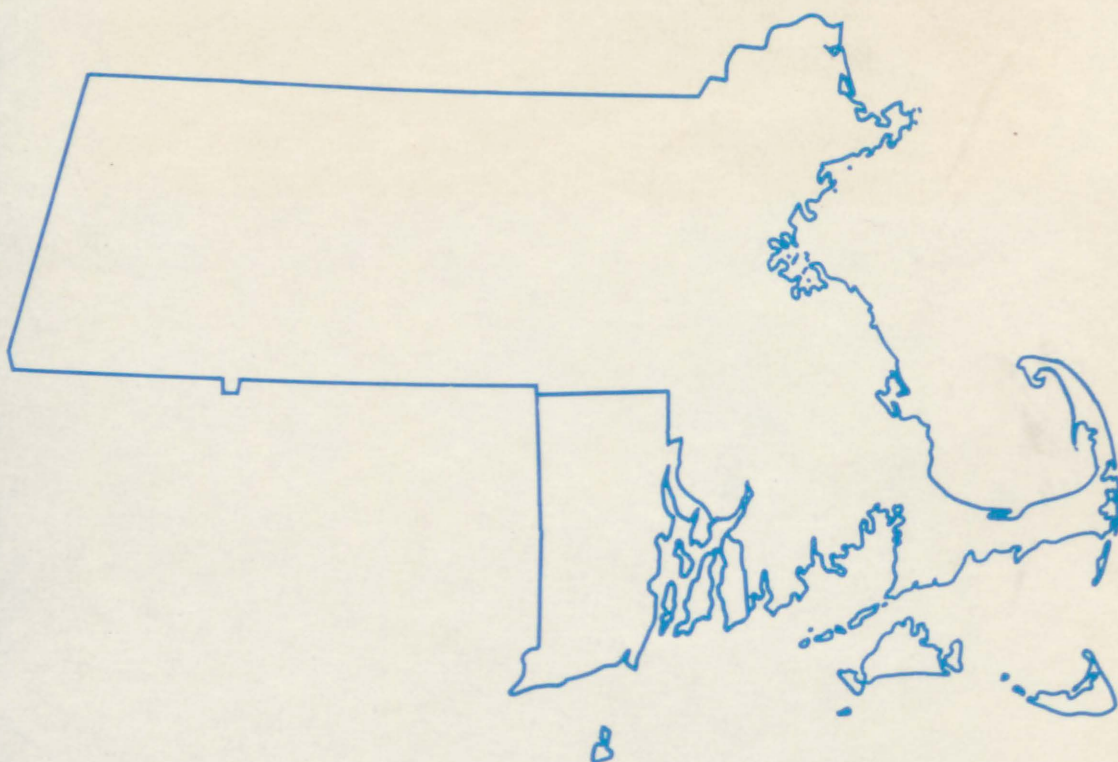
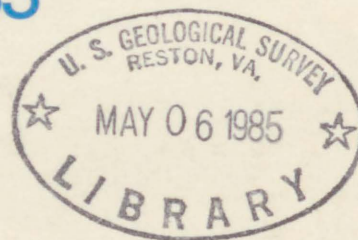




Water Resources Data Massachusetts and Rhode Island Water Year 1983



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-83-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

CALENDAR FOR WATER YEAR 1983

1982

OCTOBER

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Water Resources Data Massachusetts and Rhode Island Water Year 1983

by R.A. Gadoury, G. G. Girouard, and K.G. Ries III



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-83-1
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, L. A. Rowse, J. P. Russell, R. S. Socolow, and H. L. White.

Cheryl Carvalho, Maggie Jordan/Penrose, 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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17. Document Analysis: a. Descriptors *Massachusetts, *Rhode Island, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses.			
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 (m) microbiological, (t) water temperature, (s) sediment

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INTRODUCTION

Water-resources data for the 1983 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 93 gaging stations, monthend contents for 30 lakes and reservoirs, water quality for 12 gaging stations, and water levels for 107 observation wells. Also included are data for 20 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-83-1." 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, James Gutensohn 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, commissioner, and R. J. McDonough, chief engineer, Division of Highways; Metropolitan District Commission, W. J. Beary, commissioner, and W. A. Brutsch, director and chief engineer, Water Division.

Rhode Island: State Department of Environmental Management, R. C. Bendick, Jr.; director; Division of Land Resources, P. M. Janaros, chief; Division of Water Resources, J. W. Fester, chief; State Water Resources Board, W. M. Stetson, chairman, and R. B. Russ, general manager, Narragansett Bay Water Quality Commission, E. R. Jankal, 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) in Rhode Island and eastern Massachusetts, and was in the normal range in western Massachusetts. Runoff at index stations shown in the accompanying table ranged from 95 percent of median in the Hoosic River basin to 176 percent of median in the Parker River basin. Yearly runoff set new highs for periods of record at stations Parker River at Byfield, Mass., and Pawcatuck River at Wood River Junction, R. I. The coastal streams had the highest yearly runoff and the statistically greatest peak discharges. Parker River at Byfield, Mass., Wading River near Norton, Mass., and Pawcatuck River at Wood River Junction, R. I., recorded peak discharges with recurrence intervals of 12, 10, and 20 years, respectively, whereas streams in northern Rhode Island and central and western Massachusetts recorded peaks in the 1.5- to 5-year range.

Runoff for October was below median west of the Connecticut River and at or above median east of the Connecticut River. Runoff for November showed the same pattern, but west of the Connecticut River it was in the deficient (lower quartile of record) range. December runoff was below median at all index stations. Two storms in January brought runoff at all index stations into the normal range. From February through June, runoff

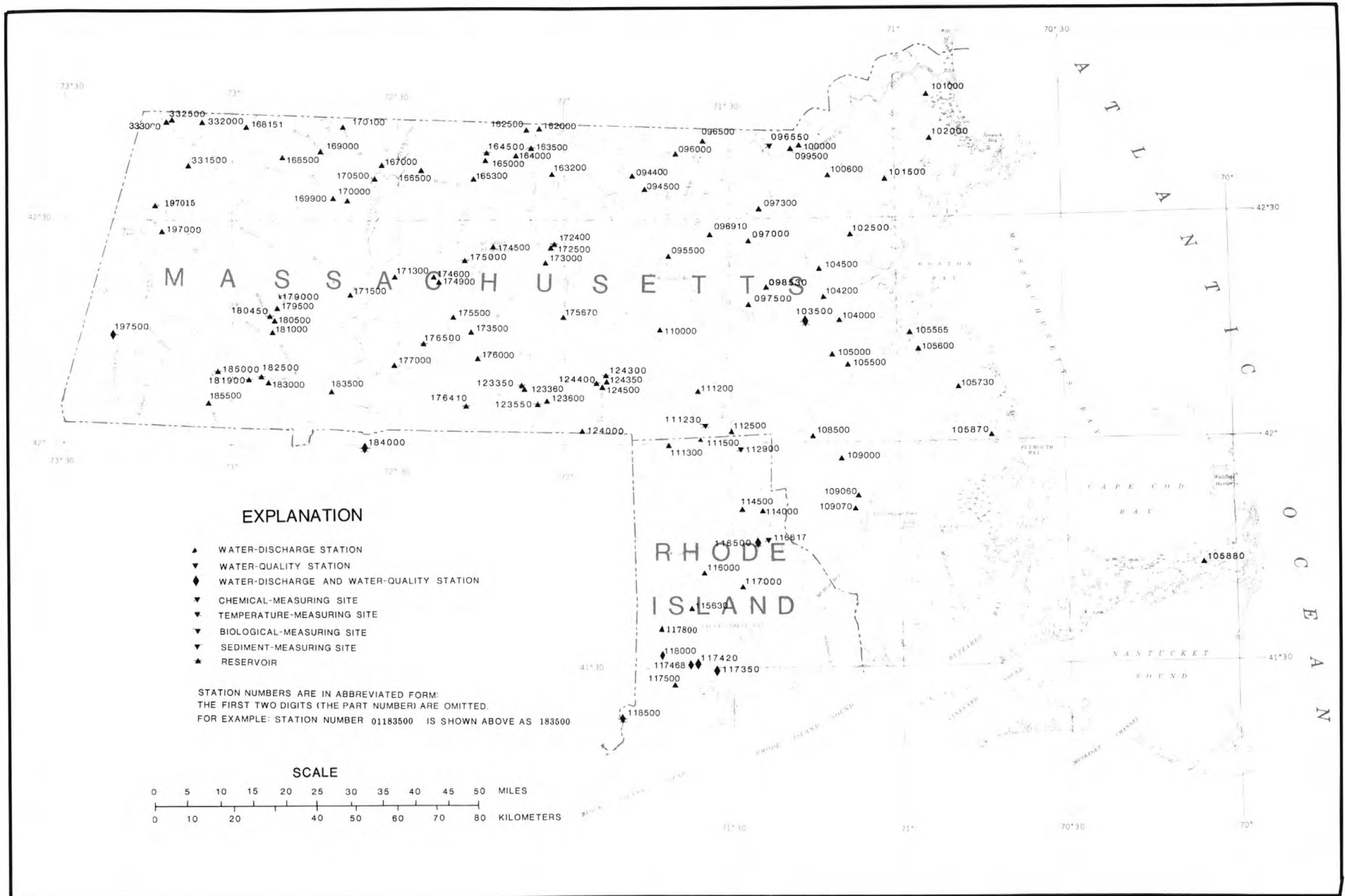


FIGURE 1. LOCATION OF GAGING STATIONS

FIGURE 3. LOCATION OF OBSERVATION WELLS

rose into and remained excessive throughout both States. Most annual peaks occurred in April. New high monthly means occurred in March or April at several stations in Rhode Island and eastern Massachusetts. Rainfall near the end of May marked the end of the unusually wet spring and streamflow rapidly declined thereafter. The excessive runoff in June was principally the result of high antecedent flow conditions. July runoff was in the normal range in all areas except southern Rhode Island, where it remained excessive. Runoff in August was above median in Rhode Island and southeastern Rhode Island, was below median elsewhere, and was in the deficient range in the northeastern and northwestern corners of Massachusetts. September runoff continued to decline, was below median throughout both States, and was in the deficient range west of the Connecticut River, in northern Rhode Island, and in northeastern Massachusetts at year's end.

The following table summarizes streamflow conditions at selected gaging stations in Massachusetts and Rhode Island. The figures in the months and water year columns are the monthly mean discharges expressed as percent of median for the reference period 1951-80. Figure 4 compares monthly mean discharges for the 1983 water year with median discharges for the reference period 1951-80 for three of the index gaging stations.

SUMMARY OF SURFACE WATER CONDITIONS IN 1983 WATER YEAR

PERCENT OF MEDIAN OF MONTHLY AND YEARLY RUNOFF														ANNUAL PEAK DISCHARGE		
STATION NUMBER	OCT	NOV	DEC	JAN	FEB	MAR	MONTH APR	MAY	JUN	JUL	AUG	SEP	WATER YEAR	DATE (1983)	DISCHARGE (FT ³ /S)	RECURRENCE INTERVAL (YEARS)
01101000	344	130	59	83	174	262	185	348	205	88	12	9	176	3-12	382	12
01109000	179	145	76	88	158	170	208	163	159	79	136	75	132	4-11	825	10
01111500	104	99	52	81	140	189	217	127	195	114	102	45	126	4-25	2,280	4
01117500	138	130	96	88	121	172	273	195	182	145	124	80	141	4-12,26	1,390	20
01169000	50	38	34	96	149	208	132	166	194	150	66	45	109	4-11	5,400	3
01173000	114	117	73	128	162	215	117	142	189	119	47	69	117	NO PEAK DATA AVAILABLE		
01174500	103	105	62	117	157	168	133	185	290	155	59	110	120	4-11	569	1.6
01181000	67	56	38	115	155	193	180	133	228	129	64	42	115	4-19	8,510	4
01197500	86	63	48	88	116	120	156	143	189	116	72	57	100	4-21	5,230	5
01332500	38	48	65	93	123	110	121	169	177	92	63	48	95	4-19	3,430	1.5

NOTE: MEDIANS BASED ON DATA FOR THE REFERENCE PERIOD 1951-80.

01101000 PARKER RIVER AT BYFIELD, MA (OCTOBER 1945 TO -) NEW HIGH MEANS FOR MARCH, MAY, AND WATER YEAR, BUT THE MEAN FOR MAY WAS AFFECTED BY RELEASE FROM POND.
 01109000 WADING RIVER NEAR NORTON, MA (JUNE 1925 TO -) NEW HIGH MONTHLY MEAN FOR APRIL.
 01111500 BRANCH RIVER AT FORESTDALE, RI (JANUARY 1940 TO -) NEW HIGH MONTHLY MEAN FOR APRIL.
 01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI (OCTOBER 1940 TO -) NEW HIGH MEANS FOR APRIL, MAY, AND WATER YEAR.
 01169000 NORTH RIVER AT SHATTUCKVILLE, MA (JANUARY 1940 TO -).
 01173500 WARE RIVER AT INTAKE WORKS NEAR BARRE, MA (JANUARY 1928 TO -).
 01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA (JANUARY 1937 TO -).
 01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA (SEPTEMBER 1935 TO -).
 01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA (MAY 1913 TO -).
 01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA (JULY 1940 TO -).

Ground-water levels for the year were generally above normal to normal in Rhode Island and Massachusetts, except that levels were in the below normal range (lowest 20 percent of recorded range for the month) in parts of western Massachusetts in October and November and in the western half of Rhode Island in December and January. Levels increased in each month January to April. Levels were generally in the above normal range (highest 20 percent of recorded range for the month) February to July, except that levels on Cape Cod were in the normal range in February. Twenty-eight wells in Massachusetts and 13 wells in Rhode Island set new highs for periods of record during March through June. The seasonal decline began in May, but water levels remained above normal until August, except for the extreme western part of Massachusetts, northern Rhode Island, and southeastern Massachusetts, where they were normal. In June, levels in 80 percent of the observation wells in Rhode Island and Massachusetts were above the normal range and 20 percent were the highest of record for the month. Levels were in the normal range in August and September except for Cape Cod, where they remained above normal and in southeastern Massachusetts from Boston to northern Rhode Island, where September levels were in the below normal range. During the summer, water levels in five wells in Massachusetts equaled or set new record lows. Figure 5 compares monthly water levels at three observation wells in western and northeastern Massachusetts and northern Rhode Island with average, maximum, and minimum monthly levels for periods of record.

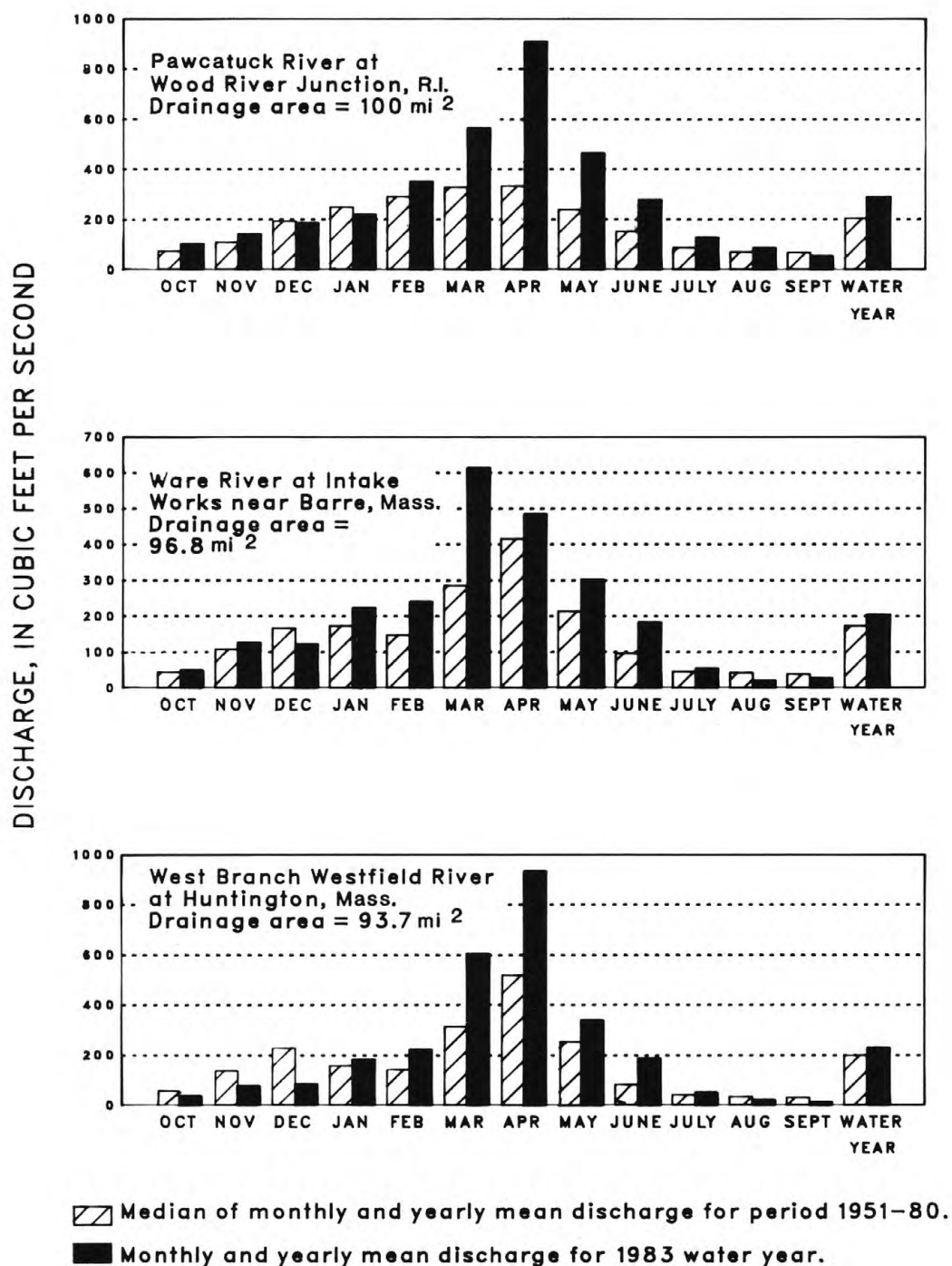
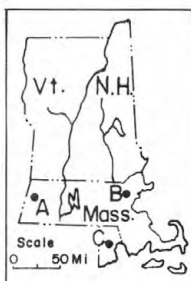


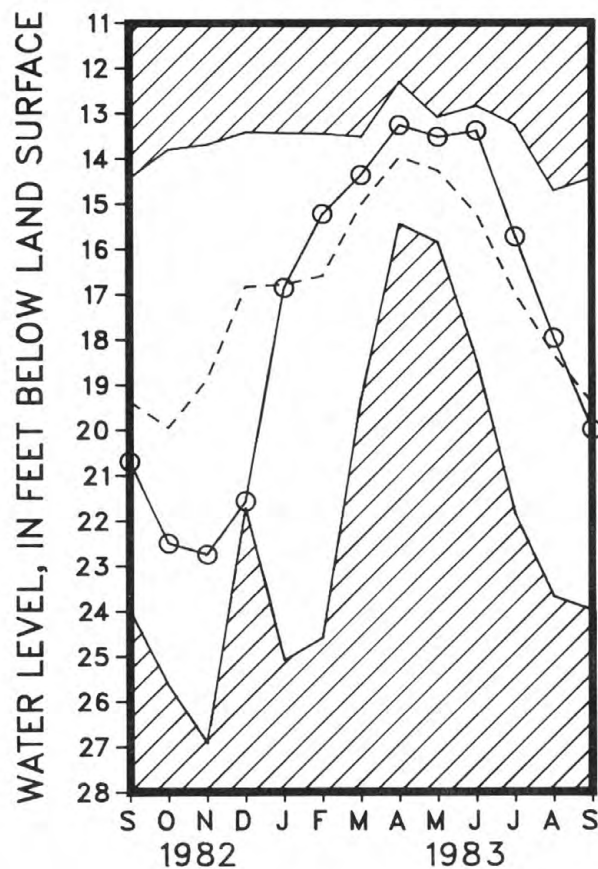
Figure 4.--Comparison of discharge at three long-term index gaging stations during 1983 water year with median discharge for period 1951-80.



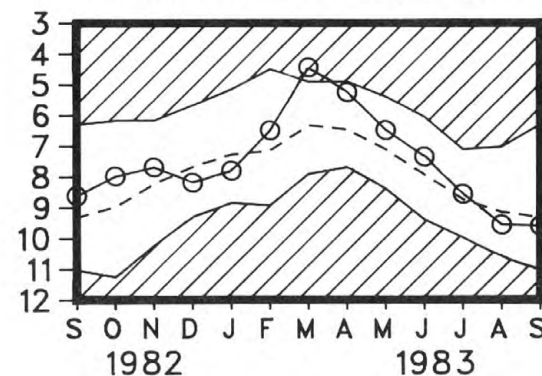
UNSHADED AREA SHOWS RANGE BETWEEN
HIGHEST AND LOWEST MONTHEND WATER LEVEL

CURRENT RECORDS —○— AVERAGE - - - - -

A. PITTSFIELD 51, MASS.



B. WILMINGTON 78, MASS.



C. COVENTRY 411, R.I.

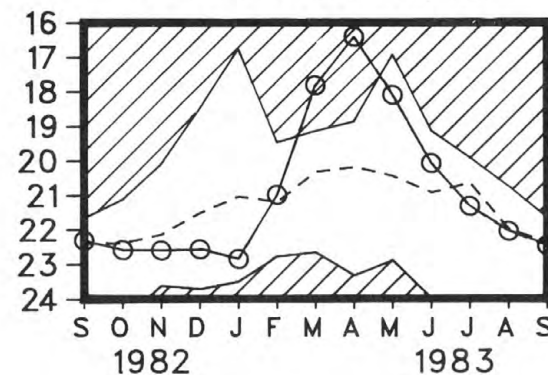


Figure 5.--Comparison of monthly water levels in selected observation wells during 1983 water year with average, maximum, and minimum levels for periods of record.

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 $\pm$ 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 $\pm$ 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 $\pm$ 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 refers to 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, as well as 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:

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

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 derieved 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 (m²). 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 substrates 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 indentation in a list of stations in the front of the report. Each indentation represents one rank. This downstream order and system of indentation 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 6 below.

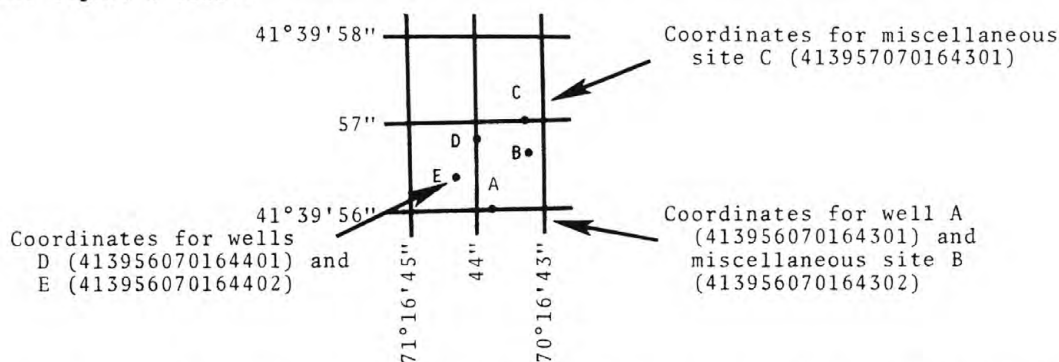


Figure 6.--System for numbering wells and miscellaneous sites (latitude and longitude)

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-two 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 January 1985, 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. \$5.00.
- 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. \$2.00.
- 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. \$2.25.
- 3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chapter A5. 1967. 29 pages. \$2.25.
- 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. \$3.25.
- 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-A14 The use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: Book 3, Chapter A14. 1983. 46 pages. \$4.50.
- 3-A15 Computation of water-surface profiles in open channels, by Jacob Davidian: Book 3, Chapter A15. \$2.50.
- 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. \$2.50.
- 5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlke, 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. \$4.75.
- 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. \$3.25.
- 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.

HYDROLOGIC-DATA STATION RECORDS

MERRIMACK RIVER BASIN

01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

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

DRAINAGE AREA.--63.6 mi².

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

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

REMARKS.--Records good except those for period of no gage-height record, Apr. 10-20, 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.--11 years, 126 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s Dec. 21, 1973, gage height, 6.22 ft and Mar. 14, 1977, gage height, 6.23 ft, but may have been greater June 6, 1982; maximum gage height, 6.57 ft Feb. 12, 1983 (ice jam); minimum discharge, 6.7 ft³/s Oct. 19, 1980, but may have been slightly lower about Sept. 8, 1980; minimum daily, 9.0 ft³/s Sept. 8, 15, 1980.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0700	934	4.58	Mar. 12	1015	1500	5.44
Feb. 3	1330	934	4.58	Mar. 19	1000	*1900	6.00
Feb. 12	1045	ice jam	*6.57	Apr. 11	--	1200	--
Mar. 2	2030	946	4.60	Apr. 24	2300	946	4.60

Minimum discharge, 7.5 ft³/s Aug. 8, 9; minimum daily, 9.2 ft³/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	31	37	99	71	110	109	234	244	295	48	16	78
2	25	36	89	67	106	550	222	249	222	70	19	48
3	23	33	83	63	633	707	251	240	175	76	17	33
4	23	34	82	51	594	464	330	224	408	59	14	26
5	22	109	76	49	326	342	286	211	391	81	14	24
6	18	82	75	93	220	291	251	190	271	113	14	18
7	20	57	74	104	198	289	228	170	207	79	14	17
8	38	47	67	96	192	295	240	156	169	61	10	16
9	228	39	63	79	178	436	264	189	140	49	11	15
10	131	34	51	68	138	519	330	166	122	42	12	14
11	91	32	54	697	128	529	1000	155	110	35	16	13
12	78	35	57	395	125	1140	650	156	98	30	33	9.2
13	62	239	47	233	125	840	450	143	86	29	28	12
14	56	166	54	153	128	578	350	137	159	25	17	12
15	57	144	51	130	128	512	300	146	122	23	13	12
16	53	135	88	131	124	518	270	188	117	24	14	12
17	48	114	144	129	122	436	450	244	90	23	14	14
18	48	107	105	101	149	390	370	193	76	21	16	15
19	103	95	89	99	143	1690	450	157	68	21	17	9.4
20	108	85	80	100	124	1300	550	169	59	22	17	17
21	103	81	76	100	119	821	506	192	52	24	16	22
22	94	79	67	109	122	693	404	162	48	28	25	60
23	46	77	62	138	122	498	332	264	42	24	24	28
24	33	74	72	259	122	382	506	363	38	20	15	21
25	32	67	94	250	118	320	813	275	37	21	13	17
26	40	64	131	197	113	274	548	207	34	18	13	15
27	38	65	111	156	107	248	412	204	35	18	12	14
28	34	55	100	126	104	287	342	231	71	16	14	13
29	34	107	97	119	---	347	290	187	78	16	69	12
30	32	120	85	108	---	309	261	390	57	21	46	12
31	31	---	74	117	---	259	---	428	---	16	119	---
TOTAL	1780	2449	2497	4588	4918	16373	11890	6630	3877	1153	692	628.6
MEAN	57.4	81.6	80.5	148	176	528	396	214	129	37.2	22.3	21.0
MAX	228	239	144	697	633	1690	1000	428	408	113	119	78
MIN	18	32	47	49	104	109	222	137	34	16	10	9.2

CAL YR 1982	TOTAL	54257.0	MEAN 149	MAX 1700	MIN 16
WTR YR 1983	TOTAL	57475.6	MEAN 157	MAX 1690	MIN 9.2

01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA

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

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

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

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: Drainage area. WDR MA-RI-82-1: 1981.

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

REMARKS.--Records good. 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.--48 years, 194 ft³/s.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0900	2180	5.24	Mar. 19	1800	*4250	7.36
Feb. 3	1700	1860	4.87	Apr. 11	0545	2370	5.45
Mar. 2	2215	1910	4.93	Apr. 25	0230	1730	4.71
Mar. 12	1045	2620	5.73				

Minimum discharge, 34 ft³/s Aug. 28, Sept. 19; minimum daily, 38 ft³/s Sept. 19.

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	64	67	163	123	169	178	324	320	463	86	54	136
2	58	65	146	117	166	1020	295	325	327	123	63	87
3	52	64	135	114	1240	1420	359	317	266	118	51	67
4	55	69	134	98	1070	839	493	298	631	97	48	57
5	52	191	124	93	543	579	392	273	652	145	48	54
6	49	139	128	179	359	483	329	246	425	170	54	51
7	51	98	118	171	308	489	293	217	318	125	50	48
8	88	87	108	154	318	502	321	193	262	102	47	46
9	415	79	106	133	269	909	337	234	216	91	45	44
10	216	74	92	121	225	1000	468	217	189	78	45	56
11	144	71	97	1080	205	979	1870	200	167	72	50	47
12	120	71	94	593	204	2150	979	197	148	68	104	41
13	108	419	81	370	215	1460	632	181	136	65	77	45
14	107	307	80	271	195	933	477	175	198	61	56	44
15	100	247	85	233	199	794	395	181	183	58	52	43
16	90	221	139	237	187	775	360	260	169	58	50	45
17	82	183	211	210	190	649	652	341	142	54	48	40
18	80	173	156	180	261	560	501	256	125	54	54	44
19	134	156	131	140	225	3040	601	210	112	54	52	38
20	136	139	126	148	195	2350	975	219	100	56	50	42
21	133	128	122	150	188	1330	729	250	92	61	45	48
22	127	128	112	145	194	1150	540	217	87	69	55	130
23	84	124	106	189	192	779	433	347	81	59	58	60
24	62	121	131	432	188	583	644	503	76	54	46	48
25	62	113	160	382	181	473	1360	378	79	56	43	43
26	78	109	221	293	171	397	821	288	73	55	42	42
27	71	111	181	231	162	353	589	299	77	52	39	41
28	64	100	162	190	165	470	465	334	140	49	41	40
29	64	193	159	176	---	531	387	266	127	51	141	40
30	61	202	140	161	---	446	347	560	100	55	79	39
31	59	---	126	178	---	362	---	700	---	49	280	---
TOTAL	3066	4249	4074	7292	8184	27983	17368	9002	6161	2345	1967	1606
MEAN	98.9	142	131	235	292	903	579	290	205	75.6	63.5	53.5
MAX	415	419	221	1080	1240	3040	1870	700	652	170	280	136
MIN	49	64	80	93	162	178	293	175	73	49	39	38
CAL YR 1982	TOTAL	89145	MEAN	244	MAX	3520	MIN	44				
WTR YR 1983	TOTAL	93297	MEAN	256	MAX	3040	MIN	38				

MERRIMACK RIVER BASIN

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 south of Clinton.

DRAINAGE AREA.--107.69 mi², 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.--87 years, 189 ft³/s, 23.83 in/yr, adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	Mean	Per square mile	Runoff, in inches	Rainfall, in inches
October.....	66.3	0.62	0.71	2.98
November.....	124	1.15	1.29	4.16
December.....	116	1.08	1.24	1.92

Calendar year 1982.....	249	2.31	31.39	50.75

January.....	276	2.56	2.96	6.10
February.....	358	3.32	3.46	5.12
March.....	798	7.41	8.55	8.56
April.....	633	5.88	6.56	7.56
May.....	332	3.08	3.56	5.32
June.....	180	1.67	1.86	2.74
July.....	67.3	.62	.72	2.28
August.....	70.5	.65	.75	4.97
September.....	20.7	.19	.21	1.64

Water year 1983.....	253	2.35	31.88	53.35

01096000 SQUANNAHOOK RIVER NEAR WEST GROTON, MA

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

DRAINAGE AREA.--62.8 mi², excludes 2.10 mi² 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.10 mi² upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except for occasional periods of spill. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--34 years, 111 ft³/s, 24.00 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 12	0400	951	5.33	Mar. 20	0330	*3020	7.41
Feb. 4	0930	793	5.06	Apr. 11	1900	1330	5.86
Mar. 3	1600	969	5.36	Apr. 25	1630	1010	5.42
Mar. 13	0100	1660	6.24				

Minimum daily discharge, 9.4 ft³/s Aug. 21, Sept. 15, 16.

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	27	32	106	70	112	113	231	213	319	42	16	27
2	25	33	87	67	109	259	209	210	212	52	18	21
3	24	34	76	64	227	830	208	225	163	78	18	18
4	23	34	71	57	697	588	338	202	202	52	15	16
5	22	50	67	48	401	375	317	183	418	47	15	15
6	21	96	65	65	268	294	245	167	277	65	15	13
7	21	79	64	90	182	281	210	151	196	56	17	13
8	30	67	60	89	163	288	203	140	156	43	15	12
9	100	53	56	77	170	384	224	145	132	37	14	11
10	200	49	51	64	145	522	213	163	116	34	13	11
11	120	45	48	342	130	686	867	144	105	31	13	11
12	80	42	51	730	119	974	765	143	95	29	19	10
13	60	82	45	350	125	1240	409	136	89	28	21	9.9
14	60	227	40	210	123	638	297	127	81	26	18	9.7
15	56	168	43	160	120	504	251	124	78	25	16	9.4
16	52	134	51	150	118	479	230	167	60	24	15	9.4
17	48	106	100	130	116	432	303	215	69	23	15	10
18	45	89	96	110	128	370	354	195	66	22	14	12
19	42	79	75	100	134	970	289	149	60	21	14	14
20	40	72	66	96	121	2280	429	132	55	20	12	13
21	38	67	63	96	114	957	412	154	50	20	9.4	16
22	37	65	60	96	115	738	300	141	46	21	10	21
23	36	63	56	101	118	541	245	163	43	20	12	23
24	35	61	58	176	116	392	236	257	39	19	12	23
25	34	59	77	275	113	315	777	230	37	20	11	21
26	35	56	121	233	110	272	615	170	36	19	11	20
27	40	57	130	176	103	247	380	149	37	18	11	16
28	37	56	104	143	102	261	282	188	45	17	10	13
29	36	76	97	124	---	348	244	166	66	17	13	12
30	34	120	88	113	---	329	221	202	53	16	15	11
31	32	---	76	111	---	266	---	436	---	16	27	---
TOTAL	1490	2251	2248	4713	4599	17173	10304	5587	3401	958	454.4	441.4
MEAN	48.1	75.0	72.5	152	164	554	343	180	113	30.9	14.7	14.7
MAX	200	227	130	730	697	2280	867	436	418	78	27	27
MIN	21	32	40	48	102	113	203	124	36	16	9.4	9.4
CFSM	.77	1.19	1.15	2.42	2.61	8.82	5.46	2.87	1.80	.49	.23	.23
IN.	.88	1.33	1.33	2.79	2.72	10.17	6.10	3.31	2.01	.57	.27	.26

CAL YR 1982	TOTAL	47289.0	MEAN 130	MAX 1470	MIN 17	CFSM 2.07	IN 28.01
WTR YR 1983	TOTAL	53619.8	MEAN 147	MAX 2280	MIN 9.4	CFSM 2.34	IN 31.76

MERRIMACK RIVER BASIN

01096500 NASHUA RIVER AT EAST PEPPERELL, MA

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

DRAINAGE AREA.--Total above gage, 433 mi²; net above gage, 316 mi², flow diverted from 117 mi² 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 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. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--48 years, 568 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,570 ft³/s Mar. 21, gage height, 9.88 ft; minimum daily, 7.0 ft³/s Sept. 19.

CORRECTION.--In the report for 1982 the heading for the table of daily mean values was shown incorrectly as October 1982 to September 1983. The data published was for the period October 1981 to September 1982.

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	309	231	437	352	713	732	1610	1480	1670	377	116	438
2	273	316	393	342	705	1040	1340	1490	1240	348	131	391
3	258	272	364	353	776	2900	1250	1450	912	352	136	334
4	228	264	344	348	2220	3370	1630	1390	918	348	287	258
5	233	207	330	336	2660	2650	1670	1190	1580	338	232	232
6	309	273	337	644	1760	1870	1390	942	1550	331	182	205
7	277	359	427	395	1240	1670	1160	832	1200	331	69	191
8	289	382	387	336	999	1610	1040	611	960	359	31	168
9	370	333	382	334	1120	2070	996	826	755	348	160	120
10	815	306	380	388	996	2700	1030	782	616	268	217	148
11	738	307	187	1340	844	3130	2390	740	571	258	205	124
12	544	249	84	2770	738	3800	3630	725	359	238	182	125
13	442	240	328	2200	727	4680	3430	701	563	214	165	126
14	367	859	384	1340	785	4560	2660	658	576	205	86	110
15	431	704	343	993	775	3530	2100	520	438	205	136	106
16	374	576	271	811	748	2760	1660	793	391	191	196	103
17	336	500	283	790	720	2370	1690	942	469	78	194	109
18	344	439	388	764	803	2050	1990	960	391	32	194	44
19	365	407	388	627	905	2560	1940	804	297	26	177	7.0
20	328	380	387	592	824	4820	2170	705	373	44	99	61
21	326	357	385	591	756	5480	2540	598	359	277	57	224
22	323	340	360	592	740	4820	2450	672	290	331	57	222
23	316	333	315	499	738	3820	2020	843	86	303	57	228
24	283	323	289	817	738	3000	1830	1060	255	99	57	218
25	233	311	231	1260	736	2330	2710	1160	363	22	59	81
26	269	301	323	1240	498	1980	3520	954	297	25	59	96
27	272	296	505	1020	566	1720	3100	821	99	27	61	118
28	255	292	505	833	737	1660	2440	894	74	40	61	116
29	245	346	459	671	---	1920	2010	871	324	92	126	91
30	192	436	412	633	---	1980	1740	906	387	112	103	73
31	167	---	335	702	---	1810	---	1560	---	121	261	---
TOTAL	10511	10939	10943	24913	26567	85392	61136	28880	18363	6340	4153	4867.0
MEAN	339	365	353	804	949	2755	2038	932	612	205	134	162
MAX	815	859	505	2770	2660	5480	3630	1560	1670	377	287	438
MIN	167	207	84	334	498	732	996	520	74	22	31	7.0
CAL YR 1982	TOTAL	266546.0	MEAN	730	MAX	6570	MIN	76				
WTR YR 1983	TOTAL	293004.0	MEAN	803	MAX	5480	MIN	7.0				

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 upstream from Pawtucket Dam, and 6 mi 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 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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 AS CAC03)	HARD- NESS (MG/L AS CAC03)
NOV											
04...	1030	3260	54	5.8	8.5	1.6	9.8	84	1800	1500	12
17...	1315	4500	80	7.1	6.0	2.0	--	--	5400	1700	15
MAR											
09...	1145	15100	78	8.0	2.0	1.0	12.9	93	4500	4100	13
APR											
13...	1030	28500	59	7.4	4.0	2.6	12.1	93	--	--	11
18...	1030	20700	59	7.4	4.0	--	12.1	93	--	--	--
JUN											
22...	1045	4220	110	7.9	24.0	0.7	7.2	87	440	100	19
JUL											
06...	1130	3340	134	7.5	25.5	1.1	6.9	85	330	470	22
AUG											
04...	1115	2000	144	7.2	26.5	1.3	7.9	99	470	380	23

DATE	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)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
NOV											
04...	2	3.6	0.7	5.5	48	0.7	1.0	10	6.3	8.7	0.1
17...	5	4.6	0.9	8.6	54	1.0	0.9	10	10	10	0.1
MAR											
09...	6	4.0	0.8	9.1	58	1.1	0.8	7.0	9.5	13	<0.1
APR											
13...	6	3.1	0.7	5.5	51	0.8	0.7	5.0	9.0	10	0.1
18...	--	--	--	--	--	--	--	--	--	--	--
JUN											
22...	8	5.8	1.0	11	54	1.2	1.1	11	10	15	0.1
JUL											
06...	9	6.8	1.1	14	57	1.4	1.4	13	14	19	0.2
AUG											
04...	7	7.2	1.3	18	61	1.7	1.3	16	16	22	0.2

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)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
NOV										
04...	5.7	42	38	0.06	370	75	0.15	0.04	0.05	0.55
17...	6.1	61	48	0.08	741	--	0.26	0.17	0.22	0.5
MAR										
09...	5.9	51	48	0.07	2080	--	0.19	0.11	0.14	0.4
APR										
13...	4.5	45	37	0.06	3460	--	--	--	--	--
18...	--	--	0.14	0.00	7.7	--	0.12	0.06	0.08	0.3
JUN										
22...	5.2	64	57	0.09	729	--	0.38	0.21	0.27	0.5
JUL										
06...	4.6	105	69	0.14	947	--	0.47	0.27	0.35	0.9
AUG										
04...	3.1	86	79	0.12	464	--	0.42	0.07	0.09	0.9

MERRIMACK RIVER BASIN

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)
NOV 04...	0.55	0.55	2.4	0.07	0.21	0.05	0.03	0.09	5	44
17...	0.5	0.5	2.2	0.09	0.28	0.06	0.04	0.12	--	--
MAR 09...	0.4	0.4	1.8	0.05	0.15	0.08	0.05	0.15	--	--
APR 13...	--	--	--	--	--	--	--	--	--	--
18...	0.3	0.3	1.3	0.05	0.15	0.02	0.02	0.06	--	--
JUN 22...	0.5	0.5	2.2	0.09	0.28	0.06	0.04	0.12	--	--
JUL 06...	0.9	0.9	4.0	0.13	0.4	0.09	0.06	0.18	--	--
AUG 04...	0.9	0.9	4.0	0.16	0.49	0.13	0.09	0.28	--	--

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	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)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	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, DIS- SOLVED (UG/L AS CR)
NOV 04...	--	1	0.00	1	100	80.00	18.00	--	<1	<1	10	<10
17...	100	--	--	1	--	--	19.00	<1.00	--	<1	--	--
MAR 09...	100	--	--	1	--	--	16.00	<1.00	--	<1	--	<1
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 22...	<10	--	--	1	--	--	37.00	<0.50	--	<1	--	10
JUL 06...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 04...	50	--	--	1	--	--	61.00	<0.50	--	<1	--	3

DATE	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)
NOV 04...	1.00	0.00	1.00	10	2.00	10	360	250	110	3.00	<1	--
17...	--	--	<3.00	--	--	13	--	--	160	--	17	6.00
MAR 09...	--	--	<3.00	--	--	3	--	--	100	--	5	<4.00
APR 13...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 22...	--	--	<3.00	--	--	6	--	--	220	--	3	<4.00
JUL 06...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 04...	--	--	<3.00	--	--	12	--	--	40	--	2	<4.00

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible]

MERRIMACK RIVER BASIN

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 downstream from Interstate Highway 495, 0.9 mi west of East Bolton, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--1.54 mi².

PERIOD OF RECORD.--Discharge: June 1971 to September 1983 (discontinued).

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, from topographic map.

REMARKS.--Records fair. 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.--12 years, 3.29 ft³/s, 29.01 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0600	29	2.57	Apr. 11	0115	29	2.57
Mar. 2	1700	25	2.52	Apr. 24	2115	29	2.57
Mar. 12	0445	*43	2.72				

Minimum discharge, 0.06 ft³/s Aug. 9, 10, 11, 27.

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	.69	.94	2.1	2.1	5.2	2.6	5.3	6.8	4.8	.72	.12	.47
2	.54	.96	2.0	2.1	3.2	17	4.7	6.5	3.5	2.9	.14	.33
3	.50	.96	1.8	2.1	10	15	6.7	6.0	2.4	1.4	.10	.30
4	.50	1.1	1.8	1.9	8.6	11	8.6	6.1	7.0	.82	.10	.26
5	.48	3.4	1.8	1.8	6.9	9.1	6.2	5.6	5.8	.95	.13	.26
6	.46	2.1	1.8	4.1	5.8	7.7	5.3	5.0	4.0	1.4	.14	.21
7	.47	1.6	1.7	4.1	5.2	7.5	4.7	4.4	3.0	.91	.14	.19
8	1.5	1.4	1.6	3.7	5.9	7.9	4.5	4.4	2.8	.72	.10	.18
9	6.3	1.2	1.6	3.0	5.9	21	5.9	4.4	2.3	.64	.07	.17
10	2.6	1.1	1.4	3.2	4.8	19	8.0	4.2	2.2	.52	.07	.18
11	1.8	1.1	1.6	17	4.2	16	17	4.2	2.1	.46	.10	.17
12	1.5	1.1	1.6	8.9	3.4	29	9.5	4.5	1.7	.51	.38	.16
13	1.4	5.5	1.4	6.3	3.6	16	8.3	4.3	1.6	.47	.29	.15
14	1.6	4.0	1.2	5.0	3.5	14	7.5	3.6	1.6	.37	.17	.14
15	1.5	3.3	1.5	4.6	3.0	13	7.1	4.2	1.5	.31	.13	.13
16	1.2	2.8	2.8	4.8	3.0	11	6.9	6.5	1.3	.27	.11	.12
17	1.0	2.4	3.0	5.0	3.7	8.5	10	7.0	1.3	.24	.11	.13
18	1.0	2.1	1.8	4.3	7.3	8.1	7.7	4.2	1.2	.19	.15	.20
19	.97	2.0	1.8	3.5	4.8	10	9.9	3.6	1.2	.16	.15	.17
20	.96	2.0	1.8	3.0	3.6	8.6	11	2.8	1.1	.13	.12	.15
21	.95	1.9	1.9	3.2	3.1	9.1	8.6	2.8	.97	.16	.10	.14
22	.83	1.9	1.8	4.1	3.0	11	7.5	2.8	.86	.33	.09	.35
23	.83	1.8	1.6	5.7	3.0	8.3	6.9	5.5	.72	.23	.09	.30
24	.83	1.8	2.0	10	3.0	7.7	13	5.9	.67	.27	.08	.23
25	.85	1.6	2.5	8.6	3.0	7.5	18	4.0	.76	.31	.08	.18
26	1.4	1.6	3.7	6.0	2.9	7.2	11	2.8	.88	.23	.08	.16
27	1.2	1.6	2.6	4.7	2.4	6.6	9.4	3.7	.80	.18	.08	.14
28	1.1	1.5	2.3	4.2	2.5	9.8	8.8	5.5	1.4	.15	.08	.13
29	.96	2.9	2.3	4.2	---	7.7	8.4	3.3	1.3	.12	.14	.12
30	.95	2.4	2.3	4.0	---	6.2	7.7	7.8	.92	.12	.14	.11
31	.83	---	2.1	5.6	---	6.0	---	6.3	---	.11	1.2	---
TOTAL	37.70	60.06	61.2	150.8	124.5	339.1	254.1	148.7	61.68	16.30	4.98	5.93
MEAN	1.22	2.00	1.97	4.86	4.45	10.9	8.47	4.80	2.06	.53	.16	.20
MAX	6.3	5.5	3.7	17	10	29	18	7.8	7.0	2.9	1.2	.47
MIN	.46	.94	1.2	1.8	2.4	2.6	4.5	2.8	.67	.11	.07	.11
CFSM	.79	1.30	1.28	3.16	2.89	7.08	5.50	3.12	1.34	.34	.10	.13
IN.	.91	1.45	1.48	3.64	3.01	8.19	6.13	3.59	1.49	.39	.12	.14

CAL YR 1982	TOTAL	1511.39	MEAN	4.14	MAX	48	MIN	.34	CFSM	2.69	IN	36.49
WTR YR 1983	TOTAL	1265.05	MEAN	3.47	MAX	29	MIN	.07	CFSM	2.25	IN	30.54

01097000 ASSABET RIVER AT MAYNARD, MA

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

DRAINAGE AREA.--116 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 142.12 ft 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.--42 years, 185 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,260 ft³/s Mar. 13, gage height, 5.48 ft; minimum daily, 13 ft³/s Aug. 27.

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	86	61	126	107	200	248	444	509	398	91	21	140
2	83	60	116	102	205	392	409	461	334	103	35	144
3	79	61	111	99	284	828	391	426	276	117	34	111
4	78	68	115	93	530	1060	453	406	270	104	37	71
5	76	107	110	86	619	886	493	391	292	94	37	53
6	74	139	84	110	488	727	446	366	295	100	40	43
7	81	145	82	140	368	635	401	336	260	108	40	36
8	97	123	88	147	288	587	376	302	225	83	37	30
9	180	96	87	133	338	733	391	283	211	64	45	27
10	227	86	83	121	351	989	428	271	163	79	29	23
11	213	78	77	252	318	1030	742	264	161	94	38	31
12	176	79	77	358	268	1150	955	261	152	60	56	22
13	147	137	74	404	276	1230	805	254	143	77	71	19
14	142	213	68	326	265	1140	635	245	134	78	64	23
15	129	256	67	251	243	949	548	236	127	120	31	16
16	117	225	81	194	233	795	492	252	128	113	38	15
17	107	183	114	194	238	684	510	292	152	115	36	23
18	100	152	126	200	288	600	548	298	150	110	32	27
19	96	133	109	187	342	648	536	268	135	104	44	21
20	92	121	99	158	333	864	672	238	114	94	45	21
21	92	112	96	149	302	937	740	230	111	90	42	25
22	88	106	94	142	288	990	650	218	99	70	23	51
23	86	103	94	147	283	985	542	237	80	68	16	55
24	79	102	103	196	278	852	534	283	88	74	22	46
25	80	95	115	233	273	709	921	309	87	52	17	37
26	82	91	142	266	262	614	1060	284	87	56	16	34
27	77	88	153	256	249	540	896	254	82	46	13	27
28	73	86	172	222	240	557	743	266	90	46	29	25
29	67	107	136	199	---	613	612	267	98	66	41	40
30	62	122	123	182	---	571	558	288	105	56	59	20
31	59	---	113	184	---	500	---	369	---	51	127	---
TOTAL	3225	3535	3235	5838	8650	24043	17931	9364	5047	2583	1215	1256
MEAN	104	118	104	188	309	776	598	302	168	83.3	39.2	41.9
MAX	227	256	172	404	619	1230	1060	509	398	120	127	144
MIN	59	60	67	86	200	248	376	218	80	46	13	15

CAL YR 1982 TOTAL 95875 MEAN 263 MAX 2230 MIN 19
WTR YR 1983 TOTAL 85922 MEAN 235 MAX 1230 MIN 13

MERRIMACK RIVER BASIN

01097300 NASHOBA BROOK NEAR ACTON, MA

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

DRAINAGE AREA.--12.7 mi².

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, from topographic map.

REMARKS.--Records good. Occasional regulation since 1967 by pond upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 21.2 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 231 ft³/s Mar. 12, gage height, 4.55 ft; minimum, 0.57 ft³/s Aug. 29, Sept. 27-30.

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	5.6	7.7	17	9.6	27	27	39	37	45	4.8	.88	8.4
2	5.3	7.7	15	9.2	29	68	35	36	35	4.8	1.2	4.4
3	4.9	7.6	12	9.0	45	198	34	35	28	11	1.4	2.9
4	4.7	7.6	11	8.0	100	129	57	35	28	6.6	1.3	2.2
5	4.7	12	11	7.1	71	87	61	34	37	5.0	1.5	1.7
6	4.7	21	10	9.4	48	69	46	30	25	7.7	1.4	1.4
7	4.5	17	9.8	16	43	64	38	26	20	7.5	1.3	1.2
8	5.2	12	9.1	16	41	61	34	23	16	5.6	1.1	1.1
9	24	11	8.5	13	32	89	38	23	13	4.7	1.1	1.1
10	47	9.5	7.8	11	31	122	41	20	11	4.3	.90	1.1
11	30	8.3	7.4	31	31	120	123	20	10	3.5	.91	.83
12	18	8.0	7.5	80	29	175	112	23	9.6	3.2	1.4	.78
13	13	16	7.2	57	29	186	73	21	8.7	3.0	2.3	.72
14	12	45	6.2	31	29	108	58	19	8.2	2.9	2.5	.67
15	12	43	6.0	21	29	84	49	38	7.7	2.5	1.9	.62
16	11	33	7.3	18	28	74	44	36	7.5	2.5	1.5	.66
17	9.9	25	13	14	29	68	47	23	7.5	2.3	1.4	.67
18	8.9	19	12	14	37	60	53	21	6.8	1.4	1.1	.76
19	8.4	16	9.4	15	50	73	47	21	6.0	1.6	.88	.79
20	8.0	14	8.6	15	51	112	58	23	5.5	1.7	.88	.93
21	7.3	13	8.4	13	42	86	58	30	5.2	1.6	.98	.80
22	6.7	12	8.4	12	37	101	47	25	4.9	2.0	.80	1.1
23	6.7	12	7.9	14	35	88	42	36	4.5	2.0	.89	1.4
24	7.4	11	8.1	29	33	67	44	40	4.0	1.8	1.1	1.2
25	7.2	10	11	45	32	57	112	24	3.8	1.7	.95	.92
26	7.2	9.6	16	52	29	50	95	18	3.8	1.7	1.1	.84
27	8.4	9.6	17	42	26	43	69	18	3.8	1.7	1.0	.71
28	8.2	8.8	14	31	25	53	57	35	4.0	1.7	1.0	.57
29	7.6	12	13	24	---	70	48	31	5.7	1.7	.75	.57
30	7.2	20	12	20	---	56	43	22	5.6	1.7	1.1	.58
31	7.8	---	10	21	---	45	---	40	---	1.5	4.7	---
TOTAL	323.5	458.4	321.6	707.3	1068	2690	1702	863	380.8	105.7	41.22	41.62
MEAN	10.4	15.3	10.4	22.8	38.1	86.8	56.7	27.8	12.7	3.41	1.33	1.39
MAX	47	45	17	80	100	198	123	40	45	11	4.7	8.4
MIN	4.5	7.6	6.0	7.1	25	27	34	18	3.8	1.4	.75	.57
CAL YR 1982	TOTAL	9987.70	MEAN	27.4	MAX	285	MIN	3.0				
WTR YR 1983	TOTAL	8703.14	MEAN	23.8	MAX	198	MIN	.57				

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 upstream from outlet of Farm Pond, and 0.8 mi southwest of Framingham Center.

DRAINAGE AREA.--75.2 mi², 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.--108 years, 116 ft³/s, 20.95 in/yr, adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

Month	Mean	Per square mile	Runoff in inches	Rainfall in inches
October.....	34.4	0.46	0.53	3.24
November.....	81.6	1.09	1.21	3.77
December.....	59.0	.78	.90	1.09
Calendar year 1982.....	164	2.18	29.57	42.50
January.....	147	1.95	2.25	5.07
February.....	313	4.16	4.34	3.79
March.....	610	8.11	9.35	7.56
April.....	478	6.36	7.09	7.02
May.....	206	2.74	3.15	4.32
June.....	72.4	.96	1.07	1.70
July.....	-12.7	-.17	-.19	1.25
August.....	28.3	.38	.43	5.78
September.....	5.54	.07	.08	1.27
Water year 1983.....	167	2.22	30.23	45.86

Note.--Negative figures indicate that evaporation, seepage, and other water transfer losses exceeded inflow.

MERRIMACK RIVER BASIN

01098530 SUDBURY RIVER AT SAXONVILLE, MA

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

DRAINAGE AREA.--106 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 110.55 ft Massachusetts Department of Public Works datum.

REMARKS.--Records fair. Flow regulated by reservoirs upstream and affected by diversions and spill. Flow diverted as needed for use of Boston metropolitan district. Part of flow from Wachusett Reservoir on Nashua River is diverted into Sudbury Reservoir en route to Boston metropolitan district. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,420 ft³/s June 7, 1982, gage height, 13.30 ft; minimum daily, 9.5 ft³/s Aug. 25, 1983.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,060 ft³/s Mar. 12, gage height, 10.09 ft; minimum daily, 9.5 ft³/s Aug. 25.

