Oct. 10, 1947; minimum daily, 15 ft³/s (0.42 m³/s) Oct. 11, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) June 7, gage height, 8.75 ft (2.667 m); minimum, 33 ft³/s (0.93 m³/s) Oct. 1, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	52	74	252	458	217	232	324	184	296	137	105
2	51	49	113	316	638	221	242	292	261	285	129	207
3	59	48	188	327	795	217	246	268	341	272	124	261
4	55	47	212	396	924	215	306	254	388	259	120	262
5	49	45	210	543	853	260	325	252	692	246	117	237
6	47	51	188	649	753	292	346	242	1610	235	114	200
7	48	56	161	688	643	333	336	232	1830	224	111	168
8	44	55	156	632	550	370	315	221	1710	215	108	148
9	41	52	151	543	488	364	308	215	1570	208	113	137
10	40	49	142	490	456	349	303	208	1420	200	136	129
11	38	48	135	452	426	330	303	203	1230	192	154	124
12	37	47	130	398	395	313	306	197	1050	186	156	120
13	37	45	128	349	373	301	306	192	891	181	143	115
14	37	45	121	328	351	299	304	188	829	176	130	112
15	37	49	178	319	336	285	290	183	800	169	121	109
16	37	78	276	315	337	272	274	176	749	161	113	107
17	37	113	339	311	337	264	262	174	697	156	107	104
18	35	132	367	301	321	266	258	166	629	151	104	102
19	38	135	342	283	306	264	250	161	571	146	105	100
20	40	130	292	274	310	260	244	161	525	151	103	99
21	39	126	248	270	306	254	238	166	473	162	99	103
22	39	115	221	258	297	254	229	164	434	170	95	109
23	38	103	229	258	285	244	221	164	404	169	93	115
24	54	93	248	325	272	236	215	173	374	157	113	115
25	61	86	254	331	258	229	208	183	347	145	128	112
26	63	81	250	331	236	225	201	185	326	136	152	106
27	66	79	246	328	229	223	287	174	309	130	156	102
28	71	78	242	328	223	217	357	161	293	136	144	103
29	68	76	244	287	---	210	378	166	287	155	128	102
30	62	73	244	264	---	203	361	185	303	159	119	101
31	56	---	234	266	---	203	---	190	---	150	110	---
TOTAL	1458	2236	6563	11412	12156	8190	8451	6220	21527	5778	3782	4014
MEAN	47.0	74.5	212	368	434	264	282	201	718	186	122	134
MAX	71	135	367	688	924	370	378	324	1830	296	156	262
MIN	34	45	74	252	223	203	201	161	184	130	93	99
CFSM	.47	.75	2.12	3.68	4.34	2.64	2.82	2.01	7.18	1.86	1.22	1.34
IN.	.54	.83	2.44	4.25	4.52	3.05	3.14	2.31	8.01	2.15	1.41	1.49
CAL YR 1981	TOTAL	36162	MEAN	99.1	MAX	367	MIN	29	CFSM	.99	IN	13.45
WTR YR 1982	TOTAL	91787	MEAN	251	MAX	1830	MIN	34	CFSM	2.51	IN	34.14

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 (0.3 km) downstream from highway bridge at Hope Valley and 6.6 mi (10.6 km) upstream from mouth.

DRAINAGE AREA.--72.4 mi² (187.5 km²).

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 (18.626 m) National Geodetic Vertical Datum of 1929. August to December 1909, nonrecording gage at site 1,000 ft (300 m) upstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 5-26, June 17 to Aug. 2, which are fair. Some seasonal regulation by Locustville Pond on Brushy Brook since 1968. Some regulation at low flow by mills and ponds upstream until 1952; regulation greater prior to 1948.

AVERAGE DISCHARGE.--41 years, 155 ft³/s (4.390 m³/s), 29.07 in/yr (738 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s (67.7 m³/s) June 6, 1982, gage height, 10.26 ft (3.127 m); minimum, 4.4 ft³/s (0.12 m³/s) Oct. 18, 1941; minimum daily, 10 ft³/s (0.28 m³/s) Oct. 13, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1711, at least 12.4 ft (3.78 m) in February 1886. Flood in November 1927 reached a stage of 11.7 ft (3.57 m), and flood in March 1936 reached a discharge of 1,540 ft³/s (43.6 m³/s).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 550 ft³/s (16 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Dec. 16	1900	605 17.1	4.62 1.408	June 3	0130	726 20.6	5.11 1.558
Jan. 6	--	1000 28	-- --	June 6	1530	*2390 67.7	10.26 3.127
Feb. 1	2330	1070 30.3	6.37 1.942	June 14	2400	578 16.4	4.76 1.451

Minimum discharge, 28 ft³/s (0.79 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	76	71	232	816	162	232	252	141	210	80	77
2	43	69	268	392	880	174	217	223	512	200	75	250
3	63	64	496	362	812	171	199	206	636	190	67	246
4	56	59	399	530	934	163	408	199	470	180	66	164
5	48	55	304	700	805	321	429	195	1070	175	63	125
6	44	65	283	880	641	353	368	182	2200	170	67	102
7	44	67	249	630	540	346	325	172	1830	160	63	88
8	42	64	205	450	480	387	283	163	1230	155	59	78
9	38	59	201	380	400	330	258	158	865	145	70	71
10	36	56	180	330	350	278	250	155	640	140	143	67
11	34	53	163	290	310	252	280	148	500	135	141	63
12	32	52	153	260	287	244	295	142	450	130	110	59
13	31	49	143	240	271	242	278	138	440	125	93	57
14	31	49	134	250	253	239	261	136	532	120	81	55
15	30	52	277	240	238	219	236	130	543	115	71	53
16	29	73	557	235	254	201	218	126	448	110	65	53
17	28	138	550	230	261	202	207	122	400	105	62	51
18	28	153	451	220	240	216	221	117	360	100	84	49
19	39	148	356	210	229	210	219	115	330	94	78	47
20	52	137	280	200	250	199	206	118	310	110	67	47
21	48	140	230	190	250	193	197	140	290	130	61	50
22	44	127	218	180	235	197	187	134	270	125	55	55
23	41	111	230	230	219	186	176	127	250	115	56	61
24	59	100	291	250	207	175	166	141	230	105	87	58
25	84	91	276	240	195	168	159	164	220	100	117	53
26	84	83	247	230	178	183	156	152	210	90	152	50
27	91	81	230	219	171	210	390	133	200	84	119	50
28	115	79	227	201	168	194	429	120	190	105	96	55
29	117	76	231	188	---	178	353	127	210	115	88	52
30	100	72	228	179	---	169	295	152	220	100	78	51
31	86	---	204	192	---	173	---	143	---	90	70	---
TOTAL	1645	2498	8332	9560	10874	6935	7898	4730	16197	4028	2584	2337
MEAN	53.1	83.3	269	308	388	224	263	153	540	130	83.4	77.9
MAX	117	153	557	880	934	387	429	252	2200	210	152	250
MIN	28	49	71	179	168	162	156	115	141	84	55	47
CFSM	.73	1.15	3.72	4.25	5.36	3.09	3.63	2.11	7.46	1.80	1.15	1.08
IN.	.85	1.28	4.28	4.91	5.59	3.56	4.06	2.43	8.32	2.07	1.33	1.20

CAL YR 1981 TOTAL 38080 MEAN 104 MAX 567 MIN 25 CFSM 1.44 IN 19.57
WTR YR 1982 TOTAL 77618 MEAN 213 MAX 2200 MIN 28 CFSM 2.94 IN 39.88

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1977 to current year.

WATER TEMPERATURES: October 1977 to current year.

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

REMARKS.--Interruptions in the record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 216 micromhos July 30, 1980; minimum recorded, 21 micromhos Jan. 23, 1979.

WATER TEMPERATURES: Maximum recorded, 28.0°C July 9, 10, 1981; minimum recorded, 0.0°C on several days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 128 micromhos July 28; minimum recorded, 39 micromhos June 3, 4.

WATER TEMPERATURES: Maximum recorded, 27.0°C July 19; minimum recorded, 0.0°C on several days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (STAND- ARD UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)
SEP 02...	1500	63	6.2	18.5	54	9.3	9	3

DATE	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SIO2)
SEP 02...	2.5	.6	6.5	.6	6.0	5.0	9.9	.2	5.3

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)
SEP 02...	58	<.010	<.10	<.10	<.010	.50	.020	.010

DATE	IRON, DIS- SOLVED (UG/L AS FE)	MANGA- NESE DIS- SOLVED (UG/L AS MN)
SEP 02...	220	16

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30												
31												

MONTH

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							---	---	---	73	69	71
2							---	---	---	73	71	72
3							---	---	---	74	71	72
4							---	---	---	75	71	72
5							---	---	---	77	69	73
6							---	---	---	75	72	73
7							---	---	---	74	72	73
8							---	---	---	75	73	74
9							---	---	---	75	73	74
10							---	---	---	74	72	73
11							---	---	---	75	72	73
12							---	---	---	74	70	72
13							---	---	---	74	71	72
14							57	53	54	75	72	73
15							65	64	65	76	72	74
16							69	66	68	76	73	74
17							71	69	70	75	73	74
18							72	68	70	75	73	74
19							70	68	69	76	74	74
20							71	70	71	83	73	74
21							73	72	73	83	69	73
22							75	73	73	70	68	69
23							76	74	75	69	68	69
24							78	76	76	95	66	72
25							80	77	78	65	55	61
26							81	79	80	63	60	61
27							103	70	83	64	61	63
28							73	69	71	65	63	64
29							71	63	67	85	61	73
30							71	62	69	65	59	62
31							---	---	---	66	61	64
MONTH							103	53	71	95	55	71

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	65	63	64	---	---	---	78	76	77	73	68	71
2	78	42	60	71	66	67	79	76	77	93	59	76
3	43	39	41	68	65	67	79	76	77	65	58	62
4	40	39	39	69	67	68	79	77	78	63	62	62
5	47	41	44	70	68	69	80	77	78	64	61	62
6	---	---	---	72	69	70	81	77	79	66	62	64
7	---	---	---	74	70	73	78	76	77	67	64	66
8	---	---	---	76	72	74	80	76	78	67	65	68
9	---	---	---	75	73	74	126	76	101	70	68	69
10	---	---	---	75	72	74	107	68	87	73	69	71
11	---	---	---	74	73	74	68	67	67	74	70	72
12	---	---	---	77	73	75	71	68	70	76	72	74
13	---	---	---	76	74	75	71	69	70	77	73	75
14	---	---	---	78	74	75	72	69	71	---	---	---
15	---	---	---	77	75	76	74	71	72	79	77	78
16	---	---	---	79	75	77	76	73	74	78	77	77
17	---	---	---	80	77	79	78	74	76	78	76	77
18	---	---	---	81	78	79	76	68	72	79	77	78
19	---	---	---	82	79	81	72	68	70	80	78	79
20	---	---	---	---	---	---	93	72	84	79	79	79
21	---	---	---	96	72	77	89	75	82	84	79	83
22	---	---	---	75	71	73	84	74	79	92	78	82
23	---	---	---	76	74	75	80	76	78	83	74	77
24	---	---	---	77	75	76	103	69	86	75	73	74
25	---	---	---	78	75	77	102	62	82	76	73	74
26	---	---	---	79	76	78	70	64	67	77	75	76
27	---	---	---	79	76	78	67	63	65	84	77	79
28	---	---	---	128	76	102	68	66	65	83	76	79
29	---	---	---	81	71	76	68	61	65	76	75	76
30	---	---	---	75	71	73	68	65	66	77	76	77
31	---	---	---	77	74	75	70	67	69	---	---	---
MONTH	78	39	50	128	65	75	126	61	75	93	58	74
YEAR	128	39	73									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	12.5	11.0	11.5	10.0	9.0	9.5	1.0	.0	.5	2.5	1.5	2.0
2	12.0	11.0	11.5	10.5	8.0	9.5	3.0	.5	2.0	2.5	2.0	2.0
3	11.5	10.0	10.5	9.5	8.0	9.0	4.5	3.5	4.0	2.0	1.0	1.0
4	12.0	9.0	10.5	9.5	6.5	8.0	5.5	3.5	4.5	3.0	1.0	1.5
5	11.5	10.5	10.5	8.5	6.5	7.5	5.0	3.5	4.5	3.5	2.5	3.0
6	11.5	10.0	11.0	9.0	7.5	8.5	3.0	1.5	2.0	2.5	1.0	1.5
7	12.0	10.5	11.0	8.0	6.5	7.0	1.0	.5	1.0	3.0	1.5	2.5
8	12.0	10.0	11.0	7.5	6.0	7.0	1.0	1.0	1.0	3.0	1.5	2.0
9	11.5	9.5	10.5	7.0	5.5	6.0	1.5	1.0	1.5	1.5	.5	1.0
10	11.0	9.5	10.5	6.0	5.5	6.0	1.5	1.0	1.5	1.0	.5	1.0
11	11.0	8.5	9.5	6.5	5.0	5.5	1.5	1.0	1.5	1.0	.5	1.0
12	10.5	8.0	9.5	5.5	4.0	5.0	2.0	1.0	1.5	1.0	.5	1.0
13	10.5	7.5	9.0	5.0	3.0	4.0	2.0	1.0	1.5	1.5	.5	1.0
14	10.5	7.0	9.0	4.5	3.0	4.0	1.5	1.0	1.5	1.0	.5	1.0
15	10.5	7.5	9.0	5.0	3.5	4.5	1.5	1.0	1.5	1.0	.5	1.0
16	10.5	8.0	9.0	5.5	5.0	5.0	2.0	1.5	1.5	1.0	.0	.5
17	11.0	8.0	9.5	6.5	5.5	6.0	2.0	1.0	1.5	1.0	.5	.5
18	10.0	7.5	9.0	7.0	6.5	6.5	2.0	1.5	1.5	1.0	.5	.5
19	11.0	9.0	10.0	6.5	6.5	6.5	2.0	1.0	1.5	1.0	.0	.5
20	10.5	8.5	9.0	6.5	6.0	6.0	1.0	.0	.5	1.0	.0	.5
21	11.0	8.5	9.5	6.5	5.5	6.0	1.0	.0	.5	1.0	.5	.5
22	11.5	8.0	9.5	5.5	4.5	5.0	1.0	.5	.5	1.0	.5	.5
23	12.0	9.5	10.5	6.0	3.5	4.5	1.5	.5	1.0	.5	.0	.5
24	12.0	10.0	11.0	3.0	2.0	2.5	2.0	1.5	2.0	1.0	.0	.5
25	11.0	10.0	10.5	2.0	1.0	1.5	2.0	1.5	2.0	1.0	.5	.5
26	10.0	9.5	9.5	1.5	.5	1.0	2.0	1.0	1.5	1.0	.5	.5
27	10.0	9.5	9.5	2.0	1.0	1.5	2.0	1.5	1.5	1.0	.5	.5
28	12.5	10.0	11.5	2.5	1.0	1.5	3.0	2.0	2.5	1.0	.5	.5
29	12.5	11.5	12.0	2.5	1.0	1.5	3.0	2.5	2.5	1.0	.5	1.0
30	11.5	10.5	11.0	1.5	.5	1.0	3.0	2.0	2.5	1.0	.5	.5
31	11.0	9.5	10.5	---	---	---	2.0	1.0	1.5	1.0	.5	1.0
MONTH	12.5	7.0	10.0	10.5	.5	5.0	5.5	.0	2.0	3.5	.0	1.0

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1							---	---	---	15.5	13.0	14.0
2							---	---	---	16.5	14.5	15.5
3							---	---	---	16.5	14.5	15.5
4							---	---	---	15.5	14.0	14.5
5							---	---	---	16.5	13.0	14.5
6							---	---	---	17.0	13.5	15.0
7							---	---	---	17.5	14.5	16.0
8							---	---	---	17.5	14.5	16.0
9							---	---	---	17.5	15.5	16.5
10							---	---	---	16.5	15.5	16.0
11							---	---	---	16.5	14.5	15.5
12							---	---	---	17.0	13.5	15.0
13							---	---	---	16.5	14.0	15.0
14							---	---	---	17.5	14.5	16.0
15							11.0	8.5	9.5	19.0	14.5	16.5
16							11.5	9.0	10.5	19.0	15.0	16.5
17							12.5	11.0	12.0	20.0	16.0	18.0
18							14.5	12.0	13.0	19.5	16.0	17.5
19							14.5	12.5	13.0	18.5	16.5	17.0
20							14.5	12.0	13.0	19.5	16.5	17.5
21							13.5	12.5	13.0	19.5	17.5	18.5
22							13.0	11.0	12.0	18.5	16.5	17.0
23							13.0	10.0	11.5	16.0	14.5	15.5
24							14.5	11.0	12.5	14.5	13.5	14.0
25							15.5	12.0	13.5	16.0	13.5	14.5
26							14.5	13.5	14.0	18.5	16.5	17.0
27							14.5	13.5	14.0	20.0	16.0	18.0
28							14.5	12.0	13.5	20.5	17.0	19.0
29							13.0	10.5	12.0	19.0	17.0	18.0
30							14.5	11.5	13.0	17.5	16.5	17.0
31							---	---	---	17.0	16.5	17.0
MONTH							15.5	8.5	12.5	20.5	13.0	16.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	16.0	17.0	---	---	---	23.0	20.0	22.0	19.0	17.5	18.0
2	20.5	16.5	18.0	---	---	---	23.5	20.5	22.0	19.5	18.0	18.0
3	18.5	17.0	18.0	---	---	---	22.5	20.5	22.0	20.5	19.0	20.0
4	18.5	17.0	18.0	19.5	18.0	18.5	23.0	20.5	22.0	21.0	19.5	20.0
5	16.5	15.0	16.0	20.5	17.0	18.5	22.0	20.0	21.0	20.0	18.5	19.0
6	---	---	---	20.5	17.5	19.0	22.5	20.5	21.0	20.0	17.5	19.0
7	---	---	---	22.0	19.0	20.0	22.5	19.0	21.0	19.5	17.0	18.0
8	---	---	---	23.5	20.0	21.5	23.0	19.5	21.0	18.0	17.0	18.0
9	---	---	---	24.0	21.0	22.5	21.5	20.5	21.0	19.0	16.5	17.5
10	---	---	---	24.5	21.0	22.5	22.5	20.5	22.0	20.0	16.5	18.0
11	---	---	---	24.5	21.0	23.0	22.5	21.0	22.0	20.0	17.0	18.5
12	---	---	---	23.0	22.0	22.5	22.0	20.5	21.0	20.5	17.5	19.0
13	---	---	---	24.5	21.5	22.5	22.0	19.5	21.0	20.5	18.5	19.5
14	---	---	---	24.5	21.5	23.0	22.0	19.5	21.0	---	---	---
15	---	---	---	24.5	21.5	23.0	22.5	19.0	21.0	---	---	---
16	---	---	---	25.0	22.0	23.5	22.5	19.5	21.0	20.5	19.5	20.0
17	---	---	---	25.5	22.5	24.0	22.5	19.5	21.0	---	---	---
18	---	---	---	26.5	23.5	24.5	22.5	20.0	21.0	---	---	---
19	---	---	---	27.0	24.0	25.0	22.5	19.5	21.0	---	---	---
20	---	---	---	25.0	23.5	24.5	22.5	20.0	21.0	16.5	15.5	16.0
21	---	---	---	24.0	22.5	23.0	22.5	20.0	21.0	16.0	15.0	15.5
22	---	---	---	22.5	21.0	22.0	20.5	18.0	19.0	15.5	14.5	15.0
23	---	---	---	23.0	20.5	21.5	19.0	18.5	19.0	16.0	14.5	15.0
24	---	---	---	24.0	20.0	22.0	20.5	18.5	19.0	17.0	14.0	15.0
25	---	---	---	24.0	20.0	22.0	19.5	18.5	19.0	---	---	---
26	---	---	---	25.0	21.0	23.0	20.5	18.0	19.0	---	---	---
27	---	---	---	25.0	21.5	23.0	20.0	19.0	19.0	19.5	15.5	16.0
28	---	---	---	22.5	22.0	22.0	19.5	18.0	19.0	---	---	---
29	---	---	---	22.5	20.5	22.0	19.5	17.0	18.0	16.5	15.5	16.0
30	---	---	---	22.5	19.5	21.0	19.0	16.5	17.0	16.0	15.5	15.5
31	---	---	---	22.5	20.0	21.0	19.5	16.5	18.0	---	---	---
MONTH	20.5	15.0	17.5	27.0	17.0	22.0	23.5	16.5	20.5	21.0	14.0	17.5
YEAR	27.0	.0	11.5									

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20 PERCENT OF YEAR

PAWCATUCK RIVER BASIN

97

01118500 PAWCATUCK RIVER AT WESTERLY, RI
(National stream-quality accounting network station)

LOCATION.--Lat 41°23'01", long 71°50'01", Washington County, Hydrologic Unit 01090005, on left bank at Westerly, 2.1 mi (3.4 km) downstream from Shunock River.

DRAINAGE AREA.--295 mi² (764 km²).

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 (0.536 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Diurnal fluctuation at low flow prior to 1962 by mills upstream; regulation much greater prior to 1958. Diversion upstream for municipal supply of Westerly.

AVERAGE DISCHARGE.--41 years (water years 1942-82), 571 ft³/s (16.17 m³/s), 26.29 in/yr (668 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,070 ft³/s (200 m³/s) June 6, 1982, gage height, 12.86 ft (3.920 m); minimum daily, 25 ft³/s (0.71 m³/s) Aug. 17, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 3,150 ft³/s (89.2 m³/s), by computation of flow over dam 1.5 mi (2.4 km) 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 (4.57 m) Sept. 21, 1938, due to hurricane tidal wave.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,070 ft³/s (200 m³/s) June 6, gage height, 12.86 ft (3.920 m); minimum daily, 73 ft³/s (2.07 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	159	199	648	1560	692	736	970	564	845	402	246
2	107	155	332	909	2080	692	774	872	992	799	324	398
3	134	144	729	992	2340	700	766	782	1460	963	289	687
4	152	137	781	1170	2770	678	1040	737	1390	992	278	773
5	141	137	692	1980	2640	872	1180	730	2360	956	274	780
6	123	141	606	2030	2400	1060	1150	707	6220	920	293	668
7	127	159	514	1990	2090	1140	1090	677	5600	879	362	531
8	123	159	458	1830	1830	1250	992	648	4860	852	380	398
9	120	155	420	1590	1630	1230	939	627	4420	825	441	324
10	113	148	402	1350	1500	1120	909	613	4150	799	509	289
11	110	144	383	1100	1390	1040	946	599	3670	780	451	271
12	101	141	360	1050	1270	984	961	585	3160	766	398	282
13	95	141	354	1000	1180	946	939	571	2670	739	371	267
14	89	141	337	960	1110	924	902	564	2540	706	389	233
15	83	148	479	930	1050	887	857	557	2470	687	389	220
16	78	167	969	900	1040	827	805	536	2290	643	320	214
17	75	221	1160	860	1040	812	760	522	2110	643	271	214
18	73	249	1120	820	999	827	752	501	1940	607	274	227
19	78	264	1010	800	954	812	745	494	1820	431	274	236
20	92	284	865	780	969	797	722	487	1710	375	267	217
21	107	284	714	774	984	774	692	494	1510	393	267	208
22	107	274	656	872	954	774	670	508	1380	417	271	205
23	107	245	656	902	894	751	641	508	1260	398	246	208
24	134	235	729	924	858	714	627	536	1130	446	260	217
25	159	221	759	1080	812	692	606	585	1030	498	300	217
26	163	212	700	1130	774	692	592	592	1100	398	353	220
27	171	208	678	1110	736	714	887	557	1080	271	371	211
28	191	208	678	1070	714	707	1180	508	899	312	362	199
29	204	204	670	961	---	678	1200	501	806	320	362	194
30	191	204	685	894	---	648	1090	571	786	324	293	194
31	179	---	655	872	---	641	---	578	---	393	257	---
TOTAL	3813	5689	19750	34278	38568	26075	26150	18717	67377	19377	10298	9548
MEAN	123	190	637	1106	1377	841	872	604	2246	625	332	318
MAX	204	284	1160	2030	2770	1250	1200	970	6220	992	509	780
MIN	73	137	199	648	714	641	592	487	564	271	246	194
CFSM	.42	.64	2.16	3.75	4.67	2.85	2.96	2.05	7.61	2.12	1.13	1.08
IN.	.48	.72	2.49	4.32	4.86	3.29	3.30	2.36	8.50	2.44	1.30	1.20
CAL YR 1981	TOTAL	107941	MEAN	296	MAX	1260	MIN	73	CFSM	1.00	IN	13.61
WTR YR 1982	TOTAL	279640	MEAN	766	MAX	6220	MIN	73	CFSM	2.60	IN	35.26

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 current year.

WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1978.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 255 micromhos Sept. 15, 1981; minimum, 27 micromhos June 7, 1982.

WATER TEMPERATURES: Maximum, 30.0°C Aug. 9, 1980; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR THE CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 209 micromhos Oct. 4, 5, 26; minimum, 27 micromhos June 7.

WATER TEMPERATURES: Maximum, 28.0°C July 19; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT											
27...	1100	171	155	6.8	13.0	2.0	32	8.4	77	--	--
NOV											
19...	1230	264	140	6.7	8.5	3.0	40	10.9	93	--	1.0
DEC											
21...	1305	685	92	6.1	.5	2.0	6	14.3	99	<10	--
JAN											
21...	1330	774	108	6.7	.0	1.1	30	12.8	86	--	2.0
FEB											
12...	1030	1280	83	5.4	.5	1.0	25	14.0	95	--	--
MAR											
19...	1400	812	90	6.5	6.0	1.0	25	13.0	104	19	1.0
APR											
15...	1230	857	86	6.1	9.5	1.0	35	12.0	103	--	--
MAY											
12...	1100	585	94	6.7	15.0	1.0	55	10.0	98	--	1.0
JUN											
15...	1300	2460	61	5.6	14.5	1.0	--	8.5	82	20	--
JUL											
15...	1300	674	91	6.5	24.0	2.0	85	8.0	93	--	1.0
AUG											
12...	1240	389	115	6.5	21.5	1.0	61	8.1	91	--	--
SEP											
01...	0930	243	100	6.2	19.0	2.0	64	8.8	95	58	1.0

DATE	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS./ 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L CAC03)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT										
27...	48	270	20	0	5.3	1.6	--	--	--	--
NOV										
19...	440	1500	19	2	5.0	1.7	21	68	2.1	1.4
DEC										
21...	44	80	--	--	--	--	--	--	--	--
JAN										
21...	34	34	15	0	4.0	1.1	13	64	1.5	.9
FEB										
12...	22	180	--	--	--	--	--	--	--	--
MAR										
19...	24	K3	13	6	3.7	.9	10	60	1.2	.9
APR										
15...	K6	K2	14	0	3.6	1.2	--	--	--	--
MAY										
12...	53	52	14	6	3.9	1.1	12	63	1.4	.9
JUN										
15...	190	520	--	--	--	--	--	--	--	--
JUL										
15...	80	5000	17	7	4.5	1.4	11	57	1.2	.9
AUG										
12...	360	1100	--	--	--	--	--	--	--	--
SEP										
01...	140	700	17	4	4.7	1.3	12	59	1.3	.7

< Actual value is known to be less than the value shown.

K Results based on colony count outside the acceptable range (non-ideal colony count)

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)
OCT 27...	22	25	15	--	8.6	--	--	--	--	--
NOV 19...	17	26	13	.1	9.4	98	88	.13	69.9	--
DEC 21...	--	15	9.0	--	--	70	--	.10	129	--
JAN 21...	18	13	10	.1	8.2	74	61	.10	155	--
FEB 12...	--	11	8.9	--	--	--	--	--	--	--
MAR 19...	7.0	14	12	.1	5.3	60	51	.08	132	5
APR 15...	20	11	9.3	--	4.6	56	--	.08	130	--
MAY 12...	8.0	13	11	.1	3.8	62	51	.08	97.9	--
JUN 15...	--	9.0	9.6	--	--	--	--	--	--	--
JUL 15...	10	11	12	<.1	6.7	84	54	.11	153	--
AUG 12...	--	17	13	--	--	79	--	.11	83.0	--
SEP 01...	13	13	11	.2	7.9	82	59	.11	53.8	3

DATE	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)
OCT 27...	104	--	<.010	.53	--	.040	--	1.1	1.10	1.6
NOV 19...	98	.34	.010	.35	<.01	.050	.060	.49	.54	.89
DEC 21...	77	--	<.010	.23	--	.030	--	.43	.46	.69
JAN 21...	74	--	<.010	.37	.35	.050	.050	.31	.36	.73
FEB 12...	44	.25	.020	.27	--	.020	--	.48	.50	.77
MAR 19...	66	--	<.010	.28	.26	.060	.040	.27	.33	.61
APR 15...	62	--	<.010	.20	--	.070	--	.26	.33	.53
MAY 12...	64	--	<.010	.28	.34	.040	.060	.50	.54	.82
JUN 15...	64	--	<.010	.15	--	.060	--	.54	.60	.75
JUL 15...	49	.46	.010	.47	.51	.100	.100	.50	.60	1.1
AUG 12...	94	.56	.020	.58	--	.160	--	.54	.70	1.3
SEP 01...	79	--	<.010	.51	.50	.040	.030	1.2	1.20	1.7

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. FINER THAN .062 MM
OCT 27...	.090	.070	.060	5.6	--	.10	--	--	--	--
NOV 19...	.090	.060	.040	7.3	--	--	--	--	--	--
DEC 21...	.050	.010	.010	8.8	--	--	--	--	--	--
JAN 21...	.040	.030	--	4.5	--	.00	--	10	21	100
FEB 12...	.020	.020	.010	4.8	--	--	--	--	--	--
MAR 19...	.020	.020	--	3.9	<1	--	<1	4	8.8	100
APR 15...	.030	.020	--	4.9	--	<.10	--	--	--	--
MAY 12...	.080	.060	.040	8.6	--	--	--	11	17	67
JUN 15...	.020	.020	.020	12	--	--	--	--	--	--
JUL 15...	.060	.030	--	7.8	--	.03	--	12	22	61
AUG 12...	.070	.090	.040	8.4	--	--	--	--	--	--
SEP 01...	.040	.030	--	8.2	<1	--	<1	1	.66	100

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)
OCT 27...	--	--	--	--	--	--	--	<1	--	--
NOV 19...	1	0	1	<100	--	14	<1	<1	20	--
DEC 21...	--	--	--	--	--	--	--	<1	--	--
JAN 21...	1	1	0	<100	--	50	<1	2	20	--
FEB 12...	--	--	--	--	--	--	--	<1	--	--
MAR 19...	--	--	--	--	--	--	--	1	--	--
APR 15...	--	--	--	--	--	--	--	1	--	--
MAY 12...	1	--	<1	<100	--	14	<1	1	20	10
JUN 15...	--	--	--	--	--	--	--	1	--	--
JUL 15...	1	--	<1	100	70	28	<1	<1	10	--
AUG 12...	--	--	--	--	--	--	--	<1	--	--
SEP 01...	1	--	--	--	--	--	1	<1	10	--

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOVERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)
OCT 27...	<1	--	--	--	--	--	4	--	--	1200
NOV 19...	<10	<1	--	1	7	0	9	380	190	190
DEC 21...	<1	--	--	--	--	--	3	--	--	--
JAN 21...	<10	3	1	2	7	6	1	230	90	140
FEB 12...	<1	--	--	--	--	--	2	--	--	--
MAR 19...	1	--	--	--	--	--	2	--	--	--
APR 15...	<1	--	--	--	--	--	2	--	--	120
MAY 12...	10	2	--	<1	4	0	5	570	320	250
JUN 15...	<1	--	--	--	--	--	5	--	--	--
JUL 15...	<10	<1	--	1	7	3	4	1100	570	530
AUG 12...	<1	--	--	--	--	--	3	--	--	--
SEP 01...	1	--	--	--	5	--	5	590	--	--

DATE	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOVERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, SUS- PENDE RECOVERABLE (UG/L AS MN)	MANGANESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOVERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)
OCT 27...	--	--	2	--	--	12	--	--	--	--
NOV 19...	3	2	1	70	40	27	.1	.0	.3	1
DEC 21...	--	--	<1	--	--	--	--	--	--	--
JAN 21...	<1	--	<1	70	10	58	.1	.0	.1	<1
FEB 12...	--	--	2	--	--	--	--	--	--	--
MAR 19...	--	--	<1	--	--	--	--	--	--	--
APR 15...	--	--	2	--	--	29	--	--	--	--
MAY 12...	7	3	4	40	0	44	<.1	--	<.1	5
JUN 15...	--	--	4	--	--	--	--	--	--	--
JUL 15...	6	--	<1	60	7	53	.2	.0	.2	3
AUG 12...	--	--	2	--	--	--	--	--	--	--
SEP 01...	3	--	4	30	--	--	<.1	--	--	2

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	NICKEL, SUS- PENDE REC ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL REC ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL REC ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE REC ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 27...	--	2	--	--	--	--	--	--	10
NOV 19...	0	1	<1	<1	<1	<1	30	20	9
DEC 21...	--	<1	--	--	--	--	--	--	30
JAN 21...	--	<1	<1	<1	<1	<1	40	20	20
FEB 12...	--	2	--	--	--	--	--	--	20
MAR 19...	--	1	--	--	--	--	--	--	10
APR 15...	--	1	--	--	--	--	--	--	10
MAY 12...	2	3	<1	<1	<1	<1	40	30	8
JUN 15...	--	<1	--	--	--	--	--	--	10
JUL 15...	2	1	<1	<1	<1	<1	50	40	14
AUG 12...	--	<1	--	--	--	--	--	--	10
SEP 01...	--	2	<1	--	<1	--	30	--	10

DATE	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 01...	<.10	<1	<1.0	<.10	<.01	<.1	<.10	2.0	<.01	<.1	<.01	<.1

DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
SEP 01...	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.01

DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOT- TOM MA- TERIAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TERIAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 01...	<.1	<.01	<.1	<.01	<.1	<.01	<.1	<.10	<1.00	<1	<10

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	182	159	169	156	152	153	112	109	110	100	98	99
2	157	144	149	155	153	154	111	108	110	99	86	91
3	176	146	157	153	145	149	112	105	110	86	85	86
4	209	177	192	144	135	138	103	93	96	88	85	87
5	209	192	200	140	134	136	99	94	96	85	76	79
6	192	167	178	154	141	147	99	97	98	79	76	77
7	167	151	158	163	155	159	100	97	98	81	79	81
8	152	141	146	175	164	170	98	97	97	79	76	78
9	153	140	146	173	167	170	99	97	98	80	76	78
10	170	151	157	166	154	161	99	98	99	88	81	84
11	169	155	162	154	142	147	101	99	100	90	85	88
12	177	164	171	148	141	143	104	101	102	98	88	93
13	183	174	179	161	149	155	106	104	106	102	98	100
14	183	177	181	161	152	158	106	103	105	103	101	102
15	178	159	168	152	145	148	105	102	103	104	100	102
16	159	145	152	166	149	157	105	87	97	106	99	102
17	147	136	141	167	150	160	87	81	83	104	97	99
18	153	137	144	149	137	144	84	80	82	106	103	104
19	186	156	171	142	136	139	88	84	86	107	103	106
20	195	187	193	140	132	136	95	88	90	108	105	106
21	195	172	184	133	131	132	104	92	95	108	105	107
22	171	159	164	133	130	132	104	91	96	107	106	106
23	167	159	163	131	124	127	98	96	97	116	107	109
24	176	166	172	124	117	120	98	93	95	116	107	111
25	192	177	183	121	116	119	95	92	94	112	108	110
26	209	183	199	126	121	123	94	92	93	108	106	107
27	180	144	157	127	125	126	94	93	93	107	105	106
28	151	143	146	125	118	121	93	91	92	107	105	106
29	153	149	152	118	114	115	94	91	93	108	106	107
30	155	150	152	115	111	113	94	93	93	107	105	106
31	154	151	152	---	---	---	98	94	96	107	105	106
MONTH	209	136	166	175	111	142	112	80	97	116	76	98
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	105	81	96	---	---	---	98	93	96	89	85	87
2	81	78	79	---	---	---	93	84	88	89	85	87
3	85	80	83	---	---	---	97	93	95	90	86	88
4	78	74	76	---	---	---	96	75	87	91	87	89
5	73	70	71	---	---	---	76	74	75	90	88	89
6	70	68	69	---	---	---	84	74	80	93	89	91
7	71	68	70	---	---	---	84	81	82	96	90	93
8	74	70	72	---	---	---	92	82	86	96	93	95
9	78	74	76	---	---	---	89	86	87	97	94	96
10	78	76	77	---	---	---	89	86	87	95	93	94
11	82	77	80	---	---	---	85	80	82	96	93	94
12	86	82	83	---	---	---	82	80	81	101	95	98
13	88	85	86	---	---	---	83	80	82	102	98	100
14	89	87	88	---	---	---	84	82	83	102	100	101
15	89	88	89	---	---	---	87	83	85	105	102	102
16	89	88	89	---	---	---	90	85	88	105	102	103
17	---	---	---	---	---	---	91	87	89	105	100	102
18	---	---	---	---	---	---	92	89	91	100	96	98
19	---	---	---	---	---	---	89	86	87	105	100	103
20	---	---	---	93	90	92	94	88	91	109	105	107
21	---	---	---	92	89	91	98	92	94	115	108	111
22	---	---	---	92	87	88	96	94	95	115	112	113
23	---	---	---	92	87	89	98	95	96	112	109	111
24	---	---	---	95	90	92	98	95	97	109	102	105
25	---	---	---	95	93	94	97	95	97	105	101	103
26	---	---	---	96	94	95	97	92	95	104	99	102
27	---	---	---	96	93	94	93	77	89	105	102	103
28	---	---	---	94	92	93	77	73	75	106	100	102
29	---	---	---	95	92	93	81	73	77	105	103	104
30	---	---	---	98	92	93	88	80	84	108	104	106
31	---	---	---	97	92	94	---	---	---	103	95	98
MONTH	105	68	80	98	87	92	98	73	87	115	85	99

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	95	85	91	---	---	---	121	106	114	103	99	101
2	85	60	72	---	---	---	107	99	102	110	90	100
3	58	52	54	---	---	---	109	100	104	---	---	---
4	62	51	56	---	---	---	106	103	105	104	96	101
5	62	41	52	---	---	---	112	102	109	101	97	99
6	100	38	54	---	---	---	115	113	114	97	92	94
7	44	27	39	---	---	---	119	114	117	92	43	86
8	38	36	37	---	---	---	118	115	116	90	44	86
9	46	37	41	---	---	---	130	106	120	100	90	94
10	53	45	49	---	---	---	123	114	116	101	95	99
11	60	53	57	---	---	---	120	114	117	---	---	---
12	62	59	60	---	---	---	---	---	---	---	---	---
13	63	61	62	---	---	---	---	---	---	---	---	---
14	64	63	63	---	---	---	---	---	---	---	---	---
15	---	---	---	92	91	91	---	---	---	---	---	---
16	---	---	---	94	92	93	---	---	---	---	---	---
17	---	---	---	99	94	97	---	---	---	---	---	---
18	---	---	---	100	97	99	---	---	---	---	---	---
19	---	---	---	100	93	98	---	---	---	---	---	---
20	---	---	---	98	76	88	126	121	124	---	---	---
21	---	---	---	109	97	102	127	123	125	---	---	---
22	---	---	---	113	110	112	131	127	129	---	---	---
23	---	---	---	116	108	112	130	120	127	---	---	---
24	---	---	---	114	106	109	125	113	118	---	---	---
25	---	---	---	113	96	103	117	109	113	---	---	---
26	---	---	---	98	93	96	133	112	125	---	---	---
27	---	---	---	96	91	94	132	120	124	---	---	---
28	---	---	---	106	93	99	122	114	118	---	---	---
29	---	---	---	124	107	115	115	110	113	---	---	---
30	---	---	---	124	121	122	111	104	108	---	---	---
31	---	---	---	123	120	122	---	---	---	---	---	---
MONTH	100	27	56	124	76	103	133	99	116	110	43	96
YEAR	209	27	108									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	13.5	13.0	13.0	11.0	9.5	10.0	3.0	2.0	2.5	2.5	1.5	2.0
2	15.0	13.5	14.0	11.5	9.0	10.0	5.0	3.0	4.5	2.5	1.5	2.0
3	13.5	12.5	13.0	10.5	9.0	10.0	5.5	5.0	5.5	1.5	1.0	1.5
4	14.0	11.5	12.5	10.0	8.0	9.0	5.5	5.0	5.5	3.5	1.5	2.0
5	13.5	12.5	13.0	10.0	8.0	9.0	5.5	4.0	5.0	4.0	3.0	3.5
6	13.0	12.5	13.0	10.5	9.5	10.0	4.0	2.0	3.0	3.0	2.5	2.5
7	14.0	12.0	13.0	9.5	8.0	9.0	2.0	1.5	1.5	3.0	2.5	2.5
8	13.0	11.5	12.0	9.0	7.0	8.0	1.5	1.5	1.5	2.5	1.5	2.0
9	13.0	11.0	12.0	9.0	6.5	8.0	2.0	1.5	1.5	1.5	.5	1.0
10	12.5	11.0	12.0	8.0	7.0	7.5	2.0	1.5	1.5	.5	.5	.5
11	12.5	10.0	11.0	8.5	7.0	7.5	2.0	1.5	1.5	.5	.5	.5
12	12.5	10.0	11.0	7.0	5.5	6.0	2.5	1.5	2.0	.5	.5	.5
13	12.0	9.0	10.5	6.5	4.5	5.5	2.0	1.0	1.5	.5	.5	.5
14	12.5	9.0	10.5	7.0	5.0	6.0	2.0	1.0	1.5	.5	.5	.5
15	12.5	9.0	10.5	7.0	6.0	6.5	2.5	1.5	2.0	.5	.5	.5
16	12.0	9.5	10.5	7.0	6.5	7.0	3.0	2.5	2.5	.5	.5	.5
17	12.5	9.5	11.0	8.0	7.0	7.5	2.5	2.0	2.0	.5	.5	.5
18	11.5	9.0	10.5	8.0	7.5	8.0	2.0	2.0	2.0	.5	.5	.5
19	12.5	10.0	11.5	8.5	7.5	8.0	2.0	1.0	1.5	.5	.5	.5
20	11.0	8.5	10.0	8.5	7.5	8.0	1.0	1.0	1.0	.5	.5	.5
21	12.5	9.5	11.0	8.0	7.0	7.5	1.0	1.0	1.0	.5	.0	.5
22	13.0	10.0	11.5	7.0	6.0	7.0	1.5	1.0	1.0	.5	.0	.0
23	14.0	12.0	13.0	6.5	5.0	5.5	2.0	1.5	1.5	.5	.0	.5
24	13.0	11.0	12.0	5.0	4.0	4.5	2.5	1.5	2.0	.5	.0	.5
25	12.0	10.5	11.5	4.0	3.0	3.5	2.0	2.0	2.0	.5	.0	.0
26	12.0	11.5	12.0	3.5	2.0	3.0	2.0	1.5	1.5	.5	.0	.0
27	12.0	11.5	12.0	4.5	3.0	3.5	2.0	1.5	2.0	.5	.0	.0
28	13.5	12.0	12.5	4.0	3.0	3.5	3.0	2.0	2.5	.5	.0	.0
29	12.5	11.5	12.0	4.0	3.0	3.5	3.5	2.5	3.0	.5	.0	.5
30	11.5	11.0	11.5	3.5	2.5	3.0	3.0	2.0	2.5	.5	.0	.5
31	12.0	10.5	11.0	---	---	---	2.0	1.5	2.0	.5	.5	.5
MONTH	15.0	8.5	12.0	11.5	2.0	7.0	5.5	1.0	2.5	4.0	.0	1.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	1.0	.0	.5	---	---	---	9.0	7.0	8.0	15.0	13.0	14.0
2	.5	.0	.0	---	---	---	10.0	7.5	9.0	16.5	14.5	15.5
3	.5	.0	.5	---	---	---	9.0	8.5	8.5	17.0	15.5	16.0
4	1.0	.5	.5	---	---	---	9.0	7.5	8.5	16.5	15.0	15.5
5	1.0	.5	.5	---	---	---	7.5	6.0	7.0	16.5	14.5	15.5
6	1.5	1.0	1.0	---	---	---	6.5	3.0	5.0	16.5	14.5	15.5
7	1.0	.5	1.0	---	---	---	3.0	1.0	1.5	18.0	15.0	16.5
8	1.0	.5	1.0	---	---	---	2.5	.5	1.5	18.0	15.5	17.0
9	1.0	1.0	1.0	---	---	---	3.0	1.5	2.5	18.0	16.5	17.0
10	1.5	1.0	1.0	---	---	---	4.5	2.0	3.5	17.0	16.0	16.5
11	1.0	.5	1.0	---	---	---	5.5	4.0	5.0	16.5	15.5	16.0
12	1.0	.0	.5	---	---	---	7.0	5.5	6.0	16.5	15.0	15.5
13	1.0	.5	.5	---	---	---	7.0	6.5	7.0	15.5	14.5	15.0
14	1.0	.0	.5	---	---	---	8.5	6.5	7.5	16.5	14.5	15.5
15	2.0	.5	1.0	---	---	---	10.0	7.5	8.5	17.5	14.5	16.0
16	3.5	2.0	2.5	---	---	---	11.0	8.5	9.5	18.5	15.0	16.5
17	---	---	---	---	---	---	11.5	10.0	11.0	19.5	16.5	17.5
18	---	---	---	---	---	---	13.5	11.0	12.0	19.0	16.5	17.5
19	---	---	---	---	---	---	14.0	11.5	12.5	18.0	17.0	17.5
20	---	---	---	8.0	6.0	7.0	14.0	12.0	13.0	19.5	17.0	18.0
21	---	---	---	7.5	7.0	7.0	13.0	11.5	12.5	19.0	17.5	18.0
22	---	---	---	8.5	6.5	7.5	13.0	11.0	12.0	18.0	16.5	17.5
23	---	---	---	9.0	7.0	8.0	12.5	10.0	11.5	16.5	15.0	16.0
24	---	---	---	9.5	7.0	8.0	13.5	10.5	12.0	15.0	14.0	14.5
25	---	---	---	10.0	7.5	9.0	15.0	11.5	13.5	16.0	14.0	15.0
26	---	---	---	9.5	8.5	9.0	14.0	13.0	13.5	17.5	14.5	16.0
27	---	---	---	9.0	7.0	8.0	14.5	13.0	14.0	19.5	16.0	18.0
28	---	---	---	7.5	5.5	6.5	14.0	12.0	13.5	20.0	17.5	19.0
29	---	---	---	7.0	5.0	6.0	13.0	11.0	12.0	19.0	18.0	18.5
30	---	---	---	7.5	5.0	6.5	13.5	11.5	12.5	18.5	17.5	18.0
31	---	---	---	7.5	6.5	7.0	---	---	---	17.5	17.0	17.5
MONTH	3.5	.0	1.0	10.0	5.0	7.5	15.0	.5	9.0	20.0	13.0	16.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	18.0	17.0	17.0	---	---	---	25.0	22.5	23.5	19.5	18.5	19.0
2	18.5	16.5	17.5	---	---	---	25.0	22.0	23.5	19.0	18.5	18.5
3	19.0	17.0	18.0	---	---	---	24.0	22.5	23.0	---	---	---
4	18.5	17.0	18.0	---	---	---	25.0	22.0	23.0	20.0	18.5	19.5
5	17.0	15.0	16.0	---	---	---	24.0	22.0	23.0	20.0	16.0	18.5
6	15.5	14.5	15.0	---	---	---	24.0	22.0	22.5	19.5	15.5	18.0
7	14.5	13.5	14.0	---	---	---	24.5	21.0	22.5	19.0	15.5	17.0
8	14.0	13.0	13.5	---	---	---	25.5	21.5	23.0	19.0	15.0	16.0
9	15.5	13.5	14.5	---	---	---	23.5	22.5	23.0	19.5	15.0	16.5
10	16.5	15.0	16.0	---	---	---	25.0	22.5	23.5	20.5	15.0	17.5
11	17.5	16.0	16.5	---	---	---	23.5	22.5	23.0	---	---	---
12	17.0	16.5	16.5	---	---	---	---	---	---	---	---	---
13	16.5	15.0	15.5	---	---	---	---	---	---	---	---	---
14	15.0	14.5	14.5	---	---	---	---	---	---	---	---	---
15	---	---	---	25.0	23.0	24.0	---	---	---	---	---	---
16	---	---	---	26.0	23.0	24.0	---	---	---	---	---	---
17	---	---	---	26.5	23.5	25.0	---	---	---	---	---	---
18	---	---	---	27.5	24.5	26.0	---	---	---	---	---	---
19	---	---	---	28.0	25.0	26.5	---	---	---	---	---	---
20	---	---	---	26.5	24.5	25.5	23.5	21.0	22.0	---	---	---
21	---	---	---	25.5	23.5	24.5	23.5	20.0	21.5	---	---	---
22	---	---	---	24.0	22.5	23.5	21.5	18.5	20.0	---	---	---
23	---	---	---	23.5	22.0	22.5	20.0	19.0	19.5	---	---	---
24	---	---	---	24.0	21.0	22.5	21.5	19.0	20.0	---	---	---
25	---	---	---	24.5	21.0	22.5	19.5	18.5	19.0	---	---	---
26	---	---	---	25.5	22.5	24.0	20.5	16.0	18.5	---	---	---
27	---	---	---	26.0	22.5	24.0	19.0	18.5	18.5	---	---	---
28	---	---	---	24.0	23.0	23.5	20.5	16.0	18.5	---	---	---
29	---	---	---	24.5	22.0	23.0	19.5	15.0	17.0	---	---	---
30	---	---	---	23.5	21.5	22.5	20.0	15.5	17.0	---	---	---
31	---	---	---	24.0	22.0	23.0	---	---	---	---	---	---
MONTH	19.0	13.0	16.0	28.0	21.0	24.0	25.5	15.0	21.0	20.5	15.0	18.0
YEAR	28.0	.0	10.5									

THAMES RIVER BASIN

01123360 QUINEBAUG RIVER BELOW EAST BRIMFIELD DAM, AT FISKDALE, MA

LOCATION.--Lat 42°06'31", long 72°07'27", Worcester County, Hydrologic Unit 01100001, on right bank at Fiskdale, 750 ft (230 m) downstream from East Brimfield Dam, and 2.4 mi (3.9 km) upstream from Cedar Pond outlet.

DRAINAGE AREA.--67.5 mi² (174.8 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 613.51 ft (186.998 m) Corps of Engineers datum.

REMARKS.--Records good. Flow regulated by East Brimfield Lake (Reservoirs in Thames River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--10 years, 133 ft³/s (3.767 m³/s), 26.76 in/yr (680 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) Jan. 30, 1976, gage height, 6.42 ft (1.957 m); maximum gage height, 6.52 ft (1.987 m) Mar. 17, 1977; minimum daily discharge, 5.0 ft³/s (0.14 m³/s) Aug. 17, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, 15,400 ft³/s (436 m³/s) Aug. 19, 1955, by slope-area measurement. Flood of Mar. 18, 1936, reached a discharge of 2,390 ft³/s (67.7 m³/s) and flood in September 1938, 7,000 ft³/s (198 m³/s), both by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 774 ft³/s (21.9 m³/s) June 21, gage height, 5.92 ft (1.804 m); minimum daily, 20 ft³/s (0.57 m³/s) June 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	123	84	139	139	107	248	230	116	158	47	58
2	36	103	129	197	176	105	269	226	192	145	42	83
3	53	88	200	221	219	103	269	194	288	127	37	101
4	59	78	230	232	325	98	309	168	296	113	34	95
5	58	71	221	382	514	101	513	155	123	101	32	79
6	53	70	204	626	575	114	587	144	20	91	32	65
7	52	74	177	725	497	124	394	134	117	82	28	54
8	48	75	162	539	346	158	288	127	400	77	24	44
9	44	71	148	373	275	172	337	121	678	72	36	38
10	39	67	138	271	242	164	288	112	755	67	64	34
11	37	63	126	200	217	151	275	104	743	61	78	29
12	36	60	118	206	193	172	293	97	729	56	78	26
13	36	57	106	184	181	215	316	88	451	51	66	24
14	36	55	103	166	171	264	335	81	530	47	53	22
15	37	54	121	159	161	292	326	73	692	44	44	22
16	37	61	188	156	164	285	302	69	710	40	37	25
17	35	80	236	150	184	275	278	65	700	38	32	25
18	35	121	260	144	189	261	289	60	690	35	30	24
19	66	162	250	138	178	256	293	57	678	33	27	23
20	80	176	209	130	165	253	282	58	664	38	25	22
21	85	188	189	128	159	251	262	66	721	51	24	29
22	78	188	174	121	154	250	235	69	714	55	23	33
23	69	176	167	119	147	248	147	68	507	55	23	37
24	94	154	179	118	139	240	237	72	285	50	27	38
25	110	132	186	121	128	232	207	80	201	45	31	35
26	131	114	181	118	105	240	182	81	155	39	34	34
27	147	106	167	110	116	272	211	75	126	34	34	35
28	177	101	161	105	112	273	227	64	129	39	36	38
29	183	97	150	101	---	250	230	71	133	50	36	37
30	172	89	142	98	---	223	230	99	155	52	37	37
31	148	---	130	97	---	209	---	117	---	52	37	---
TOTAL	2292	3054	5236	6574	6171	6358	8659	3225	12698	1998	1188	1246
MEAN	73.9	102	169	212	220	205	289	104	423	64.5	38.3	41.5
MAX	183	188	260	725	575	292	587	230	755	158	78	101
MIN	21	54	84	97	105	98	147	57	20	33	23	22
MEAN†	77.6	99.9	170	211	220	208	292	98.8	424	62.0	37.1	42.2
CFSM†	1.15	1.48	2.52	3.13	3.26	3.08	4.33	1.46	6.28	.92	.55	.63
IN†	1.33	1.65	2.91	3.61	3.40	3.55	4.83	1.69	7.01	1.06	.63	.70

CAL YR 1981 TOTAL 35924.1 MEAN 98.4 MAX 717 MIN 5.2 MEAN† 98.7 CFSM† 1.46 IN† 19.85
WTR YR 1982 TOTAL 58699.0 MEAN 161 MAX 755 MIN 20 MEAN† 161 CFSM† 2.39 IN† 32.36

† Adjusted for change in contents in East Brimfield Lake.

01123600 QUINEBAUG RIVER BELOW WESTVILLE DAM, NEAR SOUTHBRIDGE, MA

LOCATION.--Lat 42°04'58", long 72°03'27", Worcester County, Hydrologic Unit 01100001, on right bank 200 ft (60 m) downstream from Westville Dam, 1.0 mi (1.6 km) upstream from McKinstry Brook, and 1.3 mi (2.1 km) west of Southbridge.

DRAINAGE AREA.--99.1 mi² (256.7 km²).

PERIOD OF RECORD.--October 1962 to current year.

REVISED RECORDS.--WDR MA-RI-75-1: 1963-64 (monthly runoff).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 511.33 ft (155.853 m) Corps of Engineers datum.

REMARKS.--Records fair prior to June 25, poor thereafter. No gage-height record July 15 to Aug. 15. Flow regulated by mills, by East Brimfield and Westville Lakes (Reservoirs in Thames River basin), and by other reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 169 ft³/s (4.786 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft³/s (52.4 m³/s) Mar. 23, 1980, gage height, 6.83 ft (2.082 m); minimum daily, 7.3 ft³/s (0.21 m³/s) Nov. 21, 28, 1964, July 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft³/s (45.0 m³/s) June 8, gage height, 6.62 ft (2.018 m); minimum daily, 30 ft³/s (0.85 m³/s) Sept. 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	179	114	194	177	135	374	312	144	225	62	82
2	70	153	211	276	244	134	379	305	388	206	56	106
3	90	132	274	300	272	133	258	276	507	178	50	127
4	101	121	353	212	521	127	234	224	389	168	47	123
5	95	107	304	456	763	135	540	218	147	148	44	101
6	76	102	282	807	803	140	763	205	41	119	41	94
7	79	105	248	812	726	140	756	197	287	110	38	69
8	68	103	227	817	502	225	635	187	849	104	35	55
9	54	98	213	545	377	251	521	167	1160	101	40	49
10	50	94	195	375	312	207	398	145	1330	97	90	45
11	47	90	162	262	278	192	398	136	1470	86	110	41
12	46	86	161	254	237	227	412	128	1180	73	100	37
13	44	82	152	259	238	267	456	119	686	65	80	36
14	44	79	147	242	218	297	467	111	736	62	62	34
15	43	79	167	220	204	406	456	102	1080	58	52	33
16	42	91	277	201	220	425	417	95	800	54	49	32
17	38	119	467	190	239	393	384	90	753	51	48	33
18	38	190	373	180	236	445	408	81	1000	49	47	30
19	79	222	338	175	221	360	402	75	881	48	43	30
20	98	230	274	180	208	354	381	77	704	75	38	34
21	102	254	242	175	201	354	368	90	626	86	36	42
22	105	252	204	165	193	355	328	88	737	82	33	44
23	82	234	222	164	184	350	251	88	608	74	33	50
24	133	211	252	173	176	339	260	95	331	68	32	52
25	146	184	270	163	165	326	292	103	250	62	33	51
26	185	159	278	154	138	357	257	103	209	57	41	47
27	212	150	272	145	143	394	320	94	196	54	41	53
28	260	142	261	137	144	386	337	83	190	65	46	82
29	261	137	245	136	---	353	331	108	196	80	46	80
30	239	124	204	128	---	315	321	141	230	76	46	79
31	207	---	169	128	---	298	---	146	---	70	46	---
TOTAL	3184	4309	7558	8625	8340	8820	12104	4389	18105	2851	1565	1771
MEAN	103	144	244	278	298	285	403	142	604	92.0	50.5	59.0
MAX	261	254	467	817	803	445	763	312	1470	225	110	127
MIN	38	79	114	128	138	127	234	75	41	48	32	30

CAL YR 1981 TOTAL 51501.1 MEAN 141 MAX 1270 MIN 8.7
WTR YR 1982 TOTAL 81621.0 MEAN 224 MAX 1470 MIN 30

THAMES RIVER BASIN

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT

LOCATION.--Lat 42°01'20", long 71°57'22", Windham County, Hydrologic Unit 01100001, on right bank at Quinebaug, 500 ft (152 m) upstream from bridge on State Highway 197, 0.2 mi (0.3 km) downstream from Massachusetts-Connecticut State line, 7.8 mi (12.6 km) upstream from French River, and at mile 46 (74 km).

DRAINAGE AREA.--156 mi² (404 km²).

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

REVISED RECORDS.--WSP 851: 1936(M). WSP 1201: 1939-43, 1949. WSP 1381: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 341.52 ft (104.095 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by East Brimfield and Westville Lakes (Reservoirs in Thames River basin) and by smaller reservoirs upstream.

AVERAGE DISCHARGE.--51 years, 270 ft³/s (7.646 m³/s), 23.52 in/yr (597 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft³/s (1,400 m³/s) Aug. 19, 1955, gage height, 18.96 ft (5.779 m), from floodmarks, from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, about 1 ft³/s (about 0.03 m³/s) Sept. 9, 1943, July 12, 1949, Sept. 17, 18, 1950, July 9, 1951, Sept. 4 and Oct. 29, 1956; minimum gage height, 1.74 ft (0.530 m) Aug. 20, 1940; minimum daily discharge, about 1 ft³/s (about 0.03 m³/s) Sept. 4, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,010 ft³/s (85.2 m³/s) June 6, gage height, 6.71 ft (2.045 m); minimum, 25 ft³/s (0.71 m³/s) Oct. 17; minimum gage height, 2.11 ft (0.643 m) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	260	162	352	566	195	655	418	209	275	73	107
2	136	217	526	548	584	195	622	398	1130	243	65	114
3	130	189	570	554	732	189	522	363	1020	213	58	128
4	126	166	565	1090	1500	176	911	306	683	189	52	120
5	114	147	474	1900	1480	224	972	294	1110	170	52	102
6	103	154	452	1850	1320	232	1250	271	2490	152	50	83
7	100	162	390	1980	1170	271	1200	256	1720	136	42	71
8	87	151	348	1650	911	403	993	235	1650	125	39	58
9	67	136	320	1050	629	398	840	224	1760	114	112	48
10	58	126	277	808	515	323	662	209	1760	105	145	42
11	51	117	236	650	497	306	690	195	1690	95	133	36
12	47	111	224	550	440	424	740	182	1490	85	125	33
13	42	100	199	450	373	522	793	170	1040	81	107	31
14	44	95	189	380	368	597	800	161	1350	73	85	29
15	44	106	334	370	363	676	740	145	1600	65	71	29
16	44	158	705	350	378	676	662	133	1240	61	60	29
17	44	228	793	330	403	635	597	128	1130	58	56	31
18	44	431	673	320	373	591	655	117	1330	54	52	31
19	154	463	565	290	345	597	622	112	1130	54	44	29
20	151	447	470	270	327	584	572	117	1010	102	39	31
21	151	495	400	250	314	584	534	131	938	114	36	44
22	162	447	339	240	298	591	474	125	1040	95	33	50
23	123	390	357	230	282	572	388	128	891	88	33	52
24	260	334	431	220	267	541	340	149	522	77	33	52
25	244	282	400	280	247	522	393	161	378	67	38	48
26	357	240	385	260	235	635	345	152	298	60	41	44
27	385	224	352	240	235	690	534	133	256	52	39	60
28	526	213	334	230	206	609	547	117	278	97	39	83
29	463	196	315	230	---	541	503	199	275	105	39	90
30	385	176	286	220	---	474	457	247	298	90	41	88
31	320	---	277	220	---	457	---	228	---	83	42	---
TOTAL	5038	6961	12348	18362	15358	14430	20013	6204	31716	3378	1874	1793
MEAN	163	232	398	592	549	465	667	200	1057	109	60.5	59.8
MAX	526	495	793	1980	1500	690	1250	418	2490	275	145	128
MIN	42	95	162	220	206	176	340	112	209	52	33	29
MEAN†	167	230	399	591	549	468	670	195	1058	106	59.3	60.4
CFSM†	1.07	1.47	2.56	3.79	3.52	3.00	4.29	1.25	6.78	.68	.38	.39
IN†	1.23	1.64	2.95	4.37	3.66	3.46	4.79	1.44	7.56	.78	.44	.44
CAL YR 1981	TOTAL	81513	MEAN 223	MAX 1650	MIN 13	MEAN† 223	CFSM† 1.43	IN† 19.45				
WTR YR 1982	TOTAL	137475	MEAN 377	MAX 2490	MIN 29	MEAN† 377	CFSM† 2.42	IN† 32.76				

† Adjusted for change in contents in East Brimfield and Westville Lakes.

01124350 FRENCH RIVER BELOW HODGES VILLAGE DAM, AT HODGES VILLAGE, MA

LOCATION.--Lat 42°07'06", long 71°52'54", Worcester County, Hydrologic Unit 01100001, on right bank at Hodges Village, 240 ft (73 m) downstream from Hodges Village Dam, 0.8 mi (1.3 km) west of Oxford, and 1.2 mi (1.9 km) upstream from Little River.

DRAINAGE AREA.--31.0 mi² (80.3 km²).

PERIOD OF RECORD.--Discharge: March 1962 to current year.
Water-quality records: Water year 1962.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 466.98 ft (142.336 m) Corps of Engineers datum.