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	64	45	99	87	294	336	604	584	349	48	20	90
2	63	48	95	88	312	571	574	538	328	49	28	62
3	65	54	102	75	505	752	587	453	299	43	21	48
4	62	66	105	61	602	739	525	463	326	37	18	33
5	57	125	106	62	549	690	367	401	310	44	20	22
6	57	96	106	77	479	618	388	381	285	118	23	21
7	57	84	98	90	461	574	411	423	277	54	21	24
8	102	79	92	81	469	550	405	409	256	42	16	26
9	186	76	93	72	466	681	437	377	239	36	16	20
10	114	73	95	69	452	783	466	321	220	30	14	16
11	122	70	95	196	425	831	759	291	176	29	13	16
12	156	43	95	181	388	1010	709	233	138	36	41	15
13	148	174	94	161	366	1030	651	221	130	35	43	16
14	147	149	91	142	350	952	582	217	127	31	23	19
15	136	123	87	129	326	858	537	207	89	24	19	16
16	128	120	91	142	304	785	504	215	113	25	19	13
17	120	110	103	117	301	726	531	252	119	23	19	13
18	114	105	102	118	349	674	515	221	90	26	28	16
19	110	107	98	150	313	767	550	204	82	34	42	14
20	91	107	95	181	301	858	613	197	77	33	31	13
21	76	103	91	181	310	907	609	177	77	26	17	12
22	65	97	88	179	326	967	569	167	66	27	11	42
23	60	94	86	188	337	916	524	208	57	21	10	25
24	59	92	84	310	361	863	607	216	49	24	9.7	17
25	62	90	84	300	361	825	934	203	65	26	9.5	15
26	77	86	84	287	352	769	905	193	51	21	9.7	16
27	69	84	82	266	337	729	831	203	47	17	21	19
28	61	84	87	272	331	757	735	242	86	13	36	18
29	51	130	85	273	---	669	682	230	82	13	120	16
30	44	121	86	258	---	648	623	351	57	14	46	15
31	42	---	87	299	---	622	---	390	---	14	97	---
TOTAL	2765	2835	2886	5092	10727	23457	17734	9188	4667	1013	861.9	708
MEAN	89.2	94.5	93.1	164	383	757	591	296	156	32.7	27.8	23.6
MAX	186	174	106	310	602	1030	934	584	349	118	120	90
MIN	42	43	82	61	294	336	367	167	47	13	9.5	12
CAL YR 1982	TOTAL	82645.0	MEAN	226	MAX	2250	MIN	42				
WTR YR 1983	TOTAL	81933.9	MEAN	224	MAX	1030	MIN	9.5				

01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA

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

DRAINAGE AREA.--Total above gage, 405 mi²; net above gage, 312 mi² - diversion as needed from 92.6 mi² 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Mar. 3-15, which are fair. Daily discharge includes water released from 92.6 mi² 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.--47 years, 630 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, about 3,500 ft³/s Mar. 15; minimum daily, 46 ft³/s Aug. 27.

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	192	223	442	386	930	1140	2090	2280	1040	259	82	300
2	180	217	444	365	937	1470	1970	2140	1060	259	78	294
3	182	219	436	345	1110	1900	1890	2010	1040	278	69	280
4	176	223	432	313	1290	2050	1890	1890	1070	267	67	251
5	173	292	409	285	1410	2100	1860	1770	1060	262	67	213
6	166	358	405	303	1500	2100	1810	1660	1030	261	65	178
7	157	390	373	349	1370	2050	1730	1570	1000	251	66	148
8	204	405	344	392	1100	1950	1650	1480	952	252	67	126
9	419	383	320	404	1250	1950	1600	1380	897	230	68	114
10	539	347	319	392	1200	2100	1610	1300	842	198	68	103
11	579	319	307	546	1150	2200	2000	1220	781	182	68	93
12	583	302	284	687	1100	2500	2100	1170	722	175	69	84
13	568	414	276	774	1100	3000	2250	1110	666	160	70	79
14	561	573	258	834	1050	3400	2270	1060	608	152	70	73
15	536	655	247	841	1050	3450	2190	1020	560	149	70	68
16	503	707	264	700	1050	3340	2060	1010	503	152	70	65
17	466	707	296	650	1100	3130	2000	1050	467	150	70	65
18	431	671	317	640	1200	2900	1950	1030	440	150	70	70
19	398	627	337	640	1250	2890	1930	1020	413	144	70	72
20	369	586	334	630	1270	2850	1960	988	378	141	70	69
21	338	547	322	620	1280	2850	2010	944	340	137	70	68
22	300	509	306	586	1280	3020	2020	886	311	129	70	108
23	272	471	295	576	1270	3020	1980	901	281	132	70	97
24	252	440	308	705	1260	2960	2010	895	244	124	67	88
25	239	405	335	796	1240	2810	2340	896	235	121	60	82
26	251	374	381	858	1210	2660	2460	895	240	113	54	78
27	265	343	409	907	1190	2530	2610	877	236	106	46	75
28	265	327	439	920	1160	2510	2630	889	238	99	50	72
29	259	378	458	910	---	2420	2550	872	248	90	191	71
30	245	417	431	880	---	2330	2420	936	258	87	168	70
31	229	---	404	910	---	2230	---	996	---	82	313	---
TOTAL	10297	12829	10932	19144	33307	77810	61840	38145	18160	5292	2553	3554
MEAN	332	428	353	618	1190	2510	2061	1230	605	171	82.4	118
MAX	583	707	458	920	1500	3450	2630	2280	1070	278	313	300
MIN	157	217	247	285	930	1140	1600	872	235	82	46	65
CAL YR 1982	TOTAL	308830	MEAN	846	MAX	4340	MIN	127				
WTR YR 1983	TOTAL	293863	MEAN	805	MAX	3450	MIN	46				

MERRIMACK RIVER BASIN

01100000 MERRIMACK RIVER BELOW CONCORD RIVER, AT LOWELL, MA

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

DRAINAGE AREA.--Total above gage, 4,635 mi²; net above gage, 4,425 mi² - diversions as needed from 210 mi² for use of Boston metropolitan district and city of Worcester.

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

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

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

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

AVERAGE DISCHARGE.--60 years, 7,529 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53,000 ft³/s Mar. 21, gage height, 52.67 ft; minimum daily, 544 ft³/s Sept. 17.

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	2770	2770	4790	5070	7530	6820	18000	27000	23400	2890	1950	2450
2	2300	2500	5120	4540	7600	9190	16200	22800	22800	3000	1730	1980
3	1600	3220	4980	4290	9530	20100	14500	31100	19200	2450	1570	1470
4	1980	2530	4860	4070	17300	26000	15900	32000	17000	2370	1450	1520
5	1860	2940	4710	3490	22900	24100	18700	31300	17700	3170	1270	1530
6	1870	3620	4490	3800	20600	20400	19000	29600	18600	3770	766	2000
7	1780	5590	4340	4390	16600	18400	17900	24300	16800	3680	1060	1590
8	2290	4530	4370	4160	12800	17200	17400	19400	14800	3020	1850	1350
9	3070	4420	4210	4040	11800	17300	17200	17300	13000	3710	1560	1270
10	4370	3590	3910	3660	11100	19200	18000	17100	11400	3130	1340	771
11	5090	3300	4100	7970	11100	24400	24200	17500	10400	2690	1370	569
12	4370	3380	3380	16600	10600	32100	31000	15900	8810	2730	1930	1550
13	4190	5530	2490	19200	10400	41800	30500	14400	7250	2350	1800	1410
14	3940	6230	2880	14500	10000	39900	28900	13100	7200	1690	1680	1270
15	4140	8920	3020	11200	8870	34400	26600	11800	6480	1940	1980	1270
16	4090	8450	2810	8280	8250	30500	22600	11800	5940	1940	1990	1250
17	3070	5880	3880	7030	8190	28700	19800	12400	5640	1480	2070	544
18	3970	5760	6180	8440	7840	26900	22700	12500	4840	1650	1750	552
19	3290	5180	5320	8910	8190	28000	25400	10900	5120	1510	1750	1200
20	3620	5030	4580	7880	8260	43400	24700	9710	5260	1570	880	1130
21	3940	5030	4320	7420	7940	52000	24900	9320	4890	1640	943	1100
22	3440	4780	4240	6020	7650	46700	25000	10700	4600	2090	1830	1330
23	2570	4860	4320	6280	7610	39600	23600	10900	4300	1150	1440	1590
24	1460	4380	4050	7560	7440	36000	22100	11600	3530	1150	1320	1010
25	2460	5040	4250	10600	7530	32800	28900	14000	2970	2100	1230	1820
26	2150	4230	4740	12400	7210	29200	35300	13800	3380	1790	1140	1290
27	2360	4840	5070	12300	6710	26300	34400	12500	3650	1510	697	1190
28	2900	4330	5610	10700	6820	22900	32500	12300	3140	1520	554	1180
29	2740	4080	6430	9200	---	22100	31000	13600	2860	1440	1430	1320
30	1430	4410	5860	7910	---	22900	29300	14300	3340	935	1370	1190
31	2390	---	5240	8020	---	20600	---	18000	---	833	2070	---
TOTAL	91500	139350	138550	249930	288370	859910	716200	526330	278300	66898	45770	39696
MEAN	2952	4645	4469	8062	10300	27740	23870	16980	9277	2158	1476	1323
MAX	5090	8920	6430	19200	22900	52000	35300	32000	23400	3770	2070	2450
MIN	1430	2500	2490	3490	6710	6820	14500	9320	2860	833	554	544
CAL YR 1982	TOTAL	3154340	MEAN	8642	MAX	35400	MIN	649				
WTR YR 1983	TOTAL	3440804	MEAN	9427	MAX	52000	MIN	544				

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA

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

DRAINAGE AREA.--36.5 mi².

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

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

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

REMARKS.--Records good except those for period of no gage-height record, Apr. 3-24, 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.--19 years (water years 1965-83), 60.4 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 4	1315	347	5.19	Mar. 22	1815	342	5.16
Mar. 3	1015	*701	7.13	Apr. 11	--	520	--
Mar. 12	1930	645	6.87	Apr. 25	1745	500	6.11
Mar. 20	0815	364	5.30				

Minimum discharge, 0.70 ft³/s Aug. 19.

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	11	20	62	19	113	108	122	127	184	14	6.7	83
2	15	23	53	18	130	246	110	117	124	14	6.7	80
3	19	24	44	16	161	659	105	110	89	19	6.7	54
4	18	31	47	14	318	489	180	107	79	21	6.5	18
5	17	43	42	11	263	305	200	109	94	20	6.3	11
6	16	64	40	18	193	224	160	109	108	19	6.4	7.7
7	16	76	38	38	158	193	130	101	87	17	6.2	7.2
8	30	71	35	45	166	185	120	91	69	18	5.9	9.9
9	116	53	33	36	164	245	130	84	57	21	5.4	9.2
10	182	39	29	23	133	380	150	84	48	17	4.9	8.4
11	181	34	27	44	100	407	450	81	41	15	4.7	8.1
12	130	32	27	84	90	519	400	79	36	14	6.9	7.4
13	90	65	25	114	85	575	280	79	32	13	21	7.2
14	71	159	20	101	81	377	200	78	27	12	21	7.2
15	60	216	20	73	83	263	160	77	25	11	11	7.1
16	53	163	25	73	85	221	140	87	21	11	3.9	7.0
17	45	113	44	66	88	195	150	108	20	10	4.1	7.0
18	34	86	46	49	143	174	160	137	19	9.9	5.9	10
19	23	66	36	42	266	210	150	118	17	8.2	1.3	11
20	21	51	27	38	265	350	180	96	16	3.5	7.1	8.6
21	19	42	26	35	219	276	180	84	14	2.8	6.2	8.0
22	18	38	25	34	173	313	150	79	13	3.2	5.5	17
23	17	36	22	36	150	289	130	84	12	5.4	5.4	29
24	16	35	26	70	138	211	160	97	9.9	5.1	5.1	15
25	15	32	50	115	135	173	443	104	10	3.7	5.0	12
26	27	28	58	188	131	152	383	90	12	3.5	4.6	8.8
27	38	27	62	202	115	137	255	78	12	2.8	4.4	7.9
28	35	24	60	161	105	167	200	84	12	1.6	4.8	7.8
29	29	44	47	122	---	251	167	93	14	1.0	34	7.0
30	23	60	30	98	---	192	141	98	14	6.6	59	6.5
31	20	---	22	95	---	150	---	147	---	7.1	82	---
TOTAL	1405	1795	1148	2078	4251	8636	5886	3017	1315.9	330.4	364.6	488.0
MEAN	45.3	59.8	37.0	67.0	152	279	196	97.3	43.9	10.7	11.8	16.3
MAX	182	216	62	202	318	659	450	147	184	21	82	83
MIN	11	20	20	11	81	108	105	77	9.9	1.0	1.3	6.5
(†)	4.34	4.89	2.81	4.17	3.73	.39	2.99	3.58	12.9	9.99	1.68	2.02

CAL YR 1982 TOTAL 34055.2 MEAN 93.3 MAX 838 MIN 4.2
WTR YR 1983 TOTAL 30714.9 MEAN 84.2 MAX 659 MIN 1.0

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

PARKER RIVER BASIN

01101000 PARKER RIVER AT BYFIELD, MA

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

DRAINAGE AREA.--21.6 mi².

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

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

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

AVERAGE DISCHARGE.--38 years, 36.7 ft³/s, 23.07 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 382 ft³/s Mar. 12, gage height, 5.05 ft; minimum daily, 0.21 ft³/s Aug. 28.

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	8.3	13	36	24	65	82	125	256	121	9.8	1.0	.29
2	7.7	13	37	23	69	128	113	264	115	9.1	1.0	.29
3	7.1	12	35	22	85	221	107	254	107	8.5	.93	.30
4	6.6	12	35	19	105	251	108	231	98	8.0	.51	.36
5	6.0	16	33	17	110	240	107	207	100	7.6	.53	.39
6	5.4	19	32	19	100	222	105	187	87	8.0	.51	.39
7	5.0	20	30	22	84	205	99	169	54	8.1	.51	.39
8	10	20	28	23	70	189	95	163	50	7.5	.56	.39
9	30	20	27	23	74	196	93	159	46	7.1	.59	.39
10	42	18	24	22	72	245	97	152	40	6.5	.60	.37
11	52	17	23	31	65	311	141	141	37	6.1	.59	.34
12	53	17	21	39	59	364	172	129	33	5.8	.74	.34
13	50	27	19	47	55	369	173	118	30	5.4	.60	.33
14	47	35	17	46	53	332	161	108	28	4.7	.51	.29
15	44	46	16	41	51	293	147	108	25	4.4	.51	.29
16	40	52	17	30	50	267	135	107	23	4.1	.48	.31
17	37	54	20	30	52	238	136	106	21	3.7	.50	.33
18	33	54	20	31	64	211	131	103	19	3.5	.46	.34
19	29	50	19	33	72	221	125	97	18	2.6	.43	.32
20	26	47	18	36	79	253	121	95	16	2.0	.43	.30
21	23	43	18	31	85	256	114	92	14	1.4	.36	.29
22	21	40	17	26	91	264	106	109	13	1.2	.32	.43
23	18	37	16	26	94	252	97	151	12	1.0	.30	.32
24	16	35	17	35	95	228	104	175	11	.98	.29	.28
25	15	32	19	39	94	203	241	171	11	1.0	.25	.25
26	14	30	23	44	91	183	264	159	11	.98	.25	.27
27	14	28	25	50	87	164	236	145	11	.89	.25	.29
28	13	26	26	53	84	163	210	135	11	.89	.21	.29
29	13	31	26	54	---	157	221	135	11	.95	.30	.29
30	12	33	26	53	---	148	252	131	11	.98	.22	.29
31	12	---	25	60	---	136	---	125	---	.98	.38	---
TOTAL	710.1	897	745	1049	2155	6992	4336	4682	1184	133.75	15.12	9.75
MEAN	22.9	29.9	24.0	33.8	77.0	226	145	151	39.5	4.31	.49	.33
MAX	53	54	37	60	110	369	264	264	121	9.8	1.0	.43
MIN	5.0	12	16	17	50	82	93	92	11	.89	.21	.25
CFSM	1.06	1.38	1.11	1.57	3.57	10.5	6.71	6.99	1.83	.20	.02	.02
IN.	1.22	1.54	1.28	1.81	3.71	12.04	7.47	8.06	2.04	.23	.03	.02
CAL YR 1982	TOTAL	17407.40	MEAN	47.7	MAX	338	MIN	3.0	CFSM	2.21	IN	29.98
WTR YR 1983	TOTAL	22908.72	MEAN	62.8	MAX	369	MIN	.21	CFSM	2.91	IN	39.45

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA

LOCATION.--Lat 42°34'10", long 71°01'39", Essex County, Hydrologic Unit 01090001, on right bank in Peabody, 700 ft downstream from Boston Street Bridge at South Middleton, 1.5 mi downstream from Wills Brook, and 2 mi south of Middleton.

DRAINAGE AREA.--43.4 mi².

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

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

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

REMARKS.--Records excellent except those for period of no gage-height record, Feb. 3 to Mar. 17, which are poor. 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.--45 years, 62.0 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 641 ft³/s Mar. 12, gage height, 6.32 ft, from peak-stage indicator; minimum, 0.40 ft³/s Aug. 28.

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	15	55	79	32	132	150	187	184	119	11	1.1	9.3
2	17	55	78	37	134	300	174	161	112	11	1.2	5.6
3	20	53	76	46	180	480	169	163	106	13	1.1	5.3
4	24	53	75	23	190	450	197	149	111	11	1.0	5.0
5	27	69	73	13	180	390	184	141	119	9.5	.89	3.8
6	27	77	71	19	160	350	170	132	110	10	.76	2.9
7	22	72	68	33	145	310	162	118	103	13	.69	2.4
8	53	68	65	33	135	290	161	116	95	11	.61	2.0
9	121	66	62	47	140	375	173	111	88	9.8	.58	1.7
10	134	64	56	42	130	470	177	105	81	8.4	.58	1.3
11	119	60	39	61	120	500	363	101	74	7.4	.68	1.2
12	115	57	14	80	115	610	347	98	67	6.5	1.4	1.2
13	115	80	9.4	74	105	560	320	93	60	5.9	1.9	1.1
14	115	109	19	77	100	480	283	90	51	4.9	2.2	1.1
15	111	108	32	78	93	410	245	89	42	4.3	2.1	.95
16	105	111	25	71	90	360	217	97	38	3.8	1.8	.87
17	96	111	22	72	93	320	232	111	31	3.3	1.5	.89
18	87	109	18	71	100	290	222	109	28	2.9	1.2	1.0
19	80	105	15	67	120	335	204	104	23	2.6	1.0	1.1
20	75	101	12	62	135	397	206	101	20	2.4	.90	1.1
21	70	96	11	60	150	353	196	102	18	2.2	.76	.94
22	66	91	10	58	170	390	182	97	16	2.2	.69	2.1
23	62	86	8.0	62	180	356	171	102	14	2.1	.64	2.4
24	58	82	11	89	180	309	196	105	12	1.9	.59	2.4
25	55	78	29	94	170	273	329	99	14	2.1	.57	1.9
26	61	73	54	91	160	242	294	93	16	2.1	.58	1.6
27	61	70	64	89	155	217	280	91	13	1.9	.55	1.3
28	59	66	49	87	150	250	262	97	14	1.6	.53	1.1
29	57	77	50	86	---	245	230	93	16	1.3	3.2	.99
30	56	81	45	86	---	217	205	101	13	1.2	4.6	.91
31	54	---	39	116	---	193	---	125	---	1.2	11	---
TOTAL	2137	2383	1278.4	1956	3912	10872	6738	3478	1624	171.5	46.90	65.45
MEAN	68.9	79.4	41.2	63.1	140	351	225	112	54.1	5.53	1.51	2.18
MAX	134	111	79	116	190	610	363	184	119	13	11	9.3
MIN	15	53	8.0	13	90	150	161	89	12	1.2	.53	.87
CAL YR 1982	TOTAL	32889.40	MEAN	90.1	MAX	677	MIN	5.3				
WTR YR 1983	TOTAL	34662.25	MEAN	95.0	MAX	610	MIN	.53				

IPSWICH RIVER BASIN

01102000 IPSWICH RIVER NEAR IPSWICH, MA

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

DRAINAGE AREA.--124 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for periods of no gage-height record, Jan. 5 to Mar. 14, July 21 to Aug. 22, 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.--53 years, 187 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,930 ft³/s Mar. 13, gage height, 7.15 ft, from peak-stage indicator; minimum, 1.6 ft³/s Aug. 28; minimum daily, 1.7 ft³/s Aug. 28.

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	40	79	152	103	270	460	621	628	266	35	2.9	36
2	36	77	145	95	300	600	560	574	271	32	3.4	37
3	34	76	140	87	350	1000	517	527	267	33	4.0	32
4	30	75	130	78	440	1300	525	487	270	31	3.6	25
5	27	81	120	70	450	1400	530	454	276	29	3.2	19
6	25	91	110	65	430	1400	532	423	276	29	2.8	15
7	23	99	101	74	415	1200	513	394	271	23	2.4	12
8	40	103	89	92	390	1000	486	362	261	15	2.3	9.6
9	99	105	79	110	375	1150	478	332	245	15	2.2	8.4
10	142	105	67	130	360	1300	470	306	226	14	2.1	7.5
11	176	102	56	150	340	1600	720	285	209	13	2.7	6.6
12	208	97	50	170	320	1800	993	267	193	11	4.0	5.6
13	223	111	36	190	305	1900	1080	252	177	10	5.6	5.2
14	226	129	30	200	290	1800	998	243	163	9.0	6.5	4.7
15	217	155	43	195	275	1670	882	236	148	8.1	7.4	3.9
16	204	187	54	190	275	1470	773	237	133	7.2	6.8	3.6
17	191	216	73	180	290	1270	739	251	118	6.4	6.0	4.5
18	181	227	82	170	335	1090	723	261	104	5.6	5.0	6.3
19	171	223	74	160	400	1020	700	268	75	4.7	4.3	5.8
20	156	216	72	145	450	1110	672	269	71	4.2	3.9	4.8
21	141	206	66	135	485	1190	624	265	62	3.7	3.7	4.2
22	128	196	60	125	520	1260	584	253	54	3.4	3.5	8.1
23	119	178	54	120	545	1220	543	253	47	3.2	3.3	9.7
24	107	166	56	130	555	1120	528	249	40	3.0	2.9	8.3
25	97	158	67	140	545	998	684	248	37	4.4	2.7	7.1
26	93	149	86	170	540	879	896	241	36	5.0	2.4	6.6
27	89	139	99	200	520	774	964	234	35	4.6	2.0	6.4
28	87	137	107	220	490	744	877	236	36	4.0	1.7	6.1
29	85	142	112	225	---	744	777	229	38	3.5	3.9	5.6
30	94	147	113	230	---	734	698	238	36	3.2	9.3	5.1
31	82	---	109	250	---	694	---	255	---	3.0	23	---
TOTAL	3571	4172	2632	4599	11260	35897	20687	9757	4441	376.2	139.5	319.7
MEAN	115	139	84.9	148	402	1158	690	315	148	12.1	4.50	10.7
MAX	226	227	152	250	555	1900	1080	628	276	35	23	37
MIN	23	75	30	65	270	460	470	229	35	3.0	1.7	3.6
CAL YR 1982	TOTAL	89264.0	MEAN	245	MAX	2240	MIN	19				
WTR YR 1983	TOTAL	97851.4	MEAN	268	MAX	1900	MIN	1.7				

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 upstream from head of Mystic Lakes.

DRAINAGE AREA.--24.2 mi², excludes 0.6 mi² 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 upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 28.0 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 447 ft³/s Mar. 12, gage height, 12.92 ft; minimum, 1.0 ft³/s June 16, minimum daily, 2.1 ft³/s Aug. 22.

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	7.0	10	18	10	62	55	67	63	43	8.3	3.3	33
2	5.7	8.8	16	9.9	50	260	62	61	32	17	3.7	16
3	4.9	8.6	14	9.5	105	328	79	61	27	24	3.1	11
4	5.4	8.0	14	8.1	121	209	111	63	56	12	3.2	7.4
5	4.9	40	12	7.6	82	148	82	58	51	8.7	3.2	6.2
6	5.0	26	12	22	60	116	67	51	35	9.0	3.1	5.8
7	4.8	16	12	22	57	112	60	45	29	7.7	2.9	5.3
8	28	12	10	17	57	119	69	41	25	6.7	2.9	4.5
9	106	9.4	10	13	51	202	86	39	22	6.7	2.7	4.2
10	63	8.4	9.1	11	42	263	100	37	19	5.6	2.6	3.8
11	28	8.0	9.4	53	37	248	316	35	19	5.2	3.3	3.6
12	18	8.4	9.2	45	35	401	198	35	17	5.3	21	3.4
13	15	68	8.0	29	34	320	125	33	17	4.9	22	3.8
14	20	58	7.3	21	34	208	98	32	15	4.7	9.7	3.9
15	15	41	9.2	19	32	157	83	36	23	4.9	6.4	3.3
16	11	33	20	19	34	138	75	48	7.5	4.5	4.9	3.2
17	9.5	25	23	20	64	114	113	67	13	4.2	4.2	5.1
18	8.3	21	17	19	184	99	94	45	13	4.5	4.0	10
19	7.7	19	14	15	134	185	92	32	12	4.1	3.9	5.5
20	7.5	17	11	12	89	205	110	31	11	3.9	3.2	4.8
21	7.3	16	11	10	73	156	87	32	10	4.5	2.2	3.9
22	6.3	16	9.2	9.8	69	197	71	29	9.6	7.3	2.1	32
23	6.0	15	8.3	18	67	142	63	49	8.9	4.6	2.4	14
24	5.8	14	22	94	72	110	123	39	7.4	5.1	2.3	6.7
25	7.3	13	30	80	78	94	242	28	16	5.7	2.3	5.1
26	22	12	25	54	64	83	147	25	13	4.6	2.8	4.6
27	14	12	20	40	55	75	93	29	10	3.9	2.8	3.9
28	10	12	18	32	51	147	81	36	15	3.7	5.8	3.2
29	8.6	31	17	28	---	117	73	27	14	3.6	104	3.1
30	8.7	23	13	26	---	86	67	60	9.7	3.6	35	3.1
31	7.1	---	11	75	---	73	---	72	---	3.2	59	---
TOTAL	477.8	609.6	439.7	848.9	1893	5167	3134	1339	600.1	201.7	334.0	223.4
MEAN	15.4	20.3	14.2	27.4	67.6	167	104	43.2	20.0	6.51	10.8	7.45
MAX	106	68	30	94	184	401	316	72	56	24	104	33
MIN	4.8	8.0	7.3	7.6	32	55	60	25	7.4	3.2	2.1	3.1
CAL YR 1982	TOTAL	15132.0	MEAN	41.5	MAX	690	MIN	4.6				
WTR YR 1983	TOTAL	15268.2	MEAN	41.8	MAX	401	MIN	2.1				

CHARLES RIVER BASIN

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 downstream from highway bridge, 0.8 mi downstream from Noanet Brook, and 1.3 mi northeast of intersection of Centre and Walpole Streets in Dover.

DRAINAGE AREA.--184 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow affected by diversions to and from basin for municipal supplies.

AVERAGE DISCHARGE.--46 years, 302 ft³/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,590 ft³/s Mar. 14, gage height, 5.71 ft; minimum, 28 ft³/s July 31, Aug. 1.

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	59	96	217	176	429	625	877	1240	442	125	32	166
2	55	90	220	163	441	817	827	1120	444	120	39	125
3	54	88	210	152	572	1040	793	1010	435	108	35	101
4	53	90	195	139	649	1130	788	908	453	97	39	84
5	51	138	181	128	709	1240	748	821	447	89	49	71
6	50	175	177	139	769	1260	722	743	434	89	49	62
7	47	202	165	155	783	1200	695	677	422	85	46	55
8	67	214	150	174	836	1120	674	630	404	80	45	49
9	145	202	139	179	796	1140	667	584	376	76	49	43
10	213	178	132	172	722	1170	668	539	341	69	45	40
11	262	156	129	237	678	1260	895	506	302	64	43	37
12	284	140	122	298	490	1460	953	477	260	60	57	35
13	288	187	116	343	548	1560	1060	448	224	56	61	36
14	263	252	110	364	562	1580	1110	428	195	53	63	35
15	220	304	107	361	517	1550	1080	410	173	53	70	34
16	184	342	122	275	477	1450	1010	403	190	52	71	33
17	153	382	154	267	473	1330	972	419	222	49	63	36
18	132	355	188	279	599	1200	911	410	243	50	64	36
19	117	315	195	270	629	1140	899	409	248	49	70	38
20	106	280	184	235	672	1100	928	406	226	46	83	40
21	97	244	173	213	729	1080	939	404	194	43	89	40
22	90	220	157	195	755	1200	965	385	167	42	86	59
23	85	202	151	191	756	1220	966	389	149	39	74	49
24	79	191	153	270	745	1230	1020	385	131	41	63	48
25	78	177	160	322	731	1190	1260	378	120	42	57	48
26	95	169	194	366	704	1100	1360	374	112	40	51	47
27	104	154	218	401	674	1030	1530	368	110	37	49	43
28	114	146	227	425	645	1040	1560	370	113	35	68	38
29	114	169	221	424	---	990	1490	355	117	35	85	35
30	107	195	205	406	---	949	1360	386	122	34	76	34
31	100	---	188	427	---	923	---	419	---	30	139	---
TOTAL	3866	6053	5260	8146	18090	36324	29727	16801	7816	1888	1910	1597
MEAN	125	202	170	263	646	1172	991	542	261	60.9	61.6	53.2
MAX	288	382	227	427	836	1580	1560	1240	453	125	139	166
MIN	47	88	107	128	429	625	667	355	110	30	32	33
CAL YR 1982	TOTAL	134268	MEAN	368	MAX	2270	MIN	42				
WTR YR 1983	TOTAL	137478	MEAN	377	MAX	1580	MIN	30				

WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD. --

WATER TEMPERATURES: November 1974 to September 1981

WATER TEMPERATURES: November 1974 to September 1981

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (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)
NOV 16...	1330	336	175	--	6.0	--	--	--	--	--
18...	1000	358	175	7.3	4.5	1.9	9.4	72	130	200
DEC 21...	1135	173	152	--	0.5	--	--	--	--	--
FEB 04...	1140	646	138	--	1.0	--	--	--	--	--
MAR 08...	1500	1100	128	6.9	3.0	<1.0	12.7	95	150	260
28...	0940	1060	--	--	4.5	--	--	--	--	--
JUN 07...	1230	421	--	--	20.5	--	--	--	--	--
21...	1100	195	158	7.9	23.5	1.5	7.9	95	51	13
AUG 05...	0915	48	215	6.9	25.0	1.4	6.3	77	59	5400
SEP 02...	1110	123	182	--	22.5	--	--	--	--	--

[illegible][illegible]

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

[illegible][illegible][illegible]

01104000 MOTHER BROOK AT DEDHAM, MA

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

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

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

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

REMARKS.--Records good except those for period of no gage-height record, Apr. 12-28, which are poor. 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.--52 years, 78.4 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 466 ft³/s Apr. 28, gage height, 84.42 ft, from peak-stage indicator; minimum, 0.23 ft³/s Aug. 2.

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	2.0	14	28	8.3	131	134	321	394	89	5.0	.35	37
2	3.9	13	30	5.4	145	240	297	357	84	3.2	.32	13
3	2.5	11	35	4.0	186	352	283	317	73	1.6	.30	5.5
4	1.6	11	29	4.8	228	365	284	279	76	.91	.93	2.7
5	3.6	31	22	12	239	368	262	258	74	.89	.72	1.6
6	2.7	37	16	17	252	334	241	292	69	4.8	1.6	1.2
7	2.8	36	14	18	274	326	220	271	108	5.8	.95	3.0
8	6.7	33	9.2	18	286	302	208	241	103	6.2	.51	2.2
9	25	27	7.5	18	196	306	205	220	84	4.3	.31	1.3
10	15	21	6.7	15	260	311	203	200	66	2.3	.30	1.7
11	16	41	13	27	214	321	304	211	48	.95	.83	1.3
12	17	45	15	35	158	412	320	200	30	.95	4.9	1.3
13	38	103	11	57	111	450	335	191	16	2.4	3.0	1.6
14	51	107	8.1	64	129	441	350	177	8.4	2.5	.71	1.2
15	50	84	6.7	69	130	432	330	160	5.8	1.6	.32	.75
16	32	61	7.6	61	118	415	310	154	22	2.6	.33	.67
17	20	63	20	44	121	384	290	161	29	1.9	1.5	1.1
18	9.9	51	26	41	204	348	280	147	28	.86	2.9	1.1
19	6.8	48	27	37	195	324	280	118	25	.43	1.8	.73
20	9.4	59	24	30	188	307	280	110	17	.34	1.2	1.2
21	8.5	50	22	24	191	289	295	117	9.4	.54	1.2	.86
22	7.1	40	24	19	196	319	310	102	4.7	.65	.72	4.4
23	5.1	39	21	19	189	324	320	95	2.3	.61	.58	1.6
24	3.2	34	21	47	183	322	340	88	1.4	.81	2.3	.55
25	3.0	26	19	57	178	319	390	76	3.2	.45	2.4	.45
26	2.8	21	23	103	179	299	430	72	1.2	.43	1.4	.47
27	1.9	27	24	122	162	268	460	101	1.2	.41	5.2	.96
28	1.7	22	23	124	145	273	465	105	7.2	.31	20	1.8
29	9.0	28	22	121	---	284	456	81	11	.31	8.7	1.3
30	15	27	17	111	---	311	430	89	7.8	.33	12	.60
31	15	---	12	135	---	328	---	98	---	.32	27	---
TOTAL	388.2	1210	583.8	1467.5	5188	10208	9499	5482	1104.6	54.70	105.28	93.14
MEAN	12.5	40.3	18.8	47.3	185	329	317	177	36.8	1.76	3.40	3.10
MAX	51	107	35	135	286	450	465	394	108	6.2	27	37
MIN	1.6	11	6.7	4.0	111	134	203	72	1.2	.31	.30	.45

CAL YR 1982 TOTAL 29178.68 MEAN 79.9 MAX 588 MIN .37
WTR YR 1983 TOTAL 35384.22 MEAN 96.9 MAX 465 MIN .30

01104200 CHARLES RIVER AT WELLESLEY, MA

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

DRAINAGE AREA.--211 mi².

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

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

REMARKS.--Records good except those for period of no gage-height record, June 14 to July 20, which are poor.
Flow affected by diversion to Mother Brook (station 01104000), and by diversions to and from basin for municipal supplies. Occasional regulation at dam 0.2 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years, 276 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft³/s Mar. 13, gage height, 5.14 ft; minimum, 6.7 ft³/s Sept. 16, 17; minimum daily, 12 ft³/s Aug. 3.

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	65	102	224	219	394	646	698	1120	452	170	33	242
2	54	99	208	208	385	883	680	1030	458	180	15	172
3	66	95	206	194	496	938	687	951	462	180	12	138
4	56	96	210	129	565	953	692	869	485	150	14	113
5	51	146	205	127	578	997	659	680	488	90	28	95
6	48	173	204	162	606	1060	641	559	377	100	42	56
7	49	194	191	182	574	1080	625	571	350	70	62	47
8	91	214	186	191	572	1050	616	549	379	15	66	63
9	237	219	172	204	682	1090	629	513	375	25	62	44
10	233	191	127	206	613	1110	650	439	360	80	34	36
11	274	139	129	292	569	1150	852	395	337	90	17	48
12	267	143	137	295	459	1300	855	385	312	80	64	34
13	240	194	140	322	412	1340	886	356	283	55	91	28
14	261	240	133	350	456	1340	927	359	230	70	76	41
15	229	259	131	364	475	1320	941	357	160	60	73	44
16	209	321	129	322	469	1290	918	357	180	70	40	27
17	182	354	151	296	495	1220	902	385	240	75	40	17
18	169	375	181	295	665	1130	871	364	260	78	69	37
19	121	304	202	287	653	1090	854	334	270	80	77	32
20	97	264	209	269	651	1050	869	353	270	70	77	23
21	101	265	183	255	676	1030	722	382	260	38	87	39
22	101	221	169	239	709	1070	654	386	240	18	96	68
23	105	205	169	238	718	1060	714	398	210	43	58	71
24	106	200	177	353	725	1060	811	401	190	59	34	59
25	101	199	187	333	704	1040	1010	397	190	66	52	54
26	129	167	209	342	674	1010	1050	343	170	66	53	40
27	131	151	237	349	666	980	1120	320	80	64	80	17
28	135	162	254	360	646	974	1210	355	110	64	212	37
29	97	195	252	367	---	830	1230	358	160	61	109	41
30	96	206	243	367	---	708	1190	414	170	55	77	42
31	103	---	235	430	---	695	---	458	---	55	145	---
TOTAL	4204	6093	5790	8547	16287	32494	25163	15138	8508	2377	1995	1805
MEAN	136	203	187	276	582	1048	839	488	284	76.7	64.4	60.2
MAX	274	375	254	430	725	1340	1230	1120	488	180	212	242
MIN	48	95	127	127	385	646	616	320	80	15	12	17
CAL YR 1982	TOTAL	122674	MEAN	336	MAX	1720	MIN	10				
WTR YR 1983	TOTAL	128401	MEAN	352	MAX	1340	MIN	12				

01104500 CHARLES RIVER AT WALTHAM, MA

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

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

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

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

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

REMARKS.--Records good. Flow affected by diversion to Mother Brook (station 01104000), diversions to and from basin for municipal supplies, and at times by water released from Stony Brook Reservoir. Prior to 1960, some regulation by mills upstream. Low flow completely regulated by Boston Edison Co. powerplant prior to 1954. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years (water years 1932-83), 300 ft³/s.

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

Maximum discharge since 1886, that of Feb. 3, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,970 ft³/s Mar. 12, gage height, 4.39 ft; minimum, 15 ft³/s July 8, 9, Sept. 15, 16; minimum daily, 19 ft³/s Aug. 4.

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	71	114	250	247	482	757	862	1250	509	173	63	260
2	54	109	254	230	438	1050	846	1150	496	193	35	215
3	55	106	231	215	574	1300	863	1050	486	190	26	168
4	59	104	240	177	652	1350	896	975	532	171	19	140
5	51	184	234	122	653	1370	851	855	551	147	23	118
6	50	204	272	175	655	1380	818	622	494	100	20	94
7	43	216	229	199	669	1410	778	622	385	123	40	59
8	82	245	214	204	666	1370	763	603	410	71	61	110
9	297	253	199	213	729	1520	791	572	408	25	61	96
10	284	242	169	221	735	1610	813	520	398	57	56	57
11	302	169	129	338	667	1630	1220	441	379	89	32	58
12	324	168	142	353	556	1930	1180	440	353	94	67	53
13	266	274	148	340	488	1920	1140	405	325	59	111	40
14	361	301	139	381	514	1880	1140	397	295	60	95	46
15	336	314	138	402	541	1810	1130	392	254	74	87	33
16	247	361	155	395	532	1750	1100	398	169	63	78	25
17	214	403	150	338	566	1660	1110	448	216	70	45	29
18	195	426	180	333	832	1520	1060	418	256	78	70	45
19	168	387	210	320	821	1450	1050	394	278	80	90	52
20	109	306	224	301	788	1380	1060	376	285	81	89	39
21	111	309	212	283	794	1340	932	410	271	74	90	50
22	108	282	183	263	816	1430	735	411	247	52	101	102
23	111	242	183	272	835	1370	779	439	221	40	93	92
24	113	238	199	429	842	1350	936	446	201	52	50	75
25	113	223	205	428	835	1270	1310	431	208	65	58	70
26	151	211	224	397	797	1150	1310	409	202	68	66	64
27	147	170	247	405	776	1170	1300	350	168	66	80	35
28	148	178	277	410	755	1270	1360	395	97	63	260	40
29	133	282	283	421	---	1140	1380	392	144	59	221	50
30	94	245	272	419	---	950	1340	463	167	55	111	53
31	111	---	259	494	---	860	---	532	---	90	168	---
TOTAL	4908	7266	6451	9725	19008	43347	30853	17006	9405	2682	2466	2368
MEAN	158	242	208	314	679	1398	1028	549	314	86.5	79.5	78.9
MAX	361	426	283	494	842	1930	1380	1250	551	193	260	260
MIN	43	104	129	122	438	757	735	350	97	25	19	25
CAL YR 1982	TOTAL	154820	MEAN	424	MAX	2910	MIN	29				
WTR YR 1983	TOTAL	155485	MEAN	426	MAX	1930	MIN	19				

NEPONSET RIVER BASIN

01105000 NEPONSET RIVER AT NORWOOD, MA

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

DRAINAGE AREA.--35.2 mi².

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

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

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

GAGE.--Water-stage recorder. Datum of gage is 44.04 ft 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.--44 years, 53.9 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft³/s Aug. 19, 1955, gage height, 14.65 ft, from floodmarks; minimum daily, 1.4 ft³/s Oct. 20, 1963.

Maximum discharge since 1886, that of Aug. 19, 1955. Flood of July 24, 1938, reached a stage of 11.05 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 453 ft³/s Apr. 25, gage height, 8.43 ft, at upstream side of railroad bridge; minimum daily, 4.3 ft³/s July 29.

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	16	21	47	35	100	110	142	170	92	18	5.6	24
2	15	18	39	33	99	258	132	150	75	16	5.1	17
3	15	18	36	31	160	390	141	151	63	16	4.4	15
4	14	18	33	27	196	301	171	130	79	16	14	15
5	13	52	34	25	156	245	156	128	87	15	14	14
6	12	50	31	30	124	220	137	112	79	14	14	11
7	11	48	29	34	106	195	122	108	66	13	17	8.5
8	18	37	27	36	128	189	126	100	57	9.5	17	9.4
9	88	32	26	34	116	259	154	92	47	7.8	15	8.4
10	93	29	25	31	106	297	194	84	45	7.8	14	6.1
11	75	27	25	69	95	310	384	83	42	8.6	11	5.8
12	60	26	24	78	91	362	315	83	40	8.6	16	6.7
13	50	110	22	68	89	356	234	78	30	7.9	18	7.4
14	48	111	19	54	81	282	208	76	28	7.1	20	5.8
15	40	106	18	48	78	250	188	73	28	7.2	18	5.6
16	35	79	26	62	76	223	171	80	26	6.4	14	5.6
17	32	68	39	58	106	201	188	102	26	5.5	13	7.9
18	30	62	38	49	221	188	182	93	26	5.0	17	11
19	26	52	36	41	215	210	188	89	26	5.1	18	11
20	22	46	33	37	183	237	222	81	22	5.6	24	11
21	20	43	32	34	160	237	211	73	20	5.5	17	10
22	18	40	29	32	155	294	171	69	19	4.8	14	17
23	17	39	28	33	146	253	155	73	16	4.9	14	12
24	16	36	32	123	152	207	228	78	15	8.4	12	12
25	20	32	37	131	147	185	415	75	15	9.1	9.8	12
26	25	31	47	111	133	161	333	66	15	8.0	7.6	11
27	28	29	48	91	118	154	260	60	15	6.9	6.5	9.1
28	27	28	45	70	108	206	229	64	18	5.4	15	7.0
29	25	50	42	68	---	214	202	65	16	4.3	15	6.4
30	23	46	38	63	---	181	185	89	18	16	12	6.4
31	22	---	36	93	---	151	---	104	---	6.8	27	---
TOTAL	954	1384	1021	1729	3645	7326	6144	2879	1151	280.2	439.0	309.1
MEAN	30.8	46.1	32.9	55.8	130	236	205	92.9	38.4	9.04	14.2	10.3
MAX	93	111	48	131	221	390	415	170	92	18	27	24
MIN	11	18	18	25	76	110	122	60	15	4.3	4.4	5.6
CAL YR 1982	TOTAL	26607.0	MEAN	72.9	MAX	580	MIN	8.3				
WTR YR 1983	TOTAL	27261.3	MEAN	74.7	MAX	415	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 downstream from Washington Street Bridge at Canton, 200 ft downstream from Forge Pond Dam, and 900 ft downstream from Massapoag Brook.

DRAINAGE AREA.--27.2 mi².

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 Massachusetts Department of Public Works datum.

REMARKS.--Records good except those above 200 ft³/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.--31 years, 51.5 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 495 ft³/s Apr. 11, gage height, 4.44 ft, from rating curve extended above 140 ft³/s; minimum daily, 7.0 ft³/s Aug. 2, 3.

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	10	26	49	35	111	92	78	128	86	18	7.7	31
2	9.5	23	49	35	89	224	73	108	74	16	7.0	22
3	8.7	23	46	34	124	277	82	108	65	15	7.0	17
4	8.2	23	44	32	118	198	108	101	79	14	9.0	14
5	11	60	41	30	94	164	90	94	88	13	35	12
6	9.3	63	41	39	90	147	76	76	64	15	23	10
7	8.2	39	41	45	91	140	72	66	52	17	18	9.3
8	25	31	42	41	113	142	77	65	45	15	14	8.6
9	140	28	42	36	104	198	108	63	41	14	12	8.0
10	90	24	46	34	90	231	110	60	40	13	12	7.5
11	61	23	44	73	80	223	365	54	38	11	11	7.4
12	41	22	42	74	77	285	253	54	35	11	29	7.3
13	32	87	43	58	78	250	200	51	32	11	49	8.6
14	28	106	39	50	77	203	169	49	28	11	23	8.5
15	24	66	41	48	73	171	158	47	29	10	16	7.8
16	25	59	57	70	70	149	135	50	33	15	14	14
17	25	51	70	69	78	116	146	81	29	18	12	21
18	20	52	55	58	156	118	131	70	24	18	13	28
19	21	56	48	51	129	136	140	59	23	18	22	24
20	28	52	47	46	101	149	160	48	22	17	18	22
21	51	50	47	45	92	143	133	54	19	17	13	20
22	31	49	44	43	93	211	116	48	18	17	11	50
23	23	53	41	52	93	160	107	56	15	15	9.7	34
24	24	60	46	178	101	133	175	70	15	13	9.1	19
25	31	46	55	119	101	121	341	63	15	12	8.6	16
26	55	36	66	88	98	111	227	54	15	11	7.9	14
27	34	34	59	77	95	104	180	47	15	9.4	7.6	13
28	30	32	52	69	91	131	166	52	19	8.3	15	12
29	53	58	45	66	---	112	150	49	25	7.5	23	11
30	37	59	39	65	---	86	140	72	21	7.4	17	10
31	31	---	36	98	---	82	---	106	---	7.4	30	---
TOTAL	1024.9	1391	1457	1858	2707	5007	4466	2103	1104	415.0	503.6	487.0
MEAN	33.1	46.4	47.0	59.9	96.7	162	149	67.8	36.8	13.4	16.2	16.2
MAX	140	106	70	178	156	285	365	128	88	18	49	50
MIN	8.2	22	36	30	70	82	72	47	15	7.4	7.0	7.3
CAL YR 1982	TOTAL	21127.2	MEAN	57.9	MAX	506	MIN	6.0				
WTR YR 1983	TOTAL	22523.5	MEAN	61.7	MAX	365	MIN	7.0				

01105585 TOWN BROOK AT QUINCY, MA

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

DRAINAGE AREA.--4.25 mi².

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, from topographic map.

REMARKS.--Records fair except those for periods of no gage-height record, June 26 to July 25 and Sept. 2-30, which are poor. Diurnal fluctuation caused by plant upstream. Flow regulated by Old Quincy Reservoir 2.2 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--11 years, 8.68 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 355 ft³/s Aug. 29, gage height, 7.03 ft; minimum daily, 0.97 ft³/s Aug. 26.

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	1.1	1.8	9.8	2.9	11	18	15	22	3.3	2.0	5.0	6.4
2	1.1	1.9	9.3	2.8	9.9	105	14	21	3.2	4.5	2.4	4.0
3	1.3	1.8	9.2	2.9	24	40	26	21	2.9	2.0	1.7	3.0
4	1.3	2.0	8.2	2.7	14	23	18	21	12	2.0	25	2.3
5	1.3	19	8.4	2.6	12	18	14	20	3.9	3.5	7.1	2.0
6	1.2	2.9	5.1	9.5	11	16	14	19	3.0	3.0	2.3	1.7
7	1.3	2.3	1.4	3.4	15	16	13	18	2.5	2.0	1.8	1.6
8	19	2.0	1.6	2.8	17	21	23	18	2.6	2.1	1.6	1.5
9	34	2.1	1.7	2.8	13	51	19	16	2.5	3.5	1.8	1.4
10	3.4	2.0	1.7	2.7	11	70	65	11	2.5	2.0	1.6	1.3
11	2.6	1.9	1.6	16	11	38	87	11	2.5	1.9	4.7	1.2
12	2.3	1.7	1.6	3.7	11	124	26	11	2.0	1.8	24	1.1
13	7.7	39	1.7	3.4	11	54	21	11	2.2	1.7	2.6	1.1
14	13	4.7	1.8	3.2	10	38	18	10	2.1	1.6	1.5	1.3
15	13	7.4	2.3	13	10	30	17	10	2.7	1.6	1.2	1.0
16	16	3.7	9.1	25	10	24	19	15	2.2	1.5	1.1	1.0
17	15	3.1	2.6	7.8	36	20	27	13	2.0	1.3	1.1	8.0
18	13	2.7	1.8	9.7	38	19	16	7.5	1.9	1.5	3.4	2.0
19	8.8	2.6	1.8	9.8	19	43	23	2.9	1.9	1.2	1.5	1.5
20	1.9	2.2	2.0	9.8	15	25	20	4.7	6.2	1.0	1.3	1.3
21	1.9	2.1	2.2	9.8	15	50	16	3.0	2.2	5.0	1.1	1.2
22	2.1	1.8	2.0	10	15	35	16	2.5	2.2	13	1.1	25
23	2.0	1.8	2.1	32	16	23	19	10	2.3	11	1.2	3.0
24	2.0	1.9	4.6	32	17	18	79	4.4	2.3	8.0	1.3	2.0
25	7.4	1.9	5.6	15	16	17	49	2.3	2.0	8.5	1.1	1.5
26	6.7	1.7	4.0	12	14	17	29	2.1	10	9.8	.97	1.3
27	2.4	1.6	3.1	11	13	16	25	4.5	4.0	9.9	11	1.1
28	2.2	2.5	2.6	10	13	32	22	2.5	4.6	9.2	33	1.0
29	2.0	8.8	2.4	10	---	17	23	2.2	6.0	6.0	63	1.0
30	2.0	4.0	2.8	11	---	16	22	24	3.0	2.5	4.8	1.0
31	1.9	---	2.7	23	---	15	---	5.1	---	4.0	21	---
TOTAL	190.9	134.9	116.8	312.3	427.9	1049	795	345.7	102.7	128.6	232.27	82.8
MEAN	6.16	4.50	3.77	10.1	15.3	33.8	26.5	11.2	3.42	4.15	7.49	2.76
MAX	34	39	9.8	32	38	124	87	24	12	13	63	25
MIN	1.1	1.6	1.4	2.6	9.9	15	13	2.1	1.9	1.0	.97	1.0
CAL YR 1982	TOTAL	3751.88	MEAN	10.3	MAX	163	MIN	.98				
WTR YR 1983	TOTAL	3918.87	MEAN	10.7	MAX	124	MIN	.97				

01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA

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

DRAINAGE AREA.--4.29 mi².

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, from topographic map.

REMARKS.--Records fair below 60 ft³/s, poor above. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--17 years, 9.31 ft³/s, 29.47 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 16	0200	a91	3.38	Mar. 12	1600	a206	3.96
Jan. 23	2330	a93	3.39	Mar. 22	0630	a222	4.02
Mar. 2	2000	a*323	4.36	Apr. 11	1145	a246	4.11
Mar. 10	1715	a164	3.78	Apr. 25	0615	a217	4.00

a From rating curve extended above 51 ft³/s.

Minimum discharge, 0.29 ft³/s Aug. 9.

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	1.0	1.9	5.7	6.6	12	15	12	11	13	2.1	.59	7.0
2	.81	1.9	5.5	6.4	9.4	190	11	11	8.9	1.9	.65	4.9
3	.74	1.9	5.2	6.3	15	149	16	10	6.9	1.8	.63	4.0
4	.68	2.1	5.0	5.8	16	43	26	9.8	11	1.7	1.6	3.4
5	.66	3.7	5.0	5.6	11	26	16	9.3	12	1.5	1.8	3.0
6	.68	3.9	5.9	8.0	8.5	18	12	8.7	8.0	2.7	.79	2.8
7	.59	3.4	5.4	9.7	11	17	11	8.3	6.3	2.0	.70	2.4
8	4.0	2.9	5.3	8.0	17	17	12	8.0	5.6	1.7	.63	2.1
9	22	2.6	5.1	7.1	17	49	20	8.4	5.0	1.5	.45	2.0
10	14	2.4	4.8	6.7	17	126	34	8.3	4.5	1.2	.48	1.8
11	5.7	2.5	4.6	20	16	99	199	7.3	4.4	1.2	.43	1.6
12	3.7	2.5	4.7	17	15	170	50	7.0	4.0	1.0	5.8	1.6
13	3.1	9.6	5.1	11	15	105	20	6.7	3.6	1.1	5.5	2.8
14	3.3	13	5.4	8.3	14	39	14	7.1	3.3	.97	2.5	1.9
15	2.6	7.7	5.2	9.6	11	25	12	6.9	3.6	.97	1.4	1.6
16	2.3	6.1	9.3	79	8.9	19	12	7.9	6.9	.92	.97	1.5
17	2.1	5.3	14	44	15	16	23	13	5.6	.83	1.1	1.8
18	1.9	4.6	10	18	35	14	17	9.1	4.3	.83	1.6	2.1
19	1.7	4.1	8.0	16	33	27	15	7.2	3.7	.79	1.9	1.7
20	1.6	3.9	7.9	12	28	35	19	7.5	3.7	.74	1.6	1.4
21	1.7	3.9	7.3	10	20	53	15	8.8	3.3	.82	1.4	1.4
22	1.9	3.7	7.2	8.6	16	159	12	7.3	2.8	1.3	1.4	6.7
23	1.9	3.9	6.9	15	16	44	10	9.8	2.5	.83	1.4	3.1
24	1.9	4.0	7.9	50	20	23	45	13	2.2	1.2	1.5	2.4
25	2.3	3.9	11	28	20	18	158	9.6	5.0	1.3	1.5	1.9
26	4.4	3.8	18	13	15	15	43	7.3	3.1	1.2	1.4	1.7
27	3.6	3.5	13	11	13	13	24	6.9	2.4	.96	1.6	1.5
28	2.9	3.8	10	8.9	12	25	16	8.8	3.5	.78	9.3	1.4
29	2.3	7.4	8.6	8.0	---	20	13	7.3	3.8	.64	21	1.2
30	2.3	6.8	7.6	7.8	---	15	12	16	2.8	.66	9.4	1.2
31	2.1	---	7.0	14	---	13	---	27	---	.63	8.6	---
TOTAL	100.46	130.7	231.6	479.4	456.8	1597	899	294.3	155.7	37.77	89.62	73.9
MEAN	3.24	4.36	7.47	15.5	16.3	51.5	30.0	9.49	5.19	1.22	2.89	2.46
MAX	22	13	18	79	35	190	199	27	13	2.7	21	7.0
MIN	.59	1.9	4.6	5.6	8.5	13	10	6.7	2.2	.63	.43	1.2
CFSM	.76	1.02	1.74	3.61	3.80	12.0	6.99	2.21	1.21	.28	.67	.57
IN.	.87	1.13	2.01	4.16	3.96	13.84	7.79	2.55	1.35	.33	.78	.64
CAL YR 1982	TOTAL	3923.71	MEAN	10.7	MAX	322	MIN	.56	CFSM	2.49	IN	34.02
WTR YR 1983	TOTAL	4546.25	MEAN	12.5	MAX	199	MIN	.43	CFSM	2.91	IN	39.41

01105730 INDIAN HEAD RIVER AT HANOVER, MA

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

DRAINAGE AREA.--30.3 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records 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.--17 years, 62.4 ft³/s 27.97 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	0300	*716	5.47	Apr. 11	1715	547	4.94
Mar. 12	2330	621	5.18	Apr. 25	1200	611	5.15
Mar. 22	1330	550	4.95				

Minimum discharge, 0.45 ft³/s Sept. 12; minimum daily, 2.4 ft³/s July 31.

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	14	26	85	51	120	117	107	118	134	19	3.1	19
2	12	26	75	51	150	445	101	108	93	15	5.3	12
3	11	25	65	46	210	669	117	100	72	13	4.7	12
4	10	26	58	35	180	415	190	97	94	12	5.0	13
5	9.7	44	54	25	150	245	157	91	121	12	8.7	8.0
6	8.7	58	56	68	140	186	123	80	86	22	7.1	6.2
7	8.0	46	60	72	150	162	106	72	68	22	7.3	5.8
8	14	38	56	58	163	158	108	66	58	17	6.1	5.3
9	192	33	50	51	146	250	176	68	50	13	4.7	4.8
10	193	30	45	63	122	421	165	65	44	11	4.5	4.5
11	116	28	40	118	96	460	498	61	40	9.4	4.9	4.2
12	70	28	37	90	71	575	413	59	37	8.1	24	2.5
13	52	70	35	68	83	549	240	55	33	7.5	40	7.5
14	51	145	33	55	78	350	176	66	31	7.1	27	5.6
15	49	115	32	65	73	236	147	56	28	6.8	16	6.2
16	40	94	55	75	71	194	132	70	26	6.1	11	4.5
17	35	73	75	80	80	169	171	109	27	6.0	9.0	5.6
18	30	58	70	75	210	149	161	83	19	5.3	8.6	7.0
19	28	51	65	60	220	182	142	65	24	5.0	11	6.5
20	26	46	60	50	178	226	170	60	26	4.6	8.9	8.4
21	26	42	56	40	150	233	149	66	25	3.1	7.9	8.9
22	24	41	57	33	140	516	124	58	24	12	6.4	11
23	23	40	51	80	137	374	108	68	15	10	5.8	14
24	22	37	55	200	163	230	195	71	20	7.4	5.0	14
25	24	35	74	170	155	179	592	63	19	8.5	4.7	8.7
26	46	34	102	140	133	151	417	54	19	8.1	5.5	6.9
27	46	34	87	110	114	134	250	53	18	5.0	7.1	6.1
28	36	45	73	100	108	173	187	68	19	3.2	13	5.2
29	32	70	74	90	---	164	155	58	24	2.8	23	4.9
30	29	95	64	80	---	137	134	70	22	2.7	28	4.8
31	27	---	54	100	---	118	---	163	---	2.4	21	---
TOTAL	1304.4	1533	1853	2399	3791	8567	5911	2341	1316	287.1	344.3	233.1
MEAN	42.1	51.1	59.8	77.4	135	276	197	75.5	43.9	9.26	11.1	7.77
MAX	193	145	102	200	220	669	592	163	134	22	40	19
MIN	8.0	25	32	25	71	117	101	53	15	2.4	3.1	2.5
CFSM	1.39	1.69	1.97	2.55	4.46	9.11	6.50	2.49	1.45	.31	.37	.26
IN.	1.60	1.88	2.27	2.95	4.65	10.52	7.26	2.87	1.62	.35	.42	.29
CAL YR 1982	TOTAL	25790.6	MEAN	70.7	MAX	945	MIN	6.1	CFSM	2.33	IN	31.66
WTR YR 1983	TOTAL	29879.9	MEAN	81.9	MAX	669	MIN	2.4	CFSM	2.70	IN	36.68

01105870 JONES RIVER AT KINGSTON, MA

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

DRAINAGE AREA.--15.9 mi², revised, excludes 4.09 mi² 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 National Geodetic Vertical Datum of 1929 (levels by Massachusetts Department of Public Works).

REMARKS.--Records poor. Flow regulated by pond upstream. Flow affected at times during springs of 1968-76, 1978-79 by wastage from 4.09 mi² 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.--17 years, 31.5 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 266 ft³/s Mar. 12, gage height, 4.36 ft; minimum daily, 11 ft³/s Oct. 4.

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	14	19	48	19	50	58	71	78	120	37	20	39
2	14	18	46	19	70	168	61	74	100	33	21	33
3	13	18	42	22	90	222	63	70	90	31	20	27
4	11	18	44	24	105	170	86	67	94	31	18	23
5	12	22	44	21	85	137	93	62	100	31	18	20
6	12	27	33	21	70	118	81	56	86	41	18	18
7	12	28	31	23	65	104	69	54	70	47	18	19
8	15	27	33	23	95	84	67	52	60	42	18	18
9	61	24	33	23	85	132	85	49	50	36	18	17
10	87	24	30	23	77	197	91	47	40	31	18	17
11	82	24	26	30	64	215	169	45	38	31	16	13
12	58	24	21	34	47	254	152	43	33	29	29	14
13	42	29	21	34	52	243	125	42	31	30	30	13
14	42	41	22	33	59	180	100	45	31	28	24	12
15	29	54	22	29	66	148	88	50	29	28	20	13
16	29	59	37	60	69	136	82	62	27	27	17	12
17	34	58	54	62	63	123	91	77	27	27	16	15
18	27	50	57	59	100	110	88	68	27	26	16	17
19	27	50	55	41	113	112	86	62	27	26	23	15
20	24	52	44	32	102	133	90	58	26	26	24	14
21	20	52	44	27	84	126	88	54	26	25	22	14
22	19	36	35	26	82	136	82	52	26	24	19	24
23	20	33	33	22	72	126	76	50	26	23	17	24
24	20	33	33	70	73	113	104	48	24	22	18	17
25	20	25	33	95	78	102	212	48	30	22	17	16
26	23	26	33	85	78	89	170	48	34	21	17	16
27	24	26	33	75	65	80	130	47	33	20	18	13
28	24	26	34	65	56	93	105	41	32	19	24	13
29	23	27	34	55	---	99	88	42	36	19	41	14
30	21	43	32	45	---	92	82	59	37	19	36	14
31	20	---	28	40	---	82	---	139	---	19	32	---
TOTAL	879	993	1115	1237	2115	4182	2975	1789	1410	871	663	534
MEAN	28.4	33.1	36.0	39.9	75.5	135	99.2	57.7	47.0	28.1	21.4	17.8
MAX	87	59	57	95	113	254	212	139	120	47	41	39
MIN	11	18	21	19	47	58	61	41	24	19	16	12
CAL YR 1982	TOTAL	12087.1	MEAN	33.1	MAX	296	MIN	6.7				
WTR YR 1983	TOTAL	18763.0	MEAN	51.4	MAX	254	MIN	11				

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 upstream from bridge on U.S. Route 6, 0.8 mi northeast of North Harwich, 1.1 mi downstream from Hinckleys Pond, and 2 mi northwest of Harwich.

DRAINAGE AREA.--About 9.4 mi².

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

GAGE.--Water-stage recorder and crest-stage gage. Altitude of gage is 10 ft, 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.--17 years, 9.90 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75 ft³/s Feb. 12, 1983, gage height, 3.71 ft, from rating curve extended above 34 ft³/s; maximum gage height, 4.88 ft June 6, 1967; minimum discharge, 0.32 ft³/s Sept. 13-15, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 75 ft³/s Feb. 12, gage height, 3.71 ft; maximum gage height, 3.76 ft June 16; minimum discharge, 0.64 ft³/s Jan. 13-15, Aug. 4.

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	5.3	6.2	5.5	6.7	5.4	5.7	30	32	27	18	8.8	13
2	4.8	6.2	5.5	6.6	5.2	13	29	31	25	19	8.8	13
3	3.6	6.2	5.1	6.4	5.0	13	29	31	25	19	8.5	13
4	2.7	6.4	5.0	6.2	4.8	12	32	31	25	20	5.9	12
5	2.3	8.6	5.0	6.1	4.4	12	30	30	27	20	11	12
6	2.5	8.9	5.4	6.1	4.2	13	28	29	26	27	8.5	11
7	2.8	8.0	6.1	6.2	7.1	12	27	29	25	27	1.4	11
8	3.9	6.8	5.5	6.2	7.5	12	29	29	24	25	2.7	10
9	12	5.5	5.3	6.2	7.0	17	39	31	24	24	3.7	9.8
10	13	4.8	5.3	6.1	4.6	27	35	34	26	22	4.4	9.4
11	10	4.2	5.3	6.3	3.5	25	42	31	23	21	4.6	8.9
12	7.5	4.2	7.2	3.6	29	38	39	28	23	20	10	8.9
13	7.5	5.5	8.1	.90	2.4	51	37	25	22	19	9.9	8.3
14	7.2	6.4	7.0	.64	1.9	48	34	25	22	17	8.9	10
15	6.4	7.9	7.0	1.3	2.3	38	32	24	22	17	10	13
16	5.7	8.2	7.9	2.2	2.5	28	31	26	34	16	11	11
17	5.5	7.8	10	2.2	3.3	28	30	30	41	16	11	9.8
18	7.0	7.2	10	2.2	6.7	26	30	27	36	14	12	8.6
19	9.4	7.2	8.8	2.5	6.0	29	30	25	33	13	14	10
20	5.5	7.2	7.5	2.6	5.7	31	32	25	31	12	13	12
21	5.5	6.7	7.5	2.9	5.4	29	31	25	29	12	12	9.1
22	5.4	6.1	6.9	3.0	5.0	29	30	26	28	12	12	9.1
23	5.0	6.0	6.2	3.2	5.8	25	29	27	27	11	11	8.0
24	5.0	5.3	6.2	6.5	8.0	22	33	26	19	11	11	8.0
25	9.2	5.0	6.2	5.9	7.5	21	39	25	3.5	11	10	10
26	9.8	4.7	6.2	5.6	6.5	20	37	24	5.2	9.7	10	9.4
27	8.2	4.6	6.2	5.2	6.1	19	37	25	7.4	9.6	9.6	8.7
28	6.5	4.3	6.1	4.8	5.5	21	35	27	13	9.4	10	8.3
29	6.5	5.7	7.0	4.8	---	22	34	26	16	9.0	10	7.6
30	6.5	6.0	7.1	4.8	---	29	33	26	16	8.6	10	7.0
31	6.4	---	6.9	5.5	---	31	---	28	---	9.1	10	---
TOTAL	198.6	187.8	205.0	139.44	168.3	746.7	983	858	705.1	498.4	283.7	299.9
MEAN	6.41	6.26	6.61	4.50	6.01	24.1	32.8	27.7	23.5	16.1	9.15	10.0
MAX	13	8.9	10	6.7	29	51	42	34	41	27	14	13
MIN	2.3	4.2	5.0	.64	1.9	5.7	27	24	3.5	8.6	1.4	7.0
CAL YR 1982	TOTAL	2849.30	MEAN	7.81	MAX	31	MIN	2.3				
WTR YR 1983	TOTAL	5273.94	MEAN	14.4	MAX	51	MIN	.64				

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 downstream from Balcolm Street Bridge at West Mansfield, 2 mi upstream from Hodges Brook, and 3 mi southwest of Mansfield.

DRAINAGE AREA.--19.2 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those below 10 ft³/s, 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.--30 years, 32.7 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 225 ft³/s Apr. 25, gage height, 5.33 ft; minimum, 0.18 ft³/s Sept. 12; minimum daily, 0.22 ft³/s Sept. 16.

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	16	17	36	28	68	72	90	118	48	11	.97	5.0
2	18	17	34	29	68	107	84	105	43	7.5	1.6	4.0
3	16	17	32	29	87	151	86	96	40	5.6	1.0	3.1
4	17	17	32	28	104	150	93	90	40	4.2	3.1	2.4
5	20	26	31	27	98	150	87	84	41	3.3	11	1.5
6	21	31	34	30	92	137	81	76	36	3.9	6.8	1.2
7	16	28	33	35	98	124	76	69	32	4.5	8.9	2.0
8	12	25	29	33	109	115	76	64	31	4.2	7.1	.74
9	31	22	29	31	98	137	93	61	30	3.4	4.7	.60
10	50	23	28	29	84	148	102	56	27	2.4	2.9	.64
11	46	27	25	37	75	149	186	52	25	1.7	2.1	.58
12	35	23	25	44	68	170	183	50	23	1.4	8.8	.31
13	32	35	25	41	63	172	165	48	22	.95	15	.59
14	33	48	24	38	59	159	147	45	21	.57	14	.36
15	31	42	24	39	55	144	136	43	20	.48	11	.23
16	29	40	29	51	52	126	127	42	21	.55	8.5	.22
17	24	37	36	54	56	113	128	47	21	.39	7.4	.98
18	21	35	36	47	68	107	120	45	21	.28	11	4.1
19	19	33	37	40	107	123	120	41	19	.31	17	2.2
20	17	30	39	33	102	139	142	41	17	.41	14	1.2
21	17	28	35	27	97	132	130	42	16	1.0	10	.57
22	17	27	31	25	92	158	116	39	14	3.7	7.4	3.9
23	16	27	29	40	88	146	107	38	9.5	2.2	6.1	3.4
24	16	25	30	75	85	134	127	42	9.0	2.7	4.7	1.8
25	15	25	33	80	80	125	216	43	7.8	3.8	3.7	1.3
26	20	25	36	75	79	113	220	41	9.2	2.3	3.3	1.2
27	23	25	35	69	76	103	208	39	9.7	1.7	2.7	1.2
28	21	26	35	64	72	116	185	39	15	1.8	4.8	.81
29	19	35	35	60	---	118	155	37	17	1.6	5.8	.57
30	18	39	32	57	---	104	134	41	16	1.4	5.3	.57
31	17	---	30	64	---	96	---	52	---	1.2	5.4	---
TOTAL	703	855	979	1359	2280	4038	3920	1726	701.2	80.44	216.07	47.27
MEAN	22.7	28.5	31.6	43.8	81.4	130	131	55.7	23.4	2.59	6.97	1.58
MAX	50	48	39	80	109	172	220	118	48	11	17	5.0
MIN	12	17	24	25	52	72	76	37	7.8	.28	.97	.22

CAL YR 1982 TOTAL 14398.60 MEAN 39.4 MAX 225 MIN 1.4
WTR YR 1983 TOTAL 16904.98 MEAN 46.3 MAX 220 MIN .22

01109000 WADING RIVER NEAR NORTON, MA

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

DRAINAGE AREA.--42.4 mi².

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

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

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

REMARKS.--Records good. 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.--58 years, 73.3 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 3	1000	387	9.07	Apr. 11	1600	*825	10.09
Mar. 12	2300	361	8.87	Apr. 20	1600	365	8.33
Mar. 22	1500	339	8.69	Apr. 25	1400	676	9.62

Minimum discharge, 3.9 ft³/s July 20, 21.

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	16	31	105	57	161	155	155	236	165	26	5.9	11
2	17	29	89	53	159	264	143	210	136	24	5.7	11
3	20	28	78	50	228	372	144	193	116	20	5.4	11
4	20	29	73	48	261	311	183	183	119	17	6.1	9.3
5	20	46	69	45	224	272	168	176	141	15	8.0	8.6
6	21	87	72	51	176	252	147	159	121	17	16	8.3
7	22	80	82	61	174	233	127	143	103	16	18	7.5
8	22	64	74	63	190	218	127	133	88	13	15	6.5
9	54	54	65	58	211	273	189	124	79	11	12	6.3
10	111	47	59	52	180	305	207	112	72	10	11	5.9
11	94	44	56	73	140	304	671	108	64	9.5	9.5	5.7
12	76	47	53	103	125	338	588	104	57	10	17	5.0
13	61	81	49	91	120	335	399	99	50	9.3	30	5.9
14	54	188	45	75	115	290	331	95	44	8.2	33	5.9
15	51	166	44	68	105	262	290	91	43	7.8	26	6.0
16	47	141	57	81	103	238	265	95	55	7.4	20	5.2
17	42	117	96	104	112	215	275	118	47	6.6	14	5.1
18	37	100	93	105	219	197	264	116	44	6.0	14	5.4
19	32	87	80	76	269	223	266	102	40	5.3	35	7.6
20	28	78	75	58	239	272	353	94	37	4.5	43	8.5
21	27	71	77	51	217	253	314	98	33	4.0	28	7.3
22	25	65	69	46	209	327	263	95	30	5.2	20	11
23	24	61	63	54	202	292	233	93	27	5.5	16	16
24	23	58	62	226	208	250	267	97	23	6.6	13	15
25	23	55	71	242	201	228	620	97	19	7.6	12	10
26	30	52	84	207	182	210	528	90	17	7.8	11	8.0
27	35	50	81	171	164	189	415	84	17	7.3	10	6.9
28	36	47	75	140	156	213	359	83	23	9.0	10	6.8
29	34	81	72	123	---	224	308	81	33	9.3	10	6.1
30	31	122	68	111	---	198	266	98	31	7.8	11	5.7
31	30	---	61	139	---	174	---	179	---	6.8	11	---
TOTAL	1163	2206	2197	2882	5050	7887	8865	3786	1874	320.5	496.6	238.5
MEAN	37.5	73.5	70.9	93.0	180	254	296	122	62.5	10.3	16.0	7.95
MAX	111	188	105	242	269	372	671	236	165	26	43	16
MIN	16	28	44	45	103	155	127	81	17	4.0	5.4	5.0
CAL YR 1982	TOTAL	32258.9	MEAN	88.4	MAX	600	MIN	7.9				
WTR YR 1983	TOTAL	36965.6	MEAN	101	MAX	671	MIN	4.0				

01109060 THREEMILE RIVER AT NORTH DIGHTON, MA

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

DRAINAGE AREA.--83.8 mi².

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 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.--17 years, 173 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 4	0130	898	5.56	Apr. 12	0615	*1560	6.73
Mar. 13	1115	866	5.49	Apr. 21	0315	737	5.05
Mar. 23	0200	790	5.31	Apr. 26	0715	1270	6.19

Minimum discharge, 20 ft³/s Sept. 9, 10-12.

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	50	68	183	122	250	302	350	516	346	61	27	31
2	54	65	179	114	261	499	316	457	317	56	28	30
3	56	65	161	107	296	800	313	409	260	53	26	29
4	58	65	152	100	400	859	359	377	239	48	30	28
5	60	79	144	94	500	692	381	355	249	45	33	27
6	64	105	138	101	450	586	350	333	256	64	34	25
7	68	123	138	115	380	522	310	301	228	55	41	24
8	75	129	137	117	340	471	295	275	197	46	40	24
9	80	117	133	117	360	535	358	260	169	41	37	22
10	90	107	122	111	359	678	464	240	151	38	33	21
11	135	98	113	133	299	730	1130	225	134	36	32	20
12	180	91	111	158	251	814	1480	215	123	34	47	21
13	165	127	95	178	236	853	1100	207	110	34	58	24
14	130	176	91	175	248	753	809	202	98	34	59	24
15	110	252	96	158	235	627	660	195	90	33	56	23
16	100	297	109	200	220	545	569	206	93	33	49	22
17	90	268	142	220	230	480	552	238	97	31	42	23
18	80	239	159	230	367	427	544	241	90	29	42	24
19	74	213	159	190	483	448	555	227	84	28	62	23
20	68	186	146	150	527	536	667	205	78	28	65	22
21	66	161	138	120	467	593	717	202	71	27	63	23
22	63	148	134	110	425	718	616	197	65	32	47	39
23	61	136	126	100	398	762	526	193	60	29	41	37
24	58	128	120	200	403	629	570	188	55	30	36	34
25	57	122	127	400	401	525	1020	186	51	36	33	33
26	72	116	147	450	376	459	1230	182	48	33	31	28
27	80	109	150	430	338	410	1010	170	46	30	30	26
28	80	102	148	350	308	428	828	164	56	28	29	25
29	79	142	143	280	---	468	703	157	75	29	29	24
30	74	166	137	240	---	445	594	212	71	29	29	22
31	70	---	131	240	---	390	---	298	---	28	29	---
TOTAL	2547	4200	4209	5810	9808	17984	19376	7833	4007	1158	1238	778
MEAN	82.2	140	136	187	350	580	646	253	134	37.4	39.9	25.9
MAX	180	297	183	450	527	859	1480	516	346	64	65	39
MIN	50	65	91	94	220	302	295	157	46	27	26	20
CAL YR 1982	TOTAL	68751	MEAN 188	MAX 1270	MIN 41							
WTR YR 1983	TOTAL	78948	MEAN 216	MAX 1480	MIN 20							

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 upstream from twin culverts on Center Street and 1.8 mi northwest of Dighton.

DRAINAGE AREA.--10.6 mi².

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, 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.--17 years, 22.8 ft³/s, 29.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s Mar. 18, 1968, gage height, 7.51 ft; no flow at times in water years 1966, 1969, 1974, 1980, 1981, 1983.

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 24	1815	195	4.19	Apr. 11	1200	*655	6.36
Mar. 2	2345	295	4.76	Apr. 25	1145	331	4.95
Mar. 12	1800	213	4.29				

No flow part of Sept. 21, 22.

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	5.2	8.3	39	16	43	43	28	33	94	3.5	.45	.87
2	4.7	7.9	28	15	37	201	26	30	50	2.8	.45	.76
3	4.0	7.5	22	14	52	255	32	28	31	2.4	.40	.65
4	3.8	7.5	19	13	73	126	59	27	31	2.0	.40	.61
5	3.6	13	17	11	50	69	52	27	41	1.7	.52	.59
6	3.4	19	18	15	33	49	38	25	35	7.8	.80	.53
7	3.3	19	21	23	26	42	31	21	26	6.8	1.9	.39
8	3.9	16	20	24	36	41	31	19	21	3.5	10	.24
9	35	13	17	19	43	95	70	19	17	2.7	3.9	.18
10	57	11	15	16	38	130	98	18	14	2.1	2.5	.13
11	45	9.5	14	27	32	112	553	17	13	1.8	2.0	.09
12	29	9.1	13	40	24	187	271	17	11	1.6	7.9	.07
13	21	25	12	31	23	162	104	16	9.3	1.4	12	.06
14	18	53	10	23	23	85	65	16	7.9	1.3	7.2	.07
15	17	48	10	20	22	56	43	15	7.0	1.2	4.9	.07
16	15	42	22	46	22	44	36	25	6.6	1.0	3.2	.03
17	12	32	41	51	29	37	52	46	6.0	.81	2.3	.01
18	11	25	37	37	117	33	58	43	5.9	.70	2.2	.02
19	9.4	20	27	23	152	53	66	29	5.7	.62	5.4	.05
20	8.7	17	22	18	98	85	128	22	5.1	.55	3.9	.05
21	8.4	15	20	14	70	75	89	22	4.0	.49	2.3	.02
22	8.0	14	18	12	59	145	56	22	3.6	.62	1.8	.16
23	7.4	14	16	18	58	92	43	21	3.2	.60	1.8	.20
24	7.0	13	17	151	77	54	85	22	2.8	.59	1.6	.19
25	6.7	12	23	135	73	41	310	20	2.3	.68	1.5	.19
26	10	12	30	68	56	35	169	17	1.8	.78	1.4	.19
27	12	10	30	43	44	30	78	15	1.8	.82	1.4	.19
28	13	9.8	24	33	39	47	55	15	2.8	.82	1.3	.17
29	11	28	21	29	---	57	43	14	7.1	.80	1.1	.13
30	9.8	49	19	26	---	42	37	54	5.0	.69	1.0	.13
31	8.9	---	17	38	---	33	---	142	---	.54	.90	---
TOTAL	412.2	579.6	659	1049	1449	2556	2806	857	471.9	53.71	88.42	7.04
MEAN	13.3	19.3	21.3	33.8	51.8	82.5	93.5	27.6	15.7	1.73	2.85	.23
MAX	57	53	41	151	152	255	553	142	94	7.8	12	.87
MIN	3.3	7.5	10	11	22	30	26	14	1.8	.49	.40	.01
CFSM	1.26	1.82	2.01	3.19	4.89	7.78	8.82	2.60	1.48	.16	.27	.02
IN.	1.45	2.03	2.31	3.68	5.08	8.97	9.85	3.01	1.66	.19	.31	.02
CAL YR 1982	TOTAL	9943.98	MEAN	27.2	MAX	295	MIN	.90	CFSM	2.57	IN	34.89
WTR YR 1983	TOTAL	10988.87	MEAN	30.1	MAX	553	MIN	.01	CFSM	2.84	IN	38.56

01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA

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

DRAINAGE AREA.--25.5 mi².

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

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

REMARKS.--Records good. Some regulation by Lake Quinsigamond 2.3 mi upstream and by ponds upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 41.2 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 260 ft³/s Apr. 25, gage height, 3.00 ft; minimum daily, 1.8 ft³/s Aug. 1.

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	12	8.5	19	17	42	47	89	119	78	20	1.8	51
2	11	8.0	18	16	41	89	83	113	70	18	2.9	43
3	8.4	7.9	17	17	73	138	84	116	62	17	2.5	34
4	7.4	9.2	18	15	98	138	99	108	65	15	4.9	27
5	7.5	24	17	14	95	135	95	94	67	14	6.7	22
6	6.9	26	17	20	84	118	86	95	63	18	6.3	18
7	6.5	23	17	22	85	105	79	80	58	16	7.5	16
8	8.4	20	15	22	83	99	78	71	56	14	6.2	13
9	41	19	16	21	75	131	84	72	58	13	5.3	10
10	39	16	13	20	66	140	89	68	50	11	4.2	8.5
11	31	14	13	66	59	152	181	64	44	9.0	3.4	7.8
12	26	13	13	86	61	205	179	60	39	8.7	7.0	7.0
13	23	33	13	76	57	199	157	58	36	9.1	10	6.4
14	23	43	11	66	53	165	137	56	32	7.7	8.5	5.5
15	20	42	11	61	50	147	122	54	33	8.4	7.3	4.5
16	18	38	14	63	48	140	122	58	38	9.8	6.4	19
17	16	32	20	56	49	131	147	65	36	8.6	5.7	60
18	12	29	18	51	60	121	124	60	32	7.0	9.2	56
19	10	27	17	46	61	179	136	56	31	6.2	14	47
20	9.4	24	17	41	58	210	191	52	28	5.7	13	40
21	9.5	23	17	36	56	184	179	55	25	5.4	10	33
22	9.0	21	16	33	55	231	172	52	24	7.7	7.0	38
23	7.7	20	15	35	54	197	144	58	22	5.0	6.0	35
24	7.1	20	17	50	54	189	145	68	20	4.3	5.0	30
25	7.3	18	18	51	53	169	233	65	18	4.6	4.0	25
26	11	16	22	50	51	150	240	58	16	4.2	3.2	22
27	10	17	20	47	48	127	205	60	15	3.6	2.7	20
28	9.6	14	19	44	47	135	170	64	21	2.8	9.9	17
29	9.1	20	20	41	---	132	144	59	27	2.4	29	16
30	8.5	21	19	38	---	112	130	74	23	2.2	40	15
31	8.3	---	17	42	---	96	---	83	---	2.1	48	---
TOTAL	433.6	646.6	514	1263	1716	4511	4124	2215	1187	280.5	297.6	746.7
MEAN	14.0	21.6	16.6	40.7	61.3	146	137	71.5	39.6	9.05	9.60	24.9
MAX	41	43	22	86	98	231	240	119	78	20	48	60
MIN	6.5	7.9	11	14	41	47	78	52	15	2.1	1.8	4.5
CAL YR 1982	TOTAL	17108.5	MEAN	46.9	MAX	420	MIN	3.2				
WTR YR 1983	TOTAL	17935.0	MEAN	49.1	MAX	240	MIN	1.8				

01111200 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 downstream from West Hill Dam, 2.2 mi northeast of Uxbridge, and 3.5 mi upstream from mouth.

DRAINAGE AREA.--27.9 mi².

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

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

REMARKS.--Records good below 400 ft³/s, fair above. Flow regulated by West Hill Reservoir, usable capacity, 542,000,000 ft³. See table below for figures of monthend contents. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 47.5 ft³/s, 23.12 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 601 ft³/s Mar. 24, 1983, gage height, about 4.25 ft (mean of surge); no flow for part of Aug. 17, 1967, caused by unusual regulation; minimum daily discharge, 1.1 ft³/s Sept. 12, 1963, Aug. 12, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 601 ft³/s Mar. 24, gage height, about 4.25 ft (mean of surge); minimum, 4.0 ft³/s Oct. 7, 8; minimum daily, 4.1 ft³/s Oct. 7.

REVISIONS.--The maximum discharge for the water year 1982 has been revised to 569 ft³/s June 10, 1982, gage height, about 4.15 ft (mean of surge), superseding figure published in the report for 1982.

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	5.6	9.5	27	23	63	74	199	192	151	19	4.2	7.9		
2	5.5	9.5	23	22	43	85	135	139	129	16	4.2	7.9		
3	5.2	9.3	22	22	80	188	105	115	103	14	4.2	7.4		
4	4.2	9.5	22	19	236	239	155	106	85	13	4.9	6.9		
5	4.2	18	22	18	283	238	188	86	85	12	9.7	6.2		
6	4.2	31	20	22	219	161	179	75	87	12	9.9	5.8		
7	4.1	25	20	33	138	134	156	79	81	12	9.9	5.5		
8	5.0	18	19	33	101	133	123	81	65	12	9.5	5.3		
9	28	16	17	30	92	139	109	81	53	10	7.9	4.9		
10	36	16	16	27	82	221	83	79	43	9.4	5.7	4.4		
11	23	17	16	49	78	214	80	75	40	8.3	4.5	4.2		
12	15	14	16	78	72	62	143	70	38	8.2	5.9	4.2		
13	11	25	16	90	68	204	341	68	34	8.1	11	4.2		
14	12	50	14	90	69	339	328	62	28	7.6	11	4.2		
15	14	58	14	80	68	368	153	60	25	7.6	8.7	4.2		
16	14	47	18	69	66	300	44	58	33	7.6	7.2	4.2		
17	13	32	32	61	66	350	88	59	36	7.5	6.0	4.2		
18	13	31	30	52	109	255	178	63	32	7.1	6.8	4.2		
19	11	28	24	42	134	8.5	179	64	29	5.8	13	4.2		
20	10	25	22	36	129	93	197	64	26	5.4	14	4.2		
21	9.3	22	22	35	112	148	337	61	25	5.4	12	4.2		
22	9.2	21	20	34	100	173	362	60	22	5.4	9.2	5.8		
23	9.2	20	19	35	97	429	195	58	20	5.4	7.2	7.2		
24	9.2	19	20	56	80	498	130	61	18	5.4	6.4	7.3		
25	8.9	19	24	76	78	417	179	71	17	5.4	5.6	6.9		
26	11	17	30	93	81	395	357	74	16	5.4	5.3	5.8		
27	13	15	32	90	79	285	436	75	16	5.4	5.2	5.6		
28	13	14	31	85	77	185	370	76	17	5.4	5.9	5.3		
29	11	21	31	77	---	221	322	76	24	4.7	7.2	5.2		
30	11	30	28	68	---	219	257	76	24	4.7	7.3	4.8		
31	10	---	25	62	---	209	---	112	---	4.4	7.5	---		
TOTAL	352.8	686.8	692	1607	2900	6984.5	6108	2476	1402	259.6	237.0	162.3		
MEAN	11.4	22.9	22.3	51.8	104	225	204	79.9	46.7	8.37	7.65	5.41		
MAX	36	58	32	93	283	498	436	192	151	19	14	7.9		
MIN	4.1	9.3	14	18	43	8.5	44	58	16	4.4	4.2	4.2		
(†)	1.3	3.0	2.6	8.0	10.8	68.4	34.0	19.4	2.4	.9	1.3	.8		
MEAN†	11.5	23.6	22.2	53.8	105	247	190	74.4	40.2	7.81	7.79	5.22		
CFSM†	.41	.85	.80	1.93	3.76	8.85	6.81	2.67	1.44	.28	.28	.19		
IN.†	.48	.94	.92	2.23	3.91	10.20	7.61	3.08	1.61	.32	.32	.21		
CAL YR 1982	TOTAL	23857.5	MEAN	65.4	MAX	556	MIN	4.1	MEAN†	65.3	CFSM†	2.34	IN†	31.76
WTR YR 1983	TOTAL	23868.0	MEAN	65.4	MAX	498	MIN	4.1	MEAN†	65.4	CFSM†	2.34	IN†	31.82

† 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.

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 above railroad bridge, 0.8 mi southeast of Millville, and 1.4 mi upstream from Branch River.

DRAINAGE AREA.--277 mi².

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to December 1980.

pH: July 1969 to December 1980.

WATER TEMPERATURES: July 1969 to December 1980.

DISSOLVED OXYGEN: July 1969 to December 1980.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	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 14...	0930	238	245	6.8	12.0	--	--	7.2	--	--	--
NOV 17...	1030	322	205	6.5	3.5	--	3.0	12.4	--	--	3.0
DEC 14...	1000	135	340	7.0	0.5	--	2.4	12.8	--	13	--
JAN 05...	1140	224	265	7.2	2.0	--	--	13.3	95	--	--
FEB 09...	1130	900	225	6.6	0.5	--	--	14.5	--	--	--
MAR 08...	1000	1210	182	7.3	3.0	15	2.2	12.9	96	21	1.0
APR 05...	1245	1140	148	6.8	8.0	--	--	11.0	--	--	--
MAY 10...	1045	685	170	6.8	13.0	--	3.5	10.0	96	--	3.0
JUN 15...	1200	365	192	6.0	24.5	--	--	5.6	68	<10	--
JUL 13...	1030	141	285	6.5	23.0	--	--	5.9	70	--	1.0
AUG 03...	1000	114	345	6.8	25.0	--	<1.0	4.5	55	--	--
SEP 07...	0945	129	286	6.5	24.5	4	1.2	4.8	58	74	1.0

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	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)	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 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	17000	2800	330	32	19	10	1.8	22	57	1.8	2.7
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	10000	1100	59	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	24000	3400	3500	31	20	9.5	1.7	21	58	1.7	1.9
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	1400	93	42	35	19	11	1.9	20	53	1.5	2.4
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	25000	310	2600	--	--	--	--	--	--	--	--
AUG 03...	--	410	1900	54	36	17	2.7	41	60	2.5	5.0
SEP 07...	--	--	--	51	31	16	2.6	33	56	2.1	4.2

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	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 14...	--	--	--	--	--	--	--	--	--	--
NOV 17...	13	19	30	0.1	6.2	133	102	0.18	116	--
DEC 14...	--	--	--	--	--	--	--	--	--	8
JAN 05...	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 08...	11	16	35	0.1	6.5	99	100	0.13	323	4
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 10...	16	17	32	0.1	5.1	115	101	0.16	213	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--
AUG 03...	18	28	57	0.4	5.2	211	169	0.29	64.9	--
SEP 07...	20	23	46	--	--	--	137	0.19	47.6	10

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, AMMONIA DIS- SOLVED (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 14...	--	1.9	0.09	2.0	--	0.76	--	--	0.44	1.20
NOV 17...	--	0.78	0.02	0.8	0.78	0.86	0.85	1.1	0.34	1.20
DEC 14...	173	1.1	0.01	1.1	--	2.40	--	--	0.3	2.70
JAN 05...	--	0.98	0.02	1.0	--	2.30	--	--	--	2.10
FEB 09...	--	0.58	0.02	0.6	--	0.64	--	--	0.36	1.00
MAR 08...	113	0.58	0.02	0.6	0.62	0.54	0.54	0.7	0.26	0.8
APR 05...	--	0.48	0.02	0.5	--	0.52	--	--	0.08	0.6
MAY 10...	--	0.74	0.06	0.8	0.83	0.42	0.40	0.52	0.28	0.7
JUN 15...	--	1.6	0.15	1.8	--	0.42	--	--	0.58	1.00
JUL 13...	--	3.1	0.02	3.1	--	0.02	--	--	0.58	0.6
AUG 03...	--	4.4	0.00	4.4	4.5	0.02	0.00	--	--	--
SEP 07...	170	3.3	0.00	3.3	--	0.04	--	--	1.2	1.20

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	PHOS- PHATE, ORTHO, DIS- SOLVED (MG/L AS PO4)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 14...	3.2	14	0.30	0.92	--	0.24	--	--	--	--
NOV 17...	2.0	8.9	0.15	0.46	0.10	0.11	0.12	0.37	--	--
DEC 14...	3.8	17	0.33	1.0	--	0.22	--	--	--	--
JAN 05...	3.1	14	0.31	0.95	--	0.22	--	--	--	--
FEB 09...	1.6	7.1	0.16	0.49	--	0.07	--	--	--	--
MAR 08...	1.4	6.2	0.11	0.34	0.07	0.06	0.05	0.15	5	<1
APR 05...	1.1	4.9	0.15	0.46	--	0.08	--	--	--	--
MAY 10...	1.5	6.6	0.21	0.64	0.10	0.15	0.08	0.25	--	--
JUN 15...	2.8	12	0.27	0.83	--	0.26	--	--	--	--
JUL 13...	3.7	16	0.30	0.92	--	0.24	--	--	--	--
AUG 03...	4.4	19	--	--	0.38	0.39	0.35	1.1	--	--
SEP 07...	4.5	20	0.23	0.71	--	0.21	--	--	1	<1

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	40	--	2	24.00	<1.00	--	--	4	--	<1	<3.00
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	70	--	1	23.00	<1.00	--	--	2	--	3	<3.00
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	60	--	2	36.00	<0.50	--	--	1	--	2	<3.00
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	10	--	3	69.00	<0.50	--	--	2	--	<1	<3.00
SEP 07...	--	6	--	--	--	130	2	--	20	--	--

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (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)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	10	--	230	--	3	6.00	--	120	--	<0.1
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	8	--	150	--	14	<4.00	--	75	--	0.1
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	6	--	370	--	3	4.00	--	110	--	0.1
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	10	--	80	--	2	5.00	--	15	--	0.2
SEP 07...	20	--	530	--	8.00	--	--	80	--	<0.1	--

DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL 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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	<10	--	40	--	<1	--	--	60	<6.0	--	90
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	<10	--	18	--	<1	--	<1	60	<6.0	--	50
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	<10	--	11	--	<1	--	<1	70	<6.0	--	50
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	<10	--	43	--	<1	--	2	90	<6.0	--	40
SEP 07...	--	30	--	<1	--	<1.00	--	--	--	40	--

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<0.1	66	<1.0	<0.1	<0.01	<0.1	<0.1	4.0	<0.01	3.7	<0.01

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	2.1	<0.01	0.8	<0.01	2.8	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	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, TOT. IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1	<10

01111300 NIPMUC RIVER NEAR HARRISVILLE, RI

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

DRAINAGE AREA.--16.0 mi².

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

GAGE.--Water-stage recorder. Altitude of gage is 340 ft, 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.--19 years, 30.3 ft³/s, 25.72 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 3	1615	295	5.40	Mar. 22	0530	285	5.35
Mar. 2	2345	273	5.29	Apr. 11	0800	372	5.73
Mar. 12	1615	273	5.29	Apr. 20	0145	*676	6.50
Mar. 19	2115	372	5.73	Apr. 25	0115	506	6.14

Minimum discharge, 0.14 ft³/s Sept. 16-22.

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	1.3	4.1	15	12	37	47	56	62	64	6.8	.66	.50
2	1.2	4.1	12	11	39	158	51	57	45	5.1	.66	.50
3	1.2	4.6	11	11	193	217	58	53	35	4.3	.65	.41
4	1.1	7.9	11	10	171	127	88	54	52	3.3	.64	.35
5	1.1	32	9.7	10	87	86	64	58	61	3.3	.94	.32
6	1.1	30	8.6	18	62	73	53	49	42	3.3	.95	.30
7	.99	16	8.7	26	54	69	48	43	32	3.3	.89	.25
8	1.9	11	8.6	21	48	71	49	39	28	3.3	.76	.21
9	22	7.4	8.3	15	45	212	77	37	23	2.8	.50	.21
10	21	7.0	7.9	13	40	180	74	36	21	2.6	.50	.17
11	9.8	5.8	7.6	132	37	193	289	32	19	2.5	.50	.17
12	6.4	5.1	7.8	82	35	229	137	32	15	2.2	1.4	.96
13	5.1	52	7.4	47	34	177	88	31	14	2.0	2.9	2.2
14	5.1	59	7.0	33	33	112	70	30	12	1.9	1.7	.40
15	5.1	34	6.6	31	32	89	62	28	11	1.5	1.3	.24
16	4.1	27	14	41	31	76	57	29	17	1.2	1.1	.20
17	3.6	18	34	33	35	65	122	45	16	1.2	1.1	.14
18	3.6	14	20	26	100	59	87	36	13	1.2	1.8	.14
19	3.6	12	15	23	80	212	190	28	11	.97	3.3	.14
20	3.2	11	13	22	66	236	432	27	8.7	.93	1.8	.14
21	2.3	10	13	21	54	137	172	30	8.6	.78	1.2	.14
22	2.2	9.0	12	21	51	234	118	27	7.4	1.7	1.1	.53
23	2.2	8.7	10	23	51	130	93	33	6.3	1.6	.94	.45
24	2.4	8.2	11	80	56	95	159	45	5.1	1.3	.82	.31
25	2.6	7.8	16	75	52	79	373	38	4.8	1.3	.72	.29
26	6.6	7.6	28	54	47	69	170	28	4.8	1.3	.66	.26
27	7.4	7.3	22	38	41	63	118	35	4.8	1.2	.55	.26
28	6.1	6.6	17	33	41	128	94	60	9.6	1.1	.50	.26
29	5.4	21	17	29	---	102	79	41	17	1.1	.50	.22
30	4.8	23	14	28	---	73	69	80	10	.88	.50	.21
31	4.4	---	12	33	---	61	---	116	---	.66	.50	---
TOTAL	148.89	471.2	405.2	1052	1652	3859	3597	1339	618.1	66.62	32.04	10.88
MEAN	4.80	15.7	13.1	33.9	59.0	124	120	43.2	20.6	2.15	1.03	.36
MAX	22	59	34	132	193	236	432	116	64	6.8	3.3	2.2
MIN	.99	4.1	6.6	10	31	47	48	27	4.8	.66	.50	.14
CFSM	.30	.98	.82	2.12	3.69	7.75	7.50	2.70	1.29	.13	.06	.02
IN.	.35	1.10	.94	2.45	3.84	8.97	8.36	3.11	1.44	.15	.07	.03
CAL YR 1982	TOTAL	12492.49	MEAN	34.2	MAX	754	MIN	.99	CFSM	2.14	IN	29.04
WTR YR 1983	TOTAL	13251.93	MEAN	36.3	MAX	432	MIN	.14	CFSM	2.27	IN	30.81

BLACKSTONE RIVER BASIN

0111500 BRANCH RIVER AT FORESTDALE, RI

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

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--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, from topographic map. Prior to July 28, 1913, nonrecording gage at site 1 mi downstream at different datum.

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

AVERAGE DISCHARGE.--43 years, 171 ft³/s, 25.46 in/yr.

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 3	2330	1020	5.34	Mar. 22	1030	1210	5.79
Mar. 3	1200	1070	5.46	Apr. 11	1245	1670	6.77
Mar. 12	1930	1150	5.64	Apr. 20	0945	2230	7.82
Mar. 19	2330	1590	6.60	Apr. 25	0800	*2280	7.91

Minimum daily discharge, 19 ft³/s Sept. 12, 29.

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	37	83	135	95	215	244	329	334	381	87	32	27
2	33	75	119	86	210	595	299	304	292	76	29	27
3	27	68	110	81	636	1030	308	286	248	70	27	26
4	25	75	107	75	864	741	426	281	287	66	31	25
5	27	132	98	68	542	547	338	300	412	61	40	25
6	30	150	96	90	372	432	285	251	317	63	43	24
7	35	113	94	121	329	381	267	229	258	61	40	23
8	45	96	86	111	281	381	282	214	210	62	36	20
9	100	87	81	97	271	860	448	214	169	51	30	20
10	130	82	77	88	217	902	457	205	153	46	28	20
11	115	80	76	358	190	923	1430	194	144	43	27	20
12	100	83	78	468	190	1020	1070	190	128	42	62	19
13	92	146	74	293	184	978	738	184	120	39	78	20
14	86	250	70	220	179	741	573	181	114	37	62	20
15	76	189	71	198	174	592	479	177	117	37	49	21
16	68	182	96	184	173	496	463	196	162	37	41	20
17	62	163	157	169	193	432	655	282	149	36	36	26
18	75	132	131	148	438	353	552	272	123	36	49	28
19	90	111	100	127	482	928	666	219	110	35	62	24
20	92	107	90	121	372	1300	1940	192	103	34	57	24
21	92	104	86	117	315	846	1200	204	95	38	44	25
22	82	101	81	114	300	1130	848	188	89	44	38	31
23	80	99	80	128	291	871	654	195	81	39	34	28
24	79	97	87	325	303	651	797	242	70	43	32	25
25	82	93	102	417	303	541	2020	223	65	40	30	23
26	105	121	135	327	252	467	1220	186	63	39	30	22
27	104	113	131	229	229	418	877	186	67	37	27	21
28	95	101	119	187	224	607	698	280	92	35	27	20
29	83	135	108	169	---	615	588	240	145	33	27	19
30	83	160	110	159	---	455	454	268	114	31	27	20
31	82	---	108	185	---	374	---	475	---	31	28	---
TOTAL	2312	3528	3093	5555	8729	20851	21361	7392	4878	1429	1203	693
MEAN	74.6	118	99.8	179	312	673	712	238	163	46.1	38.8	23.1
MAX	130	250	157	468	864	1300	2020	475	412	87	78	31
MIN	25	68	70	68	173	244	267	177	63	31	27	19
CFSM	.82	1.29	1.09	1.96	3.42	7.38	7.81	2.61	1.79	.51	.43	.25
IN.	.94	1.44	1.26	2.27	3.56	8.50	8.71	3.02	1.99	.58	.49	.28
CAL YR 1982	TOTAL	78338	MEAN	215	MAX	4020	MIN	25	CFSM	2.36	IN	31.95
WTR YR 1983	TOTAL	81024	MEAN	222	MAX	2020	MIN	19	CFSM	2.43	IN	33.05

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 1982 TO SEPTEMBER 1983

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)
OCT 14...	1200	86	102	7.3	15.0	--	--	10.5	106	--
NOV 17...	1400	159	86	6.6	8.0	--	--	13.5	113	--
DEC 14...	1140	68	86	6.2	1.5	1.0	--	13.2	93	17
JAN 05...	1410	67	87	7.0	3.0	--	--	13.5	99	--
FEB 09...	1345	271	97	6.3	0.5	--	--	14.4	--	--
MAR 08...	1300	362	57	6.3	3.0	<1.0	20	13.2	98	10
APR 05...	1345	318	63	7.3	8.0	--	--	11.0	94	--
MAY 10...	1315	205	64	7.3	13.0	--	--	10.2	98	--
JUN 15...	1345	108	63	6.5	23.5	1.2	--	7.9	94	<10
JUL 13...	1315	37	79	7.1	27.5	--	--	8.8	113	--
AUG 03...	1315	27	90	6.1	28.5	--	--	8.6	111	--
SEP 07...	1230	24	104	6.5	27.5	2.0	7	9.0	116	23

DATE	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)	STREP- TOCOCCI 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 14...	--	--	--	--	--	--	--	--	--	--
NOV 17...	1.0	2100	440	160	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--
JAN 05...	1.0	1400	200	400	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 08...	1.0	380	100	53	10	8	3.0	0.6	8.0	0.7
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 10...	1.0	1200	490	430	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 13...	1.0	3600	420	280	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--
SEP 07...	1.0	5800	960	1500	19	8	5.6	1.1	12	1.4

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	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...	--	--	--	--	--	0.19	0.01	0.2	0.05
NOV 17...	--	--	--	--	--	0.58	0.02	0.6	1.10
DEC 14...	--	--	--	3	62	0.39	<0.01	0.4	0.21
JAN 05...	--	--	--	--	--	0.49	0.01	0.5	0.24
FEB 09...	--	--	--	--	--	0.29	<0.01	0.3	0.19
MAR 08...	2.0	10	12	4	49	0.29	<0.01	0.3	0.07
APR 05...	--	--	--	--	--	0.2	<0.00	0.2	0.06
MAY 10...	--	--	--	--	--	0.2	<0.00	0.2	0.04
JUN 15...	--	--	--	4	33	0.3	<0.00	0.3	0.04
JUL 13...	--	--	--	--	--	0.3	0.00	0.3	0.08
AUG 03...	--	--	--	--	--	0.15	0.05	0.2	0.11
SEP 07...	11	10	18	8	70	0.2	<0.00	0.2	0.11

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 (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 14...	0.45	0.5	0.7	3.1	0.03	0.09	0.01	--	--
NOV 17...	0.7	1.80	2.4	11	0.31	0.95	0.26	--	--
DEC 14...	--	<0.1	0.5	2.2	0.03	0.09	0.02	--	--
JAN 05...	0.56	0.8	1.3	5.8	0.03	0.09	<0.01	--	--
FEB 09...	0.11	0.3	0.6	2.7	0.09	0.28	0.02	--	--
MAR 08...	0.33	0.4	0.7	3.1	0.02	0.06	0.02	2	<1
APR 05...	0.14	0.2	0.4	1.8	0.02	0.06	<0.00	--	--
MAY 10...	0.16	0.2	0.4	1.8	0.03	0.09	<0.00	--	--
JUN 15...	0.36	0.4	0.7	3.1	0.03	0.09	0.02	--	--
JUL 13...	0.32	0.4	0.7	3.1	0.05	0.15	<0.00	--	--
AUG 03...	0.09	0.2	0.4	1.8	0.02	0.06	0.00	--	--
SEP 07...	0.69	0.8	1.0	4.4	0.05	0.15	0.00	<1	<1

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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 (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	1	30.00	1	20	10	580	3.00	100	<0.1	2.00	<1	<1.00

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	PCB, TOTAL 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)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	30	<0.1	8	<1.0	<0.1	<0.01	<0.1	<0.1	3.0	<0.01	3.9	<0.01

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<0.1	<0.01	<0.1	<0.01	1.6	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

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 IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	5.0	<0.1	<1.00	<1	<10

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

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

DRAINAGE AREA.--416 mi².

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

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

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. 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.--54 years, 763 ft³/s.

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

Maximum discharge since at least 1645, that of Aug. 19, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,050 ft³/s Apr. 25, gage height, 10.09 ft; minimum daily, 35 ft³/s Aug. 28.

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	241	273	573	446	1070	1200	1760	2070	1850	358	124	369
2	168	266	512	400	1060	2150	1620	1870	1470	264	203	308
3	217	248	474	382	2180	4030	1550	1710	1210	286	139	177
4	188	270	414	371	3490	3400	1990	1610	1250	291	127	223
5	169	533	466	331	2620	2680	1900	1630	1580	216	357	188
6	180	745	446	485	1970	2270	1680	1400	1390	312	287	135
7	327	634	430	581	1700	1990	1510	1270	1180	254	176	155
8	161	424	387	542	1520	1930	1480	1170	942	256	194	188
9	810	422	406	518	1450	3120	1800	1110	825	218	160	118
10	991	346	380	443	1220	3600	1870	1070	772	205	131	129
11	512	350	366	1300	1130	3900	4540	981	698	192	167	158
12	494	342	355	2340	1040	4150	4120	992	558	190	272	134
13	437	644	355	1670	1090	4380	3090	976	594	191	381	157
14	420	1230	312	1260	1060	3430	2550	932	511	188	256	135
15	360	1050	346	1060	998	2870	2160	899	520	168	207	106
16	326	901	421	1000	968	2510	1860	1050	740	215	177	124
17	319	715	703	911	1070	2260	2340	1090	679	183	175	153
18	302	628	556	789	1840	2120	2370	1160	570	148	216	179
19	301	536	524	734	2030	3280	2620	1000	566	122	339	250
20	303	488	431	687	1720	5000	5780	879	452	172	256	126
21	305	487	425	651	1510	3930	4800	937	384	200	207	184
22	288	455	413	605	1420	4490	3650	889	417	200	172	259
23	281	444	405	701	1410	3830	2900	919	400	185	150	315
24	267	432	417	1310	1420	3100	3160	1260	336	197	154	175
25	207	408	507	1680	1440	2650	7030	1270	302	166	139	171
26	359	432	596	1490	1300	2340	5220	1100	308	175	133	201
27	374	426	565	1220	1200	2100	3980	1000	279	170	148	162
28	323	398	588	1050	1140	2510	3240	1300	374	152	35	172
29	303	550	488	910	---	2710	2760	1200	596	116	257	199
30	289	655	483	849	---	2270	2390	1280	382	148	418	314
31	260	---	477	938	---	1970	---	2010	---	148	257	---
TOTAL	10482	15732	14221	27654	42066	92170	87720	38034	22135	6286	6414	5664
MEAN	338	524	459	892	1502	2973	2924	1227	738	203	207	189
MAX	991	1230	703	2340	3490	5000	7030	2070	1850	358	418	369
MIN	161	248	312	331	968	1200	1480	879	279	116	35	106
CAL YR 1982	TOTAL	346133	MEAN	948	MAX	10900	MIN	99				
WTR YR 1983	TOTAL	368578	MEAN	1010	MAX	7030	MIN	35				

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI

LOCATION.--Lat 41°58'18", long 71°28'14", Providence County, Hydrologic Unit 01090003, at Manville Road Bridge, 400 ft downstream from milldam at Manville, and 2.5 mi downstream from Woonsocket Sewage Treatment Plant.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 14...	1315	388	210	6.9	13.0	--	--	9.2	89	--
NOV 17...	1530	727	175	7.0	4.5	--	--	12.0	92	--
DEC 14...	1300	265	260	7.2	1.0	1.5	--	12.7	88	11
JAN 05...	1500	357	230	7.4	2.0	--	--	12.3	88	--
FEB 09...	1445	1420	185	7.2	0.0	--	--	13.2	--	--
MAR 08...	1445	1840	138	7.1	3.0	1.5	10	12.6	94	<10
APR 05...	0910	1920	122	5.5	8.0	--	--	11.9	101	--
MAY 10...	1430	1040	145	7.4	14.0	--	--	10.2	100	--
JUN 15...	1445	585	156	6.7	26.0	3.4	--	8.3	103	<10
JUL 13...	1400	183	275	7.0	25.0	--	--	8.0	98	--
AUG 03...	1430	68	290	6.3	27.0	--	--	7.2	90	--
SEP 07...	1415	217	272	6.9	25.5	3.8	4	7.4	92	32

DATE	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)	STREP- TOCOCCI 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 14...	--	--	--	--	--	--	--	--	--	--
NOV 17...	3.0	>9400	820	71	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--
JAN 05...	2.0	1800	210	110	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--
MAR 08...	1.0	2400	500	70	27	15	8.3	1.5	16	1.6
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 10...	3.0	2000	420	46	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 13...	3.0	13000	850	140	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--
SEP 07...	3.0	4800	560	>1000	47	32	15	2.3	32	4.1

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	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...	--	--	--	--	--	1.2	0.05	1.3	0.51
NOV 17...	--	--	--	--	--	0.68	0.02	0.7	0.60
DEC 14...	--	--	--	2	149	1.1	0.02	1.1	2.10
JAN 05...	--	--	--	--	--	1.1	0.02	1.1	1.30
FEB 09...	--	--	--	--	--	0.48	0.02	0.5	0.53
MAR 08...	12	15	29	8	104	0.59	0.01	0.6	0.31
APR 05...	--	--	--	--	--	0.8	0.00	0.8	0.31
MAY 10...	--	--	--	--	--	0.65	0.05	0.7	0.43
JUN 15...	--	--	--	10	122	1.0	0.05	1.1	0.20
JUL 13...	--	--	--	--	--	2.0	0.03	2.0	0.68
AUG 03...	--	--	--	--	--	2.6	0.05	2.7	0.41
SEP 07...	15	26	43	7	168	2.3	0.03	2.3	1.30

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 (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 14...	0.59	1.10	2.4	11	0.23	0.71	0.18	--	--
NOV 17...	1.1	1.70	2.4	11	0.18	0.55	0.13	--	--
DEC 14...	0.2	2.30	3.4	15	0.36	1.1	0.31	--	--
JAN 05...	0.7	2.00	3.1	14	0.22	0.67	0.18	--	--
FEB 09...	0.57	1.10	1.6	7.1	0.22	0.67	0.11	--	--
MAR 08...	0.29	0.6	1.2	5.3	0.14	0.43	0.07	9	<1
APR 05...	0.19	0.5	1.3	5.8	0.18	0.55	0.13	--	--
MAY 10...	0.27	0.7	1.4	6.2	0.19	0.58	0.14	--	--
JUN 15...	0.5	0.7	1.8	8.0	0.21	0.64	0.17	--	--
JUL 13...	0.72	1.40	3.4	15	0.45	1.4	0.38	--	--
AUG 03...	0.79	1.20	3.9	17	0.39	1.2	0.33	--	--
SEP 07...	0.9	2.20	4.5	20	0.49	1.5	0.47	<1	<1

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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 (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	2	150	1	30	20	470	5.00	130	<0.1	50	<1	<1.00

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	PCB, TOTAL IN BOT- TOM MA- TERIAL (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 IN BOT- TOM MA- TERIAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	40	<0.1	280	<1.0	<0.1	<0.01	<0.1	<0.1	50	<0.01	48	<0.01

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/KG)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	22	<0.01	3.0	0.01	35	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

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 IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 14...	--	--	--	--	--	--	--	--	--	--	--
NOV 17...	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--
JAN 05...	--	--	--	--	--	--	--	--	--	--	--
FEB 09...	--	--	--	--	--	--	--	--	--	--	--
MAR 08...	--	--	--	--	--	--	--	--	--	--	--
APR 05...	--	--	--	--	--	--	--	--	--	--	--
MAY 10...	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--
JUL 13...	--	--	--	--	--	--	--	--	--	--	--
AUG 03...	--	--	--	--	--	--	--	--	--	--	--
SEP 07...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

MOSHASSUCK RIVER BASIN

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 upstream from bridge on U.S. Highway 44 at Providence and 0.5 mi above mouth.