REMARKS.--Records good. Flow regulated by Hodges Village Reservoir (Reservoirs in Thames River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 55.0 ft³/s (1.558 m³/s), 24.09 in/yr (612 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft³/s (17.8 m³/s) Jan. 28, 1978, gage height, 3.47 ft (1.058 m); no flow for part of July 17, 1968 (caused by unusual regulation); minimum daily discharge, 1.4 ft³/s (0.040 m³/s) Sept. 14, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 460 ft³/s (13.0 m³/s) June 18, gage height, 3.12 ft (0.951 m); minimum, 4.1 ft³/s (0.12 m³/s) Aug. 31, Sept. 1; minimum daily, 4.1 ft³/s (0.12 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	61	45	64	48	33	108	84	59	52	16	7.5
2	32	51	78	110	110	33	129	73	181	44	14	14
3	47	44	152	122	81	33	101	63	435	38	14	11
4	46	40	168	85	69	32	101	57	349	33	13	8.7
5	44	36	151	111	173	38	216	54	108	28	12	7.0
6	39	32	126	235	272	48	267	49	20	24	11	5.8
7	37	33	108	274	260	47	236	45	107	22	11	5.6
8	37	33	96	261	239	86	199	43	249	19	10	5.6
9	37	33	90	251	196	86	168	39	366	16	24	6.0
10	32	31	82	231	155	71	129	36	380	15	50	6.5
11	29	28	76	206	97	65	111	35	376	14	39	6.8
12	26	27	71	154	76	84	118	34	369	13	28	6.7
13	29	26	67	90	71	120	136	30	226	13	21	6.6
14	40	24	63	67	62	151	149	28	188	12	18	6.5
15	37	24	66	67	56	176	154	26	300	34	16	6.4
16	31	35	119	60	64	176	147	24	259	18	14	6.3
17	27	71	162	56	77	165	130	21	286	9.1	13	6.2
18	27	102	158	48	73	151	117	19	403	9.8	12	6.1
19	44	144	134	46	65	142	118	18	406	11	9.1	6.0
20	61	148	103	45	61	136	115	18	357	21	7.4	6.0
21	59	143	91	45	59	130	88	18	297	37	6.7	7.4
22	50	132	78	43	56	131	84	19	218	28	6.4	11
23	41	109	82	40	53	136	78	16	120	20	6.1	12
24	43	89	95	41	49	136	70	21	83	16	5.6	11
25	56	72	96	42	45	132	63	28	68	13	5.6	10
26	63	61	88	39	53	132	59	26	57	11	5.8	8.4
27	83	56	84	37	43	160	79	24	50	11	5.6	7.7
28	95	55	78	36	35	168	108	20	48	18	5.0	8.4
29	109	51	76	35	---	150	110	28	48	33	4.6	8.3
30	102	47	72	33	---	133	98	63	50	27	4.3	7.5
31	79	---	61	29	---	106	---	67	---	20	4.1	---
TOTAL	1509	1838	3016	3003	2698	3387	3786	1126	6463	679.9	412.3	233.0
MEAN	48.7	61.3	97.3	96.9	96.4	109	126	36.3	215	21.9	13.3	7.77
MAX	109	148	168	274	272	176	267	84	435	52	50	14
MIN	26	24	45	29	35	32	59	16	20	9.1	4.1	5.6
MEAN†	49.1	60.8	97.4	96.7	96.2	110	126	36.2	215	21.7	13.2	7.81
CFSM†	1.58	1.96	3.14	3.12	3.10	3.55	4.06	1.17	6.94	.70	.43	.25
IN†	1.83	2.19	3.62	3.60	3.23	4.09	4.54	1.35	7.74	.81	.49	.28

CAL YR 1981 TOTAL 18807.4 MEAN 51.5 MAX 438 MIN 3.8 MEAN† 51.6 CFSM† 1.66 IN† 22.58
WTR YR 1982 TOTAL 28151.2 MEAN 77.1 MAX 435 MIN 4.1 MEAN† 77.1 CFSM† 2.49 IN† 33.77

† Adjusted for change in contents in Hodges Village Reservoir.

THAMES RIVER BASIN

01124500 LITTLE RIVER NEAR OXFORD, MA

LOCATION.--Lat 42°06'57", long 71°53'26", Worcester County, Hydrologic Unit 01100001, on left bank 0.6 mi (1.0 km) upstream from mouth, 1.1 mi (1.8 km) downstream from Buffumville Dam, and 1.5 mi (2.4 km) west of Oxford.

DRAINAGE AREA.--27.7 mi² (71.7 km²).

PERIOD OF RECORD.--Discharge: July 1939 to current year. Prior to October 1977, published as "at Buffumville." Water-quality records: Water year 1973.

REVISED RECORDS.--WSP 1201: 1940, 1948.

GAGE.--Water-stage recorder. Datum of gage is 457.00 ft (139.294 m) National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers).

REMARKS.--Records fair. No gage-height record Oct. 1-13. Flow regulated by Buffumville Lake since 1958 (Reservoirs in Thames River basin) and by other reservoirs upstream. The period July 17 to Sept. 30, 1982, includes flow from draining of Buffum Pond. Prior to 1958, flow regulated by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 48.4 ft³/s (1.371 m³/s), 23.73 in/yr (603 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,340 ft³/s (236 m³/s) Aug. 19, 1955, gage height, 15.53 ft (4.734 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of computation of peak flow over dam; minimum, 0.1 ft³/s (0.003 m³/s) Sept. 25, 26, 1957. Maximum discharge since construction of Buffumville Dam in 1958, 429 ft³/s (12.1 m³/s) Apr. 7, 1959, gage height, 5.04 ft (1.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft³/s (9.12 m³/s) June 9, gage height, 4.63 ft (1.411 m); minimum, 11 ft³/s (0.31 m³/s) Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	37	36	57	59	30	99	94	63	58	81	51
2	32	32	65	98	81	30	110	82	165	53	75	48
3	27	28	119	119	98	30	96	75	261	49	70	43
4	28	25	126	105	55	29	98	69	237	45	63	51
5	29	22	122	78	113	32	155	66	129	40	59	53
6	30	24	110	218	220	36	212	52	72	37	58	50
7	30	24	92	268	250	42	207	45	114	33	54	47
8	34	22	78	276	248	60	201	48	252	31	47	49
9	37	22	70	280	197	73	189	48	314	29	70	50
10	39	21	62	268	130	67	99	47	318	28	102	41
11	36	20	57	214	92	59	79	46	310	26	109	39
12	30	20	55	147	75	70	124	46	300	24	103	39
13	23	19	48	92	65	105	155	45	220	23	93	38
14	19	20	45	75	58	136	155	44	186	20	83	37
15	16	21	55	65	54	153	149	42	258	20	76	35
16	14	26	92	59	55	140	132	41	237	18	68	40
17	13	37	128	57	63	132	115	39	223	21	62	45
18	12	62	128	53	67	122	112	38	273	32	61	47
19	19	87	126	49	60	117	113	36	290	53	58	48
20	20	89	122	47	57	115	105	35	281	90	48	48
21	21	87	105	45	53	115	94	34	271	107	51	52
22	21	79	67	43	49	117	86	33	258	110	51	53
23	21	67	65	42	47	119	78	32	239	99	47	51
24	29	53	79	43	44	117	72	35	126	82	44	49
25	32	43	84	42	41	112	66	38	70	73	43	48
26	39	38	76	39	37	117	63	59	69	65	41	50
27	47	37	70	37	34	140	81	38	64	61	41	58
28	57	38	63	35	32	134	105	36	62	82	41	74
29	62	38	59	33	---	110	113	43	61	91	44	82
30	55	37	55	32	---	92	107	57	61	95	42	82
31	44	---	49	32	---	84	---	65	---	90	39	---
TOTAL	954	1175	2506	3048	2434	2833	3570	1488	5784	1685	1924	1498
MEAN	30.8	39.2	80.8	98.3	86.9	91.4	119	48.0	193	54.4	62.1	49.9
MAX	62	89	128	280	250	153	212	94	318	110	109	82
MIN	12	19	36	32	32	29	63	32	61	18	39	35
MEAN†	31.5	38.8	81.8	99.3	85.1	89.7	122	47.0	193	53.0	60.7	48.3
CFSM†	1.14	1.40	2.95	3.58	3.07	3.24	4.40	1.70	6.97	1.91	2.19	1.74
IN†	1.31	1.56	3.41	4.13	3.20	3.74	4.90	1.96	7.77	2.21	2.53	1.94

CAL YR 1981 TOTAL 15180.3 MEAN 41.6 MAX 299 MIN 2.9 MEAN† 41.7 CFSM† 1.51 IN† 20.46
WTR YR 1982 TOTAL 28899.0 MEAN 79.2 MAX 318 MIN 12 MEAN† 78.9 CFSM† 2.85 IN† 38.60

† Adjusted for change in contents in Buffumville Lake. No adjustments made for draining of Buffum Pond July 17 to Sept. 30.

RESERVOIRS IN THAMES RIVER BASIN

- 01123350 EAST BRIMFIELD LAKE.--Lat 42°06'32", long 72°07'35", Worcester County, Hydrologic Unit 01100001, on Quinebaug River, 0.7 mi (1.1 km) southwest of Fiskdale, MA, 1.2 mi (1.9 km) east of East Brimfield. DRAINAGE AREA, 67.5 mi² (174.8 km²). PERIOD OF RECORD, July 1960 to current year. Completed in 1960 by Corps of Engineers for storage of water for recreation, conservation, and flood control. Usable capacity, 1,400,000,000 ft³ (39,600,000 m³), including 101,000,000 ft³ (2,860,000 m³) storage in recreation and conservation pool. Records furnished by Corps of Engineers.
- 01123550 WESTVILLE LAKE.--Lat 42°04'55", long 72°03'28", Worcester County, Hydrologic Unit 01100001, on Quinebaug River, 1.3 mi (2.1 km) west of Southbridge, MA. DRAINAGE AREA, 99.1 mi² (256.7 km²). PERIOD OF RECORD, February 1962 to current year. Completed in 1962 by Corps of Engineers for storage of water for recreation and flood control. Usable capacity, 484,000,000 ft³ (13,700,000 m³), including 4,400,000 ft³ (125,000 m³) storage in recreation pool. Records furnished by Corps of Engineers.
- 01124300 HODGES VILLAGE RESERVOIR.--Lat 42°07'09", long 71°52'51", Worcester County, Hydrologic Unit 01100001, on French River at Hodges Village, MA. DRAINAGE AREA, 31.0 mi² (80.3 km²). PERIOD OF RECORD, February 1960 to current year. Completed in 1960 by Corps of Engineers for storage of water for flood control. Usable capacity, 577,000,000 ft³ (16,300,000 m³). Records furnished by Corps of Engineers.
- 01124400 BUFFUMVILLE LAKE.--Lat 42°06'58", long 71°54'29", Worcester County, Hydrologic Unit 01100001, on Little River at Charlton, MA, 2.2 mi (3.5 km) west of Oxford. DRAINAGE AREA, 26.5 mi² (68.6 km²). PERIOD OF RECORD, September 1958 to current year. Completed in 1958 by Corps of Engineers for storage of water for recreation and flood control. Usable capacity, 553,000,000 ft³ (15,700,000 m³), including 61,000,000 ft³ (1,730,000 m³) storage in recreation pool. Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

	East Brimfield Lake	Westville Lake	Hodges Village Reservoir	Buffumville Lake
Sept. 30, 1981.....	104.4	5.1	1.4	65.3
Oct. 31.....	114.3	6.1	2.6	67.1
Nov. 30.....	109.3	5.4	1.3	66.2
Dec. 31.....	112.6	5.8	1.6	68.8
Jan. 31, 1982.....	111.0	5.6	1.2	71.4
Feb. 28.....	111.0	5.7	.8	67.1
Mar. 31.....	117.6	6.0	3.0	62.7
Apr. 30.....	126.7	5.7	2.8	69.7
May 31.....	112.6	6.1	2.4	67.1
June 30.....	114.3	6.1	1.1	67.1
July 31.....	107.7	4.9	.6	63.6
Aug. 31.....	104.4	5.0	.4	60.1
Sept. 30.....	106.0	5.0	.5	55.8

01161500 TARBELL BROOK NEAR WINCHENDON, MA

LOCATION.--Lat 42°42'45", long 72°05'09", Worcester County, Hydrologic Unit 01080202, on left bank 0.1 mi (0.2 km) downstream from Spud Brook, 0.3 mi (0.5 km) downstream from Massachusetts-New Hampshire State line, and 2.8 mi (4.5 km) northwest of Winchendon.

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--Discharge: May 1916 to September 1982 (discontinued). Prior to October 1950, published as Sip Pond Brook near Winchendon.
Water-quality records: Water years 1965-66.

REVISED RECORDS.--WSP 781: 1934. WSP 871: Drainage area. WSP 1051: 1928(M), 1933-34. WSP 1301: 1917(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 24, 1965. Datum of gage is 872.82 ft (266.036 m) National Geodetic Vertical Datum of 1929. May 29 to June 29, 1916, nonrecording gage; June 30 to Dec. 12, 1916, water-stage recorder; and Dec. 13, 1916, to June 26, 1917, nonrecording gage, all at site 450 ft (150 m) downstream at same datum.

REMARKS.--Records good. Some regulation by Pearly and Sip Ponds and Damon Reservoirs 1 mi (1.6 km) upstream. Prior to 1967, greater regulation by these reservoirs and by small mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--66 years, 29.4 ft³/s (0.833 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) Sept. 21, 1938, gage height, 13.72 ft (4.182 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of critical-depth study at control section; minimum, 0.1 ft³/s (0.003 m³/s) Aug. 25, 1924.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 231 ft³/s (6.54 m³/s) Apr. 4, gage height, 8.94 ft (2.725 m); minimum, 1.3 ft³/s (0.037 m³/s) Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	66	31	25	20	18	155	77	14	30	13	4.2
2	10	56	39	28	19	18	206	64	30	27	12	5.0
3	11	49	41	27	31	17	179	55	37	24	11	6.9
4	9.8	42	45	32	46	17	211	48	47	21	11	6.7
5	8.8	39	45	46	58	17	210	43	48	19	10	6.2
6	8.7	38	44	62	75	17	161	37	69	18	8.9	5.2
7	8.4	38	42	67	75	18	137	32	137	17	8.5	4.4
8	7.6	36	40	65	70	23	118	29	142	16	7.8	4.0
9	7.3	35	38	58	63	23	105	27	119	14	19	3.6
10	6.6	34	36	51	58	23	86	25	88	13	27	3.2
11	6.0	33	34	44	54	23	80	23	63	12	21	2.9
12	5.1	31	32	39	46	30	80	22	47	12	18	2.8
13	4.3	29	30	35	41	34	80	21	39	12	16	2.6
14	3.8	27	28	34	37	43	88	20	41	11	14	2.4
15	3.2	26	30	32	34	53	102	19	40	11	12	2.3
16	3.7	23	35	30	32	56	110	18	37	11	11	2.3
17	3.5	25	36	28	30	59	124	17	35	9.5	9.6	2.2
18	4.0	31	36	27	28	58	184	16	33	11	8.5	2.0
19	10	34	35	27	26	57	212	15	30	9.2	7.5	2.0
20	7.2	41	33	27	26	57	171	14	27	14	6.6	2.1
21	15	57	31	24	25	60	144	13	24	13	6.1	2.1
22	24	66	29	22	24	66	126	12	22	10	4.9	2.1
23	26	62	30	24	23	74	107	11	22	9.2	4.3	2.6
24	47	54	31	23	25	83	89	12	21	7.8	3.9	2.6
25	57	47	30	21	22	95	77	15	19	7.1	3.8	2.4
26	65	42	29	20	21	122	67	16	20	6.6	3.5	2.3
27	79	40	27	18	20	155	91	15	25	5.9	3.2	2.2
28	106	38	26	18	19	144	124	14	25	14	3.3	2.4
29	110	35	25	18	---	118	116	13	27	17	3.0	2.3
30	94	33	25	17	---	100	95	15	29	14	2.9	2.2
31	78	---	24	17	---	96	---	14	---	12	2.8	---
TOTAL	838.8	1207	1037	1006	1048	1774	3835	772	1357	428.3	294.1	96.2
MEAN	27.1	40.2	33.5	32.5	37.4	57.2	128	24.9	45.2	13.8	9.49	3.21
MAX	110	66	45	67	75	155	212	77	142	30	27	6.9
MIN	3.2	23	24	17	19	17	67	11	14	5.9	2.8	2.0
CAL YR 1981	TOTAL	8931.6	MEAN	24.5	MAX	166	MIN	1.8				
WTR YR 1982	TOTAL	13693.4	MEAN	37.5	MAX	212	MIN	2.0				

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 (3 m) downstream from Nolan Bridge, 0.3 mi (0.5 km) downstream from Tarbell Brook, 2 mi (3 km) west of Winchendon, and at mile 32.8 (52.8 km).

DRAINAGE AREA.--83.0 mi² (215.0 km²).

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.

REVISED RECORDS.--WSP 451: 1916. WSP 871: Drainage area. WSP 1051: 1919, 1920-21(M), 1922-24, 1928(M), 1933-34.

GAGE.--Water-stage recorder. Concrete control since Oct. 6, 1933. Datum of gage is 826.66 ft (251.966 m) National Geodetic Vertical Datum of 1929. Prior to July 27, 1916, nonrecording gage at bridge at same datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Lake Monomonic 6 mi (10 km) upstream and other reservoirs and, prior to 1957, by powerplant. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--66 years, 143 ft³/s (4.050 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s (241 m³/s) Sept. 22, 1938, gage height, 21.55 ft (6.568 m), from floodmarks, from rating curve extended above 2,000 ft³/s (57 m³/s) on basis of computation of peak flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Apr. 4, gage height, 8.22 ft (2.505 m); minimum daily, 11 ft³/s (0.31 m³/s) Sept. 18-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	262	142	155	130	100	712	333	66	210	144	30
2	93	225	222	225	150	105	899	278	250	163	119	54
3	107	197	248	193	200	97	841	220	343	127	97	79
4	97	180	236	244	400	93	995	193	311	107	60	66
5	95	163	216	404	480	100	950	172	313	93	41	51
6	87	165	216	378	500	105	753	157	601	86	33	40
7	95	174	206	361	500	100	614	146	848	69	28	54
8	90	157	188	340	420	120	551	133	918	50	24	73
9	83	146	178	310	350	125	440	125	712	40	86	67
10	77	135	165	260	320	131	398	114	498	33	232	62
11	73	142	154	210	290	121	390	111	359	29	241	60
12	71	135	146	180	270	155	414	105	275	26	201	57
13	68	125	142	170	250	204	418	99	214	26	144	35
14	67	119	131	160	230	271	454	95	251	22	116	20
15	63	121	146	150	210	286	481	89	239	21	101	16
16	47	133	232	140	200	280	487	86	208	23	66	13
17	35	176	234	135	190	285	516	82	208	20	44	13
18	34	239	212	130	180	264	666	77	203	27	36	11
19	140	259	200	125	160	268	779	73	165	28	30	11
20	125	262	180	120	160	273	678	64	154	75	27	11
21	104	320	170	120	150	296	569	51	140	105	26	21
22	97	325	157	120	140	320	483	44	142	80	22	32
23	109	299	170	120	135	345	409	38	144	62	19	42
24	317	260	180	130	130	362	356	44	131	47	18	37
25	291	225	163	130	125	407	313	66	114	36	19	32
26	290	197	150	125	120	539	280	72	105	29	20	28
27	367	188	144	120	115	630	395	69	103	24	19	27
28	438	180	140	120	105	588	450	59	107	73	17	27
29	414	163	133	110	---	498	446	54	148	250	14	27
30	357	152	130	110	---	437	390	57	230	210	13	26
31	308	---	125	110	---	440	---	64	---	152	12	---
TOTAL	4718	5824	5456	5705	6610	8345	16527	3370	8500	2343	2069	1122
MEAN	152	194	176	184	236	269	551	109	283	75.6	66.7	37.4
MAX	438	325	248	404	500	630	995	333	918	250	241	79
MIN	34	119	125	110	105	93	280	38	66	20	12	11
CAL YR 1981	TOTAL	48464	MEAN 133	MAX 703	MIN 11							
WTR YR 1982	TOTAL	70589	MEAN 193	MAX 995	MIN 11							

LOCATION.--Lat 42°40'57", long 72°06'56", Worcester County, Hydrologic Unit 01080202, on right bank 100 ft (30 m) downstream from highway bridge, 3 mi (4.8 km) upstream from mouth, and 3.5 mi (5.6 km) west of Winchendon.

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: Water years 1965-66.

GAGE.--Water-stage recorder. Concrete control since September 1936. Datum of gage is 849.67 ft (258.979 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 11, 1936, nonrecording gage on left bank at same datum.

AVERAGE DISCHARGE.--66 years, 32.6 ft³/s (0.923 m³/s), 22.82 in/yr (580 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) Sept. 21, 1938, gage height, 9.90 ft (3.018 m), from rating curve extended above 620 ft³/s (18 m³/s) on basis of contracted-opening measurements at gage heights 8.4 ft (2.56 m) and 9.90 ft (3.018 m); minimum, 0.08 ft³/s (0.002 m³/s) several times in September 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 190 ft³/s (5.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Apr. 2	0330	259	7.33	4.51	1.375	Apr. 18	1445	263	7.45	4.53	1.381
Apr. 4	1345	*311	8.81	4.74	1.445						

Minimum discharge, 1.6 ft³/s (0.045 m³/s) Aug. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	66	28	20	20	14	196	71	12	46	16	3.2
2	9.0	47	39	28	21	15	239	56	45	28	13	5.6
3	14	40	61	28	30	15	193	47	87	20	9.9	14
4	13	35	57	31	66	14	278	41	74	15	8.5	11
5	10	31	47	56	124	15	224	36	54	12	6.9	8.9
6	8.5	33	38	79	137	16	153	32	119	9.0	5.7	7.1
7	9.2	47	38	80	120	17	77	28	188	7.1	4.6	6.7
8	8.5	43	40	76	101	25	100	20	168	5.9	3.9	5.7
9	7.2	36	34	66	81	30	107	18	123	5.0	7.9	4.7
10	6.0	31	31	54	65	32	93	16	89	4.3	15	3.9
11	5.2	28	28	41	59	29	86	15	56	3.8	11	3.5
12	4.4	25	26	32	47	33	86	15	23	3.5	8.2	2.8
13	4.1	23	24	28	40	42	85	12	19	4.2	6.2	2.3
14	3.6	21	22	29	34	54	93	11	32	3.8	5.1	2.0
15	3.3	21	23	29	30	74	114	10	30	3.2	4.3	1.9
16	3.2	23	33	26	28	79	119	9.3	21	3.4	3.7	1.8
17	4.5	33	38	25	27	62	142	8.9	21	3.3	3.1	2.0
18	4.4	48	35	24	26	66	232	8.1	23	7.8	2.7	2.6
19	30	66	30	23	24	59	224	7.4	17	6.0	2.4	2.9
20	36	63	26	20	23	71	173	7.0	16	11	2.3	3.1
21	19	68	23	19	23	85	144	7.5	15	14	2.3	5.3
22	16	73	23	18	22	81	123	6.8	16	7.5	2.4	6.5
23	20	65	26	20	21	90	102	7.0	20	5.1	2.3	7.6
24	100	54	31	21	20	95	85	15	22	3.9	2.2	8.1
25	155	43	29	18	19	101	71	24	18	3.1	2.2	7.8
26	136	36	27	17	17	132	60	17	14	2.6	2.2	6.8
27	144	34	24	18	16	170	87	12	13	2.3	2.2	7.0
28	149	33	22	17	15	151	125	9.1	13	13	2.0	7.0
29	144	30	22	16	---	128	110	10	21	43	1.9	6.8
30	126	26	20	15	---	105	89	16	46	34	1.8	6.8
31	98	---	19	15	---	97	---	14	---	19	1.7	---
TOTAL	1297.7	1222	964	989	1256	1997	4010	607.1	1415	349.8	163.6	165.4
MEAN	41.9	40.7	31.1	31.9	44.9	64.4	134	19.6	47.2	11.3	5.28	5.51
MAX	155	73	61	80	137	170	278	71	188	46	16	14
MIN	3.2	21	19	15	15	14	60	6.8	12	2.3	1.7	1.8
CFSM	2.16	2.10	1.60	1.64	2.31	3.32	6.91	1.01	2.43	.58	.27	.28
IN.	2.49	2.34	1.85	1.90	2.41	3.83	7.69	1.16	2.71	.67	.31	.32

CAL YR 1981	TOTAL	9888.6	MEAN 27.1	MAX 242	MIN 1.4	CFSM 1.40	IN 18.96
WTR YR 1982	TOTAL	14436.6	MEAN 39.6	MAX 278	MIN 1.7	CFSM 2.04	IN 27.68

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 (0.3 km) upstream from Bailey Brook, 0.8 mi (1.3 km) southeast of Otter River, and 2 mi (3 km) northwest of Gardner.

DRAINAGE AREA.--34.2 mi² (88.6 km²).

PERIOD OF RECORD.--Discharge: December 1964 to current year.
Water-quality records: Water years 1965-66.

GAGE.--Water-stage recorder. Altitude of gage is 900 ft (274 m), from topographic map.

REMARKS.--Records good except those for December to April, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1966-82), 61.5 ft³/s (1.742 m³/s), 24.42 in/yr (620 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 948 ft³/s (26.8 m³/s) Mar. 7, 1979, gage height, 5.02 ft (1.530 m); minimum, 2.2 ft³/s (0.062 m³/s) Aug. 13, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 502 ft³/s (14.2 m³/s) June 6, gage height, 3.73 ft (1.137 m); minimum, 9.2 ft³/s (0.26 m³/s) Sept. 17, 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	88	51	59	56	44	236	123	41	111	49	25
2	33	76	92	90	65	42	272	103	103	84	41	42
3	48	68	134	94	95	43	234	96	182	63	34	44
4	48	60	127	112	240	39	285	90	158	50	30	34
5	39	55	102	225	260	45	275	85	162	42	32	25
6	32	57	93	250	200	52	240	84	390	36	40	21
7	32	65	80	200	170	50	210	75	487	33	38	21
8	31	61	77	150	140	61	185	67	409	31	29	16
9	28	54	74	110	120	68	160	60	307	29	93	15
10	25	47	68	90	105	65	145	56	226	25	214	14
11	22	44	63	80	95	59	151	51	167	22	188	13
12	22	43	60	75	85	94	170	48	133	18	133	12
13	30	40	59	70	78	125	179	45	110	18	93	11
14	27	38	53	65	71	162	191	43	118	17	67	10
15	22	41	60	65	71	174	202	38	121	16	44	10
16	20	52	106	65	72	164	196	36	110	17	30	9.9
17	18	79	127	65	82	154	185	34	112	15	24	10
18	22	107	117	62	75	135	195	32	119	14	23	10
19	98	131	95	60	69	130	195	30	106	13	20	10
20	122	123	80	58	65	128	171	33	96	29	20	10
21	97	134	72	56	65	142	145	39	86	61	22	20
22	70	134	65	54	62	152	126	35	76	59	19	21
23	62	114	71	52	59	167	110	33	77	47	16	24
24	151	89	87	53	57	174	97	59	80	34	15	21
25	184	75	86	54	53	184	90	71	71	26	15	19
26	162	66	73	52	50	224	87	63	59	23	16	17
27	167	64	68	50	47	290	152	48	51	20	15	17
28	182	66	66	48	45	243	188	37	73	53	14	20
29	177	62	62	48	---	180	177	37	90	110	14	18
30	142	56	58	48	---	152	150	50	118	97	12	18
31	110	---	53	50	---	149	---	48	---	71	12	---
TOTAL	2243	2189	2479	2610	2652	3891	5399	1749	4438	1284	1412	557.9
MEAN	72.4	73.0	80.0	84.2	94.7	126	180	56.4	148	41.4	45.5	18.6
MAX	184	134	134	250	260	290	285	123	487	111	214	44
MIN	18	38	51	48	45	39	87	30	41	13	12	9.9
CFSM	2.12	2.14	2.34	2.46	2.77	3.68	5.26	1.65	4.33	1.21	1.33	.54
IN.	2.44	2.38	2.70	2.84	2.88	4.23	5.87	1.90	4.83	1.40	1.54	.61
CAL YR 1981	TOTAL	20445.0	MEAN	56.0	MAX	314	MIN	8.0	CFSM	1.64	IN	22.24
WTR YR 1982	TOTAL	30903.9	MEAN	84.7	MAX	487	MIN	9.9	CFSM	2.48	IN	33.61

CONNECTICUT RIVER BASIN

01164000 MILLERS RIVER AT SOUTH ROYALSTON, MA

LOCATION.--Lat 42°37'47", long 72°09'03", Worcester County, Hydrologic Unit 01080202, on right bank 500 ft (150 m) downstream from bridge in South Royalston, 0.4 mi (0.6 km) downstream from Beaver Brook, 1.7 mi (2.7 km) downstream from Birch Hill Dam, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--187 mi² (484 km²).

PERIOD OF RECORD.--Discharge: July 1939 to current year.
Water-quality records: Water years 1957, 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 792.00 ft (241.402 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are poor. No gage-height record Jan. 18 to Feb. 9. Flow regulated by Lake Monomonac and other reservoirs, by mills and powerplants prior to 1955, and at high flow by Birch Hill Reservoir since 1941 (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 323 ft³/s (9.147 m³/s), 23.46 in/yr (596 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) Apr. 13, 1940, gage height, 8.40 ft (2.560 m); maximum gage height, at least 10.6 ft (3.23 m) about Jan. 18, 1982 (ice jam); minimum daily discharge, 9.3 ft³/s (0.26 m³/s) Aug. 4, 1956. Maximum discharge since construction of Birch Hill Reservoir in 1941, 2,830 ft³/s (80.1 m³/s) June 25, 26, 1944, gage height, 7.57 ft (2.307 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 21 or 22, 1938, reached a stage of 15.9 ft (4.85 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,090 ft³/s (59.2 m³/s) Apr. 5, gage height, 7.29 ft (2.222 m); maximum gage height, at least 10.6 ft (3.23 m) about Jan. 18 (ice jam); minimum daily discharge, 42 ft³/s (1.19 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	669	326	300	330	250	1160	766	217	528	331	103
2	175	555	446	370	370	240	1420	639	437	435	282	183
3	247	473	617	400	330	240	1350	547	803	338	233	228
4	243	418	627	450	420	240	1460	481	801	273	183	192
5	209	379	568	720	550	240	1860	439	451	230	138	144
6	187	372	508	937	340	250	2010	408	426	201	127	121
7	184	423	504	977	620	270	1810	381	735	172	120	115
8	184	409	456	880	1100	320	1670	346	1230	140	103	136
9	169	368	426	700	1200	360	1460	322	1510	121	214	120
10	150	333	396	570	1100	370	1180	301	1500	106	604	109
11	140	315	370	500	870	339	980	285	1400	95	664	104
12	135	305	348	430	700	411	968	271	1280	85	551	99
13	133	285	323	390	650	536	982	256	1130	83	405	81
14	131	270	347	350	570	653	1020	248	993	77	310	60
15	123	269	321	340	500	749	1090	233	832	72	247	53
16	110	299	502	330	450	750	1120	219	647	72	180	48
17	89	388	606	310	430	741	1130	208	540	74	129	45
18	87	506	605	300	400	691	1260	196	533	132	109	43
19	338	634	582	290	370	669	314	186	471	97	96	42
20	475	644	570	270	350	660	935	186	428	178	87	42
21	402	690	485	270	330	709	1380	201	383	310	86	71
22	318	729	350	260	320	751	1590	173	364	263	80	91
23	278	696	390	260	310	800	1430	160	361	197	73	106
24	613	609	474	280	300	783	1090	245	365	150	68	102
25	812	512	455	280	280	809	788	340	325	118	66	91
26	844	442	390	270	280	911	642	308	283	97	68	89
27	889	412	374	260	270	987	756	249	260	84	64	98
28	1050	409	355	260	250	1010	943	198	282	186	60	93
29	1110	384	336	250	---	1010	986	191	358	527	56	84
30	983	352	310	250	---	943	904	248	510	537	52	77
31	814	---	300	250	---	916	---	242	---	400	49	---
TOTAL	11772	13549	13667	12704	13990	18608	35688	9473	19855	6378	5835	2970
MEAN	380	452	441	410	500	600	1190	306	662	206	188	99.0
MAX	1110	729	627	977	1200	1010	2010	766	1510	537	664	228
MIN	87	269	300	250	250	240	314	160	217	72	49	42
MEAN†	385	448	441	410	500	650	1147	298	663	205	187	99.0
CFSM†	2.06	2.40	2.36	2.19	2.67	3.48	6.13	1.59	3.55	1.10	1.00	.53
IN†	2.37	2.67	2.72	2.53	2.78	4.01	6.84	1.84	3.96	1.26	1.15	.59
CAL YR 1981	TOTAL	115799	MEAN 317	MAX 1730	MIN 35	MEAN† 317	CFSM† 1.70	IN† 23.04				
WTR YR 1982	TOTAL	164489	MEAN 451	MAX 2010	MIN 42	MEAN† 451	CFSM† 2.41	IN† 32.72				

† Adjusted for change in contents in Birch Hill Reservoir.

01165000 EAST BRANCH TULLY RIVER NEAR ATHOL, MA

LOCATION.--Lat 42°38'32", long 72°13'34", Worcester County, Hydrologic Unit 01080202, on right bank 300 ft (90 m) downstream from Tully Dam, 1.3 mi (2.1 km) downstream from Lawrence Brook, 3.5 mi (5.6 km) north of Athol, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--50.4 mi² (130.5 km²).

PERIOD OF RECORD.--Discharge: October 1915 to current year. October 1915 to May 1916 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1965-66.

REVISED RECORDS.--WSP 451: 1916. WSP 891: Drainage area. WSP 1051: 1916(M), 1928. WSP 1301: 1917-35(M), 1937(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 613.71 ft (187.059 m) Corps of Engineers datum. Prior to Oct. 26, 1948, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 14.40 ft (4.389 m) higher.

REMARKS.--Records good. Flow regulated by Tully Reservoir since 1948 (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--67 years, 81.3 ft³/s (2.302 m³/s), 21.91 in/yr (557 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,140 ft³/s (146 m³/s) Sept. 21, 1938, gage height, 8.60 ft (2.621 m), from floodmarks, site and datum then in use, from rating curve extended above 1,500 ft³/s (42 m³/s) on basis of contracted-opening measurement and computation of peak flow over dam; minimum, 0.01 ft³/s (0.001 m³/s) Nov. 6-11, 1961; minimum daily, 0.01 ft³/s (0.001 m³/s) Nov. 7-10, 1961. Maximum discharge since construction of Tully Reservoir in 1948, 828 ft³/s (23.4 m³/s) Apr. 21, 1960, gage height, 5.38 ft (1.640 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 616 ft³/s (17.4 m³/s) Apr. 21, gage height, 4.69 ft (1.430 m); minimum, 1.0 ft³/s (0.028 m³/s) Nov. 4; minimum daily, 4.6 ft³/s (0.13 ft³/s) Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	476	72	49	19	55	377	232	48	85	65	7.4
2	142	290	88	61	63	55	471	211	128	95	51	7.2
3	204	134	148	99	76	54	317	159	211	94	51	35
4	199	125	166	123	64	54	263	108	221	93	35	79
5	193	129	127	147	98	54	422	95	107	63	27	64
6	117	107	109	219	64	54	515	95	50	24	27	26
7	23	108	111	260	123	54	511	63	124	10	27	15
8	41	109	111	233	184	55	550	48	309	15	27	13
9	47	107	109	217	175	56	559	48	333	18	27	13
10	46	82	84	167	181	57	540	80	193	23	27	12
11	36	71	72	96	299	73	528	94	191	26	27	11
12	31	71	72	98	372	103	517	64	189	23	17	12
13	18	65	72	101	262	139	444	49	187	19	11	12
14	11	56	72	65	175	150	349	49	231	14	11	12
15	11	57	47	38	129	151	348	48	343	11	11	11
16	11	57	82	39	116	187	385	48	377	11	11	12
17	11	68	111	66	114	206	431	39	222	11	11	5.8
18	12	116	111	79	88	179	474	25	111	67	11	6.2
19	18	143	111	79	75	174	79	25	96	129	11	6.4
20	58	151	56	78	75	174	331	33	65	96	11	6.4
21	122	166	59	77	75	175	518	46	49	70	11	6.6
22	105	166	74	76	75	158	604	32	49	41	11	4.7
23	78	148	74	75	50	151	556	25	80	32	11	4.6
24	161	124	74	74	40	138	401	40	95	32	9.1	5.0
25	201	109	99	50	51	131	255	79	78	32	8.7	5.4
26	238	109	111	49	56	138	209	93	50	17	8.7	30
27	262	109	86	53	56	145	161	92	50	10	8.6	32
28	402	82	74	53	56	180	188	53	50	10	8.2	26
29	555	72	74	52	---	237	260	26	50	64	8.2	15
30	543	72	74	42	---	259	282	40	82	124	7.0	10
31	517	---	73	32	---	258	---	47	---	108	6.9	---
TOTAL	4437	3679	2803	2947	3211	4054	11845	2186	4369	1467	594.4	505.7
MEAN	143	123	90.4	95.1	115	131	395	70.5	146	47.3	19.2	16.9
MAX	555	476	166	260	372	259	604	232	377	129	65	79
MIN	11	56	47	32	19	54	79	25	48	10	6.9	4.6
MEAN†	128	105	90.6	95.3	115	164	362	85.2	147	46.8	17.3	16.9
CFSM†	2.54	2.08	1.80	1.89	2.28	3.25	7.18	1.69	2.92	.93	.34	.34
IN†	2.93	2.33	2.07	2.18	2.39	3.74	8.01	1.95	3.25	1.07	.40	.37
CAL YR 1981	TOTAL	28387.9	MEAN	77.8	MAX 555	MIN 5.2	MEAN†	78.0	CFSM†	1.55	IN†	21.00
WTR YR 1982	TOTAL	42098.1	MEAN	115	MAX 604	MIN 4.6	MEAN†	114	CFSM†	2.26	IN†	30.69

† Adjusted for change in contents in Tully Reservoir.

CONNECTICUT RIVER BASIN

01165300 LAKE ROHUNTA OUTLET NEAR ATHOL, MA

LOCATION.--Lat 42°34'13", long 72°16'22", Worcester County, Hydrologic Unit 01080202, on right bank 300 ft (90 m) downstream from bridge on Daniel Shays Highway, 600 ft (200 m) downstream from Lake Rohunta, and 2.8 mi (4.5 km) southwest of Athol.

DRAINAGE AREA.--20.3 mi² (52.6 km²).

PERIOD OF RECORD.--Discharge: December 1964 to current year.
Water-quality records: Water years 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 502.32 ft (153.107 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at datum 1.00 ft (0.305 m) higher.

REMARKS.--Records good. Flow regulated by Lake Rohunta. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years (water years 1966-82), 36.0 ft³/s (1.020 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) Mar. 7, 1979, gage height, 7.04 ft (2.146 m), from rating curve extended above 220 ft³/s (6.2 m³/s); minimum daily, 0.16 ft³/s (0.005 m³/s) June 19, 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 264 ft³/s (7.48 m³/s) Oct. 20, gage height, 4.74 ft (1.445 m); minimum daily, 0.17 ft³/s (0.005 m³/s) May 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	92	37	43	45	32	125	77	38	55	27	6.1
2	14	74	46	52	51	32	155	69	60	52	24	8.6
3	15	53	53	55	74	31	154	63	90	46	20	8.7
4	16	49	56	67	115	26	182	57	90	39	17	7.9
5	20	45	52	104	147	31	201	53	97	34	13	7.1
6	22	43	52	132	136	32	177	51	184	29	11	5.7
7	25	43	53	120	115	35	150	42	234	23	9.7	4.4
8	22	43	50	104	97	44	120	33	199	17	7.1	4.3
9	21	43	81	88	88	45	106	26	155	15	11	4.1
10	20	39	85	70	80	43	100	23	118	12	22	3.5
11	19	39	53	62	49	41	98	15	91	11	29	3.1
12	18	28	42	41	42	46	102	.26	72	8.7	28	3.0
13	17	24	41	41	58	53	113	.26	58	7.3	24	2.9
14	25	24	38	51	56	65	117	.31	58	6.3	20	2.6
15	29	20	43	50	52	76	126	.37	60	5.5	17	2.2
16	22	19	55	40	50	78	126	.40	58	4.8	21	2.0
17	16	21	67	38	50	83	121	.38	61	4.8	22	1.7
18	15	24	70	20	49	82	123	.44	63	3.9	18	2.0
19	23	40	65	23	48	79	127	.24	58	3.3	14	1.7
20	107	52	50	39	46	79	117	.18	53	4.8	12	1.9
21	147	60	35	38	44	83	101	.17	49	6.2	9.3	3.6
22	77	56	46	31	43	88	93	.19	44	6.5	8.0	4.1
23	48	53	49	35	42	95	84	.42	43	6.4	7.7	5.0
24	82	50	52	38	40	100	76	6.0	42	5.7	6.0	5.0
25	107	46	53	37	39	107	72	19	41	5.7	6.3	4.7
26	111	43	51	31	36	128	67	30	36	4.7	6.6	4.3
27	130	43	53	21	34	160	82	34	33	3.9	7.6	5.2
28	151	42	49	27	34	152	91	34	36	17	6.5	6.0
29	157	39	46	29	---	126	93	35	41	34	6.1	5.3
30	152	38	44	29	---	108	85	39	49	36	6.6	4.8
31	128	---	41	29	---	103	---	39	---	31	5.2	---
TOTAL	1768	1285	1608	1585	1760	2283	3484	748.62	2311	539.5	442.7	131.5
MEAN	57.0	42.8	51.9	51.1	62.9	73.6	116	24.1	77.0	17.4	14.3	4.38
MAX	157	92	85	132	147	160	201	77	234	55	29	8.7
MIN	12	19	35	20	34	26	67	.17	33	3.3	5.2	1.7
CAL YR 1981	TOTAL	11794.93	MEAN	32.3	MAX	187	MIN	.16				
WTR YR 1982	TOTAL	17946.32	MEAN	49.2	MAX	234	MIN	.17				

01165500 MOSS BROOK AT WENDELL DEPOT, MA

LOCATION.--Lat 42°36'10", long 72°21'36", Franklin County, Hydrologic Unit 01080202, on left bank 0.2 mi (0.3 km) upstream from mouth, 0.2 mi (0.3 km) north of Wendell Depot, and 2.5 mi (4.0 km) west of Orange.

DRAINAGE AREA.--12.3 mi² (31.9 km²).

PERIOD OF RECORD.--Discharge: June to October 1909, April to August 1910, June 1916 to September 1982 (discontinued). Published as "at Wendell" 1909-10.

Water-quality records: Water year 1966.

REVISED RECORDS.--WSP 821: 1936(M). WSP 891: Drainage area. WSP 1051: 1917, 1919-24, 1929(M). WSP 1231: 1917-21(M), 1922, 1923(M), 1924-26, 1927-28(M), 1929, 1930-35(M), 1939(M), 1941(M), 1944(M), 1949(M).

GAGE.--Water-stage recorder. Crest-stage gage since July 11, 1958. Datum of gage is 508.9 ft (155.11 m) National Geodetic Vertical Datum of 1929. Prior to April 1910, nonrecording gage at site 1,200 ft (350 m) downstream at different datum. April to August 1910, nonrecording gage and sharp-crested weir at site 300 ft (90 m) downstream at different datum. June 1916 to Dec. 8, 1965, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--66 years (water years 1917-82), 20.0 ft³/s (0.566 m³/s), 22.08 in/yr (561 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,540 ft³/s (43.6 m³/s) Mar. 19, 1936, gage height, 6.30 ft (1.920 m), from floodmarks, from rating curve extended above 400 ft³/s (11 m³/s) on basis of slope-area measurements at gage heights 5.62 ft (1.713 m) and 6.30 ft (1.920 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 4, 5, 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 12	2315	ice jam	*5.11 1.558	Apr. 18	1245	200 5.66	3.39 1.035
Apr. 1	1830	167 4.73	3.23 .985	June 6	1330	261 7.39	3.65 1.113
Apr. 4	0700	*282 7.99	3.73 1.137				

Minimum discharge, 0.78 ft³/s (0.022 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	23	12	15	14	10	135	35	16	20	8.8	8.5
2	2.4	19	25	15	13	9.6	135	30	40	13	7.2	11
3	6.0	16	37	18	30	9.5	94	26	53	10	5.4	23
4	8.0	14	31	30	60	9.4	219	24	30	8.3	4.5	22
5	5.6	13	25	60	85	10	120	22	35	6.8	4.3	8.4
6	3.8	15	21	50	75	11	69	20	192	6.0	3.3	4.6
7	3.8	17	20	40	50	12	46	19	125	5.2	2.6	2.9
8	4.2	15	20	30	40	13	63	18	74	4.5	2.2	2.9
9	3.2	13	20	25	34	16	55	17	46	3.6	4.2	2.1
10	2.6	12	17	22	26	18	49	16	33	3.1	6.1	2.0
11	2.1	12	17	20	23	18	49	14	24	3.0	4.1	1.7
12	2.1	10	15	19	21	19	52	13	19	2.6	2.8	1.4
13	2.0	11	14	19	19	22	54	13	17	2.9	2.4	1.4
14	2.0	10	14	18	18	30	64	12	28	2.5	2.1	1.3
15	1.7	11	15	18	17	41	81	12	30	2.5	1.8	1.3
16	1.9	12	16	17	16	41	81	11	23	2.2	1.6	1.4
17	1.6	13	17	16	15	37	103	10	21	2.1	1.5	1.4
18	2.1	14	17	15	15	35	174	8.7	22	2.9	1.4	1.4
19	14	15	17	14	14	36	128	8.6	19	4.1	1.3	1.0
20	16	16	16	13	13	40	94	8.2	20	4.5	1.5	1.3
21	11	23	15	12	13	43	81	8.5	17	6.0	1.3	4.4
22	7.9	24	15	12	13	49	68	7.3	15	4.2	1.3	5.8
23	12	19	18	11	12	58	53	8.1	18	2.9	1.4	9.7
24	46	16	21	11	12	58	47	22	19	2.3	1.4	11
25	45	14	24	11	11	67	40	31	15	1.9	1.4	8.5
26	36	14	22	10	11	98	36	21	12	1.8	1.6	8.8
27	59	14	19	10	10	128	86	15	11	1.6	1.4	8.2
28	81	15	17	10	10	79	77	11	16	12	1.2	8.5
29	62	15	17	9.5	---	58	55	15	18	25	1.1	5.4
30	38	12	14	9.0	---	48	43	23	25	15	1.1	3.7
31	26	---	14	9.0	---	56	---	19	---	8.7	1.2	---
TOTAL	510.8	447	582	588.5	690	1179.5	2451	518.4	1033	191.2	83.5	175.0
MEAN	16.5	14.9	18.8	19.0	24.6	38.0	81.7	16.7	34.4	6.17	2.69	5.83
MAX	81	24	37	60	85	128	219	35	192	25	8.8	23
MIN	1.6	10	12	9.0	10	9.4	36	7.3	11	1.6	1.1	1.0
CFSM	1.34	1.21	1.53	1.55	2.00	3.09	6.64	1.36	2.80	.50	.22	.47
IN.	1.54	1.35	1.76	1.78	2.09	3.57	7.41	1.57	3.12	.58	.25	.53
CAL YR 1981	TOTAL	5448.03	MEAN	14.9	MAX	158	MIN	.89	CFSM	1.21	IN	16.48
WTR YR 1982	TOTAL	8449.90	MEAN	23.2	MAX	219	MIN	1.0	CFSM	1.89	IN	25.55

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 5 ft (23 m) downstream from bridge at Farley, 0.6 mi (1.0 km) upstream from Mormon Hollow Brook, 2.4 mi (3.9 km) downstream from Erving, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--375 mi² (971 km²).

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.

REVISED RECORDS.--WSP 641: 1920(M). WSP 756: Drainage area. WSP 781: 1928(M), 1933(M). WSP 1301: 1915(M).

GAGE.--Water-stage recorder. Altitude of gage is 380 ft (116 m), 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 (3.5 km) 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 (0.6 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by powerplants and by Lake Monomac and other reservoirs; high flow regulated by Birch Hill Reservoir 22 mi (35 km) upstream and Tully Reservoir (Reservoirs in Connecticut River basin); greater regulation by powerplants prior to 1966. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--68 years, 628 ft³/s (17.78 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 (821 m³/s) Sept. 22, 1938, gage height, 13.37 ft (4.075 m), 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 regulation; minimum daily, 8 ft³/s (0.23 m³/s) Sept. 6, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,920 ft³/s (111 m³/s) Apr. 4, gage height, 6.10 ft (1.859 m); minimum daily, 54 ft³/s (1.53 m³/s) Sept 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	225	1470	581	607	620	510	2910	1530	461	889	605	138
2	255	1240	803	689	720	500	3150	1270	939	781	494	209
3	510	937	1060	784	640	500	3020	1120	1510	646	418	335
4	531	759	1100	1130	820	500	3770	948	1460	552	355	353
5	510	727	997	1810	1000	500	3440	848	1410	486	277	327
6	472	710	883	1960	1100	530	3640	791	2520	390	214	205
7	349	758	842	1880	1200	600	3250	736	1990	313	221	220
8	290	741	799	1680	2100	660	3010	646	2200	262	191	175
9	308	691	782	1420	2200	710	2840	582	2480	233	235	171
10	262	630	762	1200	2100	720	2450	555	2280	192	588	161
11	242	545	682	907	1800	760	2190	573	2040	222	790	162
12	223	551	629	752	1500	900	2170	526	1860	203	712	140
13	208	528	603	720	1300	1200	2130	467	1690	164	549	136
14	211	490	590	700	1100	1400	2220	430	1650	100	435	115
15	194	485	582	670	960	1600	2320	411	1560	170	355	59
16	186	515	784	650	870	1600	2320	389	1370	166	285	117
17	140	604	938	620	780	1600	2450	364	1210	101	216	60
18	142	773	982	600	730	1500	2920	336	997	210	207	87
19	443	980	832	570	680	1400	1910	298	855	301	163	54
20	667	1030	666	550	650	1350	1650	301	810	339	153	96
21	717	1150	633	540	620	1430	2320	369	699	479	143	103
22	602	1190	760	530	600	1540	2840	316	642	441	114	130
23	570	1120	711	540	580	1620	2710	294	687	340	155	148
24	1200	988	865	570	570	1640	2200	452	709	263	134	175
25	1400	840	840	580	560	1740	1620	624	633	226	139	141
26	1450	749	789	570	550	2280	1310	611	541	182	122	111
27	1790	719	761	560	540	2440	1710	536	494	161	118	211
28	2100	711	687	540	520	2000	1750	438	583	326	68	204
29	2260	654	640	500	---	1910	1780	402	632	769	72	101
30	1990	618	604	480	---	1860	1720	476	866	819	128	173
31	1710	---	546	520	---	1930	---	488	---	721	118	---
TOTAL	22157	23903	23733	25829	27410	39430	73720	18127	37778	11447	8774	4817
MEAN	715	797	766	833	979	1272	2457	585	1259	369	283	161
MAX	2260	1470	1100	1960	2200	2440	3770	1530	2520	889	790	353
MIN	140	485	546	480	520	500	1310	294	461	100	68	54

CAL YR 1981 TOTAL 209353 MEAN 574 MAX 2970 MIN 58
WTR YR 1982 TOTAL 317125 MEAN 869 MAX 3770 MIN 54

CONNECTICUT RIVER BASIN

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01167000 CONNECTICUT RIVER AT TURNERS FALLS, MA

LOCATION.--Lat 42°36'40", long 72°33'20", Franklin County, Hydrologic Unit 01080201, at dam of Western Massachusetts Electric Co. at Turners Falls, 0.2 mi (0.3 km) upstream from Fall River, and at mile 122.2 (196.6 km).

DRAINAGE AREA.--7,163 mi² (18,552 km²).

PERIOD OF RECORD.--Discharge: January 1915 to current year.
Water-quality records: Water years 1973-74.

REVISED RECORDS.--WSP 741: 1932. WSP 891: Drainage area.

REMARKS.--Discharge computed by adding flow over and through dam, flow for factories through canal that diverts around dam, and flow through power stations 1 and 2 of Western Massachusetts Electric Co. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 35,500,000,000 ft³ (1,010,000,000 m³).

COOPERATION.--Records furnished by Western Massachusetts Electric Co.

AVERAGE DISCHARGE.--67 years, 11,830 ft³/s (335.0 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12900	31000	10800	6120	7710	8540	37800	45100	8620	21900	2440	3750
2	12900	20900	10900	7560	8080	7900	47400	36600	8560	15000	4150	4640
3	12100	18800	10800	5180	8270	8380	39000	35900	11900	14000	3890	6440
4	12700	20100	10700	8770	11100	11100	44200	31900	14000	7430	4450	2240
5	12400	13300	10800	11800	14100	7610	41200	23400	14000	5090	3200	1560
6	12800	8800	10700	11400	17000	7200	31800	22900	22500	6830	2850	1590
7	12800	15400	10800	12600	13400	6680	25500	18800	19300	8380	1410	3500
8	12700	14400	10700	11900	11400	8090	22800	19800	19300	7820	1500	2910
9	12100	12700	10700	10900	13700	9900	21400	19000	17200	4960	5100	3060
10	11500	12000	7810	11400	14000	7680	24100	19700	13200	4140	9620	3350
11	7910	11300	8790	11100	13300	9110	21500	21900	9420	4820	4380	1760
12	7420	10800	8250	8840	14000	10400	21000	22100	6680	5790	4390	1490
13	8400	11500	5970	7970	12300	8790	22600	15500	6710	3950	4470	3900
14	8630	10600	8080	8010	11200	9490	22500	15600	7690	3690	1430	3730
15	9070	10500	10400	8220	7540	11900	27000	9620	10800	4240	1450	2920
16	7950	9510	10600	7300	8280	15300	35200	7180	11000	4400	3250	2590
17	6100	10500	8890	6350	10400	16000	44600	8930	10300	2260	4180	3800
18	5160	11700	8980	8510	11300	15500	67500	9700	10700	1540	4720	3540
19	7380	12900	8830	8950	9070	14500	82600	11200	6840	4320	3880	2640
20	12400	13500	5590	9120	8770	13700	70600	9840	7300	4090	1480	4380
21	15600	17500	7710	8730	6890	13400	71900	10500	7930	3980	1490	4240
22	13000	16700	7610	9750	10600	16800	75000	12500	8500	4160	1530	3020
23	14000	12400	9570	3840	8400	18100	72800	8700	8640	2360	2310	2070
24	15700	13600	9930	3660	8270	17000	64200	11200	10800	2440	5080	1520
25	19700	14300	7390	8660	8920	17600	54900	11200	10700	1530	8860	1500
26	19300	11100	7630	8460	8550	25700	56300	10800	10600	2950	2660	1480
27	25600	10600	6610	7960	6640	34800	59000	13500	9240	2110	2780	3240
28	38700	10600	7510	7250	3420	26800	66200	10300	7570	2870	1480	5730
29	52100	10800	7730	6370	---	24500	63200	7530	11700	4680	1480	3730
30	54100	10900	7450	4100	---	24600	52600	4650	23200	4870	2900	3090
31	43700	---	9320	1660	---	27800	---	1560	---	4510	3940	---
TOTAL	516820	408710	277550	252440	286610	454870	1386400	507110	344900	171110	106750	93410
MEAN	16670	13620	8953	8143	10240	14670	46210	16360	11500	5520	3444	3114
MAX	54100	31000	10900	12600	17000	34800	82600	45100	23200	21900	9620	6440
MIN	5160	8800	5590	1660	3420	6680	21000	1560	6680	1530	1410	1480
CAL YR 1981	TOTAL	4384657	MEAN	12010	MAX	70100	MIN	977				
WTR YR 1982	TOTAL	4806680	MEAN	13170	MAX	82600	MIN	1410				

01168151 DEERFIELD RIVER NEAR ROWE, MA

LOCATION.--Lat 42°40'57", long 72°58'37", Franklin County, Hydrologic Unit 01080203, on left bank 400 ft (120 m) downstream from Fife Brook, 600 ft (180 m) downstream from Fife Brook Dam, 1.2 mi (1.9 km) northeast of Hoosac Tunnel, and 4 mi (6 km) west of Rowe.

DRAINAGE AREA.--254 mi² (658 km²).

PERIOD OF RECORD.--May 1974 to current year.

REVISED RECORDS.--WDR MA-RI-78: 1977.

GAGE.--Water-stage recorder. Datum of gage is 745.00 ft (227.076 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Somerset and Harriman Reservoirs (Reservoirs in Connecticut River basin) and by several powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--8 years, 744 ft³/s (21.07 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,400 ft³/s (464 m³/s) Aug. 10, 1976, gage height, 14.79 ft (4.508 m), from rating curve extended above 2,800 ft³/s (79 m³/s); minimum daily, 28 ft³/s (0.79 m³/s) Nov. 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,780 ft³/s (167 m³/s) Apr. 18, gage height, 9.83 ft (2.996 m); minimum daily, 28 ft³/s (0.79 m³/s) Nov. 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	425	882	83	675	949	1170	1190	652	1380	151	233
2	126	505	957	197	574	907	753	1310	590	996	687	199
3	168	586	682	123	742	948	972	1280	727	904	610	295
4	179	648	405	612	1010	944	1150	1230	729	459	660	292
5	190	674	79	1060	748	643	785	841	1270	204	630	82
6	323	817	292	919	713	647	360	988	2280	670	600	80
7	289	609	770	957	905	931	552	977	1940	787	606	265
8	392	419	593	963	889	950	445	894	1530	205	480	146
9	131	636	737	944	943	984	463	924	1340	629	665	157
10	78	878	691	869	953	884	354	989	1250	221	551	204
11	78	405	740	742	950	939	206	1010	1130	132	424	118
12	105	664	167	917	965	953	712	1020	1020	646	420	78
13	89	675	105	885	946	931	918	646	1180	758	323	267
14	77	28	682	965	939	966	730	860	1040	713	174	226
15	79	116	649	937	954	939	662	449	904	433	103	219
16	107	712	659	944	965	945	1020	746	710	638	193	350
17	81	706	631	901	915	1010	1250	801	799	210	100	198
18	81	916	632	750	949	915	4060	603	814	264	251	109
19	607	712	243	907	936	954	2560	893	767	547	223	73
20	367	893	172	932	929	852	2810	480	83	626	104	277
21	168	463	620	950	934	132	3090	579	693	484	105	300
22	185	259	659	923	955	543	2040	182	641	648	95	274
23	341	649	739	743	949	712	1260	474	631	613	272	281
24	215	956	788	157	950	623	1230	800	673	105	321	242
25	104	956	118	646	956	535	1310	1010	922	124	260	106
26	453	97	190	862	920	812	1850	976	120	674	177	106
27	1150	686	247	772	886	299	3570	758	82	597	197	427
28	1230	840	575	480	910	217	1460	638	724	749	125	491
29	1200	661	676	452	---	698	954	558	1330	640	103	491
30	1050	666	633	311	---	589	727	123	1840	483	238	296
31	178	---	189	269	---	670	---	145	---	554	234	---
TOTAL	10087	18257	16202	22172	25060	24021	39423	24374	28411	17093	10088	6880
MEAN	325	609	523	715	895	775	1314	786	947	551	325	229
MAX	1230	956	957	1060	1010	1010	4060	1310	2280	1380	687	491
MIN	77	28	79	83	574	132	206	123	82	105	95	75
CAL YR 1981	TOTAL	210755	MEAN	577	MAX	4750	MIN	28				
WTR YR 1982	TOTAL	242068	MEAN	663	MAX	4060	MIN	28				

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 (1.3 km) east of Charlemont, 2.5 mi (4.0 km) downstream from Chickley River, and at mile 24.5 (39.4 km).

DRAINAGE AREA.--362 mi² (938 km²).

PERIOD OF RECORD.--Discharge: June 1913 to current year.
Water-quality records: Water years 1954-55, 1958, 1967-69.

REVISED RECORDS.--WSP 781: 1915(M). WSP 1301: 1918(M).

GAGE.--Water-stage recorder. Datum of gage is 517.36 ft (157.691 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir (Reservoir in Connecticut River basin), and by several powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--69 years, 897 ft³/s (25.40 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s (1,590 m³/s) Sept. 21, 1938, gage height, 20.17 ft (6.148 m), from floodmarks, from rating curve extended above 31,000 ft³/s (880 m³/s) on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft (5.410 m) and 20.17 ft (6.148 m); minimum daily, 5 ft³/s (0.14 m³/s) June 17, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,000 ft³/s (368 m³/s) Apr. 18, gage height, 9.44 ft (2.877 m); minimum daily, 98 ft³/s (2.78 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	285	437	966	195	674	1040	2670	1550	767	1680	246	281
2	181	654	1140	302	732	1000	1680	1600	884	1200	672	277
3	239	552	1080	256	951	1030	2040	1550	937	1100	672	354
4	165	745	600	585	2240	1050	3150	1490	816	599	688	324
5	307	690	257	1550	1320	768	1710	1100	1620	408	642	123
6	311	908	381	1200	1030	725	1060	1210	5750	742	613	110
7	394	718	763	1170	1150	1030	1080	1170	3350	919	620	272
8	387	562	760	1110	1070	1070	941	1080	2120	385	482	149
9	294	657	845	1080	1150	1080	886	1090	1740	591	628	209
10	117	963	753	1010	1120	997	718	1130	1520	408	657	221
11	111	551	821	839	1090	1040	601	1120	1390	186	536	146
12	142	647	398	1040	1100	1120	1100	1140	1240	599	438	104
13	122	790	185	989	1100	1210	1380	875	1360	833	344	268
14	102	237	656	1080	1080	1240	1370	901	1480	767	217	242
15	102	150	801	1050	1080	1200	1400	542	1200	542	142	242
16	136	617	747	1050	1110	1180	2120	858	928	688	221	344
17	109	809	729	1010	1080	1270	4220	884	1030	344	136	233
18	107	987	730	840	1080	1170	8640	688	1080	221	272	136
19	671	811	370	991	1070	1250	4380	973	1030	620	242	98
20	499	1070	246	1010	1070	1190	4820	549	370	642	149	281
21	207	710	662	1030	1070	600	4900	758	775	591	139	319
22	245	450	678	1020	1070	818	3060	300	775	613	129	290
23	388	674	828	962	1070	1120	2090	529	893	657	277	314
24	428	1070	1060	246	1060	1150	2220	1030	767	229	281	277
25	233	1050	320	639	1050	1030	2240	1210	1040	142	354	146
26	574	325	312	962	1020	1830	3090	1090	408	642	217	104
27	1280	616	297	871	1000	1120	5190	884	205	570	225	451
28	1470	981	684	616	1020	731	2280	783	735	1010	153	438
29	1330	729	708	574	---	1020	1600	758	2120	841	129	542
30	1210	760	801	382	---	1110	1150	426	2600	613	250	354
31	404	---	364	329	---	1270	---	295	---	570	263	---
TOTAL	12550	20920	19942	25988	30657	33459	73786	29563	40930	19952	11034	7649
MEAN	405	697	643	838	1095	1079	2460	954	1364	644	356	255
MAX	1470	1070	1140	1550	2240	1830	8640	1600	5750	1680	688	542
MIN	102	150	185	195	674	600	601	295	205	142	129	98
CAL YR 1981	TOTAL	262942	MEAN	720	MAX	8450	MIN	90				
WTR YR 1982	TOTAL	326430	MEAN	894	MAX	8640	MIN	98				

CONNECTICUT RIVER BASIN

01169000 NORTH RIVER AT SHATTUCKVILLE, MA

LOCATION.--Lat 42°38'18", long 72°43'32", Franklin County, Hydrologic Unit 01080203, on right bank in Shattuckville, 1.2 mi (1.9 km) south of Griswoldville, and 1.3 mi (2.1 km) upstream from mouth.

DRAINAGE AREA.--88.4 mi² (229.0 km²).

PERIOD OF RECORD.--Discharge: October 1939 to current year. October and November 1939 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1957, 1967-69.

REVISED RECORDS.--WSP 1111: 1945(M).