DRAINAGE AREA.--23.1 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 7, 1973, at datum 0.88 ft 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, June 7 to Aug. 18, which are poor. Occasional regulation at low flow. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 41.1 ft³/s, 24.16 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 23	2215	729	4.36	Apr. 10	2215	*1110	5.05
Mar. 21	1815	608	4.10	Apr. 24	1900	810	4.52

Minimum discharge, 8.4 ft³/s Sept. 11; minimum daily, 8.7 ft³/s Oct. 3-7, Sept. 5.

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	10	12	31	24	50	57	69	75	52	23	11	10
2	10	13	28	23	42	177	62	69	42	18	13	9.7
3	8.7	17	28	23	135	145	91	68	38	17	13	9.4
4	8.7	18	28	22	95	88	98	69	81	16	45	9.0
5	8.7	115	25	20	60	72	74	67	57	17	30	8.7
6	8.7	47	40	40	42	64	63	58	41	35	20	8.9
7	8.7	27	34	34	54	70	60	52	35	20	13	9.7
8	15	21	28	27	50	104	96	47	32	17	10	9.4
9	146	20	28	23	45	212	122	45	30	15	9.0	9.1
10	39	19	23	23	42	171	313	44	29	13	9.7	9.1
11	21	18	23	117	39	158	541	48	28	12	15	9.2
12	17	17	23	63	40	250	191	48	27	17	50	15
13	18	133	23	44	40	152	126	48	26	13	40	18
14	19	65	22	35	38	105	101	47	25	11	23	11
15	17	46	23	34	39	89	88	48	24	15	17	10
16	14	36	60	45	40	78	98	65	23	13	12	10
17	13	31	52	36	133	73	150	74	22	12	10	17
18	12	28	35	31	177	71	98	52	21	12	20	12
19	12	26	29	28	106	343	257	44	20	11	13	11
20	12	25	28	26	73	275	264	52	19	11	11	11
21	12	23	28	25	65	230	163	50	18	20	9.3	11
22	12	23	27	25	65	253	117	42	17	50	11	40
23	12	23	26	123	68	142	92	58	16	20	11	13
24	11	24	31	197	74	108	387	56	15	35	9.9	11
25	21	22	31	89	68	93	449	50	15	20	9.8	10
26	31	20	34	60	60	84	197	42	16	17	9.1	9.9
27	19	19	29	46	53	77	144	50	20	15	9.4	9.9
28	16	18	27	40	52	209	117	49	55	14	9.2	9.9
29	15	66	27	37	---	120	98	40	40	13	9.3	9.9
30	14	39	26	35	---	87	85	97	30	12	9.5	9.9
31	13	---	25	72	---	75	---	81	---	11	10	---
TOTAL	594.5	1011	922	1467	1845	4232	4811	1735	914	545	492.2	351.7
MEAN	19.2	33.7	29.7	47.3	65.9	137	160	56.0	30.5	17.6	15.9	11.7
MAX	146	133	60	197	177	343	541	97	81	50	50	40
MIN	8.7	12	22	20	38	57	60	40	15	11	9.0	8.7
CFSM	.83	1.46	1.29	2.05	2.85	5.93	6.93	2.42	1.32	.76	.69	.51
IN.	.96	1.63	1.48	2.36	2.97	6.81	7.75	2.79	1.47	.88	.79	.57

CAL YR 1982	TOTAL	17580.7	MEAN	48.2	MAX	729	MIN	8.7	CFSM	2.09	IN	28.31
WTR YR 1983	TOTAL	18920.4	MEAN	51.8	MAX	541	MIN	8.7	CFSM	2.24	IN	30.47

01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI

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

DRAINAGE AREA.--38.3 mi².

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

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

REMARKS.--Records fair. Some regulation by reservoirs upstream; regulation greater prior to 1956. Discharge figures prior to 1966 included leakage around station through bypass canal; leakage negligible subsequently. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 72.9 ft³/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,380 ft³/s Apr. 24, gage height, 7.05 ft; minimum daily, 4.5 ft³/s Sept. 30.

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	32	27	54	38	99	141	220	231	118	45	9.9	16
2	33	28	41	37	93	288	187	202	105	40	12	15
3	33	37	37	39	230	309	180	186	94	37	11	15
4	38	40	37	40	205	268	194	177	124	34	18	15
5	41	97	37	40	164	247	174	167	119	32	23	15
6	44	74	43	45	139	223	159	152	108	31	15	14
7	46	60	41	55	151	209	148	139	99	34	13	14
8	49	55	37	46	148	221	158	129	91	30	12	12
9	137	51	36	44	128	404	217	120	83	28	11	12
10	100	47	35	45	113	406	266	107	77	26	9.7	12
11	78	44	35	160	104	398	657	104	74	23	15	12
12	66	43	36	140	110	508	480	100	73	23	54	12
13	60	118	33	120	101	441	383	95	71	24	26	12
14	59	108	31	100	95	362	317	93	70	23	17	9.8
15	53	93	33	86	93	300	274	92	67	21	15	8.7
16	46	88	50	92	92	256	247	101	37	19	13	8.2
17	36	79	61	85	130	223	307	118	27	18	13	11
18	30	76	45	76	251	201	269	101	26	16	21	9.7
19	24	71	43	68	210	684	402	93	26	14	22	8.5
20	21	61	42	63	179	716	640	94	28	12	18	6.9
21	20	55	41	61	164	583	502	92	30	12	16	6.5
22	17	52	39	61	162	678	406	87	33	17	16	14
23	16	49	38	84	160	501	339	94	34	15	15	8.6
24	15	49	44	200	164	401	600	100	34	9.9	15	8.1
25	18	47	46	160	159	339	979	88	32	16	14	7.4
26	38	47	50	135	153	298	676	81	30	11	14	6.1
27	36	47	46	116	149	269	506	88	30	9.0	14	5.6
28	28	46	45	102	139	381	406	93	31	8.2	15	5.4
29	26	77	44	93	---	313	349	83	66	9.0	15	5.0
30	27	64	41	88	---	268	293	126	52	9.7	14	4.5
31	28	---	39	109	---	241	---	134	---	9.9	15	---
TOTAL	1295	1830	1280	2628	4085	11077	10935	3667	1889	656.7	511.6	310.0
MEAN	41.8	61.0	41.3	84.8	146	357	365	118	63.0	21.2	16.5	10.3
MAX	137	118	61	200	251	716	979	231	124	45	54	16
MIN	15	27	31	37	92	141	148	81	26	8.2	9.7	4.5
CAL YR 1982	TOTAL	30750.0	MEAN	84.2	MAX	1030	MIN	10				
WTR YR 1983	TOTAL	40164.3	MEAN	110	MAX	979	MIN	4.5				

PAWTUXET RIVER BASIN

01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI

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

DRAINAGE AREA.--63.8 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for periods of no gage-height record, Mar. 18 to Apr. 20, Aug. 31 to Sept. 30, which are poor. Flow regulated by Flat River Reservoir 2 mi upstream (see table below), usable capacity, 250,000,000 ft³, 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.--43 years, 130 ft³/s.

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,600 ft³/s Apr. 25, gage height, 4.75 ft; minimum daily, 29 ft³/s Sept. 18-21.

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	64	53	66	92	184	241	400	512	327	59	35	35
2	64	53	67	92	204	283	350	500	431	58	35	34
3	64	51	81	92	282	330	320	465	347	60	35	34
4	109	51	83	92	282	391	290	277	170	59	35	34
5	160	66	82	92	276	384	260	272	155	58	35	33
6	163	62	122	98	301	377	240	270	156	56	35	33
7	160	55	156	96	358	380	220	267	155	54	35	33
8	153	53	157	95	351	392	200	257	151	53	34	32
9	174	53	145	94	337	457	400	223	144	53	33	32
10	156	53	98	95	323	478	700	216	139	53	33	32
11	76	53	96	133	312	471	1050	149	139	48	33	31
12	65	53	96	177	291	508	900	143	137	48	41	31
13	64	70	95	174	283	502	700	96	136	46	51	31
14	71	70	88	171	268	491	550	92	96	44	48	30
15	110	65	70	172	200	481	450	91	89	44	48	30
16	110	63	77	174	75	467	400	96	94	46	46	30
17	108	61	78	170	81	335	350	137	86	46	45	30
18	103	63	75	167	100	250	300	181	85	46	44	29
19	200	84	91	165	98	450	700	181	91	46	44	29
20	71	161	153	160	222	900	1000	177	89	44	43	29
21	63	178	154	138	250	600	935	180	85	43	43	29
22	62	175	153	100	261	700	705	181	88	43	40	33
23	60	174	149	109	299	600	585	179	88	43	38	33
24	59	172	151	139	372	450	645	179	94	43	37	32
25	56	169	151	127	364	400	1440	162	251	43	35	32
26	56	162	153	123	333	350	1190	150	188	42	36	31
27	55	147	139	127	242	300	826	145	69	38	37	31
28	54	137	93	181	239	450	657	160	67	37	37	30
29	54	79	94	182	---	400	568	156	68	36	37	30
30	53	69	92	182	---	350	525	179	63	35	35	30
31	53	---	92	187	---	300	---	278	---	35	35	---
TOTAL	2870	2755	3397	4196	7188	13468	17856	6551	4278	1459	1198	943
MEAN	92.6	91.8	110	135	257	434	595	211	143	47.1	38.6	31.4
MAX	200	178	157	187	372	900	1440	512	431	60	51	35
MIN	53	51	66	92	75	241	200	91	63	35	33	29
(†)	79	133.5	119.5	157	131	203.5	240	268.5	243	229.5	194.5	133.5

CAL YR 1982 TOTAL 58643 MEAN 161 MAX 1680 MIN 46
WTR YR 1983 TOTAL 66159 MEAN 181 MAX 1440 MIN 29

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

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 upstream from Pocasset River.

DRAINAGE AREA.--200 mi².

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good. Flow regulated by powerplants and by Scituate Reservoir 13 mi upstream, Flat River Reservoir, and other reservoirs, combined usable capacity, about 6,000,000,000 ft³. Diversion from Scituate Reservoir for municipal supply of Providence, 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.--43 years (water years 1941-83), 345 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,470 ft³/s Apr. 25, gage height, 13.11 ft, minimum daily, 102 ft³/s Sept. 26.

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	222	140	211	214	404	534	1250	1140	779	235	176	174
2	214	146	200	197	394	966	1170	1150	849	193	215	195
3	162	151	212	199	747	900	1100	1200	747	160	227	190
4	224	163	220	210	639	768	1150	1010	680	202	150	136
5	315	312	202	211	508	705	1010	932	508	219	153	123
6	342	260	253	254	459	587	951	987	420	303	193	133
7	336	189	326	247	554	705	772	904	425	219	138	124
8	340	177	313	233	560	907	710	753	416	229	164	117
9	684	183	308	211	667	1410	916	720	403	232	190	119
10	386	177	252	211	572	1210	971	750	386	165	184	122
11	316	171	234	470	551	1120	2690	647	581	217	192	113
12	260	174	223	393	534	1450	2970	598	324	228	312	113
13	249	369	219	349	472	1390	2260	485	340	151	258	128
14	253	293	212	324	498	1400	1670	481	461	211	151	119
15	297	246	194	327	489	1330	1380	360	358	212	187	118
16	301	232	268	336	340	1190	1270	511	340	207	121	119
17	239	215	314	319	429	1040	1410	621	339	146	169	136
18	267	205	229	310	770	785	1090	481	403	182	200	113
19	360	211	192	310	545	1820	1470	496	254	202	198	111
20	256	285	274	310	457	2690	3030	634	255	163	185	117
21	163	319	294	286	544	2310	3050	614	273	160	126	114
22	157	326	291	234	573	2400	2160	527	312	167	107	164
23	146	322	290	296	597	1970	1640	531	275	142	149	127
24	132	321	307	785	717	1550	1860	585	270	151	131	115
25	149	307	308	462	686	1470	4190	546	364	198	140	103
26	195	305	302	358	638	1340	3980	511	344	208	143	102
27	165	287	289	315	470	1150	2770	519	289	204	144	111
28	160	265	247	359	499	1350	1920	534	321	201	146	110
29	157	324	235	373	---	1320	1510	461	295	200	210	110
30	157	249	222	351	---	1180	1310	690	265	198	190	112
31	140	---	215	440	---	1080	---	859	---	141	150	---
TOTAL	7744	7324	7856	9894	15313	40027	53630	21237	12276	6046	5399	3788
MEAN	250	244	253	319	547	1291	1788	685	409	195	174	126
MAX	684	369	326	785	770	2690	4190	1200	849	303	312	195
MIN	132	140	192	197	340	534	710	360	254	141	107	102
(†)	3880	4019	4110	4463	5012	5559	5578	5355	5045	4464	3953	3515
(‡)	91.9	87.4	84.5	86.9	84.8	83.5	84.2	90.0	118	134	120	121
CAL YR 1982	TOTAL	153071	MEAN 419	MAX 5170	MIN 132							
WTR YR 1983	TOTAL	190534	MEAN 522	MAX 4190	MIN 102							

† 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.

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to September 1981.

WATER TEMPERATURES: November 1961 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 13...	1030	183	200	6.3	13.0	--	--	8.8	83	--
NOV 16...	1300	211	237	6.9	6.0	--	--	10.6	84	--
DEC 15...	0805	174	265	6.4	1.5	1.3	--	13.2	93	14
JAN 04...	1030	195	197	7.3	2.0	--	--	12.4	88	--
FEB 08...	1340	546	207	6.3	0.0	--	--	14.0	--	--
MAR 09...	1100	1400	95	6.9	3.5	4.3	20	13.4	102	17
APR 06...	1225	804	120	7.1	7.0	--	--	12.2	101	--
MAY 11...	1045	477	132	6.5	13.0	--	--	10.2	96	--
JUN 14...	1350	312	154	5.6	23.0	3.0	--	8.6	100	<10
JUL 12...	1220	163	250	6.2	22.0	--	--	6.0	69	--
AUG 02...	1425	138	155	7.1	26.0	--	--	6.4	79	--
SEP 06...	1420	119	410	6.3	25.0	1.5	23	4.7	57	36

DATE	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)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CAC03)	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)
OCT 13...	--	--	--	--	--	--	--	--	--	--
NOV 16...	9.0	63	1	23	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 04...	2.0	K4	<1	K5	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 09...	1.0	52000	730	600	18	10	5.2	1.2	11	1.7
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 11...	1.0	520	K12	15	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--
JUL 12...	3.0	290	K26	34	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--
SEP 06...	5.0	K1000	200	1600	64	48	16	5.8	49	3.3

K, NON-IDEAL COLONY COUNT.

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	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 13...	--	--	--	--	--	0.56	0.04	0.6	0.74
NOV 16...	--	--	--	--	--	0.29	<0.01	0.3	0.16
DEC 15...	--	--	--	6	138	0.57	0.03	0.6	0.97
JAN 04...	--	--	--	--	--	0.68	0.02	0.7	1.00
FEB 08...	--	--	--	--	--	0.48	0.02	0.5	0.50
MAR 09...	8.0	14	15	10	87	0.39	<0.01	0.4	0.29
APR 06...	--	--	--	--	--	0.5	<0.00	0.5	0.33
MAY 11...	--	--	--	--	--	0.3	<0.00	0.3	0.45
JUN 14...	--	--	--	10	115	0.41	0.09	0.5	0.75
JUL 12...	--	--	--	--	--	0.6	0.10	0.7	1.00
AUG 02...	--	--	--	--	--	0.65	0.15	0.8	1.20
SEP 06...	16	53	68	6	231	0.92	0.08	1.0	1.90

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 (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 13...	0.56	1.30	1.9	8.4	0.27	0.83	0.22	--	--
NOV 16...	0.44	0.6	0.9	4.0	0.03	0.09	<0.01	--	--
DEC 15...	0.43	1.40	2.0	8.9	0.31	0.95	0.24	--	--
JAN 04...	0.1	1.10	1.8	8.0	0.30	0.92	0.22	--	--
FEB 08...	0.1	0.6	1.1	4.9	0.11	0.34	0.07	--	--
MAR 09...	0.31	0.6	1.0	4.4	0.12	0.37	0.06	<1	<1
APR 06...	0.07	0.4	0.9	4.0	0.17	0.52	0.15	--	--
MAY 11...	0.15	0.6	0.9	4.0	0.15	0.46	0.11	--	--
JUN 14...	0.15	0.9	1.4	6.2	0.24	0.74	0.23	--	--
JUL 12...	0.6	1.60	2.3	10	0.42	1.3	0.33	--	--
AUG 02...	0.5	1.70	2.5	11	0.25	0.77	0.17	--	--
SEP 06...	--	--	1.0	4.4	0.56	1.7	0.50	1	<1

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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 (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	1	80.00	4	20	30	640	4.00	200	<0.1	10	<1	<1.00

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	PCB, TOTAL 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 IN BOT- TOM MA- TERIAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	CHLOR- DANE, TOTAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	DDD, TOTAL (UG/KG)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	50	<0.1	4	<1.0	<0.1	<0.01	<0.1	<0.1	<0.1	3.0	<0.01	<0.1	<0.01	<0.01

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	0.8	<0.01	0.9	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

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 IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI

LOCATION.--Lat 41°45'51", Long 71°23'45", Providence County, Hydrologic Unit 01090004, at Warwick Ave Road Bridge at Pawtuxet, and 4.0 mi downstream from Cranston Sewage Treatment Plant.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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)
OCT 13...	1420	253	270	6.6	13.0	--	--	7.8	74	--
NOV 16...	1445	316	325	7.2	6.0	--	--	9.8	77	--
DEC 15...	1045	246	300	6.4	2.0	3.0	--	12.7	90	23
JAN 04...	1230	275	255	7.0	2.0	--	--	10.2	72	--
FEB 08...	1215	654	226	6.2	0.0	--	--	14.1	--	--
MAR 09...	1420	1800	111	6.7	4.0	4.1	20	13.0	100	72
APR 06...	1100	1040	131	6.1	7.0	--	--	12.2	100	--
MAY 11...	1230	755	159	6.7	13.0	--	--	9.4	89	--
JUN 14...	1615	347	173	6.6	23.5	2.4	--	7.5	102	<10
JUL 12...	1000	215	330	6.6	22.0	--	--	4.8	55	--
AUG 02...	1330	206	180	6.6	25.0	--	--	4.5	54	--
SEP 06...	1040	177	400	6.5	24.0	1.0	21	3.1	37	36

DATE	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)	STREP- TOCOCCI 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 13...	--	--	--	--	--	--	--	--	--	--
NOV 16...	9.0	K30000	>860	43	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--
JAN 04...	4.0	K120	K4	K17	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 09...	2.0	35000	1400	1300	22	11	6.5	1.4	13	1.9
APR 06...	--	--	--	--	--	--	--	--	--	--
MAY 11...	4.0	1500	K6	K15	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--
JUL 12...	6.0	15000	280	230	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--
SEP 06...	4.0	K1300	140	>4000	62	48	16	5.4	49	3.0

K, NON-IDEAL COLONY COUNT.

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ALKA- LINITY LAB (MG/L AS CAC03)	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)	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 13...	--	--	--	--	--	0.66	0.04	0.7	1.20
NOV 16...	--	--	--	--	--	0.67	0.03	0.7	1.80
DEC 15...	--	--	--	10	172	0.67	0.03	0.7	1.60
JAN 04...	--	--	--	--	--	0.88	0.02	0.9	1.40
FEB 08...	--	--	--	--	--	0.59	0.01	0.6	0.58
MAR 09...	11	14	20	4	115	0.58	0.02	0.6	0.45
APR 06...	--	--	--	--	--	0.4	<0.00	0.4	0.53
MAY 11...	--	--	--	--	--	0.5	0.00	0.5	0.72
JUN 14...	--	--	--	10	157	0.59	0.11	0.7	1.10
JUL 12...	--	--	--	--	--	0.99	0.11	1.1	0.99
AUG 02...	--	--	--	--	--	0.87	0.13	1.0	1.00
SEP 06...	14	53	60	6	229	0.9	0.10	1.0	2.10

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 (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 13...	0.7	1.90	2.6	12	0.55	1.7	0.49	--	--
NOV 16...	0.4	2.20	2.9	13	0.45	1.4	0.40	--	--
DEC 15...	0.4	2.00	2.7	12	0.62	1.9	0.50	--	--
JAN 04...	0.5	1.90	2.8	12	0.45	1.4	0.34	--	--
FEB 08...	0.72	1.30	1.9	8.4	0.20	0.61	0.14	--	--
MAR 09...	0.15	0.6	1.2	5.3	0.22	0.67	0.09	12	<1
APR 06...	--	0.5	0.9	4.0	0.15	0.46	0.12	--	--
MAY 11...	0.28	1.00	1.5	6.6	0.22	0.67	0.15	--	--
JUN 14...	0.3	1.40	2.1	9.3	0.43	1.3	0.40	--	--
JUL 12...	0.71	1.70	2.8	12	0.51	1.6	0.47	--	--
AUG 02...	0.4	1.40	2.4	11	0.49	1.5	0.44	--	--
SEP 06...	0.9	3.00	4.0	18	0.58	1.8	0.55	8	<1

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	ARSENIC TOTAL (UG/L AS AS)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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 (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	2	70.00	3	20	20	530	10	220	<0.1	20	<1	<1.00

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	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)
OCT 13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
APR 06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 06...	30	<0.1	19	<1.0	<0.1	<0.01	<0.1	<0.1	110	<0.01	24	<0.01

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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)
OCT												
13...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
15...	--	--	--	--	--	--	--	--	--	--	--	--
JAN												
04...	--	--	--	--	--	--	--	--	--	--	--	--
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
06...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
11...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
12...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
02...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
06...	2.0	<0.01	0.9	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

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 IN BOTTOM MATERIL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT											
13...	--	--	--	--	--	--	--	--	--	--	--
NOV											
16...	--	--	--	--	--	--	--	--	--	--	--
DEC											
15...	--	--	--	--	--	--	--	--	--	--	--
JAN											
04...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAR											
09...	--	--	--	--	--	--	--	--	--	--	--
APR											
06...	--	--	--	--	--	--	--	--	--	--	--
MAY											
11...	--	--	--	--	--	--	--	--	--	--	--
JUN											
14...	--	--	--	--	--	--	--	--	--	--	--
JUL											
12...	--	--	--	--	--	--	--	--	--	--	--
AUG											
02...	--	--	--	--	--	--	--	--	--	--	--
SEP											
06...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<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 upstream from Old Forge Dam in North Kingstown, 1.5 mi south of East Greenwich, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--23.0 mi².

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 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.--43 years 45.5 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,020 ft³/s June 6, 1982, gage height, 3.73 ft, from rating curve extended above 440 ft³/s; maximum gage height, 6.78 ft 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, Aug. 26, 1977, and July 24, 1983, due to closing of gate at Old Forge Dam.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 24	0630	230	2.11	Apr. 11	0430	a*968	3.68
Feb. 18	0430	239	2.14	Apr. 17	1000	263	2.20
Mar. 9	0900	323	2.38	Apr. 20	0330	428	2.64
Mar. 12	0930	308	2.34	Apr. 25	0330	737	3.27
Mar. 19	2230	287	2.28	May 30	2000	243	2.13
Mar. 22	0230	334	2.41				

a From rating curve extended above 440 ft³/s.

No flow part of July 24.

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	15	16	45	26	89	88	107	150	173	45	15	9.8
2	15	15	36	26	74	171	103	142	125	41	14	8.8
3	14	19	31	26	122	179	111	135	99	37	13	8.6
4	12	24	30	24	141	136	144	133	124	36	13	8.5
5	10	66	27	22	102	113	120	133	136	30	13	8.0
6	9.7	74	41	36	78	101	104	122	109	56	13	7.1
7	9.3	48	48	43	72	116	96	113	94	46	12	6.2
8	11	36	38	36	68	155	102	108	85	36	11	5.9
9	66	27	30	30	66	297	189	106	78	33	10	5.4
10	60	23	22	27	62	231	230	99	72	30	10	5.4
11	42	22	22	65	60	187	775	95	69	28	12	5.3
12	28	21	21	79	57	278	384	94	65	29	44	5.5
13	23	54	19	55	53	228	254	90	60	27	38	5.4
14	22	77	19	43	51	173	207	91	56	23	23	5.3
15	21	58	21	40	49	147	172	91	53	21	16	5.2
16	19	49	41	53	47	131	160	109	56	21	14	5.6
17	17	39	75	48	85	121	238	145	53	22	13	6.6
18	15	30	53	39	218	115	201	114	52	18	12	7.4
19	13	27	39	29	180	210	229	93	51	19	13	6.6
20	13	25	35	26	132	236	380	90	47	21	13	6.0
21	13	24	32	26	110	191	256	105	45	19	11	5.7
22	13	21	30	27	106	292	196	98	42	19	9.4	22
23	14	21	30	42	107	198	171	97	39	18	8.8	14
24	15	20	33	199	122	158	262	89	37	21	8.1	11
25	15	19	41	148	112	138	604	80	36	26	7.9	8.9
26	32	18	43	100	99	125	334	75	35	23	7.3	7.9
27	28	18	38	75	87	118	237	79	36	20	7.8	7.2
28	21	19	35	62	84	186	196	84	65	19	10	6.5
29	17	56	33	58	---	169	175	74	83	18	11	6.3
30	17	61	28	56	---	134	160	133	58	17	11	6.3
31	17	---	26	96	---	117	---	212	---	16	10	---
TOTAL	637.0	1027	1062	1662	2633	5239	6897	3379	2133	835	424.3	228.4
MEAN	20.5	34.2	34.3	53.6	94.0	169	230	109	71.1	26.9	13.7	7.61
MAX	66	77	75	199	218	297	775	212	173	56	44	22
MIN	9.3	15	19	22	47	88	96	74	35	16	7.3	5.2
CAL YR 1982	TOTAL	22829.0	MEAN	62.5	MAX	861	MIN	9.3				
WTR YR 1983	TOTAL	26156.7	MEAN	71.7	MAX	775	MIN	5.2				

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI

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

DRAINAGE AREA.--9.99 mi².

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, Rhode Island State Board of Public Roads datum.

REMARKS.--Records fair. Diversion upstream for supply of University of Rhode Island.

AVERAGE DISCHARGE.--11 years (water years 1959, 1974-83), 21.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD (SINCE 1973).--Maximum discharge, about 250 ft³/s June 6, 1982; minimum, 2.1 ft³/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, 213 ft³/s Apr. 11, gage height, 7.51 ft; minimum discharge, 3.0 ft³/s Sept. 12, 13.

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	9.7	8.2	19	14	31	39	49	66	37	27	10	6.6
2	9.3	7.8	19	14	31	49	46	63	38	25	11	6.5
3	8.7	7.9	17	14	33	63	45	60	35	24	11	6.2
4	8.6	8.0	15	13	36	62	49	58	35	22	9.6	6.1
5	8.0	9.4	15	12	36	56	51	57	39	21	6.9	6.1
6	7.7	11	15	13	33	50	48	54	40	21	5.6	6.9
7	7.6	12	16	13	34	48	45	51	37	21	5.3	7.0
8	8.2	12	17	14	34	53	44	49	33	21	6.2	6.4
9	11	12	17	14	33	75	51	46	31	20	7.3	4.9
10	13	11	15	13	30	89	64	44	29	19	7.7	3.7
11	15	9.6	14	15	28	86	175	43	27	19	7.8	3.3
12	15	9.2	14	16	30	88	185	42	25	18	12	3.1
13	14	11	13	17	28	90	129	41	24	17	14	3.0
14	13	13	12	16	25	89	96	40	23	17	16	3.3
15	12	16	12	16	23	69	80	39	22	16	15	3.4
16	11	17	13	20	23	63	72	42	22	15	13	3.5
17	10	17	17	20	25	58	76	48	22	15	13	3.7
18	9.6	15	21	19	42	54	79	50	21	14	12	3.7
19	8.9	14	21	18	63	59	83	45	21	13	11	3.7
20	8.4	13	20	16	62	66	112	42	21	13	11	3.7
21	8.2	12	18	14	53	68	112	42	21	13	9.7	3.8
22	8.1	12	16	13	47	75	94	43	20	12	9.1	4.8
23	7.9	11	14	14	44	76	80	43	19	12	8.4	4.9
24	7.6	11	15	32	47	68	82	41	19	13	7.7	4.8
25	7.6	11	15	59	49	60	132	38	18	13	7.2	4.7
26	8.3	10	16	55	47	55	135	36	18	13	6.9	4.4
27	8.4	10	16	45	44	51	108	33	17	13	6.9	5.7
28	8.6	9.9	16	36	40	55	90	33	21	13	6.6	6.3
29	8.7	13	16	31	---	60	78	32	25	12	6.7	5.9
30	8.6	16	15	27	---	58	71	31	27	11	6.7	5.6
31	8.5	---	15	28	---	52	---	33	---	11	6.6	---
TOTAL	299.2	350.0	494	661	1051	1984	2561	1385	787	514	287.9	145.7
MEAN	9.65	11.7	15.9	21.3	37.5	64.0	85.4	44.7	26.2	16.6	9.29	4.86
MAX	15	17	21	59	63	90	185	66	40	27	16	7.0
MIN	7.6	7.8	12	12	23	39	44	31	17	11	5.3	3.0
CAL YR 1982	TOTAL	10021.2	MEAN	27.5	MAX	235	MIN	7.6				
WTR YR 1983	TOTAL	10519.8	MEAN	28.8	MAX	185	MIN	3.0				

PAWCATUCK RIVER BASIN

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 September 1983 (discontinued).

WATER TEMPERATURES: October 1973 to September 1983 (discontinued).

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, 141 micromhos Mar 1; minimum recorded, 61 micromhos Mar. 11, 12, 13, 14.

WATER TEMPERATURES: Maximum recorded, 28.5°C July 4, 16, 17; minimum recorded, 0.0°C Feb. 7.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	102	100	101	105	104	104	107	105	106	98	97	98
2	102	101	101	104	103	103	106	103	105	101	97	98
3	102	101	101	103	101	102	106	103	105	99	98	98
4	102	102	102	102	100	101	106	103	105	100	98	99
5	102	102	102	101	100	100	106	106	106	100	98	99
6	102	101	101	101	99	100	106	103	104	100	97	98
7	102	100	101	100	99	99	105	103	104	102	98	99
8	103	100	101	100	99	100	104	102	104	102	97	99
9	101	95	98	101	100	101	104	102	103	99	98	99
10	97	95	95	102	100	101	105	103	104	108	98	99
11	99	97	98	103	101	102	104	103	104	100	97	98
12	99	98	98	107	104	105	104	102	103	110	97	100
13	98	98	98	108	104	106	105	102	103	104	96	98
14	98	94	96	106	105	106	105	103	104	99	97	98
15	96	93	94	106	103	105	105	101	103	98	91	95
16	97	96	96	105	103	104	102	98	100	94	91	93
17	97	95	96	104	103	104	99	98	99	95	92	94
18	98	96	97	104	103	104	99	97	98	96	94	95
19	99	98	99	105	103	104	98	97	98	99	96	98
20	100	99	99	105	102	105	98	96	97	100	98	99
21	100	99	99	106	105	106	97	95	96	108	98	100
22	99	98	98	107	105	106	98	96	97	117	98	100
23	98	97	98	109	106	107	99	96	97	99	79	95
24	100	98	98	109	108	108	96	95	95	87	78	82
25	100	100	100	110	107	109	96	93	94	97	77	82
26	105	100	102	110	109	110	98	95	97	84	76	78
27	119	105	108	122	110	111	103	96	97	82	76	77
28	109	107	108	112	110	111	97	96	96	79	76	77
29	109	108	108	111	107	109	97	96	97	78	76	77
30	109	106	107	108	106	107	98	95	97	80	78	79
31	107	105	106	---	---	---	98	96	97	81	78	79
MONTH	119	93	100	122	99	105	107	93	100	117	76	93

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	87	80	82	141	74	79	75	73	73	83	82	82
2	83	82	82	81	74	77	76	74	75	85	83	84
3	83	80	81	76	73	73	77	75	76	86	85	86
4	84	79	81	73	70	71	77	75	76	87	86	87
5	83	81	82	71	68	69	77	76	76	84	83	83
6	85	82	83	71	70	71	78	77	77	81	80	80
7	85	79	81	71	69	70	80	78	79	80	77	78
8	---	80	---	72	67	70	81	79	80	79	76	77
9	83	81	82	69	65	66	80	79	79	76	73	75
10	---	83	---	66	62	64	81	70	77	77	75	76
11	88	86	88	69	61	63	72	69	71	78	75	76
12	87	85	86	80	61	63	69	65	66	77	76	77
13	88	83	86	71	61	63	66	62	64	78	77	78
14	87	85	86	63	61	62	65	63	64	79	76	78
15	91	84	86	64	62	63	66	64	65	---	---	---
16	87	85	86	66	64	65	68	67	67	---	---	---
17	91	77	83	67	65	66	69	68	69	---	---	---
18	90	77	80	70	66	68	70	69	69	---	---	---
19	78	77	77	70	67	68	71	68	69	---	---	---
20	77	76	76	68	66	67	70	68	69	---	---	---
21	78	75	76	67	63	65	70	68	69	---	---	---
22	82	76	77	66	65	65	72	70	71	---	---	---
23	85	75	77	67	64	66	80	71	73	---	---	---
24	76	75	76	68	66	67	75	72	73	---	---	---
25	89	74	76	69	67	68	74	69	71	---	---	---
26	76	74	75	71	69	69	70	69	69	---	---	---
27	122	74	77	71	71	71	74	70	71	---	---	---
28	79	74	75	71	70	71	75	73	74	---	---	---
29	---	---	---	71	70	70	78	75	77	---	---	---
30	---	---	---	72	71	71	81	79	80	---	---	---
31	---	---	---	73	72	72	---	---	---	---	---	---
MONTH	122	74	81	141	61	68	81	62	72	87	73	80
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	95	93	94	111	111	111	108	104	106
2	---	---	---	96	95	95	111	107	108	108	105	107
3	---	---	---	97	96	96	110	107	109	108	105	107
4	---	---	---	98	97	97	112	109	110	109	105	108
5	---	---	---	100	98	99	115	112	113	110	105	108
6	---	---	---	99	98	99	116	111	114	109	104	107
7	---	---	---	100	98	99	116	110	113	109	104	107
8	---	---	---	100	99	99	114	109	112	109	105	107
9	---	---	---	101	100	101	114	110	112	110	106	108
10	101	82	83	102	101	101	113	109	111	111	108	110
11	86	84	85	103	102	103	113	107	111	113	109	111
12	87	85	86	104	103	104	105	98	101	114	109	112
13	87	85	86	105	104	104	104	102	103	114	108	111
14	88	86	87	106	104	105	105	102	103	113	108	110
15	89	87	88	107	105	106	105	102	103	111	108	110
16	90	87	89	108	106	107	105	102	103	112	109	111
17	90	88	89	109	106	108	105	100	102	114	110	112
18	91	90	91	---	---	---	102	102	102	114	110	112
19	92	90	91	110	108	109	103	99	101	115	111	114
20	92	90	91	110	108	109	104	100	102	116	111	114
21	94	92	93	110	108	109	104	101	103	116	111	114
22	111	94	97	110	108	109	105	101	103	116	109	112
23	100	96	97	110	109	110	106	102	104	113	109	111
24	98	96	97	111	106	108	107	103	105	114	109	112
25	98	96	97	108	107	108	107	103	106	114	110	112
26	100	97	99	108	107	107	108	103	106	113	110	112
27	102	100	100	108	107	108	108	104	106	112	109	111
28	101	94	98	108	107	108	109	105	108	112	109	111
29	97	95	96	109	107	108	110	107	108	113	108	110
30	96	94	95	110	108	109	109	105	107	113	110	112
31	---	---	---	110	108	109	109	105	107	---	---	---
MONTH	111	82	92	111	93	104	116	98	107	116	104	110
YEAR	141	61	94									

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18.5	15.5	17.0	14.0	12.0	13.0	8.5	7.0	7.5	4.5	3.0	3.5
2	17.5	15.0	16.5	15.0	12.0	13.5	9.5	8.0	9.0	4.5	2.5	3.5
3	17.0	14.5	16.0	15.0	13.5	14.0	9.0	8.5	9.0	8.0	3.5	5.5
4	18.5	15.5	17.0	16.0	14.5	15.0	10.5	9.5	10.0	5.5	4.0	4.5
5	18.0	16.0	17.0	16.0	13.0	15.5	10.0	8.5	9.5	6.0	4.0	5.0
6	18.5	15.5	17.0	13.0	11.0	12.0	11.5	10.0	11.0	6.0	5.0	6.0
7	18.0	16.0	17.0	11.5	9.5	10.5	10.5	8.5	9.5	6.0	4.5	5.0
8	18.5	16.5	17.5	12.0	9.5	10.5	9.0	7.5	8.0	6.5	4.5	5.0
9	18.0	14.5	16.0	11.5	9.5	10.5	8.0	4.5	7.0	4.5	3.5	4.0
10	14.5	12.5	13.5	10.0	8.0	9.0	5.5	4.0	4.5	5.5	3.5	4.5
11	14.5	11.0	12.5	9.5	7.0	8.5	6.0	5.5	5.5	7.0	5.0	6.5
12	14.5	11.5	13.0	12.0	9.5	11.0	5.5	2.5	3.5	6.0	4.0	5.0
13	14.5	13.5	14.0	12.5	9.0	11.0	3.0	1.5	2.0	5.0	3.5	4.0
14	16.0	14.0	14.5	9.5	8.0	9.0	4.0	1.0	2.5	4.5	2.5	3.5
15	15.5	13.5	14.5	9.5	7.5	9.0	5.0	2.5	3.5	4.0	1.5	3.0
16	14.5	13.0	13.5	8.5	6.5	7.5	7.0	4.5	6.0	3.0	2.0	3.0
17	13.5	11.5	12.5	9.0	7.0	8.0	5.5	2.5	4.0	3.5	1.5	2.5
18	12.5	10.0	11.5	8.5	7.0	7.5	3.0	2.0	2.5	3.0	1.5	2.0
19	13.0	10.0	11.5	9.0	7.5	8.5	3.0	2.0	2.5	2.5	1.0	1.5
20	14.0	11.0	12.5	8.5	7.5	8.0	2.5	1.5	2.0	3.0	1.0	2.0
21	15.0	12.5	13.5	10.0	8.5	9.0	3.5	2.0	2.5	3.5	1.5	2.0
22	13.0	11.0	12.0	12.0	9.5	10.5	3.5	1.5	2.0	3.5	1.5	2.5
23	11.5	9.5	10.5	11.5	10.5	11.0	2.5	1.5	2.0	3.5	2.5	3.0
24	11.0	8.5	10.0	10.5	8.0	10.0	3.5	2.5	3.0	2.5	1.5	2.0
25	10.0	9.0	9.5	8.0	6.5	7.5	5.0	3.0	4.0	2.5	1.0	2.0
26	11.0	9.5	10.0	8.0	6.0	7.0	6.5	4.0	5.5	2.5	1.0	1.5
27	11.5	8.5	10.0	7.5	5.5	6.5	5.0	3.0	4.0	10.5	1.0	2.0
28	11.5	8.5	10.0	6.5	4.0	5.0	6.5	4.5	5.5	2.0	1.0	1.5
29	12.0	8.5	11.0	9.0	6.5	8.0	7.0	5.0	6.0	3.5	1.5	2.0
30	12.0	9.5	11.0	8.5	6.5	7.5	5.0	3.5	4.5	3.0	1.5	2.0
31	13.0	10.5	11.5	---	---	---	4.5	3.0	3.5	4.5	2.0	3.0
MONTH	18.5	8.5	13.5	16.0	4.0	10.0	11.5	1.0	5.0	10.5	1.0	3.5

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

PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°28'36", long 71°36'19", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of Heaton Orchard Bridge on State Highway 2 in South Kingstown, 1.2 mi upstream from Chickasheen Brook, 1.8 mi south of Usquepaug, and 2.6 mi west of West Kingston.

DRAINAGE AREA.--36.1 mi².

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 state of Rhode Island datum.

REMARKS.--Records good. Flow affected at times by irrigation upstream.

AVERAGE DISCHARGE.--9 years (water years 1959, 1976-83), 79.7 ft³/s, 29.98 in/yr.

EXTREMES FOR PERIOD OF RECORD (SINCE 1974).--Maximum discharge, 1,060 ft³/s June 6, 1982, gage height, 9.23 ft; minimum, 3.9 ft³/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, 742 ft³/s Apr. 12, gage height, 7.87 ft; minimum, 11 ft³/s Sept. 20-22.

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	29	38	89	58	110	127	159	239	224	79	26	21
2	28	36	75	57	111	170	148	220	178	64	27	20
3	26	36	65	56	113	256	145	206	143	58	26	18
4	26	41	61	55	141	239	175	197	136	53	24	18
5	26	63	59	52	143	191	177	198	170	50	24	16
6	26	83	64	58	123	159	154	183	159	67	24	16
7	27	81	81	66	114	154	140	164	136	67	24	15
8	29	66	76	63	112	180	134	154	123	55	24	15
9	51	56	66	57	115	294	182	146	113	49	23	14
10	71	51	60	55	110	354	247	140	106	45	21	14
11	65	49	58	75	105	328	646	135	100	42	20	13
12	50	48	59	96	100	333	694	131	95	41	46	13
13	41	61	57	93	103	349	479	129	91	39	57	13
14	42	87	55	77	103	301	330	126	85	36	45	12
15	43	89	56	68	97	236	267	122	81	35	34	12
16	42	85	65	77	95	197	240	127	77	34	28	11
17	42	75	91	79	98	176	311	159	76	33	25	14
18	40	66	93	71	196	163	327	163	73	31	24	15
19	40	61	81	63	274	207	333	140	72	32	25	13
20	39	58	71	58	210	306	558	128	70	33	24	12
21	40	56	68	55	162	294	516	133	65	32	22	13
22	39	56	65	54	145	354	378	137	62	34	21	23
23	37	55	62	63	141	353	298	131	59	32	20	21
24	38	53	63	132	155	273	513	126	55	35	18	18
25	37	53	71	189	160	215	658	118	53	39	17	16
26	49	52	73	156	150	187	662	111	52	35	17	16
27	52	51	69	124	138	171	472	106	53	32	18	15
28	46	49	64	107	130	215	354	109	73	29	18	15
29	41	72	63	96	---	264	300	107	103	28	18	13
30	39	92	62	91	---	221	265	106	103	28	19	11
31	39	---	59	98	---	179	---	167	---	27	19	---
TOTAL	1240	1819	2101	2499	3754	7446	10062	4558	2986	1294	778	456
MEAN	40.0	60.6	67.8	80.6	134	240	335	147	99.5	41.7	25.1	15.2
MAX	71	92	93	189	274	354	694	239	224	79	57	23
MIN	26	36	55	52	95	127	134	106	52	27	17	11
CFSM	1.11	1.68	1.88	2.23	3.71	6.65	9.28	4.07	2.76	1.16	.70	.42
IN.	1.28	1.87	2.16	2.58	3.87	7.67	10.37	4.70	3.08	1.33	.80	.47
CAL YR 1982	TOTAL	36280	MEAN	99.4	MAX	1020	MIN	26	CFSM	2.75	IN	37.38
WTR YR 1983	TOTAL	38993	MEAN	107	MAX	694	MIN	11	CFSM	2.96	IN	40.18

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 September 1983 (discontinued).

WATER TEMPERATURES: December 1974 to September 1983 (discontinued).

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, 87 micromhos July 5; minimum recorded, 22 micromhos Apr. 11.

WATER TEMPERATURES: Maximum recorded, 23.5°C on several days during July and August; minimum recorded, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	48	44	45	52	48	50	51	44	47	49	46	47
2	48	45	46	48	40	45	49	43	46	51	45	49
3	44	40	42	42	40	40	55	42	46	52	36	48
4	43	42	42	44	42	43	48	41	43	53	47	49
5	47	41	43	45	42	43	48	41	44	51	46	49
6	49	46	47	46	43	45	47	43	45	52	47	50
7	49	43	46	47	45	46	53	45	47	55	47	51
8	46	42	44	46	41	43	51	45	48	54	47	51
9	49	43	46	41	38	39	50	39	44	54	35	50
10	52	48	50	38	38	38	46	33	40	55	35	51
11	54	52	53	39	37	38	39	22	26	54	49	51
12	54	48	52	38	36	37	33	23	27	56	47	51
13	53	46	51	37	35	36	38	28	31	54	48	51
14	53	48	51	39	36	37	41	33	36	54	48	51
15	53	48	51	42	39	41	43	36	39	54	49	51
16	53	49	51	43	41	42	47	38	40	51	49	50
17	52	45	49	43	42	43	44	32	38	49	43	46
18	44	32	36	46	43	44	46	36	40	50	43	47
19	40	34	36	45	41	43	45	30	38	53	48	50
20	43	38	40	41	38	40	42	29	34	52	45	50
21	45	41	43	42	39	40	39	31	34	55	44	50
22	47	43	45	39	34	36	47	34	36	55	48	50
23	47	44	45	39	34	36	43	38	41	53	47	49
24	47	43	44	41	37	38	46	37	42	53	47	50
25	47	44	46	42	37	40	38	32	34	55	48	52
26	48	44	46	43	38	41	36	33	34	57	50	53
27	50	46	48	43	40	41	45	35	38	56	48	52
28	52	48	50	40	36	38	44	39	41	53	48	51
29	---	---	---	44	36	37	46	39	44	55	49	52
30	---	---	---	48	40	43	49	43	46	55	45	51
31	---	---	---	56	43	45	---	---	---	47	35	39
MONTH	54	32	46	56	34	41	55	22	40	57	35	50
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	41	32	36	66	52	56	69	68	69	65	62	63
2	44	36	40	60	54	57	69	67	68	65	64	64
3	47	40	44	75	55	60	69	67	68	65	63	65
4	47	39	43	66	60	62	69	67	68	67	65	66
5	43	38	40	87	59	65	69	68	68	68	67	67
6	45	38	42	63	53	57	69	68	69	70	68	69
7	49	41	44	62	52	54	68	67	68	70	69	70
8	48	43	46	79	49	53	69	67	68	71	68	70
9	52	45	47	54	52	53	69	68	68	71	67	69
10	53	47	49	57	54	56	70	68	68	72	70	71
11	55	49	51	58	56	57	70	68	69	72	69	71
12	57	50	53	60	58	59	70	57	62	71	69	70
13	57	52	55	61	60	60	56	51	53	72	70	71
14	58	53	56	65	61	62	60	55	58	73	69	71
15	81	55	60	65	62	64	62	60	61	74	69	72
16	59	53	57	67	64	66	64	61	63	74	70	72
17	60	56	57	68	65	66	63	60	62	72	67	69
18	60	54	58	69	66	67	63	62	62	69	66	67
19	60	55	57	68	66	67	64	62	63	71	68	70
20	62	56	58	68	66	67	65	63	64	73	71	72
21	63	57	60	68	65	66	65	64	65	72	71	71
22	66	59	61	65	63	64	66	64	65	71	63	67
23	66	60	63	65	64	65	67	66	66	66	62	64
24	77	60	64	64	61	63	69	65	67	67	64	66
25	78	61	64	62	60	61	69	66	67	70	65	67
26	82	62	66	64	61	63	69	66	68	71	66	69
27	77	62	65	68	64	66	69	67	68	72	67	70
28	74	54	61	68	66	67	68	67	68	71	68	70
29	58	47	53	69	68	68	68	66	67	72	68	70
30	55	47	52	68	68	68	66	65	65	74	70	72
31	---	---	---	68	67	68	66	65	66	---	---	---
MONTH	82	32	53	87	49	62	70	51	66	74	62	69
YEAR	87	22	55									

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

01117468 BEAVER RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°29'33", long 71°37'43", Washington County, Hydrologic Unit 01090005, on right bank 10 ft downstream from Beaver River Bridge on State Highway 138 in Richmond, 1.2 mi southwest of Usquepaug, 3.3 mi north of Kenyon, and 3.6 mi upstream from mouth.
DRAINAGE AREA.--8.87 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair.

AVERAGE DISCHARGE.--8 years (water years 1976-83), 22.7 ft³/s, 34.75 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 370 ft³/s June 6, 1982, gage height, 3.83 ft; minimum, 1.7 ft³/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 and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 18	1130	76	2.32	Apr. 11	0645	252	3.30
Mar. 9	1130	85	2.38	Apr. 17	1045	120	2.60
Mar. 19	2345	92	2.43	Apr. 20	1415	187	2.98
Mar. 22	0315	106	2.53	Apr. 25	0400	*321	3.57
Mar. 28	1115	81	2.34				

Minimum discharge not determined; minimum daily, 2.9 ft³/s Sept. 15, 16.

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	8.7	8.7	20	17	31	40	52	78	51	20	7.7	6.9
2	8.4	8.7	18	17	28	58	51	73	41	18	8.3	5.7
3	8.1	8.7	16	17	41	64	47	68	36	17	8.3	4.9
4	8.1	9.0	15	16	46	56	54	65	45	16	7.8	4.3
5	7.8	16	15	15	37	52	53	65	51	15	7.5	4.2
6	7.8	19	19	16	32	47	47	59	41	21	7.0	4.0
7	7.6	14	23	18	28	47	45	55	37	17	8.0	3.8
8	7.4	12	19	17	34	47	47	52	35	15	7.8	3.7
9	12	11	17	16	34	66	73	51	32	15	6.7	3.6
10	15	10	16	16	30	73	73	48	31	13	6.3	3.5
11	14	9.8	16	24	27	69	225	46	30	13	6.1	3.3
12	13	10	16	25	27	70	143	45	29	12	21	3.2
13	12	18	16	20	30	74	116	43	28	11	16	3.1
14	11	24	15	17	28	64	99	42	26	11	10	3.0
15	10	20	15	17	28	56	86	40	25	11	8.5	2.9
16	9.5	18	20	18	28	53	75	45	25	10	7.5	2.9
17	9.0	16	29	19	28	50	98	55	24	9.9	6.9	3.9
18	8.5	15	22	17	53	48	91	46	23	9.5	6.9	3.5
19	8.2	14	19	15	62	75	93	40	22	9.5	7.1	3.2
20	7.8	14	18	14	48	83	143	39	21	10	6.5	3.0
21	7.8	14	17	14	45	74	133	45	20	10	5.8	3.5
22	7.6	14	17	14	44	101	112	41	20	10	5.3	5.5
23	7.2	13	17	17	42	79	97	38	18	9.4	5.1	4.3
24	7.6	13	17	54	46	68	129	38	17	11	4.9	4.0
25	8.5	13	20	45	47	62	268	35	17	12	4.6	3.7
26	10	13	20	35	43	57	172	33	16	10	4.5	3.5
27	11	13	19	30	41	56	133	33	16	9.2	4.6	3.4
28	9.6	13	18	28	40	73	115	35	31	8.8	4.4	3.3
29	9.2	25	18	27	---	75	103	33	40	8.4	5.2	3.2
30	8.7	26	18	26	---	59	89	39	26	8.4	6.2	3.2
31	8.7	---	17	29	---	53	---	59	---	8.1	6.4	---
TOTAL	289.8	432.9	562	670	1048	1949	3062	1484	874	379.2	228.9	114.2
MEAN	9.35	14.4	18.1	21.6	37.4	62.9	102	47.9	29.1	12.2	7.38	3.81
MAX	15	26	29	54	62	101	268	78	51	21	21	6.9
MIN	7.2	8.7	15	14	27	40	45	33	16	8.1	4.4	2.9
CFSM	1.05	1.62	2.04	2.44	4.22	7.09	11.5	5.40	3.28	1.38	.83	.43
IN.	1.22	1.82	2.36	2.81	4.39	8.17	12.84	6.22	3.67	1.59	.96	.48
CAL YR 1982	TOTAL	10242.8	MEAN	28.1	MAX	324	MIN	7.2	CFSM	3.17	IN	42.95
WTR YR 1983	TOTAL	11094.0	MEAN	30.4	MAX	268	MIN	2.9	CFSM	3.43	IN	46.52

PAWCATUCK RIVER BASIN

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 1982 to September 1983 (discontinued).

WATER TEMPERATURES: June 1979 to September 1983 (discontinued).

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, 1982-83): 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, 61 micromhos Nov. 6, 7, 28; minimum recorded, 29 micromhos Apr. 11.

WATER TEMPERATURES: Maximum recorded, 19.0°C July 4, Aug. 8, 20; minimum recorded, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	55	54	54	56	55	55	60	49	59	49	48	48
2	55	54	55	56	55	55	59	58	59	49	48	49
3	55	54	54	56	55	56	60	53	59	49	48	49
4	55	54	54	57	55	56	60	59	59	50	49	49
5	55	53	54	56	53	55	59	58	59	51	49	50
6	57	54	55	61	56	58	59	54	57	50	47	48
7	57	56	57	61	57	59	57	53	55	49	46	48
8	58	55	56	58	56	57	58	56	57	49	48	49
9	57	52	56	58	56	57	57	56	56	50	48	49
10	59	56	58	57	56	57	58	56	57	50	49	49
11	58	56	57	57	56	56	57	55	56	50	45	47
12	56	54	55	56	55	56	56	54	55	49	46	48
13	55	54	54	58	54	55	58	54	56	50	49	50
14	55	53	54	60	54	57	59	56	57	51	49	50
15	55	54	54	60	56	58	56	54	55	51	47	50
16	55	54	55	58	56	57	55	48	52	48	46	47
17	55	54	54	58	57	57	51	47	48	50	48	49
18	55	54	55	57	57	57	53	51	52	51	49	50
19	55	54	55	58	56	57	52	51	51	53	51	52
20	55	54	54	59	58	58	52	50	51	54	52	53
21	55	54	54	59	57	58	52	49	50	54	51	52
22	55	54	55	59	58	58	52	51	51	53	51	52
23	56	55	55	59	58	58	52	50	51	54	38	50
24	56	55	55	59	58	59	51	49	50	40	35	37
25	55	54	55	60	59	60	49	47	48	46	41	44
26	56	53	54	60	59	60	49	48	48	46	45	46
27	57	56	57	60	59	60	48	47	48	47	46	47
28	57	55	56	61	60	60	48	48	48	48	46	47
29	56	55	56	60	52	54	48	47	48	48	47	47
30	56	55	55	58	53	56	49	47	48	48	47	48
31	56	55	56	---	---	---	49	48	48	47	45	46
MONTH	59	52	55	61	52	57	60	47	53	54	35	48

PAWCATUCK RIVER BASIN

01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

PAWCATUCK RIVER BASIN

01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI

LOCATION.--Lat 41°26'42", long 71°40'53", Washington County, Hydrologic Unit 01090005, on right bank at downstream side of bridge on Alton-Carolina road, 0.8 mi northeast of Wood River Junction, 1.5 mi southwest of Carolina, and 2.9 mi upstream from Wood River.

DRAINAGE AREA.--100 mi².

PERIOD OF RECORD.--October 1940 to current year. October and November 1940, monthly discharge only, published in WSP 1301. Prior to October 1943, published as Charles River at Wood River Junction.

REVISED RECORDS.--WSP 1051: Drainage area. WSP 1201: 1948.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 43.86 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation by fish hatchery on White Brook. Prior to 1972, occasional regulation at low flow by powerplant and mills upstream; regulation greater prior to 1969. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 194 ft³/s, 26.35 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s Apr. 12, 26; maximum gage height, 6.71 ft Apr. 12; minimum discharge, 44 ft³/s Sept. 29, 30.