GAGE.--Water-stage recorder. Datum of gage is 458.36 ft (139.708 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are poor. Diurnal fluctuation at times caused by mill upstream; because storage capacity is small, daily flows are not affected appreciably. Prior to 1950, greater regulation by mill. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 182 ft³/s (5.154 m³/s), 27.96 in/yr (710 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s (374 m³/s) Oct. 15, 1955, gage height, 10.37 ft (3.161 m), from rating curve extended above 5,700 ft³/s (160 m³/s) on basis of computation of flow over dam at gage height 9.62 ft (2.932 m); minimum daily, 5.1 ft³/s (0.14 m³/s) Oct. 3, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 3	2400	3220 91.2	6.62 2.018	Apr. 27	0145	2910 82.4	6.42 1.957
Apr. 18	0400	*6130 174	8.16 2.487	June 6	1300	3420 96.9	6.74 2.054

Minimum discharge, 15 ft³/s (0.42 m³/s) Sept. 20; minimum daily, 16 ft³/s (0.45 m³/s) Sept. 16, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	80	47	83	76	87	1290	363	116	233	73	31
2	35	74	190	81	88	88	819	313	261	165	53	50
3	49	66	206	79	180	84	927	281	175	136	47	65
4	45	61	156	100	750	79	1840	255	124	119	45	37
5	37	57	121	400	471	87	726	227	504	101	40	28
6	34	68	103	265	328	85	492	201	2770	89	36	24
7	42	87	95	210	240	89	414	183	1200	80	33	21
8	52	68	91	150	190	115	375	167	580	73	31	20
9	46	60	86	130	168	98	334	160	363	65	39	19
10	39	56	72	120	155	97	311	146	262	59	51	20
11	33	56	77	100	135	94	317	132	209	54	39	22
12	31	53	72	92	130	130	343	124	185	63	31	21
13	29	49	52	86	130	207	358	117	188	70	30	19
14	28	49	65	90	125	254	493	108	385	54	32	17
15	28	55	71	96	115	211	589	100	248	50	28	17
16	27	62	73	89	124	192	889	94	195	48	26	16
17	40	61	73	87	126	196	1370	89	268	45	24	18
18	36	66	73	74	115	181	3510	100	230	61	23	17
19	151	71	61	68	110	217	1430	84	171	49	22	16
20	76	115	60	62	114	212	1460	98	199	56	21	16
21	53	176	65	58	111	235	1460	94	155	65	22	23
22	44	109	71	54	107	258	884	75	138	45	21	24
23	47	83	88	50	101	279	639	88	193	39	21	30
24	184	71	140	47	100	302	824	263	180	46	21	44
25	100	60	105	45	91	426	829	199	138	41	23	29
26	150	60	94	43	84	907	893	134	116	33	40	23
27	259	73	85	39	91	593	1710	100	107	30	27	31
28	254	83	85	37	89	385	822	83	148	231	22	45
29	155	72	83	36	---	328	535	174	537	199	19	32
30	111	59	79	35	---	358	429	175	544	76	18	27
31	91	---	76	40	---	516	---	129	---	56	19	---
TOTAL	2337	2160	2815	2946	4644	7390	27312	4856	10889	2531	977	802
MEAN	75.4	72.0	90.8	95.0	166	238	910	157	363	81.6	31.5	26.7
MAX	259	176	206	400	750	907	3510	363	2770	233	73	65
MIN	27	49	47	35	76	79	311	75	107	30	18	16
CFSM	.85	.81	1.03	1.08	1.88	2.69	10.3	1.78	4.11	.92	.36	.30
IN.	.98	.91	1.18	1.24	1.95	3.11	11.49	2.04	4.58	1.07	.41	.34
CAL YR 1981	TOTAL	50143	MEAN 137	MAX 4070	MIN 13	CFSM 1.55	IN 21.10					
WTR YR 1982	TOTAL	69659	MEAN 191	MAX 3510	MIN 16	CFSM 2.16	IN 29.31					

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 (3.5 km) north of Conway, and 2.6 mi (4.2 km) upstream from mouth.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

PERIOD OF RECORD.--Discharge: June 1966 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1968-70(P), 1971(M), 1972(P).

GAGE.--Water-stage recorder. Altitude of gage is 460 ft (140 m), from topographic map. Prior to Oct. 7, 1970, at downstream side of bridge at same site and datum.

REMARKS.--Records good except those for period of doubtful gage-height record, June 7 to Sept. 30, which are fair, and those for winter period and period of no gage-height record, Oct. 1 to Dec. 15, which are poor. Diurnal fluctuation by small powerplant upstream since April 1982. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 52.3 ft³/s (1.481 m³/s), 29.59 in/yr (752 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft³/s (72.2 m³/s) June 6, 1982, gage height, 7.84 ft (2.390 m), from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement at gage height 7.77 ft (2.368 m); maximum gage height, 8.86 ft (2.701 m) Feb. 11, 1981 (ice jam); minimum discharge, 2.5 ft³/s (0.071 m³/s) Sept. 12-14, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s (19 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 3	2330	806 22.8	5.39 1.643	June 6	1530	*2550 72.2	7.84 2.390

Minimum discharge, 3.4 ft³/s (0.096 m³/s) Aug. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	19	14	18	35	28	304	54	26	46	14	11
2	9.0	17	56	38	64	26	189	50	111	38	12	14
3	12	16	53	29	88	24	266	47	42	35	18	10
4	11	15	40	70	300	23	317	54	30	32	14	7.4
5	9.4	14	31	180	140	24	135	45	167	30	12	5.9
6	8.0	17	26	100	90	25	92	42	1570	27	11	5.6
7	10	22	24	70	70	25	105	37	455	26	9.6	5.2
8	13	18	23	52	60	35	98	36	219	24	8.8	5.0
9	10	15	22	44	45	30	83	33	134	23	11	4.8
10	8.0	14	20	38	42	28	78	31	108	21	11	4.8
11	7.0	14	19	34	39	26	107	29	92	20	8.7	4.4
12	6.4	13	18	33	38	35	109	27	83	17	8.1	4.4
13	6.0	13	16	34	36	50	113	27	89	15	8.2	4.1
14	5.8	13	18	34	34	70	151	25	161	13	8.8	4.1
15	5.6	15	18	33	32	60	142	23	96	14	7.6	4.1
16	5.4	16	20	31	34	52	163	22	79	16	6.6	4.4
17	5.4	17	20	29	34	52	206	21	98	13	6.6	4.7
18	9.0	25	19	27	31	52	332	20	77	12	6.9	4.7
19	30	24	16	25	30	56	154	19	65	11	6.3	4.4
20	14	28	16	23	31	55	132	19	74	16	6.3	4.5
21	11	37	18	21	30	60	119	18	60	18	8.1	8.3
22	9.0	24	20	20	29	83	92	16	55	12	5.6	7.3
23	11	20	23	19	28	83	79	28	66	11	4.7	8.5
24	50	18	43	18	27	92	71	56	52	10	6.3	8.3
25	28	16	30	17	26	134	63	36	45	8.8	6.7	6.5
26	38	15	25	17	26	238	74	26	41	8.4	7.8	5.7
27	60	17	23	16	30	130	184	21	39	8.4	6.3	12
28	60	20	21	16	29	85	98	19	49	81	5.9	14
29	37	17	19	15	---	78	74	71	77	41	5.2	8.4
30	25	15	17	15	---	99	62	40	73	19	5.0	7.4
31	21	---	14	19	---	145	---	29	---	15	4.9	---
TOTAL	542.0	544	742	1135	1498	2003	4192	1021	4333	681.6	262.0	203.9
MEAN	17.5	18.1	23.9	36.6	53.5	64.6	140	32.9	144	22.0	8.45	6.80
MAX	60	37	56	180	300	238	332	71	1570	81	18	14
MIN	5.4	13	14	15	26	23	62	16	26	8.4	4.7	4.1
CFSM	.73	.75	1.00	1.53	2.23	2.69	5.83	1.37	6.00	.92	.35	.28
IN.	.84	.84	1.15	1.76	2.32	3.10	6.50	1.58	6.72	1.06	.41	.32

CAL YR 1981	TOTAL	11171.0	MEAN 30.6	MAX 700	MIN 3.3	CFSM 1.28	IN 17.31
WTR YR 1982	TOTAL	17157.5	MEAN 47.0	MAX 1570	MIN 4.1	CFSM 1.96	IN 26.59

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 (0.6 km) downstream from South River, 1.2 mi (1.9 km) west of West Deerfield, 2.5 mi (4.0 km) west of Deerfield, and 9.2 mi (14.8 km) upstream from mouth.

DRAINAGE AREA.--558 mi² (1,445 km²).

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: Water years 1953, 1967-69.

Chemical analyses: October 1968 to April 1970.

Water temperatures: October 1968 to April 1970.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (47 m), from topographic map. Prior to Dec. 16, 1905, nonrecording gage at site 1.5 mi (2.4 km) downstream at different datum.

REMARKS.--Records fair. Flow regulated since 1913 by Somerset Reservoir, since 1924 by Harriman Reservoir (Reservoirs in Connecticut River basin), and by several powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years (water years 1941-82), 1,283 ft³/s (36.33 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,500 ft³/s (1,370 m³/s) Dec. 31, 1948, gage height, 15.3 ft (4.703 m); minimum daily, 28 ft³/s (0.79 m³/s) July 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,800 ft³/s (589 m³/s) Apr. 18, gage height, 9.65 ft (2.941 m); minimum daily, 172 ft³/s (4.87 m³/s) Oct. 13, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	339	451	1140	421	960	1320	5200	2130	1070	2320	539	379
2	250	757	1520	506	1200	1310	3380	2190	1490	1570	768	429
3	307	716	1560	400	1300	1230	3540	2210	1350	1350	789	451
4	339	893	810	936	4010	1280	7000	2050	1330	1010	799	414
5	295	820	574	2450	2320	980	3250	1750	2190	799	716	266
6	393	1070	514	1800	1680	969	2020	1540	13100	686	629	214
7	539	947	914	1500	1540	1410	1800	1580	6460	1160	747	289
8	386	657	887	1300	1540	1410	1960	1560	3600	716	619	199
9	386	757	1030	1410	1640	1260	1700	1480	2690	514	768	204
10	209	1070	958	1220	1560	1390	1460	1410	2160	619	799	214
11	194	736	947	1180	1360	1320	1350	1430	1980	407	629	214
12	181	757	706	1270	1390	1450	1730	1430	1750	716	522	204
13	172	820	295	1450	1440	1730	2210	1330	1770	851	466	283
14	194	466	583	1300	1430	1820	2420	980	2430	914	278	261
15	172	239	980	1300	1410	1850	2380	778	1860	799	255	261
16	177	657	1010	1410	1430	1750	3360	1130	1480	686	332	372
17	177	882	904	1260	1400	1760	5180	1100	1570	522	255	307
18	229	1210	872	1200	1440	1690	14500	1010	1790	365	204	194
19	830	969	592	1300	1330	1750	6830	1110	1520	789	245	224
20	677	1330	386	1300	1440	1730	6680	882	980	696	278	250
21	393	969	667	1400	1450	1310	7360	914	851	736	209	372
22	272	736	936	1300	1220	1350	5120	514	1080	841	219	358
23	638	757	1010	1100	1410	1830	3040	789	1370	768	209	319
24	716	1280	1390	520	1320	1880	3330	1480	1220	278	332	319
25	421	1160	696	840	1350	1990	3360	1750	1310	239	506	239
26	706	556	436	1200	1220	3730	3600	1500	789	716	209	199
27	1750	648	498	1100	1280	2620	8100	1060	421	799	229	498
28	2070	1160	810	860	1220	1540	4150	893	980	1730	266	629
29	1720	851	925	800	---	1610	2670	1350	2670	1110	194	610
30	1410	958	958	640	---	1900	1880	882	4130	648	224	379
31	677	---	629	500	---	2370	---	583	---	696	261	---
TOTAL	17219	25279	26137	35173	42290	51539	120560	40795	67391	26050	13495	9551
MEAN	555	843	843	1135	1510	1663	4019	1316	2246	840	435	318
MAX	2070	1330	1560	2450	4010	3730	14500	2210	13100	2320	799	629
MIN	172	239	295	400	960	969	1350	514	421	239	194	194
CAL YR 1981	TOTAL	366828	MEAN	1005	MAX	14500	MIN	172				
WTR YR 1982	TOTAL	475479	MEAN	1303	MAX	14500	MIN	172				

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 (0.8 km) upstream from bridge on West Leyden Road and 2.5 mi (4.0 km) northeast of Colrain.

DRAINAGE AREA.--41.4 mi² (107.2 km²).

PERIOD OF RECORD.--Discharge: October 1967 to current year.
Water-quality records: Water years 1968-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-71-1: 1968(M), 1969.

GAGE.--Water-stage recorder. Altitude of gage is 435 ft (133 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. No gage-height record Dec. 19 to Jan. 19. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--15 years, 92.9 ft³/s (2.631 m³/s), 30.47 in/yr (774 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,560 ft³/s (129 m³/s) Dec. 21, 1973, gage height, 8.2 ft (2.50 m), from floodmarks, from rating curve extended above 890 ft³/s (25 m³/s) on basis of slope area measurement of peak flow and conveyance-slope study; maximum gage height, 8.87 ft (2.704 m) Jan. 27, 1976, ice jam; minimum discharge, 1.9 ft³/s (0.054 m³/s) Aug. 1, 1968, caused by unusual regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 3	2330	1120 31.7	5.05 1.539	Apr. 27	0030	1050 29.7	4.95 1.509
Apr. 18	0415	a*2170 61.5	6.27 1.911	June 6	0330	1060 30.0	4.96 1.512

a From rating curve extended as explained above.

Minimum discharge, 7.1 ft³/s (0.20 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	36	30	41	35	40	510	185	56	98	31	12
2	16	33	88	40	41	42	357	162	124	72	22	21
3	19	32	93	38	80	40	406	151	82	64	22	24
4	19	29	71	50	350	37	646	132	59	59	22	15
5	16	27	54	190	200	40	334	122	190	53	18	12
6	15	33	49	120	140	40	225	111	752	43	17	10
7	19	41	45	96	110	43	205	100	440	38	16	10
8	22	32	43	74	94	54	195	89	267	35	15	9.4
9	19	28	40	64	82	49	180	85	177	31	17	8.7
10	18	27	39	57	76	45	171	76	134	29	35	8.7
11	18	26	38	50	68	45	171	71	111	29	20	8.0
12	14	25	33	45	64	60	178	67	98	32	17	7.7
13	14	24	35	43	62	94	181	62	102	32	15	7.7
14	13	23	49	43	58	120	244	58	182	28	15	7.4
15	13	28	50	46	54	100	284	53	124	24	15	7.4
16	13	30	45	42	60	90	391	51	105	22	14	7.4
17	12	30	41	41	60	90	558	48	140	21	12	7.7
18	13	30	37	36	56	85	1140	44	120	24	12	7.7
19	70	32	33	32	52	100	570	43	92	22	10	7.4
20	36	43	32	29	58	98	559	65	100	25	10	7.4
21	26	79	35	27	56	105	575	50	78	26	12	10
22	22	53	35	25	52	117	391	42	70	20	11	11
23	24	41	42	23	50	125	313	48	107	18	9.7	12
24	93	35	70	22	48	136	382	126	86	16	10	15
25	50	33	52	21	44	190	373	98	67	15	13	12
26	69	34	45	20	40	379	396	71	60	15	18	10
27	118	35	42	19	43	275	604	53	57	14	13	13
28	116	37	42	18	43	182	346	45	62	85	11	18
29	71	33	42	17	---	162	256	71	207	67	9.7	14
30	52	29	39	17	---	175	218	75	185	30	9.0	12
31	41	---	37	20	---	239	---	60	---	24	9.0	---
TOTAL	1076	1018	1426	1406	2176	3397	11359	2514	4434	1111	480.4	333.6
MEAN	34.7	33.9	46.0	45.4	77.7	110	379	81.1	148	35.8	15.5	11.1
MAX	118	79	93	190	350	379	1140	185	752	98	35	24
MIN	12	23	30	17	35	37	171	42	56	14	9.0	7.4
CFSM	.84	.82	1.11	1.10	1.88	2.66	9.16	1.96	3.58	.87	.37	.27
IN.	.97	.91	1.28	1.26	1.96	3.05	10.21	2.26	3.98	1.00	.43	.30
CAL YR 1981	TOTAL	21365.4	MEAN 58.5	MAX 1410	MIN 6.4	CFSM 1.41	IN 19.20					
WTR YR 1982	TOTAL	30731.0	MEAN 84.2	MAX 1140	MIN 7.4	CFSM 2.03	IN 27.61					

CONNECTICUT RIVER BASIN

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA

LOCATION.--Lat 42°34'48", long 72°34'30", Franklin County, Hydrologic Unit 01080201, on left bank 75 ft (23 m) downstream from railroad bridge at Montague City, 1,000 ft (300 m) downstream from Deerfield River, and at mile 119.0 (191.5 km).

DRAINAGE AREA.--7,865 mi² (20,370 km²).

PERIOD OF RECORD.--March 1904 to current year. Prior to October 1929, published as "at Sunderland." Records published for both sites October 1929 to September 1932.

REVISED RECORDS.--WSP 471: 1904-17. WSP 741: 1930-32. WSP 781: 1928(M). WSP 891: Drainage area. 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).

GAGE.--Water-stage recorder. Datum of gage is 99.87 ft (30.440 m) National Geodetic Vertical Datum of 1929. 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 (14 km) downstream at datum 1.00 ft (0.305 m) lower. Since Oct. 1, 1929, water-stage recorder at present site and datum.

REMARKS.--Records excellent. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 43,400,000 ft³ (1,230,000,000 m³). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--78 years, 13,750 ft³/s (389.4 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236,000 ft³/s (6,680 m³/s) Mar. 19, 1936, gage height, 49.2 ft (15.00 m), from floodmarks; minimum daily, 215 ft³/s (6.09 m³/s) Aug. 31, Sept. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 95,400 ft³/s (2,702 m³/s) Apr. 19, gage height, 31.09 ft (9.476 m); minimum daily, 1,630 ft³/s (46.2 m³/s) Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14800	36300	12800	6860	9400	10000	45500	49600	10200	27500	3440	4670
2	14600	26000	13400	8500	10000	10100	53600	42800	11200	19100	5540	5700
3	13400	21400	13500	6000	10500	10500	47500	41800	14300	16700	5290	7190
4	14400	23500	12700	10500	16000	13000	53700	37900	17300	9740	5850	3890
5	14400	17500	12400	15800	18000	10100	49100	28800	18700	6410	4620	1980
6	14600	10700	12200	15400	20000	8470	38100	26600	39100	8300	4510	1960
7	14600	16900	12500	15300	15000	8470	30600	23000	31900	10500	2500	4250
8	14700	17200	12700	14500	14000	10600	28500	23800	27300	10000	2860	3470
9	13800	15000	12700	13000	16000	12400	25200	23000	24800	5960	5730	3530
10	12900	14200	10100	13000	16000	10300	27900	22800	17900	5370	11800	3960
11	10100	13500	10200	13000	15000	10700	26600	25000	12800	5470	6150	2170
12	8560	12400	9930	10500	16000	12700	24600	25000	9370	7160	5480	1810
13	9350	13200	7320	9800	14000	11900	27200	18300	9610	5310	5640	4510
14	9630	12200	8770	10000	13000	12400	26500	18300	11500	5050	2260	4720
15	9890	11700	12300	10000	9400	14600	32100	11300	14100	5690	1890	3470
16	9610	10700	12400	9000	10400	18400	39500	9440	13500	5640	3780	3120
17	7500	12200	10500	8000	13200	19600	51000	10500	13100	3210	5110	4620
18	7320	13200	10600	9200	13600	18800	79600	11900	13800	2040	5740	4080
19	9420	15700	9980	11000	11400	18100	92700	13000	10200	5380	4800	3010
20	13800	15200	7010	11000	11200	16600	83900	11600	9810	5560	2030	5090
21	17700	21000	8710	10500	8950	15900	84300	12600	9660	5170	1920	5130
22	14600	20100	9000	12000	12700	19000	85300	14300	10900	5380	1910	3710
23	15900	13900	11500	5600	10500	22100	80300	10700	11200	3420	2680	2790
24	17700	16400	12600	4600	10200	21100	71900	13600	13300	3210	5240	1960
25	21400	17400	9290	10000	11200	21100	61200	14400	13100	1890	10600	2010
26	22900	13100	8450	11000	10500	30600	61700	13500	12800	3680	3800	1850
27	28200	12200	8100	10000	8840	42100	69800	15700	11400	3050	5360	3920
28	42800	12600	8570	9000	5410	33400	73000	12600	8920	4590	1880	6690
29	53900	12600	9840	8000	---	28400	70100	9970	14500	7340	1630	5100
30	57000	12600	8850	5200	---	28800	58600	6610	28800	6480	5140	3930
31	48900	---	11000	2400	---	32200	---	2820	---	4970	4550	---
TOTAL	578380	480600	329920	308660	350400	552440	1599600	601240	465070	219270	135730	114290
MEAN	18660	16020	10640	9957	12510	17820	53320	19390	15500	7073	4378	3810
MAX	57000	36300	13500	15800	20000	42100	92700	49600	39100	27500	11800	7190
MIN	7320	10700	7010	2400	5410	8470	24600	2820	8920	1890	1630	1810
CAL YR 1981	TOTAL	5230050	MEAN	14330	MAX	85500	MIN	1760				
WTR YR 1982	TOTAL	5735600	MEAN	15710	MAX	92700	MIN	1630				

01171300 FORT RIVER NEAR AMHERST, MA

LOCATION.--Lat 42°21'30", long 72°30'23", Hampshire County, Hydrologic Unit 01080201, on left bank 400 ft (120 m) downstream from Southeast Street Bridge, 600 ft (180 m) downstream from Hop Brook, and 1.3 mi (2.1 km) south-east of Amherst.

DRAINAGE AREA.--36.4 mi² (94.3 km²), excludes 5.15 mi² (13.34 km²) drained by Nurse and Dean Brooks, flow of which is diverted from basin.

PERIOD OF RECORD.--Discharge: June 1966 to current year.

Water-quality records: Water years 1971, 1973.

REVISED RECORDS.--WDR MA-RI-75-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 147 ft (45 m), from topographic map. Prior to May 10, 1974, at site 400 ft (120 m) upstream at same datum.

REMARKS.--Records fair except those for winter period, which are poor. Diversions upstream for municipal supply of Amherst. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 63.0 ft³/s (1.784 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft³/s (79.9 m³/s) Dec. 21, 1973, gage height, 9.88 ft (3.011 m), former site, from rating curve extended above 690 ft³/s (19.5 m³/s); maximum gage height, 9.94 ft (3.030 m) Mar. 6, 1979; minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 3, 1966, Sept. 6, 7, 1981.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in March 1936 and September 1938 reached discharges of 2,360 ft³/s (66.8 m³/s) and 1,640 ft³/s (46.4 m³/s), respectively, by computation of flow over dam 1.2 mi (1.9 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0515	583 16.5	4.78 1.457	Mar. 28	0715	501 14.2	4.43 1.350
Feb. 4	--	650 18	ice jam	June 6	0930	*860 24.4	5.80 1.768

Minimum discharge, 2.1 ft³/s (0.059 m³/s) Oct. 1; minimum daily, 3.4 ft³/s (0.096 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	47	22	77	80	40	216	85	49	82	25	23
2	18	37	143	148	100	43	174	70	216	56	21	46
3	15	25	121	148	210	37	159	64	191	43	18	45
4	7.7	22	80	226	570	37	401	61	104	37	18	27
5	7.7	25	60	445	280	44	229	57	147	32	17	18
6	8.9	37	59	251	160	48	151	53	696	26	11	17
7	15	45	53	179	120	61	148	47	544	26	12	15
8	8.1	33	50	127	105	105	146	42	260	25	11	12
9	3.9	32	50	117	92	94	136	40	148	19	53	12
10	4.2	25	43	97	82	81	127	38	104	18	59	13
11	4.2	28	38	75	75	59	165	42	74	16	46	12
12	3.9	19	35	56	74	108	199	41	61	15	28	11
13	3.9	18	25	53	68	142	194	39	54	18	20	9.5
14	4.5	20	30	58	60	208	203	38	128	15	18	10
15	5.3	29	38	60	62	220	176	35	110	17	16	11
16	7.1	27	120	56	72	186	136	33	110	21	16	10
17	4.9	27	94	54	68	168	125	33	228	18	15	5.7
18	7.1	47	87	50	66	174	190	29	165	17	17	6.6
19	55	47	73	46	62	199	146	32	101	15	15	5.3
20	33	48	70	48	61	206	112	31	107	42	16	6.6
21	21	72	48	46	60	229	97	30	85	46	14	25
22	15	56	53	44	58	242	94	24	73	38	11	25
23	47	40	81	43	55	200	79	35	80	24	13	27
24	220	33	95	43	49	195	69	92	69	19	16	24
25	112	30	72	42	44	230	61	80	54	16	16	17
26	102	28	69	40	40	309	65	53	44	15	21	15
27	143	40	58	39	42	296	232	38	42	13	18	24
28	162	40	54	38	40	209	179	29	47	80	14	29
29	108	31	55	37	---	144	134	84	55	95	10	21
30	73	25	45	36	---	134	102	104	126	53	11	15
31	53	---	45	42	---	146	---	66	---	35	12	---
TOTAL	1276.8	1033	1966	2821	2855	4594	4645	1545	4272	992	608	537.7
MEAN	41.2	34.4	63.4	91.0	102	148	155	49.8	142	32.0	19.6	17.9
MAX	220	72	143	445	570	309	401	104	696	95	59	46
MIN	3.4	18	22	36	40	37	61	24	42	13	10	5.3
CAL YR 1981	TOTAL	13921.5	MEAN	38.1	MAX	415	MIN	2.6				
WTR YR 1982	TOTAL	27145.5	MEAN	74.4	MAX	696	MIN	3.4				

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 (5.6 km) upstream from mouth.

DRAINAGE AREA.--54.0 mi² (139.9 km²).

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.

REVISED RECORDS.--WSP 921: 1940. WSP 1231: 1940-42(M), 1944-45(M), 1948(M), 1949.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 140 ft (43 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Dec. 21 to Jan. 19, Apr. 4, June 5-10, which are poor. Prior to 1956, flow regulated by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 96.4 ft³/s (2.730 m³/s), 24.24 in/yr (616 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) Aug. 19, 1955, gage height, 11.78 ft (3.591 m), from rating curve extended above 3,700 ft³/s (100 m³/s) on basis of computation of peak flow over dam; minimum, 2.2 ft³/s (0.062 m³/s) Oct. 1, 1950; minimum daily, 4.2 ft³/s (0.12 m³/s) Aug. 21, 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 4	--	1400 40	-- --	June 6	--	a*4790 136	b10.98 3.347

a From rating curve extended above 2,300 ft³/s (65 m³/s) on basis of computations of flow over dam at gage heights 7.58 ft (2.310 m) and 9.38 ft (2.859 m).

b From highwater mark in well.

Minimum discharge, 7.9 ft³/s (0.22 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	38	33	64	130	66	800	133	82	89	36	20
2	53	35	144	94	200	64	353	120	190	68	31	34
3	47	32	115	78	220	62	347	116	137	59	28	27
4	42	30	75	150	700	66	800	128	91	55	26	20
5	41	29	61	300	400	76	330	109	300	48	24	15
6	44	41	56	150	250	72	230	100	3000	44	22	13
7	42	48	51	100	190	89	370	91	1200	41	19	12
8	43	36	49	86	160	145	274	84	450	38	19	12
9	39	32	47	74	140	105	212	82	300	34	31	11
10	21	30	43	66	130	103	206	85	220	30	35	11
11	15	29	42	60	120	84	230	72	164	29	24	10
12	14	28	40	52	115	105	255	65	144	28	23	9.0
13	14	27	36	49	110	136	251	61	142	31	29	9.0
14	13	26	40	50	105	191	301	57	300	26	16	9.4
15	13	31	42	51	100	188	281	53	197	23	14	9.4
16	13	35	67	50	107	170	271	49	191	24	13	9.8
17	13	36	58	48	110	183	294	48	298	22	13	10
18	20	76	54	47	100	180	360	44	200	20	14	9.4
19	90	66	47	45	96	202	274	43	149	19	15	8.2
20	43	58	40	43	98	220	227	43	162	72	13	12
21	29	68	41	41	99	232	212	42	133	57	13	17
22	24	51	46	38	94	300	180	37	116	32	12	18
23	39	43	54	39	90	304	157	62	128	25	12	21
24	129	39	88	40	85	307	144	147	102	21	12	20
25	58	36	72	41	77	370	131	104	84	19	15	19
26	89	32	62	39	76	503	140	70	73	18	19	17
27	133	38	54	38	72	426	390	54	69	17	15	29
28	142	43	50	37	68	272	233	46	78	242	13	36
29	77	37	47	36	---	239	180	175	114	180	11	23
30	53	33	44	35	---	248	149	164	175	64	10	19
31	43	---	40	40	---	300	---	98	---	43	10	---
TOTAL	1457	1183	1738	2081	4242	6008	8582	2582	8989	1518	587	490.2
MEAN	47.0	39.4	56.1	67.1	152	194	286	83.3	300	49.0	18.9	16.3
MAX	142	76	144	300	700	503	800	175	3000	242	36	36
MIN	13	26	33	35	68	62	131	37	69	17	10	8.2
CFSM	.87	.73	1.04	1.24	2.82	3.59	5.30	1.54	5.56	.91	.35	.30
IN.	1.00	.81	1.20	1.43	2.92	4.14	5.91	1.78	6.19	1.05	.40	.34

CAL YR 1981	TOTAL	24786.0	MEAN	67.9	MAX	1800	MIN	7.0	CFSM	1.26	IN	17.07
WTR YR 1982	TOTAL	39457.2	MEAN	108	MAX	3000	MIN	8.2	CFSM	2.00	IN	27.18

01172500 WARE RIVER NEAR BARRE, MA

LOCATION.--Lat 42°25'35", long 72°01'30", Worcester County, Hydrologic Unit 01080204, on left bank 700 ft (200 m) downstream from Barre Falls Reservoir, 1.6 mi (2.6 km) upstream from Burnshirt River, 4 mi (6 km) east of Barre, and at mile 33.3 (53.6 km).

DRAINAGE AREA.--55.0 mi² (142.4 km²).

PERIOD OF RECORD.--Discharge: July 1946 to current year.
Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Altitude of gage is 745 ft (227 m), from topographic map.

REMARKS.--Records good. Prior to August 1955, slight regulation at low flow at times by Long Pond. Flow regulated by Barre Falls Reservoir (Reservoirs in Connecticut River basin) since 1958. Diversion at times since 1955 from 6.5 mi² (16.8 km²) upstream of station for municipal supply of Fitchburg. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--36 years, 92.5 ft³/s (2.620 m³/s), 22.84 in/yr (580 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) Oct. 16, 1955, gage height, 6.31 ft (1.923 m); minimum, 0.21 ft³/s (0.006 m³/s) Aug. 18, 1980; minimum daily, 0.5 ft³/s (0.014 m³/s) Sept. 11, 1963. Maximum discharge since construction of Barre Falls Reservoir in 1958, 1,230 ft³/s (34.8 m³/s) Mar. 14, 1979, gage height, 5.62 ft (1.713 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s (30.6 m³/s) June 10, gage height, 5.45 ft (1.661 m); minimum, 6.0 ft³/s (0.17 m³/s) Sept. 19, 20; minimum daily, 6.6 ft³/s (0.19 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	120	77	80	58	60	307	176	80	178	64	16
2	57	105	78	109	95	54	328	154	166	132	52	29
3	78	95	135	157	169	55	264	142	222	103	44	32
4	70	85	207	175	258	54	244	134	230	86	43	27
5	55	77	221	254	441	55	321	124	121	72	39	21
6	45	79	216	329	518	83	357	113	64	61	34	18
7	42	90	212	346	337	91	353	103	247	53	30	16
8	39	86	180	346	244	92	447	94	619	48	26	14
9	34	75	159	342	241	111	503	88	889	44	58	13
10	29	67	124	330	238	117	398	83	983	39	134	12
11	26	62	106	181	201	97	258	77	892	34	122	11
12	24	58	106	80	152	119	264	71	471	31	86	10
13	23	53	72	63	119	159	269	66	227	30	61	9.3
14	24	51	55	65	121	214	292	63	243	28	46	8.7
15	26	54	56	91	120	268	316	58	259	25	37	8.8
16	25	78	105	119	118	276	299	54	230	24	31	8.8
17	22	137	167	126	148	272	277	51	233	22	27	8.1
18	22	177	174	125	141	236	285	46	225	20	25	6.8
19	94	197	174	122	139	225	279	44	231	19	24	6.6
20	132	202	173	122	121	225	241	43	230	47	22	7.1
21	100	203	170	120	114	226	211	52	227	81	22	15
22	73	205	132	119	112	245	193	50	220	64	39	18
23	62	172	114	89	111	253	176	50	206	46	18	21
24	138	117	114	78	85	274	160	95	147	36	17	19
25	176	97	115	78	77	281	145	117	124	29	18	16
26	167	98	116	79	76	313	133	100	107	25	21	14
27	190	98	116	79	75	362	216	77	95	22	18	13
28	221	98	116	79	75	376	274	62	94	62	16	15
29	227	98	114	62	---	369	250	67	118	159	14	14
30	187	84	90	56	---	326	204	99	182	137	12	14
31	147	---	80	57	---	295	---	95	---	88	11	---
TOTAL	2588	3218	4074	4458	4704	6183	8264	2648	8382	1845	1191	442.2
MEAN	83.5	107	131	144	168	199	275	85.4	279	59.5	38.4	14.7
MAX	227	205	221	346	518	376	503	176	983	178	134	32
MIN	22	51	55	56	58	54	133	43	64	19	11	6.6
MEAN†	84.0	117	134	144	164	199	268	84.7	280	59.1	37.9	14.7
CFSM†	1.53	2.13	2.44	2.62	2.98	3.62	4.87	1.54	5.09	1.07	.69	.27
IN†	1.76	2.36	2.81	3.03	3.11	4.16	5.44	1.78	5.68	1.24	.80	.30
CAL YR 1981	TOTAL 30530.2	MEAN 83.6	MAX 716	MIN 5.6	MEAN† 83.7	CFSM† 1.52	IN† 20.67					
WTR YR 1982	TOTAL 47997.2	MEAN 131	MAX 983	MIN 6.6	MEAN† 131	CFSM† 2.38	IN† 32.46					

† Adjusted for change in contents in Barre Falls Reservoir.

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 (4.3 km) downstream from Burnshirt River, 3 mi (5 km) southeast of Barre, and at mile 29.1 (46.8 km).

DRAINAGE AREA.--96.8 mi² (250.7 km²).

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1977, published as Ware River at Colubrook.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1944.

GAGE.--Venturi meters and water-stage recorder. Datum of gage is 5.65 ft (1.722 m) below National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1936, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 631.91 ft (192.606 m) NGVD.

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 Corps of Engineers, U.S. Army; diversion began in March 1931. Flow regulated by Barre Falls Reservoir 4.3 mi (6.9 km) upstream (Reservoirs in Connecticut River basin) since 1958. Diversion at times since 1955 from 6.5 mi² (16.8 km²) upstream for municipal supply of Fitchburg. Several observations of water temperature and specific conductance were made during the year.

COOPERATION.--Computations of daily discharge made in cooperation with Water Division, Metropolitan District Commission, which collected gage-height and venturi-meter records.

AVERAGE DISCHARGE.--54 years, 166 ft³/s (4.701 m³/s), 23.29 in/yr (592 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Sept. 21, 1938, gage height, 664.28 ft (202.473 m), by computation of flow over dam; minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 19, 1965, caused by unusual regulation. Maximum daily discharge since construction of Barre Falls Reservoir in 1958, 1,570 ft³/s (44.5 m³/s) Mar. 6, 14, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,460 ft³/s (41.3 m³/s) June 10; minimum daily, 15 ft³/s (0.37 m³/s) Sept. 25, 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	207	151	210	162	138	709	300	138	285	96	27
2	126	174	279	270	200	125	655	270	474	214	78	58
3	136	173	308	271	388	117	560	248	394	179	69	54
4	113	154	343	411	663	117	650	238	352	151	67	50
5	90	140	351	636	780	125	643	206	543	141	61	50
6	80	176	296	629	827	153	567	194	736	129	54	45
7	78	161	332	591	543	160	577	179	808	108	51	28
8	80	166	256	531	405	192	701	159	1100	96	45	28
9	65	135	236	498	394	179	723	147	1420	80	197	28
10	59	137	213	443	582	188	588	140	1460	78	292	25
11	54	132	158	257	304	163	446	139	1300	71	214	21
12	52	123	170	151	241	246	493	140	615	67	145	21
13	51	114	141	138	241	330	505	139	381	65	105	14
14	82	110	128	139	212	423	551	136	443	59	84	14
15	77	116	153	168	225	476	569	127	376	58	71	35
16	53	138	330	191	213	460	537	116	391	51	69	33
17	63	252	311	205	261	457	497	111	454	49	86	31
18	84	342	304	200	237	388	530	103	392	46	95	28
19	257	329	260	190	227	386	483	99	365	45	59	25
20	194	356	256	191	199	382	412	100	353	122	47	25
21	157	365	239	184	201	415	355	109	333	143	49	25
22	146	331	223	180	191	458	340	99	313	135	44	29
23	163	268	227	147	179	468	305	114	308	87	42	32
24	403	210	242	147	151	507	253	201	241	70	41	15
25	304	178	218	143	140	534	251	189	205	58	45	15
26	376	187	195	137	141	703	265	176	181	52	48	15
27	397	161	195	137	143	707	489	134	166	47	45	54
28	439	160	196	136	140	639	494	118	170	161	58	56
29	397	162	195	133	---	588	428	129	248	246	54	35
30	312	147	146	118	---	525	350	186	350	178	52	31
31	247	---	138	125	---	549	---	139	---	120	50	---
TOTAL	5202	5804	7190	7907	8390	11298	14926	4885	14990	3597	2429	911
MEAN	168	193	232	255	300	364	498	158	500	110	75.4	30.4
MAX	439	365	351	636	827	707	723	300	1400	285	292	58
MIN	51	110	128	118	140	117	251	99	138	45	50	15
MEAN†	168	203	235	256	296	364	490	157	500	109	77.9	30.4
CFSM†	1.74	2.10	2.43	2.64	3.06	3.76	5.06	1.62	5.16	1.13	.60	.51
IN†	2.01	2.34	2.79	3.05	3.18	4.33	5.65	1.87	5.76	1.30	.95	.35
CAL YR 1981	TOTAL	57512	MEAN 158	MAX 1230	MIN 13	MEAN† 158	CFSM† 1.63	IN† 22.11				
WTR YR 1982	TOTAL	87329	MEAN 239	MAX 1460	MIN 13	MEAN† 239	CFSM† 2.46	IN† 35.56				

† Adjusted for change in contents in Barre Falls Reservoir.

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 (0.8 km) upstream from Gibbs Crossing, 1.8 mi (2.9 km) upstream from Beaver Brook, 2.5 mi (4.0 km) southwest of Ware, and 8.8 mi (14.2 km) upstream from mouth.

DRAINAGE AREA.--199 mi² (515 km²).

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

REVISED RECORDS.--WSP 661: Drainage area. WSP 1031: 1944. WSP 1301: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 379.79 ft (115.760 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1930, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversion at times: Since March, 1931 from 97 mi² (251 km²) for supply of Boston metropolitan district and since 1955 from 6.5 mi² (16.8 km²) for municipal supply of Fitchburg. Regulation by Barre Falls Reservoir (Reservoirs in Connecticut River basin) since 1958. Flow regulated by mills upstream prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, (water years 1913-30), 313 ft³/s (8.864 m³/s), 21.36 in/yr (543 mm/yr); 52 years (water years 1931-82) affected by diversion and storage, 280 ft³/s (7.930 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s (643 m³/s) Sept. 21, 1938, gage height, 18.2 ft (5.55 m), from floodmarks, from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of contracted-opening measurement at gage height 12.83 ft (3.911 m) and slope-area measurement at gage height 18.2 ft (5.55 m); minimum, 5.0 ft³/s (0.14 m³/s) Oct. 26, 1914; minimum daily, 6.0 ft³/s (0.17 m³/s) Oct. 4, 1914. Maximum discharge since construction of Barre Falls Reservoir in 1958, 5,050 ft³/s (143 m³/s) Mar. 6, 1979, gage height, 7.94 ft (2.420 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,420 ft³/s (68.5 m³/s) June 6, gage height, 5.34 ft (1.628 m); minimum, 27 ft³/s (0.76 m³/s) Sept. 24; minimum daily, 38 ft³/s (1.08 m³/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	286	235	330	320	290	849	346	259	573	192	101
2	260	271	549	380	370	270	654	323	685	425	161	104
3	280	257	601	400	550	250	539	339	725	323	130	117
4	230	242	421	550	1220	260	974	304	440	240	136	107
5	201	232	359	900	1150	280	724	287	904	222	117	88
6	168	261	347	783	760	330	544	274	2250	215	113	83
7	154	301	319	706	600	350	387	275	1570	196	56	73
8	147	261	309	600	580	375	637	241	992	104	69	55
9	140	239	299	500	560	370	473	262	684	130	241	55
10	113	225	285	400	540	355	443	229	490	154	686	55
11	104	218	270	320	460	380	498	234	409	73	528	49
12	99	209	263	260	420	480	591	228	337	161	343	44
13	93	190	248	270	400	569	613	227	321	110	236	44
14	93	174	235	290	380	665	662	201	533	73	188	40
15	117	177	283	310	390	696	604	209	500	80	154	41
16	113	194	633	340	410	612	506	173	465	69	93	41
17	93	281	543	370	450	586	462	142	1040	75	80	44
18	110	498	457	350	410	524	592	176	889	78	107	49
19	429	524	390	340	390	549	554	134	687	83	120	46
20	389	425	360	340	370	535	460	165	642	218	99	44
21	274	497	340	330	370	590	430	157	582	372	83	56
22	227	432	320	310	360	623	396	151	533	245	75	60
23	236	361	330	310	340	642	351	149	528	188	71	69
24	628	318	340	310	310	610	333	276	505	130	71	58
25	500	288	320	300	310	625	316	323	386	107	73	56
26	464	267	310	290	300	905	333	276	333	101	78	43
27	517	272	300	295	295	852	569	200	296	90	80	38
28	543	279	320	290	300	541	559	187	282	214	73	49
29	447	263	239	280	---	456	479	258	367	490	64	67
30	358	246	269	250	---	433	399	351	619	418	60	90
31	310	---	245	300	---	439	---	318	---	284	55	---
TOTAL	7967	8688	10739	12004	13315	15442	15931	7415	19253	6241	4632	1866
MEAN	257	290	346	387	476	498	531	239	642	201	149	62.2
MAX	628	524	633	900	1220	905	974	351	2250	573	686	117
MIN	93	174	235	250	295	250	316	134	259	69	55	38
CAL YR 1981	TOTAL	87269	MEAN	239	MAX	1210	MIN	25				
WTR YR 1982	TOTAL	123493	MEAN	338	MAX	2250	MIN	38				

CONNECTICUT RIVER BASIN

01174000 HOP BROOK NEAR NEW SALEM, MA

LOCATION.--Lat 42°28'42", long 72°20'05", Franklin County, Hydrologic Unit 01080204, on right bank 1.5 mi (2.4 km) upstream from mouth and 1.5 mi (2.4 km) south of New Salem.

DRAINAGE AREA.--3.39 mi² (8.78 km²).

PERIOD OF RECORD.--Discharge: October 1947 to September 1982 (discontinued). Monthly discharge only October 1947, published in WSP 1301.

Water-quality records: Water year 1961.

Chemical analyses: December 1971 to September 1973.

Water temperatures: December 1971 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 725 ft (221 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--35 years, 6.13 ft³/s (0.174 m³/s), 24.56 in/yr (624 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 289 ft³/s (8.18 m³/s) Oct. 24, 1959, gage height, 3.17 ft (0.966 m), from rating curve extended above 130 ft³/s (3.7 m³/s); maximum gage height, 3.21 ft (0.978 m) Feb. 2, 1973 (ice jam); minimum discharge, 0.004 ft³/s (0.001 m³/s) Aug. 3, 9, 10, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 3	1500	ice jam	*2.71 0.826	June 6	0330	*168 4.76	2.60 0.792
Apr. 3	2145	128 3.62	2.42 .738				

Minimum discharge, 0.14 ft³/s (0.004 m³/s) Sept. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.64	5.6	3.7	9.6	16	3.8	40	8.3	3.2	4.9	2.4	.89
2	2.3	5.2	16	9.6	9.0	3.7	22	7.6	33	3.8	2.1	1.9
3	1.7	4.5	8.6	6.0	40	3.7	37	7.3	8.7	3.3	1.1	1.1
4	1.3	4.3	6.3	29	39	3.6	50	7.0	5.6	3.0	1.3	.70
5	1.1	4.0	5.6	30	20	4.2	23	6.4	26	2.7	.83	.54
6	1.0	8.4	5.8	14	14	3.9	16	5.9	73	2.4	.80	.40
7	1.4	6.9	5.3	11	12	12	23	5.6	36	2.2	.95	.34
8	1.1	5.0	5.0	9.0	10	13	18	5.2	20	2.1	.64	.28
9	.99	4.5	4.9	8.2	9.3	5.2	13	5.0	13	1.8	6.3	.24
10	.91	4.2	4.7	6.7	7.7	4.7	13	4.7	10	1.5	3.2	.24
11	.74	4.0	4.5	5.0	6.9	4.6	17	4.4	8.1	1.4	1.8	.22
12	.75	3.7	4.3	4.8	6.7	9.4	20	4.1	7.2	1.3	1.3	.20
13	.75	3.6	4.1	5.0	6.0	11	19	4.0	8.3	1.6	1.0	.20
14	.75	3.6	3.9	5.8	5.8	14	21	3.5	15	1.2	.92	.19
15	.77	3.7	4.7	5.3	6.0	11	16	3.5	8.7	1.1	.78	.17
16	.79	5.6	12	5.0	6.9	11	14	3.0	8.1	1.1	.62	.17
17	.78	4.9	6.7	4.7	6.5	11	14	2.8	19	.95	.51	.18
18	2.0	5.8	5.8	4.4	5.4	10	26	2.5	10	.79	.58	.18
19	9.1	7.1	5.0	4.3	5.4	11	15	2.6	7.3	.71	.45	.18
20	2.9	6.9	4.3	4.3	5.4	12	12	2.6	11	2.5	.48	.23
21	2.0	7.3	4.3	4.1	5.3	13	12	2.4	7.3	1.8	.92	1.0
22	1.8	5.7	4.5	3.8	5.0	18	11	2.1	6.2	1.0	.55	.66
23	18	4.9	9.5	3.8	4.7	17	9.3	4.7	7.6	.85	.53	.89
24	24	4.5	8.5	3.9	4.6	19	8.6	11	5.7	.67	.59	1.1
25	6.8	4.2	6.0	3.7	4.2	25	7.9	5.8	4.8	.57	.72	.75
26	12	3.9	5.5	3.5	4.2	42	9.7	3.8	4.4	.50	.79	.58
27	20	4.9	4.8	3.4	4.0	23	28	2.9	4.1	.43	.57	.80
28	22	4.5	4.7	3.3	3.8	16	15	2.5	7.1	17	.47	1.1
29	9.6	4.1	4.6	3.3	---	14	11	7.8	8.9	5.7	.34	.79
30	6.9	3.7	4.2	3.4	---	16	9.2	5.4	9.0	2.2	.29	.66
31	6.0	---	5.7	3.8	---	24	---	3.5	---	1.6	.27	---
TOTAL	160.87	149.2	183.5	221.7	273.8	389.8	550.7	147.9	396.3	72.67	34.10	16.88
MEAN	5.19	4.97	5.92	7.15	9.78	12.6	18.4	4.77	13.2	2.34	1.10	.56
MAX	24	8.4	16	30	40	42	50	11	73	17	6.3	1.9
MIN	.64	3.6	3.7	3.3	3.8	3.6	7.9	2.1	3.2	.43	.27	.17
CFSM	1.53	1.47	1.75	2.11	2.89	3.72	5.43	1.41	3.89	.69	.32	.17
IN.	1.76	1.64	2.01	2.43	3.00	4.28	6.04	1.62	4.35	.80	.37	.19
CAL YR 1981	TOTAL	1759.14	MEAN	4.82	MAX	56	MIN	.16	CFSM	1.42	IN	19.30
WTR YR 1982	TOTAL	2597.42	MEAN	7.12	MAX	73	MIN	.17	CFSM	2.10	IN	28.49

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 (30 m) above spillway of regulating dam and 4.6 mi (7.4 km) northwest of Hardwick.

DRAINAGE AREA.--43.7 mi² (113.2 km²).

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 (153.833 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 15 to Feb. 22, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--45 years, 69.1 ft³/s (1.957 m³/s), 21.47 in/yr (545 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s (192 m³/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 (6.855 m) June 25, 1944; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	1300	496 14.0	20.44 6.230	Apr. 4	1700	398 11.3	20.29 6.184
Feb. 4	-	463 13.1	a20.39 6.215	June 6	1400	*828 23.4	20.91 6.373
Mar. 27	0300	359 10.2	20.23 6.166				

a From peak-stage indicator.

Minimum discharge, 6.9 ft³/s (0.20 m³/s) Sept. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	105	66	67	60	34	271	120	44	125	42	20
2	46	94	127	137	85	35	302	101	117	90	34	25
3	76	85	187	130	150	34	228	85	206	71	29	31
4	74	78	149	157	400	31	348	79	136	61	25	30
5	63	72	115	444	350	35	322	73	166	51	22	27
6	53	74	113	359	270	39	239	70	661	44	20	23
7	47	85	94	236	200	44	179	65	584	38	18	21
8	43	83	84	171	140	68	150	59	358	35	16	17
9	38	75	78	128	120	65	144	55	233	33	123	15
10	35	67	72	104	100	54	136	52	160	30	308	14
11	32	61	66	77	72	48	142	44	120	26	181	13
12	30	58	62	62	66	69	188	41	95	23	102	13
13	29	53	57	55	68	115	210	41	86	22	66	12
14	28	51	54	64	69	173	231	40	125	21	47	12
15	28	53	72	62	70	193	247	37	135	20	37	11
16	28	64	159	58	66	164	213	34	131	19	31	10
17	27	81	193	56	63	158	186	32	219	17	28	9.8
18	29	130	152	54	60	136	207	29	213	17	29	8.3
19	142	182	116	52	58	130	206	26	156	15	27	7.4
20	165	160	89	54	56	128	169	26	133	33	24	8.2
21	117	169	70	52	54	144	144	25	117	51	24	15
22	88	160	68	52	52	159	130	22	105	41	20	15
23	81	129	84	52	40	178	113	24	106	33	19	16
24	258	105	110	54	54	183	101	44	105	27	19	17
25	264	89	108	54	44	197	87	62	87	22	21	16
26	204	78	89	52	37	267	82	64	76	20	22	15
27	238	80	80	49	36	334	179	45	66	19	20	15
28	256	81	76	44	35	235	231	32	73	52	19	14
29	210	79	70	40	---	172	194	38	90	111	17	14
30	158	74	63	38	---	143	149	57	145	85	14	13
31	125	---	53	40	---	145	---	54	---	57	13	---
TOTAL	3038	2755	2976	3054	2875	3910	5728	1576	5048	1309	1417	477.7
MEAN	98.0	91.8	96.0	98.5	103	126	191	50.8	168	42.2	45.7	15.9
MAX	264	182	193	444	400	334	348	120	661	125	308	31
MIN	26	51	53	38	35	31	82	22	44	15	13	7.4
CFSM	2.24	2.10	2.20	2.25	2.36	2.88	4.37	1.16	3.84	.97	1.05	.36
IN.	2.59	2.35	2.53	2.60	2.45	3.33	4.88	1.34	4.30	1.11	1.21	.41
CAL YR 1981	TOTAL	24483.0	MEAN	67.1	MAX	510	MIN	4.3	CFSM	1.54	IN	20.84
WTR YR 1982	TOTAL	34163.7	MEAN	93.6	MAX	661	MIN	7.4	CFSM	2.14	IN	29.08

CONNECTICUT RIVER BASIN

01174600 CADWELL CREEK NEAR PELHAM, MA

LOCATION.--Lat 42°21'16", long 72°23'18", Hampshire County, Hydrologic Unit 01080204, on left bank 0.8 mi (1.3 km) east of Knights Corner, 2 mi (3 km) upstream from mouth, 2.7 mi (4.3 km) south of Pelham, and 5 mi (8 km) north of Belchertown.

DRAINAGE AREA.--0.63 mi² (1.63 km²).

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Altitude of gage is 860 ft (260 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 1.14 ft³/s (0.032 m³/s), 24.57 in/yr (624 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46 ft³/s (1.30 m³/s) Mar. 6, 1979, gage height, 5.26 ft (1.603 m), from rating curve extended above 21 ft³/s (0.59 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18 ft³/s (0.51 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2200	23 0.65	4.69 1.430	June 6	0415	*33 0.93	4.98 1.518
June 2	0830	27 .76	4.81 1.466				

Minimum, 0.01 ft³/s (>0.001 m³/s) July 27, Sept. 17, 18-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.87	.60	2.4	2.9	.55	4.6	1.5	.80	1.3	.21	.91
2	.71	.77	4.5	3.1	1.5	.55	2.5	1.3	11	.80	.15	1.0
3	.37	.68	2.3	1.7	7.9	.52	3.0	1.1	3.3	.60	.11	.57
4	.24	.62	1.5	9.1	9.7	.50	11	.98	1.6	.48	.09	.27
5	.18	.57	1.2	10	4.1	.80	3.6	.91	6.3	.39	.08	.17
6	.18	1.4	1.1	3.5	2.4	.71	2.4	.80	21	.32	.06	.11
7	.29	1.3	.98	2.4	1.8	.98	2.4	.77	9.0	.27	.05	.09
8	.18	.87	.91	1.8	1.5	1.4	1.9	.68	3.8	.22	.04	.06
9	.15	.71	.91	1.5	1.4	1.0	1.6	.68	2.1	.18	4.0	.06
10	.13	.62	.84	1.2	1.2	.80	1.7	.60	1.4	.15	1.4	.05
11	.11	.60	.77	1.1	1.1	.94	2.7	.55	1.0	.11	.60	.04
12	.11	.55	.74	.74	.98	3.9	4.9	.50	.87	.10	.37	.03
13	.10	.50	.68	.71	.94	4.7	4.4	.50	1.1	.13	.25	.03
14	.10	.50	.65	.80	.87	5.7	5.2	.45	3.8	.09	.18	.02
15	.09	.52	1.0	.77	.87	4.0	3.3	.41	1.9	.08	.14	.02
16	.09	.60	3.7	.74	1.3	3.3	2.2	.39	3.3	.08	.10	.02
17	.09	.74	1.9	.71	1.2	2.8	1.9	.35	6.9	.07	.09	.02
18	.87	2.1	1.4	.65	.98	2.6	3.4	.30	2.9	.04	.11	.02
19	2.7	1.4	1.2	.62	.87	2.7	2.5	.33	1.7	.04	.08	.01
20	.71	1.9	.98	.60	.91	3.4	1.8	.39	2.0	1.1	.07	.08
21	.48	2.4	.84	.60	.91	3.8	1.7	.35	1.5	.43	.06	.41
22	.37	1.5	.80	.57	.84	6.1	1.7	.28	1.2	.18	.06	.24
23	3.2	1.1	1.7	.55	.77	5.2	1.4	1.5	1.6	.14	.05	.25
24	5.8	.91	1.7	.55	.74	5.3	1.2	2.1	1.0	.09	.04	.18
25	1.6	.77	1.3	.52	.65	5.8	1.1	1.3	.74	.06	.13	.11
26	3.3	.68	1.0	.50	.62	9.6	.98	.84	.62	.04	.16	.09
27	3.6	.80	.91	.48	.60	5.0	5.5	.57	.55	.03	.08	.37
28	4.1	.74	.84	.48	.57	2.8	3.9	.43	.62	2.1	.06	.33
29	1.9	.65	.84	.45	---	2.1	2.7	2.4	2.0	1.2	.03	.21
30	1.3	.60	.77	.45	---	2.1	1.9	1.9	3.4	.37	.03	.16
31	1.0	---	.71	.55	---	2.6	---	1.1	---	.22	.03	---
TOTAL	34.15	27.97	39.27	49.84	50.12	92.25	89.08	26.26	99.00	11.41	8.91	5.93
MEAN	1.10	.93	1.27	1.61	1.79	2.98	2.97	.85	3.30	.37	.29	.20
MAX	5.8	2.4	4.5	10	9.7	9.6	11	2.4	21	2.1	4.0	1.0
MIN	.09	.50	.60	.45	.57	.50	.98	.28	.55	.03	.03	.01
CFSM	1.75	1.48	2.02	2.56	2.84	4.73	4.71	1.35	5.24	.59	.46	.32
IN.	2.01	1.65	2.32	2.94	2.95	5.44	5.25	1.55	5.84	.67	.53	.35

CAL YR 1981	TOTAL 321.41	MEAN .88	MAX 15	MIN .00	CFSM 1.40	IN 18.95
WTR YR 1982	TOTAL 534.19	MEAN 1.46	MAX 21	MIN .01	CFSM 2.32	IN 31.49

01174900 CADWELL CREEK NEAR BELCHERTOWN, MA

LOCATION.--Lat 42°20'08", long 72°22'12", Hampshire County, Hydrologic Unit 01080204, on left bank 200 ft (60 m) upstream from mouth, 2 mi (3 km) southeast of Knights Corner, and 4.5 mi (7.2 km) north of Belchertown.

DRAINAGE AREA.--2.81 mi² (7.28 km²).

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Altitude of gage is 540 ft (165 m), from topographic map.

REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 4.81 ft³/s (0.136 m³/s), 23.25 in/yr (591 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 271 ft³/s (7.67 m³/s) Mar. 6, 1979, gage height, 7.42 ft (2.262 m), from rating curve extended above 92 ft³/s (2.6 m³/s); minimum, 0.07 ft³/s (0.002 m³/s) several times in water years 1964, 1965, and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s (2.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 4	2230	79 2.24	6.47 1.972	June 6	0600	*124 3.51	6.74 2.054
June 2	0900	79 2.24	6.47 1.972				

Minimum discharge, 0.26 ft³/s (0.007 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	4.7	3.1	9.6	11	2.8	21	6.5	4.4	5.3	1.2	3.5
2	3.4	4.3	19	13	6.9	2.8	12	5.8	37	3.9	.94	4.1
3	2.5	3.9	9.9	7.3	29	2.7	17	5.3	17	3.1	.81	2.6
4	1.7	3.5	6.7	31	37	2.6	36	4.9	8.7	2.6	.74	1.4
5	1.3	3.3	5.5	39	17	3.5	16	4.5	20	2.1	.71	1.0
6	1.2	5.8	5.3	16	11	3.4	12	4.2	84	1.9	.60	.81
7	1.6	5.5	4.7	11	8.4	4.4	15	4.0	39	1.7	.52	.66
8	1.3	4.1	4.5	7.9	7.3	6.7	11	3.7	20	1.5	.47	.55
9	1.0	3.6	4.4	7.1	6.4	4.7	8.0	3.6	11	1.2	.52	.52
10	.94	3.3	4.1	5.6	5.5	4.0	8.9	3.3	7.7	1.0	6.4	.47
11	.84	3.2	3.9	5.2	5.2	3.9	14	3.0	5.7	.90	2.9	.42
12	.81	2.9	3.7	4.5	5.1	13	19	2.8	4.9	.90	1.9	.42
13	.74	2.8	3.4	2.9	4.8	15	19	2.8	4.8	.90	1.4	.40
14	.74	2.7	3.3	4.1	4.2	21	20	2.5	13	.74	1.2	.40
15	.74	2.8	4.4	4.3	4.3	16	14	2.3	7.9	.68	.94	.35
16	.71	3.1	17	3.9	5.5	13	10	2.2	11	.71	.78	.37
17	.71	3.5	8.1	3.8	5.4	12	8.9	2.0	25	.58	.74	.37
18	3.9	8.8	6.5	3.4	4.5	10	17	1.8	12	.49	.90	.29
19	11	6.4	5.2	3.2	4.4	12	10	1.8	7.7	.44	.66	.29
20	3.8	7.5	4.6	3.3	4.2	14	8.3	2.3	7.9	5.4	.60	.74
21	2.5	9.9	4.4	3.2	4.1	15	8.6	2.2	6.7	2.5	.68	2.0
22	2.1	6.9	4.3	3.0	4.0	22	7.5	1.7	5.5	1.4	.52	1.3
23	13	5.3	7.1	3.0	3.8	21	6.4	4.8	6.9	1.0	.55	1.3
24	21	4.5	7.1	3.0	3.6	21	5.8	8.9	4.7	.78	.55	1.0
25	7.1	4.0	5.4	2.8	3.0	24	5.3	5.7	3.8	.66	1.0	.78
26	13	3.6	4.6	2.8	3.3	35	7.2	3.9	3.4	.55	1.0	.66
27	16	4.1	4.3	2.7	3.1	21	24	2.9	3.1	.44	.63	1.8
28	19	3.8	4.0	2.6	2.9	12	15	2.3	3.2	7.3	.55	1.7
29	9.1	3.4	4.0	2.6	---	9.9	9.9	10	7.5	5.0	.42	1.2
30	6.5	3.1	3.7	2.5	---	10	7.6	9.4	13	2.0	.37	.97
31	5.4	---	3.5	2.8	---	14	---	5.6	---	1.3	.35	---
TOTAL	154.29	134.3	179.7	217.1	214.9	372.4	394.4	126.7	406.5	58.97	46.03	32.37
MEAN	4.98	4.48	5.80	7.00	7.68	12.0	13.1	4.09	13.6	1.90	1.48	1.08
MAX	21	9.9	19	39	37	35	36	10	84	7.3	15	4.1
MIN	.66	2.7	3.1	2.5	2.9	2.6	5.3	1.7	3.1	.44	.35	.29
CFSM	1.77	1.59	2.06	2.49	2.73	4.27	4.66	1.46	4.84	.68	.53	.38
IN.	2.04	1.78	2.38	2.87	2.84	4.93	5.22	1.68	5.38	.78	.61	.43

CAL YR 1981 TOTAL 1496.30 MEAN 4.10 MAX 49 MIN .23 CFSM 1.46 IN 19.80
WTR YR 1982 TOTAL 2337.66 MEAN 6.40 MAX 84 MIN .29 CFSM 2.28 IN 30.94

CONNECTICUT RIVER BASIN

01175500 SWIFT RIVER AT WEST WARE, MA

LOCATION.--Lat 42°16'04", long 72°19'59", Hampshire County, Hydrologic Unit 01080204, on left bank at West Ware, 1.4 mi (2.3 km) downstream from Quabbin Reservoir, 3.5 mi (5.6 km) east of Belchertown, and 8.0 mi (12.9 km) upstream from mouth.

DRAINAGE AREA.--188 mi² (487 km²), includes 1.6 mi² (4.1 km²) drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 mi² (482 km²).

PERIOD OF RECORD.--Discharge: July 1910 to September 1912 (twice-daily gage heights and corresponding discharge), October 1912 to current year.
Water-quality records: Water years 1952-54.

REVISED RECORDS.--WSP 401: Drainage area. WSP 451: 1916. WSP 871: 1919. WSP 1031: 1944 (changes in reservoir contents and adjusted figures only). WSP 1301: 1925(M).

GAGE.--Water-stage recorder. Datum of gage is 365.18 ft (111.307 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1912, nonrecording gage at site 400 ft (100 m) upstream at same datum.

REMARKS.--Records good. Flow regulated since August 1939 by Quabbin Reservoir (Reservoirs in Connecticut River basin). Diversion from Ware River to Quabbin Reservoir since 1940, from Quabbin Reservoir to Wachusett Reservoir since 1941, from Quabbin Reservoir to Chicopee Valley aqueduct since 1950, and at times since 1966 from Quabbin Reservoir to city of Worcester. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--27 years (water years 1913-39) prior to completion of Quabbin Reservoir, 314 ft³/s (8.892 m³/s), 22.68 in/yr (576 mm/yr); 43 years (water years 1940-82) affected by storage and diversions, 91.4 ft³/s (2.588 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft³/s (215 m³/s) Mar. 19, 1936, gage height, 15.00 ft (4.572 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 1,870 ft³/s (53.0 m³/s) Apr. 30, 1956, gage height, 8.37 ft (2.551 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 157 ft³/s (4.45 m³/s) Apr. 7, gage height, 2.88 ft (0.878 m); maximum gage height, 3.24 ft (0.988 m) Jan. 18 (ice jam); minimum daily discharge, 29 ft³/s (0.82 m³/s) Dec. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	42	43	45	47	44	49	45	46	49	48	127
2	39	42	48	45	45	44	47	45	54	49	92	126
3	39	42	44	43	54	44	49	46	49	49	137	125
4	39	42	43	51	53	44	53	46	48	49	130	125
5	39	42	43	51	48	44	48	46	54	49	120	126
6	39	43	44	47	46	44	47	46	64	49	119	126
7	40	42	42	45	46	46	54	46	55	49	120	126
8	40	42	29	45	45	46	47	46	53	49	119	126
9	40	42	56	45	45	45	47	46	51	49	129	126
10	40	42	43	45	45	44	48	45	51	48	127	126
11	40	42	43	45	45	45	49	46	50	48	131	126
12	41	42	43	45	44	50	49	46	50	48	130	126
13	41	42	43	45	44	48	49	46	51	48	130	126
14	41	42	43	45	44	50	49	46	55	48	131	128
15	41	42	44	44	44	47	48	46	51	48	131	128
16	41	42	48	44	45	47	47	45	56	48	131	129
17	41	39	44	44	45	48	47	45	55	48	129	129
18	42	45	44	44	45	48	36	45	50	47	125	130
19	45	43	43	44	44	48	59	45	50	47	110	132
20	42	44	43	44	44	48	47	46	53	56	123	134
21	41	44	43	44	44	48	47	45	51	49	122	133
22	41	43	43	44	44	49	46	45	51	48	122	133
23	42	43	44	44	44	48	46	46	51	48	123	133
24	45	43	43	44	42	48	46	46	50	48	122	133
25	42	42	43	44	43	48	46	46	50	48	123	132
26	44	42	43	44	44	49	47	46	49	48	123	132
27	43	43	43	44	44	48	41	46	49	48	122	133
28	44	42	43	44	44	47	58	46	49	52	123	128
29	42	42	43	44	---	47	46	49	34	50	124	127
30	42	42	43	43	---	46	46	48	63	49	124	126
31	42	---	43	43	---	48	---	47	---	48	124	---
TOTAL	1277	1270	1347	1388	1267	1450	1438	1423	1543	1511	3764	3857
MEAN	41.2	42.3	43.5	44.8	45.3	46.8	47.9	45.9	51.4	48.7	121	129
MAX	45	45	56	51	54	50	59	49	64	56	137	134
MIN	39	39	29	43	42	44	36	45	34	47	48	125

CAL YR 1981 TOTAL 16514 MEAN 45.2 MAX 130 MIN 29
WTR YR 1982 TOTAL 21535 MEAN 59.0 MAX 137 MIN 29

01175670 SEVENMILE RIVER NEAR SPENCER, MA

LOCATION.--Lat 42°15'54", long 72°00'19", Worcester County, Hydrologic Unit 01080204, on right bank 40 ft (12 m) upstream from bridge on Cooney Road and 1.5 mi (2.4 km) north of Spencer.

DRAINAGE AREA.--8.58 mi² (22.22 km²).

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1960. October 1960 to current year. October and November 1960 monthly discharge only, published in WSP 1901.

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Occasional regulation by ponds upstream since 1971. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--22 years, 14.3 ft³/s (0.405 m³/s), 22.63 in/yr (575 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 412 ft³/s (11.7 m³/s) Mar. 18, 1968, gage height, 5.19 ft (1.582 m); maximum gage height, 5.41 ft (1.649 m) Mar. 7, 1963 (ice jam); minimum discharge, 0.04 ft³/s (0.001 m³/s) Sept. 10, 11, 1980 (regulated); minimum daily, 0.13 ft³/s (0.004 m³/s) July 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0315	185 5.24	4.07 1.241	Apr. 7	1245	67 1.90	3.40 1.036
Feb. 4	0900	136 3.85	Ice jam	June 2	1400	74 2.10	3.45 1.052
Apr. 1	0600	62 1.76	3.36 1.024	June 6	1245	*208 5.89	4.17 1.271
Apr. 4	0545	102 2.89	3.64 1.109				

Minimum discharge, 0.60 ft³/s (0.017 m³/s) Aug. 30 (regulated); minimum daily, 1.0 ft³/s (0.028 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	15	12	14	20	12	56	11	5.6	25	7.0	3.5
2	4.8	13	37	28	35	13	46	13	44	18	5.3	3.8
3	9.0	12	43	24	58	13	42	7.7	37	15	4.4	3.3
4	8.1	11	31	48	110	13	89	7.2	28	12	3.9	2.8
5	7.3	10	24	131	80	14	70	9.7	80	10	3.6	2.5
6	6.1	10	23	78	55	15	55	6.2	175	8.8	3.1	2.3
7	5.4	11	20	63	40	16	52	5.0	160	7.9	3.0	1.7
8	4.7	9.8	19	38	32	26	48	4.8	108	7.0	2.8	1.5
9	4.2	9.6	17	32	26	24	43	5.1	73	6.0	13	1.7
10	4.2	8.7	16	25	23	23	40	4.2	53	5.4	16	1.3
11	3.9	8.3	15	23	21	20	43	4.6	41	4.8	11	1.5
12	3.7	8.1	14	21	20	36	48	8.5	35	4.6	8.4	1.5
13	3.3	7.5	12	19	19	40	50	7.7	32	4.4	6.6	1.1
14	3.0	7.5	12	18	18	51	56	5.0	48	4.3	5.4	1.1
15	3.3	7.7	16	17	17	44	50	3.3	42	3.8	4.4	1.0
16	3.2	11	41	17	16	38	43	3.1	39	3.5	3.5	1.2
17	3.2	20	29	17	16	35	42	3.9	55	3.5	3.0	1.2
18	3.5	39	27	17	15	33	51	7.2	42	3.2	2.7	1.5
19	12	36	23	16	15	32	44	3.7	35	5.0	2.4	1.4
20	9.2	29	19	16	14	30	39	3.0	35	18	2.3	1.4
21	7.7	33	15	15	14	30	35	3.4	30	15	2.5	2.8
22	6.5	28	15	15	14	31	31	2.4	27	9.5	2.2	2.6
23	6.8	22	19	15	13	32	30	2.2	25	7.0	1.9	2.6
24	22	19	22	15	13	26	24	5.0	22	5.8	1.7	2.2
25	16	16	17	15	13	27	17	6.4	19	4.7	2.1	2.1
26	22	15	17	14	12	38	12	6.6	17	3.8	2.1	2.0
27	24	15	15	14	12	40	16	10	15	3.2	1.7	2.1
28	36	15	15	13	12	32	15	6.4	15	9.5	1.9	2.1
29	31	13	14	13	---	38	14	6.2	22	15	1.7	2.1
30	22	12	13	12	---	35	11	7.0	34	11	1.2	2.2
31	17	---	12	11	---	35	---	6.6	---	8.9	1.3	---
TOTAL	316.9	472.2	624	814	753	892	1212	186.1	1393.6	263.6	132.1	60.1
MEAN	10.2	15.7	20.1	26.3	26.9	28.8	40.4	6.00	46.5	8.50	4.26	2.00
MAX	36	39	43	131	110	51	89	13	175	25	16	3.8
MIN	3.0	7.5	12	11	12	12	11	2.2	5.6	3.2	1.2	1.0
CFSM	1.19	1.83	2.34	3.07	3.14	3.36	4.71	.70	5.42	.99	.50	.23
IN.	1.37	2.05	2.71	3.53	3.26	3.87	5.25	.81	6.04	1.14	.57	.26

CAL YR 1981 TOTAL 4718.09 MEAN 12.9 MAX 120 MIN .69 CFSM 1.50 IN 20.45
WTR YR 1982 TOTAL 7119.60 MEAN 19.5 MAX 175 MIN 1.0 CFSM 2.27 IN 30.86

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 (3 m) upstream from abandoned highway bridge site at West Brimfield, 0.9 mi (1.4 km) upstream from Blodgett Mill Brook, 3.5 mi (5.6 km) northeast of Palmer, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--151 mi² (391 km²).

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 711: Drainage area. WSP 1301: 1918(M).

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), 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 (0.8 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. No gage-height record Jan. 18 to Feb. 23. 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. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--70 years (water years 1913-82), 244 ft³/s (6.910 m³/s), 21.94 in/yr (557 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s (362 m³/s) Aug. 19, 1955, gage height, 15.36 ft (4.682 m), from floodmarks, present site and datum, from rating curve extended above 2,700 ft³/s (76 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 6.6 ft³/s (0.19 m³/s) Sept. 28, 29, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 5	0030	991 28.1	5.52 1.682	Apr. 4	0400	969 27.4	5.48 1.670
Feb. 5	--	950 27	-- --	June 6	0530	*1650 46.7	6.57 2.003

Minimum discharge, 30 ft³/s (0.85 m³/s) Sept. 18, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	103	324	269	325	270	244	677	444	220	344	125	44
2	154	299	398	390	400	220	643	421	420	321	115	53
3	151	272	424	406	580	209	689	394	466	297	105	53
4	142	252	430	590	800	204	928	368	501	268	100	50
5	140	233	428	871	850	209	853	343	874	243	97	47
6	139	227	391	845	800	223	892	319	1520	216	86	46
7	138	214	350	946	700	250	782	299	1490	192	72	44
8	132	200	419	840	620	297	722	272	1510	170	70	41
9	129	194	401	700	560	314	778	251	1410	151	130	38
10	130	187	356	550	500	311	738	231	1270	136	170	35
11	125	175	365	460	450	310	745	220	1120	120	160	33
12	123	162	355	400	430	410	750	210	981	95	140	33
13	118	156	337	370	410	492	769	198	869	87	125	33
14	114	152	318	360	390	566	759	183	934	80	110	32
15	109	149	326	350	370	610	752	171	842	76	100	32
16	103	151	465	340	390	627	723	162	790	71	90	33
17	92	176	441	330	400	644	689	154	855	67	80	33
18	94	303	486	320	390	636	698	146	786	63	72	32
19	171	341	474	310	370	636	676	140	725	87	65	31
20	146	385	410	300	350	623	655	137	686	169	60	33
21	143	426	400	290	330	621	615	141	647	175	64	42
22	139	415	400	280	320	610	561	136	602	162	60	49
23	151	408	404	270	310	611	531	136	551	153	56	61
24	251	397	416	260	302	610	498	147	490	141	52	55
25	237	372	405	260	266	603	469	156	446	126	54	44
26	293	348	392	250	185	649	445	158	407	113	47	44
27	315	334	369	240	245	649	501	156	370	100	46	47
28	363	308	356	240	255	633	502	151	351	133	44	48
29	368	279	333	230	---	642	495	195	346	160	40	53
30	361	270	290	230	---	620	471	223	388	146	38	57
31	345	---	285	220	---	608	---	224	---	136	36	---
TOTAL	5519	8109	11893	12773	12243	14891	20006	6886	22867	4798	2609	1276
MEAN	178	270	384	412	437	480	667	222	762	155	84.2	42.5
MAX	368	426	486	946	850	649	928	444	1520	344	170	61
MIN	92	149	269	220	185	204	445	136	220	63	36	31
CFSM	1.18	1.79	2.54	2.73	2.89	3.18	4.42	1.47	5.05	1.03	.56	.28
IN.	1.36	2.00	2.93	3.15	3.02	3.67	4.93	1.70	5.63	1.18	.64	.31

CAL YR 1981	TOTAL	78983	MEAN 216	MAX 1240	MIN 26	CFSM 1.43	IN 19.46
WTR YR 1982	TOTAL	123870	MEAN 339	MAX 1520	MIN 31	CFSM 2.25	IN 30.52

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 (300 m) downstream from West Street Bridge at Indian Orchard, 1.1 mi (1.8 km) upstream from Fuller Brook, and 7.2 mi (11.6 km) upstream from mouth.

DRAINAGE AREA.--688 mi² (1,782 km²).

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.

REVISED RECORDS.--WSP 711: Drainage area. WSP 1231: 1934.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38 m), from topographic map. Prior to Nov. 1, 1938, water-stage recorder at site 1.8 mi (2.9 km) downstream at different datum.

REMARKS.--Records good except those for period of aquatic vegetation, Oct. 1 to Nov. 17, and those for January, which are fair. Diversion since 1941 from 186 mi² (482 km²) in Swift River basin and at times since 1931 from 97 mi² (251 km²) in Ware River basin for Boston metropolitan district; since 1950, for Chicopee; since 1952, for South Hadley; and, at times during 1966, 1967, and 1977, for Worcester; diversions at times since 1955 from 6.5 mi² (16.8 km²) 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 (34 km) upstream on Swift River since 1939, by Barre Falls Reservoir on Ware River since 1958, by Conant Brook Reservoir since 1966 (Reservoirs in Connecticut River basin), and by smaller reservoirs. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--54 years, 900 ft³/s (25.49 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft³/s (1,280 m³/s) Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 ft³/s (0.45 m³/s) several times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,920 ft³/s (196 m³/s) June 6, gage height, 10.47 ft (3.191 m); minimum daily, 230 ft³/s (6.51 m³/s) Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	882	736	985	1150	783	2050	1290	863	1430	673	413
2	483	860	1220	1400	1370	749	2060	1120	1580	1180	544	648
3	597	797	1720	1340	1710	679	1740	1160	2060	963	444	392
4	597	679	1420	1630	3440	666	2810	1080	1580	872	520	439
5	538	710	1190	3750	3450	679	2690	1010	1900	789	509	443
6	555	756	1200	2810	2660	811	2220	942	5400	692	494	426
7	337	811	1060	2410	2140	811	1750	882	5210	710	614	341
8	423	730	1070	2010	1860	1240	1630	853	3730	639	397	418
9	413	685	1050	1670	1690	1100	1800	797	2980	416	569	267
10	325	647	999	1450	1530	949	1730	790	2530	541	1470	325
11	385	628	963	1200	1330	927	1840	730	2160	504	1270	389
12	359	591	935	1000	1280	1280	2090	710	1870	421	1036	273
13	272	585	875	900	1220	1740	2250	622	1670	477	812	330
14	258	521	853	900	1180	2070	2200	756	2250	410	654	247
15	447	550	920	1000	1070	2040	2070	616	2240	301	641	339
16	309	622	1510	1050	1210	1790	1870	609	1820	352	457	288
17	290	628	1680	1100	1320	1790	1710	544	2400	309	534	241
18	342	1070	1480	1150	1220	1720	1880	447	2480	333	509	295
19	679	1350	1320	1100	1190	1750	1870	533	2030	360	470	326
20	875	1220	1080	900	1070	1720	1660	510	1930	579	293	328
21	685	1320	978	800	1080	1740	1540	585	1790	840	535	379
22	591	1330	1180	1050	1010	1760	1470	628	1690	740	386	384
23	561	1180	1070	1000	963	1780	1350	538	1590	658	376	387
24	1130	1070	1220	900	942	1740	1270	591	1490	598	413	363
25	1230	970	1230	1000	825	1710	1210	622	1340	546	343	230
26	1140	949	1100	980	704	1860	1150	776	1190	313	432	407
27	1340	890	1040	980	736	2200	1610	657	1010	408	410	313
28	1320	912	999	900	776	1770	1760	611	1090	516	330	361
29	1290	832	970	820	---	1610	1660	700	1030	793	364	325
30	1090	797	882	763	---	1510	1430	1160	1350	909	317	335
31	999	---	763	832	---	1460	---	999	---	753	341	---
TOTAL	20150	25572	34713	39780	40126	44434	54370	23868	62253	19352	17171	10678
MEAN	650	852	1120	1283	1433	1433	1812	770	2075	624	534	336
MAX	1340	1350	1720	3750	3450	2200	2810	1290	5400	1430	1470	648
MIN	258	521	736	763	704	666	1150	447	863	301	293	230
CAL YR 1981	TOTAL	249192	MEAN	683	MAX	3060	MIN	80				
WTR YR 1982	TOTAL	392467	MEAN	1075	MAX	5400	MIN	230				

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 (0.3 km) downstream from Knightville Dam, 0.2 mi (0.3 km) upstream from Sykes Brook, 2.4 mi (3.9 km) upstream from Middle Branch, 3.5 mi (5.6 km) north of Huntington, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--162 mi² (420 km²).

PERIOD OF RECORD.--Discharge: August 1909 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).

GAGE.--Water-stage recorder. Concrete control since Dec. 20, 1940. Datum of gage is 461.25 ft (140.589 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 11, 1936, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. Jan. 11, 1935, to May 20, 1940, water-stage recorder at site 700 ft (200 m) upstream at datum 10.57 ft (3.222 m) higher. May 21 to Dec. 19, 1940, nonrecording gage at site 700 ft (200 m) upstream at datum 18.75 ft (5.715 m) higher.

REMARKS.--Records excellent. Flow regulated by Knightville Reservoir since 1941 (Reservoirs in Connecticut River basin). Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--73 years, 327 ft³/s (9.261 m³/s), 27.41 in/yr (696 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s (1,070 m³/s) Sept. 21, 1938, gage height, 29.58 ft (9.016 m), from floodmarks, site and datum then in use, from rating curve extended above 3,800 ft³/s (110 m³/s) on basis of slope-area measurements at gage heights 24.07 ft (7.337 m) and 29.58 ft (9.016 m); minimum, 0.1 ft³/s (0.003 m³/s) Apr. 3, 1965; minimum daily, 1.1 ft³/s (0.031 m³/s) Apr. 2, 1965. Maximum discharge since construction of Knightville Reservoir in 1941, 6,660 ft³/s (189 m³/s) Mar. 21, 1945, gage height, 7.45 ft (2.271 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,440 ft³/s (97.4 m³/s) Apr. 22, gage height, 6.07 ft (1.850 m); minimum, 17 ft³/s (0.48 m³/s) Sept. 14-16, 17, 19, 20; minimum daily, 17 ft³/s (0.48 m³/s) Sept. 15, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	139	75	115	129	179	1140	547	250	506	92	32
2	53	127	274	194	323	139	1670	465	217	245	79	69
3	84	113	430	212	412	168	1280	415	506	201	88	78
4	75	102	349	315	301	170	1380	405	595	174	79	66
5	59	96	231	658	486	160	2180	362	349	149	60	43
6	49	104	190	809	936	164	2360	322	192	129	52	34
7	49	160	157	732	653	167	2210	295	817	117	47	29
8	70	127	165	387	823	178	1760	271	2160	106	43	25
9	75	106	152	203	904	236	782	258	2600	96	48	23
10	57	98	120	160	867	254	519	192	2590	86	57	22
11	51	90	127	166	811	249	568	87	2470	77	49	20
12	44	88	119	165	714	247	843	162	595	73	42	20
13	40	82	90	165	303	340	822	350	1060	77	37	19
14	37	79	72	164	191	455	840	229	1550	72	38	18
15	35	86	83	164	229	495	1140	170	1630	65	36	17
16	33	104	93	164	380	600	1180	159	1330	60	33	18
17	33	108	99	161	434	590	1550	150	900	57	33	18
18	36	172	115	168	244	478	1530	135	559	53	33	19
19	197	208	122	171	174	383	1210	127	381	49	30	18
20	152	174	104	171	237	385	1700	125	398	67	27	17
21	98	271	102	165	265	424	2630	125	335	88	27	28
22	73	211	100	158	260	454	3230	113	295	65	28	36
23	75	160	183	155	233	352	2160	143	340	52	27	37
24	322	134	172	155	221	289	1060	403	305	45	26	58
25	279	104	161	152	218	566	872	469	239	41	30	46
26	233	100	173	150	159	948	632	361	202	37	34	34
27	410	131	173	125	115	1210	1110	208	185	35	34	37
28	456	152	171	133	206	1180	1180	161	204	214	28	63
29	405	134	171	128	---	1250	1500	314	274	529	23	55
30	228	94	168	122	---	830	1020	568	775	358	21	44
31	168	---	132	122	---	762	---	482	---	124	19	---
TOTAL	4019	3854	4873	7009	11228	14502	42098	8573	24303	4047	1300	1043
MEAN	130	128	157	226	401	461	1403	277	810	131	41.9	34.8
MAX	456	271	430	809	936	1250	3250	568	2600	529	92	78
MIN	33	79	72	115	115	139	519	87	185	55	19	17
MEAN†	130	128	165	225	402	511	1352	274	814	121	41.7	34.8
CFSM†	.80	.79	1.02	1.39	2.48	3.15	8.35	.69	5.02	.75	.26	.21
IN†	.93	.88	1.17	1.60	2.59	3.63	9.32	1.95	5.61	.86	.30	.24
CAL YR 1981	TOTAL	80232	MEAN 220	MAX 3480	MIN 13	MEAN† 220	CFSM† 1.36	IN† 18.43				
WTR YR 1982	TOTAL	126649	MEAN 347	MAX 3250	MIN 17	MEAN† 347	CFSM† 2.14	IN† 29.08				

† Adjusted for change in contents in Knightville Reservoir.

01180500 MIDDLE BRANCH WESTFIELD RIVER AT GOSS HEIGHTS, MA

LOCATION.--Lat 42°15'31", long 72°52'23", Hampshire County, Hydrologic Unit 01080206, on right bank at upstream side of highway bridge at Goss Heights, 0.3 mi (0.5 km) upstream from mouth, 0.7 mi (1.1 km) downstream from Littleville Dam, and 1.7 mi (2.7 km) north of Huntington.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

PERIOD OF RECORD.--July 1910 to current year.

REVISED RECORDS.--WSP 415: 1910-13. WSP 781: 1933(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 399.30 ft (121.707 m) National Geodetic Vertical Datum of 1929. Prior to June 25, 1930, datum was 2.00 ft (0.610 m) higher, and June 25, 1930, to Sept. 30, 1964, datum was 1.00 ft (0.305 m) higher. Prior to Sept. 8, 1912, nonrecording gage at same site.

REMARKS.--Records good. Doubtful gage-height record June 20 to July 21. Some diurnal fluctuation at low flow prior to 1952 caused by mill upstream. Flow regulated by Littleville Lake (Reservoirs in Connecticut River basin) since 1965. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--72 years, 105 ft³/s (2.974 m³/s), 27.11 in/yr (689 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s (564 m³/s) Sept. 21, 1938, gage height, 11.61 ft (3.539 m), present datum, from rating curve extended above 3,200 ft³/s (91 m³/s) on basis of mean of two contracted-opening measurements of peak flow; maximum gage height, 14.87 ft (4.532 m), present datum, Mar. 12, 1936, (ice jam); practically no flow Sept. 3, 22, Oct. 20, 1910, July 30, 1912, Oct. 26, 27, 1914. Maximum discharge since construction of Littleville Dam in 1965, 1,670 ft³/s (47.3 m³/s) Mar. 26, 1980, gage height, 5.93 ft (1.807 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,030 ft³/s (29.2 m³/s) Apr. 22, gage height, 5.02 ft (1.530 m); minimum, 3.9 ft³/s (0.11 m³/s) Sept. 19, 20; minimum daily, 4.1 ft³/s (0.12 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	53	35	47	69	49	322	161	93	112	33	7.5
2	15	45	74	72	108	50	529	135	153	77	26	12
3	17	39	143	72	151	48	467	119	181	60	22	15
4	19	35	126	96	180	43	442	112	121	50	18	14
5	18	32	97	374	299	45	780	102	77	43	16	11
6	16	33	79	326	496	48	907	87	47	35	14	9.8
7	15	44	63	220	466	52	771	79	229	32	12	8.3
8	16	45	58	153	478	76	520	73	626	28	11	7.1
9	19	40	54	109	346	79	249	68	899	24	12	6.1
10	19	36	47	91	167	71	185	63	885	21	15	5.6
11	17	33	41	73	105	66	174	58	812	20	12	5.2
12	15	30	42	68	89	79	192	53	174	18	10	5.0
13	14	28	37	65	87	122	211	51	446	18	9.4	4.8
14	13	26	35	64	84	163	256	48	669	17	8.6	4.7
15	12	28	41	63	77	184	303	44	664	16	7.8	4.5
16	11	31	47	61	81	164	379	40	580	15	7.3	4.6
17	10	35	44	60	88	165	463	38	428	14	8.2	4.5
18	11	45	43	57	83	146	379	35	236	13	9.9	4.3
19	35	58	39	54	76	152	197	32	151	12	8.5	4.1
20	46	59	35	53	76	153	358	32	120	12	7.7	4.2
21	39	78	33	49	74	179	647	33	103	19	6.9	6.0
22	31	77	36	49	70	200	929	32	87	18	5.7	7.5
23	30	64	42	49	65	143	832	34	83	15	5.3	8.6
24	78	53	64	49	63	72	497	75	82	13	5.5	11
25	87	44	77	47	55	78	243	103	69	11	6.9	11
26	87	38	66	46	46	89	170	87	61	9.8	8.0	9.9
27	159	39	62	44	48	321	317	66	53	8.9	7.7	12
28	168	46	57	42	52	474	467	51	51	32	7.1	14
29	135	46	52	39	---	589	295	101	64	111	5.7	13
30	92	40	47	37	---	449	204	178	144	75	4.9	12
31	67	---	41	39	---	233	---	125	---	46	4.6	---
TOTAL	1302	1300	1757	2668	4079	4782	12685	2315	8388	995.7	336.7	247.3
MEAN	42.0	43.3	56.7	86.1	146	154	423	74.7	280	32.1	10.9	8.24
MAX	168	78	143	374	496	589	929	178	899	112	33	15
MIN	10	26	33	37	46	43	170	32	47	8.9	4.6	4.1
MEAN†	44.9	41.8	57.2	85.6	147	178	403	72.7	280	28.7	8.44	8.74
CFSM†	.85	.79	1.09	1.63	2.79	3.38	7.66	1.38	5.32	.55	.16	.17
IN.†	.98	.89	1.25	1.88	2.91	3.91	8.54	1.59	5.94	.63	.18	.19
CAL YR 1981	TOTAL	26064.3	MEAN	71.4	MAX	1210	MIN	1.4	MEAN†	71.5	CFSM†	1.36
WTR YR 1982	TOTAL	40855.7	MEAN	112	MAX	929	MIN	4.1	MEAN†	112	CFSM†	2.13
											IN†	18.45
											IN†	28.89

† Adjusted for change in contents in Littleville Lake.

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 (0.6 km) downstream from Roaring Brook, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--93.7 mi² (242.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 388.60 ft (118.445 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Prior to 1950, some diurnal fluctuation at low flow caused by small mill upstream.
Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 189 ft³/s (5.352 m³/s), 27.39 in/yr (696 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) Aug. 19, 1955, gage height, 15.27 ft (4.654 m), from rating curve extended above 9,500 ft³/s (270 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.3 ft³/s (0.093 m³/s) Aug. 9, 1955, Nov. 27, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 4	0030	3620 103	5.60 1.707	June 6	0645	*8120 230	8.43 2.569
Apr. 18	0615	3880 110	5.80 1.768				

Minimum discharge, 10 ft³/s (0.28 m³/s) Sept. 13-15, 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	94	56	108	270	86	1210	259	143	229	57	18
2	38	86	223	192	420	87	600	236	336	145	54	39
3	57	79	257	163	460	84	705	215	240	113	40	36
4	37	75	184	287	1400	75	2080	198	153	95	33	26
5	28	68	141	664	545	102	733	176	1350	81	29	20
6	25	80	122	306	348	93	462	158	5720	69	26	17
7	29	128	107	226	257	96	404	145	1920	59	23	16
8	41	96	108	171	232	154	380	133	741	58	22	15
9	39	75	100	145	205	149	331	126	494	52	27	14
10	30	66	79	130	184	126	309	120	384	44	37	14
11	25	60	93	122	171	107	331	103	304	39	28	13
12	34	57	86	115	159	176	370	94	259	36	23	11
13	36	52	72	120	161	211	380	88	263	35	21	10
14	35	50	75	115	161	275	547	81	640	36	19	10
15	34	60	80	110	152	254	578	72	411	33	18	10
16	32	75	93	105	145	229	679	67	449	30	17	12
17	31	77	94	100	145	235	984	62	616	29	17	14
18	34	111	93	95	135	208	2180	54	421	26	20	12
19	163	115	79	92	131	232	877	52	313	24	17	11
20	90	103	79	90	128	229	644	52	300	42	16	13
21	59	149	80	82	120	264	570	60	252	46	16	19
22	42	122	88	79	113	298	442	52	215	33	15	21
23	64	99	103	76	108	318	350	66	240	25	15	24
24	238	87	186	82	103	335	318	195	208	23	14	29
25	135	74	143	83	84	473	291	161	158	20	16	22
26	181	68	120	80	88	821	300	103	131	19	22	18
27	247	77	107	76	103	478	839	73	115	18	18	20
28	254	99	100	74	94	302	475	59	126	185	16	27
29	176	83	96	72	---	257	355	296	145	259	14	24
30	128	67	93	69	---	275	296	287	370	83	12	22
31	107	---	77	90	---	426	---	173	---	48	12	---
TOTAL	2488	2532	3414	4319	6622	7455	19020	4016	17417	2034	714	557
MEAN	80.3	84.4	110	139	237	240	634	130	581	65.6	23.0	18.6
MAX	254	149	257	664	1400	821	2180	296	5720	259	57	39
MIN	19	50	56	69	84	75	291	52	115	18	12	10
CFSM	.86	.90	1.17	1.48	2.53	2.56	6.77	1.39	6.20	.70	.25	.20
IN.	.99	1.01	1.36	1.71	2.63	2.96	7.55	1.59	6.91	.81	.28	.22
CAL YR 1981	TOTAL	45972.5	MEAN 126	MAX 3480	MIN 9.4	CFSM 1.35	IN 18.25					
WTR YR 1982	TOTAL	70588.0	MEAN 193	MAX 5720	MIN 10	CFSM 2.06	IN 28.02					

01183000 LITTLE RIVER AT OUTLET OF COBBLE MOUNTAIN RESERVOIR, NEAR WESTFIELD, MA

LOCATION.--Lat 42°07'34", long 72°53'37", Hampden County, Hydrologic Unit 01080206, at Cobble Mountain Dam, 7.5 mi (12.1 km) west of Westfield, and at mile 13.0 (20.9 km).

DRAINAGE AREA.--45.8 mi² (118.6 km²).

PERIOD OF RECORD.--Discharge: July 1905 to current year. Published as Westfield Little River near Blandford 1905-11, as Westfield Little River near Westfield 1912-35, and as Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield 1936-76.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 501: Drainage area. WDR MA-RI-80-1: 1979.

GAGE.--Venturi meters at outlet tunnel at powerhouse 2.4 mi (3.9 km) downstream. Prior to Mar. 1, 1910, non-recording gage at site 0.2 mi (0.3 km) upstream, and Mar. 1, 1910, to Sept. 30, 1935, water-stage recorder at diversion dam 2.8 mi (4.5 km) downstream.

REMARKS.--Discharge computed on basis of flow through venturi meters and flow over reservoir spillway or through bypass tunnel. Flow regulated by Borden Brook Reservoir since 1910 and Cobble Mountain Reservoir since August 1931 (Reservoirs in Connecticut River basin).

COOPERATION.--Records furnished by Springfield Board of Water Commissioners.

AVERAGE DISCHARGE.--72 years (water years 1911-82), 89.8 ft³/s (2.543 m³/s), 26.63 in/yr (676 mm/yr), adjusted for storage.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

Month	Meant	Per square mile†	Runoff in inches†
October	37.2	0.81	0.94
November	35.4	.77	.86
December	56.5	1.23	1.42
Calendar year 1981	55.4	1.21	16.42
January	80.4	1.76	2.02
February	127	2.77	2.90
March	163	3.56	4.09
April	275	6.00	6.70
May	56.4	1.23	1.42
June	366	7.99	8.92
July	17.2	.38	.43
August	1.60	.03	.04
September	1.70	.04	.04
Water year 1982.	101	2.21	29.80

† Adjusted for change in contents in Borden Brook and Cobble Mountain Reservoirs.

CONNECTICUT RIVER BASIN

01183450 GREAT BROOK NEAR WESTFIELD, MA

LOCATION.--Lat 42°05'18", long 72°43'24", Hampden County, Hydrologic Unit 01080206, on left bank 50 ft (15 m) downstream from bridge on Shaker Rd., 0.4 mi (0.6 km) downstream from Kellogg Brook, 1.4 mi (2.3 km) upstream from mouth, and 2.5 mi (4.0 km) southeast of center of Westfield.

DRAINAGE AREA.--29.2 mi² (75.6 km²).

PERIOD OF RECORD.--November 1972 to September 1982 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 135 ft (41.1 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Flow affected by diversion upstream for municipal supply of West Springfield. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--9 years (water years 1974-82), 35.8 ft³/s (1.014 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,930 ft³/s (54.7 m³/s) June 6, 1982, gage height, 8.27 ft (2.521 m), from rating curve extended above 270 ft³/s (7.6 m³/s); minimum, 1.7 ft³/s (0.048 m³/s) Sept. 11-13, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 240 ft³/s (6.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	--	300 8.5	ice jam	June 6	1215	a*1930 54.7	8.27 2.521

a From rating curve extended above 270 ft³/s (7.6 m³/s).

Minimum discharge, 4.9 ft³/s (0.14 m³/s) Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	13	13	24	78	27	63	43	36	33	16	24
2	13	13	56	42	120	24	56	40	80	27	14	23
3	11	12	58	45	200	23	58	38	74	24	13	17
4	7.8	12	33	64	270	24	142	37	41	23	13	13
5	6.8	12	24	150	170	33	98	34	136	21	13	12
6	6.5	13	21	120	110	29	56	33	1400	20	12	11
7	7.4	13	20	66	82	34	80	32	558	20	12	11
8	6.8	12	20	52	74	49	83	31	214	18	11	11
9	6.1	11	20	41	66	47	65	32	165	18	42	10
10	5.8	10	18	38	58	40	61	30	113	17	32	10
11	5.8	9.9	17	35	54	33	74	29	91	17	20	9.9
12	5.5	9.9	17	33	50	65	92	28	79	16	16	9.5
13	5.5	9.5	16	34	52	77	89	28	76	16	14	9.2
14	5.4	9.5	17	33	52	100	86	28	152	14	13	9.2
15	5.2	11	17	31	48	110	73	24	131	13	13	9.2
16	5.2	13	20	30	47	89	59	25	88	13	13	9.2
17	5.2	12	21	29	45	74	54	25	89	13	12	9.2
18	6.5	24	20	27	43	74	69	25	82	13	11	8.8
19	16	28	19	26	42	86	66	24	67	13	10	8.8
20	11	22	18	25	33	88	51	24	61	54	10	9.5
21	8.4	26	18	23	35	85	46	27	55	40	10	14
22	7.4	23	19	22	35	91	43	26	51	22	9.9	13
23	15	18	22	21	33	89	40	26	53	18	11	13
24	43	16	34	23	31	73	38	26	43	17	11	13
25	28	14	31	24	29	67	56	25	56	16	14	11
26	26	13	27	23	28	69	57	22	51	14	13	10
27	31	13	23	22	33	67	83	20	29	14	12	18
28	41	13	22	22	30	50	70	18	39	30	11	18
29	29	13	21	21	---	43	56	65	38	28	9.9	14
30	18	12	21	20	---	41	48	94	45	19	9.9	13
31	15	---	21	26	---	42	---	51	---	17	9.9	---
TOTAL	409.8	430.8	724	1192	1948	1843	1972	1010	4153	638	431.6	371.5
MEAN	13.2	14.4	23.4	38.5	69.6	59.5	65.7	32.6	138	20.6	13.9	12.4
MAX	43	28	58	150	270	110	142	94	1400	54	42	24
MIN	5.2	9.5	13	20	28	23	36	18	29	13	9.9	8.8
CAL YR 1981	TOTAL	6717.0	MEAN	18.4	MAX	220	MIN	2.4				
WTR YR 1982	TOTAL	15123.7	MEAN	41.4	MAX	1400	MIN	5.2				

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 (1.1 km) downstream from Great Brook, 3 mi (5 km) east of Westfield, and 8.1 mi (13.0 km) upstream from mouth.

DRAINAGE AREA.--497 mi² (1,287 km²).

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

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 (29.947 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records excellent except those for winter period, which are fair. Flow regulated by Borden Brook Reservoir, Cobble Mountain Reservoir since 1931, Knightville Reservoir since 1941, and Littleville Lake since 1965 (Reservoirs in Connecticut River basin). High flow slightly affected by retarding reservoirs since 1963. Diversion from Little River for municipal supply of Springfield. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--68 years, 918 ft³/s (26.00 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,300 ft³/s (1,990 m³/s) Aug. 19, 1955, gage height, 34.2 ft (10.42 m), from floodmarks, from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of computations of flow over dam at gage heights 27.20 ft (8.291 m), 29.40 ft (8.961 m), and 34.2 ft (10.42 m); minimum, 9 ft³/s (0.25 m³/s) Oct. 2, 1921; minimum daily, 40 ft³/s (1.13 m³/s) Dec. 28, 29, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,400 ft³/s (408 m³/s) June 6, gage height, 14.69 ft (4.478 m); minimum, 82 ft³/s (2.32 m³/s) Sept. 20; minimum daily, 105 ft³/s (2.97 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	449	306	450	832	687	3450	1450	875	1440	238	232
2	210	407	747	780	945	747	3570	1210	1140	989	299	213
3	229	374	1140	740	1890	714	3250	1200	1230	660	275	261
4	238	347	1000	1200	4500	708	5000	1060	1220	584	258	238
5	199	313	724	2800	4000	574	4210	965	2510	471	242	196
6	181	328	594	2090	2900	521	4320	878	13300	503	202	173
7	175	419	498	1740	2200	589	3890	815	9040	489	187	148
8	164	419	517	1180	2300	797	3510	752	6050	485	170	135
9	210	363	480	832	2100	681	2300	714	5740	411	390	123
10	205	310	436	639	1800	687	1520	687	5430	332	462	138
11	175	306	367	634	1600	671	1700	574	4670	288	275	116
12	161	278	432	609	1500	826	2140	454	2270	436	205	121
13	153	268	330	569	1100	1060	2250	594	2080	432	199	105
14	138	251	310	604	797	1430	2360	681	3980	313	161	111
15	148	275	340	584	714	1570	2830	494	3710	355	170	111
16	138	310	390	569	885	1480	3080	462	3360	403	167	107
17	135	339	390	564	1090	1550	3490	449	3190	248	151	111
18	143	485	420	614	1000	1360	4700	419	2060	217	167	118
19	395	614	400	671	730	1340	3170	454	1510	370	151	121
20	467	535	360	569	735	1320	3170	428	1260	526	153	167
21	332	687	370	507	747	1500	4010	424	1130	428	153	148
22	242	629	380	489	719	1620	4970	386	995	321	125	161
23	313	531	500	471	714	1680	3970	378	983	251	138	193
24	786	436	700	507	697	1390	2550	780	965	226	143	181
25	758	403	660	489	873	1730	1810	964	803	190	167	184
26	660	317	600	535	741	2880	1580	803	703	265	167	167
27	1050	367	580	676	507	2910	2840	594	609	205	161	205
28	1190	415	560	458	503	2520	2720	458	703	343	159	223
29	996	415	540	476	---	2550	2590	957	792	958	133	205
30	714	351	520	436	---	2170	2170	1560	1450	832	143	175
31	512	---	430	449	---	2010	---	1120	---	458	116	---
TOTAL	11560	11941	16021	23931	39119	42272	93120	23164	83758	14429	6127	4887
MEAN	373	398	517	772	1397	1364	3104	747	2792	465	198	163
MAX	1190	687	1140	2800	4500	2910	5000	1560	13300	1440	462	261
MIN	135	251	306	436	503	521	1520	378	609	190	116	105
CAL YR 1981	TOTAL	218037	MEAN	597	MAX	6680	MIN	79				
WTR YR 1982	TOTAL	370329	MEAN	1015	MAX	13300	MIN	105				

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT
(National stream-quality accounting network station)

LOCATION.--Lat 41°59'14", long 72°36'21", Hartford County, Hydrologic Unit 01080205, on right bank just upstream from Enfield Dam, 1 mi (2 km) downstream from Thompsonville, 3 mi (5 km) downstream from Massachusetts-Connecticut State line, and at mile 68.2 (109.7 km).

DRAINAGE AREA.--9,661 mi² (25,022 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 741: 1932. WSP 891: Drainage area. WDR CT-77-1: 1976.

GAGE.--Water-stage recorders on river and on canal of Connecticut Light and Power Co. Datum of gage is 38.48 ft (11.729 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Discharge includes water diverted around station by canal of Connecticut Light and Power Co. Flow regulated by powerplants, by diversion from Chicopee River basin, and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs, Quabbin Reservoir (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 107 billion cu ft (3.03 billion cu m).

AVERAGE DISCHARGE.--54 years, 16,380 ft³/s (463.9 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 282,000 ft³/s (7,990 m³/s) Mar. 20, 1936, gage height, 16.6 ft (5.06 m), from floodmarks; minimum daily, 968 ft³/s (27.4 m³/s) Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 108,000 ft³/s (3,060 m³/s) Apr. 19, gage height, 6.63 ft (2.021 m); minimum daily, 2,320 ft³/s (65.7 m³/s) Aug. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17200	45600	14800	12000	6820	4100	35200	59000	7380	32600	6650	5800
2	16400	33700	16800	11000	11800	6700	52100	50800	14100	26200	5970	6290
3	15300	25400	17900	10700	15400	6610	54500	45500	17400	19300	7180	7160
4	15200	24700	17500	13600	21100	7680	56400	44300	19200	17700	6630	8050
5	15700	24400	16200	21900	23100	8240	60800	37700	24700	11200	6860	4090
6	15400	16400	15700	23800	22800	5580	47800	30500	58800	8700	5690	3200
7	15700	15500	15000	21700	22600	5720	35100	28000	64500	11100	4390	2940
8	15800	20000	15400	19900	19400	7250	28800	25200	46000	12600	3550	4210
9	15200	19000	15500	17800	16400	8490	25300	26100	38800	11200	5900	4020
10	13900	16900	13700	15400	18000	7680	24000	24500	32800	7910	12000	3720
11	13900	16400	12100	18700	17100	6550	26500	25800	25300	6340	12100	4260
12	9300	15300	12400	18200	16000	8560	23500	26500	17400	8950	8120	3320
13	10200	14800	11300	14400	14200	9850	25400	24300	15500	8390	6460	5000
14	10600	14900	16400	13700	13600	9930	25700	21000	19200	7180	6470	5060
15	10700	14100	13100	12300	11100	11100	28700	17200	21700	6920	3840	5700
16	11300	12700	15900	12700	8750	13000	32700	13500	21100	7420	3520	4920
17	9380	13400	15600	72600	10800	15700	45600	11400	21400	6860	4950	3690
18	9030	15600	13700	11300	10900	15500	69300	13600	20500	4710	5860	4830
19	11900	17800	13400	11500	10200	15200	103000	13500	17200	4780	6800	3920
20	13100	18100	11800	12800	9440	14100	103000	14200	16000	8390	4340	5330
21	16400	20600	8900	13200	8250	13500	97400	14300	14100	7970	3300	6100
22	17900	24500	11300	14800	7980	13800	100000	15300	14900	7540	2930	6320
23	17500	19900	12600	13200	8020	17400	97400	14900	14800	6520	2510	5760
24	19900	17700	14600	8320	6750	18400	86600	13700	16100	5240	3290	2990
25	22600	18700	14600	8370	7110	17300	72800	17000	16400	4050	8450	2500
26	25300	18600	12000	10600	7020	21300	65900	16100	16000	3890	8600	2590
27	26700	15400	10500	11300	6410	36300	73800	15600	15100	4720	4090	3980
28	40400	14700	10800	10700	5320	35400	80100	16700	13100	6200	3530	5530
29	52900	15100	11400	10200	---	25900	81900	14300	13100	9480	2920	8040
30	60700	14800	11700	9160	---	23900	72200	14000	22800	10100	2320	6410
31	59500	---	11300	6970	---	24900	---	10500	---	8400	4230	---
TOTAL	625010	574700	423900	482820	356370	435640	1731500	715000	675380	302560	173450	143730
MEAN	20160	19160	13670	15570	12730	14050	57720	23060	22510	9760	5595	4791
MAX	60700	45600	17900	72600	23100	36300	103000	59000	64500	32600	12100	8050
MIN	9030	12700	8900	6970	5320	4100	23500	10500	7380	3890	2320	2500
CAL YR 1981	TOTAL	6083020	MEAN	16670	MAX	111000	MIN	2100				
WTR YR 1982	TOTAL	6640060	MEAN	18190	MAX	103000	MIN	2320				

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: October 1955 to September 1956, October 1973 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1973.

REMARKS.--Interruptions in the record are due to malfunctions of the instrument. Instantaneous records are representative of the cross section while continuous records are based on point samples. The instantaneous record values will not necessarily fall within the corresponding daily range of the continuous records.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 219 micromhos Oct. 18, 1981; minimum, 46 micromhos Apr. 2, 1977.

WATER TEMPERATURES: Maximum, 36.5°C Aug. 30, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 219 micromhos Oct. 18; minimum, 76 micromhos Apr. 6.

WATER TEMPERATURES: Maximum, 28.0°C July 19-20, 27; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 28...	0920	37300	79	6.4	11.0	7.0	16	11.5	100	980	6500	31
NOV 17...	0915	12400	120	6.9	6.5	3.0	15	10.6	87	10000	4600	40
DEC 17...	0930	16000	145	6.9	1.0	4.0	5	12.4	87	1600	4600	--
JAN 15...	1045	12600	121	6.7	.5	2.0	10	12.9	90	7000	5000	34
FEB 16...	0915	8780	124	6.8	.5	2.0	17	12.7	88	7000	3400	--
MAR 17...	1015	15900	114	6.4	3.0	3.0	8	13.2	98	600	600	27
APR 13...	0930	25100	94	6.8	3.5	3.0	6	12.6	94	440	240	27
MAY 22...	1350	100000	66	6.5	7.0	--	--	--	--	--	--	--
MAY 13...	1025	26200	89	7.1	15.0	2.0	1	9.9	97	560	120	29
JUN 17...	0930	21600	88	6.8	16.5	4.0	--	9.5	98	1000	2600	--
JUL 13...	0930	8100	114	7.2	24.5	2.1	8	8.4	100	600	180	39
AUG 10...	0900	11600	135	6.6	24.5	3.0	19	6.8	80	4400	2600	--
SEP 03...	1500	6370	145	6.7	22.0	1.4	15	8.4	115	680	150	46

DATE	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD- SORP- TION RATIO	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT 28...	8	9.9	1.6	--	--	--	--	23	9.6	6.8	--
NOV 17...	11	13	1.8	6.5	26	.5	1.1	29	13	9.5	<.1
DEC 17...	--	--	--	--	--	--	--	--	12	14	--
JAN 15...	11	11	1.7	7.0	30	.5	1.1	23	12	9.5	<.1
FEB 16...	--	--	--	--	--	--	--	--	11	13	--
MAR 17...	9	8.5	1.5	7.2	35	.6	1.1	18	12	12	<.1
APR 13...	0	8.2	1.5	--	--	--	--	38	8.0	9.4	--
MAY 22...	--	--	--	--	--	--	.8	--	--	--	--
MAY 13...	8	9.3	1.3	5.6	29	.5	1.0	21	9.0	6.4	<.1
JUN 17...	--	--	--	--	--	--	--	--	11	9.7	--
JUL 13...	10	13	1.7	6.9	27	.5	1.2	29	10	9.3	.1
AUG 10...	--	--	--	--	--	--	--	--	11	12	--
SEP 03...	14	15	2.0	11	34	.7	1.4	32	15	12	.1

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 28...	5.8	60	--	.08	6040	65	.32	.010	.33	--	.060
NOV 17...	6.5	74	69	.10	2480	85	--	<.010	.39	.38	.130
DEC 17...	--	86	--	.12	3720	93	.48	.010	.49	--	.320
JAN 15...	6.8	77	63	.10	2620	79	--	<.010	.47	.46	.160
FEB 16...	--	--	--	--	--	58	.49	.030	.52	--	.170
MAR 17...	6.1	64	59	.09	2750	87	--	<.010	.47	.43	.100
APR 13...	5.7	54	--	.07	3660	84	--	<.010	.38	--	.070
MAY 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	5.0	--	50	.07	3540	73	.43	.010	.44	.41	.070
JUN 17...	--	62	--	.08	3620	67	<.34	<.010	.35	--	.130
JUL 13...	3.3	62	63	.08	1360	83	.35	.010	.36	.41	.090
AUG 10...	--	82	--	.11	2570	108	.48	.020	.50	--	.080
SEP 03...	4.0	99	80	.13	1700	98	.50	.020	.52	.52	.170

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	SEDI- MENT, SUB- PENDEED (MG/L)	SEDI- MENT, DIS- CHARGE, SUB- PENDEED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	--	.49	.55	.88	.060	.010	5.0	.00	--	--	--
NOV 17...	.140	.26	.39	.78	.100	.040	3.5	--	16	536	100
DEC 17...	--	.62	.94	1.4	.040	.020	3.3	--	--	--	--
JAN 15...	.160	.33	.49	.96	.060	.050	1.4	.00	10	340	100
FEB 16...	--	.03	.20	.72	.050	.030	2.2	--	--	--	--
MAR 17...	.080	.22	.32	.79	.040	.020	2.3	--	10	429	100
APR 13...	--	.32	.39	.77	.060	.040	2.7	.10	--	--	--
MAY 22...	--	--	--	--	--	--	--	--	--	--	--
MAY 13...	.070	.35	.42	.86	.060	.020	3.4	--	14	990	87
JUN 17...	--	.57	.70	1.1	.060	.030	5.0	--	--	--	--
JUL 13...	.080	.71	.80	1.2	.050	.020	3.5	.03	7	153	100
AUG 10...	--	.72	.80	1.3	.140	.100	3.0	--	--	--	--
SEP 03...	.160	.33	.50	1.0	.120	.090	3.7	--	3	52	100

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	ARSENIC TOTAL (UG/L AS AS)		ARSENIC SUS- PENDED TOTAL (UG/L AS AS)		ARSENIC DIS- SOLVED (UG/L AS AS)		BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)		BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)		BARIUM, DIS- SOLVED (UG/L AS BA)		CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)		CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)		CADMIUM DIS- SOLVED (UG/L AS CD)		CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	
OCT 28...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	--	<1	--	13	--
NOV 17...	1	1	0	100	80	17	<1	--	<1	--	<1	--	1	--	1	10	12	2	1	10
DEC 17...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	1	1	1	1	10
JAN 15...	1	1	0	<100	--	17	1	--	<1	--	1	0	1	1	10	12	2	1	10	10
FEB 16...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	1	1	1	1	10
MAR 17...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	1	1	1	1	10
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	1	1	1	1	10
MAY 13...	1	0	1	<100	--	15	1	0	1	10	12	2	1	1	10	12	2	1	10	10
JUN 17...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	1	1	1	1	10
JUL 13...	1	0	1	100	80	23	<1	--	<1	--	<1	--	<1	--	<1	24	2	1	10	10
AUG 10...	--	--	--	--	--	--	--	--	--	--	--	--	<1	--	--	<1	24	2	1	10
SEP 03...	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	<1	2	1	10	10

DATE	CHRO- MIUM, SUS- PENDED RECOV. (UG/L AS CR)		CHRO- MIUM, DIS- SOLVED (UG/L AS CR)		COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)		COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)		COBALT, DIS- SOLVED (UG/L AS CO)		COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)		COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)		COPPER, DIS- SOLVED (UG/L AS CU)		IRON, TOTAL RECOV- ERABLE (UG/L AS FE)		IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	
OCT 28...	--	<1	--	--	--	--	--	--	--	13	--	3	1000	--	--	--	--	--	--	--
NOV 17...	10	10	<1	--	<1	13	6	7	410	260	--	--	--	--	--	--	--	--	--	--
DEC 17...	--	<1	--	--	--	--	--	--	--	9	--	3	340	--	--	--	--	--	--	--
JAN 15...	0	10	1	0	1	7	5	2	250	140	--	--	--	--	--	--	--	--	--	--
FEB 16...	--	<1	--	--	--	--	--	--	--	8	--	3	300	--	--	--	--	--	--	--
MAR 17...	--	1	--	--	--	--	--	--	--	8	--	3	470	--	--	--	--	--	--	--
APR 13...	--	<1	--	--	--	--	--	--	--	13	--	6	350	--	--	--	--	--	--	--
MAY 13...	--	<10	4	--	<1	5	0	5	580	520	--	--	--	--	--	--	--	--	--	--
JUN 17...	--	<1	--	--	--	--	--	--	--	8	--	5	640	--	--	--	--	--	--	--
JUL 13...	--	<10	2	--	<1	8	0	8	310	260	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	3	--	--	--	--	--	--	--	8	--	4	470	--	--	--	--	--	--	--
SEP 03...	--	1	--	--	--	--	--	--	--	11	--	9	220	--	--	--	--	--	--	--

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)
OCT 28...	110	9	2	--	--	19	--	--	--	5
NOV 17...	150	4	<1	60	20	38	<.1	--	.2	5
DEC 17...	--	5	<1	--	--	--	--	--	--	4
JAN 15...	110	<1	<1	40	2	38	.2	.0	.2	5
FEB 16...	--	4	1	--	--	--	--	--	--	5
MAR 17...	--	8	<1	--	--	--	--	--	--	3
APR 13...	62	4	2	--	--	23	--	--	--	3
MAY 13...	60	8	<1	40	20	23	.2	--	<.1	3
JUN 17...	--	3	2	--	--	--	--	--	--	5
JUL 13...	51	6	<1	30	30	4	.2	.0	.2	5
AUG 10...	--	5	3	--	--	--	--	--	--	6
SEP 03...	--	3	1	--	--	--	--	--	--	3

DATE	NICKEL, SUS- PENDE RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 28...	--	4	--	--	--	--	90	--	10
NOV 17...	0	10	<1	<1	<1	<1	50	40	8
DEC 17...	--	1	--	--	--	--	50	--	20
JAN 15...	3	2	<1	<1	2	<1	50	40	15
FEB 16...	--	3	--	--	--	--	10	--	20
MAR 17...	--	5	--	--	--	--	20	--	20
APR 13...	--	3	--	--	--	--	10	--	10
MAY 13...	2	1	<1	<1	<1	<1	40	--	3
JUN 17...	--	3	--	--	--	--	10	--	10
JUL 13...	3	2	<1	<1	<1	<1	40	30	9
AUG 10...	--	3	--	--	--	--	10	--	10
SEP 03...	--	3	--	--	--	--	10	--	20

DATE	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
NOV 17...	<2.0	<.4	--	2.8	2.6	.5	.06	.14
APR 22...	<.9	3.9	2.7	1.0	1.0	2.4	.05	.08

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	164	158	161	81	80	80	109	107	108	142	124	128
2	170	157	163	82	80	81	119	108	113	182	147	165
3	184	172	181	86	82	85	116	111	114	182	143	153
4	192	182	185	87	86	86	111	106	108	159	133	144
5	202	193	199	90	87	88	105	101	103	185	115	149
6	210	201	206	104	90	97	110	104	107	114	104	108
7	202	193	196	107	105	106	115	111	113	104	98	100
8	196	192	194	105	99	101	120	115	117	106	101	104
9	193	187	191	103	100	101	124	120	122	112	106	109
10	192	187	190	108	103	105	121	117	119	113	97	109
11	195	191	192	109	106	107	123	120	121	114	99	105
12	195	185	189	109	106	107	124	119	121	118	113	116
13	188	182	185	114	108	111	123	120	122	121	117	119
14	200	185	193	116	113	114	126	123	124	122	119	120
15	198	193	196	116	112	114	138	123	127	122	121	121
16	204	194	200	119	115	117	149	138	143	122	119	121
17	216	204	212	124	120	122	146	135	140	123	120	121
18	219	216	218	128	120	124	139	135	136	128	113	123
19	217	201	210	121	115	118	141	133	137	131	128	129
20	197	174	181	116	113	114	134	127	131	127	121	124
21	174	160	166	117	110	114	138	135	137	125	122	124
22	160	141	149	110	106	107	138	135	137	126	120	123
23	146	137	143	109	105	107	157	134	140	121	117	119
24	135	129	131	111	109	110	165	145	155	130	121	125
25	129	114	121	111	105	108	151	128	134	140	132	137
26	112	105	108	105	102	104	129	126	128	140	125	134
27	105	100	103	111	104	106	129	127	128	126	122	124
28	99	90	95	114	110	111	138	129	133	125	120	122
29	91	85	88	114	110	112	167	140	151	---	---	---
30	88	77	82	111	108	109	170	146	158	---	---	---
31	82	77	79	---	---	---	147	129	136	---	---	---
MONTH	219	77	165	128	80	106	170	101	128	185	97	124
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	131	125	129	98	91	94	83	78	81
2	---	---	---	128	119	123	92	86	89	85	83	84
3	---	---	---	129	122	125	88	83	85	85	84	85
4	---	---	---	124	114	119	89	79	83	87	85	86
5	---	---	---	168	114	126	80	78	79	91	87	89
6	---	---	---	193	163	175	79	76	78	94	91	92
7	---	---	---	171	139	153	81	77	79	96	93	94
8	---	---	---	150	138	144	88	80	83	100	96	98
9	---	---	---	137	127	132	96	90	93	101	99	100
10	---	---	---	134	126	129	107	97	101	104	101	102
11	99	96	98	136	132	135	107	106	106	105	104	104
12	99	95	97	137	129	132	110	107	108	106	103	105
13	102	98	100	131	124	127	108	103	105	109	105	107
14	113	102	105	127	119	123	107	104	106	111	108	109
15	110	103	106	119	109	113	105	100	103	112	108	109
16	132	111	123	108	104	106	101	98	100	116	111	114
17	131	108	119	111	104	106	101	98	99	122	117	119
18	107	104	105	113	110	112	97	91	94	124	120	121
19	110	104	106	113	110	111	92	86	88	123	120	121
20	133	111	119	112	108	109	87	83	85	123	121	122
21	141	133	137	109	105	106	86	84	85	125	122	123
22	132	122	126	106	104	105	86	83	84	124	121	122
23	121	113	116	105	103	104	86	83	84	124	121	122
24	119	116	117	105	103	104	87	84	86	129	124	126
25	121	114	118	104	101	103	89	86	88	129	122	125
26	117	110	114	102	93	97	90	87	88	122	120	121
27	117	111	114	92	90	91	92	87	90	120	117	119
28	123	117	121	91	90	91	113	80	87	119	116	118
29	---	---	---	92	89	90	81	78	80	125	119	121
30	---	---	---	93	90	91	79	78	79	121	113	117
31	---	---	---	97	94	95	---	---	---	117	114	115
MONTH	141	95	113	193	89	116	113	76	90	129	78	109

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	121	112	118	106	95	99	---	---	---	144	138	141
2	120	116	119	105	95	100	---	---	---	144	139	141
3	119	116	118	102	99	100	---	---	---	142	135	139
4	116	110	114	104	101	103	---	---	---	144	136	142
5	110	100	107	110	102	103	---	---	---	146	144	145
6	99	83	88	114	105	109	---	---	---	146	141	144
7	89	83	86	114	106	110	140	137	139	145	143	144
8	90	87	88	113	104	107	140	138	139	146	144	145
9	89	88	88	102	97	99	139	122	133	146	144	145
10	92	88	90	105	93	100	137	127	132	147	141	145
11	95	89	92	110	93	103	130	122	126	151	135	146
12	105	93	98	114	102	108	128	124	125	144	136	141
13	108	105	107	117	106	112	134	127	131	151	147	149
14	107	99	103	118	105	110	143	134	140	155	151	153
15	101	97	99	112	104	107	139	137	137	154	148	152
16	103	96	99	110	103	107	140	137	138	152	148	150
17	104	101	102	112	96	105	141	135	138	149	147	148
18	107	102	105	103	92	99	143	135	139	152	148	150
19	112	105	108	99	91	97	145	136	139	152	148	150
20	115	112	113	116	103	111	142	134	138	152	148	150
21	118	113	115	113	106	109	142	135	138	156	150	153
22	122	117	120	109	106	107	143	138	140	151	145	148
23	123	121	122	116	107	111	143	137	139	148	141	145
24	122	119	121	118	108	113	146	139	142	145	143	144
25	119	117	118	120	115	118	147	139	143	147	142	144
26	120	118	119	120	117	119	148	134	140	152	148	149
27	121	119	120	125	119	122	139	133	136	154	149	151
28	131	120	124	133	118	123	140	134	137	152	143	148
29	135	129	131	137	128	132	139	135	137	145	141	143
30	133	108	124	130	118	123	140	83	133	143	137	140
31	---	---	---	118	115	117	144	140	142	---	---	---
MONTH	135	83	109	137	91	109	148	83	137	156	135	146
YEAR	219	76	121									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	14.5	14.0	14.0	9.0	9.0	9.0	3.5	3.0	3.5	1.0	.5	1.0
2	14.0	14.0	14.0	9.5	8.5	9.0	3.5	3.0	3.5	1.0	.5	.5
3	14.0	14.0	14.0	9.5	9.0	9.5	3.5	3.0	3.5	.5	.5	.5
4	14.0	13.5	14.0	9.5	8.5	9.0	4.0	3.0	3.5	1.0	.5	.5
5	14.0	13.5	14.0	9.5	8.5	9.0	3.5	3.0	3.5	1.0	.5	1.0
6	14.0	13.5	13.5	9.5	9.0	9.0	3.0	2.5	2.5	1.0	.0	.5
7	13.5	13.0	13.0	9.5	8.5	9.0	2.5	2.0	2.5	1.5	1.0	1.0
8	13.0	12.5	13.0	8.5	8.0	8.5	2.5	2.0	2.5	1.5	.5	1.0
9	13.0	12.5	12.5	8.5	7.5	8.0	2.5	2.0	2.5	.5	.5	.5
10	12.5	12.0	12.5	8.0	7.0	7.5	2.5	2.0	2.0	.5	.0	.0
11	12.5	11.5	12.0	7.5	7.5	7.5	2.5	2.0	2.0	.5	.0	.0
12	12.5	12.0	12.0	7.5	7.0	7.0	2.5	2.0	2.5	.5	.0	.5
13	12.5	11.5	12.0	7.0	7.0	7.0	2.0	2.0	2.0	.5	.0	.5
14	12.5	12.0	12.5	7.0	6.5	6.5	2.0	1.5	1.5	.5	.0	.5
15	12.5	12.0	12.0	7.0	6.5	7.0	2.0	1.5	2.0	1.0	.5	.5
16	12.5	12.0	12.5	7.5	7.0	7.0	2.0	1.5	2.0	.5	.5	.5
17	12.5	11.5	12.0	8.0	7.5	7.5	2.0	1.5	1.5	.5	.0	.5
18	12.0	11.5	12.0	8.0	8.0	8.0	1.5	1.0	1.5	.5	.0	.5
19	12.0	11.5	12.0	8.0	7.5	7.5	1.5	1.0	1.0	.5	.5	.5
20	11.5	11.0	11.5	8.0	7.5	7.5	.5	.5	.5	.5	.5	.5
21	11.5	11.0	11.0	7.5	7.0	7.5	.5	.5	.5	.5	.5	.5
22	12.0	11.0	11.5	7.0	6.5	7.0	1.0	.5	.5	.5	.0	.5
23	12.0	11.5	11.5	6.5	6.0	6.0	1.5	1.0	1.0	.5	.0	.5
24	12.0	11.0	11.5	6.0	5.5	6.0	1.5	1.0	1.0	.5	.0	.5
25	11.0	10.5	10.5	5.5	4.5	5.0	1.0	.5	.5	.5	.0	.5
26	10.5	10.0	10.5	5.0	4.0	4.5	1.0	.5	.5	.5	.5	.5
27	10.5	10.0	10.5	5.0	4.5	4.5	1.5	.5	1.0	.5	.5	.5
28	10.5	10.5	10.5	5.0	4.5	5.0	1.5	1.0	1.0	.5	.5	.5
29	10.5	10.0	10.5	4.5	4.0	4.0	1.5	1.5	1.5	---	---	---
30	10.0	9.5	9.5	4.0	3.5	3.5	1.5	1.0	1.5	---	---	---
31	9.5	9.0	9.5	---	---	---	1.5	.5	1.0	---	---	---
MONTH	14.5	9.0	12.0	9.5	3.5	7.0	4.0	.5	2.0	1.5	.0	.5

CONNECTICUT RIVER BASIN

01185100 FALL RIVER BELOW OTIS RESERVOIR, NEAR OTIS, MA

LOCATION---Lat 42°09'42", long 73°03'48", Berkshire County, Hydrologic Unit 01080207, on right bank 0.4 mi (0.6 km) downstream from Otis Reservoir, 0.5 mi (0.8 km) upstream from mouth, and 2.6 mi (4.2 km) southeast of Otis.

DRAINAGE AREA--16.5 mi² (42.7 km²).

PERIOD OF RECORD--August 1969 to September 1982 (discontinued).

GAGE--Water-stage recorder. Altitude of gage is 1,260 ft (384 m), from topographic map.

REMARKS--Records good. Flow regulated by Otis Reservoir (Reservoirs in Connecticut River basin). Several observations of water temperature were made during the year.

AVERAGE DISCHARGE--13 years, 37.7 ft³/s (1.068 m³/s).

EXTREMES FOR PERIOD OF RECORD--Maximum discharge, 422 ft³/s (12.0 m³/s) July 2, 1972, gage height, 5.41 ft (1.649 m); minimum daily, 0.68 ft³/s (0.019 m³/s) June 20, 1973.