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	99	92	211	170	303	373	488	850	439	236	82	72
2	96	92	202	166	305	406	451	750	465	208	86	72
3	92	90	185	162	324	452	442	670	428	182	84	68
4	90	93	171	156	344	490	478	630	415	164	81	65
5	89	124	161	150	349	486	484	610	430	155	79	62
6	87	149	170	163	331	448	467	580	432	171	77	60
7	85	160	194	175	323	433	436	550	411	176	84	59
8	90	156	200	177	288	454	417	520	377	170	83	57
9	109	139	192	170	290	541	485	490	346	156	78	55
10	136	125	175	162	280	621	583	450	320	146	77	54
11	147	117	167	191	270	664	1100	420	298	135	74	53
12	142	114	163	218	255	693	1360	390	281	129	123	52
13	129	143	155	226	249	698	1340	370	267	124	157	51
14	121	175	147	215	252	672	1210	360	252	116	148	50
15	113	197	150	199	257	617	1060	350	241	111	130	49
16	107	199	174	202	261	552	950	400	229	109	112	48
17	101	186	218	205	283	498	870	450	221	104	97	53
18	97	171	229	211	386	459	900	480	215	100	91	55
19	94	156	221	187	468	499	990	450	210	95	90	52
20	93	146	208	165	521	568	1170	420	203	101	86	49
21	92	140	196	156	491	632	1240	450	196	100	80	49
22	91	137	188	153	451	739	1150	430	187	99	77	57
23	89	135	180	172	434	774	1050	410	178	95	73	62
24	87	132	182	340	441	732	1040	400	167	104	70	58
25	87	131	191	386	441	654	1230	390	158	113	69	54
26	98	129	198	394	432	573	1380	367	152	110	66	50
27	105	126	195	365	408	519	1300	354	153	103	66	48
28	105	121	190	324	387	552	1160	350	183	95	66	46
29	102	169	184	296	---	587	1050	336	234	90	68	44
30	97	201	180	276	---	582	950	337	248	87	70	44
31	94	---	176	292	---	536	---	376	---	84	70	---
TOTAL	3164	4245	5753	6824	9824	17504	27231	14390	8336	3968	2694	1648
MEAN	102	142	186	220	351	565	908	464	278	128	86.9	54.9
MAX	147	201	229	394	521	774	1380	850	465	236	157	72
MIN	85	90	147	150	249	373	417	336	152	84	66	44
CFSM	1.02	1.42	1.86	2.20	3.51	5.65	9.08	4.64	2.78	1.28	.87	.55
IN.	1.18	1.58	2.14	2.54	3.65	6.51	10.13	5.35	3.10	1.48	1.00	.61
CAL YR 1982	TOTAL	94692	MEAN 259	MAX 1830	MIN 85	CFSM 2.59	IN 35.23					
WTR YR 1983	TOTAL	105581	MEAN 289	MAX 1380	MIN 44	CFSM 2.89	IN 39.28					

01117800 WOOD RIVER NEAR ARCADIA, RI

LOCATION.--Lat 41°34'26", long 71°43'16", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of bridge on Ten Rod Road, 1.8 mi northwest of Arcadia, and 4.5 mi north of Hope Valley.

DRAINAGE AREA.--35.2 mi².

PERIOD OF RECORD.--Discharge: January 1964 to September 1981, October 1982 to September 1983.
Water-quality records: Water years 1967-74.

GAGE.--Water-stage recorder. Datum of gage is 137.97 ft Rhode Island State Board of Public Roads datum.

REMARKS.--Records good.

AVERAGE DISCHARGE.--18 years (water years 1965-81, 1983), 77.5 ft³/s, 29.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 896 ft³/s Mar. 18, 1968, gage height, 8.64 ft; minimum, 4.9 ft³/s Sept. 24-26, Sept. 29 to Oct. 1, 1980.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 12	1215	302	5.42	Apr. 11	0715	636	7.43
Mar. 20	0930	410	6.20	Apr. 20	1415	598	7.24
Mar. 28	1415	303	5.43	Apr. 25	0345	*766	8.01

Minimum discharge, 5.9 ft³/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	25	27	78	53	101	123	184	238	165	70	22	13
2	23	26	71	50	102	199	165	219	141	64	23	13
3	22	27	63	48	183	213	171	206	120	59	20	13
4	21	31	56	46	220	185	202	202	143	52	20	12
5	20	64	52	44	200	163	184	198	149	48	20	11
6	20	71	59	53	170	145	164	179	135	58	19	11
7	19	62	65	58	150	152	148	165	119	55	17	10
8	19	56	60	58	140	167	151	154	104	49	16	11
9	48	48	57	52	130	254	238	148	94	45	16	12
10	50	43	51	50	120	259	244	140	89	43	17	11
11	45	40	48	90	110	252	600	133	81	38	17	7.7
12	40	37	47	111	105	291	495	128	77	38	39	6.8
13	34	86	43	109	105	281	352	124	73	35	44	7.9
14	32	111	43	90	100	238	283	121	71	32	31	8.4
15	30	113	44	83	98	201	246	118	70	33	25	8.4
16	28	106	66	95	99	177	226	134	68	30	22	8.4
17	26	94	106	83	120	159	301	163	65	29	20	10
18	24	81	99	71	225	151	278	142	59	28	18	12
19	24	69	87	62	218	290	344	128	58	27	20	11
20	23	62	77	57	196	399	583	123	58	32	20	9.5
21	23	58	72	57	170	345	473	129	57	29	18	7.9
22	23	54	69	56	156	400	357	122	56	29	16	16
23	21	53	63	67	149	343	298	122	56	27	15	14
24	22	50	59	182	156	275	362	116	50	30	14	13
25	23	48	65	185	154	233	736	109	48	32	13	12
26	31	45	74	168	143	206	546	101	45	31	12	12
27	33	44	70	133	130	188	396	103	50	28	12	11
28	32	42	65	110	123	277	330	115	95	26	12	11
29	31	74	64	98	---	282	289	110	103	26	15	10
30	29	83	62	90	---	241	260	137	80	25	14	10
31	27	---	55	97	---	207	---	185	---	23	13	---
TOTAL	868	1805	1990	2606	4073	7296	9606	4512	2579	1171	600	324.0
MEAN	28.0	60.2	64.2	84.1	145	235	320	146	86.0	37.8	19.4	10.8
MAX	50	113	106	185	225	400	736	238	165	70	44	16
MIN	19	26	43	44	98	123	148	101	45	23	12	6.8
CFSM	.80	1.71	1.82	2.39	4.12	6.68	9.09	4.15	2.44	1.07	.55	.31
IN.	.92	1.91	2.10	2.75	4.30	7.71	10.15	4.77	2.73	1.24	.63	.34

WTR YR 1983 TOTAL 37430.0 MEAN 103 MAX 736 MIN 6.8 CFSM 2.93 IN 39.56

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI

LOCATION.--Lat 41°29'53", long 71°43'01", Washington County, Hydrologic Unit 01090005, on right bank 0.2 mi downstream from highway bridge at Hope Valley and 6.6 mi upstream from mouth.
DRAINAGE AREA.--72.4 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 61.11 ft National Geodetic Vertical Datum of 1929. August to December 1909, nonrecording gage at site 1,000 ft upstream at different datum.

REMARKS.--Records good except those for periods of no gage-height record, Mar. 22 to Apr. 11, Apr. 20, 25, 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.--42 years, 156 ft³/s, 29.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,390 ft³/s June 6, 1982, gage height, 10.26 ft; minimum, 4.4 ft³/s Oct. 18, 1941; minimum daily, 10 ft³/s Oct. 13, 1941.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 20	0800	737	5.40	Apr. 17	1900	673	5.15
Mar. 28	--	650	--	Apr. 20	--	1250	--
Apr. 11	--	1300	--	Apr. 25	--	*1400	--

Minimum discharge, 23 ft³/s Sept. 13-17, 29, 30.

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	50	52	153	111	203	238	360	470	366	141	41	37
2	48	51	135	108	193	344	330	436	310	121	48	33
3	45	50	123	104	295	396	370	410	270	109	46	32
4	44	57	116	99	438	340	410	399	290	97	42	30
5	42	90	110	94	378	303	370	405	330	90	41	30
6	41	150	121	107	294	271	330	369	290	111	39	29
7	41	120	143	121	279	283	300	340	260	107	39	27
8	46	100	129	117	275	322	350	322	230	92	39	26
9	91	90	118	108	244	474	500	312	210	82	38	26
10	117	78	106	102	213	499	560	293	198	75	38	26
11	93	71	102	153	193	487	1200	274	185	69	36	26
12	76	68	104	211	194	516	1080	266	174	66	77	25
13	69	132	95	192	186	518	781	257	162	64	105	24
14	68	235	90	162	179	436	592	255	151	59	76	23
15	65	205	93	153	175	373	502	255	142	56	57	23
16	60	189	118	178	175	333	462	293	135	54	48	23
17	55	161	225	161	212	300	635	361	132	52	43	24
18	51	142	199	137	467	284	581	318	125	52	43	25
19	49	127	165	114	452	497	691	273	120	50	45	26
20	48	116	150	107	372	722	1200	269	117	58	42	25
21	49	110	139	101	325	655	1030	303	111	54	39	24
22	48	105	129	98	300	720	762	278	105	51	36	28
23	46	101	121	127	296	650	600	272	100	49	35	31
24	45	98	123	418	320	540	696	261	95	58	34	29
25	47	94	139	385	308	450	1350	238	86	65	32	26
26	62	89	147	312	284	400	1190	219	80	58	31	26
27	66	86	138	260	255	370	889	220	84	51	30	25
28	62	82	130	219	238	580	687	251	192	47	30	25
29	57	146	127	194	---	520	587	237	285	46	36	24
30	54	183	122	178	---	450	518	273	191	45	39	23
31	52	---	114	198	---	400	---	406	---	42	37	---
TOTAL	1787	3378	4024	5129	7743	13671	19911	9535	5526	2171	1362	801
MEAN	57.6	113	130	165	277	441	664	308	184	70.0	43.9	26.7
MAX	117	235	225	418	467	722	1350	470	366	141	105	37
MIN	41	50	90	94	175	238	300	219	80	42	30	23
CFSM	.80	1.56	1.80	2.28	3.83	6.09	9.17	4.25	2.54	.97	.61	.37
IN.	.92	1.74	2.07	2.64	3.98	7.02	10.23	4.90	2.84	1.12	.70	.41

CAL YR 1982	TOTAL	74332	MEAN	204	MAX	2200	MIN	41	CFSM	2.82	IN	38.19
WTR YR 1983	TOTAL	75038	MEAN	206	MAX	1350	MIN	23	CFSM	2.85	IN	38.55

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 many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 166 micromhos Aug. 12; minimum recorded, 36 micromhos Apr. 25, 26.

WATER TEMPERATURES: Maximum recorded, 26.0°C July 16, Aug. 8; minimum recorded, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	79	76	77	78	77	77	71	68	69	59	58	59
2	77	76	76	81	77	79	69	68	69	59	58	59
3	79	76	77	84	81	83	69	68	68	60	58	59
4	81	78	79	86	78	82	70	69	69	60	59	60
5	79	77	78	---	---	---	70	69	70	62	60	61
6	80	78	79	62	60	61	95	69	76	72	63	67
7	81	79	80	63	61	62	71	68	69	63	60	61
8	96	80	88	66	63	64	68	67	68	62	60	61
9	---	---	---	66	62	64	69	66	67	61	59	60
10	69	68	68	67	63	66	67	65	66	66	60	61
11	73	68	71	64	61	63	67	65	66	93	61	71
12	74	72	73	66	63	65	67	64	65	60	56	57
13	74	72	73	91	56	69	67	64	65	57	55	56
14	77	74	76	55	51	52	72	66	69	55	53	54
15	74	72	73	56	50	53	76	67	71	74	55	58
16	74	72	73	50	47	48	114	70	80	89	60	71
17	75	73	74	49	46	47	72	57	60	60	58	59
18	77	74	76	48	46	47	57	56	56	61	59	60
19	78	76	77	49	47	48	56	55	56	66	62	64
20	78	76	77	49	48	48	63	56	59	66	64	65
21	80	77	78	50	48	49	59	57	58	67	65	66
22	80	77	79	53	49	51	62	58	59	68	66	67
23	80	76	78	52	50	51	64	58	60	117	66	76
24	78	77	77	52	49	50	68	60	64	82	55	60
25	78	76	77	50	49	50	63	60	61	54	51	53
26	88	76	82	49	48	49	60	58	59	51	50	50
27	76	70	73	49	48	49	58	56	57	53	51	52
28	74	71	72	50	48	49	58	56	57	55	53	54
29	77	72	75	73	48	60	62	59	60	56	55	56
30	77	75	77	70	67	69	60	57	58	57	56	56
31	78	76	77	---	---	---	59	57	59	69	57	60
MONTH	96	68	76	91	46	59	114	55	64	117	50	60

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	59	57	58	55	54	54	54	51	52	53	50	51
2	57	56	56	60	49	55	56	53	54	54	52	53
3	70	55	61	50	47	48	60	53	55	55	53	54
4	53	48	50	49	47	48	55	52	53	55	54	55
5	48	47	48	51	49	50	65	51	54	---	---	---
6	50	48	49	52	50	51	65	53	55	---	---	---
7	64	49	54	57	51	54	57	53	55	---	---	---
8	58	52	53	58	51	53	68	56	58	---	---	---
9	55	52	53	57	50	52	63	49	54	55	55	55
10	55	52	54	52	50	51	53	45	50	56	54	55
11	57	54	56	52	49	50	45	37	40	56	55	55
12	59	55	57	52	47	50	38	37	37	56	54	55
13	90	56	65	49	45	48	42	37	39	57	53	55
14	91	87	89	52	48	50	45	41	43	58	55	57
15	93	88	90	53	50	52	47	44	46	61	57	59
16	96	57	87	55	53	54	52	46	49	65	56	59
17	94	57	64	57	55	56	53	45	49	59	52	53
18	---	---	---	60	56	58	46	44	45	54	51	52
19	---	---	---	64	55	60	49	40	45	54	51	53
20	---	---	---	56	47	51	40	37	38	66	53	57
21	49	47	48	51	45	47	38	37	37	56	54	55
22	51	49	49	49	44	47	41	37	39	---	---	---
23	56	50	52	44	41	42	45	40	42	58	55	56
24	53	50	51	45	42	44	51	44	46	55	54	55
25	51	50	51	48	46	47	44	36	40	57	55	56
26	52	50	51	51	48	49	39	36	37	56	56	56
27	53	52	52	50	49	50	41	38	40	62	54	57
28	54	53	53	62	48	52	45	41	43	54	53	53
29	---	---	---	49	47	47	48	45	47	54	53	53
30	---	---	---	50	47	48	51	48	50	70	51	55
31	---	---	---	51	48	50	---	---	---	---	---	---
MONTH	96	47	58	64	41	51	68	36	46	70	50	55
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	---	---	---	67	65	66	---	---	---	106	88	97
2	---	---	---	68	67	68	81	75	78	88	82	85
3	---	---	---	69	67	68	77	73	76	85	80	83
4	---	---	---	71	68	69	80	74	78	88	82	85
5	---	---	---	72	69	71	81	79	80	87	83	86
6	---	---	---	88	68	76	81	79	80	88	84	86
7	---	---	---	68	67	68	83	79	81	89	85	87
8	---	---	---	69	67	69	83	80	82	88	84	86
9	---	---	---	72	68	70	82	79	81	89	85	87
10	---	---	---	72	69	71	80	78	80	90	86	89

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

PAWCATUCK RIVER BASIN

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 downstream from Shunock River.

DRAINAGE AREA.--295 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--November 1940 to current year.

REVISED RECORDS.--WSP 1051: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.76 ft below 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.--42 years (water years 1942-83), 576 ft³/s, 26.52 in/yr.

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

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 3,150 ft³/s, by computation of flow over dam 1.5 mi upstream. Maximum discharge since 1886 occurred in November 1927 and was possibly more than twice that in March 1936. Maximum stage since at least 1635, 15.0 ft Sept. 21, 1938, due to hurricane tidal wave.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,340 ft³/s Apr. 25, gage height, 9.78 ft; minimum daily, 147 ft³/s Sept. 30.

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	188	220	572	477	838	1020	1350	2080	1150	633	263	217
2	185	205	531	467	825	1070	1250	1880	1150	567	260	214
3	191	205	504	461	892	1150	1200	1730	1080	505	260	207
4	191	214	472	446	1060	1190	1350	1660	1110	464	252	198
5	177	233	456	431	1090	1190	1450	1620	1200	426	249	192
6	169	274	456	446	1030	1130	1350	1520	1170	476	241	189
7	161	340	526	498	963	1080	1200	1410	1080	476	245	189
8	164	349	531	498	934	1130	1150	1300	1020	447	241	183
9	196	320	504	488	892	1460	1400	1220	901	405	238	180
10	289	300	472	461	825	1650	2000	1160	831	385	231	177
11	336	285	451	509	733	1690	3200	1090	780	365	227	180
12	312	278	446	613	719	1810	3730	1060	740	361	287	177
13	282	336	436	631	700	1960	3470	1010	696	347	342	171
14	260	482	389	607	687	1890	3170	979	654	338	324	171
15	250	531	402	578	700	1800	2830	971	633	329	299	168
16	257	543	441	631	713	1550	2430	1030	607	324	275	168
17	253	509	566	625	773	1400	2480	1200	587	316	252	174
18	233	467	613	572	1300	1250	2420	1240	567	312	245	180
19	208	426	607	467	1560	1450	2690	1160	548	303	241	174
20	188	402	584	467	1480	1700	3880	1090	535	320	238	168
21	177	380	549	456	1410	2000	3730	1100	511	316	231	163
22	172	375	526	407	1320	2200	3330	1090	493	307	217	174
23	172	362	504	467	1220	2400	2990	1080	464	303	211	174
24	182	357	498	1010	1250	2200	3020	1060	447	316	207	171
25	188	357	526	1230	1230	1900	4200	1020	421	329	204	168
26	180	349	543	1180	1180	1700	4060	953	410	312	201	163
27	185	340	543	1080	1110	1500	3810	918	400	303	198	157
28	188	332	531	985	1020	1600	3510	962	476	291	204	155
29	194	436	520	892	---	1700	3070	953	696	283	207	152
30	202	578	509	819	---	1650	2380	927	733	275	211	147
31	220	---	493	819	---	1500	---	1020	---	267	214	---
TOTAL	6550	10785	15701	19718	28454	48920	78100	37493	22090	11401	7515	5301
MEAN	211	360	506	636	1016	1578	2603	1209	736	368	242	177
MAX	336	578	613	1230	1560	2400	4200	2080	1200	633	342	217
MIN	161	205	389	407	687	1020	1150	918	400	267	198	147
CFSM	.72	1.22	1.72	2.16	3.44	5.35	8.82	4.10	2.50	1.25	.82	.60
IN.	.83	1.36	1.98	2.49	3.59	6.17	9.85	4.73	2.79	1.44	.95	.67
CAL YR 1982	TOTAL	283424	MEAN 777	MAX 6220	MIN 161	CFSM 2.63	IN 35.74					
WTR YR 1983	TOTAL	292028	MEAN 800	MAX 4200	MIN 147	CFSM 2.71	IN 36.83					

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 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, 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 the winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 177 micromhos Aug. 7; minimum, 50 micromhos Apr. 11.

WATER TEMPERATURES: Maximum, 27.5°C Aug. 5; minimum, 0.0°C on many days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	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												
19...	1430	202	124	7.2	16.0	11.5	--	1.0	11.3	102	--	--
NOV												
18...	1030	467	96	6.6	10.5	5.5	--	1.6	12.5	98	--	1.0
DEC												
17...	1215	566	108	7.0	4.5	3.0	--	1.2	13.5	100	33	--
JAN												
18...	1100	602	105	6.8	-2.5	0.5	--	1.8	14.7	102	--	1.0
FEB												
22...	1300	1310	78	6.1	10.0	2.0	--	0.7	14.0	101	--	--
MAR												
04...	1130	1190	69	6.2	5.0	5.0	35	0.5	12.6	98	22	1.0
APR												
12...	1015	3750	66	6.4	14.0	9.0	--	0.9	10.5	91	--	--
MAY												
19...	1140	1150	80	6.8	17.0	13.0	--	0.5	10.2	94	--	1.0
JUN												
16...	0930	607	93	6.7	27.0	22.0	--	1.3	8.7	99	<10	--
JUL												
14...	0900	338	97	6.7	28.0	22.5	--	0.75	9.1	105	--	1.0
AUG												
11...	1015	224	110	6.8	21.0	23.0	--	0.5	7.8	91	--	--
SEP												
06...	1000	189	180	7.3	29.5	24.0	24	1.5	8.5	100	32	3.0

DATE	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI 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)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
OCT												
19...	100	1000	--	--	--	--	--	--	--	18	11	--
NOV												
18...	84	420	14	6	3.9	1.1	12	0.7	8.0	18	9.4	0.1
DEC												
17...	500	2700	--	--	--	--	--	--	--	14	10	--
JAN												
18...	72	110	15	6	3.9	1.2	13	1.1	9.0	17	13	<0.1
FEB												
22...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
04...	K18	K12	12	8	3.0	.96	6.6	0.8	4.0	11	9.8	--
APR												
12...	460	280	--	--	--	--	--	--	--	8.0	7.7	--
MAY												
19...	170	280	13	5	3.2	1.2	10	1.0	8.0	10	12	0.1
JUN												
16...	140	1300	--	--	--	--	--	--	--	12	11	--
JUL												
14...	96	1200	20	8	5.4	1.5	11	1.2	12	19	13	0.3
AUG												
11...	88	6300	--	--	--	--	--	--	--	15	14	--
SEP												
06...	110	3800	22	0	6.2	1.7	29	1.5	26	35	10	--

< 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).

PAWCATUCK RIVER BASIN

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01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SILICA, DIS- SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, 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)	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 19...	--	83	29	0.11	45.3	--	88	0.49	<0.01	0.5	--	0.02
NOV 18...	9.3	68	60	0.09	85.7	--	77	0.29	<0.01	0.3	0.23	0.09
DEC 17...	--	78	24	0.11	119	--	86	0.39	<0.01	0.4	--	0.09
JAN 18...	8.1	86	63	0.12	140	--	84	0.39	0.01	0.4	0.38	0.05
FEB 22...	--	--	--	--	--	--	--	0.19	<0.01	0.2	--	0.04
MAR 04...	--	43	35	0.06	138	3	50	0.19	<0.01	0.2	--	0.02
APR 12...	--	49	16	0.07	496	--	58	0.09	0.01	0.1	--	0.03
MAY 19...	3.1	--	46	0.06	143	--	62	0.19	<0.01	0.2	0.17	0.08
JUN 16...	--	76	23	0.1	125	4	80	0.39	<0.01	0.4	--	0.05
JUL 14...	7.2	86	66	0.12	78.5	--	61	0.59	<0.01	0.6	0.62	0.02
AUG 11...	--	85	29	0.12	51.4	--	87	0.69	<0.01	0.7	--	0.03
SEP 06...	--	111	99	0.15	56.6	5	123	0.87	0.03	0.9	--	0.09

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)	PHOS- PHORUS, ORTHOPHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, ORTHOPHOS- PHORUS, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)
OCT 19...	--	0.88	0.9	1.4	0.04	0.03	0.02	--	--	--	--
NOV 18...	0.09	0.71	0.8	1.1	0.04	0.03	--	0.02	130	--	1
DEC 17...	--	0.41	0.5	0.9	0.05	0.05	0.04	--	--	--	--
JAN 18...	0.05	0.15	0.2	0.6	0.04	0.04	0.02	0.02	100	--	1
FEB 22...	--	0.36	0.4	0.6	0.02	--	0.01	--	--	--	--
MAR 04...	--	0.28	0.3	0.5	0.02	<0.01	0.02	--	--	--	--
APR 12...	--	0.27	0.3	0.4	0.05	0.06	0.02	--	--	--	--
MAY 19...	0.03	0.52	0.6	0.8	0.03	0.02	0.01	0.02	100	--	<1
JUN 16...	--	0.35	0.4	0.8	0.05	0.05	0.05	--	--	--	--
JUL 14...	0.05	0.68	0.7	1.3	0.06	0.05	0.02	0.01	30	--	1
AUG 11...	--	0.77	0.8	1.5	0.04	0.05	0.03	--	--	--	--
SEP 06...	--	0.71	0.8	1.7	0.09	0.07	0.06	--	--	1	--

< 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 1982 TO SEPTEMBER 1983

DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BARIUM, DIS- SOLVED (UG/L AS BA)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	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, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 19...	--	--	--	--	1	--	<1	--	--	6	--
NOV 18...	<1.00	15.00	--	--	<1	--	<1	<3.00	--	1	--
DEC 17...	--	--	--	--	1	--	<1	--	--	3	--
JAN 18...	<1.00	15.00	--	--	<1	--	1	<3.00	--	4	--
FEB 22...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	<1	--	3	--	--	1	--
APR 12...	--	--	--	--	<1	--	<1	--	--	4	--
MAY 19...	<0.05	14.00	--	--	2	--	<1	<3.00	--	6	--
JUN 16...	--	--	--	--	1	--	4	--	--	2	--
JUL 14...	<0.50	--	--	--	1	--	<1	<3.00	--	18	--
AUG 11...	--	--	--	--	2	--	<1	--	--	13	--
SEP 06...	--	--	80.00	1	1	20	<1	--	35	5	600

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (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)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)
OCT 19...	--	--	<1	--	--	--	--	--	--	--	3
NOV 18...	340	--	2	<4.00	--	30	--	<0.1	<10	--	<1
DEC 17...	--	--	7	--	--	--	--	--	--	--	1
JAN 18...	180	--	3	<4.00	--	30	--	0.2	<10	--	1
FEB 22...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	2	--	--	--	--	--	--	--	3
APR 12...	--	--	3	--	--	--	--	--	--	--	3
MAY 19...	280	--	2	<4.00	--	28	--	0.2	<10	--	2
JUN 16...	--	--	2	--	--	--	--	--	--	--	<1
JUL 14...	380	--	4	<4.00	--	30	--	0.7	<10	--	10
AUG 11...	--	--	4	--	--	--	--	--	--	--	1
SEP 06...	--	14	1	--	20	--	0.3	--	--	8.00	1

<ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 19...	--	--	--	--	--	--	--	10	9.1	--	--
NOV 18...	--	<1	--	<1	24	<6.0	--	8.00	9.0	--	--
DEC 17...	--	--	--	--	--	--	--	10	6.6	--	--
JAN 18...	--	<1	--	<1	28	<6.0	--	<4.00	7.3	--	--
FEB 22...	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	--	--	--	--	--	--	--	10	4.7	<1	<1
APR 12...	--	--	--	--	--	--	--	10	7.7	--	--
MAY 19...	--	<1	--	<1	23	<6.0	--	<3.00	5.9	--	--
JUN 16...	--	--	--	--	--	--	--	10	6.5	--	--
JUL 14...	--	<1	--	<1	37	25	--	15	5.4	--	--
AUG 11...	--	--	--	--	--	--	--	20	4.2	--	--
SEP 06...	<1	--	<1.00	--	--	--	190	20	6.3	<1	<1

DATE	TIME	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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)
SEP 06...	1000	<0.1	<1	<0.1	<1.0	<0.01	<0.1	<0.1	<1.0	<0.01	<0.1	<0.01

DATE	TIME	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	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 06...		<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01

DATE	TIME	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, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL (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 06...		<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 18...	1030	467	12	15	57
JAN 18...	1100	602	4	6.5	100
MAY 19...	1140	1150	14	43	69
JUL 14...	0900	338	11	10	68

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	144	140	142	102	95	98	106	104	105
2	---	---	---	139	132	136	97	95	96	104	100	102
3	---	---	---	132	126	130	99	97	98	99	97	98
4	---	---	---	143	130	136	100	96	97	99	96	97
5	---	---	---	151	142	144	102	96	99	107	99	104
6	---	---	---	145	134	141	105	99	103	113	107	111
7	---	---	---	133	124	127	99	97	98	119	114	117
8	---	---	---	123	111	117	104	99	102	113	105	110
9	---	---	---	110	105	108	104	102	103	113	108	111
10	---	---	---	113	106	109	103	101	102	110	107	109
11	---	---	---	118	113	116	107	102	104	109	104	106
12	---	---	---	124	118	121	107	105	106	106	101	103
13	---	---	---	123	112	117	110	103	106	102	98	101
14	---	---	---	122	109	117	106	102	103	98	96	97
15	---	---	---	116	101	109	116	102	110	103	99	101
16	---	---	---	100	94	97	118	114	115	110	100	105
17	---	---	---	99	94	97	116	106	113	106	99	102
18	---	---	---	99	96	97	111	96	105	106	69	94
19	---	---	---	103	98	101	97	95	96	73	69	71
20	123	118	120	106	102	104	98	95	96	106	73	87
21	138	123	130	106	103	105	97	94	95	116	107	113
22	139	122	130	107	104	106	101	94	98	122	115	118
23	129	119	125	106	103	105	107	101	104	127	112	122
24	142	129	136	111	104	107	109	104	106	113	71	91
25	143	137	141	111	109	110	107	104	106	73	68	71
26	138	124	131	114	112	113	104	93	97	79	69	75
27	136	122	127	111	106	109	95	93	94	82	78	80
28	149	137	144	106	100	103	98	92	94	86	81	84
29	153	149	151	101	96	98	96	91	93	90	86	88
30	151	148	149	99	95	97	102	95	100	91	89	90
31	147	144	145	---	---	---	104	101	103	90	82	87
MONTH	153	118	136	151	94	114	118	91	101	127	68	98
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	84	80	82	84	78	81	76	71	74	61	60	61
2	86	82	84	85	73	81	76	75	75	63	61	62
3	89	80	86	72	68	70	77	74	76	64	62	63
4	77	72	74	---	---	---	74	66	68	66	64	65
5	75	70	72	---	---	---	71	67	69	67	65	66
6	84	75	80	---	---	---	75	71	73	68	66	67
7	90	84	87	---	---	---	78	74	76	70	68	69
8	90	85	88	---	---	---	78	76	78	71	69	70
9	93	82	89	---	---	---	78	64	71	73	71	72
10	113	80	91	---	---	---	66	59	64	77	73	75
11	108	73	87	---	---	---	75	50	63	78	76	77
12	104	65	84	---	---	---	74	52	63	79	77	78
13	106	73	84	---	---	---	55	51	52	80	79	79
14	104	78	91	---	---	---	54	52	53	83	80	82
15	105	76	92	---	---	---	56	54	55	82	78	81
16	97	95	96	---	---	---	57	56	56	80	78	79
17	101	95	98	---	---	---	58	56	57	81	69	74
18	97	69	78	---	---	---	60	57	59	77	70	74
19	72	68	70	---	---	---	61	57	59	80	77	78
20	70	68	69	---	---	---	56	54	55	81	77	80
21	74	70	72	---	---	---	55	52	54	80	72	75
22	79	74	77	68	61	63	54	52	53	76	72	74
23	80	79	80	76	69	73	55	53	54	77	73	75
24	79	74	76	71	62	66	58	55	56	78	73	76
25	78	75	77	63	60	61	55	52	54	81	77	79
26	79	77	78	67	63	64	55	53	54	83	79	81
27	81	76	78	70	66	68	55	52	53	87	82	85
28	81	79	80	70	61	67	57	54	55	87	79	83
29	---	---	---	62	60	61	59	56	58	81	78	80
30	---	---	---	65	60	62	58	57	58	80	77	79
31	---	---	---	72	66	69	---	---	---	76	65	68
MONTH	113	65	82	85	60	68	78	50	62	87	60	74

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	66	62	64	91	86	88	141	136	138			
2	70	63	67	90	83	86	137	131	135			
3	76	69	73	85	82	83	131	126	128			
4	80	70	77	85	83	84	130	128	129			
5	70	62	64	86	83	85	145	130	134			
6	74	64	68	88	84	85	175	146	160			
7	80	74	78	89	86	88	177	171	174			
8	82	78	80	89	86	87	171	140	160			
9	84	79	82	---	---	---	157	137	146			
10	86	83	85	---	---	---	137	123	128			
11	87	83	86	---	---	---	---	---	---			
12	87	83	85	---	---	---	---	---	---			
13	86	82	84	---	---	---	---	---	---			
14	88	82	85	100	95	98	---	---	---			
15	91	87	89	106	100	102	---	---	---			
16	93	90	92	109	106	107	---	---	---			
17	97	93	95	114	109	111	---	---	---			
18	98	96	97	118	113	116	---	---	---			
19	98	94	96	117	113	115	---	---	---			
20	98	93	95	116	108	111	---	---	---			
21	93	90	92	138	117	128	---	---	---			
22	101	93	96	147	134	139	---	---	---			
23	108	102	105	150	144	147	---	---	---			
24	108	104	106	144	128	138	---	---	---			
25	106	101	103	142	129	135	---	---	---			
26	104	101	102	142	138	141	---	---	---			
27	102	97	99	137	131	133	---	---	---			
28	99	93	95	132	129	131	---	---	---			
29	94	79	90	136	130	132	---	---	---			
30	86	78	81	140	135	137	---	---	---			
31	---	---	---	142	138	140	---	---	---			
MONTH	108	62	87	150	82	113	177	123	143			
YEAR	177	50	94									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	3.0	2.0	2.5	4.5	3.0	3.5	7.5	6.5	7.0	17.0	15.5	16.5
2	3.0	2.0	2.5	5.0	4.5	5.0	7.5	6.0	7.0	16.5	16.0	16.5
3	4.5	3.0	4.0	6.0	4.5	5.5	7.5	7.0	7.0	16.0	15.5	16.0
4	4.5	4.0	4.5	---	---	---	8.0	6.5	7.5	15.5	15.0	15.0
5	4.0	2.0	3.0	---	---	---	9.5	7.5	9.0	15.5	14.0	15.0
6	2.0	.5	1.0	---	---	---	10.5	9.0	10.0	16.0	14.5	15.5
7	.5	.0	.5	---	---	---	11.0	10.0	10.5	16.5	15.0	15.5
8	.5	.0	.5	---	---	---	11.5	11.0	11.0	16.0	15.0	15.5
9	.5	.0	.0	---	---	---	12.5	11.0	12.0	16.0	15.0	15.5
10	.5	.0	.0	---	---	---	12.0	10.0	11.0	15.0	13.5	14.5
11	.0	.0	.0	---	---	---	9.5	9.0	9.5	13.5	12.5	13.5
12	.5	.0	.0	---	---	---	10.0	9.0	9.5	12.5	12.0	12.0
13	.5	.0	.0	---	---	---	11.0	9.5	10.5	12.0	11.5	11.5
14	.5	.0	.0	---	---	---	11.5	10.0	10.5	13.5	11.5	12.5
15	1.0	.0	.0	---	---	---	11.5	10.5	11.0	13.5	13.0	13.0
16	1.0	.0	.5	---	---	---	11.0	10.0	10.5	13.5	12.0	13.0
17	1.0	.5	.5	---	---	---	10.5	9.0	10.0	13.0	11.5	12.5
18	1.5	.5	1.0	---	---	---	10.0	9.0	9.5	13.5	12.0	13.0
19	1.0	.0	.5	---	---	---	9.5	8.0	8.5	14.0	12.5	13.5
20	1.5	.0	.5	---	---	---	8.0	7.0	7.5	13.5	13.5	13.5
21	1.5	.5	1.0	---	---	---	8.5	7.0	8.0	15.0	13.5	14.0
22	2.5	1.0	1.5	8.5	7.5	8.5	10.0	8.0	9.0	17.0	15.0	16.0
23	2.5	2.0	2.5	7.5	6.5	7.0	11.5	9.5	10.5	18.5	16.5	17.5
24	3.0	2.0	2.5	6.5	5.5	6.0	11.0	11.0	11.0	18.0	17.0	18.0
25	3.0	2.5	3.0	5.5	4.5	5.0	11.0	10.5	10.5	18.0	16.5	17.5
26	3.0	2.5	2.5	5.0	3.5	4.5	10.5	10.0	10.5	17.5	17.0	17.0
27	3.0	1.5	2.5	5.0	4.5	4.5	12.0	10.0	11.0	16.5	14.5	15.5
28	3.5	2.5	3.0	7.0	5.0	6.0	14.5	12.0	13.0	15.5	14.0	14.5
29	---	---	---	8.5	7.0	7.5	15.5	14.0	15.0	15.0	14.5	15.0
30	---	---	---	8.0	6.5	7.0	16.5	15.0	15.5	15.0	15.0	15.0
31	---	---	---	7.0	6.5	7.0	---	---	---	15.5	15.0	15.0
MONTH	4.5	.0	1.5	8.5	3.0	6.0	16.5	6.0	10.0	18.5	11.5	15.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.5	15.0	16.0	21.0	19.0	20.0	25.5	23.5	24.0			
2	18.0	16.0	17.0	22.5	20.0	21.0	27.0	23.5	25.0			
3	19.0	17.0	18.0	24.0	21.0	22.5	27.0	23.0	25.0			
4	18.0	17.0	17.5	25.5	22.5	24.0	26.0	24.0	25.0			
5	18.0	16.5	17.0	25.0	23.5	24.0	27.5	24.0	25.5			
6	18.5	17.0	18.0	25.0	23.0	24.0	27.0	24.0	25.5			
7	19.5	18.0	18.5	24.5	22.5	23.5	27.0	24.5	25.5			
8	19.0	18.0	18.5	24.5	22.0	23.0	26.5	24.5	25.5			
9	18.5	17.5	18.0	---	---	---	26.5	25.0	25.5			
10	18.0	16.5	17.0	---	---	---	26.5	23.0	25.0			
11	18.5	16.0	17.5	---	---	---	---	---	---			
12	19.5	17.0	18.5	---	---	---	---	---	---			
13	21.5	19.0	20.0	---	---	---	---	---	---			
14	22.5	20.0	21.5	25.5	22.5	24.0	---	---	---			
15	23.5	21.0	22.0	25.5	22.0	24.0	---	---	---			
16	23.5	22.0	22.5	26.5	23.0	25.0	---	---	---			
17	23.0	21.5	22.0	27.0	23.0	25.0	---	---	---			
18	22.0	21.0	21.5	27.0	23.5	25.0	---	---	---			
19	22.0	20.5	21.0	26.5	24.0	25.0	---	---	---			
20	22.0	20.5	21.5	26.5	23.5	25.0	---	---	---			
21	22.0	20.5	21.0	27.0	23.5	25.0	---	---	---			
22	23.0	20.0	21.5	25.5	22.5	24.0	---	---	---			
23	23.5	20.5	22.0	26.0	22.5	24.0	---	---	---			
24	24.0	21.0	22.5	23.5	21.5	22.0	---	---	---			
25	24.0	21.5	22.5	23.0	21.0	21.5	---	---	---			
26	22.0	21.0	21.5	23.5	20.0	21.5	---	---	---			
27	23.5	20.5	21.5	24.0	20.0	22.0	---	---	---			
28	21.5	19.5	20.5	23.5	20.5	22.0	---	---	---			
29	20.5	18.5	19.5	24.0	21.5	22.5	---	---	---			
30	21.0	18.5	19.5	25.0	22.0	23.5	---	---	---			
31	---	---	---	26.0	22.5	24.0	---	---	---			
MONTH	24.0	15.0	20.0	27.0	19.0	23.5	27.5	23.0	25.0			
YEAR	27.5	.0	10.5									

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 downstream from East Brimfield Dam, and 2.4 mi upstream from Cedar Pond outlet.

DRAINAGE AREA.--67.5 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 613.51 ft Corps of Engineers datum.

REMARKS.--Records good except those below 10 ft³/s, which are fair. 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.--11 years, 135 ft³/s, 27.16 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s Jan. 30, 1976, gage height, 6.42 ft; maximum gage height, 6.52 ft Mar. 17, 1977; minimum daily discharge, 2.2 ft³/s Sept. 10, 1983.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, 15,400 ft³/s Aug. 19, 1955, by slope-area measurement. Flood of Mar. 18, 1936, reached a discharge of 2,390 ft³/s and flood in September 1938, 7,000 ft³/s, both by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 735 ft³/s Mar. 15, gage height, 5.82 ft; minimum daily, 2.2 ft³/s Sept. 10.

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	38	42	104	75	125	149	441	681	324	85	16	18
2	35	40	102	72	85	192	266	705	251	73	17	26
3	34	35	91	70	217	297	220	709	261	62	16	24
4	34	35	84	65	561	338	343	683	223	54	16	24
5	33	66	77	60	559	340	321	642	226	53	20	23
6	50	84	74	73	364	266	280	484	220	58	21	23
7	82	75	73	95	314	307	251	290	202	54	21	23
8	106	69	67	110	260	297	236	223	183	47	20	23
9	150	69	63	110	232	309	246	200	166	42	19	15
10	160	66	58	98	199	543	196	183	151	37	16	2.2
11	165	52	56	192	180	488	63	172	139	33	16	9.1
12	161	46	56	238	151	252	140	166	129	31	23	16
13	129	65	53	336	154	425	395	158	120	29	33	20
14	113	30	50	449	167	584	524	150	119	26	33	20
15	138	37	48	331	159	686	425	143	137	24	30	17
16	128	178	63	251	149	679	260	147	191	22	27	13
17	90	180	105	214	144	533	405	170	161	20	24	12
18	72	53	128	190	160	248	506	179	124	20	26	15
19	59	185	125	153	179	22	364	170	103	19	32	13
20	48	132	110	150	181	172	290	156	87	18	33	11
21	40	93	96	139	171	216	567	155	75	18	29	9.0
22	35	34	84	132	159	179	706	150	67	19	26	20
23	35	77	78	136	152	487	330	156	59	19	24	22
24	35	102	75	174	148	663	266	194	54	20	21	21
25	35	77	78	217	147	646	375	211	48	22	19	18
26	42	68	95	234	152	629	534	198	44	22	16	15
27	50	64	102	217	152	478	649	193	42	21	15	13
28	53	59	103	182	149	337	685	220	54	20	14	11
29	54	75	101	154	---	490	694	232	78	18	14	9.4
30	50	94	90	135	---	480	693	254	90	17	13	8.3
31	44	---	81	128	---	466	---	306	---	16	12	---
TOTAL	2298	2282	2570	5180	5770	12198	11671	8680	4128	1019	662	494.0
MEAN	74.1	76.1	82.9	167	206	393	389	280	138	32.9	21.4	16.5
MAX	165	185	128	449	561	686	706	709	324	85	33	26
MIN	33	30	48	60	85	22	63	143	42	16	12	2.2
MEAN†	73.5	78.6	82.3	168	207	410	474	185	132	30.4	20.7	16.5
CFSM†	1.09	1.16	1.22	2.49	3.07	6.07	7.02	2.74	1.96	.45	.31	.24
IN†	1.26	1.30	1.41	2.88	3.19	7.01	7.84	3.16	2.18	.52	.35	.27

CAL YR 1982 TOTAL 55267.0 MEAN 151 MAX 755 MIN 20 MEAN† 151 CFSM† 2.24 IN† 30.44
WTR YR 1983 TOTAL 56952.0 MEAN 156 MAX 709 MIN 2.2 MEAN† 156 CFSM† 2.31 IN† 31.35

† 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 downstream from Westville Dam, 1.0 mi upstream from McKinstry Brook, and 1.3 mi west of Southbridge.

DRAINAGE AREA.--99.1 mi².

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 Corps of Engineers datum.

REMARKS.--Records good except those for period of doubtful or no gage-height record, Oct. 1 to Nov. 1, which are poor. 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.--21 years, 172 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,850 ft³/s Mar. 23, 1980, gage height, 6.83 ft; minimum daily, 7.3 ft³/s Nov. 21, 28, 1964, July 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,660 ft³/s Apr. 22, gage height, 6.68 ft; minimum daily, 12 ft³/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	83	73	104	127	186	212	580	1000	437	108	24	16
2	65	44	102	129	129	295	352	925	375	97	29	15
3	58	48	113	110	257	440	246	906	359	83	34	16
4	57	99	159	62	846	480	493	895	327	74	20	17
5	52	82	123	74	868	460	587	982	328	64	33	17
6	50	85	143	139	696	362	486	674	302	66	23	26
7	59	86	73	158	444	383	419	399	276	68	26	38
8	121	97	71	116	390	425	323	284	247	64	25	31
9	214	70	96	104	330	474	372	281	222	57	23	21
10	214	65	79	132	277	763	256	257	202	50	21	16
11	212	84	105	407	257	767	68	237	187	44	26	13
12	196	95	89	507	230	424	343	226	167	41	26	12
13	150	104	50	414	235	678	796	218	163	39	43	14
14	148	119	45	540	237	987	1040	207	150	36	35	21
15	159	117	51	480	228	928	738	196	171	34	36	27
16	188	114	110	345	213	852	404	206	276	32	32	18
17	137	290	106	300	211	748	609	245	267	30	26	13
18	108	92	122	259	258	325	738	246	179	29	35	14
19	94	137	166	194	269	22	588	229	148	28	39	24
20	86	206	199	195	264	261	501	215	125	27	41	27
21	78	191	145	183	248	339	1100	214	109	25	33	19
22	57	131	77	178	235	297	1460	203	98	30	32	27
23	44	64	74	191	227	679	602	220	95	31	26	33
24	40	91	80	273	223	1100	431	287	73	27	23	31
25	43	70	103	327	216	1200	632	293	71	33	20	29
26	60	87	149	322	218	1030	948	269	50	29	19	24
27	41	67	92	298	213	631	1260	280	63	18	18	19
28	75	68	161	243	210	495	1250	330	90	24	18	16
29	83	144	166	214	---	802	1150	319	110	24	54	18
30	64	95	87	190	---	751	1080	368	114	25	32	15
31	64	---	92	189	---	686	---	427	---	24	14	---
TOTAL	3100	3115	3332	7400	8615	18296	19852	12038	5781	1361	886	627
MEAN	100	104	107	239	308	590	662	388	193	43.9	28.6	20.9
MAX	214	290	199	540	868	1200	1460	1000	437	108	54	38
MIN	40	44	45	62	129	22	68	196	50	18	14	12
CAL YR 1982	TOTAL	76117	MEAN	209	MAX	1470	MIN	30				
WTR YR 1983	TOTAL	84403	MEAN	231	MAX	1460	MIN	12				

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT

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

DRAINAGE AREA.--155 mi², revised.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 851: 1936(M). WSP 1201: 1939-43, 1949. WSP 1381: 1938(M).

GAGE.--Water-stage recorder. Datum of gage is 341.52 ft 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.--52 years, 272 ft³/s, 23.85 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 49,300 ft³/s Aug. 19, 1955, gage height, 18.96 ft, from floodmarks, from rating curve extended above 5,100 ft³/s on basis of slope-area measurement of peak flow; minimum, about 1 ft³/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 Aug. 20, 1940; minimum daily discharge, about 1 ft³/s Sept. 4, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,400 ft³/s Apr. 20, gage height, 6.06 ft; minimum, 7.0 ft³/s Sept. 12, gage height, 2.06 ft.

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	114	81	213	164	302	323	816	1110	707	137	36	25
2	109	61	202	155	278	609	560	1050	574	117	45	17
3	73	67	185	149	1050	885	403	1030	500	101	42	17
4	58	117	173	136	1530	853	642	1040	532	88	61	17
5	54	232	158	112	1340	747	770	1090	520	86	54	19
6	54	224	158	195	1060	616	662	853	445	94	45	23
7	81	185	152	235	770	603	547	549	389	88	38	49
8	117	155	139	235	642	718	462	400	333	80	38	42
9	345	136	133	220	553	1020	541	400	290	68	34	32
10	271	128	131	199	503	1280	578	352	255	62	31	26
11	239	114	117	1200	400	1380	965	323	230	56	32	19
12	206	100	114	1040	320	1110	816	309	207	52	52	15
13	167	354	100	725	300	1160	1070	295	193	49	61	17
14	167	349	90	770	350	1340	1220	286	183	45	54	22
15	170	278	100	711	363	1250	979	272	207	42	49	34
16	179	252	170	515	327	1130	578	309	286	41	45	29
17	136	424	264	440	340	1010	911	384	286	38	41	23
18	109	179	256	370	462	629	979	347	204	36	59	27
19	95	243	235	300	457	642	1410	309	166	34	68	22
20	90	275	213	250	418	931	1970	295	140	31	57	41
21	79	202	195	230	388	952	1690	300	120	54	49	26
22	69	170	170	230	368	824	1760	277	104	49	44	54
23	61	97	161	298	358	1010	1050	337	99	42	41	44
24	54	145	167	468	358	1310	1120	526	81	23	36	41
25	60	152	179	522	345	1430	1580	451	74	41	32	38
26	102	139	232	497	331	1250	1470	378	61	45	31	34
27	77	131	228	435	314	952	1520	445	62	32	27	27
28	97	120	220	358	310	808	1470	520	131	31	26	23
29	97	202	213	323	---	1080	1320	463	159	34	52	19
30	69	220	192	294	---	965	1220	707	149	34	54	19
31	73	---	176	306	---	878	---	797	---	32	31	---
TOTAL	3672	5532	5436	12082	14537	29695	31079	16204	7687	1762	1365	841
MEAN	118	184	175	390	519	958	1036	523	256	56.8	44.0	28.0
MAX	345	424	264	1200	1530	1430	1970	1110	707	137	68	54
MIN	54	61	90	112	278	323	403	272	61	23	26	15
MEAN†	117	187	174	392	520	981	1126	418	248	54.0	42.2	27.7
CFSMT	.75	1.21	1.12	2.53	3.35	6.33	7.26	2.70	1.60	.35	.27	.18
IN.†	.86	1.35	1.29	2.92	3.49	7.30	8.10	3.11	1.78	.40	.31	.20

CAL YR 1982	TOTAL	127768	MEAN	350	MAX	2490	MIN	29	MEAN†	350	CFSMT	2.26	IN†	30.61
WTR YR 1983	TOTAL	129892	MEAN	356	MAX	1970	MIN	15	MEAN†	356	CFSMT	2.30	IN†	31.11

† Adjusted for change in contents in East Brimfield and Westville Reservoirs.

THAMES RIVER BASIN

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT.--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

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

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

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 308 micromhos Jan. 31, 1969; minimum, 49 micromhos April 2, 1960.

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

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

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 19...	1000	96	116	7.2	8.5	9.5	3.0	11.6	102	190	140
NOV 16...	0945	260	113	6.9	0.5	4.5	1.0	13.3	101	240	520
DEC 15...	1030	98	134	7.1	5.0	1.0	2.8	14.5	102	46	96
JAN 13...	1030	735	92	6.8	-4.0	1.0	1.0	14.3	102	150	760
MAR 02...	1010	530	108	6.3	5.5	3.0	0.5	13.6	104	360	540
APR 14...	1000	1180	80	6.8	10.0	9.0	1.7	12.3	106	40	K16
MAY 23...	1330	355	89	7.3	25.0	18.0	1.7	11.3	116	500	360
JUN 15...	0910	200	95	6.8	27.0	24.0	1.2	8.4	100	1600	12000
JUL 13...	0920	48	138	7.0	24.5	24.5	1.0	8.3	100	80	4000
AUG 10...	0855	33	154	6.8	19.0	22.0	0.6	8.0	92	180	6800
SEP 06...	1115	22	168	7.2	29.5	24.5	1.7	9.1	108	140	1000

DATE	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)	ALKA- LINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	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)
OCT 19...	--	--	--	--	--	10	16	--	76	26	0.1
NOV 16...	22	12	6.0	1.7	10	10	15	7.5	77	47	0.1
DEC 15...	--	--	--	--	--	11	17	--	80	28	0.11
JAN 13...	16	9	4.3	1.3	7.0	9.0	14	6.5	64	39	0.09
MAR 02...	--	--	--	--	--	12	17	--	63	29	0.09
APR 14...	--	--	--	--	--	6.0	12	--	48	18	0.06
MAY 23...	20	10	5.2	1.6	10	9.0	14	4.4	74	41	0.1
JUN 15...	--	--	--	--	--	8.0	14	--	65	22	0.09
JUL 13...	25	11	6.8	2.0	14	9.0	23	3.9	85	54	0.12
AUG 10...	--	--	--	--	--	10	25	--	87	35	0.12
SEP 06...	--	--	--	--	--	16	27	--	94	43	0.13

K, NON-IDEAL COLONY COUNT.

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	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, 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)
OCT 19...	19.6	75	0.28	0.02	0.3	0.23	0.67	0.9	1.2	0.27
NOV 16...	54.1	80	0.18	0.02	0.2	0.09	0.51	0.6	0.8	0.09
DEC 15...	21.1	82	0.29	0.01	0.3	0.32	0.88	1.20	1.5	0.28
JAN 13...	127	68	0.29	<0.01	0.3	0.03	0.07	0.1	0.4	0.15
MAR 02...	90.2	78	0.39	<0.01	0.4	0.07	0.43	0.5	0.9	0.07
APR 14...	153	56	0.09	<0.01	0.1	<0.01	0.29	0.3	0.4	0.04
MAY 23...	70.9	76	0.09	0.01	0.1	0.08	0.82	0.9	1.0	0.05
JUN 15...	35.1	74	0.18	0.02	0.2	0.14	0.46	0.6	0.8	0.14
JUL 13...	10.9	91	0.64	0.06	0.7	0.17	0.53	0.7	1.4	0.42
AUG 10...	7.8	103	0.64	0.06	0.7	0.17	1.0	1.20	1.9	0.42
SEP 06...	5.6	104	0.88	0.02	0.9	0.03	0.87	0.9	1.8	0.78

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	NICKEL, DIS- SOLVED (UG/L AS NI)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 19...	0.24	1	<1	7	--	<1	--	2	10	6.5
NOV 16...	0.04	1	<1	4	310	<1	44	<1	12	7.1
DEC 15...	0.22	1	<1	8	--	9	--	1	10	4.3
JAN 13...	0.03	<1	5	1	140	1	32	1	13	4.5
MAR 02...	0.03	1	6	2	--	4	--	4	10	2.7
APR 14...	0.02	<1	1	6	--	5	--	2	10	3.8
MAY 23...	0.04	1	<1	10	290	2	34	1	6.00	4.3
JUN 15...	0.10	1	<1	6	--	<1	--	2	10	5.2
JUL 13...	0.38	<1	<1	12	450	8	36	5	11	5.7
AUG 10...	0.36	1	<1	16	--	1	--	1	20	4.7
SEP 06...	0.64	1	<1	11	--	<1	--	1	10	4.0

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

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 downstream from Hodges Village Dam, 0.8 mi west of Oxford, and 1.2 mi upstream from Little River.

DRAINAGE AREA.--31.0 mi².

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 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.--21 years, 55.8 ft³/s, 24.44 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft³/s Jan. 28, 1978, gage height, 3.47 ft; no flow for part of July 17, 1968 (caused by unusual regulation); minimum daily discharge, 1.4 ft³/s Sept. 14, 1980.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 503 ft³/s Mar. 23, gage height, 3.22 ft; minimum, 1.7 ft³/s Sept. 10-19; minimum daily, 1.7 ft³/s Sept. 11-18.