EXTREMES FOR CURRENT YEAR--Maximum discharge, 351 ft³/s (9.94 m³/s) June 6, gage height, 5.09 ft (1.551 m); maximum gage height 5.18 ft (1.579 m) June 7 (backwater from log); minimum daily discharge, 1.6 ft³/s (0.045 m³/s) Sept. 15-19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	102	90	3.3	4.1	4.8	48	3.4	2.4	6.9	6.9	2.0
2	2.2	102	90	75	4.1	4.8	47	3.1	4.5	6.1	6.3	2.0
3	2.2	102	90	112	5.9	4.8	48	2.8	3.4	5.5	5.3	2.0
4	2.3	102	26	113	7.2	4.8	30	2.7	2.8	5.1	4.8	1.9
5	2.3	102	3.6	114	5.7	4.8	17	2.5	8.6	4.8	4.1	1.9
6	2.4	101	3.4	114	5.0	4.8	16	2.4	153	4.1	3.6	1.9
7	2.4	101	3.4	114	4.3	4.8	14	2.2	347	4.0	3.1	1.9
8	2.3	101	3.4	92	3.9	5.0	56	2.2	345	3.7	2.8	1.9
9	2.3	99	3.3	4.0	3.7	5.0	88	2.1	334	3.2	3.6	1.8
10	2.4	99	3.3	4.0	3.4	5.0	126	2.1	140	3.0	3.9	1.7
11	2.4	99	3.3	4.0	3.3	5.0	185	2.0	17	3.1	3.1	1.7
12	2.4	99	3.3	4.0	3.3	5.0	225	2.0	5.7	2.6	2.6	1.7
13	2.5	98	3.3	3.9	3.1	5.0	233	2.0	6.5	2.3	2.3	1.7
14	2.4	98	3.0	3.6	5.0	38	233	1.9	23	2.2	2.2	1.7
15	2.3	98	3.0	3.3	2.9	105	233	1.9	70	2.1	2.2	1.6
16	79	98	3.3	3.2	2.9	119	170	1.8	91	2.1	2.2	1.6
17	183	98	52	3.2	2.9	119	124	1.8	129	2.1	2.2	1.6
18	182	98	93	3.1	2.9	119	50	1.9	132	2.0	2.2	1.6
19	111	98	92	3.1	24	119	9.2	2.0	124	2.0	2.2	1.6
20	37	96	92	3.0	71	119	7.6	2.1	121	5.1	2.1	1.7
21	3.0	96	44	3.0	84	119	7.2	2.1	115	5.7	2.1	1.7
22	2.8	94	3.2	3.4	84	117	6.1	2.0	87	4.5	2.1	1.7
23	34	94	3.3	3.9	86	117	5.5	2.2	5.9	3.6	2.1	1.7
24	180	93	3.3	3.9	86	117	5.1	2.4	5.9	3.1	2.1	1.8
25	163	92	3.3	3.6	86	65	4.5	2.4	5.9	2.8	2.0	1.8
26	3.9	92	3.3	3.4	36	44	5.0	2.2	6.3	2.5	1.8	1.8
27	3.7	92	3.3	3.4	5.0	45	7.2	2.1	7.2	2.3	1.8	75
28	3.7	91	3.3	3.4	4.8	44	6.1	2.0	138	7.4	1.8	1.9
29	3.3	91	3.3	3.4	---	44	5.1	3.4	164	8.6	1.8	1.8
30	71	90	3.3	3.4	---	44	4.1	3.2	115	7.4	1.7	1.8
31	102	---	3.2	3.4	---	44	---	2.8	---	6.7	1.7	---
TOTAL	1197.2	2916	741.4	817.9	638.4	1601.6	2015.7	71.7	2710.1	126.6	88.7	126.5
MEAN	38.6	97.2	23.9	26.4	22.8	51.7	67.2	2.31	90.3	4.08	2.86	4.22
MAX	183	102	93	114	86	119	233	3.4	347	8.6	6.9	75
MIN	2.0	90	3.0	3.0	2.9	4.8	4.1	1.8	2.4	2.0	1.7	1.6
CAL YR 1981	TOTAL	8764.4	MEAN	24.0	MAX	284	MIN	1.5				
WTR YR 1982	TOTAL	13051.8	MEAN	35.8	MAX	347	MIN	1.6				

01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA

LOCATION.--Lat 42°04'45", long 73°04'24", Berkshire County, Hydrologic Unit 01080207, on left bank 5 ft (1.5 m) downstream from highway bridge, 0.3 mi (0.5 km) downstream from Clam River, 1 mi (1.6 km) south of New Boston, and at mile 65.0 (104.6 km).

DRAINAGE AREA.--92.0 mi² (238.3 km²).

PERIOD OF RECORD.--May 1913 to current year. Prior to October 1948, published as Farmington River near New Boston.

REVISED RECORDS.--WSP 641: 1924(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1231: 1914.

GAGE.--Water-stage recorder. Datum of gage is 758.21 ft (231.102 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of doubtful gage-height record, July 1 to Sept. 7, which are fair. Flow regulated by Otis Reservoir 7.0 mi (11.3 km) upstream on Fall River (Reservoirs in Connecticut River basin). High flow slightly affected by retarding reservoirs since 1966. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--69 years, 182 ft³/s (5.154 m³/s), 26.87 in/yr (682 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,300 ft³/s (971 m³/s) Aug. 19, 1955, gage height, 14.06 ft (4.285 m), from rating curve extended above 9,600 ft³/s (270 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 20, 21, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,340 ft³/s (66.3 m³/s) June 6, gage height, 6.74 ft (2.054 m); maximum gage height, 6.80 ft (2.073 m) Feb. 3 (ice jam); minimum daily discharge, 10 ft³/s (0.28 m³/s) Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	175	138	120	230	96	880	241	156	214	49	24
2	49	165	287	230	350	94	716	190	365	148	40	34
3	45	158	279	240	580	92	720	166	240	111	33	38
4	37	153	195	350	930	103	1220	169	182	90	28	29
5	33	147	128	596	636	147	730	141	812	73	25	23
6	38	156	100	430	450	119	483	125	2070	61	22	19
7	75	168	89	330	310	112	398	101	1630	52	20	18
8	87	161	96	250	250	182	405	98	1050	49	19	16
9	89	153	85	130	200	174	389	102	777	44	26	15
10	83	147	72	115	180	161	380	93	504	38	30	14
11	67	143	82	105	160	126	417	85	277	35	26	13
12	63	139	76	100	155	166	461	79	211	33	22	12
13	60	134	64	105	155	205	483	75	225	33	20	12
14	60	132	66	100	155	291	577	71	649	30	18	11
15	58	137	70	98	150	342	620	65	449	27	17	11
16	108	141	80	92	146	336	609	59	415	25	15	12
17	204	142	120	86	141	327	684	56	584	24	16	11
18	200	194	160	82	135	309	1090	52	463	22	16	11
19	228	187	145	80	148	314	794	50	366	21	14	10
20	143	193	150	76	187	326	579	74	378	77	14	11
21	75	220	105	73	192	348	493	95	308	63	14	19
22	56	209	78	70	185	382	406	70	257	42	13	17
23	125	201	92	69	182	401	328	77	188	32	13	19
24	385	213	160	74	170	421	288	113	159	27	13	22
25	301	169	130	74	163	474	255	106	133	24	17	18
26	170	152	110	71	141	680	267	89	112	21	22	15
27	210	156	94	68	108	551	597	75	100	19	17	81
28	263	156	90	66	95	407	428	68	370	78	15	25
29	160	150	80	64	---	354	342	295	428	96	13	21
30	168	141	80	62	---	341	283	251	504	66	12	19
31	191	---	92	70	---	429	---	194	---	56	11	---
TOTAL	3850	4892	3593	4476	6884	8810	16322	3525	14362	1731	630	600
MEAN	124	163	116	144	246	284	544	114	479	55.8	20.3	20.0
MAX	385	220	287	596	930	680	1220	295	2070	214	49	81
MIN	19	132	64	62	95	92	255	50	100	19	11	10
MEAN†	111	93.0	116	152	276	279	590	132	514	57.3	17.5	15.6
CFSM†	1.21	1.01	1.26	1.65	3.00	3.03	6.41	1.43	5.59	.62	.19	.17
IN†	1.39	1.13	1.45	1.91	3.12	3.50	7.16	1.65	6.23	.72	.22	.19
CAL YR 1981 TOTAL	46581		MEAN 128	MAX 2000	MIN 12	MEAN† 128	CFSM† 1.39	IN† 18.93				
WTR YR 1982 TOTAL	69675		MEAN 191	MAX 2070	MIN 10	MEAN† 194	CFSM† 2.11	IN† 28.67				

† Adjusted for change in contents in Otis Reservoir.

Reservoirs in Connecticut River basin

- 01127850; 01128000. FIRST CONNECTICUT AND SECOND CONNECTICUT LAKES on Connecticut River are operated as a unit for storage of water for power and are used for recreation. The downstream order and usable capacity of each are as follows: Second Lake, 12 mi (19 km) northeast of Pittsburg, NH, 506,000,000 ft³ (14,300,000 m³); First Lake, 5.6 mi (9.0 km) northeast of Pittsburg, NH, 3,330,000,000 ft³ (94,300,000 m³). Records furnished by New England Power Co.
01129000. LAKE FRANCIS on Connecticut River at Pittsburg, NH, completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft³ (122,500,000 m³). Records furnished by New Hampshire Water Resources Board.
- 01132000; 01132500. MOORE AND COMERFORD RESERVOIRS on Connecticut River are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Moore Reservoir, 4.5 mi (7.2 km) northwest of Littleton, NH, filled in April 1956, 4,970,000,000 ft³ (141,000,000 m³); Comerford Reservoir, 5 mi (8 km) northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft³ (36,220,000 m³). Records furnished by New England Power Co.
01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi (0.5 km) north of Union Village, VT, completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft³ (47,000,000 m³). Records furnished by Corps of Engineers.
- 01148000; 01150000. LAKES AND PONDS IN MASCOMA RIVER BASIN are operated as a unit for storage of water for power and are used for recreation. The reservoirs and usable capacity of each are as follows: 01148000 Goose Pond, 5.2 mi (8.4 km) northeast of Mascoma, NH, 509,000,000 ft³ (14,400,000 m³); Grafton Pond, 8.5 mi (13.7 km) southeast of Mascoma, 144,000,000 ft³ (4,080,000 m³); Crystal Lake, 5.8 mi (9.3 km) southeast of Mascoma, 75,000,000 ft³ (2,100,000 m³); 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³ (9,540,000 m³); total usable capacity of the four reservoirs, 1,060,000,000 ft³ (30,000,000 m³). Records furnished by New Hampshire Water Resources Board.
01151400. NORTH HARTLAND RESERVOIR on Ottauquechee River at North Hartland, VT, completed in 1961, used for flood control and recreation, has usable capacity of 3,110,000,000 ft³ (88,100,000 m³). Records furnished by Corps of Engineers.
01152000. SUNAPEE LAKE on Sugar River at Sunapee, NH, used for recreation and storage of water for power, has usable capacity of 862,000,000 ft³ (24,400,000 m³). Records furnished by New Hampshire Water Resources Board.
01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, VT, completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft³ (63,200,000 m³). Records furnished by Corps of Engineers.
01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi (3.2 km) north of Jamaica, VT, completed in 1961, used for flood control and recreation, has usable capacity of 2,380,000,000 ft³ (67,400,000 m³). Records furnished by Corps of Engineers.
01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi (2.9 km) northwest of Townshend, VT, completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft³ (41,300,000 m³). Records furnished by Corps of Engineers.
01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi (7.2 km) north of Keene, NH, completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³ (40,200,000 m³). Records furnished by Corps of Engineers.
01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi (4.0 km) northeast of Keene, NH, completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³ (22,600,000 m³). Records furnished by Corps of Engineers.
01163500. BIRCH HILL RESERVOIR on Millers River, 1 mi (1.6 km) east of South Royalston, MA, completed in 1941 for flood control, has usable capacity of 2,180,000,000 ft³ (61,700,000 m³). Records furnished by Corps of Engineers.
01164500. TULLY RESERVOIR on East Branch Tully River, 3.5 mi (5.6 km) north of Athol, MA, completed in 1948 for flood control, has usable capacity of 958,000,000 ft³ (27,100,000 m³). Records furnished by Corps of Engineers.
- 01167490; 01168000. SOMERSET AND HARRIMAN RESERVOIRS in Deerfield River basin are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Somerset Reservoir on East Branch Deerfield River, 2.5 mi (4.0 km) northeast of Somerset, VT, completed in 1913, 2,500,000,000 ft³ (71,000,000 m³); Harriman Reservoir on Deerfield River at Davis Bridge, VT, completed in 1924, 5,060,000,000 ft³ (143,000,000 m³). Records furnished by New England Power Co.
01172400. BARRE FALLS RESERVOIR on Ware River, 4 mi (6 km) east of Barre, MA, completed in 1958 for flood control, has usable capacity of 1,050,000,000 ft³ (29,700,000 m³). Records furnished by Corps of Engineers.
01175000. QUABBIN RESERVOIR on Swift River, 3.2 mi (5.1 km) east of Belchertown, MA, completed in August 1939 for storage of water for municipal supply, has usable capacity of 53,800,000,000 ft³ (1,520,000,000 m³). Records furnished by Water Division, Metropolitan District Commission.
01176410. CONANT BROOK RESERVOIR in Chicopee River basin, 1.5 mi (2.4 km) southeast of South Monson, MA, completed in September 1966 for flood control, has usable capacity of 163,000,000 ft³ (4,620,000 m³). Records furnished by Corps of Engineers.
01176500. LUDLOW RESERVOIR in Chicopee River basin, 3.2 mi (5.1 km) northwest of Three Rivers, MA, completed in 1875 for storage of water for municipal supply, has usable capacity of 201,000,000 ft³ (5,690,000 m³). Records furnished by Board of Water Commissioners, Springfield, MA.
01179000. KNIGHTVILLE RESERVOIR on Westfield River, 4 mi (6 km) north of Huntington, MA, completed in 1941 for flood control, has usable capacity of 2,130,000,000 ft³ (60,300,000 m³). Records furnished by Corps of Engineers.

Reservoirs in Connecticut River basin--Continued

01180450. LITTLEVILLE LAKE on Middle Branch Westfield River, 2 mi (3 km) north of Huntington, MA, completed in 1965, used for flood control, water supply, and recreation, has usable capacity of 1,410,000,000 ft³ (39,900,000 m³). Records furnished by Corps of Engineers.

01181900; 01182500. BORDEN BROOK AND COBBLE MOUNTAIN RESERVOIRS in Little River basin are operated as a unit for storage of water for municipal supply and for hydroelectric power development. The downstream order and usable capacity of each are as follows: Borden Brook Reservoir on Borden Brook, 3.5 mi (5.6 km) south of Blandford, MA, completed in 1909, 344,000,000 ft³ (9,740,000 m³); Cobble Mountain Reservoir on Little River, 6.5 mi (10.5 km) west of Westfield, MA, completed in 1931, 3,050,000,000 ft³ (86,400,000 m³). Records furnished by Board of Water Commissioners, Springfield, MA.

01185000. OTIS RESERVOIR in Farmington River basin, 3 mi (5 km) southeast of Otis, MA, completed in 1865, used for storage of water for power and for recreation, has usable capacity of 780,000,000 ft³ (22,000,000 m³). Records furnished by Massachusetts Department of Natural Resources, Division of Forests and Parks.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982						
Date	First and Second Connecticut Lakes	Lake Francis	Moore and Comerford Reservoirs	Union Village Reservoir	Lakes and Ponds in Mascoma River basin	North Hartland Reservoir
Sept. 30, 1981.....	2964.5	3688.6	5523.6	4.8	975.1	117.0
Oct. 31.....	3071.2	3922.6	5925.6	5.3	936.4	123.0
Nov. 30.....	2606.2	3390.7	6019.3	14.4	723.3	120.0
Dec. 31.....	2195.5	3024.3	5334.2	14.3	691.8	124.0
Jan. 31, 1982.....	1563.5	1803.4	5230.9	14.5	584.3	117.0
Feb. 28.....	756.3	1025.4	3429.2	16.1	502.2	126.0
Mar. 31.....	608.1	723.9	1580.3	15.5	648.3	116.0
Apr. 30.....	2321.7	2819.3	6024.4	6.6	854.1	111.0
May 31.....	3406.3	3776.8	6017.0	2.8	1012.5	123.0
June 30.....	3522.3	3618.9	5848.4	3.6	1002.8	125.0
July 31.....	3273.1	3257.7	5467.3	1.4	964.2	119.0
Aug. 31.....	3060.0	3210.9	5658.1	1.4	917.1	120.0
Sept. 30.....	2760.3	3128.0	5494.5	1.4	751.7	124.0
	Sunapee Lake	Springfield Reservoir	Mountain Reservoir	Townshend Reservoir	Mountain Lake	Otter Brook Lake
Sept. 30, 1981.....	478	28.4	109.8	0.1	73.1	38.6
Oct. 31.....	559	30.5	15.0	.7	99.7	43.8
Nov. 30.....	408	25.4	17.2	.2	73.1	38.6
Dec. 31.....	416	24.0	13.9	37.6	79.5	38.2
Jan. 31, 1982.....	364	24.0	10.3	36.9	80.7	39.0
Feb. 28.....	320	24.7	10.3	35.2	82.0	36.2
Mar. 31.....	365	34.1	23.3	40.8	94.2	37.2
Apr. 30.....	581	47.0	179.9	47.1	579.3	178.0
May 31.....	609	27.6	96.5	36.6	66.9	31.2
June 30.....	668	36.3	164.2	63.2	78.2	41.4
July 31.....	520	23.3	85.8	35.2	62.2	37.9
Aug. 31.....	410	22.5	74.5	34.4	56.3	36.8
Sept. 30.....	496	22.5	95.7	34.8	58.6	36.8
	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs	Barre Falls Reservoir	Quabbin Reservoir†	Conant Brook Reservoir
Sept. 30, 1981.....	3.0	108.0	4735.6	2.9	43244	0
Oct. 31.....	15.8	67.9	5633.6	4.4	43449	.1
Nov. 30.....	5.4	22.5	5179.6	28.4	43634	.1
Dec. 31.....	4.5	23.0	4849.1	35.6	44473	.1
Jan. 31, 1982.....	3.9	23.6	3717.4	37.4	45445	a
Feb. 28.....	3.9	25.4	2830.7	27.6	46851	.1
Mar. 31.....	135.8	113.4	2559.0	25.3	48807	.2
Apr. 30.....	24.5	27.2	7036.2	5.7	51774	.1
May 31.....	3.9	66.6	6487.7	3.9	51814	.1
June 30.....	8.0	69.2	6895.1	4.7	54343	a
July 31.....	6.0	67.9	6073.5	3.7	54196	a
Aug. 31.....	1.5	62.9	5372.1	2.4	52767	.1
Sept. 30.....	1.5	62.9	4895.0	2.4	51915	.1
	Ludlow Reservoir	Knightville Reservoir	Littleville Lake	Borden Brook and Cobble Mountain Reservoirs	Otis Reservoir	
Sept. 30, 1981.....	0	0.3	415.9	2366.5	582.3	
Oct. 31.....	177.5	1.2	423.7	2342.3	545.8	
Nov. 30.....	174.1	.6	419.8	2329.2	364.3	
Dec. 31.....	175.8	21.2	421.1	2370.9	364.3	
Jan. 31, 1982.....	170.4	17.7	419.8	2451.0	385.9	
Feb. 28.....	168.6	20.9	422.4	2547.8	458.0	
Mar. 31.....	174.1	152.7	486.4	2801.3	444.7	
Apr. 30.....	165.1	20.5	434.1	3180.4	564.0	
May 31.....	181.1	15.0	428.9	3180.4	612.0	
June 30.....	181.1	25.3	430.2	3222.9	703.3	
July 31.....	175.8	.7	421.1	2969.3	707.2	
Aug. 31.....	170.4	.2	414.6	2815.4	699.5	
Sept. 30.....	168.6	.3	415.9	2688.2	688.0	

a No record; recorder stopped.

† Affected by diversion from Ware River and diversion to Wachusett Reservoir and Chicopee Valley aqueduct.

HOUSATONIC RIVER BASIN

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA

LOCATION.--Lat 42°28'10", long 73°11'49", Berkshire County, Hydrologic Unit 01100005, on right bank 40 ft (12 m) downstream from Hubbard Avenue Bridge at Coltsville, 1.2 mi (1.9 km) upstream from Unkamet Brook, and 2 mi (3 km) northeast of Pittsfield.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--Discharge: March 1936 to current year. Prior to October 1945, published as Housatonic River at Coltsville.

Water-quality records: Water years 1963-65.

REVISED RECORDS.--WSP 851: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 993.49 ft (302.816 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by powerplants upstream and, since 1949, by Cleveland Brook Reservoir, usable capacity, 214,000,000 ft³ (6,060,000 m³), 5.4 mi (8.7 km) upstream; regulation greater prior to 1955. Diversion upstream from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950; see table below for figures of diversion. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 113 ft³/s (3.200 m³/s), 26.87 in/yr (682 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s (181 m³/s) Sept. 21, 1938, gage height, 10.80 ft (3.292 m), from rating curve extended above 2,300 ft³/s (65 m³/s) on basis of computation of peak flow over dam; minimum daily, 4.4 ft³/s (0.12 m³/s) Aug. 15, 1936.
Maximum discharge since at least 1755, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 18	0615	a*2860 81.0	6.59 2.009				

a From rating curve extended above 730 ft³/s (21 m³/s) on basis of slope-area measurement of peak flow.

Minimum daily discharge, 7.9 ft³/s (0.22 m³/s) Aug. 22.

REVISIONS.--Revised figures of maximum (*), peak, and daily discharges, in cubic feet per second, during high-water periods in water years 1976-81, superseding those published in the reports for those years, are given herewith.

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
8-10-76	0930	*2780 78.7	6.52 1.987	3- 6-79	2400	*2250 63.7	6.00 1.829
3-14-77	1130	*2360 66.8	6.11 1.862	3-25-79	0915	1380 39.1	4.97 1.515
3-30-77	2030	1240 35.1	4.77 1.454	5-25-79	--	1800 51	-- --
10-17-77	1345	1140 32.3	4.62 1.408	9- 6-79	1815	1200 34.0	4.71 1.436
1- 9-78	1315	*1720 48.7	5.40 1.646	3-22-80	0145	*4170 118	7.63 2.326
8- 8-78	--	1280 36.2	4.83 1.472	4-10-80	0630	2080 58.9	5.82 1.774
1- 2-79	2230	1550 43.9	5.19 1.582				

NOTE.--Discharges computed from rating curve extended above 730 ft³/s (21 m³/s) on basis of slope-area measurement at gage height 6.59 ft (2.009 m).

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Aug. 10, 1976.....	1460	Mar. 30, 1977.....	910	Mar. 7, 1979.....	1640	Apr. 10, 1980.....	1510
Mar. 13, 1977.....	947	Mar. 31, 1977.....	1020	Mar. 25, 1979.....	1180		
Mar. 14, 1977.....	2050	Mar. 6, 1977.....	1060	Mar. 22, 1980.....	2000		

Month	Total	Mean	Max	Min	†	Mean†	Cfsm†	In†
August 1976	4808	155	1460	33	12.7	--	--	--
Wtr Yr 1976	50237	137	1460	17	--	151	2.64	36.02
Cal Yr 1976	42020	115	1460	17	--	129	2.26	30.66
March 1977	10658	344	2050	51	16.5	--	--	--
Wtr Yr 1977	38485	105	2050	18	--	120	2.10	28.44
Cal Yr 1977	51079	140	2050	18	--	154	2.70	36.57
March 1979	12926	417	1640	94	16.0	--	--	--
Wtr Yr 1979	45990	126	1640	12	--	140	2.45	33.26
Cal Yr 1979	50824	139	1640	12	--	153	2.68	36.43
March 1980	6865	221	2000	14	12.4	--	--	--
April 1980	7874	262	1510	110	12.5	--	--	--
Wtr Yr 1980	30828	84.2	2000	11	--	97.7	1.71	23.30
Cal Yr 1980	24897	68.0	2000	11	--	81.2	1.42	19.36

† Diversion, in cubic feet per second, from Cleveland Brook Reservoir for municipal supply of Pittsfield.

‡ Adjusted for diversion.

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	25	36	45	40	62	44	728	139	65	134	50	23		
2	32	35	108	54	77	49	545	119	122	75	36	31		
3	38	35	122	50	183	46	455	110	122	55	30	34		
4	30	34	96	81	409	40	982	102	75	46	28	26		
5	29	34	75	175	311	55	501	94	106	41	26	22		
6	35	42	64	143	311	53	248	82	766	40	24	20		
7	27	61	55	140	239	58	173	80	649	35	20	21		
8	44	46	61	120	201	80	217	72	326	30	18	21		
9	37	36	57	104	166	72	220	72	196	27	24	22		
10	30	34	53	80	139	73	211	67	136	24	28	22		
11	24	33	50	75	114	66	208	59	110	22	25	19		
12	25	32	48	62	92	102	223	48	85	23	23	17		
13	25	37	47	58	80	148	217	45	82	26	22	18		
14	25	43	43	62	71	187	265	42	155	24	19	19		
15	24	45	35	62	68	173	319	36	160	22	17	18		
16	23	51	32	57	75	160	370	35	119	20	19	17		
17	22	53	37	52	79	153	580	35	139	20	37	17		
18	22	65	37	51	74	132	1900	35	136	20	18	17		
19	68	72	31	52	70	139	766	35	102	20	17	15		
20	62	73	27	52	67	130	511	35	87	23	15	14		
21	38	97	30	41	64	143	449	40	64	29	9.7	16		
22	31	85	33	33	63	173	251	32	53	30	7.9	18		
23	39	70	44	30	60	184	193	51	82	29	12	22		
24	104	62	73	32	58	190	163	122	70	28	17	23		
25	77	53	69	33	49	268	184	98	46	27	19	21		
26	71	48	50	32	43	474	223	61	38	26	22	17		
27	111	53	43	31	51	358	465	44	33	22	20	19		
28	116	67	42	31	48	226	311	36	37	70	16	21		
29	91	65	41	30	---	168	217	83	168	139	15	21		
30	57	48	38	29	---	171	166	110	275	85	16	21		
31	44	---	33	32	---	293	---	72	---	37	15	---		
TOTAL	1426	1545	1619	1924	3324	4608	12261	2091	4602	1249	665.6	612		
MEAN	46.0	51.5	52.2	62.1	119	149	409	67.5	153	40.3	21.5	20.4		
MAX	116	97	122	175	409	474	1900	139	766	139	50	34		
MIN	22	32	27	29	43	40	163	32	33	20	7.9	14		
†	12.3	14.8	10.1	9.89	11.6	13.9	11.4	10.9	13.9	10.7	13.5	11.0		
CAL YR 1981	TOTAL	23161.0	MEAN	63.5	MAX	820	MIN	10	MEAN†	76.2	CFSM†	1.33	IN†	18.13
WTR YR 1982	TOTAL	35926.6	MEAN	98.4	MAX	1900	MIN	7.9	MEAN†	110	CFSM†	1.93	IN†	26.26

† Diversion, in cubic feet per second, from Cleveland Brook Reservoir for municipal supply of Pittsfield.
‡ Adjusted for diversion.

HOUSATONIC RIVER BASIN

01197015 TOWN BROOK AT BRIDGE STREET AT LANESBOROUGH, MA

LOCATION.--Lat 42°31'12", long 73°13'48", Berkshire County, Hydrologic Unit 01100005, on right bank 20 ft (6 m) upstream from bridge on Bridge Street at Lanesborough and 1.3 mi (2.1 km) upstream from Pontoosuc Lake.

DRAINAGE AREA.--10.7 mi² (27.7 km²).

PERIOD OF RECORD.--June 1980 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1111.64 ft (338.828 m) Massachusetts Department of Public Works datum.

REMARKS.--Records good except those for winter period, which are fair, and those for periods of no gage-height record, Oct. 23 to Dec. 16, Sept. 14-30, which are poor. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 659 ft³/s (18.7 m³/s) Apr. 18, 1982, gage height, 5.21 ft (1.588 m), from rating curve extended above 200 ft³/s (5.7 m³/s); minimum, 0.40 ft³/s (0.011 m³/s) Sept. 12, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 190 ft³/s (5.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 1	0030	281 7.96	3.87 1.180	Apr. 18	0445	a*659 18.7	5.21 1.588
Apr. 3	2200	a440 12.5	4.51 1.375				

a From rating curve extended above 200 ft³/s (5.7 m³/s).

Minimum discharge, 0.76 ft³/s (0.022 m³/s) Sept. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	11	9.5	12	14	9.8	179	34	10	28	8.9	2.9
2	4.0	9.9	18	11	13	9.8	104	30	19	22	5.8	4.2
3	3.8	9.2	16	11	47	8.1	144	28	14	19	5.3	5.2
4	3.4	8.6	14	23	96	8.8	183	25	12	17	4.4	2.6
5	3.4	8.0	13	45	49	10	86	23	21	14	4.0	2.3
6	3.6	17	13	29	36	8.1	57	22	34	13	3.9	1.9
7	4.2	16	12	25	29	9.1	54	20	27	11	3.7	1.7
8	6.7	12	12	19	26	9.5	51	18	20	10	3.1	1.6
9	4.6	10	12	19	24	9.5	41	17	16	8.9	4.4	1.7
10	4.0	9.0	11	15	20	8.8	37	16	14	7.7	3.7	1.5
11	3.8	8.6	10	16	20	8.8	39	15	12	7.0	3.0	1.4
12	3.6	8.4	10	15	19	16	37	14	11	9.7	2.8	1.3
13	3.4	8.2	9.6	15	17	18	36	13	12	8.8	2.5	1.2
14	2.9	8.4	9.4	16	15	20	45	12	19	6.6	2.5	1.1
15	3.2	9.6	9.4	13	15	19	49	11	13	6.0	2.4	1.9
16	2.9	9.6	9.6	13	16	19	63	11	12	5.5	2.3	1.4
17	2.5	9.6	9.5	12	15	20	109	9.8	15	5.2	2.4	1.3
18	2.9	11	9.7	12	14	19	326	9.1	13	4.9	2.5	1.5
19	5.6	11	9.9	12	14	21	128	8.8	10	4.6	2.4	1.3
20	3.6	13	9.0	11	14	24	105	9.8	12	8.1	2.2	1.4
21	3.0	17	8.9	9.6	13	26	93	9.5	10	6.0	2.7	1.4
22	3.0	14	9.3	9.2	12	32	68	7.8	9.3	4.7	2.4	1.4
23	5.0	12	15	9.7	12	32	54	16	19	4.0	2.2	2.0
24	13	11	16	9.7	11	39	49	22	12	3.7	2.1	5.1
25	10	10	13	8.4	9.8	67	46	16	9.7	3.4	2.4	2.1
26	15	9.4	12	8.3	11	131	49	13	8.9	3.0	2.5	1.6
27	30	10	12	7.9	10	71	79	11	8.1	2.8	2.0	1.4
28	25	12	12	8.0	9.1	49	53	9.1	10	30	1.9	2.1
29	19	11	11	7.2	---	42	44	17	53	14	1.8	1.6
30	15	10	10	7.4	---	49	38	13	57	7.0	1.6	1.5
31	12	---	9.9	8.5	---	96	---	11	---	6.7	1.7	---
TOTAL	224.8	324.5	355.7	437.9	600.9	910.3	2446	491.9	513.0	302.3	95.5	55.6
MEAN	7.25	10.8	11.5	14.1	21.5	29.4	81.5	15.9	17.1	9.75	3.08	1.85
MAX	30	17	18	45	96	131	326	34	57	30	8.9	4.2
MIN	2.5	8.0	8.9	7.2	9.1	8.1	36	7.8	8.1	2.8	1.6	1.1
CFSM	.68	1.01	1.08	1.32	2.01	2.75	7.62	1.49	1.60	.91	.29	.17
IN.	.78	1.13	1.24	1.52	2.09	3.16	8.50	1.71	1.78	1.05	.33	.19

CAL YR 1981	TOTAL	5341.44	MEAN 14.6	MAX 200	MIN .97	CFSM 1.36	IN 18.57
WTR YR 1982	TOTAL	6758.40	MEAN 18.5	MAX 326	MIN 1.1	CFSM 1.73	IN 23.49

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA

LOCATION.--Lat 42°13'55", long 73°21'19", Berkshire County, Hydrologic Unit 01100005, on left bank at upstream side of highway bridge at Van Deusenville, 0.5 mi (0.8 km) upstream from Williams River, and 2 mi (3 km) north of Great Barrington.

DRAINAGE AREA.--280 mi² (725 km²).

PERIOD OF RECORD.--Discharge: May 1913 to current year.

Water-quality records: Water years 1957-59, 1963-64, 1971, 1979-80.

REVISED RECORDS.--WSP 415: 1913-14. WSP 781: 1928(M). WSP 1051: 1928, 1933. WSP 1301: 1914-15(M), 1917-27(M), 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 683.04 ft (208.191 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are poor. No gage-height record Feb. 5-15.

Regulation at low flow by powerplants upstream. High flow slightly affected by retarding reservoir since 1973. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--69 years, 526 ft³/s (14.90 m³/s), 25.51 in/yr (648 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Jan. 1, 1949, gage height, 12.08 ft (3.682 m), from rating curve extended above 6,400 ft³/s (180 m³/s) on basis of computations of flow over dams at gage heights 11.72 ft (3.572 m) and 12.08 ft (3.682 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Oct. 18, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	1345	ice jam	*8.00 2.438	Apr. 5	0430	2610 73.9	6.20 1.890
Feb. 5	--	2800 79	-- --	Apr. 19	1445	*3620 103	7.53 2.295

Minimum daily discharge, 92 ft³/s (2.61 m³/s) Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	334	298	334	430	330	1830	764	375	949	232	109
2	265	307	363	415	650	325	2070	665	416	624	220	160
3	373	311	539	430	800	319	1950	577	534	483	190	182
4	343	307	545	410	2300	310	2430	539	434	403	168	175
5	316	302	472	1150	2600	310	2560	527	447	348	156	145
6	311	273	430	900	1900	340	2160	499	1160	306	146	128
7	320	343	378	800	1100	330	1520	467	1670	278	138	117
8	329	363	373	620	920	387	1430	445	1600	257	129	137
9	329	325	383	580	800	400	1290	472	1060	236	138	138
10	307	316	373	560	700	390	1180	404	730	216	146	133
11	277	307	343	540	640	380	1200	368	565	200	137	112
12	261	290	339	520	600	507	1240	353	478	182	129	98
13	253	261	325	500	560	686	1210	343	435	182	121	92
14	250	238	311	490	540	886	1260	329	662	175	116	93
15	242	242	320	470	520	937	1290	302	692	166	111	95
16	231	224	329	450	537	899	1330	281	608	162	104	98
17	224	220	325	450	545	840	1510	273	741	151	103	102
18	227	281	329	440	546	786	2530	269	728	140	128	104
19	343	348	310	430	500	820	3490	265	594	135	116	101
20	353	343	275	420	474	853	2850	277	518	147	109	99
21	298	383	270	400	473	932	2140	311	466	166	110	96
22	250	399	290	380	437	970	1820	298	407	145	105	92
23	227	399	320	360	420	1080	1430	290	457	145	100	132
24	494	404	430	350	380	1090	1160	378	485	137	99	164
25	488	334	456	340	370	1200	1020	510	404	123	100	169
26	430	316	400	330	340	1690	953	451	342	119	121	161
27	527	316	388	330	360	1990	1340	388	289	122	117	156
28	587	325	368	320	350	1620	1510	305	299	258	111	134
29	551	320	358	320	---	1230	1290	325	421	615	103	108
30	451	311	339	310	---	1050	984	531	1060	423	100	133
31	383	---	320	300	---	1130	---	435	---	288	99	---
TOTAL	10429	9442	11299	14649	20792	25017	49977	12641	19077	8281	4002	3763
MEAN	336	315	364	473	743	807	1666	408	636	267	129	125
MAX	587	404	545	1150	2600	1990	3490	764	1670	949	232	182
MIN	189	220	270	300	340	310	953	265	289	119	99	92
CFSM	1.20	1.13	1.30	1.69	2.65	2.88	5.95	1.46	2.27	.95	.46	.45
IN.	1.39	1.25	1.50	1.95	2.76	3.32	6.64	1.68	2.53	1.10	.53	.50
CAL YR 1981	TOTAL	135888	MEAN 372	MAX 3420	MIN 100	CFSM 1.33	IN 18.05					
WTR YR 1982	TOTAL	189369	MEAN 519	MAX 3490	MIN 92	CFSM 1.85	IN 25.16					

01331500 HOOSIC RIVER AT ADAMS, MA

LOCATION.--Lat 42°36'40", long 73°07'28", Berkshire County, Hydrologic Unit 02020003, on left bank at Adams, 500 ft (150 m) downstream from Dry Brook, and 0.4 mi (0.6 km) upstream from Pecks Brook.

DRAINAGE AREA.--46.3 mi² (119.9 km²).

PERIOD OF RECORD.--Discharge: October 1931 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1971-72.

GAGE.--Water-stage recorder. Datum of gage is 828.01 ft (252.377 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, datum was 9.00 ft (2.743 m) higher and Oct. 1, 1964, to May 29, 1974, 8.00 ft (2.438 m) higher, at site 500 ft (150 m) upstream.

REMARKS.--Records good. Diversion upstream for municipal supply of Adams. Some diurnal fluctuation by mill upstream prior to 1961. Flow regulated by Cheshire Reservoir 5.1 mi (8.2 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 89.5 ft³/s (2.535 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Sept. 21, 1938, gage height, 9.25 ft (2.819 m), site and datum then in use, from rating curve extended above 1,100 ft³/s (31 m³/s) on basis of computation of peak flow over dam; minimum daily, 8.0 ft³/s (0.23 m³/s) Aug. 31, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 3	2100	Ice jam	*9.66 2.944	Apr. 18	0245	a*1830 51.8	8.84 2.694

a From rating curve extended above 450 ft³/s (13 m³/s) on basis of slope-area measurement of peak flow.

Minimum discharge, 8.0 ft³/s (0.23 m³/s) Feb. 26; minimum daily, 18 ft³/s (0.51 m³/s) Oct. 1, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	46	34	51	58	44	586	147	64	163	35	29
2	23	42	97	64	66	47	370	132	117	118	34	35
3	28	41	93	51	160	44	375	121	85	101	34	35
4	27	38	70	81	425	42	592	112	65	88	31	28
5	26	36	58	217	284	46	333	100	107	76	31	25
6	24	52	56	148	195	46	276	72	336	68	31	24
7	33	60	54	116	139	44	280	69	218	62	31	24
8	44	47	52	90	119	54	236	66	133	58	30	22
9	33	42	51	78	108	46	210	64	99	51	32	22
10	27	39	46	70	97	46	192	61	81	47	31	22
11	25	39	42	58	81	47	195	56	72	44	30	22
12	22	38	42	58	78	85	199	54	66	49	30	22
13	21	35	36	58	74	105	195	51	67	46	28	22
14	20	34	39	58	70	136	228	48	109	41	29	22
15	20	36	39	60	66	108	228	46	79	39	30	20
16	19	38	42	60	68	100	232	44	68	34	30	20
17	28	38	42	51	70	103	480	44	80	35	31	20
18	35	46	42	52	64	95	1140	41	75	35	29	20
19	58	47	42	51	62	105	500	41	63	33	28	20
20	42	54	39	51	62	110	485	41	73	41	29	20
21	35	78	38	51	60	127	455	42	61	38	29	21
22	32	60	41	46	58	142	326	39	57	32	28	21
23	39	51	58	46	54	148	254	61	92	31	28	25
24	97	46	90	47	52	168	252	115	71	30	26	25
25	54	39	72	46	49	243	244	83	60	30	25	21
26	76	36	56	46	46	436	262	64	54	30	25	20
27	148	41	56	42	47	310	410	53	53	29	22	19
28	119	46	54	42	46	217	257	48	83	119	20	19
29	83	41	52	42	---	195	197	89	397	113	19	19
30	58	34	51	42	---	213	167	82	381	45	20	18
31	51	---	44	42	---	365	---	61	---	36	21	---
TOTAL	1365	1320	1628	2015	2758	4017	10156	2147	3366	1762	877	682
MEAN	44.0	44.0	52.5	65.0	98.5	130	339	69.3	112	56.8	28.3	22.7
MAX	148	78	97	217	425	436	1140	147	397	163	35	35
MIN	18	34	34	42	46	42	167	39	53	29	19	18

CAL YR 1981 TOTAL 23545 MEAN 64.5 MAX 874 MIN 11
WTR YR 1982 TOTAL 32093 MEAN 87.9 MAX 1140 MIN 18

01332000 NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA

LOCATION.--Lat 42°42'08", long 73°05'37", Berkshire County, Hydrologic Unit 02020003, on left bank at North Adams, 0.4 mi (0.6 km) downstream from Hudson Brook, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--39.0 mi² (101.0 km²).

PERIOD OF RECORD.--Discharge: June 1931 to current year.

Water-quality records: Water years 1967-69.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1933(M). WSP 801: 1928(M). WDR MA-NH-RI-VT-73-1: 1971.

GAGE.--Water-stage recorder. Concrete control at present site. Datum of gage is 820.46 ft (250.076 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 23, 1938, at site 100 ft (30 m) upstream at same datum.

July 9, 1959, to July 29, 1960, nonrecording gage at site 500 ft (150 m) upstream at datum about 4.6 ft (1.40 m) lower.

REMARKS.--Records good except those for periods of no gage-height record, Jan. 9 to Feb. 24, Apr. 17-19, which are poor. Infrequent diurnal fluctuation at low flow by mill upstream; more frequent fluctuation prior to 1948. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 96.5 ft³/s (2.733 m³/s), 33.60 in/yr (853 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s (253 m³/s) Sept. 21, 1938, gage height, 12.05 ft (3.673 m), from floodmarks, by computation of peak flow over dam; maximum gage height, 12.24 ft (3.731 m) Aug. 10, 1976; minimum discharge, 1.7 ft³/s (0.048 m³/s) July 30, 1965; minimum daily, 3.1 ft³/s (0.088 m³/s) July 30, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1927 reached a discharge of 9,980 ft³/s (283 m³/s), by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 18	--	a*3830 108	b10.14 3.091	June 29	1915	1870 53.0	8.75 2.667

a From rating curve extended above 1,100 ft³/s (31 m³/s) on basis of computations of flow over dam at gage heights 10.28 ft (3.133 m) and 12.24 ft (3.731 m).

b From peak-stage indicator.

Minimum discharge, 5.8 ft³/s (0.16 m³/s) Sept. 12, 13, 14-16, 20; minimum daily, 5.8 ft³/s (0.16 m³/s) Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	88	50	52	30	35	674	160	52	173	33	9.1
2	62	79	142	46	35	37	365	136	104	108	24	14
3	96	71	127	42	100	34	396	120	81	81	20	15
4	87	64	99	74	500	32	760	107	60	67	17	11
5	66	59	84	219	210	40	299	91	161	54	15	8.8
6	59	109	75	118	140	35	211	81	586	45	14	7.9
7	109	125	72	95	115	38	224	74	273	39	13	7.2
8	172	90	68	72	100	46	188	67	155	33	12	6.8
9	100	78	64	59	88	40	132	65	116	28	14	6.5
10	77	75	58	54	78	40	115	60	84	24	24	6.3
11	65	69	55	50	68	42	123	53	72	21	15	6.3
12	57	64	52	46	64	100	129	49	58	36	12	6.2
13	69	57	49	42	60	120	129	46	55	46	11	6.0
14	63	56	47	44	56	123	170	43	100	24	11	6.0
15	53	58	49	44	54	97	214	39	70	22	9.9	5.8
16	45	52	50	42	56	90	339	36	57	20	9.6	6.1
17	38	50	53	41	56	93	800	34	83	18	8.7	6.4
18	39	65	50	36	52	86	1500	30	73	57	8.5	6.2
19	127	86	44	33	48	95	700	31	59	32	7.9	6.1
20	77	94	42	31	48	93	738	65	70	30	8.1	6.1
21	61	123	50	29	46	97	738	43	52	40	11	6.8
22	53	101	50	27	43	100	406	32	45	23	9.3	7.5
23	63	81	72	26	40	102	291	46	80	16	8.3	10
24	170	71	90	25	38	115	428	149	82	14	8.2	17
25	105	63	64	24	34	188	480	105	63	12	10	10
26	141	57	59	23	37	393	502	72	48	11	17	8.2
27	408	69	56	22	41	224	775	55	43	11	10	8.0
28	289	78	54	21	36	144	397	44	61	137	8.5	11
29	170	65	52	21	---	120	255	72	564	116	7.7	9.2
30	124	56	46	21	---	130	194	74	432	50	7.2	8.1
31	102	---	44	22	---	255	---	57	---	28	7.1	---
TOTAL	3191	2253	1967	1501	2273	3184	12672	2136	3839	1416	392.0	249.6
MEAN	103	75.1	63.5	48.4	81.2	103	422	68.9	128	45.7	12.6	8.32
MAX	408	125	142	219	500	393	1500	160	586	173	33	17
MIN	38	50	42	21	30	32	115	30	43	11	7.1	5.8
CFSM	2.64	1.93	1.63	1.24	2.08	2.64	10.8	1.77	3.28	1.17	.32	.21
IN.	3.04	2.15	1.88	1.43	2.17	3.04	12.09	2.04	3.66	1.35	.37	.24

CAL YR 1981	TOTAL	28592.5	MEAN	78.3	MAX	1200	MIN	8.1	CFSM	2.01	IN	27.27
WTR YR 1982	TOTAL	35073.6	MEAN	96.1	MAX	1500	MIN	5.8	CFSM	2.46	IN	33.45

HUDSON RIVER BASIN

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'01", long 73°09'34", Berkshire County, Hydrologic Unit 02020003, on left bank 0.3 mi (0.5 km) downstream from Sherman Brook and 2.7 mi (4.3 km) east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi² (326 km²).

PERIOD OF RECORD.--Discharge: July 1940 to current year.

Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft (187.790 m), Corps of Engineers datum. Prior to June 6, 1979, at site 1.2 mi (1.9 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Prior to 1966, slight diurnal fluctuation at low flow caused by mills upstream. Some regulation by Cheshire Reservoir 16 mi (26 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 273 ft³/s (7.731 m³/s), 29.42 in/yr (747 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Dec. 31, 1948, gage height, 14.85 ft (4.526 m) former site and datum, from rating curve extended above 4,300 ft³/s (120 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft³/s (0.16 m³/s) Aug. 30, 31, Oct. 26, 1940; minimum daily, 24 ft³/s (0.68 m³/s) Sept. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Apr. 18	0515	*5920 168	10.59 3.228	June 29	1945	2880 81.6	8.56 2.609

Minimum discharge, 40 ft³/s (1.13 m³/s) Sept. 10, 11 20; minimum daily, 43 ft³/s (1.22 m³/s) Sept. 11, 15, 17, 19-21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	195	131	147	130	127	1730	448	164	507	108	76
2	97	182	350	160	150	131	1070	391	320	339	97	93
3	123	168	311	135	350	123	1070	361	253	273	104	97
4	119	147	243	223	1400	119	1810	333	191	233	90	69
5	93	143	214	583	795	135	918	305	356	195	86	57
6	86	233	191	373	555	131	656	248	1240	173	76	51
7	156	263	191	300	373	135	562	233	724	151	69	51
8	268	204	177	238	339	160	562	209	435	143	63	48
9	164	173	168	209	300	139	494	195	322	123	76	45
10	135	164	156	168	278	143	454	191	248	115	79	45
11	108	160	147	160	219	156	474	177	219	100	69	43
12	90	151	143	155	233	305	494	164	191	131	63	45
13	97	139	131	150	258	379	480	160	177	135	60	45
14	108	135	127	155	258	429	591	143	300	104	57	45
15	100	139	127	160	233	356	649	139	223	100	57	43
16	86	131	140	160	209	322	811	135	186	97	57	45
17	83	127	150	140	204	327	1600	131	233	97	56	43
18	93	160	147	140	182	300	3530	119	219	127	57	45
19	238	191	127	135	173	339	1540	127	173	100	57	43
20	160	219	119	130	177	350	1540	160	204	108	60	43
21	127	294	135	130	177	373	1540	131	164	115	63	43
22	119	238	145	120	168	410	1000	115	151	90	60	48
23	139	195	175	120	160	422	763	151	248	79	60	66
24	356	173	240	125	156	474	885	373	214	73	60	73
25	223	156	200	120	135	664	935	278	173	69	66	57
26	289	147	164	120	127	1200	969	200	143	60	73	48
27	701	164	164	110	147	803	1500	160	131	60	57	48
28	528	186	160	110	139	548	893	139	209	367	45	54
29	350	160	147	110	---	480	649	228	1250	350	45	51
30	268	131	143	110	---	514	521	233	1310	156	45	45
31	223	---	127	110	---	885	---	173	---	115	48	---
TOTAL	5817	5268	5290	5306	8025	11379	30690	6550	10371	4885	2063	1605
MEAN	188	176	171	171	287	367	1023	211	346	158	66.5	53.5
MAX	701	294	350	583	1400	1200	3530	448	1310	507	108	97
MIN	83	127	119	110	127	119	454	115	131	60	45	43
CFSM	1.49	1.40	1.36	1.36	2.28	2.91	8.12	1.68	2.75	1.25	.53	.43
IN	1.72	1.56	1.56	1.57	2.37	3.36	9.06	1.93	3.06	1.44	.61	.47

CAL YR 1981	TOTAL	77006	MEAN 211	MAX 2680	MIN 44	CFSM 1.68	IN 22.73
WTR YR 1982	TOTAL	97249	MEAN 266	MAX 3530	MIN 43	CFSM 2.11	IN 28.71

01333000 GREEN RIVER AT WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'32", long 73°11'50", Berkshire County, Hydrologic Unit 02020003, on left bank 0.1 mi (0.2 km) upstream from bridge on State Highway 2 at Williamstown and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--42.6 mi² (110.3 km²).

PERIOD OF RECORD.--Discharge: September 1949 to current year.

Water-quality records: Water years 1967-69.

GAGE.--Water-stage recorder. Altitude of gage is 615 ft (187 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Slight diurnal fluctuation at times caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--33 years, 83.2 ft³/s (2.356 m³/s), 26.52 in/yr (674 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s (115 m³/s) Dec. 21, 1973, gage height, 5.68 ft (1.731 m) in gage well, from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement at gage height 4.94 ft (1.506 m); maximum gage height, 6.35 ft (1.935 m) Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s (0.088 m³/s) Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft (2.3 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Feb. 4	0200	1090 30.9	3.77 1.149	Apr. 18	0345	a*2060 58.3	4.53 1.381
Apr. 4	2130	1120 31.7	3.80 1.158	June 29	1715	1230 34.8	5.90 1.189

a From rating curve extended as explained above.

Minimum discharge, 8.7 ft³/s (0.25 m³/s) Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	84	62	70	48	47	574	128	37	180	29	21
2	34	77	115	67	48	43	366	119	61	131	23	19
3	35	70	97	60	190	41	442	108	52	108	25	22
4	31	64	88	124	666	40	553	95	45	89	23	14
5	29	60	82	228	286	39	333	87	84	75	21	12
6	29	105	82	138	183	40	236	80	154	67	19	11
7	42	103	77	124	141	44	205	75	119	59	17	11
8	61	86	77	100	129	43	189	69	93	54	17	10
9	44	79	74	88	117	37	166	65	77	50	18	10
10	38	74	68	68	101	41	158	61	67	45	17	9.9
11	35	70	64	64	84	58	166	58	59	41	15	9.6
12	33	65	62	60	86	131	164	54	54	50	14	9.4
13	31	61	58	58	82	168	186	51	54	43	14	9.4
14	30	58	57	60	76	177	205	48	65	36	14	9.2
15	28	58	58	62	76	149	186	46	54	36	15	9.2
16	27	57	54	58	76	143	211	43	51	33	13	9.3
17	25	57	57	52	73	136	436	41	59	36	12	9.2
18	26	74	57	46	68	135	1060	37	52	33	12	9.0
19	44	67	54	42	65	139	471	37	46	31	11	8.9
20	33	88	50	39	63	155	376	41	51	34	12	8.8
21	30	101	61	36	59	149	346	37	44	31	14	9.4
22	28	91	61	34	55	174	258	33	41	25	11	9.7
23	46	82	103	32	50	166	198	43	60	23	11	13
24	92	79	103	30	47	186	180	63	47	21	11	12
25	65	73	82	29	40	254	171	52	41	20	15	9.9
26	90	68	74	27	40	489	218	45	38	18	14	9.4
27	210	76	73	26	48	311	311	39	36	17	11	10
28	182	73	70	26	47	215	208	36	71	75	11	11
29	134	67	68	27	---	183	165	47	408	47	10	9.7
30	114	61	64	29	---	180	143	44	361	30	9.9	9.6
31	95	---	60	32	---	319	---	39	---	26	9.8	---
TOTAL	1767	2228	2212	1936	3044	4432	8881	1821	2481	1564	468.7	355.6
MEAN	57.0	74.3	71.4	62.5	109	143	296	58.7	82.7	50.5	15.1	11.2
MAX	210	105	115	228	666	489	1060	128	408	180	29	22
MIN	25	57	50	26	40	37	143	33	36	17	9.8	8.8
CFSM	1.34	1.74	1.68	1.47	2.56	3.36	6.95	1.38	1.94	1.19	.35	.26
IN	1.54	1.95	1.93	1.69	2.66	3.87	7.76	1.59	2.17	1.37	.41	.29

CAL YR 1981 TOTAL 25370.9 MEAN 69.5 MAX 791 MIN 7.3 CFSM 1.63 IN 22.15
WTR YR 1982 TOTAL 31170.3 MEAN 85.4 MAX 1060 MIN 8.8 CFSM 2.01 IN 27.22

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second, a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1982

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Thames River basin						
01123200	Stevens Brook at Holland, MA	Lat 42°03'41", long 72°09'45", Hampden County, 100 ft upstream from bridge on Mashapaug Rd., 0.3 mi south of Holland.	4.44	1960-62, 1965-66, 1979-82	10-15-81	0.65
					5-17-82	4.2
					7- 8-82	3.1
					9-15-82	.33
01124750	Browns Brook near Webster, MA	Lat 42°03'24", long 71°49'51", Worcester County, 15 ft downstream from culvert on State Highway 16, 1.8 mi east of Webster.	.49	1963-77†, 1978-82	10-16-81	.12
					5-13-82	3.9
					7- 7-82	.38
					7-27-82	.07
					9-16-82	0
01124800	Sucker Brook near Webster, MA	Lat 42°04'01", long 71°51'16", Worcester County, at bridge on Mine Brook Rd., 1.5 mi northeast of Webster, MA	2.54	1960-62, 1965-66, 1979-82	10-16-81	.46
					5-13-82	3.2
					7- 7-82	1.0
					7-27-82	.30

† Operated as a continuous-record gaging station.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1982

Annual maximum discharge at cross stage partial record stations during water year 1961-1982							
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (ft ³ /s)
Merrimack River basin							
01095200	Houghton Brook near Oakdale, MA	Lat 42°24'57", long 71°48'12", Worcester County, at culvert on State Highway 140, 2 mi north of Oakdale.	0.69	1964-82	6- 6-82	7.10	21
01097452	Jackstraw Brook at Hopkinton Road, Westborough, MA	Lat 42°15'28", long 71°36'13", Worcester County, at culvert on Hopkinton Rd. (Route 135), 0.9 mi southeast of Westborough.	1.24	1972-82	3-23-72 12- 7-72 3-23-74 4- 3-75 1-28-76 3-13-77 1-26-78 1-25-79 3-22-80 2-25-81 6- 6-82	8.65 8.40 8.24 7.68 8.76 7.67 8.54 9.59 8.58 7.74 8.51	a53 a47 a43 a29 a55 a29 a50 ab77 ab54 ab34 a51
01100100	Richardson Brook near Lowell, MA	Lat 42°39'48", long 71°16'02", Middlesex County, at culvert on Methuen St., 3 mi northeast of Lowell.	4.32	1963-82	12-27-69 3-17-71 3- 4-72 4- 2-73 12-18-73 4- 3-75 1-28-76 3-23-77 1-26-78 4-10-80 2-26-81 6- 5-82	13.80 12.66 13.23 13.76 13.15 12.19 13.08 14.07 13.61 13.59 13.12 13.66	b135 b57 b92 b132 b86 b37 b81 b157 b120 b119 b84 124
01100800	Cobbler Brook near Merrimac, MA	Lat 42°50'55", long 71°01'10", Essex County, at culvert on Highland St., 1.3 mi northwest of Merrimac.	.77	1963-82	6- 5-82	9.43	90
Charles River basin							
01104600	Beaver Brook at Belmont, MA	Lat 42°23'26", long 71°11'51", Middlesex County, at culvert on State Highway 60 (Trapelo Rd.), 1 mi southwest of Belmont.	4.09	1963-82	4-10-80 2-26-81 6- 6-82	10.83 10.92 13.35	b64 b68 192
South River basin							
01105850	Furnace Brook near Marshfield, MA	Lat 42°06'30", long 70°43'53", Plymouth County, at culvert on Furnace St., 1.7 mi northwest of Marshfield.	1.61	1964-82	4-15-64 2-26-65 2-14-66 5-26-67 3-18-68 3-25-69 12-27-69 5-17-71 9- 3-72 7- 1-73 12-18-73 1-14-75 1-28-76 3-23-77 1-26-78 8-13-79 10- 3-79 2-26-81 6- 6-82	8.39 7.97 8.10 9.41 9.99 9.32 9.45 9.40 10.03 8.81 9.87 8.97 8.79 10.94 9.16 8.95 8.80 8.61 10.43	b20 b12 b15 b49 b64 b34 b50 b49 b66 b32 b64 b36 b31 b101 b41 b31 b31 b26 83

a Does not include unknown amount of bypass flow.
b Revised.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Annual maximum discharge at crest-stage partial-record stations during water year 1982--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Taunton River basin							
01109100	Taunton River tributary near Fall River, MA	Lat 41°45'31", long 71°07'01", Bristol County, at culvert on State Highway 79, 4 mi northeast of Fall River.	0.25	1964-82	2- 1-82	12.16	77
Runnins River basin							
01109270	Runnins River at Seekonk, MA	Lat 41°49'25", long 71°20'00", Bristol County, at culvert on Pleasant St., 1.0 mi north of Seekonk.	4.24	1967-82	2-20-81 2- 1-82	5.37 6.61	b32 93
Blackstone River basin							
01109480	Kettle Brook Diversion Weir at Auburn, MA	Lat 42°13'06", long 71°49'40", Worcester County, on right bank behind MacKensie Machinery Co., on State Highway 12, 1.8 mi north of Massachusetts Turnpike overpass.	-	1979-82	6- 6-82	489.01	a1400
Thames River basin							
*01123160	Wales Brook tributary near Wales, MA	Lat 42°04'48", long 72°11'51", Hampden County, at culvert on Holland Rd., 1.5 mi northeast of Wales.	0.71	1964-82	1-25-79 10- 3-79 2-24-81 6 -5-82	9.44 7.96 7.78 8.53	b63 b35 b31 43
01124050	Tufts Branch at Dudley, MA	Lat 42°03'11", long 71°56'22", Worcester County, at culvert on Dudley-Southbridge Rd., 0.7 mi northwest of Dudley.	1.06	1963-82	6- 6-82	13.38	123
Connecticut River basin							
01161300	Millers Brook at Northfield, MA	Lat 42°41'07", long 72°27'11", Franklin County, at culvert on Beers Plain Rd., 0.8 mi south of Northfield.	2.33	1964-82	6- 6-82	16.02	106
01171910	Broad Brook near Holyoke, MA	Lat 42°11'59", long 72°41'11", Hampden County, at culvert on Keys Rd., 3.5 mi west of Holyoke.	2.26	1965-82	6- 6-82	19.84	393
*01175600	Caruth Brook near Paxton, MA	Lat 42°19'00", long 71°58'16", Worcester County, at culvert on Spring St., 2.2 mi west of Paxton.	2.35	1965-82	6- 6-82	8.16	112
01178230	Mill Brook at Plainfield, MA	Lat 42°30'57", long 72°55'30", Hampshire County, at culvert on High St., 0.4 mi west of Plainfield.	4.47	1964-76, 1978-82	1- 9-78 5-25-79 4-10-80 2-20-81 4-18-82	15.51 14.34 16.03 15.58 15.16	a250 a191 a275 a250 a242
01183100	Seymour Brook tributary at Granville, MA	Lat 42°03'53", long 72°51'42", Hampden County, at culvert on State Highway 189, Granville.	.66	1964-77, 1979-82	6- 1-72 2- 3-73 9-27-75 3-13-77 1-25-79 3-21-80 2-20-81 6- 6-82	11.92 12.55 14.24 11.33 b11.99 b13.87 b12.62 13.66	b91 b130 b208 b80 b97 b167 b139 196
01183810	Longmeadow Brook at Pondsides Rd., near Longmeadow, MA	Lat 42°02'22", long 72°35'32", Hampden County, at culvert on Pondsides Rd., 2 mi southwest of Longmeadow.	4.15	1967-77, 1979-82	6-30-72 2- 3-73 12-21-73 6-13-75 4- 1-76 9- 6-79 4-10-80 9- 9-81 6- 6-82	5.20 5.42 6.13 5.85 4.94 5.65 5.76 4.38 6.22	b90 b78 b118 b95 b76 b108 b98 b59 112
Housatonic River basin							
01197550	Housatonic River tributary at Risingdale, MA	Lat 42°13'57", long 73°20'47", Berkshire County, at culvert on State Highway 183, 0.7 mi southeast of Risingdale.	0.69	1963-82	8-10-76 3-13-77 b1- 9-78 3- 6-79 3-22-80 2-20-81 6- 6-82	b16.20 b17.04 b15.76 b16.58 b15.53 b15.47 15.38	b27 b44 b19 b34 b16 b15 13

* Also a miscellaneous measurement site.

a Does not include unknown amount of bypass flow.

b Revised.