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	6.8	9.1	49	51	53	61	101	288	156	19	4.8	3.8
2	5.1	8.4	45	49	45	116	67	273	144	15	4.6	4.0
3	4.6	7.7	43	49	98	284	66	257	119	15	4.5	3.8
4	4.3	7.4	39	49	286	307	130	226	100	14	4.2	3.5
5	3.9	43	35	44	314	259	151	217	105	12	6.5	3.5
6	3.5	63	34	50	269	165	116	188	101	13	6.9	3.0
7	3.5	48	35	56	183	141	99	145	86	11	5.6	2.3
8	3.5	42	34	56	122	144	87	108	73	8.7	4.5	2.3
9	32	24	34	56	123	171	89	87	60	8.7	3.9	2.3
10	44	12	24	54	99	218	67	77	49	8.1	3.3	2.1
11	24	13	15	115	60	238	205	73	44	7.4	3.1	1.7
12	18	15	19	227	53	168	383	67	42	7.4	3.7	1.7
13	15	39	23	231	71	186	353	64	40	6.8	7.5	1.7
14	15	92	22	210	71	288	246	63	40	7.0	8.4	1.7
15	14	92	21	160	65	396	145	62	44	7.4	7.4	1.7
16	14	77	27	109	63	392	75	63	73	6.8	6.2	1.7
17	15	63	54	81	61	350	160	76	63	5.6	5.8	1.7
18	9.8	49	58	65	95	154	186	83	44	5.4	6.3	1.7
19	12	43	54	59	103	16	126	79	34	4.1	13	1.8
20	15	37	49	55	90	89	124	71	31	3.9	11	2.0
21	12	33	45	50	82	122	255	68	43	4.0	8.0	2.0
22	11	31	41	38	80	169	297	68	30	9.3	6.0	5.2
23	9.6	30	38	34	78	407	234	71	22	7.0	4.7	8.4
24	7.4	30	37	54	76	432	105	91	14	5.2	4.1	6.6
25	7.4	32	38	88	68	396	119	116	10	5.4	3.7	4.9
26	13	32	48	92	68	336	267	115	9.4	5.7	3.1	3.9
27	19	32	54	84	65	204	333	100	9.4	4.5	3.1	3.5
28	15	29	52	53	62	183	327	101	14	3.9	3.1	3.5
29	12	35	50	54	---	246	318	101	21	9.8	3.1	3.5
30	11	48	58	51	---	204	304	99	19	11	3.1	3.5
31	9.8	---	55	49	---	151	---	139	---	6.8	3.2	---
TOTAL	390.2	1116.6	1230	2473	2903	6993	5535	3636	1639.8	258.9	166.4	93.0
MEAN	12.6	37.2	39.7	79.8	104	226	185	117	54.7	8.35	5.37	3.10
MAX	44	92	58	231	314	432	383	288	156	19	13	8.4
MIN	3.5	7.4	15	34	45	16	66	62	9.4	3.9	3.1	1.7
MEAN†	12.6	37.4	39.7	79.8	104	227	216	88.6	51.3	8.35	5.33	3.10
CFSM†	.41	1.21	1.28	2.57	3.35	7.32	6.97	2.86	1.65	.27	.17	.10
IN†	.47	1.35	1.48	2.97	3.48	8.44	7.78	3.30	1.85	.31	.20	.11

CAL YR 1982 TOTAL 24525.0 MEAN 67.2 MAX 435 MIN 3.5 MEAN† 67.2 CFSM† 2.17 IN† 29.42
WTR YR 1983 TOTAL 26434.9 MEAN 72.4 MAX 432 MIN 1.7 MEAN† 72.4 CFSM† 2.34 IN† 31.72

† Adjusted for change in contents in Hodges Village Reservoir.

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 upstream from mouth, 1.1 mi downstream from Buffumville Dam, and 1.5 mi west of Oxford.

DRAINAGE AREA.--27.7 mi².

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 National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers).

REMARKS.--Records fair. Flow regulated by Buffumville Lake since 1958 (Reservoirs in Thames River basin) and by other reservoirs upstream. July 1982 to about January 1983, flow affected by 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.--44 years, 49.4 ft³/s, 24.22 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,340 ft³/s Aug. 19, 1955, gage height, 15.53 ft, from rating curve extended above 1,200 ft³/s on basis of computation of peak flow over dam; minimum, 0.1 ft³/s Sept. 25, 26, 1957. Maximum discharge since construction of Buffumville Dam in 1958, 429 ft³/s Apr. 7, 1959, gage height, 5.04 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 365 ft³/s Apr. 27, gage height, 4.94 ft; minimum, 0.72 ft³/s Sept. 14.

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	77	98	127	84	65	82	193	310	136	15	5.2	4.5
2	57	97	125	78	53	119	160	295	133	14	5.3	4.8
3	53	95	120	73	98	196	140	270	122	13	5.1	5.5
4	50	105	115	67	222	223	147	205	103	12	5.4	5.5
5	52	150	110	61	242	218	152	170	102	11	5.8	5.4
6	53	180	105	68	210	160	144	150	96	11	5.4	5.0
7	55	176	102	80	153	135	132	132	84	10	4.9	4.9
8	61	164	96	83	119	146	123	117	71	9.0	4.5	5.6
9	97	151	92	81	103	161	130	110	59	8.4	4.6	5.9
10	76	139	88	74	90	172	127	104	50	8.5	5.2	5.8
11	74	128	85	153	78	193	99	97	44	8.5	5.8	5.5
12	78	119	82	189	78	187	190	92	39	8.3	6.7	5.7
13	82	161	81	189	74	187	262	87	35	7.6	6.6	6.1
14	83	213	78	230	71	220	284	83	32	7.3	6.1	3.4
15	64	220	76	247	67	280	253	81	31	7.0	5.5	2.0
16	62	205	92	180	66	292	181	85	31	6.6	4.6	2.3
17	65	188	119	136	68	283	219	97	27	6.4	4.4	2.7
18	69	170	128	114	84	186	224	101	25	6.3	5.0	2.8
19	74	153	122	96	98	41	202	93	22	6.1	5.2	2.4
20	73	141	114	82	107	95	165	84	20	5.6	4.8	2.1
21	70	130	106	74	105	155	236	82	19	5.4	5.4	2.2
22	72	124	97	67	97	120	297	81	17	5.6	5.5	3.9
23	72	117	89	68	92	262	274	84	15	6.6	5.4	3.5
24	71	112	87	83	91	280	168	108	14	7.2	5.4	3.5
25	75	107	89	102	91	290	151	117	14	7.4	5.3	3.9
26	95	102	97	110	88	293	253	108	13	6.7	5.3	4.3
27	105	98	103	104	83	223	342	100	12	6.4	4.8	4.0
28	107	94	101	89	81	157	356	105	14	6.0	4.5	3.9
29	106	107	98	76	---	208	341	102	17	5.7	4.7	3.9
30	103	123	95	67	---	206	326	110	17	5.5	5.4	3.9
31	100	---	90	65	---	202	---	135	---	5.5	5.7	---
TOTAL	2331	4167	3109	3270	2874	5972	6271	3895	1414	249.6	163.5	124.9
MEAN	75.2	139	100	105	103	193	209	126	47.1	8.05	5.27	4.16
MAX	107	220	128	247	242	293	356	310	136	15	6.7	6.1
MIN	50	94	76	61	53	41	99	81	12	5.4	4.4	2.0
MEAN†	78.1	140	100	106	102	199	228	103	43.4	5.10	3.15	.85
CFSM†	2.82	5.05	3.61	3.83	3.68	7.18	8.23	3.72	1.57	.18	.11	.03
IN†	3.25	5.65	4.18	4.42	3.85	8.30	9.20	4.28	1.75	.21	.13	.03

CAL YR 1982	TOTAL	33871.0	MEAN	92.8	MAX	318	MIN	18	MEAN†	92.7	CFSM†	3.35	IN†	45.46
WTR YR 1983	TOTAL	33841.0	MEAN	92.7	MAX	356	MIN	2.0	MEAN†	92.3	CFSM†	3.33	IN†	45.24

† Adjusted for change in contents in Buffumville Lake.

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 southwest of Fiskdale, MA, 1.2 mi east of East Brimfield. DRAINAGE AREA, 67.5 mi². 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, including 101,000,000 ft³ 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 west of Southbridge, MA. DRAINAGE AREA, 99.1 mi². 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, including 4,400,000 ft³ 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. 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. 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 west of Oxford. DRAINAGE AREA, 26.5 mi². 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, including 61,000,000 ft³ storage in recreation pool. Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

	East Brimfield Lake	Westville Lake	Hodges Village Reservoir	Buffumville Lake
Sept. 30, 1982.....	106.0	5.0	0.5	55.8
Oct. 31.....	104.4	4.9	.5	63.6
Nov. 30.....	111.0	5.6	1.1	67.1
Dec. 31.....	109.3	5.2	1.1	67.1
Jan. 31, 1983.....	112.6	6.0	1.1	68.8
Feb. 28.....	114.3	6.1	1.1	68.0
Mar. 31.....	158.6	23.9	4.3	85.8
Apr. 30.....	379.2	37.2	86.0	135.7
May 31.....	124.4	9.6	9.1	74.3
June 30.....	109.3	5.3	.5	64.5
July 31.....	102.7	4.4	.5	56.6
Aug. 31.....	101.1	1.3	.4	50.9
Sept. 30.....	101.1	.4	.4	42.3

01162000 MILLERS RIVER NEAR WINCHENDON, MA

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

DRAINAGE AREA.--83.0 mi².

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

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

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 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 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.--67 years, 144 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s Sept. 22, 1938, gage height, 21.55 ft, from floodmarks, from rating curve extended above 2,000 ft³/s on basis of computation of peak flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,080 ft³/s Mar. 20, gage height, 9.30 ft; minimum daily, 8.1 ft³/s Aug. 26, 27.

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	24	36	108	121	142	104	301	311	430	47	15	79
2	22	41	99	114	135	219	270	318	360	64	12	45
3	22	36	73	110	289	399	270	320	300	76	11	30
4	28	34	63	107	402	389	328	315	320	59	11	29
5	48	67	59	103	356	377	330	303	360	52	11	23
6	71	73	57	111	306	360	324	276	330	82	18	23
7	89	62	54	121	270	338	297	229	300	79	18	20
8	96	54	51	117	210	325	319	199	270	62	13	18
9	154	44	48	104	190	348	357	191	247	49	11	17
10	155	40	43	100	170	387	369	183	206	64	9.8	15
11	135	36	41	305	160	418	784	171	180	66	10	15
12	122	35	41	374	150	552	905	168	156	63	11	13
13	111	114	35	328	140	698	718	158	135	59	10	13
14	118	179	34	286	150	644	543	150	134	73	9.6	13
15	111	175	34	240	150	576	436	149	153	56	9.2	12
16	103	161	54	200	140	539	379	187	132	28	9.0	12
17	101	133	109	185	140	512	441	231	119	18	8.7	11
18	103	119	89	170	150	484	432	209	109	16	9.7	13
19	94	107	77	160	152	560	454	183	100	16	9.5	33
20	89	98	69	150	141	961	599	200	86	15	9.1	18
21	89	106	65	145	135	1030	578	253	77	15	8.6	12
22	89	94	61	140	131	984	508	236	60	14	9.0	55
23	81	90	57	140	128	831	420	284	43	13	9.2	54
24	82	89	58	210	125	660	387	360	34	17	8.6	37
25	77	88	70	280	120	521	533	356	31	17	8.4	31
26	79	83	92	291	115	426	563	306	28	15	8.1	29
27	65	82	97	236	110	367	497	288	27	20	8.1	37
28	53	77	112	208	108	365	423	293	43	13	19	23
29	53	96	135	180	---	379	356	258	58	14	42	18
30	51	108	131	158	---	361	321	317	54	20	23	17
31	40	---	126	149	---	330	---	460	---	16	102	---
TOTAL	2555	2557	2242	5643	4915	15444	13442	7862	4882	1218	471.6	765
MEAN	82.4	85.2	72.3	182	176	498	448	254	163	39.3	15.2	25.5
MAX	155	179	135	374	402	1030	905	460	430	82	102	79
MIN	22	34	34	100	108	104	270	149	27	13	8.1	11
CAL YR 1982	TOTAL	61945.0	MEAN 170	MAX 995	MIN 11							
WTR YR 1983	TOTAL	61996.6	MEAN 170	MAX 1030	MIN 8.1							

01162500 PRIEST BROOK NEAR WINCHENDON, MA

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

DRAINAGE AREA.--19.4 mi².

PERIOD OF RECORD.--Discharge: May 1916 to current year. Monthly discharge only October 1917 to July 1918 (published in WSP 1301) and September 1935 to September 1936.
Water-quality records: Water years 1965-66.

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

GAGE.--Water-stage recorder. Concrete control since September 1936. Datum of gage is 849.67 ft (258.979 m) National Geodetic Vertical Datum of 1929. Prior to Sept. 11, 1936, nonrecording gage on left bank at same datum.

REMARKS.--Records good except those for October and November, which are poor. Backwater from beaver dam Oct. 1-9, Oct. 14 to Nov. 13. Prior to 1962, occasional diurnal fluctuation at low flow by mill upstream; prior to 1953, regulation at low flow by mill and ponds. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--67 years, 32.6 ft³/s, 22.82 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 20	1145	268	4.55	Apr. 11	1500	*290	4.65

Minimum discharge, 0.34 ft³/s Aug. 26, 27.

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	7.0	9.2	23	23	24	17	53	52	103	5.5	1.1	13
2	6.4	10	20	20	23	32	48	57	77	6.8	1.2	6.8
3	5.6	10	17	19	56	72	48	69	59	7.5	1.1	4.0
4	5.0	11	16	15	135	89	66	67	58	5.0	.96	2.6
5	4.5	19	15	14	105	84	71	65	84	4.3	.90	2.0
6	4.2	21	14	17	76	74	65	57	74	8.1	1.2	1.7
7	4.0	15	14	20	57	63	58	47	68	6.3	1.3	1.4
8	7.0	12	13	20	43	59	58	37	65	4.4	.99	1.2
9	19	9.6	12	17	40	60	67	29	50	3.8	.87	1.1
10	21	7.6	10	15	34	67	66	29	39	3.3	.77	1.0
11	16	6.2	9.6	51	28	78	224	26	33	2.8	.81	.96
12	12	5.9	9.4	97	27	118	211	25	28	2.5	1.1	.86
13	9.8	20	8.3	90	26	157	150	24	24	2.3	1.0	.80
14	9.6	50	7.3	70	25	139	115	21	21	2.0	.91	.78
15	9.0	46	7.6	46	23	123	92	22	17	1.9	.77	.71
16	7.5	39	15	35	22	117	76	35	14	1.9	.68	.65
17	6.5	30	47	31	21	114	90	46	11	1.7	.54	.69
18	5.6	24	51	28	21	103	107	47	9.9	2.2	.60	.97
19	5.3	20	41	23	22	117	96	45	8.7	4.7	.68	1.0
20	5.0	17	32	21	20	253	123	44	7.4	2.8	.57	.97
21	4.7	15	27	20	19	242	120	62	6.3	2.1	.45	.90
22	4.5	14	22	19	19	210	103	58	5.5	2.0	.45	2.5
23	4.5	13	19	20	19	161	87	56	4.8	1.8	.55	2.7
24	6.9	12	19	38	19	124	76	93	4.2	1.7	.45	2.0
25	28	11	25	60	19	97	97	113	3.7	1.7	.40	1.6
26	20	11	36	63	18	77	101	90	3.6	1.6	.40	1.3
27	14	10	41	55	17	62	88	76	3.7	1.4	.40	1.2
28	10	9.3	37	42	17	56	74	81	7.3	1.2	.48	1.0
29	8.4	14	36	32	---	64	62	73	12	1.2	2.1	.93
30	6.9	23	32	27	---	67	54	69	8.0	1.2	2.7	1.7
31	7.3	---	27	25	---	61	---	114	---	1.1	11	---
TOTAL	285.2	514.8	703.2	1073	975	3157	2746	1729	910.1	96.8	37.43	59.02
MEAN	9.20	17.2	22.7	34.6	34.8	102	91.5	55.8	30.3	3.12	1.21	1.97
MAX	28	50	51	97	135	253	224	114	103	8.1	11	13
MIN	4.0	5.9	7.3	14	17	17	48	21	3.6	1.1	.40	.65
CFSM	.47	.89	1.17	1.78	1.79	5.26	4.72	2.88	1.56	.16	.06	.10
IN.	.55	.99	1.35	2.06	1.87	6.05	5.27	3.32	1.75	.19	.07	.11
CAL YR 1982	TOTAL	12456.10	MEAN	34.1	MAX	278	MIN	1.7	CFSM	1.76	IN	23.88
WTR YR 1983	TOTAL	12286.55	MEAN	33.7	MAX	253	MIN	.40	CFSM	1.74	IN	23.56

01163200 OTTER RIVER AT OTTER RIVER, MA

LOCATION.--Lat 42°35'18", long 72°02'29", Worcester County, Hydrologic Unit 01080202, on right bank at upstream side of Turner Street Bridge, 0.2 mi upstream from Bailey Brook, 0.8 mi southeast of Otter River, and 2 mi northwest of Gardner.

DRAINAGE AREA.--34.2 mi².

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, 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.--18 years (water years 1966-83), 62.1 ft³/s, 24.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 948 ft³/s Mar. 7, 1979, gage height, 5.02 ft; minimum, 2.2 ft³/s Aug. 13, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 439 ft³/s Mar. 20, gage height, 3.50 ft; minimum, 5.8 ft³/s Aug. 23.

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	17	17	65	48	52	53	114	109	196	32	10	87
2	16	19	56	42	50	125	101	106	150	33	12	67
3	15	18	48	38	119	233	97	106	112	43	11	39
4	14	18	46	33	175	189	125	102	133	40	10	28
5	13	40	42	30	100	172	134	99	207	43	10	21
6	13	57	42	46	105	159	115	89	181	84	9.7	17
7	13	47	41	52	78	147	100	77	137	75	9.7	15
8	15	36	37	54	90	138	100	63	106	51	9.0	15
9	54	30	34	48	89	158	112	67	86	39	8.3	15
10	91	26	31	39	82	192	114	68	71	33	7.7	14
11	78	23	29	154	65	217	269	65	64	28	7.9	14
12	53	22	29	187	63	275	305	67	55	25	9.5	13
13	38	81	27	150	69	313	228	66	48	22	10	12
14	36	146	24	110	62	254	178	65	44	20	10	12
15	34	132	23	77	58	252	142	66	57	20	9.5	12
16	29	100	42	74	56	227	120	85	74	22	8.7	12
17	25	78	94	74	58	223	145	113	79	18	8.3	12
18	22	63	84	68	69	202	160	108	59	16	8.7	13
19	20	54	64	65	71	259	160	88	50	15	9.5	11
20	19	51	51	53	67	411	239	91	40	13	9.0	10
21	18	50	47	48	62	301	243	116	33	14	8.5	9.3
22	17	47	42	46	61	313	212	107	29	24	7.5	34
23	16	42	38	53	61	170	168	114	25	19	6.9	40
24	16	41	39	100	59	183	154	185	26	18	6.9	29
25	15	37	46	116	58	202	222	196	24	22	7.1	22
26	19	34	66	108	54	196	233	153	23	13	7.5	19
27	20	34	72	94	54	196	196	123	22	12	7.3	16
28	19	32	65	75	51	149	167	123	31	12	7.3	13
29	18	50	62	61	---	146	138	112	44	10	12	12
30	17	67	55	53	---	144	120	145	38	10	12	12
31	17	---	53	52	---	128	---	215	---	10	50	---
TOTAL	807	1492	1494	2248	2038	6327	4911	3289	2244	836	321.5	645.3
MEAN	26.0	49.7	48.2	72.5	72.8	204	164	106	74.8	27.0	10.4	21.5
MAX	91	146	94	187	175	411	305	215	207	84	50	87
MIN	13	17	23	30	50	53	97	63	22	10	6.9	9.3
CFSM	.76	1.45	1.41	2.12	2.13	5.97	4.80	3.10	2.19	.79	.30	.63
IN.	.88	1.62	1.63	2.45	2.22	6.88	5.34	3.58	2.44	.91	.35	.70
CAL YR 1982	TOTAL	27785.9	MEAN	76.1	MAX	487	MIN	9.9	CFSM	2.23	IN	30.22
WTR YR 1983	TOTAL	26652.8	MEAN	73.0	MAX	411	MIN	6.9	CFSM	2.14	IN	28.99

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 downstream from bridge in South Royalston, 0.4 mi downstream from Beaver Brook, 1.7 mi downstream from Birch Hill Dam, and at mile 25.5.

DRAINAGE AREA.--187 mi².

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 National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are fair. 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.--44 years, 325 ft³/s, 23.60 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s Apr. 13, 1940, gage height, 8.40 ft; maximum gage height, at least 10.6 ft about Jan. 18, 1982 (ice jam); minimum daily discharge, 9.3 ft³/s Aug. 4, 1956. Maximum discharge since construction of Birch Hill Reservoir in 1941, 2,830 ft³/s June 25, 26, 1944, gage height, 7.57 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 21 or 22, 1938, reached a stage of 15.9 ft, from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,070 ft³/s Mar. 22, gage height, 7.27 ft; maximum gage height, 7.73 ft Jan. 22 (ice jam); minimum daily discharge, 28 ft³/s Aug. 26, 28.

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	72	91	316	295	338	273	1350	668	1210	147	47	278
2	67	97	281	271	284	475	1070	656	1090	162	52	220
3	61	93	231	255	477	925	561	678	864	240	47	129
4	62	90	204	232	967	1060	905	670	761	194	44	98
5	76	167	189	252	1030	995	1050	655	929	155	43	77
6	94	255	180	260	900	873	922	602	943	257	45	66
7	129	221	177	301	603	788	801	523	821	275	54	59
8	140	186	164	299	500	729	715	446	708	210	47	52
9	254	152	152	269	480	786	730	425	589	157	41	50
10	353	130	135	262	450	917	459	424	478	145	37	48
11	325	114	133	529	410	938	866	402	406	141	36	47
12	270	105	125	869	380	953	1590	400	355	133	38	44
13	225	273	120	868	370	1250	1860	384	315	123	41	42
14	225	541	110	785	380	1520	1750	369	285	114	40	41
15	221	565	109	597	380	1610	1220	377	343	126	38	39
16	199	502	167	419	370	1540	828	467	346	93	36	38
17	187	402	397	390	360	1560	1040	569	334	72	34	38
18	194	338	383	350	387	1020	1160	576	295	63	34	42
19	172	295	322	330	391	486	1010	508	257	61	37	43
20	152	260	264	310	409	1010	1210	487	221	59	35	58
21	155	267	233	310	347	1080	1370	600	188	55	33	39
22	149	244	206	300	329	1210	1270	599	161	67	31	100
23	136	226	190	300	324	2040	940	614	128	65	32	143
24	136	218	191	500	317	1940	815	783	110	61	31	108
25	140	209	222	684	307	1820	1070	926	103	67	29	82
26	158	196	308	653	293	1500	1310	860	98	62	28	70
27	146	193	346	580	278	1190	1220	739	96	56	29	66
28	121	180	342	537	276	996	1030	720	132	52	28	67
29	113	235	361	449	---	881	864	672	209	47	95	51
30	107	310	341	367	---	871	737	678	176	51	93	47
31	98	---	310	339	---	915	---	1050	---	51	197	---
TOTAL	4937	7155	7209	13162	12337	34151	31723	18527	12951	3561	1452	2282
MEAN	159	239	233	425	441	1102	1057	598	432	115	46.8	76.1
MAX	353	565	397	869	1030	2040	1860	1050	1210	275	197	278
MIN	61	90	109	232	276	273	459	369	96	47	28	38
MEAN†	159	240	233	425	440	1164	996	600	425	114	47.4	75.5
CFSM†	.85	1.28	1.25	2.27	2.35	6.22	5.33	3.21	2.27	.61	.25	.40
IN†	.98	1.43	1.43	2.62	2.45	7.18	5.95	3.70	2.54	.71	.29	.45
CAL YR 1982	TOTAL	144802	MEAN 397	MAX 2010	MIN 42	MEAN† 397	CFSM† 2.12	IN† 28.81				
WTR YR 1983	TOTAL	149447	MEAN 409	MAX 2040	MIN 28	MEAN† 409	CFSM† 2.19	IN† 29.73				

† 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 downstream from Tully Dam, 1.3 mi downstream from Lawrence Brook, 3.5 mi north of Athol, and 4.9 mi upstream from mouth.

DRAINAGE AREA.--50.4 mi².

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 Corps of Engineers datum. Prior to Oct. 26, 1948, nonrecording gage at site 0.2 mi upstream at datum 14.40 ft higher.

REMARKS.--Records good except those for December to February, which are fair. 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.--68 years, 81.3 ft³/s, 21.91 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,140 ft³/s Sept. 21, 1938, gage height, 8.60 ft, from floodmarks, site and datum then in use, from rating curve extended above 1,500 ft³/s on basis of contracted-opening measurement and computation of peak flow over dam; minimum, 0.01 ft³/s Nov. 6-11, 1961; minimum daily, 0.01 ft³/s Nov. 7-10, 1961. Maximum discharge since construction of Tully Reservoir in 1948, 828 ft³/s Apr. 21, 1960, gage height, 5.38 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 508 ft³/s Apr. 13, gage height, 4.42 ft; minimum, 3.8 ft³/s Oct. 9, 10; minimum daily, 5.0 ft³/s Oct. 9.

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	10	83	57	70	70	49	115	114	212	11	9.1	12
2	10	82	74	53	50	71	209	150	179	18	9.2	15
3	10	80	67	50	76	134	81	160	159	63	8.9	15
4	10	78	44	59	192	160	150	159	158	42	8.7	15
5	10	77	36	51	220	136	186	173	160	24	8.7	11
6	10	51	36	44	163	138	182	154	174	40	8.7	8.7
7	10	62	36	53	154	145	177	127	179	24	8.3	8.7
8	9.2	74	36	68	160	122	163	126	145	12	8.2	8.7
9	5.0	73	36	74	143	125	148	126	129	22	8.0	8.7
10	29	49	29	56	92	156	147	96	100	26	7.7	8.7
11	45	27	25	102	70	134	174	84	83	18	8.5	8.7
12	23	22	25	166	70	69	272	114	60	13	8.6	8.7
13	12	32	25	209	70	123	424	104	50	13	8.3	8.7
14	20	38	25	169	70	270	481	83	50	13	8.2	8.7
15	24	65	26	146	70	363	336	83	50	13	8.2	7.5
16	24	115	26	146	66	344	161	84	50	12	7.9	6.7
17	24	146	76	119	66	192	178	115	50	12	7.7	6.8
18	24	144	129	86	66	76	247	149	35	12	7.7	6.8
19	24	98	127	78	66	99	230	136	28	12	7.7	7.5
20	15	74	90	66	66	250	276	127	28	11	7.7	7.9
21	16	50	68	61	56	244	378	127	18	11	7.7	8.2
22	18	37	68	61	51	256	268	128	13	11	7.7	8.2
23	19	37	50	61	51	441	178	147	13	11	7.4	7.5
24	19	37	58	116	59	435	161	165	13	9.7	7.2	8.3
25	14	37	61	185	59	332	241	184	12	9.7	7.2	8.2
26	11	27	66	169	54	175	254	253	12	9.7	6.8	8.2
27	11	22	111	146	50	139	179	233	15	9.2	6.9	8.5
28	12	22	90	111	48	123	174	180	61	9.2	6.8	8.4
29	57	22	86	99	---	96	170	188	68	8.7	6.8	7.8
30	86	22	95	82	---	59	107	167	23	9.0	6.8	5.2
31	85	---	78	70	---	47	---	174	---	8.8	6.7	---
TOTAL	696.2	1783	1856	3026	2428	5503	6447	4410	2327	518.0	244.0	268.0
MEAN	22.5	59.4	59.9	97.6	86.7	178	215	142	77.6	16.7	7.87	8.93
MAX	86	146	129	209	220	441	481	253	212	63	9.2	15
MIN	5.0	22	25	44	48	47	81	83	12	8.7	6.7	5.2
MEAN†	18.8	48.3	59.2	98.3	86.2	204	202	128	92.3	14.7	4.21	6.93
CFSM†	.37	.96	1.17	1.95	1.71	4.05	4.01	2.54	1.83	.29	.08	.14
IN†	.43	1.07	1.36	2.25	1.78	4.68	4.48	2.93	2.04	.34	.10	.15

CAL YR 1982 TOTAL 35514.3 MEAN 97.3 MAX 604 MIN 4.6 MEAN† 97.3 CFSM† 1.93 IN† 26.21
WTR YR 1983 TOTAL 29506.2 MEAN 80.8 MAX 481 MIN 5.0 MEAN† 80.2 CFSM† 1.59 IN† 21.60

† 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 downstream from bridge on Daniel Shays Highway, 600 ft downstream from Lake Rohunta, and 2.8 mi southwest of Athol.

DRAINAGE AREA.--20.3 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, at datum 1.00 ft higher.

REMARKS.--Records excellent. Flow regulated by Lake Rohunta. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--18 years (water years 1966-83), 36.2 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft³/s Mar. 7, 1979, gage height, 7.04 ft, from rating curve extended above 220 ft³/s; minimum daily, 0.16 ft³/s June 19, 25, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 194 ft³/s Apr. 21, gage height, 4.21 ft; minimum daily, 0.49 ft³/s Aug. 2.

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

DAY	MEAN VALUES											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	4.1	19	24	38	30	65	71	147	17	.64	6.4
2	3.4	6.4	19	22	37	43	61	73	129	20	.49	6.8
3	3.8	9.1	20	20	52	72	62	72	105	24	.51	6.0
4	3.0	14	19	18	79	91	70	71	100	25	.54	5.3
5	3.0	31	17	17	85	87	71	73	122	24	.59	4.5
6	2.8	32	19	22	74	78	68	69	119	36	.63	4.1
7	2.5	28	15	25	69	73	63	67	85	39	.62	3.2
8	3.0	26	46	26	64	74	62	57	67	35	.86	2.5
9	4.8	23	59	24	54	93	64	52	59	28	.63	2.2
10	5.5	20	35	22	48	113	70	53	51	22	.66	1.7
11	5.9	21	23	43	43	123	126	51	45	18	.77	1.5
12	6.2	30	17	67	45	146	168	50	42	15	.83	1.2
13	5.9	35	13	72	41	182	157	42	38	12	.89	1.0
14	7.3	43	11	63	41	177	133	37	12	10	.85	.90
15	7.0	44	10	52	39	150	106	32	1.3	9.4	.80	.75
16	5.9	42	19	48	37	128	87	34	4.9	3.5	.91	.75
17	4.9	37	34	44	37	112	96	44	10	1.0	.96	.72
18	4.9	32	38	40	39	97	111	51	13	.94	1.0	.72
19	4.5	27	36	36	40	93	119	51	14	.94	1.2	.77
20	4.2	24	34	31	39	102	169	55	15	.94	1.4	.77
21	3.5	20	30	28	38	109	189	64	14	.95	.96	1.5
22	2.9	18	27	27	37	109	161	68	12	.82	1.1	5.7
23	3.0	16	24	34	37	113	130	73	11	.77	.91	6.0
24	2.9	14	25	47	37	100	114	115	8.8	.72	.92	5.1
25	2.8	13	24	57	36	83	120	142	7.0	.74	.99	4.7
26	3.4	12	27	58	34	73	122	123	7.1	.76	1.0	4.3
27	3.5	10	28	53	33	67	111	107	6.9	.82	.84	3.6
28	3.4	10	31	47	32	71	99	105	12	.79	.85	3.2
29	3.5	15	29	43	---	72	86	97	18	.65	.81	2.9
30	3.6	17	27	41	---	74	79	97	19	.51	1.1	3.9
31	3.6	---	25	40	---	72	---	127	---	.60	4.5	---
TOTAL	129.4	673.6	800	1191	1285	3007	3139	2223	1295.0	349.85	29.76	92.68
MEAN	4.17	22.5	25.8	38.4	45.9	97.0	105	71.7	43.2	11.3	.96	3.09
MAX	7.3	44	59	72	85	182	189	142	147	39	4.5	6.8
MIN	2.5	4.1	10	17	32	30	61	32	1.3	.51	.49	.72
CAL YR 1982	TOTAL	14888.32	MEAN	40.8	MAX	234	MIN	.17				
WTR YR 1983	TOTAL	14215.29	MEAN	38.9	MAX	189	MIN	.49				

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 downstream from bridge at Farley, 0.6 mi upstream from Mormon Hollow Brook, 2.4 mi downstream from Erving, and 5.5 mi upstream from mouth.

DRAINAGE AREA.--375 mi².

PERIOD OF RECORD.--Discharge: August 1914 to June 1915 (twice-daily gage heights and corresponding discharge), July 1915 to current year.
Water-quality records: Water years 1953, 1965-66.

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, from topographic map. Prior to June 30, 1915, nonrecording gage, June 30, 1915, to Sept. 20, 1938, water-stage recorder, and Sept. 21 to Dec. 31, 1938, nonrecording gage, at site 2.2 mi upstream at different datum. Jan. 1 to Mar. 29, 1939, nonrecording gage, and Mar. 30, 1939, to Sept. 12, 1941, water-stage recorder, at site 0.4 mi downstream at different datum.

REMARKS.--Records good. Flow regulated by powerplants and by Lake Monomonic and other reservoirs; high flow regulated by Birch Hill Reservoir 22 mi 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.--69 years, 630 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,440 ft³/s Mar. 23, gage height, 5.81 ft; minimum daily, 53 ft³/s Aug. 28, 29.

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	132	237	478	509	624	516	1570	1220	2120	268	82	334
2	92	211	482	471	621	889	2000	1280	1980	279	78	290
3	123	225	406	416	1190	1600	1150	1320	1570	425	89	204
4	109	214	404	370	2010	1810	1380	1300	1560	416	71	146
5	98	359	327	378	1890	1650	1810	1290	1760	306	72	124
6	59	479	308	442	1550	1450	1640	1160	1690	385	70	107
7	157	404	299	495	1160	1370	1480	1010	1610	465	69	93
8	169	369	281	509	907	1370	1420	889	1380	364	72	84
9	233	323	331	495	880	1560	1380	908	1110	289	71	76
10	408	279	265	448	813	1810	1350	888	915	246	70	71
11	443	225	231	1120	693	1980	2900	797	775	188	71	70
12	390	202	211	1670	651	2140	3020	775	692	196	71	69
13	297	429	227	1530	634	2350	3110	767	594	187	67	66
14	286	796	254	1370	676	2480	3190	702	521	172	66	64
15	304	806	234	1100	675	2820	2690	712	498	161	64	63
16	332	769	319	843	648	2710	1620	873	525	162	62	58
17	276	713	677	776	622	2530	1960	1020	510	93	88	59
18	245	630	742	684	652	2150	2200	1040	480	145	96	65
19	229	559	705	660	688	1300	2350	974	413	78	69	65
20	214	456	579	626	665	2130	2680	951	369	78	64	67
21	202	432	475	633	638	2590	2800	1110	309	124	59	74
22	204	385	433	620	611	1780	2480	1090	261	121	56	136
23	188	353	402	620	599	3340	1970	1210	231	80	58	171
24	154	342	360	1130	594	3190	1680	1970	199	80	58	154
25	205	314	413	1310	589	2930	2160	1910	122	128	58	121
26	194	306	519	1330	552	2400	2400	1750	236	74	55	103
27	201	278	617	1160	530	1880	2190	1820	138	77	54	95
28	173	261	641	959	520	1710	1800	1710	232	119	53	92
29	160	337	611	832	---	1580	1580	1520	430	73	53	87
30	215	463	607	756	---	1460	1390	1480	363	71	123	76
31	195	---	559	637	---	1330	---	1980	---	77	248	---
TOTAL	6687	12156	13397	24899	22882	60805	61350	37426	23593	5927	2337	3284
MEAN	216	405	432	803	817	1961	2045	1207	786	191	75.4	109
MAX	443	806	742	1670	2010	3340	3190	1980	2120	465	248	334
MIN	59	202	211	370	520	516	1150	702	122	71	53	58
CAL YR 1982	TOTAL	279572	MEAN	766	MAX	3770	MIN	54				
WTR YR 1983	TOTAL	274743	MEAN	753	MAX	3340	MIN	53				

CONNECTICUT RIVER BASIN

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 upstream from Fall River, and at mile 122.2.

DRAINAGE AREA.--7,163 mi².

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.

COOPERATION.--Records furnished by Western Massachusetts Electric Co.

AVERAGE DISCHARGE.--68 years, 11,830 ft³/s.

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	2920	4370	6770	9810	10100	6970	11200	43200	30200	5810	5650	9360
2	1560	3170	6900	8030	10600	9280	14100	49300	31500	1520	7350	3560
3	2960	4800	9200	7540	13700	15000	15200	58700	24000	1540	4330	2320
4	5220	6520	9860	7400	23200	16100	16500	61700	23100	1500	4750	1560
5	2660	7920	9670	4680	24200	16100	16000	58100	20100	5960	4100	1490
6	4010	10700	8150	4280	16800	13000	16800	53100	17800	5230	1530	5380
7	2610	10900	8170	4340	13100	12200	17600	42200	19800	6520	1540	5340
8	5580	11300	9440	3710	12400	13900	26600	29900	19400	7770	4300	1550
9	4450	12100	4670	3110	10300	19100	28600	27000	17200	2580	4580	1540
10	2050	8320	6010	7380	10800	14500	25100	33200	14900	1500	6770	1490
11	3930	4970	1510	13400	11300	23100	37100	34100	13200	6180	7650	1560
12	4080	6820	2120	20100	6440	23100	45200	30500	6980	4950	9810	2370
13	4490	9130	7740	14400	5540	24000	43400	29600	8800	4750	8620	2760
14	5130	9880	5160	12900	9640	16200	36600	23000	9000	4270	5480	1740
15	3280	10600	5160	8870	11200	20100	34700	20400	9930	3550	7200	1490
16	1460	8380	6300	5180	7900	20800	30100	23700	7050	2590	5870	2250
17	1480	6330	10900	9860	9830	18100	32300	19900	8180	1500	3640	1580
18	4280	7080	10800	7270	8920	22100	33400	25000	8120	3350	4390	1580
19	5890	6590	8970	6400	6490	26900	36200	20000	6480	3600	4640	3510
20	5280	5290	9590	6370	6450	47500	35900	16600	7820	4030	3150	3810
21	4370	5470	9170	6650	7340	53800	35700	14900	9630	3840	1600	3720
22	3890	8070	8470	4200	7120	43500	32000	14600	7130	1490	4190	5500
23	1760	7910	5720	5650	9770	43300	27700	15400	6520	1490	3650	4280
24	1530	8360	5180	11500	8950	35100	27600	21700	6290	1500	3650	1900
25	4430	8500	5870	12700	7300	25200	44100	21600	2390	4070	2760	1490
26	4230	8600	6770	12600	6690	20600	55800	19200	1530	3830	1490	3220
27	3030	7100	10400	13000	6280	18700	57200	26000	7010	3350	1520	3400
28	1980	7040	10500	12500	7030	16700	55800	26200	7470	4900	2200	3540
29	1530	9690	9460	12300	---	17800	46800	24700	4240	3340	4630	3540
30	1540	4730	10100	10100	---	18000	44500	19000	4140	1850	3740	3280
31	2280	---	9900	8210	---	13700	---	32000	---	1990	7190	---
TOTAL	103890	230640	238630	274440	289390	684450	979800	934500	359910	110350	141970	90110
MEAN	3351	7688	7698	8853	10340	22080	32660	30150	12000	3560	4580	3004
MAX	5890	12100	10900	20100	24200	53800	57200	61700	31500	7770	9810	9360
MIN	1460	3170	1510	3110	5540	6970	11200	14600	1530	1490	1490	1490
CAL YR 1982	TOTAL	4176760	MEAN	11440	MAX	82600	MIN	1410				
WTR YR 1983	TOTAL	4438080	MEAN	12160	MAX	61700	MIN	1460				

01168151 DEERFIELD RIVER NEAR ROWE, MA

LOCATION.--Lat 42°40'57", long 72°58'37", Franklin County, Hydrologic Unit 01080203, on left bank 400 ft downstream from Fife Brook, 600 ft downstream from Fife Brook Dam, 1.2 mi northeast of Hoosac Tunnel, and 4 mi west of Rowe.

DRAINAGE AREA.--254 mi².

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

REVISED RECORDS.--WDR MA-RI-78: 1977.

GAGE.--Water-stage recorder. Datum of gage is 745.00 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. 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.--9 years, 739 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,400 ft³/s Aug. 10, 1976, gage height, 14.79 ft, from rating curve extended above 2,800 ft³/s; minimum daily, 28 ft³/s Nov. 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,390 ft³/s May 2, gage height, 9.94 ft; minimum daily, 73 ft³/s Oct. 17.

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	76	142	311	351	998	920	455	2340	2230	347	529	340
2	74	231	617	424	939	764	132	4600	1500	150	543	92
3	99	142	471	683	1000	952	326	3940	1390	168	508	94
4	341	360	77	933	1080	952	737	2910	1370	202	559	94
5	119	302	74	920	965	933	627	2100	1340	595	482	95
6	163	77	552	810	1000	985	547	1490	1170	674	103	738
7	135	145	260	440	1000	688	753	1330	1080	545	99	408
8	151	258	421	78	978	1010	920	1060	720	451	585	286
9	80	188	570	95	1000	959	810	1130	992	151	540	178
10	124	95	652	710	959	972	1210	1080	978	135	556	353
11	89	75	132	1190	933	810	1820	1070	338	580	585	177
12	521	95	76	1030	985	652	1270	1110	82	612	761	387
13	102	288	598	920	972	939	1060	1110	508	572	243	389
14	76	121	622	972	959	978	1110	781	455	526	97	412
15	74	753	632	965	959	959	1260	588	477	322	598	375
16	76	391	846	402	1000	731	1450	781	623	191	563	356
17	73	277	907	946	978	720	1400	822	880	132	536	104
18	114	388	870	895	972	998	1360	852	329	614	555	120
19	110	299	253	715	715	1310	1270	764	82	524	538	671
20	77	205	726	901	243	1470	1640	834	655	472	154	675
21	116	285	787	998	699	1120	2080	603	596	384	130	432
22	89	574	699	946	985	1170	1980	504	594	258	320	532
23	78	335	652	212	965	1120	1650	998	602	180	398	513
24	77	271	178	876	972	834	2600	3640	651	103	264	136
25	203	83	84	978	704	720	3590	2190	82	453	316	100
26	161	78	748	972	80	972	2720	1980	121	398	101	515
27	137	118	901	1000	80	354	2490	2950	470	462	104	515
28	77	105	952	939	715	704	2480	2410	340	385	93	359
29	110	436	926	471	---	946	2390	1320	421	411	432	322
30	121	238	978	263	---	946	2450	1540	280	243	337	263
31	80	---	876	726	---	998	---	2580	---	168	321	---
TOTAL	3923	7355	17448	22761	23835	28586	44587	51407	21356	11408	11950	10031
MEAN	127	245	563	734	851	922	1486	1658	712	368	385	334
MAX	521	753	978	1190	1080	1470	3590	4600	2230	674	761	738
MIN	73	75	74	78	80	354	132	504	82	103	93	92
CAL YR 1982	TOTAL	226248	MEAN	620	MAX	4060	MIN	73				
WTR YR 1983	TOTAL	254647	MEAN	698	MAX	4600	MIN	73				

CONNECTICUT RIVER BASIN

01168500 DEERFIELD RIVER AT CHARLEMONT, MA

LOCATION.--Lat 42°37'33", long 72°51'20", Franklin County, Hydrologic Unit 01080203, on left bank 0.8 mi east of Charlemont, 2.5 mi downstream from Chickley River, and at mile 24.5.

DRAINAGE AREA.--362 mi².

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 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.--70 years, 897 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s Sept. 21, 1938, gage height, 20.17 ft, from floodmarks, from rating curve extended above 31,000 ft³/s on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft and 20.17 ft; minimum daily, 5 ft³/s June 17, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,890 ft³/s Apr. 10, gage height, 8.23 ft; minimum daily, 98 ft³/s Oct. 23.

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	110	142	387	498	1070	1020	1020	2730	2520	391	542	363
2	98	289	578	529	1030	1310	500	5470	1830	351	579	131
3	98	156	670	701	1830	1490	755	4840	1610	205	523	116
4	370	322	179	906	1770	1330	1410	3510	1770	248	556	116
5	149	572	152	968	1280	1250	1410	2470	1660	840	502	116
6	188	205	566	963	1200	1270	1170	1870	1440	876	156	655
7	154	192	354	556	1210	1110	1320	1650	1440	680	141	400
8	182	291	479	206	1150	1390	1960	1340	1000	549	560	333
9	188	270	601	156	1150	1330	1770	1530	1180	211	537	200
10	192	141	650	622	1070	1320	2760	1350	1160	222	545	235
11	116	143	267	1910	1050	1240	4630	1310	677	579	574	247
12	377	140	157	1410	1100	1250	2280	1300	257	610	705	447
13	321	435	583	1130	1070	1410	1760	1300	621	630	454	386
14	134	256	634	1050	1080	1390	1670	1090	578	500	143	413
15	129	676	680	1070	1070	1420	1720	846	613	399	570	376
16	130	575	955	568	1090	1260	2020	1010	667	227	567	360
17	120	360	1150	1020	1090	1210	2310	1030	1010	172	543	131
18	148	314	961	985	1070	1450	2100	1040	603	539	574	128
19	114	490	392	817	981	3840	3030	943	210	558	569	596
20	144	237	785	961	313	3410	4310	1090	577	491	200	676
21	155	287	847	1030	736	2450	3160	1100	721	398	131	444
22	131	635	807	1020	1080	2360	2780	766	649	293	363	552
23	116	449	737	448	1070	1830	2560	1400	596	217	404	527
24	110	346	327	1160	1070	1460	4570	4480	685	146	287	164
25	189	173	230	1270	975	1220	6010	2510	272	462	332	156
26	230	143	831	1140	227	1410	3960	2170	138	403	129	474
27	170	166	1040	1130	211	718	3170	3860	491	449	127	486
28	108	159	1040	1070	659	1170	2990	2950	530	414	120	338
29	140	547	1060	686	---	1410	2820	1800	519	418	416	421
30	143	377	1010	418	---	1340	2950	2050	348	271	357	277
31	119	---	970	744	---	1380	---	3310	---	144	360	---
TOTAL	5073	9488	20079	27142	28702	47448	74875	64115	26372	12893	12566	10264
MEAN	164	316	648	876	1025	1531	2496	2068	879	416	405	342
MAX	377	676	1150	1910	1830	3840	6010	5470	2520	876	705	676
MIN	98	140	152	156	211	718	500	766	138	144	120	116
CAL YR 1982	TOTAL	307658	MEAN	843	MAX	8640	MIN	98				
WTR YR 1983	TOTAL	339017	MEAN	929	MAX	6010	MIN	98				

01169000 NORTH RIVER AT SHATTUCKVILLE, MA

LOCATION.--Lat 42°38'18", long 72°43'32", Franklin County, Hydrologic Unit 01080203, on right bank in Shattuckville, 1.2 mi south of Griswoldville, and 1.3 mi upstream from mouth.

DRAINAGE AREA.--88.4 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. 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.--44 years, 183 ft³/s, 28.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s Oct. 15, 1955, gage height, 10.37 ft, from rating curve extended above 5,700 ft³/s on basis of computation of flow over dam at gage height 9.62 ft; minimum daily, 5.1 ft³/s Oct. 3, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 19	1000	4900	7.57	Apr. 24	1845	4130	7.15
Apr. 11	0015	*5400	7.82	May 24	0115	2490	6.13

Minimum discharge, 9.9 ft³/s Sept. 17; minimum daily, 10 ft³/s Sept. 17.

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	24	21	58	56	98	100	273	423	459	55	22	31
2	22	25	49	57	93	709	286	1070	345	68	25	23
3	20	23	44	53	940	607	474	587	260	78	21	18
4	19	23	43	32	666	343	603	442	474	50	20	15
5	18	132	40	34	298	259	544	350	369	347	20	14
6	18	84	41	59	211	244	468	295	266	240	38	14
7	17	50	47	56	180	305	492	255	334	106	39	13
8	25	41	39	51	170	286	805	232	234	75	25	12
9	64	35	36	39	140	268	648	296	186	65	21	12
10	51	32	22	39	125	291	1150	245	161	57	18	13
11	35	30	34	1000	115	341	2460	213	142	50	21	13
12	44	31	34	351	120	533	842	201	125	47	55	13
13	38	112	28	167	120	389	570	183	109	43	45	12
14	39	87	25	96	120	332	463	169	98	35	32	11
15	39	59	27	95	119	383	399	220	100	35	25	11
16	35	46	106	89	117	414	518	253	90	34	22	11
17	31	41	161	89	110	403	978	191	91	31	19	10
18	27	52	55	83	112	374	755	161	79	30	21	12
19	25	48	52	79	106	3690	977	145	73	28	25	13
20	25	38	56	83	100	2150	1450	218	65	26	21	12
21	25	36	56	80	102	1420	827	298	58	25	17	11
22	26	35	45	80	109	1220	653	200	54	26	16	35
23	24	40	43	97	111	636	677	421	49	24	17	28
24	24	42	49	349	107	463	1690	1090	45	24	17	20
25	22	38	64	291	100	375	1730	403	41	30	16	17
26	22	35	168	189	94	319	876	291	41	27	14	15
27	22	35	115	145	89	292	581	1120	43	23	13	14
28	22	26	92	115	93	328	460	600	113	21	13	13
29	21	58	104	120	---	361	379	391	107	21	14	12
30	21	84	80	104	---	295	483	684	62	20	16	12
31	21	---	52	102	---	269	---	933	---	20	22	---
TOTAL	866	1439	1865	4280	4865	18399	23511	12580	4673	1761	710	460
MEAN	27.9	48.0	60.2	138	174	594	784	406	156	56.8	22.9	15.3
MAX	64	132	168	1000	940	3690	2460	1120	474	347	55	35
MIN	17	21	22	32	89	100	273	145	41	20	13	10
CFSM	.32	.54	.68	1.56	1.97	6.72	8.87	4.59	1.77	.64	.26	.17
IN.	.36	.61	.78	1.80	2.05	7.74	9.89	5.29	1.97	.74	.30	.19
CAL YR 1982	TOTAL	66517	MEAN 182	MAX 3510	MIN 16	CFSM 2.06	IN 27.99					
WTR YR 1983	TOTAL	75409	MEAN 207	MAX 3690	MIN 10	CFSM 2.34	IN 31.73					

CONNECTICUT RIVER BASIN

01169900 SOUTH RIVER NEAR CONWAY, MA

LOCATION.--Lat 42°32'31", long 72°41'39", Franklin County, Hydrologic Unit 01080203, on left bank at upstream side of Reeds Bridge just off Bardwell Road, 2.2 mi north of Conway, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--24.0 mi².

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, from topographic map. Prior to Oct. 7, 1970, at downstream side of bridge at same site and datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 14 to Nov. 16, 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.--17 years, 52.5 ft³/s, 29.71 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft³/s June 6, 1982, gage height, 7.84 ft, maximum gage height, 8.86 ft Feb. 11, 1981 (ice jam); minimum discharge, 2.5 ft³/s Sept. 12-14, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s and maximums (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 11	0545	1150	5.98	Apr. 10	2230	*1530	6.54
Feb. 3	--	a850	ice jam	Apr. 19	1945	1520	6.52
Mar. 19	--	a1450	*b6.63	Apr. 24	1745	1400	6.35
Mar. 21	1800	1090	5.89				

a Estimated.

b Backwater from debris.

Minimum discharge, 3.7 ft³/s Dec. 13, Sept. 11, 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	6.0	4.7	11	12	30	30	87	102	81	20	6.9	13
2	5.7	5.5	9.9	11	29	237	90	136	68	43	7.3	9.3
3	5.4	5.1	9.3	10	380	123	130	109	57	31	6.9	8.0
4	4.5	5.1	9.4	8.0	117	74	180	100	124	21	6.9	6.4
5	4.5	29	8.7	8.0	70	62	120	86	82	36	15	6.1
6	4.9	20	8.4	14	61	62	96	78	66	48	16	5.9
7	4.9	11	9.2	13	54	97	83	70	107	26	15	5.4
8	6.3	9.0	8.5	12	48	94	110	68	66	21	9.3	5.4
9	12	7.8	8.1	9.3	45	107	120	83	56	18	7.5	5.4
10	10	7.0	7.4	14	43	112	391	68	50	17	6.9	5.3
11	7.3	6.6	8.1	280	42	117	439	64	45	15	7.9	5.1
12	6.5	6.8	6.6	52	44	197	157	61	41	14	16	4.5
13	6.4	28	5.0	30	44	123	118	57	36	12	12	4.5
14	8.9	23	5.7	28	44	112	102	54	34	11	8.9	4.7
15	11	15	7.2	27	44	128	92	63	33	9.9	7.4	4.7
16	8.0	11	39	26	42	120	140	79	29	10	7.1	4.7
17	6.8	9.1	36	25	40	110	278	68	59	9.3	6.7	5.0
18	6.0	8.9	18	24	39	107	177	56	48	8.9	9.6	6.3
19	5.8	8.7	16	24	37	1080	479	51	33	8.9	11	5.6
20	5.8	8.5	15	23	36	459	610	78	28	8.6	7.7	5.0
21	5.8	7.9	14	24	34	429	247	70	25	8.4	6.0	4.6
22	5.8	7.9	13	29	36	294	196	56	22	11	5.4	21
23	5.4	8.8	12	50	37	176	177	105	21	8.8	5.6	9.2
24	5.2	8.8	14	224	35	143	509	157	18	8.6	5.7	7.1
25	5.0	8.5	16	124	34	124	396	74	17	10	5.4	6.9
26	5.0	8.8	38	77	32	109	211	62	17	8.9	5.4	5.9
27	5.0	8.8	19	54	30	90	156	168	18	7.5	5.4	5.8
28	4.9	9.2	16	41	30	100	127	99	48	6.9	7.1	5.5
29	4.7	15	17	36	---	110	110	75	37	6.9	20	5.3
30	4.7	16	14	34	---	100	122	96	24	6.9	12	5.2
31	4.7	---	12	32	---	84	---	129	---	6.5	33	---
TOTAL	192.9	329.5	431.5	1375.3	1557	5310	6250	2622	1390	479.0	303.0	196.8
MEAN	6.22	11.0	13.9	44.4	55.6	171	208	84.6	46.3	15.5	9.77	6.56
MAX	12	29	39	280	380	1080	610	168	124	48	33	21
MIN	4.5	4.7	5.0	8.0	29	30	83	51	17	6.5	5.4	4.5
CFSM	.26	.46	.58	1.85	2.32	7.13	8.67	3.53	1.93	.65	.41	.27
IN.	.30	.51	.67	2.13	2.41	8.23	9.69	4.06	2.15	.74	.47	.31

CAL YR 1982 TOTAL 16283.4 MEAN 44.6 MAX 1570 MIN 4.1 CFSM 1.86 IN 25.24
WTR YR 1983 TOTAL 20437.0 MEAN 56.0 MAX 1080 MIN 4.5 CFSM 2.33 IN 31.68

01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA

LOCATION.--Lat 42°32'09", long 72°39'14", Franklin County, Hydrologic Unit 01080203, on right bank 0.4 mi downstream from South River, 1.2 mi west of West Deerfield, 2.5 mi west of Deerfield, and 9.2 mi upstream from mouth.

DRAINAGE AREA.--558 mi².

PERIOD OF RECORD.--Discharge: March to November 1904, January 1905, March to December 1905, October 1940 to current year, published as "at Deerfield" 1904-5.

Water-quality records: 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, from topographic map. Prior to Dec. 16, 1905, nonrecording gage at site 1.5 mi downstream at different datum.

REMARKS.--Records good. 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.--43 years (water years 1941-83), 1,285 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,500 ft³/s Dec. 31, 1948, gage height, 15.3 ft; minimum daily, 28 ft³/s July 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 19,000 ft³/s Apr. 11, gage height, 9.21 ft; minimum daily, 185 ft³/s Oct. 25.