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites during water year 1982

Discharge measurements made at miscellaneous sites during water year 1982						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Discharge (ft ³ /s)
Charles River basin						
01103200 Charles River	Boston Harbor (Atlantic Ocean)	Lat 42°05'38", long 71°28'56", Norfolk County, at bridge on Depot St. 800 ft below Box Pond, 0.6 mi northwest of Bellingham, MA.	14.5	1967, 1969-70	8-24-82 8-30-82 9-13-82 9-20-82	5.3 6.0 2.6 6.7
01103206 Charles River	do	Lat 42°07'14", long 71°27'11", Norfolk County, 200 ft downstream from bridge on Maple St., at North Bellingham, MA	-	-	8-24-82 8-30-82 9-10-82 9-13-82 9-20-82	8.7 7.7 8.1 6.7 5.6
01103260 Charles River	do	Lat 42°08'12", long 71°25'08", Norfolk County, at bridge on Shaw St., at south limits of West Medway, MA.	60.1	1968-71	8-24-82 8-30-82 9-10-82 9-13-82 9-20-82	19 14 15 11 10
01103305 Charles River	do	Lat 42°07'59", long 71°21'46", Norfolk County, 150 ft upstream from bridge on Myrtle St., 2.5 mi south of Millis, MA.	85.9	1968, 1974-80†	8-24-82 8-30-82 9-10-82 9-13-82	38 33 29 24
01103340 Charles River	do	Lat 42°10'33", long 71°19'10", Norfolk County, at end of Meadowcartway off Dwight St., 0.9 mi southwest of Medfield, MA.	132	-	8-24-82 8-30-82 9-10-82 9-13-82 9-20-82	59 41 41 35 27
01103400 Charles River	do	Lat 42°12'36", long 71°21'09", Norfolk County, at old highway bridge, 600 ft upstream from bridge on State highway 27, 2.9 mi northwest of Medfield, MA.	141	1969-70	8-25-82 8-31-82 9-10-82 9-13-82 9-20-82	60 49 49 42 30
01103420 Charles River	do	Lat 42°16'17", long 71°18'57", Middlesex County, 50 ft below dam and 50 ft upstream from bridge on Pleasant St., at Natick, MA.	157	-	8-24-82 8-31-82 9-10-82 9-13-82 9-20-82	61 47 50 44 36
01103905 Charles River	do	Lat 42°16'02', long 71°12'16", Norfolk County, 200' upstream from southbound bridge on State Highway 128 (Interstate 1 95), at Dedham, MA	192	-	8-31-82 9-14-82 9-20-82 9-22-82	63 52 45 244
Mattapoisett River basin						
011059101 Mattapoisett River	Buzzards Bay	Lat 41°45'45", long 70°52'10", Plymouth County, at outlet of Snipatuit Pond, 3.3 mi northwest of Rochester, MA.	5.5	-	3-22-82 5-19-82 7-13-82 8-30-82 9-15-82	9.5 2.9 *1.4 3.8 *8.0
011059105 Mattapoisett River	do	Lat 41°44'46", long 70°51'51", Plymouth County, at bridge on Hartley Rd., 2.5 mi northwest of Rochester, MA.	-	-	7-13-82 8-30-82 9-15-82	*2.2 4.8 *9.7
011059106 Mattapoisett River tributary No. 1	Mattapoisett River	Lat 41°44'35", long 70°52'04", Plymouth County, at bridge on Hartley Rd., 2.6 mi west of Rochester, MA.	-	-	3-22-82 5-18-82 7-13-82	3.1 1.0 *6.0
011059107 Mattapoisett River tributary No. 2	do	Lat 41°44'29", long 70°52'06", Plymouth County, at bridge on Cushman Rd., 2.6 mi west of Rochester, MA.	-	-	3-22-82 5-18-82 7-13-82	1.3 .52 *.07
01105911 Mattapoisett River	Buzzards Bay	Lat. 41°44'10", long 70°51'46", Plymouth County, at bridge on Rounseville Rd., 2.2 mi west of Rochester, MA.	11.7 (revised)	1972-74	3-23-82 5-19-82 7-14-82 8-30-82 9-15-82	29 9.6 *4.0 6.8 *9.7

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water)	Measurements	
					Date	Dis- charge
Mattapoissett River basin--Continued						
011059115 Mattapoissett River	Buzzards Bay	Lat 41°43'10", long 70°51'31", Plymouth County, at bridge on New Bedford Rd., 2.2 mi southwest of Rochester, MA	-	-	11- 6-80 7-13-82 8-30-82 9-15-82	2.8 *5.3 7.7 12
01105912 Mattapoissett River	do	Lat 41°42'45", long 70°50'45", Plymouth County, at remains of old dam 0.3 mi west of Mattapoissett Rd., 1.9 mi southwest of Rochester, MA.	14.8	1965	7-13-82 8-30-82 9-15-82	*5.1 8.5 *11
011059125 Mattapoissett River tributary No. 3	Mattapoissett River	Lat 41°42'21", long 70°50'25", Plymouth County, at bridge on Mattapoissett Rd., 2.1 mi southwest of Rochester, MA.	-	-	3-22-82 5-18-82 7-13-82	1.0 .22 *.09
01105913 Mattapoissett River	Buzzards Bay	Lat 41°42'11", long 70°50'40", Plymouth County, at outlet of cranberry bog, 0.2 mi south of Wolf Island Rd., 2.4 mi southwest of Rochester, MA.	-	-	5- 7-81 7-13-82 8-30-82 9-15-82	17 *6.1 7.3 *12
011059132 Branch Brook	Mattapoissett River	Lat 41°41'56", long 70°50'51", Plymouth County, at bridge on Wolf Island Rd., 3.0 mi northwest of Mattapoissett, MA.	-	-	5- 6-81 3-23-82 5-18-82 7-14-82	1.2 1.5 *4.2 *.03
011059135 Crystal Spring	do	Lat 41°41'14", long 70°50'15", Plymouth County, 30 ft downstream from bridge on dirt road (formerly Tinkham Ln.), 2.0 mi northwest of Mattapoissett, MA.	-	-	5-18-82 7-13-82	.12 *.05
01105914 Mattapoissett River	Buzzards Bay	Lat 41°41'06", long 70°50'29", Plymouth County, at remains of bridge on Tinkham Lane, 2.0 mi northwest of Mattapoissett, Ma.	18.4 (revised)	1972-74	3-23-82 5-18-82 7-14-82 8-30-82 9-15-82	44 14 *7.6 7.0 *12
01105915 Mattapoissett River tributary No. 4	Mattapoissett River	Lat 41°40'54", long 70°51'27", Plymouth County, at outlet of Tinkham Pond on Acushnet Rd., 2.6 mi northwest of Mattapoissett, MA.	-	-	5-18-82 7-13-82	*1.5 *.20
01105916 Mattapoissett River	Buzzards Bay	Lat 41°40'09", long 70°50'30", Plymouth County, at footbridge at swimming hole upstream of bridge on Acushnet Rd., 1.5 mi west of Mattapoissett, MA.	-	-	7-13-82 8-30-82 9-15-82	*7.3 9.2 *14
01105917 Mattapoissett River	do	Lat 41°39'45", long 70°50'20", Plymouth County, 0.4 mi above bridge on US Highway 6, 1.5 mi west of Mattapoissett, MA.	23.8	1965, (revised) 1972-74	3-22-82 5-18-82 7-14-82 8-30-82 9-15-82	53 17 *8.3 9.2 *16

Note: Some unpublished daily record in water years 1959-60, 1981-83, for stations 01105911, 01105914, and 01105917, is on file in the Massachusetts Office of the New England District.

Blackstone River basin

01110500 Blackstone River	Providence River (Narragansett Bay)	Lat 42°09'13", long 71°39'09", Worcester County, 100 ft downstream from Sutton St. Bridge, at Northbridge, MA.	139	1940-77†, 1978-81	10-13-81	110
					11-24-81	318
					1- 6-82	1090
					2-16-82	398
					3-29-82	389
					5-14-82	180
					7- 9-82	190
					8-23-82	132
					9-22-82	244

Pawcatuck River basin

0117800 Wood River	Pawcatuck River	Lat 41°34'26", long 71°43'16", Washington County, at upstream side of bridge on Ten Rod Road, 1.8 mi northwest of Arcadia and 4.5 mi north of Hope Valley, RI.	35.2	1964-81†	12- 1-81	45
					8- 4-82	*32

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water	Measurements Date	Dis- charge
Thames River basin						
01119100 Sawmill Brook	Middle River	Lat 42°02'04", long 72°18'13", Hampden County, at bridge on Stafford Hollow Rd., 3.8 mi south of South Monson, MA.	-	1980-81	5-17-82 7- 8-82 9-15-82	*1.3 *.91 *.33
01123090 Hollow Brook	Mill Brook	Lat 42°05'03", long 72°13'40", Hampden County, at culvert on Hollow Rd., 1.1 mi north of Wales, MA.	-	1980-81	5-17-82 7- 8-82 9-15-82	*1.3 *1.1 *.42
01123150 East Brook	do	Lat 42°08'18", long 72°11'24", Hampden County, at bridge 500 ft east of Sherman Pond, 1.2 mi north of Brimfield, MA.	4.14	1960-62†, 1965†, 1980-81	5-14-82 7-17-82 9-14-82	*3.8 *3.0 0
01123155 Unnamed Lake on Wales Brook	do	Lat 42°04'24", long 72°13'02", Hampden county, at bridge on Holland Rd., 0.5 mi north of Wales, MA.	-	-	8-19-81 8-31-81 5-17-82 7- 8-82 9-14-82	*.48 *.55 *1.3 *2.1 *.61
01123158 Wales Brook	do	Lat 42°04'37", long 72°12'16", Hampden County, at bridge on Hollow Rd., 1.1 mi northeast of Wales, MA.	-	1980-81	5-17-82 7- 8-82 9-14-82	*3.1 *4.2 *1.2
†01123160 Wales Brook tributary	Wales Brook	Lat 42°04'48", long 72°11'51", Hampden County, at culvert on Holland Rd., 1.5 mi northeast of Wales, MA.	.71	1965-66, 1980-81	5-17-82 7- 8-82 9-15-82	*.87 *1.1 *.07
01123190 May Brook	Quinebaug River	Lat 42°01'46", long 72°10'32", Tolland County, 800 ft south of Connecticut- Massachusetts state line, 2.6 mi south of Holland, MA, and 2.8 mi north of Union, CT.	-	1980-81	5-17-82 7- 8-82 9-15-82	*4.0 *1.8 *.01
01123250 Quinebaug River tributary	do	Lat 42°09'57", long 72°08'38", Worcester County, at culvert on Brookfield Rd., 4 mi southwest of Brookfield, MA.	2.07	1960-62†, 1965-66†, 1980-81	5-14-82 7- 7-82 9-14-82	*3.0 *1.6 *.11
01123300 Quinebaug River tributary	do	Lat 42°08'52", long 72°07'55", Worcester County, at culvert on Sturbridge Rd., 2.2 mi northwest of Fiskdale, MA.	5.49	1960-62†, 1965-66†, 1980-81	5-14-82 7- 7-82 9-14-82	*7.7 *4.0 *.79
01123695 McKinstry Brook	do	Lat 42°07'38", long 72°01'52", Worcester County, at bridge on Hill Rd., 2.4 mi southwest of Charlton City, MA.	-	1980-81	5-14-82 9-16-82	*2.7 0
01123700 McKinstry Brook	do	Lat 42°05'30", long 72°02'43", Worcester County, 100 ft below Plimpton Street Bridge, at Southbridge, MA.	7.76	1960-62†, 1965-66†, 1980-81	5-14-82 7- 7-82 8- 4-82	*5.7 *3.4 *.76
01123795 Unnamed pond outlet on Lebanon Brook	do	Lat 42°02'29", long 72°02'48", Worcester County, at culvert on road 0.2 mi west of Alpine Drive, 1.6 mi south of Southbridge, MA.	-	-	5-14-82	*5.2
01123800 Lebanon Brook	do	Lat 42°03'20", long 72°01'10", Worcester County, at bridge on State Highway 169, 1.8 mi southwest of Southbridge, MA.	9.41	1960-62†, 1965-66†, 1980-81	5-14-82 7- 7-82 8- 5-82	*5.9 *3.8 *1.6
01123810 Quinebaug River tributary	do	Lat 42°04'15", long 72°00'23", Worcester County, at bridge at wastewater treatment plant off Dresser Hill Rd., 0.5 mi northeast of Sandersdale, 1.4 mi southeast of Southbridge, MA.	-	1980-81	5-14-82 7- 7-82 8- 4-82	*6.5 *3.4 *1.1
01124100 Tufts Branch	do	Lat 42°01'42", long 71°56'19", Worcester County, 200 ft above bridge on State Highway 197, 1.2 mi southwest of Dudley, MA.	2.21	1960-62†, 1965-66†, 1980-81	5-14-82 7- 7-82 8- 5-82 9-16-82	*1.3 *.64 *.13 0
01124285 French River	Quinebaug River	Lat 42°11'16", long 71°53'50", Worcester County, at culvert on unnamed road at Cominsville, 1.9 mi north of North Oxford, MA.	-	1980-81	5-12-82 7- 8-82 8- 4-82	*15 *7.6 *5.7

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water)	Measurements	
					Date	Dis- charge
Thames River basin--Continued						
01124390 Little River	French River	Lat 42°09'16", long 71°54'47", Worcester County, at bridge on U.S. Highway 20, 0.7 mi east of Richardson Corners, 1.5 mi west of North Oxford, MA.	-	1980-81	5-12-82 7- 8-82 8- 3-82	*9.3 *3.8 *2.6
01124515 French River tributary	do	Lat 42°05'45", long 71°52'39", Worcester County, at culvert on Nelson St., 0.7 mi southeast of West Oxford, 1.3 mi southwest of Oxford, MA.	-	1980-81	5-12-82 7- 7-82 7-27-82 9-16-82	*9.8 *9.0 *4.6 0
01124910 Mill Brook	do	Lat 42°04'02", long 71°52'34", Worcester County, at bridge on Bigelow Rd., 1.3 mi north of Webster, MA.	-	1980-81	5-13-82 7- 7-82 7-27-82	*3.4 *6.2 *4.0
01125000 French River	Quinebaug River	Lat 42°03'03", long 71°53'08", Worcester County, on right bank in Dudley, 50 ft upstream from Pleasant Street Bridge at Webster, 1.1 mi upstream from Potash Brook, in Dudley, MA.	85.3	1949-81†	10-14-81 2- 3-82 2-17-82 5-13-82 6- 8-82 7- 8-82 8-18-82 9-22-82	56 408 140 73 666 15 37 24
01125020 Long Branch Brook	do	Lat 42°00'42", long 71°52'21", Windham County, at culverts on Labby Rd., 1.0 mi east of Wiltonville, CT.	-	-	8-26-80 9-11-80 9-23-80 5-13-82 7- 7-82 8- 3-82	*.40 *.16 *.17 *3.2 *1.8 *.65
01125780 Rocky Brook	Fivemile River	Lat 42°00'48", long 71°48'09", Windham County, at bridge on East Thompson Rd., 0.5 mi northeast of East Thompson, CT.	-	1980-81	5-13-82 7- 7-82 8- 3-82	*6.9 *2.9 *.89
Connecticut River basin						
01172600 Canesto Brook	Burnshirt River	Lat 42°28'24", long 72°03'08", Worcester County, at culvert on Williamsville Rd., 1.4 mi east of Williamsville, MA.	4.48	1960-62†, 1965-66†, 1980-81	5-17-82 7- 6-82	*4.1 *3.6
01172700 Natty Pond Brook	Canesto Brook	Lat 42°28'41", long 72°01'26", Worcester County, at bridge on Williamsville Rd., 0.9 mi west of Hubbardston, MA.	2.51	1960-62†, 1965-66† 1981	5-17-82 7- 6-82	*4.8 *5.0
01172800 Natty Pond Brook	do	Lat 42°27'06", long 72°01'48", Worcester County, at bridge on Hale Rd., 0.8 mi above mouth, 2.0 mi southwest of Hubbardston, MA.	5.50	1960-62†, 1965†, 1980-81	5-17-82 7- 6-82	*6.0 *6.0
01172950 Ware River tributary	Ware River	Lat 42°23'35", long 72°02'39", Worcester County, at bridge on State Highway 122, at Coldbrook Springs, MA.	4.89	1980-81	5-18-82 7- 9-82 9-15-82	*7.4 *7.0 *3.0
01173150 Smith Brook	Prince River	Lat 42°23'52", long 72°06'17", Worcester County, at culvert on Loring Rd., 1.0 mi north of South Barre, MA.	.57	1960-62†, 1965-66†, 1980-81	5-17-82 7- 8-82 9-15-82	*.31 *.44 *.02
01173200 Bell Brook	Pratt Brook	Lat 42°22'24", long 72°05'56", Worcester County, at culvert on Woods Rd., 0.4 mi south of Barre Plains, MA.	3.57	1960-62†, 1965-66†, 1980-81	5-17-82 7- 8-82 9-15-82	*3.4 *2.3 *.84
01173230 Pine Hill Brook	Ware River	Lat 42°22'16", long 72°07'39", Worcester County, at bridge on Glazer Rd., 0.5 mi southwest of Barre Plains, MA.	2.62	1960-62†, 1965-66†, 1980-81	5-17-82 7- 8-82 9-14-82	*1.3 *1.0 *.08
01173300 Winimusset Brook	do	Lat 42°20'33", long 72°08'44", Worcester County, at culvert on Hardwick Rd., 0.8 mi south of Wheelwright, 3 mi southwest of Barre Plains, MA.	5.69	1960-62†, 1965-66†, 1980-81	5-18-82 7- 8-82 9-15-82	*5.2 *5.3 *2.1
01173350 Danforth Brook	do	Lat 42°19'42", long 72°12'19", Worcester County, at culvert on State Highway 32, 1.1 mi north of Gilbertville, MA.	4.01	1960-62†, 1965-66†, 1980-81	7- 7-82 9-14-82	*1.6 *.68
01173400 Muddy Brook	do	Lat 42°22'06", long 72°13'16", Worcester County, at culvert on Greenwich Rd., 1.8 mi northwest of Hardwick, MA.	4.34	1960-62†, 1965-66†, 1980-81	7- 7-82 9-14-82	*2.2 *.56

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water	Measurements	
					Date	Dis- charge
Connecticut River basin--Continued						
01173450 Flat Brook	Ware River	Lat 42°14'56", long 72°15'53", Hampshire County, at culvert on State Highway 32, 1.4 mi southwest of Ware, MA.	6.50	1960-62†, 1965-66†, 1980-81	5-18-82 7- 7-82 9-14-82	*4.2 *3.9 *.87
01173900 Middle Branch Swift River	Quabbin Reservoir	Lat 42°32'45", long 72°19'10", Franklin County, at culvert on Elm St., at North New Salem, MA.	4.73	1964-74††, 1980-81	5-12-82 5-19-82 7- 7-82 9-13-82	*5.9 *2.8 *1.9 *.14
01174200 East Branch Swift River	do	Lat 42°30'44", long 72°09'18", Worcester County, at bridge on State Highway 101, 2.3 mi northeast of Petersham, MA.	5.62	1980-81	5-12-82 7- 6-82 9-13-82	*7.6 *3.6 *.42
01174560 West Branch Swift River	do	Lat 42°27'50", long 72°22'59", Franklin County, at bridge on Cooleyville Rd., 0.4 mi west of Cooleyville, 1.6 mi northeast of Shutesbury, MA.	6.88	1980-81	5-12-82 7- 7-82 7-27-82 9-13-82	*6.6 *3.1 *.41 *.17
01174563 West Branch Swift River tributary	West Branch Swift River	Lat 42°27'52", long 72°22'56", Franklin County, at bridge on Cooleyville Rd., 0.3 mi west of Cooleyville, 1.7 mi northeast of Shutesbury, MA.	3.86	1981	5-12-82 7- 7-82 7-27-82 9-13-82	*4.2 *2.6 *.59 *.19
01175570 Jabish Brook	Swift River	Lat 42°21'05", long 72°24'37", Hampshire County, at culvert on Gold St., 0.4 mi west of Knights Corner, 2.8 mi south of Pelham, MA.	1.51	1980-81	5-13-82 7- 7-82 7-27-82 9-13-82	*1.5 *1.0 *.36 *.31
01175580 Jabish Brook	do	Lat 42°17'16", long 72°24'02", Hampshire County, at bridge on State Highway 9, 0.8 mi north of Belchertown, MA.	6.10	1980-81	5-13-82 7- 7-82 7-27-82 9-13-82	*6.6 *4.9 *1.6 *.96
††01175600 Caruth Brook	Turkey Hill Brook	Lat 42°19'00", long 71°58'16", Worcester County, at culvert on Nanigian Rd., 2.2 mi west of Paxton, MA.	2.35	1960-62†, 1965-66†, 1980-81	5-18-82 7- 8-82 9-15-82	*1.2 *.91 *.06
01175700 Maynard Brook	Fivemile River	Lat 42°19'27", long 72°02'44", Worcester County, at culvert on North Brookfield Rd., 2.0 mi south of Oakham, MA.	1.88	1960-62†, 1965-66†, 1980-81	5-18-82 7- 8-82 9-15-82	*.83 *.62 *.08
01175730 Great Brook	East Brookfield River	Lat 42°12'09", long 72°03'04", Worcester County, 40 ft upstream from bridge on Podunk St., 1.6 mi south of East Brookfield, MA.	4.34	1960-62†, 1965-66† 1981	5-19-82 7- 7-82	*2.7 *1.8
01175790 Coys Brook	Quaboag River	Lat 42°14'01", long 72°08'05", Worcester County at bridge on State Highway 9, at West Brookfield, MA.	7.88	1960-62†, 1965†, 1980-81	7- 7-82	*1.5
01175820 Meadow Brook	Mill Brook	Lat 42°17'31", long 72°08'09", Worcester County, at bridge on West Brookfield Rd., 1.8 mi south of New Braintree, MA.	7.30	1960-62†, 1965†, 1981	5-18-82 7- 8-82	*3.8 *3.0
01175850 Mill Brook	Quaboag River	Lat 42°15'50", long 72°09'33", Worcester County, at bridge on Shay Rd., 0.8 mi above Wickaboag Pond, 2.2 mi northwest of West Brookfield, MA.	11.9	1960-62†, 1965†, 1980	5-18-82 7- 7-82	*12 *11
01175890 Naultaug Brook	do	Lat 42°13'31", long 72°10'12", Worcester County, at bridge on State Highway 67, 1.5 mi northeast of Warren, MA.	3.55	1981	5-13-82 7- 7-82 7-27-82 9-14-82	*4.4 *2.5 *1.2 *.39
01175910 Cheney Brook	do	Lat 42°12'56", long 72°12'24", Worcester County, at bridge on State Highway 67, 0.6 mi west of Warren, MA.	1.29	1960-62†, 1965†, 1980-81	5-18-82 5-19-82 7- 7-82 9-14-82	*.46 *.38 *.38 *.02
01175940 O'Neil Brook	do	Lat 42°12'58", long 72°13'14", Worcester County, at bridge on State Highway 67, 0.8 mi east of West Warren, MA.	2.07	1960-62†, 1965†, 1980-81	5-18-82 7- 7-82 9-14-82	*.68 *.59 *.02
01175970 School Street Brook	do	Lat 42°12'49", long 72°14'30", Worcester County, at culvert on School St., at West Warren, MA.	1.22	1960-62†, 1965†, 1980-81	5-18-82 7- 7-82 9-14-82	*1.1 *.85 *.08

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1982--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water	Measurements	
					Date	Dis- charge
Connecticut River basin--Continued						
01176100 Blodgett Mill Brook	Quaboag River	Lat 42°10'13", long 72°15'41", Hampden County, at Boston and Albany Railroad culvert, 0.3 mi south of West Brimfield, 3.5 mi northeast of Palmer, MA.	7.72	1960-62†, 1965-66†, 1980-81	5-18-82 7- 7-82 9-14-82	*7.6 *7.1 *.87
01176200 Kings Brook	do	Lat 42°09'41", long 72°16'08", Hampden County, at culvert on State Highway 67, 1 mi south of West Brimfield and 3 mi east of Palmer, MA.	3.87	1960-62†, 1965-66†, 1980-81	5-17-82 7- 7-82	*6.3 *4.4
01176395 Calkins Pond Outlet	Chicopee Brook	Lat 42°04'20", long 72°19'40", Hampden County, at culvert on Bumstead Rd., 1.5 mi southwest of South Monson, MA.	.62	1980-81	5-17-82 7- 7-82	*.96 *.81
01176400 Chicopee Brook	Quaboag River	Lat 42°05'01", long 72°18'57", Hampden County, at culvert on Maple St., at South Monson, 1.5 mi south of Monson, MA.	4.68	1960-62†, 1965-66†, 1980-81	5-17-82 5-19-82 7- 7-82	*11 *8.2 *6.9
01176450 Roaring Brook	Broad Brook * Canal	Lat. 42°14'07", long 72°24'18", Hampshire County, at culvert on State Highway 21, 4 mi south of Belchertown, MA.	2.77	1963-74††, 1965, 1980-81	5-13-82 5-19-82 7- 9-82 7-27-82 9-14-82	*2.1 *.97 *.69 *.29 *.17
01177032 Harris Brook	Higher Brook	Lat 42°11'24", long 72°28'44", Hampden County, at culvert at intersection of Church St. and Rood St., 1.0 mi west of Ludlow Center, MA.	2.77	1957-58, 1980-81	5-13-82 7- 9-82	*2.9 *2.2

† Operated as a continuous-record station.

* Published as low-flow partial-record station.

†† Also a crest-stage partial-record station.

‡ Crest-stage partial-record station.

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
MERRIMACK RIVER BASIN									
01094400 - NORTH NASHUA RIVER AT FITCHBURG, MA (LAT 42 34 34 LONG 071 47 19)									
OCT , 1981					MAY , 1982				
14...	1430	26	13.0	--	03...	1830	165	15.0	133
NOV					JUN				
24...	1045	137	5.0	145	23...	1030	193	18.0	130
DEC					AUG				
31...	1215	82	2.0	95	02...	1630	54	27.0	126
FEB , 1982					SEP				
05...	1030	524	2.5	--	09...	1030	23	22.0	240
MAR									
30...	1030	264	3.0	115					
01094500 - NORTH NASHUA RIVER NEAR LEOMINSTER, MA (LAT 42 30 06 LONG 071 43 23)									
OCT , 1981					MAY , 1982				
14...	1030	64	11.0	168	03...	1515	250	15.5	159
NOV					JUN				
24...	1415	227	5.0	--	23...	1445	284	21.0	152
DEC					JUL				
28...	1100	199	2.0	--	26...	1115	76	25.5	258
FEB , 1982					SEP				
05...	1315	804	3.5	--	09...	1500	69	21.0	262
MAR									
30...	1400	383	3.0	145					
01096000 - SQUANNACOOK RIVER NEAR WEST GROTON, MA (LAT 42 38 03 LONG 071 39 30)									
OCT , 1981					MAY , 1982				
15...	1115	26	8.0	--	04...	1300	142	12.0	90
NOV					JUN				
25...	1015	147	3.5	84	24...	1445	149	20.0	72
DEC					JUL				
23...	1100	124	2.5	85	29...	1430	231	23.0	87
FEB , 1982					SEP				
12...	1015	142	1.5	--	10...	1030	20	20.5	105
APR									
01...	1415	428	2.5	77					
01096910 - BOULDER BROOK AT EAST BOLTON, MA (LAT 42 27 04 LONG 071 34 39)									
OCT , 1981					APR , 1982				
19...	1000	1.8	--	142	15...	1100	2.6	7.5	153
NOV					MAY				
16...	1500	3.1	8.0	116	11...	1510	6.0	15.5	152
JAN , 1982					JUN				
15...	1500	4.8	.0	124	25...	1245	4.6	16.5	162
FEB					AUG				
04...	1515	20	2.5	--	03...	1400	1.3	18.0	200
11...	1030	8.5	.5	137	SEP				
APR					20...	0930	.25	10.5	440
02...	1130	4.8	5.5	128					
01097000 - ASSABET RIVER AT MAYNARD, MA (LAT 42 25 55 LONG 071 27 01)									
OCT , 1981					MAY , 1982				
19...	1200	73	11.5	270	11...	0945	244	16.0	188
NOV					JUN				
16...	1200	137	7.0	210	08...	1500	2110	16.5	--
JAN , 1982					25...	0845	269	20.0	157
21...	1000	257	1.0	156	AUG				
FEB					03...	0930	110	23.0	172
11...	1230	384	1.0	213	SEP				
APR					20...	1230	36	17.0	270
01...	1600	366	9.0	164	27...	0900	62	14.0	--
01097300 - NASHOBA BROOK NEAR ACTON, MA (LAT 42 31 19 LONG 071 24 15)									
NOV , 1981					MAY , 1982				
25...	1200	28	5.0	--	07...	0925	13	14.0	162
JAN , 1982					JUL				
08...	0930	81	.0	--	09...	1200	10	21.0	--
FEB					AUG				
26...	1045	20	1.5	--	27...	1400	5.6	18.5	84
APR									
14...	0900	49	6.5	139					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
MERRIMACK RIVER BASIN--Continued									
01098530 - SUDBURY RIVER AT SAXONVILLE, MA (LAT 42 19 31 LONG 071 23 53)									
OCT , 1981					MAY , 1982				
19...	1500	72	--	245	10...	0945	191	17.5	245
NOV					JUN				
20...	1000	261	7.0	210	10...	0900	1480	16.5	170
JAN , 1982					21...	0900	544	18.5	171
11...	1315	556	.5	118	AUG				
21...	1300	234	1.0	118	02...	1415	74	25.5	230
FEB					SEP				
12...	1000	431	--	240	23...	0900	81	16.0	225
19...	1345	289	--	240					
APR									
01...	1100	294	9.0	240					
01099500 - CONCORD R BELOW R MEADOW BROOK, AT LOWELL, MA (LAT 42 38 12 LONG 071 18 09)									
NOV , 1981					MAY , 1982				
10...	0830	362	6.0	185	14...	1415	707	17.0	232
JAN , 1982					JUL				
05...	0815	1870	.0	195	06...	1230	805	22.5	306
FEB					AUG				
04...	0900	1380	4.0	--	27...	1045	205	20.5	234
MAR									
03...	0915	707	1.5	--					
01100000 - MERRIMACK RIVER BL CONCORD RIVER AT LOWELL, MA (LAT 42 38 45 LONG 071 17 56)									
NOV , 1981					JUN , 1982				
10...	1130	8600	6.0	178	09...	1230	32600	15.5	160
JAN , 1982					JUL				
07...	1030	17400	.0	132	06...	1100	7560	22.5	195
MAR					AUG				
03...	1430	5670	2.0	--	27...	1000	2930	22.5	248
APR									
30...	0900	31500	11.5	--					
01100600 - SHAWSHEEN RIVER NEAR WILMINGTON, MA (LAT 42 34 05 LONG 071 12 55)									
JAN , 1982					MAY , 1982				
07...	0830	439	.0	115	13...	0930	86	14.5	218
FEB					JUL				
26...	1430	76	1.5	--	07...	0830	39	21.5	242
APR					AUG				
14...	1450	156	10.5	310	26...	0700	30	21.5	190
PARKER RIVER BASIN									
01101000 - PARKER RIVER AT BYFIELD, MA (LAT 42 45 10 LONG 070 56 46)									
DEC , 1981					MAY , 1982				
04...	1145	52	3.0	--	11...	1000	40	16.0	136
JAN , 1982					JUL				
06...	1115	161	.5	105	09...	0830	26	24.5	158
FEB					AUG				
19...	1200	47	1.0	--	26...	1230	11	19.5	178
APR									
02...	1035	78	1.5	204					
IPSWICH RIVER BASIN									
01101500 - IPSWICH RIVER AT SOUTH MIDDLETON, MA (LAT 42 34 10 LONG 071 01 39)									
JAN , 1982					JUL , 1982				
22...	0930	60	.0	166	07...	1100	68	17.5	185
MAR					AUG				
09...	0800	105	.5	202	26...	1030	18	19.5	172
MAY									
07...	1430	36	16.0	240					
01102000 - IPSWICH RIVER NEAR IPSWICH, MA (LAT 42 39 35 LONG 070 53 39)									
OCT , 1981					APR , 1982				
05...	1515	51	12.0	--	02...	1230	280	6.5	168
DEC					MAY				
04...	1000	213	3.0	--	11...	1400	169	16.5	116
JAN , 1982					JUL				
06...	1330	841	.0	84	07...	1400	210	24.0	93
FEB					AUG				
19...	0930	268	1.5	--	26...	1445	49	26.5	67

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
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MYSTIC RIVER BASIN

01102500 - ABERJONA RIVER AT WINCHESTER, MA (LAT 42 26 50 LONG 071 08 22)

OCT , 1981					APR , 1982				
06...	1230	4.5	12.0	--	05...	1500	45	6.5	315
DEC					MAY				
03...	1445	69	3.5	--	13...	1400	24	16.5	475
JAN , 1982					JUL				
22...	1430	37	.5	--	09...	1345	21	22.5	350
FEB					AUG				
26...	1230	24	1.5	--	24...	1430	9.2	21.5	292

CHARLES RIVER BASIN

01104000 - MOTHER BROOK AT DEDHAM, MA (LAT 42 15 18 LONG 071 09 53)

OCT , 1981					APR , 1982				
05...	1135	6.7	12.0	278	16...	0830	126	9.5	152
NOV					JUN				
18...	1300	58	7.5	--	18...	1610	340	20.0	--
JAN , 1982					AUG				
05...	1500	297	2.0	117	10...	1400	25	24.0	--
FEB									
25...	1350	87	.5	183					

01104200 - CHARLES RIVER AT WELLESLEY, MA (LAT 42 18 59 LONG 071 13 42)

OCT , 1981					MAY , 1982				
14...	1045	65	12.5	172	12...	1230	261	17.0	222
DEC					JUL				
14...	1415	392	1.0	153	08...	0930	191	25.5	184
MAR , 1982					AUG				
16...	0800	501	2.5	196	24...	0945	97	21.0	160

01104500 - CHARLES RIVER AT WALTHAM, MA (LAT 42 22 20 LONG 071 14 03)

OCT , 1981					MAY , 1982				
14...	1230	71	11.0	190	13...	1200	334	17.0	212
DEC					JUL				
14...	1100	460	1.0	240	08...	1330	240	23.0	245
JAN , 1982					AUG				
22...	1145	427	.5	--	24...	1115	126	22.5	185
MAR									
16...	1150	591	3.0	285					

NEPONSET RIVER BASIN

01105000 - NEPONSET RIVER AT NORWOOD, MA (LAT 42 10 39 LONG 071 12 05)

OCT , 1981					MAY , 1982				
05...	1500	13	12.5	255	03...	1045	55	15.0	173
NOV					JUN				
19...	1145	80	8.0	188	03...	1645	203	18.0	142
JAN , 1982					AUG				
06...	1040	360	1.0	133	03...	1240	11	22.0	220
FEB					SEP				
04...	1440	306	1.5	170	16...	1220	9.4	20.0	266
26...	1520	55	.5	140					
APR									
15...	1540	89	10.0	168					

01105500 - EAST BRANCH NEPONSET RIVER AT CANTON, MA (LAT 42 09 16 LONG 071 08 47)

OCT , 1981					APR , 1982				
06...	1000	9.4	8.5	228	15...	1230	84	10.0	157
JAN , 1982					JUN				
13...	0925	102	.5	147	04...	1440	90	20.0	134
FEB					AUG				
26...	0815	39	.5	184	11...	1115	45	22.0	--
MAR					SEP				
12...	1450	70	4.5	163	16...	1440	7.1	20.5	254

WEYMOUTH FORE RIVER BASIN

01105585 - TOWN BROOK AT QUINCY, MA (LAT 42 14 52 LONG 070 59 52)

DEC , 1981					JUN , 1982				
09...	1230	19	.0	460	16...	1435	13	17.0	480
JAN , 1982					AUG				
13...	1430	11	2.0	465	04...	1215	1.4	18.0	--
MAR					10...	1110	5.7	19.5	574
05...	0930	10	3.0	435	SEP				
APR					17...	1225	.98	16.5	681
21...	1400	5.9	10.0	610					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
WEYMOUTH BACK RIVER BASIN									
01105600 - OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA (LAT 42 11 25 LONG 070 56 43)									
OCT , 1981					APR , 1982				
07...	1140	2.8	11.0	--	16...	1150	8.7	10.0	183
DEC					AUG				
11...	0900	8.3	2.0	173	09...	1530	12	19.0	215
JAN , 1982					SEP				
13...	1120	6.0	.5	188	17...	1015	.75	15.0	310
MAR									
02...	1230	4.9	1.0	325					
NORTH RIVER BASIN									
01105730 - INDIAN HEAD RIVER AT HANOVER, MA (LAT 42 06 02 LONG 070 49 23)									
OCT , 1981					APR , 1982				
07...	1415	12	12.0	--	21...	1645	54	11.0	225
DEC					JUN				
11...	1530	68	14.0	190	09...	1315	386	13.0	120
JAN , 1982					AUG				
15...	1430	57	.0	192	03...	1640	25	23.0	212
MAR					SEP				
05...	1600	157	1.0	245	21...	1305	13	16.0	290
JONES RIVER BASIN									
01105870 - JONES RIVER AT KINGSTON, MA (LAT 41 59 27 LONG 070 44 03)									
OCT , 1981					JUN , 1982				
15...	1230	6.7	10.0	--	09...	1630	162	13.0	62
DEC					AUG				
11...	1540	26	2.0	68	04...	0900	18	19.0	93
JAN , 1982					11...	1625	26	21.0	--
15...	1125	22	.5	90	SEP				
MAR					21...	1620	14	14.5	192
05...	1510	33	2.0	92					
APR									
23...	1210	21	12.0	86					
HERRING RIVER BASIN									
01105880 - HERRING RIVER AT NORTH HARWICH, MA (LAT 41 42 00 LONG 070 06 27)									
OCT , 1981					APR , 1982				
08...	1550	3.4	12.0	94	23...	0925	7.8	9.0	83
NOV					JUN				
24...	1545	2.0	7.0	83	10...	1620	14	17.5	86
JAN , 1982					AUG				
21...	1525	6.0	1.5	85	05...	1025	4.8	20.0	92
MAR					SEP				
19...	1240	6.7	6.5	75	22...	1050	6.2	16.0	93
TAUNTON RIVER BASIN									
01108500 - WADING RIVER AT WEST MANSFIELD, MA (LAT 42 00 00 LONG 071 15 38)									
OCT , 1981					APR , 1982				
07...	1510	3.6	8.5	115	15...	0845	51	6.5	167
NOV					JUN				
16...	1235	7.7	7.5	210	18...	1235	94	19.0	153
JAN , 1982					AUG				
07...	1110	195	1.5	137	06...	1015	12	21.5	196
MAR					SEP				
04...	1110	28	1.0	174	20...	1255	2.8	16.0	192
01109000 - WADING RIVER NEAR NORTON, MA (LAT 41 56 51 LONG 071 10 38)									
OCT , 1981					JUN , 1982				
07...	1110	12	9.0	259	11...	1715	250	18.0	128
NOV					18...	0800	184	17.5	124
16...	1525	35	7.5	237	AUG				
JAN , 1982					05...	1610	16	21.5	153
07...	1510	366	2.5	117	SEP				
MAR					20...	1030	10	16.0	78
04...	1310	62	1.0	148					
APR									
22...	1410	77	12.0	143					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
TAUNTON RIVER BASIN--Continued									
01109060 - THREEMILE RIVER AT NORTH DIGHTON, MA (LAT 41 51 58 LONG 071 07 24)									
OCT , 1981					APR , 1982				
08...	1300	23	12.0	223	23...	1445	152	12.5	143
NOV					JUN				
24...	1230	101	7.5	153	11...	1210	610	17.0	141
JAN , 1982					AUG				
08...	1530	681	1.0	150	05...	1410	47	22.5	160
MAR					SEP				
04...	1500	131	1.0	150	23...	0945	72	15.0	230
01109070 - SEGREGANSET RIVER NEAR DIGHTON, MA (LAT 41 50 25 LONG 071 08 36)									
OCT , 1981					MAY , 1982				
09...	1125	1.7	10.5	121	05...	1625	14	17.0	64
NOV					JUN				
20...	1025	24	7.0	146	11...	1020	33	14.0	71
JAN , 1982					AUG				
08...	1240	53	.5	62	04...	1550	5.2	21.0	72
MAR					SEP				
04...	1625	14	.5	77	23...	1550	10	16.0	163
APR									
23...	1555	12	13.0	68					
BLACKSTONE RIVER BASIN									
01110000 - QUINSIGAMOND RIVER AT NORTH GRAFTON, MA (LAT 42 13 49 LONG 071 42 41)									
OCT , 1981					MAY , 1982				
08...	1100	18	11.5	255	10...	1400	44	19.0	260
NOV					JUN				
20...	1400	62	8.5	230	24...	1100	72	22.0	245
JAN , 1982					AUG				
12...	0930	87	.5	270	02...	0945	20	24.0	225
FEB					SEP				
19...	1130	54	2.5	280	23...	1430	11	15.5	300
MAR									
31...	1530	53	8.0	140					
01110500 - BLACKSTONE RIVER AT NORTHBRIDGE, MA (LAT 42 09 13 LONG 071 39 09)									
OCT , 1981					MAY , 1982				
13...	1000	110	11.5	--	14...	0930	180	18.5	--
NOV					JUL				
24...	1000	318	--	270	09...	1030	190	24.5	350
JAN , 1982					AUG				
16...	1100	1090	--	99	23...	1030	132	18.5	430
FEB					SEP				
16...	1300	398	4.5	--	22...	1500	244	16.0	--
MAR									
29...	1445	389	7.5	275					
01111200 - WEST RIVER BELOW WEST HILL DAM, NR UXBRIDGE, MA (LAT 42 06 17 LONG 071 36 28)									
OCT , 1981					MAY , 1982				
13...	1500	8.5	9.0	175	13...	1340	32	17.5	133
NOV					JUL				
24...	1400	86	6.0	105	09...	1315	19	24.5	117
JAN , 1982					AUG				
05...	1100	20	--	47	23...	1305	8.5	17.5	146
FEB					SEP				
16...	1130	94	.5	125	22...	1245	7.6	14.5	148
MAR									
29...	1100	86	4.0	97					
01111300 - NIPMUC RIVER NEAR HARRISVILLE, RI (LAT 41 58 52 LONG 071 41 11)									
DEC , 1981					MAY , 1982				
01...	1500	18	1.0	46	05...	1045	25	12.0	46
JAN , 1982					JUN				
28...	1345	24	.0	48	06...	1815	938	14.5	--
MAR					AUG				
16...	1230	52	3.0	42	05...	1330	2.8	19.0	64
01112500 - BLACKSTONE RIVER AT WOONSOCKET, RI (LAT 42 00 22 LONG 071 30 13)									
DEC , 1981					MAY , 1982				
01...	1140	606	2.5	154	04...	1715	770	15.0	147
MAR , 1982									
16...	1240	1460	10.5	142					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
MOSHASSUCK RIVER BASIN									
01114000 - MOSHASSUCK RIVER AT PROVIDENCE, RI (LAT 41 50 02 LONG 071 24 42)									
NOV , 1981					MAR , 1982				
13...	1500	9.5	7.5	318	17...	0815	52	4.0	280
DEC					MAY				
03...	1515	78	6.5	172	03...	1400	42	14.5	280
JAN , 1982					AUG				
29...	1000	28	1.0	290	13...	1300	17	20.0	340
FEB									
04...	0815	189	2.0	167					
PAWTUXET RIVER BASIN									
01116000 - SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI (LAT 41 41 24 LONG 071 33 59)									
DEC , 1981					MAR , 1982				
02...	1215	180	4.0	162	18...	0800	173	2.5	66
JAN , 1982					MAY				
26...	1300	104	.5	132	04...	1230	214	16.0	68
PAWCATUCK RIVER BASIN									
01117500 - PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI (LAT 41 26 42 LONG 071 40 53)									
DEC , 1981					MAY , 1982				
02...	1500	154	5.5	89	24...	0840	174	14.0	78
APR , 1982					JUL				
26...	1600	201	6.0	85	26...	1415	135	22.5	70
THAMES RIVER BASIN									
01123090 - HOLLOW BROOK NEAR WALES, MA (LAT 42 05 03 LONG 072 13 40)									
MAY , 1982					JUL , 1982				
17...	1135	1.3	13.0	46	08...	1410	1.1	11.0	46
01123150 - EAST BROOK NEAR BRIMFIELD, MA (LAT 42 08 18 LONG 072 11 24)									
JUL , 1982									
07...	1430	3.0	21.0	135					
01123155 - UNNAMED LAKE ON WALES BROOK AT WALES, MA (LAT 42 04 24 LONG 072 13 02)									
MAY , 1982					SEP , 1982				
17...	1145	1.3	16.5	80	14...	1400	.61	23.0	55
JUL									
08...	1240	2.1	24.0	81					
01123158 - WALES BROOK AT HOLLOW RD NEAR WALES, MA (LAT 42 04 37 LONG 072 12 16)									
MAY , 1982					SEP , 1982				
17...	0945	3.1	15.0	103	14...	1515	1.2	19.5	105
JUL									
08...	1130	4.2	20.0	46					
01123190 - MAY BROOK NEAR UNION, CT (LAT 42 01 46 LONG 072 10 32)									
JUL , 1982									
08...	1030	1.8	25.5	34					
01123200 - STEVENS BROOK AT HOLLAND, MA (LAT 42 03 41 LONG 072 09 45)									
JUL , 1982									
08...	1145	3.1	--	42					
01123250 - QUINEBAUG RIVER TRIBUTARY NEAR BROOKFIELD, MA (LAT 42 09 57 LONG 072 08 38)									
JUL , 1982					SEP , 1982				
07...	1345	1.6	18.0	74	14...	1130	.11	16.5	171
01123300 - QUINEBAUG RIVER TRIBUTARY NEAR FISKDALE, MA (LAT 42 08 52 LONG 072 07 55)									
JUL , 1982					SEP , 1982				
07...	1055	4.0	18.5	77	14...	1030	.79	--	120
01123360 - QUINEBAUG R BL E BRIMFIELD DAM AT FISKDALE, MA (LAT 42 06 31 LONG 072 07 27)									
OCT , 1981					JUL , 1982				
15...	0900	36	--	86	07...	1230	82	23.5	72
NOV					AUG				
19...	1000	162	6.5	78	17...	0930	32	23.0	82
FEB , 1982					27...	1140	34	21.5	--
18...	0900	188	1.0	79	SEP				
MAY					21...	0930	29	18.0	78
18...	1235	60	19.5	79					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
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THAMES RIVER BASIN--Continued

01123600 - QUINEBAUG R BL WESTVILLE DAM NR SOUTHBRIDGE, MA (LAT 42 04 58 LONG 072 03 27)

OCT , 1981					MAY , 1982				
15...	1600	41	--		18...	0930	80	19.0	108
NOV				135	JUL				
19...	1330	225	7.0		07...	0930	113	22.0	97
JAN , 1982				102	AUG				
20...	1200	180	.5		17...	1435	46	24.0	12
FEB				102	SEP				
17...	1215	239	.5		21...	1230	42	16.0	118

01123700 - MCKINSTRY BROOK AT SOUTHBRIDGE, MA (LAT 42 05 30 LONG 072 02 43)

AUG , 1982				
04...	1245	.76	19.5	104

01123795 - UNNAMED P OUTLET LEBANON BK NR SOUTHBRIDGE, MA (LAT 42 02 29 LONG 072 02 48)

MAY , 1982				
14...	1045	5.2	19.0	40

01123800 - LEBANON BROOK NEAR SOUTHBRIDGE, MA (LAT 42 03 20 LONG 072 01 10)

AUG , 1982				
05...	1235	1.6	23.0	43

01123810 - QUINEBAUG RIVER TRIBUTARY AT SANDERSDALE, MA. (LAT 42 04 15 LONG 072 00 23)

JUL , 1982					AUG , 1982				
07...	1600	3.4	25.5	84	04...	1540	1.1	22.0	104

01124100 - TUFTS BRANCH NEAR DUDLEY, MA (LAT 42 01 42 LONG 071 56 19)

JUL , 1982					AUG , 1982				
07...	1430	.64	25.5	110	05...	0940	.13	18.5	122

01124285 - FRENCH RIVER NEAR NORTH OXFORD, MA (LAT 42 11 16 LONG 071 53 50)

MAY , 1982					AUG , 1982				
12...	1155	15	7.5	83	04...	1040	5.7	23.0	91

01124350 - FRENCH RIVER BELOW DAM, AT HODGES VILLAGE, MA (LAT 42 07 06 LONG 071 52 54)

OCT , 1981					MAY , 1982				
14...	1300	39	--	89	17...	1130	23	19.5	118
NOV					JUL				
23...	1200	108	6.0	93	08...	0840	20	22.0	105
JAN , 1982					AUG				
12...	1400	138	--	77	19...	0900	9.5	20.0	116
22...	0900	42	.5	77	SEP				
FEB					27...	1250	7.7	15.5	121
23...	1430	54	2.0	124					
MAR									
31...	1000	101	5.0	87					

01124390 - LITTLE RIVER AT RICHARDSON CORNERS, MA (LAT 42 09 16 LONG 071 54 47)

AUG , 1982				
03...	1105	2.6	21.5	180

01124500 - LITTLE RIVER NEAR OXFORD, MA (LAT 42 06 57 LONG 071 53 26)

OCT , 1981					MAY , 1982				
14...	1600	18	--	88	17...	1515	39	21.5	87
NOV					JUL				
23...	1300	72	6.0	94	08...	1130	32	24.5	68
JAN , 1982					AUG				
22...	1100	43	.5	48	19...	1300	57	23.0	78
FEB					SEP				
23...	1530	46	2.5	104	27...	1515	63	17.0	78
MAR									
31...	1200	79	.5	77					

01124515 - FRENCH RIVER TRIBUTARY AT WEST OXFORD, MA (LAT 42 05 45 LONG 071 52 39)

JUL , 1982				
07...	0940	9.0	23.0	103

01124750 - BROWNS BROOK NEAR WEBSTER, MA (LAT 42 03 24 LONG 071 49 51)

JUL , 1982				
07...	1110	.38	23.0	43

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
THAMES RIVER BASIN--Continued									
01124800 - SUCKER BROOK NEAR WEBSTER, MA (LAT 42 04 01 LONG 071 51 16)									
MAY , 1982					JUL , 1982				
13...	1250	3.2	1.5	46	07...	1035	1.0	--	43
01124910 - MILL BROOK NEAR WEBSTER, MA (LAT 42 04 02 LONG 071 52 34)									
JUL , 1982									
07...	0840	6.2	23.0	123					
01125020 - LONG BRANCH BROOK AT WILSONVILLE, CT. (LAT 42 00 42 LONG 071 52 21)									
JUL , 1982					AUG , 1982				
07...	1325	1.8	--	116	03...	1515	.65	19.0	277
01125780 - ROCKY BROOK AT EAST THOMPSON, CT (LAT 42 00 48 LONG 071 48 09)									
JUL , 1982					AUG , 1982				
07...	1210	2.9	23.0	23	03...	1400	.89	18.0	--
CONNECTICUT RIVER BASIN									
01161500 - TARBELL BROOK NEAR WINCHENDON, MA (LAT 42 42 45 LONG 072 05 09)									
OCT , 1981					MAY , 1982				
05...	1200	8.8	10.0	--	06...	1130	38	14.0	43
NOV					JUN				
16...	1000	23	7.0	50	14...	0930	42	15.0	42
DEC					JUL				
30...	1500	25	1.5	56	28...	1000	9.1	24.0	47
FEB , 1982					SEP				
08...	1015	76	1.0	--	08...	1000	4.2	16.0	58
MAR									
22...	1015	63	2.0	55					
01162000 - MILLERS RIVER NEAR WINCHENDON, MA (LAT 42 41 03 LONG 072 05 02)									
OCT , 1981					MAY , 1982				
05...	1345	89	14.0	--	05...	1440	170	15.0	54
NOV					JUN				
16...	1145	129	7.0	48	14...	1245	260	15.5	53
DEC					AUG				
30...	1415	135	2.0	--	03...	1315	97	21.0	73
FEB , 1982					SEP				
08...	1100	420	1.0	--	17...	1400	12	19.0	85
MAR									
22...	1230	308	3.5	68					
01162500 - PRIEST BROOK NEAR WINCHENDON, MA (LAT 42 40 57 LONG 072 06 56)									
OCT , 1981					MAY , 1982				
05...	1515	9.6	7.0	--	05...	1700	35	14.0	39
NOV					JUN				
16...	1545	23	7.5	40	14...	1415	34	15.0	35
DEC					JUL				
30...	1215	21	1.5	--	27...	1515	2.2	26.0	37
FEB , 1982					SEP				
08...	1300	98	1.5	--	14...	1600	2.0	18.0	48
MAR									
22...	1415	81	2.5	48					
01163200 - OTTER RIVER AT OTTER RIVER, MA (LAT 42 35 18 LONG 072 02 29)									
OCT , 1981					MAY , 1982				
13...	1545	30	13.0	--	05...	1130	84	14.0	117
NOV					JUN				
23...	1515	110	4.0	80	22...	1445	73	19.0	95
DEC					JUL				
31...	0945	53	1.0	117	26...	1600	20	21.0	131
FEB , 1982					SEP				
11...	1115	95	.5	--	08...	1500	16	19.0	110
MAR									
29...	1515	180	2.5	105					
01164000 - MILLERS RIVER AT SOUTH ROYALSTON, MA (LAT 42 37 47 LONG 072 09 03)									
OCT , 1981					MAY , 1982				
13...	1230	133	11.0	--	06...	1500	403	14.0	96
NOV					JUN				
23...	1045	704	3.5	100	22...	1130	368	17.0	88
DEC					JUL				
28...	1215	347	1.5	--	26...	1500	96	25.0	90
FEB , 1982					AUG				
11...	0845	920	.5	--	03...	1645	226	25.0	--
MAR					SEP				
29...	1300	1010	1.5	45	08...	1315	138	19.0	115

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01165000 - EAST BRANCH TULLY RIVER NEAR ATHOL, MA (LAT 42 38 32 LONG 072 13 34)									
OCT , 1981					MAY , 1982				
06...	1145	185	12.0	--	06...	1615	95	14.0	34
NOV					JUN				
16...	1400	56	5.5	65	14...	1600	256	15.0	33
DEC					JUL				
30...	1145	74	1.5	--	27...	1330	10	27.5	32
FEB , 1982					SEP				
08...	1445	185	1.5	--	14...	1730	11	19.0	35
MAR									
22...	1530	148	2.0	40					
01165300 - LAKE ROHUNTA OUTLET NEAR ATHOL, MA (LAT 42 34 13 LONG 072 16 22)									
OCT , 1981					MAY , 1982				
06...	0930	22	12.0	52	07...	1000	43	17.0	68
NOV					JUN				
19...	1415	47	7.0	65	21...	1100	51	20.0	53
DEC					AUG				
28...	1615	2.5	2.0	--	04...	1030	17	19.0	220
FEB , 1982					SEP				
09...	0845	89	1.0	--	15...	1000	2.1	19.0	67
MAR									
24...	1015	100	2.0	82					
01165500 - MOSS BROOK AT WENDELL DEPOT, MA (LAT 42 36 10 LONG 072 21 36)									
OCT , 1981					MAY , 1982				
08...	1315	4.0	7.0	45	07...	1430	19	14.0	39
NOV					JUN				
17...	1415	14	5.0	35	17...	1445	22	17.5	50
DEC					JUL				
28...	1500	17	1.5	--	27...	1030	1.6	20.5	50
FEB , 1982					SEP				
09...	1300	34	1.5	--	17...	1045	1.3	13.0	46
MAR									
25...	1415	69	2.0	47					
01166500 - MILLERS RIVER AT ERVING, MA (LAT 42 35 51 LONG 072 26 19)									
NOV , 1981					MAY , 1982				
19...	0815	983	8.0	62	07...	1615	733	17.0	79
DEC					JUN				
28...	1330	740	2.0	138	17...	1230	1240	17.0	65
FEB , 1982					AUG				
09...	1440	2200	1.5	95	06...	1000	170	26.5	124
MAR					SEP				
25...	1215	1690	3.0	73	17...	0845	55	18.0	183
01168151 - DEERFIELD RIVER NEAR ROWE, MA (LAT 42 40 57 LONG 072 58 37)									
OCT , 1981					JUN , 1982				
22...	1045	874	15.5	46	04...	0840	391	15.5	40
DEC					JUL				
14...	1025	976	6.5	42	07...	0855	803	17.0	35
FEB , 1982					AUG				
24...	0910	935	4.0	45	10...	1435	1070	21.0	38
APR									
19...	1235	2350	4.0	38					
01168500 - DEERFIELD RIVER AT CHARLEMONT, MA (LAT 42 37 33 LONG 072 51 20)									
OCT , 1981					JUN , 1982				
20...	1125	742	10.0	56	04...	0935	272	13.0	51
DEC					JUL				
10...	1325	1030	4.0	46	07...	1255	955	20.0	97
FEB , 1982					AUG				
24...	1300	1040	3.5	48	19...	1220	132	21.0	53
APR									
13...	1155	1390	4.5	52					
01169000 - NORTH RIVER AT SHATTUCKVILLE, MA (LAT 42 38 18 LONG 072 43 32)									
OCT , 1981					JUN , 1982				
19...	1030	196	7.5	87	08...	1255	561	12.5	63
DEC					JUL				
12...	1000	62	1.0	138	13...	1255	69	21.0	97
FEB , 1982					AUG				
22...	1345	106	2.0	122	19...	1455	21	23.0	255
APR									
12...	1310	317	5.0	81					

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CONNECTICUT RIVER BASIN--Continued									
01169900 - SOUTH RIVER NEAR CONWAY, MA (LAT 42 32 31 LONG 072 41 39)									
OCT , 1981					JUN , 1982				
20...	0810	11	6.0	158	08...	1515	196	14.0	90
DEC					JUL				
15...	1330	18	.0	147	12...	1202	15	19.0	170
FEB , 1982					AUG				
23...	1430	28	.0	128	31...	1300	5.0	17.0	190
APR									
13...	0755	96	2.0	104					
01170000 - DEERFIELD RIVER NEAR WEST DEERFIELD, MA (LAT 42 32 09 LONG 072 39 14)									
OCT , 1981					JUN , 1982				
20...	1410	1000	9.5	83	09...	0815	2550	12.0	82
JAN , 1982					JUL				
20...	1345	904	.0	73	08...	0935	686	21.0	95
FEB					AUG				
23...	1235	1080	1.0	96	11...	0830	132	21.0	84
APR									
14...	0830	2290	3.0	87					
01170100 - GREEN RIVER NEAR COLRAIN, MA (LAT 42 42 12 LONG 072 40 16)									
OCT , 1981					JUN , 1982				
19...	1400	67	7.0	77	08...	0840	278	10.0	61
DEC					JUL				
14...	1230	49	.0	90	07...	1415	39	19.0	102
FEB , 1982					AUG				
22...	1240	52	.0	86	20...	0830	10	17.0	117
APR									
05...	1350	338	3.0	68					
01170500 - CONNECTICUT RIVER AT MONTAGUE CITY, MA (LAT 42 34 48 LONG 072 34 30)									
OCT , 1981					JUL , 1982				
21...	1020	17800	--	119	06...	1615	11200	21.0	90
APR , 1982									
13...	1435	27000	3.0	97					
01171300 - FORT RIVER NEAR AMHERST, MA (LAT 42 21 30 LONG 072 30 23)									
OCT , 1981					MAY , 1982				
08...	1520	11	11.0	--	10...	1745	44	16.0	78
NOV					JUN				
17...	1715	27	8.5	--	16...	1045	83	17.5	62
JAN , 1982					AUG				
07...	1200	181	1.0	67	05...	1045	17	26.0	97
FEB					SEP				
10...	0930	82	1.0	--	16...	1100	10	19.0	118
MAR									
24...	1230	206	2.0	56					
01171500 - MILL RIVER AT NORTHAMPTON, MA (LAT 42 19 05 LONG 072 39 21)									
OCT , 1981					MAY , 1982				
09...	1045	40	10.5	--	10...	1315	84	16.0	74
NOV					JUN				
18...	1155	69	9.0	87	16...	1345	169	20.5	--
JAN , 1982					17...	1015	349	19.0	77
20...	1000	43	1.0	--	21...	1515	135	21.0	--
FEB					AUG				
25...	1330	77	.0	111	05...	1615	23	26.0	113
MAR					SEP				
24...	1500	261	2.5	80	16...	1500	10	19.0	123
01172500 - WARE RIVER NEAR BARRE, MA (LAT 42 25 35 LONG 072 01 30)									
OCT , 1981					MAY , 1982				
07...	1530	42	10.5	56	21...	1025	53	17.5	59
NOV					JUL				
17...	1450	144	7.0	47	06...	1140	62	19.5	53
JAN , 1982					AUG				
15...	1200	104	.5	55	26...	1545	20	18.5	59
FEB					SEP				
25...	1130	112	.5	92	28...	1100	15	15.5	61
APR									
05...	1500	357	2.0	43					

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01172600 - CANESTO BROOK NEAR WILLIAMSVILLE, MA (LAT 42 28 24 LONG 072 03 08)									
MAY , 1982	17...	1335	4.1	--	36				
01172700 - NATTY POND BROOK AT HUBBARDSTON, MA (LAT 42 28 41 LONG 072 01 26)									
MAY , 1982	17...	1310	4.8	17.5	45				
01172800 - NATTY POND BROOK NEAR HUBBARDSTON, MA (LAT 42 27 06 LONG 072 01 48)									
MAY , 1982	17...	1500	6.0	18.0	50				
01172950 - WARE RIVER TRIBUTARY AT COLDBROOK SPRINGS, MA (LAT 42 23 35 LONG 072 02 39)									
MAY , 1982	18...	1410	7.4	13.5	78	SEP , 1982	15...	1200	3.0 14.0 --
01173000 - WARE RIVER AT INTAKE WORKS NEAR BARRE, MA (LAT 42 23 26 LONG 072 03 39)									
OCT , 1981	07...	1245	80	10.5	51	MAY , 1982	21...	1230	102 19.5 52
NOV	17...	1155	133	6.5	44	JUL	06...	0930	132 19.0 48
JAN , 1982	14...	1500	127	.0	37	AUG	26...	1415	46 18.0 53
FEB	22...	1430	127	.5	50	SEP	28...	0900	35 14.5 55
APR	05...	1500	132	4.0	41				
01173150 - SMITH BROOK NEAR SOUTH BARRE, MA (LAT 42 23 52 LONG 072 06 17)									
MAY , 1982	17...	1545	.31	15.0	110	SEP , 1982	15...	0815	.02 14.5 --
01173200 - BELL BROOK AT BARRE PLAINS, MA (LAT 42 22 24 LONG 072 05 56)									
MAY , 1982	18...	1515	3.4	15.0	54	SEP , 1982	15...	1030	.84 15.5 --
01173250 - PINE HILL BROOK AT BARRE PLAINS, MA (LAT 42 22 16 LONG 072 07 39)									
MAY , 1982	17...	1610	1.3	18.5	52	SEP , 1982	14...	1615	.08 20.5 --
01173300 - WINIMUSSET BROOK AT WHEELWRIGHT, MA (LAT 42 20 33 LONG 072 08 44)									
MAY , 1982	18...	1610	5.2	19.0	67	SEP , 1982	15...	0930	2.1 14.0 --
01173350 - DANFORTH BROOK NEAR GILBERTVILLE, MA (LAT 42 19 42 LONG 072 12 19)									
SEP , 1982	14...	1430	.68	21.5	--				
01173450 - FLAT BROOK NEAR WARE, MA (LAT 42 14 56 LONG 072 15 53)									
MAY , 1982	18...	0840	4.2	13.5	75	SEP , 1982	14...	1000	.87 17.0 --
01173500 - WARE RIVER AT GIBBS CROSSING, MA (LAT 42 14 10 LONG 072 16 23)									
OCT , 1981	05...	1500	196	11.0	--	MAY , 1982	19...	0830	154 18.0 72
NOV	30...	1600	241	1.5	--	JUN	23...	0900	515 18.5 56
JAN , 1982	06...	1115	758	1.0	--	AUG	26...	0900	78 17.5 77
FEB	24...	1030	307	.5	69	SEP	29...	0830	73 16.5 85
APR	06...	1130	557	1.5	--				
	07...	1235	394	1.5	48				
01173900 - MIDDLE BRANCH SWIFT RIVER AT NORTH NEW SALEM, MA (LAT 42 32 45 LONG 072 19 10)									
MAY , 1982	12...	1310	5.9	13.0	28	SEP , 1982	13...	1620	.14 17.0 --
	19...	0855	2.8	13.0	39				

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01174000 - HOP BROOK NEAR NEW SALEM, MA (LAT 42 28 42 LONG 072 20 05)									
OCT , 1981					MAY , 1982				
06...	1430	.89	8.0	--	11...	1330	4.5	14.5	60
NOV					JUN				
17...	1115	4.2	5.0	60	15...	1000	9.0	17.0	42
DEC					AUG				
29...	1000	4.7	1.0	--	04...	1230	1.0	25.0	67
FEB , 1982					SEP				
10...	1415	7.7	1.5	--	15...	1130	.18	18.0	68
MAR									
23...	1540	19	4.5	70					
01174200 - EAST BRANCH SWIFT RIVER NEAR PETERSHAM, MA (LAT 42 30 44 LONG 072 09 18)									
MAY , 1982									
12...	1140	7.6	14.5	32					
01174500 - EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA (LAT 42 23 36 LONG 072 14 21)									
OCT , 1981					JUL , 1982				
09...	1415	38	11.0	47	07...	1530	36	23.0	41
NOV					AUG				
17...	1000	78	8.0	43	26...	1230	22	23.0	42
APR , 1982					SEP				
05...	1330	310	4.0	42	28...	1445	14	19.5	43
MAY									
19...	1200	28	19.5	43					
01174560 - WEST BRANCH SWIFT RIVER AT COOLEYVILLE, MA (LAT 42 27 50 LONG 072 22 59)									
MAY , 1982					SEP , 1982				
12...	1500	6.6	14.0	34	13...	1245	.17	16.0	--
JUL									
27...	1530	.41	19.5	--					
01174563 - WEST BRANCH SWIFT RIVER TR AT COOLEYVILLE, MA (LAT 42 27 52 LONG 072 22 56)									
MAY , 1982					SEP , 1982				
12...	1545	4.2	16.5	28	13...	1210	.19	20.5	--
JUL									
27...	1600	.59	24.0	--					
01174600 - CADWELL CREEK NEAR PELHAM, MA (LAT 42 21 16 LONG 072 23 18)									
NOV , 1981					JUN , 1982				
18...	1215	2.4	4.0	37	15...	1130	1.9	13.5	35
FEB , 1982					AUG				
10...	1245	1.2	1.0	34	04...	1520	.09	25.0	30
MAR					SEP				
23...	0930	4.2	2.0	38	15...	1330	.03	17.0	34
MAY									
12...	1230	.52	17.0	60					
01174900 - CADWELL CREEK NEAR BELCHERTOWN, MA (LAT 42 20 08 LONG 072 22 12)									
OCT , 1981					MAY , 1982				
07...	1400	1.6	7.0	--	11...	1715	3.0	15.0	33
NOV					JUN				
18...	1330	10	4.0	32	15...	1500	7.9	13.5	38
DEC					AUG				
30...	0930	3.4	1.5	--	04...	1630	.78	24.5	35
FEB , 1982					SEP				
10...	1100	5.6	.5	--	15...	1515	.37	16.0	36
MAR									
23...	1115	17	2.0	39					
01175500 - SWIFT RIVER AT WEST WARE, MA (LAT 42 16 04 LONG 072 19 59)									
OCT , 1981					APR , 1982				
07...	1615	26	15.0	--	28...	0830	111	6.0	--
DEC					MAY				
01...	1615	16	7.0	40	19...	1500	63	11.5	52
JAN , 1982					JUN				
06...	1545	36	3.0	--	22...	1100	137	12.0	41
FEB					AUG				
24...	1330	124	2.0	42	24...	1000	123	13.5	39
MAR									
23...	1330	128	2.0	--					

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01175570 - JABISH BROOK AT KNIGHTS CORNER, MA (LAT 42 21 05 LONG 072 24 37)									
MAY , 1982					SEP , 1982				
13...	0900	1.5	16.0	40	13...	1530	.31	20.0	--
JUL									
27...	1500	.36	22.0	--					
01175580 - JABISH BROOK AT BELCHERTOWN, MA (LAT 42 17 16 LONG 072 24 02)									
MAY , 1982					SEP , 1982				
13...	1020	6.6	12.0	91	13...	1505	.96	18.5	--
JUL									
27...	1330	1.6	20.0	--					
01175600 - CARUTH BROOK NEAR PAXTON, MA (LAT 42 19 00 LONG 071 58 16)									
MAY , 1982					SEP , 1982				
18...	1200	1.2	16.0	87	15...	1320	.06	18.0	--
01175670 - SEVENMILE RIVER NEAR SPENCER, MA (LAT 42 15 54 LONG 072 00 19)									
OCT , 1981					MAR , 1982				
09...	1100	4.3	8.5	61	30...	1400	35	8.0	47
NOV					MAY				
18...	1200	46	7.5	48	12...	1425	9.5	17.0	54
JAN , 1982					JUL				
13...	1400	19	.0	51	06...	1515	8.9	23.0	47
14...	0900	18	.5	52	AUG				
FEB					16...	1300	2.9	21.0	53
04...	1115	135	.0	52	SEP				
23...	0930	15	.5	56	24...	1230	1.9	14.0	62
01175700 - MAYNARD BROOK NEAR OAKHAM, MA (LAT 42 19 27 LONG 072 02 44)									
MAY , 1982					SEP , 1982				
18...	1135	.83	13.0	35	15...	1400	.08	16.5	--
01175730 - GREAT BROOK NEAR EAST BROOKFIELD, MA (LAT 42 12 09 LONG 072 03 04)									
MAY , 1982									
19...	1145	2.7	17.0	63					
01175820 - MEADOW BROOK NEAR NEW BRAINTREE, MA (LAT 42 17 31 LONG 072 08 09)									
MAY , 1982									
18...	1030	3.8	14.5	69					
01175850 - MILL BROOK NEAR WEST BROOKFIELD, MA (LAT 42 15 50 LONG 072 09 33)									
MAY , 1982									
18...	1005	12	13.5	63					
01175890 - NAULTAUG BROOK NEAR WARREN, MA (LAT 42 13 31 LONG 072 10 12)									
MAY , 1982					SEP , 1982				
13...	1445	4.4	17.5	50	14...	1030	.39	20.5	--
JUL									
27...	1215	1.2	23.0	--					
01175910 - CHENEY BROOK AT WARREN, MA (LAT 42 12 56 LONG 072 12 24)									
MAY , 1982					SEP , 1982				
18...	1325	.46	15.5	74	14...	1100	.02	17.0	--
19...	1100	.38	15.5	81					
01175940 - O'NEIL BROOK AT WEST WARREN, MA (LAT 42 12 58 LONG 072 13 14)									
MAY , 1982					SEP , 1982				
18...	1210	.68	14.5	45	14...	1130	.02	17.0	--
01175970 - SCHOOL STREET BROOK AT WEST WARREN, MA (LAT 42 12 49 LONG 072 14 30)									
MAY , 1982					SEP , 1982				
18...	1045	1.1	15.5	44	14...	1200	.08	18.0	--
01176000 - QUABOAG RIVER AT WEST BRIMFIELD, MA (LAT 42 10 56 LONG 072 15 51)									
DEC , 1981					MAY , 1982				
01...	1430	259	.5	--	20...	1345	129	22.5	92
JAN , 1982					JUN				
06...	1340	804	1.0	--	23...	1200	563	20.5	68
FEB					AUG				
24...	1600	302	2.0	92	25...	1415	55	20.0	118
APR					SEP				
14...	0905	760	--	74	30...	1245	51	15.5	127

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
CONNECTICUT RIVER BASIN--Continued									
01176100 - BLODGETT MILL BROOK AT WEST BRIMFIELD, MA (LAT 42 10 13 LONG 072 15 41)									
MAY , 1982					SEP , 1982				
18...	0930	7.6	14.5	148	14...	1245	.87	16.5	--
01176200 - KINGS BROOK AT WEST BRIMFIELD, MA (LAT 42 09 41 LONG 072 16 08)									
MAY , 1982									
17...	1650	6.3	17.0	103					
01176395 - CALKINS POND OUTLET NEAR SOUTH MONSON, MA (LAT 42 04 20 LONG 072 19 40)									
MAY , 1982									
17...	1510	.96	20.5	59					
01176400 - CHICOPEE BROOK AT SOUTH MONSON, MA (LAT 42 05 01 LONG 072 18 57)									
MAY , 1982					MAY , 1982				
17...	1320	11	16.5	81	19...	1400	8.2	17.0	81
01176450 - ROARING BROOK NEAR BELCHERTOWN, MA (LAT 42 14 07 LONG 072 24 18)									
MAY , 1982					SEP , 1982				
13...	1150	2.1	14.0	72	14...	0830	.17	16.0	--
19...	1325	.97	17.5	75					
JUL									
27...	1300	.29	19.5	--					
01177000 - CHICOPEE RIVER AT INDIAN ORCHARD, MA (LAT 42 09 38 LONG 072 30 52)									
NOV , 1981					MAY , 1982				
20...	1400	963	7.0	--	26...	0830	776	16.0	82
JAN , 1982					JUN				
18...	1115	1150	.5	--	22...	1330	1660	18.0	67
APR					AUG				
26...	1240	1400	13.0	--	24...	1430	628	21.5	85
MAY									
20...	1130	567	20.0	--					
01177032 - HARRIS BROOK AT LUDLOW CENTER, MA (LAT 42 11 24 LONG 072 28 44)									
MAY , 1982									
13...	1300	2.9	16.0	92					
01179500 - WESTFIELD RIVER AT KNIGHTVILLE, MA (LAT 42 17 16 LONG 072 51 53)									
OCT , 1981					MAY , 1982				
16...	1250	33	11.0	--	27...	0855	205	14.0	70
JAN , 1982					JUL				
07...	1600	589	.5	--	21...	1250	94	23.0	81
01180500 - MIDDLE B WESTFIELD RIVER AT GOSS HEIGHTS, MA (LAT 42 15 31 LONG 072 52 23)									
OCT , 1981					APR , 1982				
13...	1615	14	12.0	--	22...	0930	1030	4.0	38
DEC					MAY				
03...	1145	146	.5	--	26...	1425	86	26.0	48
JAN , 1982					JUL				
19...	1530	54	.5	--	21...	1600	20	26.0	52
MAR					SEP				
02...	1040	49	1.5	--	01...	1650	7.7	19.0	57
01181000 - WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA (LAT 42 14 14 LONG 072 53 46)									
OCT , 1981					MAY , 1982				
16...	1630	32	10.5	--	24...	1230	179	10.0	78
NOV					JUN				
18...	1530	126	7.0	--	07...	1640	1370	12.0	46
JAN , 1982					21...	1445	255	17.5	67
19...	1615	87	.5	--	JUL				
FEB					23...	0825	26	19.0	102
23...	1540	115	1.5	77	AUG				
MAR					25...	0900	14	17.5	--
25...	1200	343	4.5	75	SEP				
26...	1000	685	4.5	--	22...	0835	22	14.0	107
APR									
23...	0845	355	4.0	60					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
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CONNECTICUT RIVER BASIN--Continued

01183450 - GREAT BROOK NEAR WESTFIELD, MA (LAT 42 05 18 LONG 072 43 24)

OCT , 1981					APR , 1982				
14...	1700	5.2	9.0	--	16...	0800	61	7.0	148
DEC					27...	1400	76	13.0	--
02...	1315	66	2.0	--	MAY				
JAN , 1982					25...	1000	26	12.0	174
05...	1315	174	.0	--	JUL				
MAR					19...	1310	13	19.5	198
01...	1345	27	.0	178	SEP				
26...	1130	66	6.5	--	01...	0855	29	15.0	173

01183500 - WESTFIELD RIVER NEAR WESTFIELD, MA (LAT 42 06 24 LONG 072 41 58)

OCT , 1981					APR , 1982				
14...	1345	190	10.5	--	16...	1050	2680	5.0	65
NOV					MAY				
20...	1035	535	7.0	130	25...	1345	970	13.0	82
JAN , 1982					JUL				
05...	1005	2970	.0	--	22...	1555	296	23.0	178
MAR					SEP				
03...	1020	445	--	102	01...	1115	217	18.0	179

01185100 - FALL RIVER BELOW OTIS RESERVOIR, NEAR OTIS, MA (LAT 42 09 42 LONG 073 03 48)

OCT , 1981					APR , 1982				
15...	1625	2.4	10.5	--	29...	1245	5.0	10.0	--
DEC					JUN				
04...	1410	3.6	2.5	--	29...	1435	179	20.0	--
JAN , 1982					JUL				
19...	1315	3.0	.5	--	30...	0914	7.4	20.0	--
FEB					SEP				
22...	1432	86	.5	--	09...	0831	1.7	14.0	--

01185500 - WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA (LAT 42 04 45 LONG 073 04 24)

NOV , 1981					MAY , 1982				
19...	1725	187	7.0	--	03...	0937	166	11.0	--
JAN , 1982					JUN				
18...	1630	84	.5	91	29...	1115	327	20.0	--
MAR					JUL				
31...	1350	379	3.0	--	30...	1230	67	20.0	--

HOUSATONIC RIVER BASIN

01197000 - EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA (LAT 42 28 10 LONG 073 11 49)

OCT , 1981					APR , 1982				
15...	1115	24	12.0	339	21...	1555	465	8.0	85
DEC					JUN				
16...	1045	30	3.0	260	01...	1225	65	16.0	181
JAN , 1982					JUL				
14...	1125	62	1.5	187	16...	0825	20	20.0	255
FEB					AUG				
25...	1030	46	2.5	245	16...	1310	20	18.0	320

01197015 - TOWN BROOK AT BRIDGE ST AT LANESBOROUGH, MA (LAT 42 31 12 LONG 073 13 48)

OCT , 1981					APR , 1982				
15...	1500	3.2	10.5	287	20...	1550	109	10.5	166
DEC					JUN				
16...	1320	13	.5	197	02...	0820	23	11.5	225
JAN , 1982					JUL				
14...	1025	17	.0	155	15...	1440	6.7	18.0	270
FEB					AUG				
25...	0910	7.8	.0	215	17...	1045	2.9	15.0	310

01197500 - HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA (LAT 42 13 55 LONG 073 21 19)

OCT , 1981					APR , 1982				
15...	1145	242	9.5	--	28...	1000	1520	11.0	200
NOV					JUN				
19...	1025	353	7.0	295	18...	1215	737	19.5	212
JAN , 1982					29...	1015	329	21.0	295
19...	0930	430	.5	--	AUG				
MAR					24...	1325	98	23.0	395
24...	1303	1070	3.5	--					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)
HUDSON RIVER BASIN									
01331500 - HOOSIC RIVER AT ADAMS, MA (LAT 42 36 40 LONG 073 07 28)									
OCT , 1981					APR , 1982				
15...	0825	20	7.5	251	21...	1005	469	6.0	107
DEC					JUN				
10...	0920	46	.5	181	03...	1020	85	14.0	166
JAN , 1982					JUL				
14...	1340	56	.5	169	15...	0835	41	19.0	225
FEB					AUG				
25...	1135	47	.0	--	18...	1450	28	21.0	245
01332000 - NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA (LAT 42 42 08 LONG 073 05 37)									
OCT , 1981					JUL , 1982				
14...	1230	75	7.0	67	15...	0835	19	19.0	128
APR , 1982					AUG				
20...	1235	496	7.0	47	19...	0830	7.9	15.0	157
JUN									
03...	1535	75	15.0	64					
01332500 - HOOSIC RIVER NEAR WILLIAMSTOWN, MA (LAT 42 42 21 LONG 073 10 50)									
OCT , 1981					JUN , 1982				
14...	1420	100	10.0	235	02...	1505	435	17.0	162
DEC					JUL				
09...	1335	168	.5	--	14...	1450	100	23.0	280
APR , 1982					AUG				
20...	1500	1350	7.0	102	17...	1600	57	25.0	345
01333000 - GREEN RIVER AT WILLIAMSTOWN, MA (LAT 42 42 32 LONG 073 11 50)									
OCT , 1981					APR , 1982				
14...	1450	30	10.0	207	20...	1140	356	9.0	--
DEC					JUN				
09...	0915	74	1.0	158	02...	1235	78	15.0	162
JAN , 1982					JUL				
13...	1030	58	.0	142	14...	1505	36	23.0	145
FEB					AUG				
26...	0955	12	.0	255	17...	1400	13	21.0	168
APR									
19...	1455	425	9.5	119					

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BARNSTABLE COUNTY

413956070164301. Barnstable well AlW 230.

LOCATION.--Lat 41°39'56", long 70°16'43", Hydrologic Unit 01090002, 50 ft (15 m) west of Mary Dunn Road at Hyannis Airport and 0.3 mi (0.5 km) north of intersection of Willow Street and State Highway 28 in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 35.8 ft (10.9 m), screened 32.8 to 35.8 ft (10.0 to 10.9 m).

DATUM.--Land-surface datum is 43.23 ft (13.18 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land surface datum.

PERIOD OF RECORD.--January 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.05 ft (6.42 m) below land-surface datum, May 12, 1973; lowest, 26.22 ft (7.99 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1981	26.08	JAN 22, 1982	24.11	APR 23, 1982	23.83	JUL 21, 1982	24.19
NOV 21	26.10	FEB 19	24.00	MAY 25	24.15	AUG 24	24.59
DEC 28	24.69	MAR 24	23.69	JUN 22	23.95	SEP 23	24.59

414154070165001. Barnstable well AlW 247.

LOCATION.--Lat 41°41'54", long 70°16'50", Hydrologic Unit 01090002, 30 ft (9.1 m) east of Mary Dunn Road and 0.2 mi (0.33 km) south of State Highway 6A in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 52 ft (15.8 m), screened 49 to 52 ft (14.9 to 15.8 m).

DATUM.--Land-surface datum is 44.52 ft (13.57 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft (6.39 m) below land-surface datum, May 25, 1973; lowest measured, 28.64 ft (8.73 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1981	26.86	JAN 26, 1982	26.02	APR 23, 1982	25.08	JUL 22, 1982	25.11
NOV 24	27.07	FEB 19	25.67	MAY 25	25.19	AUG 24	25.45
DEC 30	26.52	MAR 24	25.25	JUN 22	25.08	SEP 21	25.68

414129070361401. Bourne well BHW 198.

LOCATION.--Lat 41°41'29", long 70°36'14", Hydrologic Unit 01090002, 50 ft (15.2 m) west of County Road and 0.3 mi (0.48 km) south of Pocasset Road in Bourne.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 50 ft (15.2 m), screened 47 to 50 ft (14.3 to 15.2 m).

DATUM.--Land-surface datum is 55.56 ft (16.93 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.0 ft (1.5 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.43 ft (9.28 m) below land-surface datum, Dec. 27, 1972; lowest measured, 36.17 ft (11.02 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1981	35.02	JAN 21, 1982	33.60	APR 22, 1982	33.33	JUL 22, 1982	33.73
NOV 21	35.18	FEB 19	33.07	MAY 21	33.63	AUG 26	34.02
DEC 28	34.36	MAR 22	33.08	JUN 23	33.50	SEP 21	34.20

BARNSTABLE COUNTY--Continued

414518070020301. Brewster well BMW 21.
 LOCATION.--Lat 41°45'18", long 70°02'03", Hydrologic Unit 01090002, about 50 ft (15 m) north of Nook Road, 0.1 mi (0.2 km) south of Cliff Pond, 0.3 mi (0.5 km) east of Silas Road, and at Nickerson State Park in Brewster.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.5 in (0.06 m), depth 25 ft (7.6 m), screened 22 to 25 ft (6.7 to 7.6 m).
 DATUM.--Land-surface datum is 36.97 ft (11.27 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.40 ft (0.73 m) above land-surface datum.
 PERIOD OF RECORD.--October 1957 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft (2.10 m) below land-surface datum, Apr. 25, 1974; lowest measured, 13.34 ft (4.07 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1981	12.83	JAN 25, 1982	12.22	APR 26, 1982	11.39	JUL 26, 1982	10.83
NOV 21	12.89	FEB 23	11.77	MAY 26	11.26	AUG 27	10.88
DEC 29	12.47	MAR 23	11.59	JUN 25	10.85	SEP 23	10.85

414630070014901. Brewster well BMW 22.
 LOCATION.--Lat 41°46'30", long 70°01'49", Hydrologic Unit 01090002, 50 ft (15.2 m) east of entrance to Nickerson State Park and 50 ft (15.2 m) south of State Highway 6A in Brewster.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 52 ft (15.8 m), screened 49 to 52 ft (14.9 to 15.8 m).
 DATUM.--Land-surface datum is 50.45 ft (15.38 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land-surface datum.
 PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.62 ft (8.72 m) below land-surface datum, June 27, 1973; lowest measured, 33.60 ft (10.24 m) below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1981	33.40	JAN 25, 1982	33.21	APR 26, 1982	31.52	JUL 26, 1982	31.15
NOV 21	33.59	FEB 23	32.17	MAY 26	31.55	AUG 27	31.42
DEC 29	33.01	MAR 23	31.69	JUN 25	31.16	SEP 23	31.55

414100070011101. Chatham well CGW 138.
 LOCATION.--Lat 41°41'00", long 70°01'11", Hydrologic Unit 01090002, 50 ft (15.2 m) east of State Highway 137 and 300 ft (91 m) north of State Highway 28 in Chatham.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 44 ft (13.4 m), screened 41 to 44 ft (12.5 to 13.4 m).
 DATUM.--Land-surface datum is 35.28 ft (10.75 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.77 ft (1.45 m) above land-surface datum; prior to June 1980, 3.80 ft (1.16 m) above land-surface datum.
 PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.13 ft (6.44 m) below land-surface datum, June 27, 1967; lowest measured, 26.22 ft (7.99 m) below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	25.73	JAN 25, 1982	24.16	APR 26, 1982	23.40	JUL 26, 1982	23.84
NOV 21	25.75	FEB 23	23.85	MAY 26	23.63	AUG 24	24.20
DEC 30	24.50	MAR 23	23.40	JUN 25	23.55	SEP 22	24.09

BARNSTABLE COUNTY--Continued

414418070241601. Sandwich well SDW 252.

LOCATION.--Lat 41°44'18", long 70°24'16", Hydrologic Unit 01090002, 0.5 mi (0.8 km) north of State Highway 6A and 15 ft (4.6 m) east of Private Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 57 ft (17.4 m), screened 55 to 57 ft (16.8 to 17.4 m).

DATUM.--Land-surface datum is 53.47 ft (16.30 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.97 ft (14.01 m) below land-surface datum, Feb. 27, 1978; lowest measured, 48.23 ft (14.70 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1981	48.00	JAN 21, 1982	47.61	APR 22, 1982	47.32	JUL 22, 1982	47.15
NOV 23	47.77	FEB 19	47.46	MAY 21	47.34	AUG 26	47.36
DEC 28	47.55	MAR 22	47.32	JUN 23	47.02	SEP 21	47.48

414124070265901. Sandwich well SDW 253.

LOCATION.--Lat 41°41'24", long 70°26'59", Hydrologic Unit 01090002, 800 ft (240 m) west of Stowe Road and 50 ft (15.2 m) south of Farmersville Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 70 ft (21.3 m), screened 67 to 70 ft (20.4 to 21.3 m).

DATUM.--Land-surface datum is 111.20 ft (33.89 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.78 ft (13.95 m), below land-surface datum, July 30, 1973; lowest measured, 55.05 ft (16.78 m) below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1981	52.33	JAN 21, 1982	52.74	APR 22, 1982	50.83	JUL 23, 1982	50.81
NOV 23	52.33	FEB 19	51.29	MAY 21	50.94	AUG 26	51.02
DEC 28	52.00	MAR 22	51.03	JUN 23	50.65	SEP 23	51.09

420239070062001. Truro well TSW 1.

LOCATION.--Lat 42°02'39", long 70°06'20", Hydrologic Unit 01090002, near old pumping station about 200 ft (60 m) north of State Highway 6A and 1.2 mi (1.9 km) northwest of North Truro.

Owner: Town of Provincetown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 68 ft (20.7 m), cased to 68 ft (20.7 m), open end.

DATUM.--Land-surface datum is 16.80 ft (5.12 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft (1.07 m) above land-surface datum.

REMARKS.--Water levels affected by pumping, barometric pressure, and tide.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.73 ft (2.97 m) below land-surface datum, Dec. 27, 1972; lowest measured, 12.1 ft (3.69 m) below land-surface datum, Sept. 11, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	11.07	JAN 25, 1982	11.20	APR 26, 1982	10.98	JUL 26, 1982	10.60
NOV 21	10.54	FEB 23	10.93	MAY 26	10.79	AUG 27	10.90
DEC 29	10.70	MAR 23	11.13	JUN 25	10.10	SEP 23	10.79

BARNSTABLE COUNTY--Continued

420206070045901. Truro well TSW 89.

LOCATION.--Lat 42°02'06", long 70°04'59", Hydrologic Unit 01090002, 300 ft (91.4 m) west of U.S. Highway 6 and 50 ft (15.2 m) north of Highland Road in Truro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 27.7 ft (8.4 m), screened 24.7 to 27.7 ft (7.5 to 8.4 m).

DATUM.--Land-surface datum is 16.60 ft (4.88 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.7 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--September 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.36 ft (3.16 m) below land-surface datum, Feb. 27, 1978; lowest measured, 12.96 ft (3.95 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	12.68	JAN 25, 1982	12.06	APR 26, 1982	12.08	JUL 26, 1982	11.90
NOV 21	12.58	FEB 23	11.97	MAY 26	12.25	AUG 27	12.21
DEC 29	11.97	MAR 23	12.00	JUN 25	11.58	SEP 23	12.41

415353069585401. Wellfleet well WNW 17.

LOCATION.--Lat 41°53'53", long 69°58'54", Hydrologic Unit 01090002, about 150 ft (45.7 m) east of old pumping station and 45 ft (13.7 m) west of road to the public beach at Cape Cod National Seashore in Wellfleet.

Owner: Cape Cod National Seashore.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 42 ft (12.8 m), screen information not available.

DATUM.--Land-surface datum is 19.10 ft (5.82 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.13 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft (2.22 m) below land-surface datum, June 27, 1967; lowest measured, 12.75 ft (3.89 m) below land-surface datum, Jan. 31, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	12.04	JAN 25, 1982	10.96	APR 26, 1982	10.09	JUL 26, 1982	9.84
NOV 21	12.12	FEB 23	10.60	MAY 26	10.32	AUG 27	10.22
DEC 29	11.35	MAR 23	10.17	JUN 23	9.63	SEP 23	10.43

BERKSHIRE COUNTY

423503073075401. Cheshire well CJW 2.

LOCATION.--Lat 42°35'03", long 73°07'54", Hydrologic Unit 02020003, at intersection of Wells and Jenks Roads 2.3 mi (3.7 km) northeast of Cheshire.

Owner: John Jayko.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 22 ft (6.7 m), cased with stone to 22 ft (6.7 m), open end.

DATUM.--Altitude of land-surface datum is 1,210 ft (369 m). Measuring point: Inside rim of concrete well top, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft (0.03 m) below land-surface datum, Jan. 19, 1952; lowest measured, 14.03 ft (4.28 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	7.96	JAN 22, 1982	6.11	MAY 24, 1982	5.03	AUG 23, 1982	7.61
NOV 21	6.33	MAR 24	0.84	JUN 23	3.36	SEP 26	9.36
DEC 24	6.34	APR 21	0.94	JUL 23	5.75		

GROUND-WATER LEVELS IN MASSACHUSETTS

BERKSHIRE COUNTY--Continued

421316073212801. Great Barrington well GMW 2.

LOCATION.--Lat 42°13'16", long 73°21'28", Hydrologic Unit 01100005, 30 ft (9 m) west of State Highway 41 and 1.5 mi (2.4 km) north of intersection of State Highway 41 and U.S. Highway 7 in Great Barrington.

Owner: Mr. Jacobson.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 15 ft (4.6 m), cased with stone to 15 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 732 ft (223 m). Measuring point: Top of stone curbing, east side of well 0.33 ft (0.10 m) above land-surface datum. Prior to July 25, 1978, measured at land surface datum.

REMARKS.--Water level affected by stream.

PERIOD OF RECORD.--June 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.02 ft (1.23 m) below land-surface datum, Feb. 12, 1970; lowest, 14.97 ft (4.56 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	12.94	DEC 25, 1981	12.31	MAR 10, 1982	9.64	JUL 05, 1982	9.62
10	12.91	31	12.23	15	7.87	10	10.70
15	12.90	JAN 05, 1982	5.63	20	6.43	15	11.36
20	12.90	10	8.24	25	5.60	20	11.96
31	12.58	15	9.80	31	5.40	25	12.30
NOV 05	12.46	20	10.60	APR 05	4.53	31	12.32
10	12.45	25	11.04	10	4.09	AUG 05	12.37
15	12.48	31	11.35	15	5.16	10	12.54
20	12.48	FEB 05	7.30	20	5.00	15	12.59
25	12.44	10	8.38	25	5.41	20	12.62
30	12.38	15	9.28	MAY 24	10.66	23	12.64
DEC 05	12.32	20	9.42	27	10.13	SEP 25	12.77
10	12.24	25	8.89	JUN 23	9.14		
15	12.25	28	9.50	25	9.23		
20	12.28	MAR 05	10.10	30	8.44		

WTR YEAR 1982 MAX 4.07 APR 11, 1982 MIN 12.77 SEP 25, 1982

420912073043001. Otis well OTW 7.

LOCATION.--Lat 42°09'12", long 73°04'30", Hydrologic Unit 01080207, about 400 ft (126 m) south of Hawley Road and 15 ft (4.6 m) west of State Highway 8 in Otis.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 17.5 ft (5.3 m), screened 15.5 to 17.5 ft (4.7 to 5.3 m).

DATUM.--Altitude of land-surface datum is 1,145 ft (349 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

REMARKS.--Water levels affected by Minor Brook and Farmington River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.54 ft (1.69 m) below land-surface datum, Dec. 27, 1973; lowest measured, 9.93 ft (3.03 m) below land-surface datum, Aug. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	8.85	JAN 22, 1982	8.45	APR 21, 1982	6.12	JUL 23, 1982	8.56
NOV 21	8.75	FEB 23	8.14	MAY 24	8.22	AUG 23	9.40
DEC 23	8.68	MAR 23	6.52	JUN 23	7.27	SEP 26	9.75

422745073112001. Pittsfield well PTW 51.

LOCATION.--Lat 42°27'45", long 73°11'20", Hydrologic Unit 01100005, 30 ft (9.1 m) east of Hubbard Ave. and about 100 ft (30 m) north of Barton Brook in Pittsfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft (0.03 m), depth 31.5 ft (9.6 m), screened 29.5 to 31.5 ft (9 to 9.6 m).

DATUM.--Altitude of land-surface datum is 1,050 ft (320 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft (3.75 m) below land-surface datum, Apr. 25, 1969; lowest measured, 27.57 ft (8.40 m) below land-surface datum, Dec. 22, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	21.98	JAN 22, 1982	15.34	APR 21, 1982	13.39	JUL 23, 1982	15.74
NOV 21	20.11	FEB 23	15.09	MAY 24	14.21	AUG 23	17.88
DEC 24	16.56	MAR 24	14.53	JUN 23	14.17	SEP 26	20.70

BERKSHIRE COUNTY--Continued

420351073193601. Sheffield well SJW 59.

LOCATION.--Lat 42°03'51", long 73°19'36", Hydrologic Unit 01100005, about 200 ft (61 m) east of U.S. Highway 7 and 30 ft (9.1 m) north of Hewins Road in Sheffield.

Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft (0.03 m), depth 24 ft (7.3 m), screened 22 to 24 ft (6.7 to 7.3 m).

DATUM.--Altitude of land-surface datum is 680 ft (210 m). Measuring point: Top of casing, 3.70 ft (1.13 m) above land-surface datum.

PERIOD OF RECORD.--November 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.19 ft (2.80 m) below land-surface datum, Mar. 28, 1978; lowest measured, 19.69 ft (6.00 m) below land-surface datum, Jan. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	16.70	JAN 22, 1982	16.75	APR 21, 1982	14.44	JUL 23, 1982	14.04
NOV 21	16.94	FEB 23	15.51	MAY 24	14.12	AUG 23	14.49
DEC 24	17.15	MAR 24	14.52	JUN 23	14.00	SEP 26	15.01

BRISTOL COUNTY

415447071155301. Attleboro well ATW 83.

LOCATION.--Lat 41°54'47", long 71°15'53", Hydrologic Unit 01090004, about 150 ft (46 m) north of parking lot and 200 ft (61 m) west of dirt road at Bristol County Nursing Home in Attleboro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.6 ft (6.3 m), screened 18.6 to 20.6 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft (0.60 m) below land-surface datum, Jan. 27, 1978; lowest measured, 5.23 ft (1.59 m) below land-surface datum, Aug. 26, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	4.27	JAN 23, 1982	3.49	APR 22, 1982	3.47	JUL 25, 1982	3.65
NOV 21	3.53	FEB 21	3.40	MAY 22	3.75	AUG 23	3.92
DEC 22	3.23	MAR 27	3.46	JUN 27	3.47	SEP 25	3.97

414228071091401. Fall River well FRW 67.

LOCATION.--Lat 41°42'28", long 71°09'14", Hydrologic Unit 01090004, about 200 ft (61 m) east of Main Street and 50 ft (15.2 m) north of Walnut Street at Bristol County Court in Fall River.

Owner: Bristol County Court.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 12.0 ft (3.7 m), cased with stone to 12.0 ft (3.7 m), open end.

DATUM.--Altitude of land-surface datum is 135 ft (41 m). Measuring point: Top of stone casing, at land-surface datum.

PERIOD OF RECORD.--May 1948 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft (1.45 m) below land-surface datum, Mar. 22, 1972; dry, Oct. 30, 1950, Sept. 30 to Nov. 25, 1957, Sept. 27, 1965 to Jan. 29, 1966, Aug. 23 and Oct. 25, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1981	9.08	JAN 26, 1982	7.97	APR 29, 1982	7.84	JUL 31, 1982	8.40
NOV 27	8.80	MAR 03	7.98	MAY 28	8.36	AUG 31	8.80
DEC 28	7.70	29	7.83	JUN 30	7.40	SEP 30	8.80

GROUND-WATER LEVELS IN MASSACHUSETTS

BRISTOL COUNTY--Continued

414705071045301. Freetown well F3W 23.

LOCATION.--Lat 41°47'05", long 71°04'53", Hydrologic Unit 01090004, about 300 ft (91.4 m) west of State Highway 24 and 200 ft (61 m) north of State Highway 79 in Freetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 42 ft (12.8 m), screened 40 to 42 ft (12.2 to 12.8 m).

DATUM.--Altitude of land-surface datum is 38 ft (12 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

REMARKS.--Water level affected by tide.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.82 ft (2.99 m) below land-surface datum, Jan. 29, 1979; lowest measured, 15.70 ft (4.79 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	15.19	JAN 23, 1982	13.75	APR 22, 1982	13.63	JUL 25, 1982	12.39
NOV 21	14.91	FEB 21	13.42	MAY 22	13.59	AUG 23	12.75
DEC 22	14.10	MAR 27	13.71	JUN 27	12.03	SEP 23	12.73

414025070572801. New Bedford well NGW 116.

LOCATION.--Lat 41°40'25", long 70°57'28", Hydrologic Unit 01090002, New Bedford Municipal Airport, 30 ft (9 m) east of control tower building in New Bedford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 27.3 ft (8.3 m), screened 25.3 to 27.3 ft (7.7 to 8.3 m).

DATUM.--Altitude of land-surface datum is 65 ft (20 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.31 ft (0.70 m) below land-surface datum, Mar. 26, 1969; lowest measured, 5.20 ft (1.58 m) below land-surface datum, July 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	4.24	JAN 23, 1982	4.20	APR 22, 1982	3.94	JUL 25, 1982	4.17
NOV 21	3.36	FEB 21	3.60	MAY 22	4.32	AUG 23	4.38
DEC 21	3.30	MAR 27	3.93	JUN 27	3.85	SEP 25	4.25

415812071111101. Norton well N4W 37.

LOCATION.--Lat 41°58'12", long 71°11'11", Hydrologic Unit 01090004, at Wheaton College, 250 ft (76 m) northeast of observatory in Norton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 19.4 ft (5.9 m), screened 17.4 to 19.4 ft (5.3 to 5.9 m).

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft (0.72 m) below land-surface datum, Dec. 29, 1969; lowest measured, 11.24 ft (3.43 m) below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	10.18	JAN 23, 1982	5.87	APR 22, 1982	6.26	JUL 25, 1982	7.76
NOV 22	6.38	FEB 21	6.38	MAY 22	7.81	AUG 23	8.12
DEC 22	4.79	MAR 27	6.48	JUN 27	5.92	SEP 25	8.60

BRISTOL COUNTY--Continued

414714071175901. Seekonk well SHW 275.

LOCATION.--Lat 41°47'14", long 71°17'59", Hydrologic Unit 01090004, middle of median strip of Interstate Highway 195 and 1.1 mi (1.77 km) west of Palmer River in Seekonk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 14.4 ft (4.39 m), screened 12.4 to 14.4 ft (3.78 to 4.39 m).

DATUM.--Altitude of land-surface datum is 21 ft (9 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.33 ft (1.62 m) below land-surface datum, May 24, 1979; lowest measured, 8.02 ft (2.44 m) below land-surface datum, Sept. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	6.89	JAN 23, 1982	6.77	APR 22, 1982	5.89	JUL 25, 1982	5.81
NOV 21	6.56	FEB 21	6.51	MAY 22	6.30	AUG 23	6.22
DEC 21	6.17	MAR 27	5.77	JUN 27	6.01	SEP 25	6.37

414420071084401. Somerset well SPW 161.

LOCATION.--Lat 41°44'20", long 71°08'44", Hydrologic Unit 01090004, 110 ft (34 m) east of Riverside Avenue and 335 ft (102 m) south of the Johnson Street and Riverside Avenue intersection in Somerset.

Owner: Montaup Electric.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3 in (0.08 m), depth 1,500 ft (457 m), cased to 26 ft

(7.9 m), open hole.

DATUM.--Altitude of land-surface datum is 40 ft (12 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--March 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.87 ft (1.79 m) below land-surface datum, Jan. 29, 1979; lowest measured, 22.09 ft (6.73 m) below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	19.71	JAN 26, 1982	11.76	APR 22, 1982	11.73	JUL 25, 1982	14.27
NOV 21	18.54	FEB 21	11.31	MAY 22	13.85	AUG 23	16.06
DEC 22	10.32	MAR 27	12.04	JUN 27	11.17	SEP 25	16.17

415454071061801. Taunton well TAW 258.

LOCATION.--Lat 41°54'54", long 71°06'18", Hydrologic Unit 01090004, 420 ft (128 m) northwest of Danforth Street and 520 ft (158 m) southwest of Chester Street in Taunton.

Owner: Joseph Mozzzone.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3.0 in (0.08 m), depth 1,006.0 ft (306.6 m), cased to 10.0 ft (3.0 m), open hole.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--November 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.10 ft (3.08 m) below land-surface datum, Jan. 27, 1978; lowest measured, 15.85 ft (4.83 m) below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	15.81	JAN 23, 1982	12.04	APR 22, 1982	11.75	JUL 25, 1982	12.62
NOV 22	14.28	FEB 21	11.61	MAY 22	12.74	AUG 23	13.16
DEC 22	11.97	MAR 27	11.92	JUN 27	11.70	SEP 25	13.53

GROUND-WATER LEVELS IN MASSACHUSETTS

BRISTOL COUNTY--Continued

415457071060101. Taunton well TAW 337.

LOCATION.--Lat 41°54'57", long 71°06'01", Hydrologic Unit 01090004, Taunton State Hospital, about 200 ft (61 m) west of Mill River and about 300 ft (91 m) east of Danforth Street in Taunton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20 ft (6.1 m), screened 18 to 20 ft (5.5 to 6.1 m).

DATUM.--Altitude of land-surface datum is 50 ft (15 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

REMARKS.--Water levels affected by Mill River.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft (1.82 m) below land-surface datum, Dec. 29, 1969; lowest measured, 10.33 ft (3.15 m) below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	10.17	JAN 23, 1982	8.36	APR 22, 1982	8.40	JUL 25, 1982	8.80
NOV 22	9.80	FEB 21	8.18	MAY 22	9.00	AUG 23	9.19
DEC 22	8.30	MAR 27	8.48	JUN 27	8.09	SEP 25	9.45

DUKES COUNTY

412346070353403. Edgartown well ENW 52.

LOCATION.--Lat 41°23'46", long 70°35'34", Hydrologic Unit 01090002, 0.5 mi (0.80 km) west of Airport Road and 0.6 mi (0.97 km) north of West Tisbury Road in Edgartown.

Owner: Martha's Vineyard State Forest.

AQUIFER.--Glacial sand, gravel and cobbles of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in (0.05 m), depth 64.02 ft (19.51 m), screened 61.02 to 64.02 ft (18.60 to 19.51 m).

DATUM.--Altitude of land-surface datum is 34 ft (10 m). Measuring point: Top of casing, 0.02 ft (0.01 m) below land-surface datum.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.17 ft (4.32 m) below land-surface datum, July 28, 1979; lowest measured, 20.51 ft (6.25 m) below land-surface datum, Feb. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	19.36	JAN 24, 1982	19.89	MAY 25, 1982	18.47	AUG 23, 1982	18.45
NOV 25	19.81	MAR 25	18.91	JUN 21	18.56	SEP 25	18.83
DEC 24	20.05	APR 20	18.56	JUL 24	18.23		

ESSEX COUNTY

423734071080901. Andover well AJW 26.

LOCATION.--Lat 42°37'34", long 71°08'09", Hydrologic Unit 01070002, 90 ft (27.4 m) north of Ballardvale Road and 30 ft (9.1 m) west of Sunset Rock Road in Andover.

Owner: Harry K. Jenkins.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 25 in (0.64 m), depth 15 ft (4.6 m), cased with stone to 15 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 189 ft (58 m). Measuring point: Upper edge of brick lip in corner of opening, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.47 ft (1.06 m) below land-surface datum, Mar. 26, 1969; lowest measured, 13.44 ft (4.10 m) below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	12.45	JAN 24, 1982	9.50	APR 25, 1982	9.44	JUL 23, 1982	11.55
NOV 22	11.56	FEB 23	9.34	MAY 23	10.75	AUG 21	11.99
DEC 24	8.96	MAR 28	8.66	JUN 25	8.53	SEP 26	12.39

ESSEX COUNTY--Continued

423641071102501. Andover well AJW 462.

LOCATION.--Lat 42°36'41", long 71°10'25", Hydrologic Unit 01070002, about 1,200 ft (366 m) south of Shawsheen River, and 30 ft (9.1 m) west of Interstate Highway 93 in Andover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 32.5 ft (9.9 m), screened 30.5 to 32.5 ft (9.3 to 9.9 m).

DATUM.--Altitude of land-surface datum is 110 ft (34 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft (3.84 m) below land-surface datum, June 25, 1982; lowest measured, 15.80 ft (4.82 m) below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	15.47	JAN 24, 1982	13.81	APR 25, 1982	13.75	JUL 23, 1982	13.11
NOV 22	14.70	FEB 23	13.93	MAY 23	14.08	AUG 21	13.51
DEC 24	14.19	MAR 28	13.93	JUN 25	12.60	SEP 26	14.36

424322070592401. Georgetown well GCW 168.

LOCATION.--Lat 42°43'22", long 70°59'24", Hydrologic Unit 01090001, 18 ft (5.5 m) south of State Highway 133 and 25 ft (7.6 m) east of Winter Street at Murca Park in Georgetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 21 ft (6.4 m), screened 19 to 21 ft (5.8 to 6.4 m).

DATUM.--Altitude of land-surface datum is 80 ft (24 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft (0.74 m) below land-surface datum, Mar. 27, 1969; lowest measured, 6.65 ft (2.03 m) below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	5.09	JAN 24, 1982	4.09	APR 25, 1982	4.03	JUL 23, 1982	4.37
NOV 22	4.00	FEB 24	4.00	MAY 23	4.62	AUG 21	4.97
DEC 24	3.86	MAR 28	3.78	JUN 25	3.63	SEP 26	5.42

424841071004101. Haverhill well HLW 23.

LOCATION.--Lat 42°48'41", long 71°00'41", Hydrologic Unit 01070002, about 50 ft (15 m) north of Amesbury Line Road and 0.9 mi (1.4 km) south of State Highway 110 in Haverhill.

Owner: Mrs. Benjamin Hamm.

AQUIFER.--Glacial sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in (0.3 m), depth 15.1 ft (4.6 m), cased with tile to 15.1 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of hole in base of wooden recorder shelter, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.08 ft (2.46 m) below land-surface datum, Apr. 19, 1961; lowest, 15.02 ft (5.48 m) below land-surface datum, Feb. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	14.00	JAN 05, 1982	11.93	APR 05, 1982	9.72	JUL 05, 1982	9.60
10	14.04	10	11.36	10	9.57	10	9.96
15	14.11	15	11.33	15	9.17	15	10.34
20	14.15	20	11.37	20	9.10	20	10.69
25	14.16	25	11.38	25	9.27	25	10.99
31	13.96	31	11.54	30	9.43	31	11.28
NOV 05	13.84	FEB 05	11.18	MAY 05	9.57	AUG 05	11.56
10	13.80	10	11.06	10	9.73	10	11.77
15	13.83	15	11.11	15	9.93	15	11.99
20	13.64	20	11.15	20	10.13	20	12.18
25	13.26	25	11.24	25	10.40	25	12.38
30	13.14	28	11.33	31	13.65	31	12.62
DEC 05	13.03	MAR 05	11.43	JUN 05	9.94	SEP 05	12.80
10	12.92	10	11.23	10	8.28	10	12.97
15	12.89	15	10.50	15	8.52	15	13.13
20	12.70	20	10.07	20	8.76	20	13.27
25	12.60	25	9.95	25	9.03	25	13.44
31	12.61	31	9.85	30	9.28	30	13.53

WTR YEAR 1982 MAX 8.31 JUNE 10, 1982 MIN 14.17 OCT 24, 1981

GROUND-WATER LEVELS IN MASSACHUSETTS

ESSEX COUNTY--Continued

424520070562401. Newbury well NIW 27.

LOCATION.--Lat 42°45'20", long 70°56'24", Hydrologic Unit 01090001, about 300 ft (91 m) east of Interstate Highway 95 and 100 ft (30 m) north of Central Street in Newbury.

Owner: Mrs. George Brown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 31 in (0.79 in), depth 19.8 ft (6.0 m), cased with tile to 19.8 ft (6.0 m), open end.

DATUM.--Altitude of land-surface datum is 55 ft (17 m). Measuring point: Top of hole in base of wooden recorder shelter, 1.95 ft (0.59 m) above land-surface datum. Prior to October 1978, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.15 ft (0.96 m) below land-surface datum, Mar. 25, 1969; lowest, 12.68 ft (3.86 m) below land-surface datum, Nov. 24, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	11.35	DEC 25, 1981	6.00	APR 10, 1982	5.15	JUL 25, 1982	6.94
10	11.31	31	6.10	15	4.62	31	7.33
15	11.39	JAN 05, 1982	4.11	20	4.90	AUG 05	7.66
20	11.34	10	4.68	25	5.14	10	7.30
25	11.09	15	4.45	30	5.35	15	7.43
31	9.70	20	5.30	MAY 05	5.59	20	7.89
NOV 05	9.66	24	5.51	10	5.85	25	8.23
10	9.83	FEB 25	6.07	15	6.09	31	8.60
15	9.93	28	6.28	20	6.38	SEP 05	8.81
20	7.82	MAR 05	6.46	25	6.73	10	9.08
25	7.25	10	6.18	JUN 25	4.78	15	9.33
30	7.67	15	5.46	30	4.98	20	9.57
DEC 05	7.18	20	5.57	JUL 05	5.28	26	9.64
10	7.01	25	5.43	10	5.67		
15	7.05	31	5.48	15	6.20		
20	5.86	APR 05	5.08	20	6.74		

WTR YEAR 1982 MAX 4.11 JAN 5, 1982 MIN 11.44 OCT 18, 1981

425103070513401. Salisbury well SBW 9.

LOCATION.--Lat 42°51'03", long 70°51'34", Hydrologic Unit 01070002, at intersection of Gerrish and Seabrook Roads 0.6 mi (1.0 km) north of Salisbury.

Owner: Eugene G. Folsom.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 11 ft (3.4 m), cased with tile to 11 ft (3.4 m), open end.

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top inside lip of tile casing, 1.60 ft (0.49 m) above land-surface datum.

PERIOD OF RECORD.--August 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.06 ft (0.93 m) below land-surface datum, Mar. 27, 1969; lowest measured, 8.20 ft (2.50 m) below land-surface datum, Sept. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	5.98	JAN 24, 1982	5.02	APR 25, 1982	4.62	JUL 23, 1982	5.55
NOV 22	4.15	FEB 24	4.47	MAY 23	5.45	AUG 21	5.81
DEC 24	3.96	MAR 28	4.13	JUN 25	4.70	SEP 26	6.64

423845070542501. Topsfield well TQW 1.

LOCATION.--Lat 42°38'45", long 70°54'25", Hydrologic Unit 01090001, 0.7 mi (1.2 km) south of Ipswich Road and 120 ft (36.6 m) west of Hamilton Road in Topsfield.

Owner: Mr. Sullivan.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 22.0 ft (6.7 m), cased with stone to 22.0 ft (6.7 m), open end.

DATUM.--Altitude of land-surface datum is 130 ft (40 m). Measuring point: Top edge of steel rim in concrete cover, 0.6 ft (0.2 m) above land-surface datum.

PERIOD OF RECORD.--February 1936 to October 1947, April 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.64 ft (1.72 m) below land-surface datum, Jan. 27, 1958; lowest measured, 17.52 ft (5.34 m) below land-surface datum, Jan. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	15.27	JAN 24, 1982	9.28	APR 25, 1982	9.40	JUL 23, 1982	11.52
NOV 22	14.62	FEB 21	9.34	MAY 23	11.15	AUG 21	12.53
DEC 21	10.40	MAR 28	9.50	JUN 25	9.51	SEP 26	14.08

ESSEX COUNTY--Continued

423505070491702. Wenham well WPW 76.

LOCATION.--Lat 42°35'05", long 70°49'17", Hydrologic Unit 01090001, 45 ft (13.7 m) west of State Highway 128 and 120 ft (36.6 m) of Grapevine Road in Wenham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 22.0 ft (6.7 m), screened 20.0 to 22.0 ft (6.1 to 6.7 m).

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.39 ft (0.12 m) below land-surface datum, Jan. 26, 1978; lowest measured, 4.36 ft (1.33 m) below land-surface datum, Sept. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	3.31	FEB 21, 1982	1.70	MAY 23, 1982	2.07	AUG 21, 1982	2.67
NOV 22	1.94	MAR 28	1.78	JUN 25	1.34	SEP 26	3.11
JAN 24, 1982	1.51	APR 25	1.53	JUL 23	2.12		

FRANKLIN COUNTY

423809072435601. Colrain well CSW 8.

LOCATION.--Lat 42°38'09", long 72°43'56", Hydrologic Unit 01080203, 15 ft (4.6 m) east of State Highway 112 and 100 ft (30.5 m) north of North River Bridge in Colrain.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 32.3 ft (9.8 m), screened 30.3 to 32.3 ft (9.2 to 9.8 m).

DATUM.--Altitude of land-surface datum is 460 ft (140 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

REMARKS.--Water levels affected by North River.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.62 ft (4.46 m) below land-surface datum, Apr. 24, 1969; lowest measured, 23.48 ft (7.16 m) below land-surface datum, Jan. 31, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	22.40	JAN 22, 1982	21.58	APR 21, 1982	15.25	JUL 23, 1982	18.63
NOV 21	22.54	MAR 24	19.12	MAY 24	17.47	AUG 23	19.93
DEC 24	22.62	APR 05	15.95	JUN 23	17.39	SEP 26	20.98

423310072355801. Deerfield well DFW 44.

LOCATION.--Lat 42°33'10", long 72°35'58", Hydrologic Unit 01080203, 1.2 mi (1.93 km) south of Deerfield River Bridge and 15 ft (4.6 m) east of U.S. Highway 5 in Deerfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 27.6 ft (8.4 m), screened 25.6 to 27.6 ft (7.8 to 8.4 m).

DATUM.--Altitude of land-surface datum is 140 ft (43 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.42 ft (0.43 m) below land-surface datum, May 29, 1979; lowest measured, 6.16 ft (1.88 m) below land-surface datum, Sept. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	2.23	JAN 21, 1982	2.92	APR 21, 1982	2.53	JUL 23, 1982	3.86
NOV 22	1.81	FEB 23	2.40	MAY 24	2.74	AUG 23	4.74
DEC 23	2.89	MAR 24	2.12	JUN 23	2.52	SEP 26	4.53

GROUND-WATER LEVELS IN MASSACHUSETTS

FRANKLIN COUNTY--Continued

423305072320301. Montague well M5W 5.

LOCATION.--Lat 42°33'05", long 72°32'03", Hydrologic Unit 01080201, about 15 ft (5 m) west of Montague Road, 0.2 mi (0.3 km) north of Old Northfield Road, and 1.0 mi (1.6 km) north of Montague.

Owner: Thomas C. Kurtyka.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 12 ft (3.6 m), screened 9 to 12 ft (2.7 to 3.6 m).

DATUM.--Altitude of land-surface datum is 240 ft (73 m). Measuring point: Top of casing, 1.75 ft (0.69 m) above land-surface datum.

PERIOD OF RECORD.--January 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft (0.11 m) below land-surface datum, Feb. 26, 1976; lowest measured, 8.00 ft (2.44 m) below land-surface datum, Dec. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	5.37	FEB 23, 1982	3.09	MAY 01, 1982	2.21	JUL 23, 1982	3.28
NOV 22	4.58	MAR 02	4.17	24	1.92	AUG 23	4.40
DEC 23	4.45	24	1.98	JUN 03	2.17	SEP 01	5.17
JAN 21, 1982	3.93	APR 21	1.80	23	1.93	26	4.94

423424072170301. Orange well ORW 5.

LOCATION.--Lat 42°34'24", long 72°17'03", Hydrologic Unit 01080202, Orange Airport, 300 ft (91 m) east of main building and 600 ft (182 m) southwest of East River Street in Orange.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 20.6 ft (6.3 m), screened 18.6 to 20.6 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 530 ft (162 m). Measuring point: Top of casing, 2.40 ft (0.73 m) above land-surface datum.

PERIOD OF RECORD.--January 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.14 ft (1.26 m) below land-surface datum, Apr. 21, 1982; lowest measured, 7.56 ft (2.30 m) below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	5.57	JAN 21, 1982	5.44	APR 21, 1982	4.14	JUL 23, 1982	5.44
NOV 21	5.29	FEB 23	5.50	MAY 24	4.87	AUG 23	5.83
DEC 21	5.60	MAR 24	4.48	JUN 23	4.49	SEP 26	6.32

422607072324401. Sunderland well S6W 7.

LOCATION.--Lat 42°26'07", long 72°32'44", Hydrologic Unit 01080201, about 100 ft (30 m) east of State Highway 116 and 30 ft (10 m) north of Russellville Brook in Sunderland.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 54 ft (16.5 m), cased to 54 ft (16.5 m), open end.

DATUM.--Altitude of land-surface datum is 210 ft (64 m). Measuring point: Top of casing, at land-surface datum.

REMARKS.--Water level affected by pumping and nearby Russellville Brook.

PERIOD OF RECORD.--November 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.85 ft (2.09 m) below land-surface datum, Apr. 25, 1973; lowest measured, 23.26 ft (7.09 m) below land-surface datum, Feb. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	20.07	JAN 21, 1982	19.54	APR 24, 1982	9.07	JUL 23, 1982	9.86
NOV 22	20.94	FEB 23	16.61	MAY 24	9.06	AUG 23	12.12
DEC 23	20.49	MAR 24	9.78	JUN 23	8.08	SEP 26	13.40

HAMPDEN COUNTY

420357072511601. Granville well GLW 5.
 LOCATION.--Lat 42°03'57", long 72°51'16", Hydrologic Unit 01080206, near Granville Public School, 275 ft (83.8 m) south of State Highway 57 and 0.2 mi (0.32 km) west of Sodom Street in Granville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 67.7 ft (20.6 m), screened 65.7 to 67.7 ft (20.2 to 20.6 m).
 DATUM.--Altitude of land-surface datum is 675 ft (236 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.
 PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.28 ft (8.92 m) below land-surface datum, July 27, 1972; lowest, 37.20 ft (11.34 m) below land-surface datum, Jan. 24, 1966.
 REMARKS--Water levels from May 1976 to September 1981 have been found to be 1.0 ft (0.3 m) lower than those previously published. Corrected values are included below.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, MAY 1976 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 27, 1976	30.80	JAN 25, 1978	31.68	SEP 25, 1979	33.28	MAY 23, 1981	34.12
JUN 24	31.35	FEB 23	31.25	OCT 22	33.07	JUN 23	34.29
JUL 27	32.23	MAR 28	31.42	NOV 26	33.23	JUL 23	34.53
AUG 26	32.84	APR 25	30.69	DEC 26	33.25	AUG 25	34.99
SEP 22	33.47	MAY 24	30.96	JAN 24, 1980	33.24	SEP 22	35.26
OCT 26	34.08	JUN 26	31.29	FEB 21	33.56	OCT 26	35.56
NOV 26	34.51	JUL 25	31.96	MAR 25	33.32	NOV 21	35.62
DEC 27	34.95	AUG 28	32.68	APR 23	31.88	DEC 23	35.49
JAN 26, 1977	35.25	SEP 27	33.41	MAY 22	31.30	JAN 22, 1982	35.28
FEB 25	35.48	OCT 25	34.02	JUN 23	32.28	FEB 23	34.66
MAR 28	34.80	NOV 21	34.52	JUL 22	32.40	MAR 23	34.29
APR 28	33.97	DEC 21	34.84	AUG 22	33.10	APR 21	33.40
MAY 27	33.22	JAN 24, 1979	34.61	SEP 23	33.88	MAY 24	32.90
JUN 28	33.00	FEB 21	33.99	OCT 22	34.52	JUN 23	30.98
JUL 25	33.28	MAR 27	32.99	NOV 22	34.96	JUL 23	30.49
AUG 23	33.80	APR 25	32.52	DEC 21	35.14	AUG 23	30.25
SEP 26	34.14	MAY 23	31.99	JAN 26, 1981	35.38	SEP 26	32.22
OCT 25	33.80	JUN 21	31.65	FEB 21	35.18		
NOV 28	33.00	JUL 25	32.18	MAR 24	34.20		
DEC 27	32.71	AUG 22	32.76	APR 26	34.08		

420259072581701. Granville well GLW 6.
 LOCATION.--Lat 42°02'59", long 72°58'17", Hydrologic Unit 01080207, at Granville State Forest, 20 ft (6.1 m) west of West Hartland Road and 0.9 mi (1.4 km) north of state boundary in Granville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.8 ft (6.3 m), screened 18.8 to 20.8 ft (5.7 to 6.3 m).
 DATUM.--Altitude of land-surface datum is 1,160 ft (353 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.
 REMARKS--Water levels affected by Halfway Brook.
 PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.49 ft (0.76 m) below land-surface datum, Apr. 26, 1972; lowest measured, 8.42 ft (2.57 m) below land-surface datum, Aug. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	5.45	JAN 22, 1982	6.03	APR 21, 1982	3.03	JUL 23, 1982	6.23
NOV 21	5.09	FEB 23	4.45	MAY 24	5.25	AUG 23	7.32
DEC 23	6.14	MAR 23	3.36	JUN 23	3.63	SEP 26	7.45

GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPDEN COUNTY--Continued

420646072420101. Westfield well WVW 62.

LOCATION.--Lat 42°06'46", long 72°42'01", Hydrologic Unit 01080206, at Western Massachusetts Hospital about 200 ft (60 m) east of East Mountain Road and 0.4 mi (0.6 km) north of U.S. Highway 20 in Westfield.

Owner: Commonwealth of Massachusetts.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 25 ft (7.6 m), casing information not available.

DATUM.--Altitude of land-surface datum is 210 ft (64 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.70 ft (1.13 m) below land-surface datum, Oct. 29, 1975; lowest measured, 12.08 ft (3.68 m) below land-surface datum, Oct. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	12.08	FEB 22, 1982	6.44	JUN 23, 1982	3.84	SEP 26, 1982	9.05
NOV 21	9.79	MAR 23	5.72	JUL 21	5.22		
DEC 23	8.44	APR 21	8.18	23	5.64		
JAN 21, 1982	6.38	MAY 24	6.70	AUG 23	6.89		

420905072254001. Wilbraham well XJW 55.

LOCATION.--Lat 42°09'05", long 72°25'40", Hydrologic Unit 01080204, 45 ft (13.7 m) south of U.S. Highway 20 and 0.1 mi (0.16 km) west of North Main Street in Wilbraham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 62.5 ft (19.1 m), screened 60.5 to 62.5 ft (18.5 to 19.1 m).

DATUM.--Altitude of land-surface datum is 255 ft (78 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.56 ft (9.31 m) below land-surface datum, Mar. 28, 1979; lowest measured, 45.44 ft (13.85 m) below land-surface datum, Jan. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	44.26	JAN 21, 1982	37.96	APR 22, 1982	33.98	JUL 24, 1982	36.11
NOV 22	43.93	FEB 22	36.41	MAY 25	36.35	AUG 25	39.17
DEC 23	43.00	MAR 23	36.48	JUN 21	32.22	SEP 27	41.60

HAMPSHIRE COUNTY

421355072322001. Granby well GKW 68.

LOCATION.--Lat 42°13'55", long 72°32'20", Hydrologic Unit 01080201, about 15 ft (5 m) east of Morgan Street, 0.3 mi (0.5 km) south of East Street, and 2.0 mi (3.2 km) southwest of Granby.

Owner: Holyoke Water Power Co.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 18 ft (5.5 m), screened 16 to 18 ft (4.9 to 5.5 m).

DATUM.--Land-surface datum is 239.17 ft (72.90 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--April 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.99 ft (1.52 m) below land-surface datum, Aug. 22, Nov. 15, 1955; lowest measured, 11.17 ft (3.40 m) below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	9.16	JAN 21, 1982	7.15	APR 22, 1982	5.72	JUL 24, 1982	7.30
NOV 22	8.54	FEB 22	6.94	MAY 25	7.03	AUG 25	8.24
DEC 23	7.75	APR 02	5.79	JUN 21	5.85	SEP 27	9.16

HAMPSHIRE COUNTY--Continued

421627072201701. Ware well WEW 43.

LOCATION.--Lat 42°16'27", long 72°20'17", Hydrologic Unit 01080204, 30 ft (9.1 m) north of State Highway 9 and 200 ft (61 m) east of Swift River in Ware.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Plesitocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 27.2 ft (8.3 m), screened 25.2 to 27.2 ft (7.7 to 8.3 m).

DATUM.--Altitude of land-surface datum is 380 ft (116 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

REMARKS.--Water levels affected by Swift River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1975, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.78 ft (2.07 m) below land-surface datum, Feb. 25, 1976; lowest measured, 10.34 ft (3.15 m) below land-surface datum, Jan. 26, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	9.34	JAN 21, 1982	8.99	APR 22, 1982	8.57	JUL 24, 1982	9.00
NOV 22	9.13	FEB 22	9.04	MAY 25	8.92	AUG 25	8.62
DEC 22	9.04	MAR 23	8.81	JUN 21	8.40	SEP 27	8.75

MIDDLESEX COUNTY

422812071244401. Acton well ACW 158.

LOCATION.--Lat 42°28'12", long 71°24'44", Hydrologic Unit 01070005, 30 ft (9.1 m) north of State Highway 2 and 150 ft (45.7 m) east of Wetherbee Street in Acton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.8 ft (10.3 m), screened 31.8 to 33.8 ft (9.7 to 10.3 m).

DATUM.--Altitude of land-surface datum is 153 (47 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.00 ft (4.88 m) below land-surface datum, June 24, 1982; lowest measured, 21.86 ft (6.66 m) below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	20.62	JAN 22, 1982	17.62	APR 22, 1982	17.47	JUL 23, 1982	16.95
NOV 21	20.44	FEB 23	17.69	MAY 22	17.92	AUG 22	17.79
DEC 21	19.48	MAR 27	17.68	JUN 24	16.00	SEP 23	18.68

423349071134101. Billerica well BCW 363.

LOCATION.--Lat 42°33'49", long 71°13'41", Hydrologic Unit 01070002, 20 ft (6.1 m) south of Baldwin Road and 50 ft (15.2 m) west of Westminster Road in Billerica.

Owner: Robert M. Young.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 15.5 ft (4.7 m), cased with stone to 15.5 ft (4.7 m), open end.

DATUM.--Altitude of land-surface datum is 166 ft (51 m). Measuring point: Top of hole in wooden cover, 2.35 ft (0.72 m) above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.75 ft (0.53 m) below land-surface datum, Mar. 24, 1972; lowest measured, 13.11 ft (4.00 m) below land-surface datum, Oct. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	11.78	JAN 24, 1982	4.68	APR 25, 1982	4.55	JUL 23, 1982	6.22
NOV 22	7.16	FEB 24	4.42	MAY 23	5.91	AUG 21	7.88
DEC 24	4.98	MAR 28	4.22	JUN 25	4.05	SEP 26	9.99

GROUND-WATER LEVELS IN MASSACHUSETTS

MIDDLESEX COUNTY--Continued

423845071231401. Chelmsford well CHW 68.

LOCATION.--Lat 42°38'45", long 71°23'14", Hydrologic Unit 01070002, 1,300 ft (400 m) north of intersection of Wharton Lane and the B and M Railroad, 400 ft (640 m) east of Middlesex Street, and 0.5 mi (0.8 km) north of Vinal Square in North Chelmsford.

Owner: Wellman Realty Company.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 50 ft (15.2 m), cased to 50 ft (15.2 m), open end.

DATUM.--Land-surface datum is 100.83 ft (30.73 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of hole in cap on casing, 1.40 ft (0.43 m) below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.25 ft (1.60 m) below land-surface datum; Apr. 25, 1969; lowest measured, 12.24 ft (3.73 m) below land-surface datum, Sept. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	8.36	JAN 24, 1982	7.17	APR 25, 1982	6.41	JUL 23, 1982	8.82
NOV 22	7.08	FEB 23	7.39	MAY 23	7.79	AUG 22	9.07
DEC 24	7.04	MAR 28	6.80	JUN 25	7.03	SEP 26	9.84

423546071190702. Chelmsford well CHW 385.

LOCATION.--Lat 42°35'46", long 71°19'07", Hydrologic Unit 01070002, 15 ft (4.6 m) east of U.S. Highway 3 and 0.4 mi (0.64 km) north of State Highway 129 in Chelmsford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 42.8 ft (13.0 m), screened 40.8 to 42.8 ft (12.4 to 13.0 m).