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	228	199	421	667	1350	1190	1760	3700	3560	361	634	385
2	187	214	610	638	1400	2770	1040	6430	2680	676	521	264
3	192	194	947	810	3820	2770	1570	6400	2180	404	602	223
4	386	393	313	958	3290	2080	2530	4670	2650	452	757	200
5	305	851	245	1040	1950	1770	2380	3280	2510	1620	494	200
6	205	345	490	1230	1650	1730	1950	2580	2090	1730	303	331
7	189	295	522	820	1660	1750	2080	2210	2110	863	241	582
8	201	345	629	379	1600	1990	3060	1870	1750	702	596	356
9	200	400	696	229	1490	2050	2960	2210	1390	455	550	241
10	249	209	778	498	1330	1990	3600	1860	1510	379	663	263
11	221	204	414	3800	1350	2120	9710	1830	1050	598	702	339
12	411	194	214	2150	1390	2370	3870	1780	614	705	926	487
13	429	768	498	1600	1360	2270	2820	1700	772	780	447	406
14	209	443	657	1130	1410	2100	2520	1560	847	638	246	393
15	209	696	799	1430	1330	2190	2430	1300	746	590	623	424
16	190	810	1120	904	1350	2080	2880	1510	744	247	557	371
17	190	498	1690	1100	1450	1990	4410	1540	1380	322	618	226
18	190	372	1070	1140	1240	2160	3560	1470	931	506	655	251
19	199	601	638	980	1320	10500	4580	1280	471	687	673	509
20	199	386	882	1280	610	7530	8410	1450	714	644	357	748
21	190	345	980	1310	872	5100	5230	1840	851	511	281	514
22	190	619	925	1320	1360	4900	4170	1230	837	264	412	713
23	190	574	851	992	1360	3130	4020	2060	766	213	342	614
24	190	530	583	1480	1330	2470	6730	6250	698	331	362	231
25	185	278	352	1950	1240	1960	9820	3620	485	398	264	216
26	204	194	1010	1540	514	2050	5980	2830	302	510	246	416
27	272	209	1310	1500	365	1460	4480	5500	569	496	224	574
28	278	255	1230	1360	810	1790	4030	4500	830	489	218	449
29	190	667	1270	925	---	2260	3700	2760	711	320	325	454
30	199	592	1310	768	---	1970	3940	2750	626	338	421	292
31	194	---	1100	861	---	1950	---	5000	---	315	605	---
TOTAL	7071	12680	24554	36789	40201	84440	120220	88970	37374	17544	14865	11672
MEAN	228	423	792	1187	1436	2724	4007	2870	1246	566	480	389
MAX	429	851	1690	3800	3820	10500	9820	6430	3560	1730	926	748
MIN	185	194	214	229	365	1190	1040	1230	302	213	218	200
CAL YR 1982	TOTAL	451149	MEAN	1236	MAX	14500	MIN	185				
WTR YR 1983	TOTAL	496380	MEAN	1360	MAX	10500	MIN	185				

CONNECTICUT RIVER BASIN

01170100 GREEN RIVER NEAR COLRAIN, MA

LOCATION.--Lat 42°42'12", long 72°40'16", Franklin County, Hydrologic Unit 01080203, on right bank 0.5 mi upstream from bridge on West Leyden Road and 2.5 mi northeast of Colrain.

DRAINAGE AREA.--41.4 mi².

PERIOD OF RECORD.--Discharge: October 1967 to current year.
Water-quality records: Water years 1968-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-71-1: 1968(M), 1969.

GAGE.--Water-stage recorder. Altitude of gage is 435 ft, from topographic map.

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.--16 years, 92.8 ft³/s, 30.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,560 ft³/s Dec. 21, 1973, gage height, 8.2 ft, from floodmarks, from rating curve extended above 1,500 ft³/s on basis of slope area measurement of peak flow and conveyance-slope study; maximum gage height, 8.87 ft Jan. 27, 1976 (ice jam); minimum discharge, 1.9 ft³/s Aug. 1, 1968, caused by unusual regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 19	0745	*2310	6.41	Apr. 24	1815	2150	6.25
Apr. 10	2400	2220	6.32				

Minimum discharge, 3.3 ft³/s Sept. 16, 17.

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	11	9.7	24	26	45	47	131	220	208	21	9.4	13
2	9.7	10	20	26	42	310	135	477	152	23	12	8.8
3	8.7	10	18	22	340	283	214	289	120	22	9.9	6.9
4	8.7	10	18	15	270	166	260	223	226	19	7.9	6.0
5	8.4	57	17	16	136	128	252	180	174	77	23	5.4
6	8.0	34	20	27	85	122	229	149	129	66	28	5.3
7	8.0	20	19	26	82	142	239	133	149	33	24	5.1
8	11	17	17	24	78	138	373	122	107	26	15	4.5
9	19	15	16	19	66	130	317	162	88	22	12	4.2
10	19	13	14	37	58	143	505	124	74	20	8.4	4.0
11	14	13	17	369	53	163	905	110	65	20	9.4	4.0
12	13	12	15	145	55	236	382	103	56	18	25	3.9
13	12	49	10	71	55	175	285	94	51	16	24	3.6
14	15	36	12	48	55	162	242	86	46	15	16	3.6
15	15	23	26	44	55	182	211	103	43	14	13	3.5
16	14	19	61	41	54	201	267	114	40	13	9.8	3.3
17	13	17	69	41	50	197	410	90	37	12	8.5	3.3
18	12	16	26	39	52	182	325	74	34	12	8.8	4.9
19	11	15	24	37	49	1530	396	67	35	11	9.5	8.4
20	11	16	26	39	46	746	510	110	29	10	8.5	6.1
21	11	15	26	37	48	521	364	131	29	9.9	6.8	5.0
22	11	15	21	37	51	480	321	91	28	11	6.0	17
23	10	17	20	45	51	309	333	202	23	9.5	7.8	18
24	10	17	23	160	51	239	810	440	21	9.5	7.5	9.8
25	11	17	34	140	51	196	658	191	22	16	6.3	8.6
26	10	15	81	90	48	169	415	142	21	12	5.9	7.9
27	9.7	15	51	68	45	152	301	405	22	9.9	5.7	6.3
28	9.7	14	38	53	45	174	245	263	40	8.8	5.4	6.1
29	9.4	23	43	56	---	185	205	180	38	9.5	6.3	5.2
30	9.4	32	34	49	---	152	252	274	25	8.8	6.2	4.9
31	9.4	---	24	47	---	135	---	355	---	8.1	14	---
TOTAL	352.1	591.7	864	1894	2116	8095	10492	5704	2132	583.0	360.0	196.6
MEAN	11.4	19.7	27.9	61.1	75.6	261	350	184	71.1	18.8	11.6	6.55
MAX	19	57	81	369	340	1530	905	477	226	77	28	18
MIN	8.0	9.7	10	15	42	47	131	67	21	8.1	5.4	3.3
CFSM	.28	.48	.67	1.48	1.83	6.30	8.45	4.44	1.72	.45	.28	.16
IN.	.32	.53	.78	1.70	1.90	7.27	9.43	5.13	1.92	.52	.32	.18

CAL YR 1982	TOTAL	29018.8	MEAN	79.5	MAX	1140	MIN	7.4	CFSM	1.92	IN	26.07
WTR YR 1983	TOTAL	33380.4	MEAN	91.5	MAX	1530	MIN	3.3	CFSM	2.21	IN	29.99

CONNECTICUT RIVER BASIN

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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 downstream from railroad bridge at Montague City, 1,000 ft downstream from Deerfield River, and at mile 119.0.

DRAINAGE AREA.--7,865 mi².

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 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 downstream at datum 1.00 ft 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 43,400,000,000 ft³. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--79 years, 13,760 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72,800 ft³/s May 3, gage height, 26.80 ft; minimum daily, 1,660 ft³/s Oct. 17, 24.

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	3490	4900	7000	11300	12200	8910	14000	49500	39600	7320	7770	11700
2	1730	3610	8230	9640	13300	13300	15600	56600	38200	2810	7940	5010
3	3050	5180	10500	8400	19500	20000	18300	66500	30400	2560	7300	3440
4	5860	6740	10900	8870	29900	20100	21600	68900	30100	2300	7650	2300
5	3460	9030	11100	6630	30200	19500	20600	64900	26700	8020	6550	1910
6	4500	11900	9020	5760	22000	16700	20900	60400	23500	9130	2720	5850
7	3040	12300	9400	5540	17100	16100	21600	49300	24300	8750	2350	6990
8	5640	12400	11400	4430	16000	17200	30600	37700	25700	10400	5410	2880
9	5660	13500	6160	3450	13000	23600	35700	33400	22300	3730	5640	1980
10	2350	9780	7420	7750	13400	18700	32000	38600	19800	2050	8700	1860
11	4290	5680	1980	18500	13500	28100	51400	39900	16300	7450	9190	1950
12	5090	7130	2310	25500	8800	28800	53400	36700	9830	6720	12600	2960
13	5370	10700	8110	19100	7400	29400	51300	36300	10900	6260	11200	3610
14	5720	11500	6710	15700	11500	21000	43600	28600	11400	5630	7420	2480
15	3870	12200	6390	11400	13500	25100	40900	24700	12500	4840	8490	2080
16	1710	10300	7480	6620	10000	25600	37400	27800	9490	3250	8200	2790
17	1660	7710	13300	11800	12500	23500	41200	25300	10700	2020	4960	1920
18	4830	7640	12900	9000	11400	26800	41900	28500	10600	4350	5930	1880
19	6330	7820	10500	8000	8550	41800	46300	26000	8420	4970	6200	4070
20	6060	6170	11300	8200	7850	58700	50000	21200	9770	5450	4280	5080
21	4990	6340	11000	8400	8750	62500	45500	19200	11700	5110	2150	5090
22	4210	8900	10400	6000	9420	53800	41800	18300	9690	2300	4880	8110
23	1910	8790	7360	6800	11700	48800	36800	19800	8120	1830	4830	6150
24	1660	9530	6260	14000	11400	41000	39000	30600	8670	1910	4610	2660
25	4810	10000	6230	15500	9340	31300	57500	29000	3900	4930	3600	1820
26	4670	9220	7880	15700	8030	26300	66300	25300	2250	5170	2010	3690
27	3540	7600	12200	15500	7320	22400	66800	33700	7840	4620	1910	4440
28	2330	7950	13200	15000	8460	20900	63600	35600	9660	5950	2670	4450
29	1690	11500	11300	14400	---	22100	55500	32500	6480	4590	5520	4370
30	1690	6430	12100	12000	---	22000	51100	26300	5620	2670	4900	4010
31	2330	---	11600	9840	---	18300	---	38800	---	3120	8140	---
TOTAL	117540	262450	281640	338730	366020	852310	1212200	1129900	464440	150210	185720	117530
MEAN	3792	8748	9085	10930	13070	27490	40410	36450	15480	4845	5991	3918
MAX	6330	13500	13300	25500	30200	62500	66800	68900	39600	10400	12600	11700
MIN	1660	3610	1980	3450	7320	8910	14000	18300	2250	1830	1910	1820
CAL YR 1982	TOTAL	5008330	MEAN	13720	MAX	92700	MIN	1630				
WTR YR 1983	TOTAL	5478690	MEAN	15010	MAX	68900	MIN	1660				

CONNECTICUT RIVER BASIN

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 downstream from Southeast Street Bridge, 600 ft downstream from Hop Brook, and 1.3 mi southeast of Amherst.

DRAINAGE AREA.--36.4 mi², excludes 5.15 mi² 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, from topographic map. Prior to May 10, 1974, at site 400 ft upstream at same datum.

REMARKS.--Records fair except those for November to July, 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.--17 years, 63.7 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft³/s Dec. 21, 1973, gage height, 9.88 ft, former site, from rating curve extended above 690 ft³/s; maximum gage height, 9.94 ft Mar. 6, 1979; minimum discharge, 1.9 ft³/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 and 1,640 ft³/s, respectively, by computation of flow over dam 1.2 mi downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 11	1400	615	4.91	Apr. 11	0545	1090	6.50
Feb. 3	1500	1060	6.41	Apr. 20	0100	*1580	7.78

Minimum discharge, 2.9 ft³/s Sept. 13; minimum daily, 4.5 ft³/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	17	23	40	37	67	55	92	101	129	12	12	15
2	13	22	37	36	60	265	80	109	95	17	24	11
3	10	16	32	37	598	296	101	107	75	19	16	8.1
4	13	16	42	23	458	202	171	123	149	14	12	7.2
5	9.5	66	30	25	185	151	126	120	160	12	13	6.8
6	11	66	42	71	122	126	98	96	111	39	14	6.4
7	10	41	32	80	102	139	82	78	81	25	12	5.7
8	15	30	25	64	98	155	107	71	66	12	11	5.0
9	95	18	24	37	100	344	123	93	54	10	9.6	4.7
10	65	14	20	39	92	272	143	83	48	7.2	8.6	4.9
11	48	20	26	385	74	239	762	68	46	6.8	9.1	4.7
12	37	27	24	257	76	358	299	61	41	9.1	15	4.5
13	39	142	18	128	79	290	172	60	39	11	17	4.6
14	40	143	18	82	74	191	130	58	34	18	13	5.2
15	34	99	26	71	65	148	108	62	34	7.7	11	4.9
16	23	51	91	66	57	123	105	105	30	11	9.1	6.0
17	18	41	136	60	57	108	257	123	25	7.2	8.6	6.2
18	15	35	81	54	90	99	196	91	24	7.2	9.6	8.9
19	17	37	60	45	76	139	447	67	26	7.2	14	8.1
20	20	35	58	40	66	194	1070	72	31	10	11	6.8
21	25	35	56	38	62	172	357	87	22	25	7.7	6.1
22	14	35	41	41	64	210	208	69	20	31	7.2	34
23	14	34	37	75	65	142	155	123	21	27	7.2	19
24	10	22	42	303	68	97	187	185	18	17	6.4	12
25	11	17	55	266	64	90	340	136	11	23	6.0	9.9
26	18	15	93	148	50	81	203	91	9.6	19	6.0	9.1
27	19	15	62	97	45	74	151	143	15	12	6.0	8.8
28	15	12	62	79	49	184	125	153	24	11	6.4	8.6
29	17	57	62	69	---	171	105	107	32	11	5.6	7.8
30	18	65	41	65	---	122	101	148	18	11	7.2	7.7
31	15	---	36	70	---	100	---	185	---	10	17	---
TOTAL	725.5	1249	1449	2888	3063	5337	6601	3175	1488.6	459.4	332.3	257.7
MEAN	23.4	41.6	46.7	93.2	109	172	220	102	49.6	14.8	10.7	8.59
MAX	95	143	136	385	598	358	1070	185	160	39	24	34
MIN	9.5	12	18	23	45	55	80	58	9.6	6.8	5.6	4.5
CAL YR 1982	TOTAL	26293.2	MEAN	72.0	MAX	696	MIN	5.3				
WTR YR 1983	TOTAL	27025.5	MEAN	74.0	MAX	1070	MIN	4.5				

01171500 MILL RIVER AT NORTHAMPTON, MA

LOCATION.--Lat 42°19'05", long 72°39'21", Hampshire County, Hydrologic Unit 01080201, on right bank at Northampton 3.5 mi upstream from mouth.

DRAINAGE AREA.--54.0 mi².

PERIOD OF RECORD.--Discharge: October 1938 to current year. October 1938 monthly discharge only, published in WSP 1301.

Water-quality records: Water years 1957-59, 1971, 1973.

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, from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 26 to Dec. 2, 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.--45 years, 96.8 ft³/s, 24.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s Aug. 19, 1955, gage height, 11.78 ft, from rating curve extended above 3,700 ft³/s on basis of computation of peak flow over dam; minimum, 2.2 ft³/s Oct. 1, 1950; minimum daily, 4.2 ft³/s Aug. 21, 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Jan. 24	0330	1560	5.41	Apr. 11	0645	1390	5.16
Feb. 3	1415	1520	5.35	Apr. 19	2230	*3010	7.87
Mar. 19	1315	2120	6.33	Apr. 24	2015	1900	5.97
Mar. 21	2045	1510	5.34				

Minimum discharge, 5.8 ft³/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	17	16	35	28	68	77	166	218	169	43	16	17
2	14	16	30	26	65	548	154	269	135	37	16	14
3	13	16	26	24	714	366	215	221	113	40	14	12
4	13	17	25	21	390	226	341	213	388	37	13	10
5	13	30	23	19	189	174	217	182	256	41	13	9.5
6	13	48	24	30	148	161	178	156	168	68	14	9.9
7	13	43	23	41	130	214	159	139	162	53	28	9.5
8	20	35	21	40	110	252	203	134	125	38	20	8.4
9	73	30	20	30	95	417	216	182	102	32	16	7.7
10	42	25	16	32	86	322	344	141	91	28	13	7.0
11	26	22	17	420	83	364	918	125	83	25	17	6.4
12	36	20	18	170	82	500	359	118	75	21	25	6.4
13	39	40	15	95	74	342	259	106	68	20	22	6.7
14	42	110	14	73	72	264	214	99	63	18	17	6.7
15	26	80	17	63	70	259	190	118	59	16	15	6.8
16	19	60	70	60	80	238	204	220	53	16	14	6.6
17	17	50	90	58	90	209	448	187	50	16	13	6.9
18	16	40	40	56	94	196	391	126	48	16	15	8.1
19	16	35	35	54	86	1410	792	106	46	16	16	8.7
20	15	30	32	52	79	769	1490	143	42	15	14	8.0
21	15	25	30	56	77	637	595	165	39	24	11	14
22	15	26	27	64	77	637	423	128	36	33	11	59
23	14	25	26	112	79	331	349	255	32	21	11	24
24	13	24	28	871	79	250	752	254	28	19	10	17
25	14	23	32	225	78	211	821	169	26	23	9.9	13
26	16	22	50	136	72	183	443	135	28	19	9.5	12
27	17	21	47	104	67	169	328	330	32	16	8.8	12
28	18	20	40	88	69	320	271	239	45	15	8.0	10
29	17	30	41	80	---	296	231	165	74	14	13	9.4
30	17	38	36	75	---	214	246	213	57	13	15	9.1
31	16	---	29	70	---	180	---	228	---	13	20	---
TOTAL	655	1017	977	3273	3403	10736	11917	5484	2693	806	458.2	355.8
MEAN	21.1	33.9	31.5	106	122	346	397	177	89.8	26.0	14.8	11.9
MAX	73	110	90	871	714	1410	1490	330	388	68	28	59
MIN	13	16	14	19	65	77	154	99	26	13	8.0	6.4
CFSM	.39	.63	.58	1.96	2.26	6.41	7.35	3.28	1.66	.48	.27	.22
IN.	.45	.70	.67	2.25	2.34	7.40	8.21	3.78	1.86	.56	.32	.25

CAL YR 1982	TOTAL	37728.2	MEAN 103	MAX 3000	MIN 8.2	CFSM 1.91	IN 25.99
WTR YR 1983	TOTAL	41775.0	MEAN 114	MAX 1490	MIN 6.4	CFSM 2.11	IN 28.78

CONNECTICUT RIVER BASIN

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 downstream from Barre Falls Reservoir, 1.6 mi upstream from Burnshirt River, 4 mi (6 km) east of Barre, and at mile 33.3.

DRAINAGE AREA.--55.0 mi².

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, 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 upstream of station for municipal supply of Fitchburg. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--37 years, 93.1 ft³/s, 22.99 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/s Oct. 16, 1955, gage height, 6.31 ft; minimum, 0.21 ft³/s Aug. 18, 1980; minimum daily, 0.5 ft³/s Sept. 11, 1963. Maximum discharge since construction of Barre Falls Reservoir in 1958, 1,230 ft³/s Mar. 14, 1979, gage height, 5.62 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 692 ft³/s Apr. 22, gage height, 4.89 ft; minimum, 2.5 ft³/s Aug. 26, 27, 28; minimum daily, 2.7 ft³/s Aug. 26, 27.

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	13	18	82	84	98	91	197	203	267	31	5.3	64		
2	11	19	72	75	69	105	172	189	209	35	6.5	47		
3	9.9	19	63	64	101	260	134	180	170	63	6.3	30		
4	9.5	20	59	45	319	355	186	178	186	50	5.8	21		
5	9.2	49	55	39	377	355	218	170	270	45	5.8	17		
6	8.8	84	54	40	221	347	209	157	247	98	5.5	14		
7	9.5	72	54	54	200	335	165	140	194	86	5.3	11		
8	19	55	50	101	209	270	155	123	160	55	4.8	8.9		
9	66	46	45	117	189	285	167	123	134	40	4.1	7.6		
10	89	41	43	100	165	327	98	127	115	32	3.7	6.8		
11	64	36	39	113	136	300	191	121	103	25	3.5	6.2		
12	45	34	38	127	105	253	476	123	93	21	5.8	5.6		
13	37	96	26	176	103	270	526	117	81	19	14	5.0		
14	36	183	21	231	96	364	347	113	73	17	11	4.6		
15	35	175	21	227	111	481	218	117	67	15	8.4	4.1		
16	33	140	21	189	123	516	197	150	63	13	6.8	3.7		
17	33	113	22	167	123	585	247	186	60	12	5.8	3.7		
18	32	93	23	167	123	407	260	180	54	11	5.8	4.4		
19	28	80	34	136	123	247	160	147	49	9.9	7.1	4.2		
20	23	70	45	98	125	407	247	136	42	8.8	6.3	3.9		
21	21	63	54	89	123	351	596	157	37	8.8	4.8	3.6		
22	19	60	54	88	123	386	669	147	33	8.4	4.1	17		
23	18	58	54	88	123	563	377	172	28	7.4	3.7	21		
24	17	54	54	115	123	640	200	243	25	7.4	3.3	15		
25	16	50	54	152	123	623	274	250	22	8.1	2.8	11		
26	20	46	62	170	121	596	542	200	20	7.4	2.7	9.2		
27	21	48	83	170	121	476	585	172	19	6.5	2.7	8.1		
28	21	44	98	167	117	335	311	194	28	6.0	3.0	6.9		
29	19	62	101	162	---	278	253	183	48	5.8	3.7	6.2		
30	18	84	101	134	---	274	221	203	40	5.5	8.1	5.7		
31	17	---	101	98	---	240	---	288	---	5.5	35	---		
TOTAL	817.9	2012	1683	3781	4090	11322	8598	5189	2937	763.5	201.5	376.4		
MEAN	26.4	67.1	54.3	122	146	365	287	167	97.9	24.6	6.50	12.5		
MAX	89	183	101	231	377	640	669	288	270	98	35	64		
MIN	8.8	18	21	39	69	91	98	113	19	5.5	2.7	3.6		
MEAN†	26.5	67.5	67.2	119	145	363	280	172	92.4	24.3	6.76	12.3		
CFSM†	.48	1.23	1.22	2.16	2.64	6.60	5.09	3.13	1.68	.44	.12	.22		
IN†	.55	1.37	1.41	2.50	2.75	7.61	5.68	3.61	1.87	.51	.14	.25		
CAL YR 1982	TOTAL	42630.1	MEAN	117	MAX	983	MIN	6.6	MEAN†	117	CFSM†	2.13	IN†	28.85
WTR YR 1983	TOTAL	41771.3	MEAN	114	MAX	669	MIN	2.7	MEAN†	114	CFSM†	2.07	IN†	28.25

† 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 downstream from Burnshirt River, 3 mi southeast of Barre, and at mile 29.1.

DRAINAGE AREA.--96.8 mi².

PERIOD OF RECORD.--January 1928 to current year. Prior to October 1977, published as Ware River at Coldbrook.

REVISED RECORDS.--WSP 781: Drainage area. WSP 1031: 1944.

GAGE.--Venturi meters and water-stage recorder. Datum of gage is 5.65 ft below National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1936, water-stage recorder at site 0.2 mi downstream at datum 631.91 ft 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 upstream (Reservoirs in Connecticut River basin) since 1958. Diversion at times since 1955 from 6.5 mi² upstream for municipal supply of Fitchburg.

COOPERATION.--Computations of daily discharge made in cooperation with Water Division, Metropolitan District Commission, which collected gage-height and venturi-meter records.

AVERAGE DISCHARGE.--55 years, 167 ft³/s, 23.43 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s Sept. 21, 1938, gage height, 664.28 ft, by computation of flow over dam; minimum daily, 1.1 ft³/s Sept. 19, 1965, caused by unusual regulation. Maximum daily discharge since construction of Barre Falls Reservoir in 1958, 1,570 ft³/s Mar. 6, 14, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 941 ft³/s Apr. 22; minimum daily, 13 ft³/s Aug. 26-28.

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	29	39	139	137	169	192	323	325	474	68	19	92
2	27	40	132	126	144	417	289	314	360	102	20	69
3	25	46	116	112	405	594	269	307	288	122	20	48
4	24	75	109	83	630	593	375	306	387	93	20	37
5	24	118	104	85	525	544	357	289	479	102	20	31
6	22	132	105	117	339	548	337	261	409	139	19	28
7	23	123	104	127	247	519	277	233	327	140	19	25
8	41	96	94	171	381	448	305	212	274	107	17	22
9	130	83	85	158	311	577	310	216	233	79	17	19
10	143	74	75	147	263	621	313	238	207	66	16	18
11	105	67	78	443	195	585	580	227	186	56	16	17
12	76	66	70	365	168	777	744	221	166	51	23	17
13	63	341	50	358	162	674	742	193	151	47	31	16
14	66	333	50	378	170	685	504	185	144	43	30	15
15	64	285	56	331	176	774	366	212	141	38	24	14
16	59	205	98	302	201	775	343	279	138	35	20	14
17	55	165	133	268	205	842	466	315	148	33	18	14
18	47	137	103	248	229	572	441	288	144	30	19	15
19	43	137	101	187	212	621	478	243	124	29	21	15
20	43	130	106	154	198	767	703	280	100	28	20	14
21	41	113	112	151	185	667	922	283	86	26	19	17
22	37	110	106	151	187	702	941	247	77	51	15	46
23	35	108	107	203	183	822	567	349	69	29	15	42
24	32	104	108	335	180	859	444	460	60	24	14	33
25	33	95	117	338	176	813	571	447	54	29	14	27
26	45	93	136	330	166	728	779	361	52	24	13	24
27	46	90	160	295	165	612	766	332	51	21	13	22
28	43	84	173	273	175	530	488	338	90	21	13	19
29	41	124	140	255	---	452	396	305	121	20	14	18
30	38	145	167	209	---	428	356	438	106	19	22	17
31	37	---	152	171	---	382	---	537	---	18	57	---
TOTAL	1537	3758	3386	7008	6747	19120	14752	9241	5646	1690	618	805
MEAN	49.6	125	109	226	241	617	492	298	188	54.5	19.9	26.8
MAX	143	341	173	443	630	859	941	537	479	140	57	92
MIN	22	39	50	83	144	192	269	185	51	18	13	14
MEAN†	49.6	126	122	223	240	614	485	303	183	54.2	20.2	26.6
CFSM†	.51	1.30	1.26	2.30	2.48	6.34	5.01	3.13	1.89	.56	.21	.27
IN†	.59	1.45	1.45	2.66	2.58	7.32	5.59	3.61	2.11	.65	.24	.31
CAL YR 1982	TOTAL	77814	MEAN 213	MAX 1460	MIN 13	MEAN† 213	CFSM† 2.20	IN† 29.92				
WTR YR 1983	TOTAL	74308	MEAN 204	MAX 941	MIN 13	MEAN† 204	CFSM† 2.11	IN† 28.56				

† Adjusted for change in contents in Barre Falls Reservoir.

CONNECTICUT RIVER BASIN

01173500 WARE RIVER AT GIBBS CROSSING, MA

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

DRAINAGE AREA.--199 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1930, at site 0.5 mi downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversion at times: Since March 1931 from 97 mi² for supply of Boston metropolitan district and since 1955 from 6.5 mi² 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, 21.36 in/yr; 53 years (water years 1931-83), affected by diversion and storage, 281 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s Sept. 21, 1938, gage height, 18.2 ft, from floodmarks, from rating curve extended above 4,600 ft³/s on basis of contracted-opening measurement at gage height 12.83 ft and slope-area measurement at gage height 18.2 ft; minimum, 5.0 ft³/s Oct. 26, 1914; minimum daily, 6.0 ft³/s Oct. 4, 1914. Maximum discharge since construction of Barre Falls Reservoir in 1958, 5,050 ft³/s Mar. 6, 1979, gage height, 7.94 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,860 ft³/s Apr. 20, gage height, 5.82 ft; minimum, 18 ft³/s Sept. 16, 17; minimum daily, 21 ft³/s Sept 9.

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	69	75	245	207	230	279	394	741	1180	124	48	93
2	26	73	226	198	197	568	372	688	919	144	54	140
3	41	75	207	172	517	929	389	693	719	175	50	80
4	56	80	187	166	823	687	483	709	796	190	59	70
5	36	196	178	150	500	514	446	679	1070	158	36	73
6	38	274	166	243	400	468	408	609	934	268	43	35
7	40	214	169	299	350	483	400	538	753	248	44	52
8	46	188	161	278	450	497	427	487	618	219	42	55
9	196	154	148	246	380	936	483	484	512	175	40	21
10	338	134	141	194	340	824	485	475	448	135	51	31
11	255	118	105	815	300	781	1400	389	401	103	27	34
12	184	102	113	785	270	1210	1120	360	368	100	51	40
13	157	301	105	472	250	1190	1090	360	293	77	58	30
14	117	541	96	410	285	716	1010	349	322	92	50	31
15	123	382	100	400	275	601	819	363	292	58	48	30
16	123	337	127	380	331	542	696	468	264	60	46	30
17	58	275	306	350	290	504	971	570	247	61	43	28
18	120	243	260	330	330	469	998	565	245	55	56	30
19	101	222	220	270	318	566	1370	449	222	57	64	31
20	66	210	200	240	260	733	2430	407	219	58	41	36
21	80	193	180	240	270	614	1770	461	171	94	42	27
22	96	180	160	240	256	684	1670	417	156	113	41	76
23	38	170	150	280	252	564	1510	540	146	56	40	48
24	58	161	174	380	256	493	1160	858	145	80	37	64
25	96	154	189	416	263	448	1440	864	85	73	33	55
26	75	149	269	400	285	412	1340	801	113	90	33	48
27	88	150	284	360	264	394	1410	775	99	28	32	40
28	93	138	253	402	270	492	1240	844	163	31	33	38
29	83	177	245	395	---	527	917	721	232	46	39	36
30	78	265	228	302	---	454	803	1140	198	48	36	50
31	73	---	213	302	---	420	---	1450	---	45	77	---
TOTAL	3048	5931	5805	10322	9212	18999	29451	19254	12330	3261	1394	1452
MEAN	98.3	198	187	333	329	613	982	621	411	105	45.0	48.4
MAX	338	541	306	815	823	1210	2430	1450	1180	268	77	140
MIN	26	73	96	150	197	279	372	349	85	28	27	21
CAL YR 1982	TOTAL	110883	MEAN	304	MAX	2250	MIN	26				
WTR YR 1983	TOTAL	120459	MEAN	330	MAX	2430	MIN	21				

CONNECTICUT RIVER BASIN

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01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA

LOCATION.--Lat 42°23'36", long 72°14'21", Worcester County, Hydrologic Unit 01080204, on left bank 100 ft above spillway of regulating dam and 4.6 mi northwest of Hardwick.

DRAINAGE AREA.--43.7 mi².

PERIOD OF RECORD.--Discharge: January 1937 to current year. Published as "near Dana" January 1937 to September 1939.

Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Concrete spillway since Mar. 12, 1940. Datum of gage is 504.70 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of backwater from Quabbin Reservoir, Apr. 11 to June 23, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--46 years, 69.5 ft³/s, 21.60 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s Sept. 21, 1938, average of slope-area and contracted-opening measurements; maximum gage height since construction of concrete spillway in 1940, 22.49 ft June 25, 1944; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s and maximums (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 12	0200	372	20.25	Apr. 20	1700	566	*20.63
Mar. 13	0100	559	20.53	May 24	1600	410	20.37
Apr. 11	1800	*569	20.56	May 31	1300	383	20.34

Minimum discharge, 2.6 ft³/s Sept. 21.

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	12	20	67	42	62	56	114	147	319	28	7.6	44
2	12	20	60	38	60	132	99	144	224	36	9.5	35
3	10	20	50	36	152	325	105	147	173	53	9.2	26
4	9.9	21	44	32	325	279	142	141	143	43	9.2	21
5	8.8	39	42	28	218	199	140	136	279	41	9.3	18
6	8.4	61	42	47	138	160	119	124	223	78	11	15
7	8.4	55	45	64	115	151	102	118	169	69	13	13
8	11	43	38	62	103	166	106	105	149	46	11	10
9	49	37	36	53	88	268	128	94	130	38	9.4	8.8
10	78	31	30	43	74	321	139	100	112	29	7.5	7.9
11	63	27	29	189	64	298	478	93	101	24	6.7	7.7
12	45	23	29	331	77	422	453	86	87	19	8.4	7.2
13	36	103	26	206	70	493	290	81	77	19	8.5	6.6
14	33	206	22	131	67	334	201	74	70	18	7.4	5.9
15	30	150	23	101	63	259	154	76	60	15	6.4	5.1
16	27	112	39	93	62	229	132	94	68	14	6.2	4.0
17	24	86	104	79	63	205	194	130	77	14	6.2	4.2
18	21	70	96	68	81	183	225	133	62	12	7.3	4.4
19	20	58	71	55	87	201	225	107	51	11	8.4	4.3
20	18	49	56	47	78	279	530	99	41	10	7.8	4.2
21	18	45	48	46	71	260	457	121	36	10	6.8	3.8
22	18	46	41	46	69	250	300	121	29	10	5.7	17
23	16	46	38	62	69	211	225	126	26	8.4	5.3	17
24	15	44	40	140	68	169	201	347	23	8.4	4.7	15
25	15	39	42	174	65	143	266	352	21	10	4.3	13
26	20	38	60	145	61	121	246	224	17	9.2	3.6	11
27	21	39	75	111	56	108	207	163	17	8.4	3.4	10
28	22	33	67	86	55	132	182	203	29	7.8	4.7	9.5
29	21	48	63	74	---	161	161	179	38	7.2	5.2	8.5
30	21	69	55	66	---	149	135	207	34	6.9	5.4	7.7
31	20	---	47	66	---	126	---	374	---	7.2	24	---
TOTAL	731.5	1678	1525	2761	2561	6790	6456	4646	2885	710.5	243.1	364.8
MEAN	23.6	55.9	49.2	89.1	91.5	219	215	150	96.2	22.9	7.84	12.2
MAX	78	206	104	331	325	493	530	374	319	78	24	44
MIN	8.4	20	22	28	55	56	99	74	17	6.9	3.4	3.8
CFSM	.54	1.28	1.13	2.04	2.09	5.01	4.92	3.43	2.20	.52	.18	.28
IN.	.62	1.43	1.30	2.35	2.18	5.78	5.50	3.95	2.46	.60	.21	.31
CAL YR 1982	TOTAL	28399.2	MEAN	77.8	MAX	661	MIN	7.4	CFSM	1.78	IN	24.17
WTR YR 1983	TOTAL	31351.9	MEAN	85.9	MAX	530	MIN	3.4	CFSM	1.97	IN	26.69

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 east of Knights Corner, 2 mi upstream from mouth, 2.7 mi south of Pelham, and 5 mi north of Belchertown.

DRAINAGE AREA.--0.63 mi².

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, from topographic map.

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

AVERAGE DISCHARGE.--22 years, 1.15 ft³/s, 24.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46 ft³/s Mar. 6, 1979, gage height, 5.26 ft, from rating curve extended above 21 ft³/s; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0545	26	4.79	Apr. 10	2230	30	4.89
Feb. 3	0815	32	4.96	Apr. 19	1700	*36	5.05

No flow July 19, 20, Sept. 12-16.

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	.14	.25	1.1	.70	.93	1.1	1.3	1.6	2.2	.13	.04	.01
2	.10	.26	.87	.67	.92	8.0	1.2	2.1	1.6	.20	.04	.01
3	.09	.19	.79	.63	17	5.8	2.8	1.7	1.2	.19	.02	.01
4	.08	.30	.76	.52	5.8	3.3	3.1	2.3	4.8	.10	.02	.01
5	.07	2.0	.69	.55	2.7	2.3	1.9	1.9	2.8	.98	.02	.01
6	.06	1.0	.95	1.8	1.9	2.1	1.5	1.4	1.7	.95	.01	.01
7	.07	.68	.86	1.4	1.4	2.7	1.3	1.2	1.3	.32	.01	.01
8	.32	.50	.68	1.1	1.3	3.1	2.0	1.1	1.0	.19	.01	.01
9	2.7	.41	.62	.87	1.2	9.7	1.9	1.6	.79	.14	.01	.01
10	.80	.39	.54	.73	1.0	6.1	7.5	1.2	.67	.11	.01	.01
11	.48	.33	.54	12	.92	4.9	13	1.1	.58	.07	.01	.01
12	.35	.33	.52	3.8	.91	11	4.1	1.0	.48	.06	.02	.00
13	.33	9.3	.46	1.9	.87	5.0	2.5	.92	.39	.05	.02	.00
14	.45	3.1	.43	1.3	.86	3.1	2.0	.88	.32	.04	.02	.00
15	.33	2.0	.46	1.1	.85	2.4	1.7	1.6	.29	.03	.01	.00
16	.28	1.4	3.2	1.1	.86	2.0	2.2	2.7	.26	.02	.01	.00
17	.24	1.0	3.0	.97	1.2	1.7	5.9	2.9	.22	.01	.01	.01
18	.21	.87	1.4	.89	1.8	1.6	3.0	1.6	.21	.01	.01	.01
19	.21	.77	1.0	.80	1.4	3.6	15	1.2	.28	.00	.01	.01
20	.21	.65	.90	.72	1.2	4.8	12	1.8	.46	.00	.01	.01
21	.19	.60	.82	.71	1.2	4.5	4.6	1.8	.25	.08	.01	.01
22	.17	.60	.71	.70	1.2	4.6	2.9	1.3	.18	.10	.01	.22
23	.17	.60	.65	2.4	1.2	2.5	2.2	2.7	.14	.07	.01	.09
24	.18	.57	.93	6.4	1.2	1.9	6.0	3.8	.10	.06	.01	.02
25	.18	.52	1.4	3.4	1.1	1.6	6.1	2.0	.09	.04	.01	.01
26	.45	.50	2.0	2.1	1.0	1.4	3.4	1.5	.08	.04	.01	.01
27	.33	.52	1.2	1.5	.92	1.3	2.4	3.8	.08	.02	.01	.01
28	.25	.50	1.1	1.1	.97	3.6	2.0	2.6	.67	.01	.01	.01
29	.24	2.4	1.0	.99	---	2.8	1.7	1.7	.44	.01	.01	.01
30	.22	1.6	.87	.89	---	1.8	1.8	4.2	.19	.01	.01	.01
31	.21	---	.76	.90	---	1.5	---	3.8	---	.01	.02	---
TOTAL	10.11	34.14	31.21	54.64	53.81	111.8	119.0	61.00	23.77	4.05	.44	.55
MEAN	.33	1.14	1.01	1.76	1.92	3.61	3.97	1.97	.79	.13	.014	.018
MAX	2.7	9.3	3.2	12	17	11	15	4.2	4.8	.98	.04	.22
MIN	.06	.19	.43	.52	.85	1.1	1.2	.88	.08	.00	.01	.00
CFSM	.52	1.81	1.60	2.79	3.05	5.73	6.30	3.13	1.25	.21	.02	.03
IN.	.60	2.01	1.84	3.22	3.17	6.59	7.02	3.60	1.40	.24	.03	.03

CAL YR 1982	TOTAL	508.26	MEAN	1.39	MAX	21	MIN	.01	CFSM	2.21	IN	29.96
WTR YR 1983	TOTAL	504.52	MEAN	1.38	MAX	17	MIN	.00	CFSM	2.19	IN	29.74

01174900 CADWELL CREEK NEAR BELCHERTOWN, MA

LOCATION.--Lat 42°20'08", long 72°22'12", Hampshire County, Hydrologic Unit 01080204, on left bank 200 ft upstream from mouth, 2 mi southeast of Knights Corner, and 4.5 mi north of Belchertown.

DRAINAGE AREA.--2.81 mi².

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 from topographic map.

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

AVERAGE DISCHARGE.--22 years, 4.86 ft³/s, 23.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 271 ft³/s Mar. 6, 1979, gage height, 7.42 ft, from rating curve extended above 92 ft³/s; minimum, 0.07 ft³/s several times in water years 1964-66.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 11	0545	82	6.49	Apr. 11	0045	121	6.72
Feb. 3	0900	132	6.78	Apr. 19	1800	*a204	7.11

a From rating curve extended above 92 ft³/s.

Minimum discharge, 0.08 ft³/s Sept. 11, 12, 13, 14, 15, 16, 20, 21.

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	.85	1.3	4.0	3.1	4.5	4.7	5.8	7.7	8.9	.63	.42	.50
2	.70	1.2	3.4	3.0	4.5	28	5.3	8.6	6.4	.74	.80	.21
3	.58	1.1	3.1	2.8	62	23	11	7.9	4.9	.66	.34	.16
4	.57	1.4	3.1	2.1	25	14	13	8.8	18	.42	.25	.13
5	.55	6.8	2.8	2.8	12	10	8.1	8.6	11	2.8	.31	.12
6	.52	3.8	3.9	7.2	8.2	9.0	6.6	7.0	7.1	3.7	.30	.12
7	.52	2.5	3.5	5.8	7.1	12	5.9	5.6	5.7	1.6	.26	.12
8	1.2	2.0	2.9	4.5	7.0	13	7.8	4.9	4.4	1.1	.19	.10
9	9.0	1.7	2.8	3.6	6.0	37	7.7	6.4	3.4	.92	.15	.10
10	3.6	1.6	2.7	3.4	5.4	25	22	5.7	2.9	.70	.13	.10
11	2.1	1.5	2.6	40	5.2	21	53	4.9	2.5	.57	.17	.10
12	1.6	1.4	2.3	16	5.2	40	19	4.5	2.1	.51	.49	.09
13	1.5	27	2.1	8.7	4.9	22	12	4.0	1.7	.42	.58	.09
14	2.0	10	2.1	6.4	4.5	14	9.4	3.7	1.4	.34	.25	.09
15	1.5	6.5	2.3	5.7	4.5	11	8.1	5.2	1.3	.29	.18	.09
16	1.3	4.7	11	5.3	4.4	8.9	9.3	9.6	1.1	.28	.15	.09
17	1.2	3.8	9.9	4.7	5.5	7.8	25	11	1.1	.23	.14	.11
18	1.1	3.4	5.1	4.1	7.7	7.2	13	6.5	1.0	.21	.30	.14
19	1.0	3.0	4.1	4.0	5.9	14	71	5.0	1.1	.19	.43	.11
20	1.0	2.8	3.7	3.8	5.1	19	62	6.9	1.6	.19	.22	.10
21	1.0	2.6	3.5	3.7	4.9	16	24	6.8	1.0	1.1	.15	.09
22	.96	2.6	3.2	3.5	5.1	18	17	5.0	.78	1.3	.13	1.9
23	.90	2.5	3.1	10	5.0	10	12	11	.60	.49	.13	.50
24	.94	2.4	4.0	26	4.9	8.1	18	12	.47	.53	.13	.27
25	.94	2.2	5.3	14	4.7	7.0	28	7.4	.44	.68	.13	.20
26	2.2	2.2	7.2	9.2	4.4	6.3	17	5.5	.44	.40	.12	.17
27	1.6	2.4	4.8	6.6	4.1	5.9	12	13	.47	.28	.12	.16
28	1.3	2.1	4.4	5.7	4.2	14	10	9.4	2.7	.23	.13	.15
29	1.2	7.7	4.1	5.0	---	11	8.5	6.8	1.7	.20	.13	.14
30	1.1	5.5	3.5	4.5	---	7.4	8.2	17	.90	.20	.13	.14
31	1.1	---	3.2	4.6	---	6.4	---	13	---	.19	.36	---
TOTAL	45.63	119.7	123.7	229.8	231.9	450.7	529.7	239.4	97.10	22.10	7.72	6.39
MEAN	1.47	3.99	3.99	7.41	8.28	14.5	17.7	7.72	3.24	.71	.25	.21
MAX	9.0	27	11	40	62	40	71	17	18	3.7	.80	1.9
MIN	.52	1.1	2.1	2.1	4.1	4.7	5.3	3.7	.44	.19	.12	.09
CFSM	.52	1.42	1.42	2.64	2.95	5.16	6.30	2.75	1.15	.25	.09	.08
IN.	.60	1.58	1.64	3.04	3.07	5.96	7.01	3.17	1.28	.29	.10	.08
CAL YR 1982	TOTAL	2158.40	MEAN	5.91	MAX	84	MIN	.29	CFSM	2.10	IN	28.56
WTR YR 1983	TOTAL	2103.84	MEAN	5.76	MAX	71	MIN	.09	CFSM	2.05	IN	27.84

CONNECTICUT RIVER BASIN

01175500 SWIFT RIVER AT WEST WARE, MA

LOCATION.--Lat 42°16'04", long 72°19'59", Hampshire County, Hydrologic Unit 01080204, on left bank at West Ware, 1.4 mi downstream from Quabbin Reservoir, 3.5 mi east of Belchertown, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--188 mi², includes 1.6 mi² drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 mi².

PERIOD OF RECORD.--Discharge: July 1910 to September 1912 (twice-daily gage heights and corresponding discharge), October 1912 to current year.

Water-quality records: Water years 1952-54.

REVISED RECORDS.--WSP 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 National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1912, nonrecording gage at site 400 ft upstream at same datum.

REMARKS.--Records good. Flow regulated since August 1939 by Quabbin Reservoir (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, 22.68 in/yr; 44 years (water years 1940-83), affected by storage and diversions, 93.5 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft³/s Mar. 19, 1936, gage height, 15.00 ft; minimum daily, 9.1 ft³/s Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 1,870 ft³/s Apr. 30, 1956, gage height, 8.37 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s Apr. 25, gage height, 7.11 ft; minimum daily, 29 ft³/s July 31.

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	130	127	128	41	42	44	44	821	908	48	42	85
2	130	125	127	40	42	52	44	805	867	48	55	123
3	132	127	92	41	42	48	46	784	789	47	43	125
4	134	123	43	40	44	46	46	800	848	47	43	125
5	127	123	42	41	43	46	45	778	903	49	43	125
6	125	121	41	43	43	46	45	732	832	34	43	125
7	125	121	41	42	43	46	44	607	813	60	43	125
8	125	121	41	42	43	47	46	517	774	47	43	125
9	132	121	41	41	43	63	45	512	703	47	43	125
10	128	121	41	41	43	49	56	477	638	47	43	127
11	127	121	41	41	43	48	200	482	577	32	44	128
12	127	121	41	43	43	56	324	477	545	44	45	127
13	127	128	41	41	43	49	412	455	499	57	44	128
14	127	125	41	42	43	47	457	429	422	47	43	128
15	125	125	41	42	43	47	472	434	334	47	43	128
16	128	125	43	42	43	46	509	515	288	47	43	128
17	128	125	42	41	44	46	632	530	228	47	43	128
18	128	125	42	42	43	46	617	455	180	47	44	128
19	128	125	41	43	43	48	743	382	149	47	44	128
20	128	127	42	41	43	48	1040	363	132	46	43	128
21	128	128	42	42	43	47	1140	419	95	48	43	128
22	128	128	42	41	43	47	1130	450	68	45	43	132
23	128	127	42	41	32	46	1070	532	51	45	43	130
24	128	128	42	45	45	46	1090	727	49	45	43	130
25	128	128	42	43	45	44	1150	756	49	45	43	130
26	128	127	42	43	44	45	1120	724	48	39	43	130
27	127	128	42	42	46	45	1060	789	48	33	43	130
28	127	128	42	42	45	47	995	789	51	40	43	130
29	125	130	41	42	---	46	924	750	49	55	42	130
30	127	128	41	41	---	45	867	837	48	43	42	129
31	127	---	41	42	---	45	---	905	---	29	45	---
TOTAL	3962	3757	1511	1294	1202	1471	16413	19033	11985	1402	1350	3788
MEAN	128	125	48.7	41.7	42.9	47.5	547	614	400	45.2	43.5	126
MAX	134	130	128	45	46	63	1150	905	908	60	55	132
MIN	125	121	41	40	32	44	44	363	48	29	42	85
CAL YR 1982	TOTAL	26871	MEAN	73.6	MAX	137	MIN	34				
WTR YR 1983	TOTAL	67168	MEAN	184	MAX	1150	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 upstream from bridge on Cooney Road and 1.5 mi north of Spencer.

DRAINAGE AREA.--8.58 mi².

PERIOD OF RECORD.--Occasional low-flow measurements, water year 1960. October 1960 to current year. October and November 1960 monthly discharge only, published in WSP 1901.

GAGE.--Water-stage recorder. Altitude of gage is 640 ft, from topographic map.

REMARKS.--Records poor. Stage-discharge relation indefinite Aug. 10 to Sept. 12. Occasional regulation by ponds upstream since 1971. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--23 years, 14.5 ft³/s, 22.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 412 ft³/s Mar. 18, 1968, gage height, 5.19 ft; maximum gage height, 5.41 ft Mar. 7, 1963 (ice jam); minimum discharge, 0.04 ft³/s Sept. 10, 11, 1980 (regulated); minimum daily, 0.13 ft³/s July 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s and maximums (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Oct. 9	1115	--	*4.37	Mar. 19	2230	82	2.24
Jan. 11	1645	a110	2.35	Apr. 11	0515	112	2.58
Feb. 3	--	100	--	Apr. 20	0145	181	2.77
Mar. 2	1915	a180	2.58	Apr. 25	1045	107	2.50
Mar. 12	0545	*a254	2.79				

a From rating curve extended above 50 ft³/s.

Minimum discharge not determined, minimum daily, 0.24 ft³/s Sept. 21.

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	2.2	4.7	13	8.1	17	16	25	37	37	6.5	.45	13
2	2.4	4.3	12	8.8	15	95	25	33	31	6.2	.50	11
3	2.3	4.4	11	7.1	60	128	25	31	26	5.2	.40	6.1
4	1.9	5.1	12	7.1	60	99	29	31	32	4.7	.70	3.2
5	1.7	15	12	6.4	45	77	27	28	34	5.7	1.5	1.4
6	1.7	13	11	13	37	68	23	26	28	10	1.2	1.3
7	1.8	12	11	15	32	68	22	24	22	7.7	.80	.66
8	2.1	10	11	12	28	65	21	21	20	5.9	.50	.47
9	29	8.5	9.0	12	26	105	25	23	17	5.3	.25	.40
10	16	7.0	8.0	9.4	24	109	29	22	15	4.2	.40	.38
11	15	6.0	7.2	75	23	118	97	22	14	3.6	.45	.40
12	10	5.5	6.4	55	22	168	63	22	13	2.7	.80	.40
13	7.6	30	5.3	42	21	123	54	20	13	2.6	2.0	.54
14	8.5	26	4.8	30	20	77	39	22	12	2.1	.90	.43
15	6.8	21	4.8	23	20	56	32	22	12	1.5	.55	.30
16	6.1	17	13	20	19	45	30	28	11	1.4	.44	.26
17	5.1	14	18	18	19	37	51	35	9.8	1.3	.40	.34
18	4.5	14	19	16	35	32	40	26	9.2	.85	2.0	.56
19	4.1	16	11	15	33	58	81	20	8.3	.57	1.3	.41
20	3.6	14	9.9	14	25	71	121	20	7.7	.53	.80	.29
21	3.2	12	9.8	13	22	60	48	23	6.7	.69	.60	.24
22	3.1	11	8.3	12	24	62	32	21	5.9	1.4	.48	1.6
23	3.2	9.3	8.7	15	21	45	31	29	5.2	.92	.42	1.1
24	3.2	8.2	9.1	40	19	37	39	49	4.7	.91	.39	.83
25	3.3	9.8	10	45	18	31	79	38	4.6	.92	.36	.81
26	6.8	12	11	32	16	27	66	28	4.8	.75	.34	.61
27	5.5	11	10	25	17	26	54	29	4.3	.60	.32	.56
28	5.6	8.1	9.7	20	15	46	45	34	9.4	.50	.35	.49
29	5.0	15	9.1	17	---	45	40	28	11	.43	.45	.47
30	5.0	16	8.6	15	---	30	42	43	8.1	.40	.60	.56
31	4.8	---	8.6	17	---	27	---	47	---	.37	18	---
TOTAL	181.1	359.9	312.3	657.9	733	2051	1335	882	436.7	86.44	38.65	49.11
MEAN	5.84	12.0	10.1	21.2	26.2	66.2	44.5	28.5	14.6	2.79	1.25	1.64
MAX	29	30	19	75	60	168	121	49	37	10	18	13
MIN	1.7	4.3	4.8	6.4	15	16	21	20	4.3	.37	.25	.24
CFSM	.68	1.40	1.18	2.47	3.05	7.72	5.19	3.32	1.70	.33	.15	.19
IN.	.79	1.56	1.35	2.85	3.18	8.89	5.79	3.82	1.89	.37	.17	.21
CAL YR 1982	TOTAL	6559.80	MEAN	18.0	MAX	175	MIN	1.0	CFSM	2.10	IN	28.44
WTR YR 1983	TOTAL	7123.10	MEAN	19.5	MAX	168	MIN	.24	CFSM	2.27	IN	30.88

CONNECTICUT RIVER BASIN

01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA

LOCATION.--Lat 42°10'56", long 72°15'51", Hampden County, Hydrologic Unit 01080204, on right bank 10 ft upstream from abandoned highway bridge site at West Brimfield, 0.9 mi upstream from Blodgett Mill Brook, 3.5 mi northeast of Palmer, and 9.9 mi upstream from mouth.

DRAINAGE AREA.--151 mi².

PERIOD OF RECORD.--Discharge: August 1909 to July 1912 (twice-daily gage heights and corresponding discharges), August 1912 to current year.
Water-quality records: Water years 1953, 1967, 1969-70, 1972-74.

REVISED RECORDS.--WSP 451: 1916. WSP 711: Drainage area. WSP 1301: 1918(M).

GAGE.--Water-stage recorder. Altitude of gage is 390 ft, from topographic map. Prior to Aug. 19, 1912, nonrecording gage, and Aug. 19, 1912, to Oct. 31, 1955, water-stage recorder, at several sites 0.5 mi downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Slight diurnal fluctuation at low flow caused by mill upstream prior to 1956; regulation much greater prior to 1938. High flow slightly affected by retarding reservoirs since 1965. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--71 years (water years 1913-83), 245 ft³/s, 22.03 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s Aug. 19, 1955, gage height, 15.36 ft, from floodmarks, present site and datum, from rating curve extended above 2,700 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 6.6 ft³/s Sept. 28, 29, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 12	0700	1170	5.81	Apr. 11	0230	924	5.35
Mar. 21	2030	1050	5.60	Apr. 19	2400	*2120	7.20

Minimum discharge, 22 ft³/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	61	66	155	134	291	305	625	851	662	94	49	53
2	60	66	150	131	291	481	577	776	625	84	52	54
3	56	63	144	123	565	577	573	722	585	78	48	54
4	54	63	136	107	637	633	573	688	601	75	67	53
5	50	114	132	120	621	637	546	641	589	78	91	51
6	48	129	130	150	630	629	527	593	554	96	78	48
7	46	127	120	167	621	633	507	554	519	83	77	45
8	51	126	118	162	573	637	489	511	481	72	71	42
9	89	116	110	160	520	827	504	481	438	71	65	38
10	100	109	105	160	460	827	542	449	401	64	60	37
11	96	103	103	428	445	900	841	431	359	61	55	35
12	94	97	97	462	435	1110	804	414	319	59	65	33
13	92	218	91	452	428	1130	813	391	279	55	84	33
14	91	241	88	445	414	1140	790	371	258	51	74	30
15	88	265	91	418	391	1090	740	362	219	49	71	28
16	83	269	120	392	371	996	701	404	222	47	69	26
17	75	259	148	330	368	919	772	445	194	45	64	26
18	75	236	146	300	387	851	722	431	175	46	71	27
19	72	212	146	280	391	914	1090	418	159	44	80	24
20	71	187	132	270	384	949	1620	411	142	42	72	24
21	66	166	125	260	371	980	1500	428	128	49	63	33
22	60	154	121	260	365	1010	1430	407	113	81	60	74
23	62	152	115	275	359	934	1310	460	99	63	58	71
24	60	147	118	361	349	885	1280	562	89	64	53	75
25	59	133	125	386	346	832	1390	538	80	64	49	76
26	79	135	138	383	325	758	1330	519	74	59	46	77
27	76	120	148	370	307	714	1250	562	72	55	43	76
28	72	124	150	350	305	776	1140	573	99	53	41	73
29	70	150	146	328	---	714	1040	542	113	52	41	70
30	68	154	144	308	---	675	939	683	101	51	41	68
31	67	---	140	300	---	662	---	696	---	48	52	---
TOTAL	2191	4501	3932	8772	11950	25125	26965	16314	8749	1933	1910	1454
MEAN	70.7	150	127	283	427	810	899	526	292	62.4	61.6	48.5
MAX	100	269	155	462	637	1140	1620	851	662	96	91	77
MIN	46	63	88	107	291	305	489	362	72	42	41	24
CFSM	.47	.99	.84	1.87	2.83	5.36	5.95	3.48	1.93	.41	.41	.32
IN.	.54	1.11	.97	2.16	2.94	6.19	6.64	4.02	2.16	.48	.47	.36

CAL YR 1982	TOTAL	108973	MEAN	299	MAX	1520	MIN	31	CFSM	1.98	IN	26.85
WTR YR 1983	TOTAL	113796	MEAN	312	MAX	1620	MIN	24	CFSM	2.07	IN	28.03

01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA

LOCATION.--Lat 42°09'38", long 72°30'52", Hampden County, Hydrologic Unit 01080204, on left bank 1,000 ft downstream from West Street Bridge at Indian Orchard, 1.1 mi upstream from Fuller Brook, and 7.2 mi upstream from mouth.