DATUM.--Land-surface datum is 123.30 ft (37.58 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.83 ft (4.22 m) below land-surface datum, June 25, 1982; lowest measured, 19.04 ft (5.80 m) below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	17.18	JAN 24, 1982	15.45	APR 25, 1982	14.83	JUL 23, 1982	14.38
NOV 22	16.53	FEB 23	15.25	MAY 23	14.93	AUG 22	15.29
DEC 24	15.96	MAR 28	14.94	JUN 25	13.83	SEP 26	16.01

422637071202701. Concord well CTW 165.

LOCATION.--Lat 42°26'37", long 71°20'27", Hydrologic Unit 01070005, 30 ft (9.1 m) south of State Highway 2 and 0.1 mi (0.3 km) west of State Highway 126 in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 66.7 ft (20.3 m), screened 64.7 to 66.7 ft (19.7 to 20.3 m).

DATUM.--Land-surface datum is 201.12 ft (61.30 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.19 ft (11.64 m) below land-surface datum, July 25, 1973; lowest measured, 47.10 ft (14.36 m) below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	43.64	JAN 24, 1982	42.93	APR 22, 1982	41.61	JUL 23, 1982	39.39
NOV 21	43.66	FEB 23	42.36	MAY 22	41.26	AUG 22	39.30
DEC 21	43.78	MAR 27	42.04	JUN 24	39.16	SEP 23	39.59

MIDDLESEX COUNTY--Continued

422650071214402. Concord well CTW 167.

LOCATION.--Lat 42°26'50", long 71°21'44", Hydrologic Unit 01070005, 10 ft (0.3 m) south of State Highway 2 and 10 ft (0.3 m) west of Sudbury Road in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 24.8 ft (7.5 m), screened 21.8 to 24.8 ft (6.6 to 7.5 m).

DATUM.--Altitude of land-surface datum is 135 ft (41 m). Measuring point: Top of casing, 3.30 ft (1.01 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.67 ft (1.40 m) below land-surface datum, Mar. 24, 1971; lowest measured, 10.59 ft (3.23 m) below land-surface datum, Sept. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	8.57	JAN 24, 1982	6.25	APR 22, 1982	5.86	JUL 23, 1982	6.03
NOV 21	7.17	FEB 23	6.02	MAY 22	6.83	AUG 22	7.05
DEC 24	6.35	MAR 27	5.69	JUN 24	5.42	SEP 23	7.71

422627071154002. Lexington well LTW 104.

LOCATION.--Lat 42°26'27", long 71°15'40", Hydrologic Unit 01090001, at The Commonwealth of Massachusetts Department of Public Works maintenance depot, 0.2 mi (0.32 km) west of State Highway 128 and 500 ft (152 m) south of State Highway 2A in Lexington.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.7 ft (6.3 m), screened 18.7 to 20.7 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 180 ft (55 m). Measuring point: Top of casing, 4.5 ft (1.4 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.44 ft (0.44 m) below land-surface datum, Jan. 27, 1978; lowest measured, 4.35 ft (1.32 m) below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	2.59	JAN 22, 1982	2.46	APR 22, 1982	2.28	JUL 23, 1982	2.55
NOV 23	2.25	FEB 23	2.33	MAY 24	2.66	AUG 24	3.10
DEC 24	2.16	MAR 26	2.23	JUN 25	2.14	SEP 27	3.08

423812071174801. Lowell well L2W 14.

LOCATION.--Lat 42°38'12", long 71°17'48", Hydrologic Unit, 01070005, at YWCA (formerly Rogers Hall School), about 50 ft (15 m) north of Rogers Street, and 800 ft (240 m) northwest of intersection of Rogers Street and State Highway 38 in Lowell.

Owner: Y.W.C.A.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 30 ft (9.1 m), cased with stone to 30 ft (9.1 m), open end.

DATUM.--Land-surface datum is 157.78 ft (48.09 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of stone slab under wooden cover, 0.20 ft (0.06 m) below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.79 ft (2.37 m) below land-surface datum, Mar. 27, 1958; lowest measured, 19.79 ft (6.03 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	16.59	JAN 24, 1982	11.20	APR 25, 1982	9.60	JUL 23, 1982	10.77
NOV 22	15.64	FEB 23	11.11	MAY 23	10.54	AUG 21	12.04
DEC 24	13.46	MAR 28	10.61	JUN 25	9.06	SEP 26	13.76

GROUND-WATER LEVELS IN MASSACHUSETTS

MIDDLESEX COUNTY--Continued

424055071435301. Townsend well TRW 13.

LOCATION.--Lat 42°40'55", long 71°43'53", Hydrologic Unit 01070004, 15 ft (4.6 m) south of Dudley Road and 15 ft (4.6 m) north of Turnpike Road in Townsend.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 32.9 ft (10.0 m), screened 30.9 to 32.9 ft (9.4 to 10.0 m).

DATUM.--Altitude of land-surface datum is 313 ft (95 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.95 ft (3.03 m) below land-surface datum, Apr. 25, 1973; lowest measured, 17.41 ft (5.31 m) below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	14.52	JAN 25, 1982	13.08	APR 22, 1982	11.45	JUL 24, 1982	11.68
NOV 23	14.19	FEB 24	12.77	MAY 25	11.77	AUG 25	12.39
DEC 26	13.58	MAR 25	12.55	JUN 21	10.80	SEP 27	13.15

423115071032001. Wakefield well WAW 38.

LOCATION.--Lat 42°31'15", long 71°03'20", Hydrologic Unit 01090001, 75 ft (22.9 m) north of State Highway 128 and 0.4 mi (0.7 km) southeast of Saugus River in Wakefield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 25.5 ft (7.8 m), screened 23.5 to 25.5 ft (7.2 to 7.8 m).

DATUM.--Altitude of land-surface datum is 80 ft (24 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.51 ft (1.37 m) below land-surface datum, Mar. 27, 1969; lowest measured, 9.99 ft (3.04 m) below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	8.67	JAN 24, 1982	6.24	APR 25, 1982	6.50	JUL 23, 1982	6.63
NOV 22	6.71	FEB 21	6.18	MAY 23	7.01	AUG 21	7.44
DEC 21	6.28	MAR 28	6.55	JUN 25	6.03	SEP 26	8.20

421852071220501. Wayland well WKW 2.

LOCATION.--Lat 42°18'52", long 71°22'05", Hydrologic Unit 01070005, 0.25 mi (0.40 km) west of State Highway 27 and 100 ft (30.5 m) south of State Highway 30, at Cochituate State Park in Wayland.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.0 ft (10.0 m), screened 31.0 to 33.0 ft (9.4 to 10.0 m).

DATUM.--Land-surface datum is 157.75 ft (48.08 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.0 ft (1.2 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.96 ft (4.26 m) below land-surface datum, Mar. 27, 1972; lowest measured, 17.47 ft (5.32 m) below land-surface datum, Jan. 22, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	17.21	JAN 22, 1982	16.40	APR 22, 1982	15.57	JUL 23, 1982	15.43
NOV 21	17.07	FEB 24	16.43	MAY 22	15.73	AUG 22	15.92
DEC 21	16.95	MAR 27	16.09	JUN 24	14.41	SEP 23	16.42

MIDDLESEX COUNTY--Continued

423401071093801. Wilmington well XMW 78.

LOCATION.--Lat 42°34'01", long 71°09'38", Hydrologic Unit 01090001, at Whitefield Public School in Wilmington, about 30 ft (9 m) west of State Highway 62, and 0.3 mi (0.5 km) north of Concord Street.

Owner: Town of Wilmington.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 42 in (1.07 m), depth 12 ft (3.7 m) cased with stone to 12 ft (3.7 m), open end.

DATUM.--Altitude of land-surface datum is 95 ft (29 m). Measuring point: Hole in base of wooden recorder shelter, 0.33 ft (0.10 m) above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.46 ft (1.36 m) above land-surface datum, Feb. 27, 1976; lowest, 11.27 ft (3.44 m) below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	9.21	JAN 05, 1982	6.14	APR 05, 1982	6.64	JUL 15, 1982	6.98
10	9.18	10	6.03	10	6.65	20	6.33
15	9.17	15	6.28	15	6.40	25	7.20
20	9.16	20	6.47	25	6.74	31	7.38
25	9.12	25	6.75	MAY 05	7.14	AUG 05	7.56
31	8.77	31	6.99	10	7.02	10	7.35
NOV 05	8.63	FEB 05	6.35	15	7.12	15	7.48
10	8.60	10	6.40	20	7.27	20	7.70
15	8.63	15	6.64	25	7.36	25	7.92
20	7.98	20	6.63	31	7.47	31	8.12
25	7.58	25	6.80	JUN 05	6.04	SEP 05	8.18
30	7.60	28	6.90	10	5.28	10	8.32
DEC 05	7.48	MAR 05	6.77	15	5.56	15	8.45
10	7.44	10	6.78	20	5.77	20	8.59
15	7.44	15	6.62	25	6.06	26	8.62
20	7.09	20	6.56	30	6.06	30	8.66
25	7.05	25	6.63	JUL 05	6.41		
31	7.16	31	6.75	10	6.68		
WTR YEAR 1982	MAX 5.85	JUN 29, 1982	MIN 9.28	OCT 1, 1981			

422819071065701. Winchester well XOW 14.

LOCATION.--Lat 42°28'19", long 71°06'57", Hydrologic Unit 01090001, at 220 Forest Street and 100 ft (30.5 m) north of Forest Street in Winchester.

Owner: J. E. Sharkey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 17.0 ft (5.2 m), cased with stone to 17.0 ft (5.2 m), open end.

DATUM.--Land-surface datum is 116.29 ft (35.45 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--July 1940 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.03 ft (1.23 m) below land-surface datum, Mar. 26, 1969; lowest measured, 15.60 ft (4.75 m) below land-surface datum, Oct. 31, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	13.06	JAN 22, 1982	8.79	APR 25, 1982	8.86	JUL 23, 1982	11.12
NOV 22	6.66	FEB 23	9.46	MAY 23	10.60	AUG 21	11.89
DEC 22	6.82	MAR 28	9.00	JUN 25	7.96	SEP 26	13.10

GROUND-WATER LEVELS IN MASSACHUSETTS

NANTUCKET COUNTY

411555070021901. Nantucket well NBW 228.

LOCATION.--Lat 41°15'55", long 70°02'19", Hydrologic Unit 01090002, 165 ft (50 m) south of Milestone Road and 300 ft (91 m) east of Madequecham Valley Brook in Nantucket.

Owner: Nantucket Conservation Foundation.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 35.6 ft (10.9 m), screened 32.6 to 35.6 ft (9.9 to 10.9 m).

DATUM.--Altitude of land-surface datum is 39 ft (12 m). Measuring point: Top of casing, 0.7 ft (0.2 m) above land-surface datum.

PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.45 ft (6.54 m) below land-surface datum, Apr. 21, 1978; lowest measured, 27.90 ft (8.50 m) below land-surface datum, Feb. 23, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	26.88	MAR 16, 1982	25.87	JUN 10, 1982	24.38	AUG 23, 1982	24.24
NOV 27	27.13	APR 26	24.49	JUL 08	23.65	SEP 24	24.64
FEB 28, 1982	26.49						

NORFOLK COUNTY

421250071090901. Dedham well DDW 231.

LOCATION.--Lat 42°12'50", long 71°09'09", Hydrologic Unit 01090001, 50 ft (15.2 m) south of State Highway 128 and 0.3 mi (0.48 km) west of University Avenue in Dedham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 21.9 ft (6.7 m), screened 19.9 to 21.9 ft (6.1 to 6.7 m).

DATUM.--Altitude of land-surface datum is 65 ft (20 m). Measuring point: Top of casing, 2.3 ft (0.7 m) above land-surface datum. Prior to July 17, 1978, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.45 ft (0.75 m) below land-surface datum, Mar. 28, 1978; lowest measured, 13.81 ft (4.21 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	11.62	JAN 23, 1982	4.74	APR 22, 1982	4.23	JUL 25, 1982	6.69
NOV 21	7.22	FEB 21	4.19	MAY 22	5.88	AUG 23	8.29
DEC 21	3.81	MAR 27	4.40	JUN 27	4.13	SEP 25	10.42

421435071165701. Dover well DVW 10.

LOCATION.--Lat 42°14'35", long 71°16'57", Hydrologic Unit 01090001, at Dover Public School about 400 ft (120 m) southwest of and about 400 ft (120 m) west of Center Street in Dover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 54 ft (16.5 m), screened 52 to 54 ft (15.8 to 16.5 m).

DATUM.--Altitude of land-surface datum is 160 ft (49 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.25 ft (9.22 m) below land-surface datum, Feb. 20, 1970; lowest measured, 36.87 ft (11.24 m) below land-surface datum, Jan. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	35.68	JAN 23, 1982	32.17	APR 22, 1982	31.98	JUL 25, 1982	31.58
NOV 21	35.61	FEB 21	31.65	MAY 22	32.29	AUG 23	32.45
DEC 21	34.82	MAR 27	32.00	JUN 27	30.31	SEP 25	33.38

NORFOLK COUNTY--Continued

420432071151201. Foxborough well FXW 3.

LOCATION.--Lat 42°04'32", long 71°15'12", Hydrologic Unit 01090004, at Foxborough State Hospital, near railroad tracks, 100 ft (30 m) east of driveway, and 250 ft (76 m) north of Chestnut Street in Foxborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 32 ft (9.8 m), screened 30 to 32 ft (9.2 to 9.8 m).

DATUM.--Altitude of land-surface datum is 290 ft (88 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.24 ft (4.95 m) below land-surface datum, Mar. 25, 1968; lowest measured, 21.42 ft (6.53 m) below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	20.82	JAN 23, 1982	17.99	APR 22, 1982	18.05	JUL 25, 1982	18.46
NOV 21	20.29	FEB 21	18.03	MAY 22	18.56	AUG 23	19.12
DEC 22	18.77	MAR 27	18.28	JUN 27	17.59	SEP 25	19.85

420545071174001. Norfolk well NNW 27.

LOCATION.--Lat 42°05'45", long 71°17'40", Hydrologic Unit 01090001, 15 ft (4.8 m) northwest of State Highway 1A and 0.1 mi (0.16 km) northeast of Valley Street in Norfolk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 18.4 ft (5.6 m), screened 16.4 to 18.4 ft (5.0 to 5.6 m).

DATUM.--Altitude of land-surface datum is 160 ft (49 m). Measuring point: Top of casing, 1.7 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.73 ft (1.44 m) below land-surface datum, Sept. 26, 1975; lowest measured, 7.97 ft (2.43 m) below land-surface datum, Sept. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	6.99	JAN 23, 1982	5.98	APR 22, 1982	5.95	JUL 25, 1982	6.46
NOV 21	6.13	FEB 21	5.94	MAY 22	6.26	AUG 23	6.80
DEC 22	5.86	MAR 27	6.01	JUN 27	5.81	SEP 25	7.05

420954070564501. Weymouth well XGW 2.

LOCATION.--Lat 42°09'54", long 70°56'45", Hydrologic Unit 01090001, 40 ft (12 m) south of main gate guard house at U.S. Naval Air Station at Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 30 ft (9.1 m), screened 28 to 30 ft (8.5 to 9.1 m).

DATUM.--Altitude of land-surface datum is 180 ft (55 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.25 ft (1.60 m) below land-surface datum, Jan. 28, 1970; lowest measured, 22.63 ft (6.90 m) below land-surface datum, Nov. 21, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	20.63	JAN 24, 1982	8.67	APR 24, 1982	8.89	JUL 25, 1982	10.68
NOV 21	16.19	FEB 21	8.23	MAY 22	10.65	AUG 23	12.90
DEC 22	8.89	MAR 27	8.83	JUN 27	7.96	SEP 25	16.05

GROUND-WATER LEVELS IN MASSACHUSETTS

NORFOLK COUNTY--Continued

421147070571901. Weymouth well XGW 3.

LOCATION.--Lat 42°11'47", long 70°57'19", Hydrologic Unit 01090001, about 100 ft (30 m) east of State Highway 18 and about 600 ft (183 m) off State Highway 3 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 22.3 ft (6.8 m), screened 20.3 to 22.3 ft (6.2 to 6.8 m).

DATUM.--Altitude of land-surface datum is 90 ft (27 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.91 ft (0.89 m) below land-surface datum, Jan. 27, 1978; lowest, 18.10 ft (5.52 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	6.92	JAN 24, 1982	4.49	APR 24, 1982	4.92	JUL 25, 1982	4.65
NOV 21	4.07	FEB 21	4.58	MAY 22	4.80	AUG 23	5.59
DEC 22	4.42	MAR 27	4.93	JUN 27	4.45	SEP 25	7.07

421120070562801. Weymouth well XGW 4.

LOCATION.--Lat 42°11'20", long 70°56'28", Hydrologic Unit 01090001, at median strip of State Highway 3 and 0.8 mi (1.3 km) south of State Highway 18 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 22.6 ft (6.9 m), screened 20.6 to 22.6 ft (6.3 to 6.9 m).

DATUM.--Altitude of land-surface datum is 90 ft (27 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft (1.45 m) below land-surface datum, Mar. 26, 1969; lowest measured, 10.45 ft (3.19 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	7.25	JAN 24, 1982	6.31	APR 24, 1982	6.45	JUL 25, 1982	6.42
NOV 21	5.48	MAR 02	6.40	MAY 22	7.13	AUG 23	7.53
DEC 22	5.61	27	6.44	JUN 27	6.02	SEP 25	7.83

PLYMOUTH COUNTY

420321070433502. Duxbury well D4W 79.

LOCATION.--Lat 42°03'21", long 70°43'35", Hydrologic Unit 01090002, 30 ft (9.1 m) west of State Highway 3 and about 300 ft (91 m) north of State Highway 14 in Duxbury.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and silty clay of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 23.5 ft (7.2 m), screened 21.5 to 23.5 ft (6.6 to 7.2 m).

DATUM.--Altitude of land-surface datum is 55 ft (17 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft (1.86 m) below land-surface datum, Jan. 26, 1978; lowest measured, 10.68 ft (3.26 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	9.32	JAN 26, 1982	7.86	APR 24, 1982	7.99	JUL 25, 1982	8.10
NOV 21	7.98	FEB 21	7.55	MAY 22	8.29	AUG 23	8.68
DEC 22	7.32	MAR 27	7.91	JUN 27	7.85	SEP 25	8.62

PLYMOUTH COUNTY--Continued

420317070432901. Duxbury well D4W 80.

LOCATION.--Lat 42°03'17", long 70°43'29", Hydrologic Unit 01090002, 78 ft (23.8 m) south of State Highway 14 and 250 ft (76.2 m) east of State Highway 3 in Duxbury.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Bedrock.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6.0 in (0.15 m), depth 181 ft (54.6 m), cased to 59 ft (18.0 m), open hole.

DATUM.--Altitude of land-surface datum is 65 ft (20 m). Measuring point: Top of hole in concrete cover, at land-surface datum.

PERIOD OF RECORD.--April 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.53 ft (5.95 m) below land-surface datum, Jan. 26, 1978; lowest measured, 24.02 ft (7.32 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	22.40	JAN 26, 1982	21.43	APR 24, 1982	21.48	JUL 25, 1982	21.61
NOV 21	21.66	FEB 21	21.07	MAY 22	21.77	AUG 23	22.13
DEC 22	20.59	MAR 27	21.43	JUN 27	21.07	SEP 25	22.15

420056070575701. East Bridgewater well EBW 30.

LOCATION.--Lat 42°00'56", long 70°57'57", Hydrologic Unit 01090004, about 100 ft (30.5 m) north of State Highway 106 and 800 ft (244 m) west of State Highway 18 in East Bridgewater.

Owner: East Bridgewater Medical Center.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 24 ft (7.3 m), cased with stone to 24 ft (7.3 m), open end.

DATUM.--Altitude of land-surface datum is 85 ft (26 m). Measuring point: Top of stone casing curb, 2.6 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--July 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.40 ft (0.73 m) below land-surface datum, Mar. 27, 1969; lowest measured, 17.83 ft (5.43 m) below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	16.81	JAN 26, 1982	5.52	APR 22, 1982	4.55	JUL 25, 1982	7.04
NOV 21	16.27	FEB 21	4.07	MAY 22	6.58	AUG 23	8.64
DEC 22	7.45	MAR 27	4.52	JUN 27	4.38	SEP 25	10.17

415820070522801. Halifax well HBW 97.

LOCATION.--Lat 41°58'20", long 70°52'28", Hydrologic Unit 01090004, 1,950 ft (594 m) west of South Street and 130 ft (39.6 m) south of River Street in Halifax.

Owner: Richard W. Green.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3.0 in (0.08 m), depth 945 ft (288.0 m), cased to 90 ft (27.4 m), open hole.

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top of casing, 0.5 ft (0.2 m) above land-surface datum.

PERIOD OF RECORD.--April 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.30 ft (0.70 m) below land-surface datum, Jan. 26, 1978; lowest measured, 5.82 ft (1.77 m) below land-surface datum, Oct. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	5.39	JAN 26, 1982	3.57	APR 22, 1982	3.52	JUL 25, 1982	3.77
NOV 21	4.28	FEB 21	3.31	MAY 22	3.74	AUG 23	3.96
DEC 22	3.55	MAR 27	3.48	JUN 27	3.35	SEP 25	3.88

GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY--Continued

420353070520301. Hanson well HGW 76.

LOCATION.--Lat 42°03'53", long 70°52'03", Hydrologic Unit 01090002, 100 ft (30.5 m) south of State Highway 14 and 150 ft (46 m) west of town hall in Hanson.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 26.6 ft (8.1 m), screened 24.6 to 26.6 ft (7.5 to 8.1 m).

DATUM.--Altitude of land-surface datum is 71 ft (22 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

REMARKS.--Water level affected by Wampatuck Pond.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft (0.76 m) below land-surface datum, Mar. 26, 1969; lowest measured, 6.53 ft (1.99 m) below land-surface datum, Sept. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	5.34	JAN 26, 1982	4.49	APR 24, 1982	4.43	JUL 25, 1982	4.45
NOV 21	3.94	FEB 21	4.15	MAY 22	4.62	AUG 23	4.93
DEC 22	3.90	MAR 27	4.42	JUN 27	4.08	SEP 25	5.07

415228070554601. Lakeville well LKW 14.

LOCATION.--Lat 41°52'28", long 70°55'46", Hydrologic Unit 01090004, 30 ft (9 m) west of parking lot at Lakeville State Hospital in Lakeville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 41 ft (12.5 m), screened 39 to 41 ft (11.9 to 12.5 m).

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.84 ft (3.00 m) below land-surface datum, May 29, 1979; lowest, 23.59 ft (7.19 m) below land-surface datum, Oct. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	22.64	JAN 25, 1982	17.94	MAR 05, 1982	16.71	MAY 22, 1982	16.24
27	22.96	31	17.91	10	16.66	JUN 27	14.34
NOV 22	22.75	FEB 05	17.60	15	16.56	JUL 25	15.35
DEC 22	20.83	10	17.26	20	16.43	AUG 23	15.81
JAN 05, 1982	19.31	15	17.01	25	16.34	SEP 25	16.32
10	18.70	20	16.88	31	16.26		
15	18.26	25	16.83	APR 05	16.30		
20	18.03	28	18.79	25	15.99		

WTR YEAR 1982 MAX 14.34 JUN 27, 1982 MIN 22.69 OCT 8, 1981

415433070583302. Middleborough well MTW 82.

LOCATION.--Lat 41°54'33", long 70°58'33", Hydrologic Unit 01090004, 15 ft (4.6 m) southeast of southbound side of State Highway 25 and 435 ft (133 m) southeast of Puddingshear Brook in Middleborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 26.5 ft (8.1 m), screened 24.5 to 26.5 ft (7.5 to 8.1 m).

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft (0.48 m) below land-surface datum, Dec. 29, 1969; lowest measured, 17.58 ft (5.36 m) below land-surface datum, Oct. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	16.63	JAN 23, 1982	4.70	APR 22, 1982	5.85	JUL 25, 1982	7.95
NOV 22	13.73	FEB 21	4.61	MAY 22	8.02	AUG 23	9.72
DEC 21	4.42	MAR 27	5.78	JUN 27	4.70	SEP 25	10.75

PLYMOUTH COUNTY--Continued

415453070434901. Plymouth well PWV 22.

LOCATION.--Lat 41°54'53", long 70°43'49", Hydrologic Unit 01090004, 10 ft (3 m) from northeast corner of main building at Plymouth Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 42 ft (12.8 m) screened 40 to 42 ft (12.2 to 12.8 m).

DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.82 ft (6.04 m) below land-surface datum, May 26, 1958; lowest measured, 28.99 ft (8.34 m) below land-surface datum, Jan. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	27.45	JAN 23, 1982	25.00	APR 22, 1982	24.14	JUL 25, 1982	22.48
NOV 21	27.66	FEB 21	24.13	MAY 22	24.03	AUG 23	23.10
DEC 22	26.73	MAR 27	24.10	JUN 27	22.35	SEP 25	23.77

414518070435701. Wareham well WFW 51.

LOCATION.--Lat 41°45'18", long 70°43'57", Hydrologic Unit 01090002, 50 ft (15 m) east of U.S. Highway 6 and 100 ft (30 m) north of Exxon service station in Wareham.

Owner: Thomas B. Rogers.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 9.65 ft (2.94 m), cased with tile to 9.65 ft (2.94 m), open end. Prior to September 1980, well depth was 12.5 ft (3.8 m).

DATUM.--Altitude of land-surface datum is 21 ft (6 m). Measuring point: Top edge of tile casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--July 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft (1.02 m) below land-surface datum, Jan. 26, 1978; lowest measured, 10.98 ft (3.35 m) below land-surface datum, Dec. 28, 1965; well dry Sept. 25, Oct. 23, Nov. 24, Dec. 24, 1980, Jan. 27, Sept. 26, Oct. 24, Nov. 21, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1981	DRY	JAN 23, 1982	7.38	APR 22, 1982	6.53	JUL 25, 1982	6.99
NOV 21	DRY	FEB 21	6.98	MAY 22	7.01	AUG 23	7.48
DEC 21	8.32	MAR 27	6.75	JUN 27	6.13	SEP 25	7.57

GROUND-WATER LEVELS IN MASSACHUSETTS

SUFFOLK COUNTY

422133071033801. Boston well BGW 925.

LOCATION.--Lat 42°21'33", long 71°03'38", Hydrologic Unit 01090001, in basement room at Scollay Building, intersection of Court and Tremont Streets in Boston.

Owner: United States Trust.

AQUIFER.--Cambridge slate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8.0 in (0.20 m), depth 624 ft (190.2 m), cased to 90 ft (27.4 m), open hole.

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top of casing, 15 ft (4.6 m) below land-surface datum.

REMARKS.--Water levels affected by tide and barometric pressure.

PERIOD OF RECORD.--February 1960 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 18.61 ft (5.67 m) below measuring point, Oct. 31, 1975; lowest measured, 26.20 ft (7.99 m) below measuring point, Oct. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	23.35	JAN 05, 1982	22.81	APR 05, 1982	23.46	JUL 05, 1982	22.83
10	23.46	10	22.95	10	23.43	10	22.78
15	23.29	15	22.94	15	23.59	15	22.79
20	23.40	20	23.09	20	23.56	20	22.74
25	23.48	25	22.92	25	23.52	25	22.67
31	23.42	31	22.98	30	23.46	31	22.52
NOV 05	23.26	FEB 05	23.10	MAY 05	23.58	AUG 05	22.62
10	23.48	10	22.92	10	23.46	10	22.53
15	23.20	15	22.97	15	23.53	15	22.48
20	23.12	20	22.91	20	23.39	20	22.44
25	23.23	25	23.10	25	23.37	25	22.34
30	23.26	28	23.18	31	23.32	31	22.51
DEC 05	23.07	MAR 05	22.86	JUN 05	23.20	SEP 05	22.63
10	23.04	10	23.20	10	23.09	10	22.70
15	22.99	15	23.18	15	23.95	15	22.87
20	23.07	20	23.25	20	22.80	20	23.02
25	23.11	25	23.34	25	22.90	25	23.05
31	23.10	31	23.32	30	22.81	30	23.08

WTR YEAR 1982 MAX 22.31 AUG 26, 1982 MIN 23.62 MAY 4, 1982

WORCESTER COUNTY

422058072085501. Hardwick well HHW 1.

LOCATION.--Lat 42°20'58", long 72°08'55", Hydrologic Unit 01080204, 30 ft (9.1 m) southeast of State Highway 32 and 0.6 mi (0.96 km) southwest of Hardwick Road in Hardwick.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.2 ft (10.1 m), screened 31.2 to 33.2 ft (9.5 to 10.1 m).

DATUM.--Altitude of land-surface datum is 580 ft (177 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft (2.81 m) below land-surface datum, Apr. 25, 1969; lowest measured, 17.77 ft (5.42 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	15.97	JAN 23, 1982	13.43	APR 22, 1982	10.92	JUL 24, 1982	14.23
NOV 22	13.80	FEB 22	12.92	MAY 25	13.88	AUG 25	15.14
DEC 22	12.74	MAR 23	12.24	JUN 21	10.74	SEP 27	15.98

WORCESTER COUNTY--Continued

421837071380901. Northborough well NUW 38.

LOCATION.--Lat 42°18'37", long 71°38'09", Hydrologic Unit 01070005, 0.7 mi (1.13 km) south of U.S. Highway 20 and about 400 ft (122 m) west of School Street in Northborough.

Owner: Eric MacLean.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 14 ft (4.3 m), cased with concrete to 14 ft (4.3 m), open end.

DATUM.--Altitude of land-surface datum is 285 ft (87 m). Measuring point: Top edge of concrete casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--August 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.96 ft (0.29 m) below land-surface datum, Mar. 25, 1969; lowest measured, 13.30 ft (4.05 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	6.36	FEB 22, 1982	4.29	MAY 26, 1982	5.07	AUG 26, 1982	7.85
NOV 23	4.78	MAR 23	3.61	JUN 22	3.12	SEP 28	9.66
DEC 26	4.55	APR 23	4.38	JUL 22	6.19		

420610071421401. Northbridge well NXW 1.

LOCATION.--Lat 42°06'10", long 71°42'14", Hydrologic Unit 01090003, about 100 ft (30 m) northeast of the intersection of State Highway 146 and Main Street in Northbridge.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 12 ft (3.7 m), screened 10 to 12 ft (3.0 to 3.7 m).

DATUM.--Altitude of land-surface datum is 370 ft (113 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.88 ft (0.57 m) below land-surface datum, Mar. 27, 1978; lowest measured, 4.75 ft (1.45 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	3.47	JAN 25, 1982	2.58	APR 23, 1982	2.51	JUL 22, 1982	2.60
NOV 23	2.99	FEB 22	2.53	MAY 26	2.81	AUG 26	2.80
DEC 26	2.62	MAR 23	2.54	JUN 22	2.14	SEP 28	3.05

422805071480801. Sterling well SYW 1.

LOCATION.--Lat 42°28'05", long 71°48'08", Hydrologic Unit 01070004, 45 ft (14 m) northeast of Justice Hill Road and 0.8 mi (1.3 km) west of South Nelson Road in Sterling.

Owner: N. Lanciani.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 15 ft (4.5 m), cased with stone to 15 ft (4.5 m), open end.

DATUM.--Altitude of land-surface datum is 710 ft (220 m). Measuring point: Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.66 ft (0.51 m) below land-surface datum, Mar. 26, 1969; dry, Nov. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1981	6.04	JAN 25, 1982	3.09	APR 22, 1982	3.07	JUL 24, 1982	5.69
NOV 23	3.03	FEB 24	3.06	MAY 25	3.14	AUG 25	7.72
DEC 26	3.05	MAR 25	3.01	JUN 21	3.13	SEP 27	10.33

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

423717072043101. Templeton well TMW 3.

LOCATION.--Lat 42°57'17", long 72°04'31", Hydrologic Unit 01080202, 60 ft (18.3 m) east of U.S. Highway 202 and 0.2 mi (0.32 km) south of Winchendon town line in Templeton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 14 ft (4.3 m), screened 12 to 14 ft (3.7 to 4.3 m).

DATUM.--Altitude of land-surface datum is 900 ft (270 m). Measuring point: Top of casing, 4.2 ft (1.2 m) above land-surface datum.

PERIOD OF RECORD.--December 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.46 ft (0.75 m) below land-surface datum, Mar. 26, 1969; lowest measured, 5.10 ft (1.55 m) below land-surface datum, Sept. 29, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	2.84	JAN 25, 1982	3.63	APR 22, 1982	3.00	JUL 24, 1982	3.67
NOV 22	3.22	FEB 24	3.52	MAY 25	3.53	AUG 25	3.85
DEC 22	3.43	MAR 24	2.81	JUN 21	3.49	SEP 27	3.97

420313071514201. Webster well WLW 1.

LOCATION.--Lat 42°03'13", long. 71°51'42", Hydrologic Unit 01100001, 100 ft (30.5 m) east of State Highway 52 and 100 ft (30.5 m) south of Memorial Beach Drive in Webster.

Owner: Town of Webster.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 27.0 ft (8.2 m) cased to 27.0 ft (8.2 m), open end.

DATUM.--Altitude of land-surface datum is 500 ft (152 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--September 1958 to November 1979, October 1981 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.28 ft (3.13 m) below land-surface datum, Mar. 25, 1968; lowest measured, 17.90 ft (5.46 m) below land-surface datum, Dec. 20, 1965; dry, Oct. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	DRY	JAN 25, 1982	12.29	APR 23, 1982	13.09	JUL 22, 1982	13.30
NOV 23	13.90	FEB 22	12.85	MAY 26	13.69	AUG 26	14.64
DEC 26	12.70	MAR 23	13.85	JUN 22	11.14	SEP 28	15.17

421410072081301. West Brookfield well WUW 2.

LOCATION.--Lat 42°14'10", long 72°08'13", Hydrologic Unit 01080204, about 50 ft (15 m) north of State Highway 9 and about 500 ft (150 m) south of State Highway 67 in West Brookfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 43.0 ft (13.1 m), screened 40 to 43 ft (12.2 to 13.1 m).

DATUM.--Altitude of land-surface datum is 630 ft (192 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.93 ft (5.16 m) below land-surface datum, July 24, 1982; lowest measured, 23.63 ft (7.20 m) below land-surface datum, Feb. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	20.12	JAN 23, 1982	18.89	APR 23, 1982	17.98	JUL 24, 1982	16.92
NOV 22	20.05	FEB 22	18.48	MAY 25	17.61	AUG 25	17.33
DEC 22	19.74	MAR 23	18.37	JUN 21	16.94	SEP 27	17.85

WORCESTER COUNTY--Continued

421522072113401. West Brookfield well WUW 10.

LOCATION.--Lat 42°15'22", long 72°11'34", Hydrologic Unit 01080204, 15 ft (4.6 m) east of Coy Hill Road and 1,850 ft (569 m) south of State Highway 9 in West Brookfield.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Brimfield schist.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.5 in (0.06 m), depth 64.5 ft (19.6 m), cased to 40 ft (12.2 m), open hole.

DATUM.--Land-surface datum is 833.23 ft (253.99 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.85 ft (0.87 m) above land-surface datum.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft (0.48 m) below land-surface datum, Feb. 2, 1976; lowest measured, 12.12 ft (3.69 m) below land-surface datum, Oct. 27, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	6.48	JAN 23, 1982	4.09	APR 23, 1982	2.34	JUL 24, 1982	7.01
NOV 22	4.65	FEB 22	2.75	MAY 25	5.51	AUG 25	8.60
DEC 22	3.17	MAR 23	1.77	JUN 21	2.32	SEP 27	10.50

423430072015201. Winchendon well XNW 13.

LOCATION.--Lat 42°42'04", long 72°01'52", Hydrologic Unit 01080202, about 50 ft (15 m) east of Forristall Road, 0.2 mi (0.3 km) north of Elmwood Road, and 1.6 mi (2.6 km) northeast of Winchendon.

Owner: W. B. Hart.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 12 ft (3.7 m), cased with stone to 12 ft (3.7 m), open end.

DATUM.--Land-surface datum is 1,209.36 ft (368.61 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of extension pipe, 3.8 ft (1.2 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.86 ft (0.57 m) below land-surface datum, Mar. 20, 1948; lowest measured, 13.36 ft (4.07 m) below land-surface datum, Dec. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	3.76	JAN 25, 1982	4.99	APR 22, 1982	3.17	JUL 24, 1982	6.35
NOV 22	3.42	FEB 24	4.40	MAY 25	5.10	AUG 25	7.53
DEC 22	4.31	MAR 24	2.64	JUN 21	4.92	SEP 27	9.27

421538071451301. Worcester well XSW 274.

LOCATION.--Lat 42°15'38", long 71°45'13", Hydrologic Unit 01090003, about 300 ft (91.4 m) north of Hamilton Street and about 300 ft (91.4 m) east of North Lake Avenue in Worcester.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 54.6 ft (16.6 m), screened 52.6 to 54.6 ft (16.0 to 16.6 m).

DATUM.--Altitude of land-surface datum is 400 ft (122 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

REMARKS.--Water levels affected by Lake Quinsigamond.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.23 ft (6.76 m) below land-surface datum, Mar. 27, 1972; lowest measured, 24.62 ft (7.50 m) below land-surface datum, Oct. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	23.54	JAN 25, 1982	23.39	APR 23, 1982	23.28	JUL 22, 1982	23.61
NOV 23	23.30	FEB 22	23.34	MAY 26	23.55	AUG 26	23.90
DEC 26	23.25	MAR 23	23.19	JUN 22	23.22	SEP 28	23.85

GROUND-WATER LEVELS IN RHODE ISLAND

KENT COUNTY

414022071332801. Coventry well COW 411.

LOCATION.--Lat 41°40'22", long 71°33'28", Hydrologic Unit 01090004, town of Coventry, about 75 ft (23 m) west of house on Powhattan Avenue, 1.3 mi (2.1 km) southeast of Washington.

Owner: Robert Card.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 26 ft (7.9 m), cased with concrete to 26 ft (7.9 m), open end.

DATUM.--Altitude of land-surface datum is 260 ft (79 m). Measuring point: Hole in top of wooden cover, 1.98 ft (0.60 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.77 ft (5.11 m) below land-surface datum, Jan. 27, 1979; lowest measured, 23.73 ft (7.23 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	23.57	JAN 25, 1982	21.21	APR 24, 1982	21.41	JUL 27, 1982	21.04
NOV 21	23.34	FEB 20	21.17	MAY 22	21.68	AUG 26	21.92
DEC 26	22.17	MAR 27	21.69	JUN 26	19.36	SEP 27	22.33

413907071465001. West Greenwich well WGW 181.

LOCATION.--Lat 41°39'07", long 71°46'50", Hydrologic Unit 01090005, town of West Greenwich, about 50 ft (15 m) from southeast corner of a house 1.3 mi (2.1 km) north of intersection of Hazard and Muddy Brook Roads, and 1.8 mi (2.9 km) northwest of West Greenwich Center.

Owner: E. Lambert.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 18.5 ft (5.64 m), lined with stone to 18.5 ft (5.64 m), shored.

DATUM.--Altitude of land-surface datum is 380 ft (116 m). Measuring point: Edge of shelter floor, 2.19 ft (0.67 m) above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.15 ft (3.70 m) below land-surface datum, Jan. 27, 1979; lowest measured, 17.68 ft (5.39 m) below land-surface datum, Sept. 28, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	16.54	JAN 25, 1982	15.27	APR 24, 1982	15.27	JUL 27, 1982	16.33
NOV 21	16.05	FEB 20	15.29	MAY 22	16.03	AUG 25	16.32
DEC 26	14.66	MAR 27	15.15	JUN 26	15.03	SEP 27	16.43

PROVIDENCE COUNTY

415710071402201. Burrillville well BUW 187.

LOCATION.--Lat 41°57'10", long 71°40'22", Hydrologic Unit 01090003, town of Burrillville, 25 ft (8 m) east of road and 75 ft (23 m) southwest of a house 0.6 mi (1.0 km) north of intersection of Harrisville and Lapham Farm Roads, and 0.9 mi (1.4 km) south of Harrisville.

Owner: Brothers of the Sacred Heart.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 19.8 ft (6.04 m), lined with stone to 19.8 ft (6.04 m), shored.

DATUM.--Altitude of land-surface datum is 462 ft (141 m). Measuring point: Hole in base of shelter, 0.59 ft (0.18 m) above land-surface datum.

PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.15 ft (3.71 m) below land-surface datum, Apr. 9, 1970; lowest, 18.83 (5.74 m) below land-surface datum, Nov. 3, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	18.20	JAN 24, 1982	13.96	APR 24, 1982	13.68	JUL 27, 1982	14.63
NOV 21	17.28	FEB 20	13.84	MAY 22	14.48	AUG 25	15.74
DEC 26	15.47	MAR 27	14.30	JUN 26	12.52	SEP 27	16.95

PROVIDENCE COUNTY--Continued

415626071254601. Cumberland well CUW 265.

LOCATION.--Lat 41°56'26", long 71°25'46", Hydrologic Unit 01090003, town of Cumberland, at 27 Scott Street, 900 ft (270 m) northeast of intersection of Scott Street and Mendon Road in Ashton.

Owner: Francis J. Varone.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 20 ft (6.1 m), lined with stone to 20 ft (6.1 m), shored.

DATUM.--Altitude of land-surface datum is 130 ft (40 m). Measuring point: Hole in wooden cover, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft (2.80 m) below land-surface datum, Jan. 27, 1979; lowest measured, 17.20 (5.24 m) below land-surface datum, Sept. 29, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	14.07	JAN 24, 1982	11.92	APR 24, 1982	11.95	JUL 27, 1982	13.71
NOV 21	11.96	FEB 20	11.84	MAY 22	12.74	AUG 25	14.64
DEC 26	10.59	MAR 27	11.98	JUN 26	11.81	SEP 27	15.22

415437071242201. Lincoln well LIW 84.

LOCATION.--Lat 41°54'37", long 71°24'22", Hydrologic Unit 01090003, town of Lincoln, at north side of Maplehurst Farms building, and 800 ft (240 m) west of Blackstone River bridge in Lonsdale.

Owner: Maplehurst Farm, Inc.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 107 ft (32.6 m), cased to 107 ft (32.6 m), open end.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Inside lower lip of 8-in (0.20 m) pipe, 3.32 ft (1.01 m) above land-surface datum.

REMARKS.--Water level affected by Blackstone River floods.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft (0.30 m) above land-surface datum, Jan. 28, 1976, revised; lowest measured, 7.30 ft (2.23 m) below land-surface datum, Aug. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	5.86	JAN 24, 1982	4.97	APR 24, 1982	4.32	JUL 27, 1982	5.40
NOV 21	4.90	FEB 20	4.90	MAY 22	4.93	AUG 25	5.86
DEC 26	4.66	MAR 27	4.32	JUN 26	4.47	SEP 27	5.92

415948071325001. North Smithfield well NSW 21.

LOCATION.--Lat 41°59'48", long 71°32'50", Hydrologic Unit 01090003, town of North Smithfield, 500 ft (152 m) southwest of State Highway 146A, 900 ft (270 m) west of intersection of State Highway 146A and Harkness Road at Branch Village.

Owner: Thomas E. Esty.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug domestic water-table well, diameter 24 in (0.61 m), depth 16 ft (4.9 m), cased with tile to 16 ft (4.9 m), open end.

DATUM.--Land-surface datum is 238.68 ft (72.77 m) National Geodetic Vertical Datum of 1929. Measuring point: Hole in wooden cover at top of tile casing, 2.08 ft (0.63 m) below land-surface datum.

REMARKS.--Well used for domestic supply. Water levels affected by pumping.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.67 ft (1.12 m) below land-surface datum, Mar. 26, 1969; lowest measured, 11.71 ft (3.57 m) below land-surface datum, Oct. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	9.98	JAN 24, 1982	FROZEN	APR 24, 1982	6.48	JUL 27, 1982	8.27
NOV 21	7.56	FEB 20	6.17	MAY 22	7.75	AUG 25	8.90
DEC 26	6.02	MAR 27	6.36	JUN 26	6.44	SEP 27	10.01

GROUND-WATER LEVELS IN RHODE ISLAND

PROVIDENCE COUNTY--Continued

415318071220401. Pawtucket well PAW 136.

LOCATION.--Lat 41°53'18", long 71°22'04", Hydrologic Unit 01090004, city of Pawtucket, at 314 Woodbine Street, and 1,500 ft (457 m) northeast of intersection of Cottage Street and Central Avenue.

Owner: Greenhalgh Mills, Inc.

AQUIFER.--Gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in (0.05 m), depth 43 ft (13.11 m), cased to about 40 ft (12.2 m), screened about 40 to 43 ft (12.2 to 13.1 m).

DATUM.--Altitude of land-surface datum is 86 ft (26 m). Measuring point: Top of casing, 3.15 ft (0.96 m) above land-surface datum.

PERIOD OF RECORD.--January 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.32 ft (0.71 m) below land-surface datum, Dec. 27, 1972; lowest measured, 7.28 ft (2.22 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	6.42	JAN 24, 1982	4.42	APR 24, 1982	4.42	JUL 27, 1982	3.95
NOV 21	6.19	FEB 20	4.31	MAY 22	4.58	AUG 25	4.48
DEC 26	5.21	MAR 27	4.49	JUN 26	3.44	SEP 27	4.95

414746071255601. Providence well PRW 48.

LOCATION.--Lat 41°47'46", long 71°25'56", Hydrologic Unit 01090004, city of Providence, at 333 Adelaide Avenue, and 800 ft (240 m) northwest of Adelaide and 800 ft (240 m) west of Narragansett Avenues.

Owner: Gorham Division of Tectron.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 124 ft (37.8 m), cased to 116 ft (35.4 m), screened 116 to 124 ft (35.4 to 37.8 m).

DATUM.--Land-surface datum is 45.79 ft (13.96 m), National Geodetic Vertical Datum of 1929. Measuring point: Top edge of hole in center of steel cover, 0.48 ft (0.15 m) below land-surface datum.

REMARKS.--Water-level affected by pumping from one or more nearby wells.

PERIOD OF RECORD.--December 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.31 ft (1.31 m) below land-surface datum, Jan. 27, 1979; lowest, 10.22 ft (3.12 m) below land-surface datum, Oct. 20, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	6.56	JAN 24, 1982	5.22	APR 24, 1982	4.84	JUL 27, 1982	4.35
NOV 21	5.83	FEB 20	4.98	MAY 22	4.96	AUG 25	4.53
DEC 26	5.77	MAR 27	4.98	JUN 26	4.35	SEP 27	4.68

414939071260801. Providence well PRW 1051.

LOCATION.--Lat 41°49'39", long 71°26'08", Hydrologic Unit 01090004, city of Providence, at 10 Eagle Street, and 200 ft (60 m) south of Valley and 300 ft (690 m) east of Eagle Streets.

Owner: Licht Industries.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (0.25 m), depth 82 ft (25.0 m), cased to 82 ft (25.0 m), open end.

DATUM.--Altitude of land-surface datum is 10 ft (3 m). Measuring point: Floor of recorder shelter, 1.65 ft (0.50 m) above land-surface datum.

REMARKS.--Water level affected by pumping from one or more nearby wells. Since October 1971, reduced pumping has resulted in higher water levels.

PERIOD OF RECORD.--January 1948 to current year. January 1948 to March 1949, weekly water level measurements. April 1949 to February 1976, water level recorder (published water levels were monthly lows). Since April 1976, water levels measured near end of month.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, observed flowing at times in 1978-80; lowest measured, 16.10 ft (4.91 m) below land-surface datum, Jan. 16, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	0.68	JAN 24, 1982	0.02	APR 24, 1982	0.03	JUL 27, 1982	0.01
NOV 21	0.55	FEB 20	0.02	MAY 22	0.01	AUG 25	0.01
DEC 26	0.33	MAR 27	0.04	JUN 26	0.00	SEP 27	0.17

WASHINGTON COUNTY

412214071394001. Charlestown well CHW 18.

LOCATION.--Lat 41°22'14", long 71°39'40", Hydrologic Unit 01090005, town of Charlestown, 1,900 ft (579 m) southeast of U.S. Highway 1, at former U.S. Navy Auxiliary Air Station.

Owner: U.S. General Services Administration.

AQUIFER.--Sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table, diameter 8 in (0.20 m), depth 32 ft (9.8 m), cased to 32 ft (9.8 m), open end.

DATUM.--Altitude of land-surface datum is 26 ft (8 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.89 ft (3.62 m) below land-surface datum, Jan. 27, 1979; lowest measured, 21.63 ft (6.59 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	21.26	JAN 25, 1982	16.47	APR 24, 1982	16.17	JUL 27, 1982	15.84
NOV 21	21.21	FEB 20	15.76	MAY 22	16.82	AUG 26	17.66
DEC 26	17.77	MAR 27	16.26	JUN 26	12.33	SEP 27	18.44

413423071431901. Exeter well EXW 6.

LOCATION.--Lat 41°34'23", long 71°43'19", Hydrologic Unit 01090005, town of Exeter, in Arcadia State Forest, 150 ft (46 m) west of Wood River, 250 ft (76 m) south of Ten Rod Road, and 2.0 mi (3.2 m) west of Millville.

Owner: State Dept. of Natural Resources.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 10 ft (3.0 m), cased with concrete to 10 ft (3.0 m), open end.

DATUM.--Land-surface datum is 132.80 ft (40.48 m) National Geodetic Vertical Datum of 1929. Measuring point:

Hole on east side of concrete cover, at land-surface datum.

REMARKS.--Water level affected by stage of nearby Wood River.

PERIOD OF RECORD.--December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft (0.71 m) below land-surface datum, Jan. 27, 1979; lowest measured, 7.97 ft (2.43 m) below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	6.46	JAN 26, 1982	4.71	APR 24, 1982	5.09	JUL 27, 1982	5.41
NOV 21	6.22	FEB 20	4.39	MAY 22	5.44	AUG 25	5.54
DEC 26	5.44	MAR 27	4.90	JUN 26	4.09	SEP 27	6.37

413307071323601. Exeter well EXW 16.

LOCATION.--Lat 41°33'07", long 71°32'36", Hydrologic Unit 01090005, town of Exeter, about 25 ft (8 m) southwest of fire station at Exeter State (Dr. Joseph H. Ladd) School.

Owner: State Dept. of Public Welfare.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 27 ft (8.2 m), cased to 27 ft (8.2 m), open end.

DATUM.--Land-surface datum is 154.47 ft (47.09 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.78 ft (0.54 m) above land-surface datum.

REMARKS.--Nearby well either being pumped or pumped recently.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.38 ft (2.25 m) below land-surface datum, Apr. 15, 1953; lowest measured, 15.40 ft (4.69 m) below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	12.78	JAN 25, 1982	FROZEN	APR 25, 1982	9.19	JUL 27, 1982	9.08
NOV 21	12.64	FEB 20	7.79	MAY 22	9.40	AUG 26	10.06
DEC 26	8.77	MAR 27	9.14	JUN 26	7.82	SEP 27	*

* Affected by runoff. No measurement.

GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

413358071433801. Exeter well EXW 475.

LOCATION.--Lat 41°33'58", long 71°43'38", Hydrologic Unit 01090005, town of Exeter, 70 ft (21 m) east of Mt. Tom Road, 50 ft (15 m) north of Blitzkrieg Trail, and 2.4 mi (3.9 km) northwest of Barberville.

Owner: State Department of Environmental Management.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 40 ft (12.2 m), cased to 38 ft (11.6 m), screened 38 to 40 ft (11.6 to 12.2 m).

DATUM.--Land-surface datum is 146.40 ft (44.62 m), National Geodetic Vertical Datum of 1929. Measuring point: floor of recorder shelter, 3.48 ft (1.06 m) above land-surface datum.

PERIOD OF RECORD.--March 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.58 ft (3.83 m) below land-surface datum, Feb. 11, 1982; lowest, 16.74 ft (5.10 m) below land-surface datum, Oct. 19, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	16.67	DEC 31, 1981	15.05	MAR 20, 1982	13.07	MAY 31, 1982	13.74
10	16.68	JAN 31, 1982	13.30	31	13.24	JUN 05	12.91
15	16.70	FEB 05	12.76	APR 05	13.14	AUG 25	14.09
20	16.73	10	12.62	10	13.04	31	14.28
25	16.68	15	12.62	15	13.03	SEP 05	14.32
31	16.59	20	12.62	20	13.09	10	14.44
NOV 05	16.59	25	12.79	25	13.18	15	14.58
10	16.62	28	12.90	30	13.09	20	14.73
15	16.67	MAR 05	12.96	MAY 05	13.16	25	14.85
20	16.53	10	12.92	10	13.26	30	14.98
25	16.48	15	13.01	25	13.61		

WTR YR 1982 MAX 12.58 FEB. 11, 1982 MIN 16.74 OCT. 19, 1981

413148071281601. North Kingstown well NKW 255.

LOCATION.--Lat 41°31'48", long 71°28'16", Hydrologic Unit 01090004, town of North Kingstown, 100 ft (30 m) east of Pendar Road, 0.6 mi (0.9 km) south of intersection of Pendar and Tower Hill Roads, and 1.0 mi (1.6 km) south of Allenton.

Owner: Carlton Cook.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 14 ft (4.3 m), cased with concrete to 14 ft (4.3 m), open end.

DATUM.--Altitude of land-surface datum is 50 ft (15 m). Measuring point: Top edge of casing on west rim of well, at land-surface datum.

PERIOD OF RECORD.--August 1954 to December 1963, January 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.81 ft (1.16 m) below land-surface datum, Mar. 26, 1968; lowest measured, 13.03 ft (3.97 m) below land-surface datum, Oct. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	13.03	JAN 25, 1982	8.98	APR 24, 1982	8.28	JUL 27, 1982	8.58
NOV 21	12.39	FEB 20	8.50	MAY 22	8.68	AUG 26	9.10
DEC 26	10.39	MAR 27	8.35	JUN 26	6.57	SEP 27	9.25

413308071280501. North Kingstown well NKW 450.

LOCATION.--Lat 41°33'08", long 71°28'05", Hydrologic Unit 01090004, town of North Kingstown, at 890 Tower Hill Road in Belleville, and 0.35 mi (0.56 km) north of intersection of alternate U.S. Highway 1 and West Allenton Road.

Owner: Richard S. Bannister.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 17 ft (5.2 m), cased with concrete to 17 ft (5.2 m), open end.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Hole in top of wooden base, 2.80 ft (0.85 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.69 ft (2.65 m) below land-surface datum, Jan. 28, 1978; lowest measured, well dry several times in water years 1981-82.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	DRY	JAN 25, 1982	12.18	APR 24, 1982	12.35	JUL 27, 1982	12.09
NOV 21	DRY	FEB 20	12.03	MAY 22	12.68	AUG 26	12.95
DEC 26	14.32	MAR 27	12.49	JUN 26	10.29	SEP 27	13.79

WASHINGTON COUNTY--Continued

412717071415301. Richmond well RIW 231.

LOCATION.--Lat 41°27'17", long 71°41'53", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) west of Narragansett Trail, and 1.2 mi (1.9 km) north of Wood River Junction.

Owner: N. D. MacLeod.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 29 ft (8.8 m), lined with stone to 29 ft (8.8 m), shored.

DATUM.--Altitude of land-surface datum is 84 ft (26 m). Measuring point: Hole in top of wooden cover, 0.36 ft (0.11 m) above land-surface datum.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.76 ft (6.63 m) below land-surface datum, June 26, 1982. Dry several times in water years 1965-67, 1977, 1981-82.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	DRY	JAN 26, 1982	DRY	APR 24, 1982	25.90	JUL 27, 1982	22.22
NOV 21	DRY	FEB 20	27.04	MAY 22	25.58	AUG 26	23.20
DEC 26	DRY	MAR 27	26.22	JUN 26	21.76	SEP 27	24.15

412932071374302. Richmond well RIW 417.

LOCATION.--Lat 41°29'32", long 71°37'43", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) south of State Highway 138, about 75 ft (228 m) west of Beaver River, and 3.3 mi (5.3 km) north of Kenyon.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 40 ft (12.2 m), cased to 37 ft (11.3 m), screened 37 to 40 ft (11.3 to 12.2 m).

DATUM.--Land-surface datum is 115.56 ft (35.22 m), National Geodetic Vertical Datum of 1929. Measuring point: Floor of recorder shelter, 0.65 ft (0.20 m) above land-surface datum.

REMARKS.--Water level affected by stage of nearby Beaver River.

PERIOD OF RECORD.--December 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.83 ft (1.47 m) below land-surface datum, Jan. 22, 1979; lowest, 8.02 ft (2.44 m) below land-surface datum, Oct. 3, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	7.78	DEC 25, 1981	a6.57	APR 15, 1982	6.22	JUL 31, 1982	a6.73
10	7.84	31	6.54	20	6.31	AUG 05	6.86
15	7.88	JAN 05, 1982	5.71	25	6.40	10	6.83
20	7.87	10	5.72	30	6.13	15	6.99
25	7.76	25	6.04	MAY 05	6.25	20	7.08
31	7.73	FEB 20	6.05	10	6.34	25	6.96
NOV 05	7.80	25	6.18	15	6.46	31	7.15
10	7.81	28	6.28	20	6.56	SEP 05	6.90
15	7.80	MAR 05	6.31	25	6.60	10	7.06
20	7.48	10	6.19	31	6.66	15	7.15
25	7.54	15	6.29	JUN 30	5.69	20	a7.24
30	7.60	20	6.36	JUL 05	5.95	25	a7.24
DEC 05	7.14	25	a6.44	10	6.15	30	7.27
10	7.16	31	6.47	15	6.33		
15	6.79	APR 05	6.25	20	6.46		
20	6.61	10	6.26	25	6.60		

WTR YR 1982 MAX 5.61 JUN 26, 1982 MIN 7.92 OCT 1, 1981

a Estimated.

GROUND-WATER LEVELS IN RHODE ISLAND

WASHINGTON COUNTY--Continued

412844071422802. Richmond well RIW 600.

LOCATION.--Lat 41°28'44", long 71°42'28", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) west of Hope Valley Road, and 1.5 mi (2.4 km) northeast of Woodville.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 54 ft (16.4 m), cased to 49 ft (14.9 m), screened 49 to 54 ft (14.9 to 16.4 m).

DATUM.--Land-surface datum is 100.17 ft (30.53 m), National Geodetic Vertical Datum of 1929. Measuring point:

Floor of recorder shelter, 2.68 ft (0.82 m) above land-surface datum.

PERIOD OF RECORD.--September 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.42 ft (9.58 m) below land-surface datum, June 11, 1982; lowest, 35.94 ft (10.95 m) below land-surface datum, Feb. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	35.59	JAN 10, 1982	33.66	APR 10, 1982	33.25	JUL 10, 1982	32.77
10	35.62	15	33.47	15	33.24	15	32.94
15	35.68	20	33.44	20	33.27	20	33.10
20	35.73	25	33.42	25	33.31	25	33.23
25	35.76	31	33.46	30	33.20	31	33.36
NOV 05	35.74	FEB 05	33.10	MAY 05	33.24	AUG 05	33.48
10	35.76	10	32.97	10	33.30	10	33.59
15	35.80	15	33.00	15	33.39	15	33.64
20	35.63	20	33.03	20	33.45	20	33.75
25	35.53	25	33.14	25	33.49	25	33.84
30	35.50	28	33.21	31	33.54	31	33.88
DEC 05	35.31	MAR 05	33.27	JUN 05	33.18	SEP 05	33.73
10	35.11	10	33.21	10	31.45	10	33.79
15	34.96	15	33.25	15	31.59	15	33.89
20	34.67	20	33.29	20	31.84	20	33.95
25	a34.45	25	a33.34	25	a32.11	25	34.01
31	34.31	31	33.39	30	32.34	30	34.07
JAN 05, 1982	34.09	APR 05	33.32	JUL 05	32.59		

WTR YR 1982 MAX 31.42 JUN 11, 1982 MIN 35.80 NOV 15, 1981

a Estimated.

412918071321001. South Kingstown well SNW 6.

LOCATION.--Lat 41°29'18", long 71°32'10", Hydrologic Unit 01090005, town of South Kingstown, at northwest corner of Mead Field at University of Rhode Island, and 0.9 mi (1.4 km) northwest of Kingston.

Owner: University of Rhode Island.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 10 in (0.25 m), depth 34 ft (10.4 m), cased to 34 ft (10.4 m), open end.

DATUM.--Land-surface datum is 111.89 ft (34.11 m) National Geodetic Vertical Datum of 1929. Measuring point:

Floor of recorder shelter, 0.57 ft (0.17 m) above land-surface datum (since July 12, 1973).

RECORD OF PERIOD.--November to December 1947, February 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.92 ft (2.41 m) below land-surface datum, Apr. 12, 13, 1958; lowest, 15.06 ft (4.59 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1981	14.60	DEC 25, 1981	13.23	MAR 15, 1982	11.63	JUN 05, 1982	11.00
10	14.62	31	13.06	20	11.68	10	8.99
15	14.67	JAN 05, 1982	12.23	25	11.74	15	9.17
20	14.73	10	11.87	31	11.84	20	9.32
25	14.76	15	11.81	APR 05	11.73	25	a9.56
31	14.73	20	11.89	10	11.74	30	9.77
NOV 05	14.75	25	11.72	15	11.64	JUL 31	11.26
10	14.79	31	11.65	20	11.63	AUG 31	12.21
15	14.83	FEB 05	11.12	25	11.70	SEP 05	12.06
20	14.52	10	11.18	30	11.65	10	12.22
25	14.40	15	11.40	MAY 05	11.72	15	12.37
30	14.40	20	11.49	10	11.81	20	12.53
DEC 05	14.15	25	11.61	15	11.95	25	12.63
10	14.07	28	11.70	20	12.08		
15	13.91	MAR 05	11.78	25	12.20		
20	13.36	10	11.60	31	12.30		

WTR YR 1982 MAX 8.84 JUN 7, 8, 1982 MIN 14.83 NOV 15, 1981

a Estimated.

WASHINGTON COUNTY--Continued

412923071361601. South Kingstown well SNW 515.

LOCATION.--Lat 41°29'23", long 71°36'16", Hydrologic Unit 01090005, town of South Kingstown, at Laurel Lane Golf Course, 2.7 mi (4.3 km) west of West Kingston.

Owner: R. R. Holley.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 30 ft (9.15 m), lined with stone to 30 ft (9.15 m), shored.

DATUM.--Land-surface datum is 127.84 ft (38.97 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of concrete casing on south rim of well, 2.11 ft (0.64 m) above land-surface datum. Dec. 27, 1975, to Apr. 25, 1981, measuring point 1.61 ft (0.49 m) lower.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.38 ft (7.43 m) below land-surface datum, Apr. 18, 1958, Mar. 26, 1968. Dry several times in water years 1978, 1980-82.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1981	DRY	JAN 25, 1982	26.09	APR 24, 1982	26.62	JUL 27, 1982	26.89
NOV 21	DRY	FEB 20	25.99	MAY 22	27.08	AUG 26	27.86
DEC 26	27.46	MAR 27	26.70	JUN 26	24.59	SEP 27	28.15

412154071462901. Westerly well WEW 522.

LOCATION.--Lat 41°21'54", long 71°46'29", Hydrologic Unit 01090005, town of Westerly, 350 ft (107 m) northwest of intersection of Pound and Old Shore Roads and 1.0 mi (1.6 km) north of Dunn Corner.

Owner: S. Panciera.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 16 ft (4.88 m), lined with stone to 16 ft (4.88 m), shored.

DATUM.--Altitude of land-surface datum is 45 ft (14 m). Measuring point: Southwest corner of stone casing, 0.91 ft (0.28 m) above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.38 ft (2.86 m) below land-surface datum, Feb. 21, 1976; lowest measured, 14.61 ft (4.45 m) below land-surface datum, Sept. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1981	13.94	JAN 25, 1982	11.19	APR 24, 1982	11.75	JUL 27, 1982	12.20
NOV 21	13.48	FEB 20	11.26	MAY 22	12.29	AUG 26	12.72
DEC 26	11.80	MAR 27	11.53	JUN 26	10.69	SEP 27	12.96

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- N O T E S -

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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