DRAINAGE AREA.--688 mi².

PERIOD OF RECORD.--Discharge: August 1928 to current year. Published as "at Bircham Bend" prior to November 1938.

Water-quality records: Water years 1953, 1957.

REVISED RECORDS.--WSP 711: Drainage area. WSP 1231: 1934.

GAGE.--Water-stage recorder. Altitude of gage is 125 ft, from topographic map. Prior to Nov. 1, 1938, water-stage recorder at site 1.8 mi downstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, Dec. 29 to Feb. 9, which are poor. Diversion since 1941 from 186 mi² in Swift River basin and at times since 1931 from 97 mi² in Ware River basin for Boston metropolitan district; since 1950, for Chicopee; since 1952, for South Hadley; at times since 1966 for Worcester; at times since 1955 from 6.5 mi² in Ware River basin for Fitchburg. Diversion from Ludlow Reservoir for Springfield and, prior to 1952, for Chicopee. Flow regulated by powerplants upstream, by Quabbin Reservoir 21 mi upstream on Swift River since 1939, by Barre Falls Reservoir on Ware River since 1958, by Conant Brook Reservoir since 1966 (Reservoirs in Connecticut River basin), and by smaller reservoirs. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--55 years, 903 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft³/s Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 ft³/s several times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,140 ft³/s Apr. 20, gage height, 11.77 ft from peak-stage indicator; minimum daily, 130 ft³/s Aug. 27.

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	346	350	708	600	850	875	1450	2840	3370	454	247	244
2	340	290	706	520	700	1250	1360	2710	2860	436	286	333
3	255	300	721	480	1500	2510	1260	2610	2500	392	290	367
4	302	310	573	460	2300	2280	1510	2640	2480	396	294	290
5	348	540	521	600	1850	1860	1480	2580	2920	431	290	313
6	270	600	502	600	1450	1650	1330	2380	2720	516	251	290
7	252	670	494	600	1300	1570	1190	2130	2420	527	254	275
8	263	620	439	580	1300	1660	1220	1850	2190	483	290	215
9	512	600	463	560	1250	2430	1310	1860	1920	403	234	375
10	715	492	379	540	1060	2770	1440	1760	1730	372	215	243
11	691	471	332	1200	998	2650	3170	1640	1560	350	209	228
12	613	436	338	2000	746	2980	3220	1580	1430	283	350	248
13	583	861	312	1500	1040	3670	2850	1500	1310	313	283	253
14	532	1320	337	1300	1030	2970	2690	1430	1210	313	279	240
15	420	1140	365	1200	1010	2480	2490	1400	1030	244	254	236
16	483	1060	470	1100	994	2210	2350	1690	968	237	231	222
17	424	923	671	1050	1080	2000	2990	1990	859	251	254	230
18	339	830	713	1000	1160	1860	2980	1870	771	241	298	248
19	433	768	656	920	1130	1840	3460	1620	693	224	346	269
20	339	697	564	820	1030	2420	7530	1470	624	194	294	233
21	326	668	433	780	1010	2300	5810	1580	521	261	228	229
22	393	639	583	800	996	2440	5050	1570	520	394	237	431
23	341	581	495	900	973	2170	4610	1840	473	294	224	341
24	305	617	506	1050	977	1900	4160	2460	374	279	221	327
25	337	550	591	1250	973	1760	4600	2580	381	321	206	324
26	475	547	597	1300	926	1590	4900	2370	336	254	215	304
27	448	538	570	1200	867	1510	4300	2420	349	265	130	319
28	371	522	413	1250	860	1780	3900	2680	466	212	189	278
29	387	624	570	1300	---	1880	3500	2420	605	215	244	294
30	394	676	630	1150	---	1640	3100	2980	555	224	215	297
31	390	---	600	1000	---	1530	---	3710	---	221	218	---
TOTAL	12627	19240	16252	29610	31360	64435	91210	66160	40145	10000	7776	8496
MEAN	407	641	524	955	1120	2079	3040	2134	1338	323	251	283
MAX	715	1320	721	2000	2300	3670	7530	3710	3370	527	350	431
MIN	252	290	312	460	700	875	1190	1400	336	194	130	215
CAL YR 1982	TOTAL	360151	MEAN	987	MAX	5400	MIN	230				
WTR YR 1983	TOTAL	397311	MEAN	1089	MAX	7530	MIN	130				

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA

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

DRAINAGE AREA.--162 mi².

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

REMARKS.--Records 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.--74 years, 328 ft³/s, 27.50 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s Sept. 21, 1938, gage height, 29.58 ft, from floodmarks, site and datum then in use, from rating curve extended above 3,800 ft³/s on basis of slope-area measurements at gage heights 24.07 ft and 29.58 ft; minimum, 0.1 ft³/s Apr. 3, 1965; minimum daily, 1.1 ft³/s Apr. 2, 1965. Maximum discharge since construction of Knightville Reservoir in 1941, 6,660 ft³/s Mar. 21, 1945, gage height, 7.45 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,940 ft³/s Apr. 22, gage height, 6.33 ft; minimum, 14 ft³/s Nov. 17, Sept. 16, 17; minimum daily, 14 ft³/s Sept. 17.

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	37	33	135	135	216	141	484	2410	673	111	36	60
2	34	37	105	103	176	418	575	1250	504	127	37	43
3	29	38	90	90	535	1090	452	905	408	291	41	34
4	26	36	83	70	1600	1430	536	718	755	135	44	28
5	24	151	86	48	1200	870	670	608	953	175	60	26
6	23	212	95	76	715	583	679	502	584	642	76	24
7	23	108	97	131	454	601	684	436	661	724	145	23
8	29	77	69	130	318	544	829	397	536	189	74	21
9	92	64	63	69	330	597	1180	501	379	145	51	20
10	92	54	38	39	269	856	914	426	317	126	39	17
11	62	49	36	715	243	838	1170	374	277	104	37	16
12	49	47	45	1090	209	511	2250	364	241	94	87	15
13	41	188	39	728	260	907	2670	328	210	84	88	15
14	46	275	30	274	262	1420	2200	303	187	75	66	15
15	62	138	30	158	250	1350	1340	344	206	66	48	15
16	53	102	33	166	240	1060	553	592	260	62	39	15
17	54	81	302	168	238	924	857	539	248	56	33	14
18	65	74	267	168	224	642	1400	383	281	50	36	18
19	60	69	128	139	221	327	1210	315	190	48	60	22
20	52	66	104	111	221	1060	957	369	151	45	54	21
21	41	63	104	113	221	1310	2490	590	131	53	39	18
22	38	61	94	202	218	1790	3430	438	116	117	30	74
23	38	63	84	233	218	2920	1960	602	102	70	27	74
24	34	67	84	481	218	2950	693	1320	91	55	26	41
25	32	64	87	770	218	2770	1230	917	80	76	24	31
26	37	60	185	529	214	1490	2840	517	75	65	23	26
27	36	59	244	345	205	876	3490	1150	75	52	21	23
28	34	44	236	246	165	840	3530	1220	128	44	22	21
29	32	104	163	154	---	917	3380	673	342	40	67	20
30	32	193	141	178	---	1090	3050	684	163	39	47	19
31	31	---	140	189	---	732	---	983	---	38	62	---
TOTAL	1338	2677	3437	8048	9858	33854	47703	21158	9324	3998	1539	809
MEAN	43.2	89.2	111	260	352	1092	1590	683	311	129	49.6	27.0
MAX	92	275	302	1090	1600	2950	3530	2410	953	724	145	74
MIN	23	33	30	39	165	141	452	303	75	38	21	14
MEAN†	43.2	89.7	118	262	347	1095	1678	592	309	129	51.2	25.3
CFSM†	.27	.55	.73	1.62	2.14	6.76	10.4	3.65	1.91	.80	.32	.16
IN†	.31	.62	.84	1.87	2.23	7.79	11.56	4.21	2.13	.92	.36	.17

CAL YR 1982 TOTAL 121355 MEAN 332 MAX 3250 MIN 17 MEAN† 332 CFSM† 2.05 IN† 27.86
WTR YR 1983 TOTAL 143743 MEAN 394 MAX 3530 MIN 14 MEAN† 394 CFSM† 2.43 IN† 33.01

† 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 upstream from mouth, 0.7 mi downstream from Littleville Dam, and 1.7 mi north of Huntington.

DRAINAGE AREA.--52.6 mi².

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 National Geodetic Vertical Datum of 1929. Prior to June 25, 1930, datum was 2.00 ft higher, and June 25, 1930, to Sept. 30, 1964, datum was 1.00 ft higher. Prior to Sept. 8, 1912, nonrecording gage at same site.

REMARKS.--Records good. 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.--73 years, 105 ft³/s, 27.11, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s Sept. 12, 1938, gage height, 1.61 ft, present datum, from rating curve extended above 3,200 ft³/s on basis of mean of two contracted-opening measurements of peak flow; maximum gage height, 14.87 ft, 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 Mar. 26, 1980, gage height, 5.93 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,420 ft³/s Apr. 26, gage height, 5.80 ft; minimum, 1.1 ft³/s Sept. 16, 17; minimum daily, 1.1 ft³/s Sept. 17.

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	11	11	51	42	70	60	150	271	266	34	7.5	6.1
2	9.5	12	44	37	54	167	145	239	189	29	8.1	5.3
3	7.9	13	38	35	180	355	145	230	143	26	7.5	4.9
4	7.3	13	33	29	580	277	150	199	223	25	9.8	4.4
5	6.6	27	30	24	521	201	156	176	302	44	16	4.0
6	6.3	46	28	32	233	173	159	148	253	186	15	3.8
7	6.1	41	27	40	160	212	113	126	227	118	14	3.6
8	7.9	32	25	40	128	223	84	112	193	74	12	3.3
9	23	26	24	35	110	196	266	118	143	49	9.8	3.0
10	28	21	19	29	92	300	273	112	112	36	7.5	2.7
11	24	18	19	341	75	310	470	102	94	28	7.8	2.7
12	19	17	20	391	72	176	992	94	85	24	11	2.2
13	16	42	17	205	73	312	940	89	71	21	13	2.0
14	16	82	16	116	74	523	391	86	61	18	12	1.9
15	16	66	17	87	73	572	118	85	57	15	10	1.7
16	16	48	34	76	72	368	88	136	60	15	8.8	1.3
17	14	37	119	68	71	295	443	154	60	14	7.5	1.1
18	13	31	93	60	71	197	734	124	56	13	8.8	1.3
19	12	27	63	49	71	98	470	100	49	11	11	1.6
20	11	24	51	47	66	272	480	100	43	11	11	1.9
21	11	22	44	47	64	359	1150	138	37	13	8.8	2.1
22	10	21	38	48	65	558	1210	133	31	25	6.9	8.3
23	9.9	21	34	57	68	1110	612	174	28	25	6.1	9.6
24	9.5	22	34	186	69	1120	199	294	25	21	5.1	8.2
25	9.0	21	36	250	68	950	463	302	21	20	4.6	6.5
26	11	20	64	190	65	576	1110	248	19	18	4.2	5.4
27	11	20	80	135	60	232	1220	273	19	15	4.2	4.7
28	11	18	70	101	59	189	840	313	27	14	3.8	4.2
29	11	26	64	85	---	212	385	304	51	9.4	3.6	3.7
30	11	49	57	80	---	197	299	283	44	8.8	3.8	3.6
31	11	---	47	76	---	167	---	289	---	8.1	5.8	---
TOTAL	386.0	874	1336	3038	3364	10957	14255	5552	2989	968.3	265.0	115.1
MEAN	12.5	29.1	43.1	98.0	120	353	475	179	99.6	31.2	8.55	3.84
MAX	28	82	119	391	580	1120	1220	313	302	186	16	9.6
MIN	6.1	11	16	24	54	60	84	85	19	8.1	3.6	1.1
MEAN†	12.5	31.6	42.6	99.5	119	357	479	180	90.6	29.3	8.55	3.37
CFSM†	.24	.60	.81	1.89	2.26	6.79	9.11	3.42	1.72	.56	.16	.06
IN†	.27	.67	.93	2.18	2.36	7.83	10.16	3.95	1.92	.64	.19	.07
CAL YR 1982	TOTAL	39092.7	MEAN 107	MAX 929	MIN 4.1	MEAN† 107	CFSM† 2.03	IN† 27.65				
WTR YR 1983	TOTAL	44099.4	MEAN 121	MAX 1220	MIN 1.1	MEAN† 121	CFSM† 2.30	IN† 31.18				

† Adjusted for change in contents in Littleville Lake.

01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA

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

DRAINAGE AREA.--93.7 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of doubtful or no gage-height record, Feb. 11 to Mar. 22, which are poor. 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.--48 years, 190 ft³/s, 27.54 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Mar. 19	about 1130	4160	ab6.01	Apr. 19	2330	*a8510	8.63
Apr. 10	2330	4480	a6.24	Apr. 24	1915	a4220	6.05

a From rating curve extended above 1,100 ft³/s on basis of slope area measurement at gage height 15.27 ft.
b From peak-stage indicator.

Minimum discharge, 6.8 ft³/s Sept. 16, 17.

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	20	36	97	69	135	140	296	380	380	45	16	18
2	18	39	73	62	125	430	300	462	304	39	20	14
3	17	36	63	58	989	500	475	386	259	35	18	12
4	16	35	59	35	662	400	602	370	829	31	32	11
5	16	153	54	41	350	360	482	336	532	170	31	11
6	23	137	52	89	263	320	386	291	346	331	43	9.8
7	26	71	51	99	218	370	375	259	468	122	36	9.3
8	36	55	47	81	224	420	468	240	322	67	23	8.6
9	182	48	43	53	200	480	555	267	255	47	18	8.1
10	103	43	27	54	181	470	1160	236	222	39	16	7.8
11	59	41	42	859	210	560	2030	215	185	33	17	7.5
12	46	39	41	445	180	650	723	195	150	29	36	7.2
13	41	278	22	253	170	530	489	182	126	27	34	7.1
14	45	236	28	161	180	450	386	167	107	25	24	7.1
15	48	130	40	137	170	490	341	182	122	23	19	7.1
16	42	91	188	130	156	490	462	346	107	41	16	7.0
17	35	70	315	120	155	460	947	318	103	32	22	7.2
18	29	65	127	100	170	410	733	240	86	25	26	9.2
19	26	61	95	90	168	2500	2430	198	73	22	38	10
20	28	49	82	92	163	2000	3560	232	62	20	25	10
21	29	50	75	100	158	1500	1350	291	55	26	18	11
22	27	44	60	117	150	1240	956	240	51	153	15	40
23	25	45	58	176	150	679	984	386	42	52	14	33
24	23	44	62	566	145	475	2170	761	37	35	13	21
25	21	43	81	401	140	380	2130	355	33	33	12	16
26	35	40	210	293	135	327	1140	275	29	29	12	14
27	38	41	147	246	130	300	714	799	29	23	12	13
28	35	33	116	216	130	346	540	547	88	19	11	16
29	33	120	124	198	---	435	435	360	138	18	12	12
30	36	165	99	164	---	350	429	365	63	17	13	10
31	38	---	72	145	---	304	---	619	---	16	20	---
TOTAL	1196	2338	2650	5650	6207	18766	28048	10500	5603	1624	662	375.0
MEAN	38.6	77.9	85.5	182	222	605	935	339	187	52.4	21.4	12.5
MAX	182	278	315	859	989	2500	3560	799	829	331	43	40
MIN	16	33	22	35	125	140	296	167	29	16	11	7.0
CFSM	.41	.83	.91	1.94	2.37	6.46	9.98	3.62	2.00	.56	.23	.13
IN.	.47	.93	1.05	2.24	2.46	7.45	11.14	4.17	2.22	.64	.26	.15
CAL YR 1982	TOTAL	68338.0	MEAN 187	MAX 5720	MIN 10	CFSM 2.00	IN 27.13					
WTR YR 1983	TOTAL	83619.0	MEAN 229	MAX 3560	MIN 7.0	CFSM 2.44	IN 33.20					

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 west of Westfield, and at mile 13.0.

DRAINAGE AREA.--45.8 mi².

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 downstream. Prior to Mar. 1, 1910, nonrecording gage at site 0.2 mi upstream, and Mar. 1, 1910, to Sept. 30, 1935, water-stage recorder at diversion dam 2.8 mi 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.--73 years (water years 1911-83), 90.1 ft³/s, 26.72 in/yr, adjusted for storage.

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

Month	Meant	Per square mile†	Runoff in inches†
October	11.6	0.25	0.29
November	33.2	.72	.81
December	46.0	1.00	1.16
Calendar year 1982	97.3	2.12	28.83
January	114	2.49	2.87
February	136	2.97	3.10
March	402	8.78	10.12
April	465	10.2	11.33
May	120	2.62	3.03
June	48.7	1.06	1.19
July	7.04	.15	.18
August	2.60	.06	.07
September	-1.91	-.04	-.05
Water year 1983	115	2.51	34.09

† Adjusted for change in contents in Borden Brook and Cobble Mountain Reservoirs.

Note.--Negative figures indicate that evaporation and seepage from reservoirs exceeded inflow.

CONNECTICUT RIVER BASIN

01183500 WESTFIELD RIVER NEAR WESTFIELD, MA

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

DRAINAGE AREA.--497 mi².

PERIOD OF RECORD.--Discharge: June 1914 to current year.
Water-quality 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 National Geodetic Vertical Datum of 1929. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records excellent. 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.--69 years, 921 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,300 ft³/s Aug. 19, 1955, gage height, 34.2 ft, from flood-marks, from rating curve extended above 18,000 ft³/s on basis of computations of flow over dam at gage heights 27.20 ft, 29.40 ft, and 34.2 ft; minimum, 9 ft³/s Oct. 2, 1921; minimum daily, 40 ft³/s Dec. 28, 29, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,100 ft³/s Apr. 20, gage height, 14.52 ft; minimum, 77 ft³/s Sept. 12, 16, 17; minimum daily, 81 ft³/s Sept. 12, 16.

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	165	170	421	363	640	648	1650	3970	2060	354	329	196
2	155	161	375	332	647	1900	1560	3370	1440	309	311	179
3	129	162	324	306	3350	2890	1870	2770	1480	439	217	136
4	146	197	314	258	3960	2740	2300	2150	2230	370	202	126
5	131	321	272	217	2920	2160	2110	1810	2500	373	239	111
6	112	603	283	334	1810	1530	1980	1500	1820	1350	249	193
7	133	362	300	406	1360	1890	1950	1290	1690	1160	384	307
8	141	288	258	389	1260	2220	2000	1170	1560	695	279	166
9	410	356	222	347	1300	2670	2540	1340	1200	440	217	116
10	394	276	217	222	1140	2930	2910	1220	1030	328	163	89
11	295	251	204	2750	1100	3370	6190	1080	854	319	193	98
12	232	208	195	2670	803	2830	5200	1030	730	267	199	80
13	216	532	407	1690	770	2530	5170	955	642	259	289	102
14	199	858	233	977	955	3050	4320	891	818	222	229	94
15	207	712	184	636	1030	3410	3170	879	699	211	202	94
16	206	489	318	615	1090	2870	1920	1430	735	222	166	80
17	192	349	825	591	1080	2530	3910	1560	729	200	150	210
18	184	310	736	538	1160	2300	4070	1170	613	317	249	100
19	200	278	455	706	829	5870	5670	962	532	197	258	134
20	193	260	418	740	698	5350	10400	955	577	286	217	172
21	182	228	455	604	692	5330	7300	1350	460	234	205	113
22	160	240	369	496	869	5270	7270	1180	416	340	168	304
23	153	225	312	674	1060	6050	5460	1560	510	289	143	243
24	150	235	314	1650	1050	5690	4710	2640	785	264	138	177
25	264	202	310	1940	1060	5030	6610	2240	303	221	102	143
26	259	218	466	1520	728	3590	6640	1470	254	246	124	129
27	206	220	610	1050	636	2100	7340	2820	253	204	117	113
28	200	192	554	832	666	2690	6430	2890	401	105	111	110
29	180	269	522	656	---	2620	5550	1890	748	128	155	109
30	160	472	481	634	---	2540	4940	1950	527	174	185	90
31	160	---	389	648	---	2040	---	2700	---	138	177	---
TOTAL	6114	9644	11743	25791	34663	98638	133140	54192	28596	10661	6367	4314
MEAN	197	321	379	832	1238	3182	4438	1748	953	344	205	144
MAX	410	858	825	2750	3960	6050	10400	3970	2500	1350	384	307
MIN	112	161	184	217	636	648	1560	879	253	105	102	80
CAL YR 1982	TOTAL	358308	MEAN	982	MAX	13300	MIN	105				
WTR YR 1983	TOTAL	423863	MEAN	1161	MAX	10400	MIN	80				

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 downstream from Thompsonville, 3 mi downstream from Massachusetts-Connecticut State line, and at mile 68.2.

DRAINAGE AREA.--9,660 mi², revised.

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 The Dexter Corporation. Datum of gage is 38.48 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Discharge includes water diverted around station by canal of the Dexter Corporation. 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, and other reservoirs, combined usable capacity, about 107 billion cu ft.

AVERAGE DISCHARGE.--55 years, 16,420 ft³/s, unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 282,000 ft³/s Mar. 20, 1936, gage height, 16.6 ft, from floodmarks; minimum daily, 968 ft³/s Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 84,800 ft³/s Apr. 27, gage height, 5.58 ft; minimum daily, 1,320 ft³/s Nov. 1.

REVISIONS.--Revised figure of discharge, in cubic feet per second, for January 1982, is given below. This figure supercedes that published in the report for 1982.

Jan. 17.....12600

Month	Total	Mean	Max	Min
January 1982	422820	13640	23800	6970
Wtr yr 1982	6580060	18030	103000	2320

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	4080	1320	8610	14000	13100	11800	21900	59700	48300	8000	4550	10600
2	3020	4400	9960	13200	14300	14800	20800	59800	44100	7750	9790	10000
3	1730	4450	10800	11100	23100	25700	23500	69500	39100	4920	8620	4650
4	2580	5990	12900	10800	39100	28100	27500	76100	36800	4260	8080	3240
5	5010	9520	12700	10400	39700	26300	27200	73300	36800	5020	8170	2750
6	3490	12400	11900	9150	33000	23900	26700	69400	31900	12300	5740	3540
7	4230	13600	11200	9110	26700	21800	26300	60400	29300	12100	3480	6380
8	3770	13300	11000	7990	23400	22800	28900	49500	31300	12100	3220	6180
9	7690	14300	11900	6880	20200	28900	40300	40000	28100	10500	6420	2940
10	6470	14000	8120	7130	18200	31400	40300	40300	26200	5920	7400	2570
11	4130	9780	7950	16700	17900	32000	56000	43800	22100	5150	8990	2390
12	5520	5930	4370	30400	15200	38100	65000	41600	18200	8940	11700	2370
13	6220	11900	4970	28200	12600	39800	64600	40300	13300	7680	12500	2440
14	6200	14800	9670	21100	13300	34000	57300	37100	15000	7600	11000	2810
15	5850	14900	9110	16900	16700	30900	49000	30600	15300	6020	8080	2690
16	3790	14000	8540	13200	17100	32000	47500	30400	14100	4880	8880	2410
17	1710	11900	12300	13100	16400	31600	49600	32900	12000	4000	8260	2430
18	1870	9860	15300	14700	17400	29600	52100	31100	14300	3290	6780	2750
19	5200	9460	14400	14100	14400	40900	56400	32400	12900	6100	6920	2750
20	6770	9520	13300	13500	12400	63300	78400	27400	11300	6110	5940	3600
21	6260	7980	12300	11100	11900	71200	67300	25000	12400	6000	4850	5610
22	5440	9260	12700	10600	12600	73100	60100	24000	12400	5840	3920	8750
23	3420	10200	11700	9840	13900	62100	53800	24400	11400	3300	5090	10300
24	2230	10600	9340	14600	15800	56600	49200	30900	10400	2860	5100	5570
25	2130	11100	9090	21900	14600	45500	64400	37500	8970	3740	4010	3330
26	5450	11200	9810	22100	12600	37800	77900	32300	5050	5500	2910	2850
27	4470	10700	11400	19700	11100	30600	83600	35100	5260	5740	2460	4800
28	3060	9320	15100	18400	10700	30200	80700	44000	11900	5050	2460	5680
29	2400	11100	14900	17200	---	29500	72100	40000	11400	5650	3560	5690
30	2400	12500	14200	15500	---	29000	64100	36100	8790	4160	5760	5690
31	1930	---	14100	14300	---	27200	---	38800	---	3010	6460	---
TOTAL	128520	309290	343640	456900	507400	1100500	1532500	1313700	598370	193490	201100	137760
MEAN	4146	10310	11090	14740	18120	35500	51080	42380	19950	6242	6487	4592
MAX	7690	14900	15300	30400	39700	73100	83600	76100	48300	12300	12500	10600
MIN	1710	1320	4370	6880	10700	11800	20800	24000	5050	2860	2460	2370
CAL YR 1982	TOTAL	5737900	MEAN	15720	MAX	103000	MIN	1320				
WTR YR 1983	TOTAL	6823170	MEAN	18690	MAX	83600	MIN	1320				

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--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, 189 micromhos Jan. 24; minimum, 67 micromhos Apr. 20.

WATER TEMPERATURES: Maximum, 29.0°C July 21; minimum, 0.0°C Feb. 6-14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	COLI- FORM, DIS- SOLVED FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT 20...	0900	7470	150	7.4	9.0	12.0	2.0	9.6	87	1600	800	--
NOV 15...	1000	13600	124	7.4	5.0	9.0	2.0	10.6	92	3500	3000	42
DEC 14...	0930	8850	136	7.2	0.5	1.0	2.1	13.2	92	5800	6100	--
JAN 12...	0930	28700	84	7.1	3.5	2.0	5.5	13.4	98	1900	14000	23
MAR 07...	0930	20700	91	7.2	5.0	2.5	3.0	13.5	99	960	220	--
APR 13...	0915	63700	65	7.0	11.0	5.5	1.8	13.5	106	150	1200	--
MAY 18...	0900	29900	87	7.3	14.5	11.5	0.7	10.5	95	520	560	30
JUN 14...	0900	15300	114	7.0	25.0	21.5	0.3	7.7	87	3000	1200	--
JUL 12...	0830	8580	137	7.3	24.0	24.5	0.6	8.8	106	680	800	46
AUG 15...	0930	6020	132	7.1	22.0	22.5	0.75	7.6	88	2900	170	--
SEP 02...	0730	10200	144	7.2	16.0	24.0	5.0	7.0	83	120	800	--

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)	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)
OCT 20...	--	--	--	--	--	--	12	14	--	--	88
NOV 15...	12	14	1.7	7.1	1.1	30	12	10	<0.1	5.5	73
DEC 14...	--	--	--	--	--	--	14	11	--	--	83
JAN 12...	10	7.0	1.3	4.7	1.3	13	11	8.2	<0.1	5.5	61
MAR 07...	--	--	--	--	--	--	11	9.3	--	--	47
APR 13...	--	--	--	--	0.9	--	6.0	6.4	--	--	41
MAY 18...	10	9.7	1.4	4.5	1.0	20	7.8	5.6	<0.1	5.4	58
JUN 14...	--	--	--	--	--	--	10	9.3	--	--	80
JUL 12...	14	15	2.0	8.9	1.5	32	13	13	0.1	3.6	88
AUG 15...	--	--	--	--	--	--	10	10	--	--	78
SEP 02...	--	--	--	--	--	--	12	12	--	--	96

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	SOLIDS, SUM OF CONSTITUENTS, 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)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)
OCT 20...	26	0.12	1770	98	0.38	0.02	0.4	--	0.32	--	0.68
NOV 15...	70	0.1	2680	83	0.29	0.01	0.3	0.33	0.15	0.17	0.35
DEC 14...	25	0.11	1980	88	0.49	<0.01	0.5	--	0.32	--	0.28
JAN 12...	47	0.08	4730	--	0.29	0.01	0.3	0.36	0.08	0.07	0.52
MAR 07...	20	0.06	2630	71	0.39	<0.01	0.4	--	0.08	--	0.22
APR 13...	13	0.06	7050	--	0.19	<0.01	0.2	--	<0.01	--	0.19
MAY 18...	48	0.08	4680	62	0.29	<0.01	0.3	0.26	0.05	0.06	0.15
JUN 14...	19	0.11	3300	85	0.29	<0.01	0.3	--	0.26	--	0.34
JUL 12...	77	0.12	2040	78	0.39	<0.01	0.4	0.31	0.09	0.09	0.71
AUG 15...	20	0.11	1270	94	0.39	<0.01	0.4	--	0.08	--	0.92
SEP 02...	24	0.13	2640	91	0.39	0.01	0.4	--	0.27	--	0.43

DATE	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)	PHOS- PHORUS, ORTHO, DIS- SOLVED (MG/L AS P)	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)
OCT 20...	1.00	1.4	0.09	0.07	--	--	--	--	--	1	<1
NOV 15...	0.5	0.8	0.05	0.03	0.02	<10	1	<1.00	20.00	<1	<1
DEC 14...	0.6	1.1	0.09	0.05	--	--	--	--	--	1	3
JAN 12...	0.6	0.9	0.23	0.02	0.02	60	1	<1.00	18.00	2	<1
MAR 07...	0.3	0.7	0.04	0.02	--	--	--	--	--	1	<1
APR 13...	0.2	0.4	0.05	<0.01	--	--	--	--	--	2	<1
MAY 18...	0.2	0.5	0.04	0.03	0.01	80	<1	0.50	18.00	1	1
JUN 14...	0.6	0.9	0.10	0.01	--	--	--	--	--	1	1
JUL 12...	0.8	1.2	0.10	0.06	<0.01	<10	<1	<0.50	--	1	<1
AUG 15...	1.00	1.4	0.06	0.04	--	--	--	--	--	1	<1
SEP 02...	0.7	1.1	0.11	0.08	--	--	--	--	--	1	1

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CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGANESE, DIS- SOLVED (UG/L AS MN)
OCT 20...	<1	<1	--	10	7	290	--	8.00	<1	--	--
NOV 15...	<1	<1	<3.00	12	2	310	93	1.00	1	<4.00	23
DEC 14...	<1	<1	--	5.00	1	330	--	16	3	--	--
JAN 12...	20	<1	<3.00	9.00	2	1600	130	13	1	<4.00	33
MAR 07...	5	7	--	4.00	2	360	--	14	2	--	--
APR 13...	3	<1	--	7.00	6	1400	--	7.00	3	--	--
MAY 18...	2	<1	3.00	3.00	6	510	99	4.00	<1	4.00	27
JUN 14...	12	<1	--	13	1	360	--	3.00	<1	--	--
JUL 12...	<1	<1	<3.00	9.00	7	270	51	6.00	3	5.00	3
AUG 15...	<1	<1	--	3.00	3	170	--	12	1	--	--
SEP 02...	<1	<1	--	9.00	4	200	--	1.00	<1	--	--

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYBDENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELENIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRONTIUM, DIS- SOLVED (UG/L AS SR)	VANADIUM, DIS- SOLVED (UG/L AS V)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 20...	--	--	8.00	8	--	--	--	--	20	10	5.1
NOV 15...	<0.1	<10	6.00	1	<1	<1	59	<6.0	20	<4.00	3.2
DEC 14...	--	--	5.00	3	--	--	--	--	30	<10	4.6
JAN 12...	<0.1	<10	6.00	2	<1	<1	32	<6.0	40	6.00	6.2
MAR 07...	--	--	5.00	6	--	--	--	--	30	10	16
APR 13...	--	--	3.00	5	--	--	--	--	10	<10	3.0
MAY 18...	0.1	10	10	<1	<1	<1	44	6.0	20	3.00	3.5
JUN 14...	--	--	4.00	1	--	--	--	--	40	10	3.8
JUL 12...	0.4	<10	7.00	3	<1	<1	76	<6.0	30	5.00	4.0
AUG 15...	--	--	4.00	1	--	--	--	--	20	10	3.3
SEP 02...	--	--	3.00	10	--	--	--	--	10	10	3.1

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01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (PCI/L AS U-NAT)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ 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 15...	1000	<1.9	<0.4	--	3.0	<0.4	2.9	<0.4	0.07	--
APR 13...	0915	<0.7	1.8	1.2	1.1	1.2	1.0	1.1	0.06	0.04

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 15...	1000	13600	15	551	68
JAN 12...	0930	28700	65	5040	76
MAY 18...	0900	29900	19	1530	53
JUL 12...	0830	8580	2	46	100

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CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	144	138	142	158	154	156	130	127	129	96	93	95
2	146	142	144	160	153	157	131	129	130	95	94	94
3	146	144	145	159	154	156	128	125	127	97	95	96
4	148	143	145	157	153	155	127	122	125	97	95	96
5	150	137	145	154	151	153	125	119	122	96	93	94
6	144	137	141	152	144	147	122	118	120	102	94	97
7	144	140	143	145	138	141	124	120	122	106	102	103
8	149	143	145	141	138	139	123	121	122	107	106	107
9	150	141	146	142	140	141	123	117	120	108	106	107
10	146	139	142	142	138	141	119	116	118	106	104	105
11	141	138	139	141	135	137	125	119	123	106	92	100
12	141	137	139	138	135	137	128	125	127	89	79	82
13	143	138	141	141	136	138	133	127	130	85	79	82
14	146	141	144	138	134	136	131	125	128	91	83	88
15	147	142	144	134	125	130	124	115	119	101	91	95
16	148	144	146	125	121	123	122	114	117	110	102	105
17	147	143	145	122	118	120	129	122	127	118	111	116
18	145	140	142	123	120	121	126	109	117	117	109	112
19	147	143	145	128	123	125	108	102	104	120	110	114
20	146	142	144	129	126	127	103	102	102	119	111	115
21	146	143	145	130	127	128	108	102	105	115	111	112
22	146	143	144	131	128	129	108	105	107	122	115	119
23	148	144	146	129	125	127	106	103	104	135	121	126
24	149	145	147	129	126	128	114	102	107	189	137	169
25	149	147	148	129	125	127	121	114	119	145	105	116
26	154	148	150	127	123	125	120	115	118	108	102	106
27	155	149	151	126	124	125	116	113	114	106	102	104
28	150	146	148	127	125	126	113	105	110	110	107	110
29	152	148	150	129	125	127	104	100	102	114	110	111
30	153	150	152	129	124	126	100	98	99	117	114	116
31	156	150	153	---	---	---	99	96	98	139	118	124
MONTH	156	137	145	160	118	135	133	96	117	189	79	107
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	148	142	146	131	127	129	96	90	92	88	87	87
2	139	124	128	129	124	127	100	96	98	88	86	87
3	124	100	115	123	102	109	100	97	98	88	86	87
4	98	90	92	101	95	97	97	94	96	89	86	87
5	92	89	91	95	92	94	94	93	93	90	88	89
6	95	88	92	98	95	97	95	94	94	89	87	88
7	99	95	97	99	97	98	97	95	96	90	87	88
8	106	99	103	99	96	97	96	94	95	91	89	90
9	107	105	106	99	97	98	94	92	93	91	88	90
10	108	98	104	98	95	96	92	91	91	91	88	90
11	104	96	99	95	91	93	91	79	85	88	85	86
12	107	101	104	94	90	92	79	77	78	89	86	87
13	112	105	108	93	91	92	78	77	78	89	87	88
14	113	112	112	93	88	90	79	77	78	91	88	89
15	112	104	108	88	85	86	82	80	81	92	91	92
16	107	104	106	87	84	85	83	79	81	93	91	92
17	109	107	108	88	86	87	83	79	80	91	87	89
18	114	109	112	89	87	88	79	74	76	90	88	89
19	118	114	116	90	79	86	74	72	73	91	89	90
20	118	116	117	82	78	80	73	67	69	94	90	92
21	121	118	119	83	80	81	69	68	69	95	94	94
22	122	120	121	84	81	83	70	68	69	96	94	95
23	123	118	121	83	77	79	75	70	72	102	96	99
24	119	114	116	76	74	76	81	75	78	101	95	99
25	116	112	114	75	73	74	83	80	82	94	86	89
26	116	112	114	79	74	76	85	83	84	88	86	87
27	123	115	119	87	79	83	86	85	85	92	89	90
28	128	123	126	92	87	90	86	85	85	90	85	87
29	---	---	---	91	89	90	86	84	85	86	85	86
30	---	---	---	89	87	88	87	83	84	89	86	87
31	---	---	---	90	86	88	---	---	---	89	86	88
MONTH	148	88	111	131	73	91	100	67	84	102	85	90

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG.C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	86	84	85	123	119	121	161	159	160	153	150	152
2	84	80	82	126	117	122	166	157	161	152	146	150
3	83	81	83	123	117	120	158	152	156	147	145	146
4	83	81	81	130	118	124	155	151	153	153	147	149
5	81	74	76	134	122	129	158	153	156	156	153	154
6	83	77	80	135	119	128	154	150	152	158	155	156
7	85	83	84	118	112	114	152	149	150	162	158	161
8	85	80	82	115	109	112	153	150	151	161	155	159
9	84	80	82	117	108	113	154	151	153	155	152	153
10	85	83	84	126	117	123	151	147	149	157	153	155
11	89	84	86	136	126	132	147	143	145	161	157	159
12	93	89	90	140	136	138	---	---	---	166	161	162
13	100	94	97	141	132	135	---	---	---	163	160	162
14	103	100	101	140	133	136	---	---	---	160	152	155
15	105	100	103	139	133	136	---	---	---	158	153	155
16	105	101	103	136	133	135	135	132	134	158	156	157
17	113	105	109	139	136	138	139	134	137	158	154	157
18	113	110	112	143	140	141	145	139	143	158	156	157
19	114	110	112	144	141	143	152	146	149	161	158	159
20	117	112	113	147	143	145	146	144	145	159	157	158
21	120	117	119	150	145	148	145	141	144	160	156	158
22	119	112	114	153	149	152	143	139	141	158	153	156
23	119	114	116	152	149	150	145	142	144	158	151	155
24	122	118	119	153	150	151	144	140	142	150	139	146
25	122	117	119	155	152	154	145	142	143	140	134	138
26	121	118	119	154	151	152	146	142	144	143	138	139
27	128	119	123	152	149	150	152	146	148	151	143	148
28	135	124	129	153	149	151	157	152	154	152	148	151
29	131	119	123	153	149	151	160	155	158	158	152	156
30	122	118	120	155	151	153	158	155	156	160	155	157
31	---	---	---	160	155	157	155	150	153	---	---	---
MONTH	135	74	102	160	108	137	166	132	149	166	134	154
YEAR	189	67	118									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	2.0	1.5	1.5	4.0	3.5	3.5	6.0	4.5	5.5	12.0	11.0	11.5
2	2.5	1.5	2.0	4.0	3.5	3.5	6.5	5.5	6.0	12.5	11.5	12.0
3	3.0	2.5	2.5	4.0	3.0	3.5	6.5	6.0	6.0	12.0	11.5	11.5
4	2.0	1.5	2.0	3.0	2.5	3.0	6.5	5.5	6.0	12.0	11.5	12.0
5	1.5	.5	1.0	3.5	2.0	2.5	7.0	6.0	6.5	12.0	11.5	12.0
6	.5	.0	.5	3.5	2.5	3.0	7.5	6.0	7.0	12.0	11.5	11.5
7	.5	.0	.5	3.5	3.0	3.5	8.0	7.0	7.5	12.5	11.5	12.0
8	.5	.0	.5	3.5	2.5	3.0	8.5	7.5	8.0	13.0	12.0	12.5
9	1.0	.0	.5	3.0	2.5	3.0	8.5	7.5	8.0	13.0	12.5	13.0
10	.5	.0	.5	3.0	2.5	3.0	8.5	7.5	8.0	12.5	11.5	12.0
11	.5	.0	.5	3.0	2.5	3.0	7.5	7.0	7.0	11.5	11.0	11.5
12	.5	.0	.0	3.5	3.0	3.0	7.0	6.5	7.0	11.5	11.0	11.5
13	.5	.0	.5	3.0	3.0	3.0	7.5	6.5	7.0	11.5	11.0	11.0
14	.5	.0	.5	4.0	3.0	3.5	8.0	6.5	7.0	12.0	11.0	11.5
15	1.0	.5	.5	4.5	4.0	4.5	8.0	7.5	8.0	12.5	12.0	12.0
16	1.5	.5	1.0	4.5	4.0	4.5	8.0	7.0	7.5	12.5	12.0	12.5
17	1.5	1.0	1.0	5.0	4.5	4.5	7.0	6.5	7.0	12.5	11.5	12.0
18	2.0	1.0	1.5	5.0	4.5	4.5	7.0	6.5	7.0	13.5	12.0	12.5
19	2.0	1.5	2.0	5.5	4.5	5.0	6.5	5.5	6.0	13.5	12.5	13.0
20	2.5	1.5	2.0	5.5	5.0	5.5	5.5	4.5	5.0	13.5	12.5	13.0
21	3.0	2.5	2.5	5.0	4.5	4.5	6.0	5.0	5.5	14.5	13.0	13.5
22	3.5	3.0	3.5	4.5	4.0	4.5	6.5	5.5	6.0	15.5	14.0	15.0
23	3.5	3.0	3.5	4.0	3.5	3.5	7.5	5.5	6.5	16.5	15.0	15.5
24	3.5	2.5	3.0	3.5	3.0	3.5	8.0	7.5	7.5	16.5	16.0	16.0
25	4.0	2.5	3.5	3.5	2.5	3.0	8.0	7.5	7.5	16.0	15.0	15.5
26	3.5	3.0	3.0	3.5	3.0	3.5	7.5	7.0	7.5	15.5	15.0	15.5
27	3.0	3.0	3.0	4.0	3.5	3.5	8.5	7.0	7.5	15.0	13.5	14.5
28	3.5	3.0	3.0	4.5	3.5	4.0	9.0	7.5	8.5	14.0	13.0	13.5
29	---	---	---	5.0	4.0	4.5	10.0	8.5	9.0	14.0	13.5	14.0
30	---	---	---	5.0	4.0	4.5	11.0	9.5	10.0	13.5	13.5	13.5
31	---	---	---	5.5	4.0	4.5	---	---	---	14.0	13.5	13.5
MONTH	4.0	.0	1.5	5.5	2.0	3.5	11.0	4.5	7.0	16.5	11.0	13.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	14.0	13.0	13.5	24.0	23.0	23.5	27.5	26.5	27.0	25.5	24.5	25.0
2	15.0	14.0	14.5	25.0	23.0	24.5	27.5	26.5	27.0	25.0	24.5	25.0
3	16.0	14.5	15.5	26.5	24.5	25.5	28.0	26.5	27.5	26.0	24.0	25.0
4	16.0	15.5	15.5	27.5	26.0	26.5	27.5	26.5	27.0	26.0	25.0	25.5
5	16.5	15.5	16.0	27.5	26.5	27.0	27.0	26.0	26.5	26.5	25.0	25.5
6	17.5	16.0	17.0	26.5	26.0	26.5	27.5	26.0	26.5	27.0	26.0	26.5
7	18.0	17.5	17.5	26.0	25.0	25.5	28.0	26.5	27.0	27.0	26.0	26.5
8	18.5	17.5	18.0	25.5	24.5	25.0	28.5	27.0	27.5	26.0	25.5	26.0
9	18.5	17.0	18.0	25.5	24.5	25.0	28.5	27.5	28.0	26.0	25.0	25.5
10	18.5	17.5	18.0	25.5	24.0	25.0	27.0	26.5	27.0	26.0	25.0	25.5
11	19.5	17.5	18.5	25.5	24.0	25.0	27.0	25.5	26.0	27.0	25.5	26.0
12	20.5	18.5	19.5	26.5	25.0	26.0	---	---	---	26.5	25.5	26.0
13	21.5	19.5	20.5	27.0	26.0	26.5	---	---	---	25.0	23.5	24.5
14	23.0	21.5	22.5	27.0	25.5	26.5	---	---	---	23.5	21.5	22.5
15	24.0	22.5	23.0	27.5	26.0	27.0	---	---	---	22.5	21.0	21.5
16	24.0	23.0	23.5	28.0	26.5	27.5	25.0	23.0	24.0	22.0	20.5	21.0
17	24.0	23.0	23.5	28.5	27.0	27.5	25.0	23.5	24.5	21.5	20.5	21.0
18	24.0	23.0	23.5	28.5	27.0	28.0	25.0	24.0	24.5	22.0	20.5	21.0
19	24.0	23.5	24.0	28.5	27.5	28.0	25.0	24.0	24.5	22.0	20.5	21.5
20	24.5	24.0	24.5	28.5	27.5	28.0	26.0	25.0	25.5	23.5	22.0	22.5
21	24.5	24.0	24.5	29.0	28.0	28.0	25.5	24.5	25.0	23.5	23.0	23.0
22	25.5	23.5	24.5	27.5	26.0	26.5	25.0	24.0	24.5	23.0	22.5	22.5
23	26.0	24.5	25.0	26.5	25.5	26.0	25.5	24.0	24.5	22.0	21.5	22.0
24	26.5	25.0	26.0	26.0	24.0	25.0	25.5	24.5	25.0	21.0	20.0	20.5
25	25.5	24.5	25.5	25.0	24.0	24.5	25.5	24.5	25.0	20.5	19.0	20.0
26	24.5	24.0	24.5	26.0	24.5	25.0	25.5	24.0	24.5	20.0	19.0	19.0
27	25.0	23.5	24.0	26.0	25.0	25.5	26.0	24.5	25.5	20.0	18.5	19.0
28	25.0	23.0	24.0	26.0	25.0	25.5	27.5	25.5	26.5	20.0	19.0	19.5
29	24.0	22.5	23.0	26.0	25.5	25.5	26.5	25.5	26.0	20.0	19.0	19.5
30	24.5	23.0	24.0	26.5	25.5	26.0	26.0	25.5	25.5	19.5	19.0	19.0
31	---	---	---	27.0	26.0	26.5	25.5	25.0	25.0	---	---	---
MONTH	26.5	13.0	21.0	29.0	23.0	26.0	28.5	23.0	26.0	27.0	18.5	23.0
YEAR	29.0	.0	12.5									

01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA

LOCATION.--Lat 42°04'45", long 73°04'24", Berkshire County, Hydrologic Unit 01080207, on left bank 5 ft downstream from highway bridge, 0.3 mi downstream from Clam River, 1 mi south of New Boston, and at mile 65.0.

DRAINAGE AREA.--92.0 mi².

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of doubtful gage-height record, Aug. 18 to Sept. 30, which are fair. Flow regulated by Otis Reservoir 7.0 mi 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.--70 years, 182 ft³/s, 26.87 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,300 ft³/s Aug. 19, 1955, gage height, 14.06 ft, from rating curve extended above 9,600 ft³/s on basis of slope-area measurement of peak flow; minimum daily, 2.4 ft³/s Aug. 20, 21, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s Apr. 19, gage height, 7.78 ft; minimum daily, 5.4 ft³/s Sept. 15.

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	18	150	101	123	112	104	327	445	329	56	15	15
2	16	131	88	116	107	395	308	458	268	52	17	12
3	15	127	79	107	907	419	428	374	224	44	13	11
4	14	129	74	67	651	312	500	334	603	38	34	9.5
5	13	214	70	73	411	287	436	305	509	38	40	9.0
6	13	198	68	112	323	350	390	263	372	89	28	8.5
7	13	175	66	104	277	380	362	211	350	79	26	7.9
8	40	161	62	92	245	331	394	174	280	61	21	7.3
9	331	150	62	69	206	415	390	183	226	48	17	6.9
10	267	143	64	84	173	350	665	162	194	36	15	6.5
11	96	137	109	294	161	430	1180	149	140	32	18	6.3
12	85	139	255	358	140	579	706	140	103	29	28	6.0
13	73	331	236	328	145	445	495	132	90	27	26	6.2
14	60	287	161	272	150	386	378	125	106	24	20	5.6
15	58	239	201	220	150	402	316	147	130	21	17	5.4
16	203	206	251	200	143	670	423	241	163	20	15	5.5
17	195	180	251	170	133	654	670	292	131	18	13	5.8
18	94	163	207	150	154	559	595	228	104	17	39	6.5
19	91	157	179	120	139	1640	1380	237	85	16	39	12
20	89	152	159	130	125	1710	2260	344	72	15	24	13
21	90	150	125	150	120	1500	1450	229	65	15	20	11
22	96	148	79	190	121	1380	1140	173	56	15	16	29
23	102	148	75	230	121	975	1060	295	49	14	14	21
24	99	148	76	356	120	733	1600	423	44	16	12	22
25	97	109	96	357	114	543	1830	343	38	19	11	20
26	109	66	170	320	109	445	1310	254	34	15	9.6	19
27	105	66	156	263	109	334	876	491	32	13	11	17
28	105	67	179	190	102	458	548	452	122	11	13	15
29	120	100	171	148	---	472	415	346	129	11	18	14
30	133	120	150	138	---	378	394	322	75	11	16	15
31	183	---	132	121	---	338	---	373	---	11	16	---
TOTAL	3023	4691	4152	5652	5768	18374	23226	8645	5123	911	621.6	348.9
MEAN	97.5	156	134	182	206	593	774	279	171	29.4	20.1	11.6
MAX	331	331	255	358	907	1710	2260	491	603	89	40	29
MIN	13	66	62	67	102	104	308	125	32	11	9.6	5.4
MEAN†	40.4	85.7	135	181	250	617	846	276	172	25.1	20.1	2.76
CFSM†	.44	.93	1.47	1.97	2.72	6.71	9.20	3.00	1.87	.27	.22	.03
IN†	.51	1.04	1.69	2.27	2.83	7.74	10.26	3.46	2.09	.31	.25	.03
CAL YR 1982	TOTAL	69206.0	MEAN 190	MAX 2070	MIN 10	MEAN† 189	CFSM† 2.05	IN† 27.94				
WTR YR 1983	TOTAL	80535.5	MEAN 221	MAX 2260	MIN 5.4	MEAN† 220	CFSM† 2.39	IN† 32.49				

† Adjusted for change in contents in Otis Reservoir.

CONNECTICUT RIVER BASIN

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 northeast of Pittsburg, NH, 506,000,000 ft³; First Lake, 5.6 mi northeast of Pittsburg, NH, 3,330,000,000 ft³. 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. 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 northwest of Littleton, NH, filled in April 1956, 4,970,000,000 ft³; Comerford Reservoir, 5 mi northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft³. Records furnished by New England Power Co.
01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi north of Union Village, VT, completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft³. 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 northeast of Mascoma, NH, 509,000,000 ft³; Grafton Pond, 8.5 mi southeast of Mascoma, 144,000,000 ft³; Crystal Lake, 5.8 mi southeast of Mascoma, 75,000,000 ft³; 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³; total usable capacity of the four reservoirs, 1,060,000,000 ft³. 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. 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. 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. Records furnished by Corps of Engineers.
01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi north of Jamaica, VT, completed in 1961, used for flood control and recreation, has usable capacity of 2,380,000,000 ft³. Records furnished by Corps of Engineers.
01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi northwest of Townshend, VT, completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft³. Records furnished by Corps of Engineers.
01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi north of Keene, NH, completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³. Records furnished by Corps of Engineers.
01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi northeast of Keene, NH, completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³. Records furnished by Corps of Engineers.
01163500. BIRCH HILL RESERVOIR on Millers River, 1 mi east of South Royalston, MA, completed in 1941 for flood control, has usable capacity of 2,180,000,000 ft³. Records furnished by Corps of Engineers.
01164500. TULLY RESERVOIR on East Branch Tully River, 3.5 mi north of Athol, MA, completed in 1948 for flood control, has usable capacity of 958,000,000 ft³. 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 northeast of Somerset, VT, completed in 1913, 2,500,000,000 ft³; Harriman Reservoir on Deerfield River at Davis Bridge, VT, completed in 1924, 5,060,000,000 ft³. Records furnished by New England Power Co.
01172400. BARRE FALLS RESERVOIR on Ware River, 4 mi east of Barre, MA, completed in 1958 for flood control, has usable capacity of 1,050,000,000 ft³. Records furnished by Corps of Engineers.
01175000. QUABBIN RESERVOIR on Swift River, 3.2 mi east of Belchertown, MA, completed in August 1939 for storage of water for municipal supply, has usable capacity of 53,800,000,000 ft³. Records furnished by Water Division, Metropolitan District Commission.
01176410. CONANT BROOK RESERVOIR in Chicopee River basin, 1.5 mi southeast of South Monson, MA, completed in September 1966 for flood control, has usable capacity of 163,000,000 ft³. Records furnished by Corps of Engineers.
01176500. LUDLOW RESERVOIR in Chicopee River basin, 3.2 mi northwest of Three Rivers, MA, completed in 1875 for storage of water for municipal supply, has usable capacity of 201,000,000 ft³. Records furnished by Board of Water Commissioners, Springfield, MA.
01179000. KNIGHTVILLE RESERVOIR on Westfield River, 4 mi north of Huntington, MA, completed in 1941 for flood control, has usable capacity of 2,130,000,000 ft³. Records furnished by Corps of Engineers.
01180450. LITTLEVILLE LAKE on Middle Branch Westfield River, 2 mi north of Huntington, MA, completed in 1965, used for flood control, water supply, and recreation, has usable capacity of 1,410,000,000 ft³. 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 south of Blandford, MA, completed in 1909, 344,000,000 ft³; Cobble Mountain Reservoir on Little River, 6.5 mi west of Westfield, MA, completed in 1931, 3,050,000,000 ft³. Records furnished by Board of Water Commissioners, Springfield, MA.

Reservoirs in Connecticut River basin--Continued

01185000. OTIS RESERVOIR in Farmington River basin, 3 mi 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. Records furnished by Massachusetts Department of Natural Resources, Division of Forests and Parks.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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, 1982.....	2760.3	3128.0	5494.5	1.4	751.7	124.0
Oct. 31.....	2511.4	3047.7	5541.4	1.4	679.4	123.0
Nov. 30.....	2692.7	3359.2	5868.4	22.6	701.6	127.0
Dec. 31.....	2104.9	3602.5	5786.3	15.8	630.5	122.0
Jan. 31, 1983.....	2072.2	2616.5	5380.2	19.8	671.2	127.0
Feb. 28.....	1671.4	2000.0	3121.2	18.6	664.9	117.0
Mar. 31.....	1565.3	2056.9	1938.7	15.2	914.5	126.0
Apr. 30.....	2681.3	3541.0	5035.0	6.6	1130.0	155.5
May 31.....	3430.5	4235.8	5819.6	9.8	1125.5	128.0
June 30.....	3397.2	3500.0	5691.9	2.0	1068.9	90.5
July 31.....	2980.3	3078.9	5391.7	1.4	994.4	97.4
Aug. 31.....	2923.7	2894.1	5330.1	1.9	984.2	80.0
Sept. 30.....	2416.5	2580.2	4889.7	1.4	971.5	104.6
	Sunapee Lake	North Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1982.....	*326	22.5	95.7	34.8	58.6	36.8
Oct. 31.....	221	21.6	15.0	34.4	28.8	36.8
Nov. 30.....	182	21.6	25.4	38.3	62.2	38.6
Dec. 31.....	126	24.0	29.0	40.8	87.4	41.8
Jan. 31, 1983.....	258	23.3	20.8	38.6	86.0	41.0
Feb. 28.....	377	24.7	20.6	36.6	78.2	35.4
Mar. 31.....	515	77.5	86.9	41.4	88.8	39.6
Apr. 30.....	666	42.1	310.4	57.3	103.9	38.2
May 31.....	711	32.7	148.4	35.8	108.1	22.8
June 30.....	619	24.0	103.9	37.6	61.0	37.6
July 31.....	498	21.8	73.6	35.2	55.3	36.5
Aug. 31.....	411	23.3	91.7	35.8	52.1	35.8
Sept. 30.....	275	21.8	94.9	35.2	62.2	1.2
	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs	Barre Falls Reservoir	Quabbin Reservoir†	Conant Brook Reservoir
Sept. 30, 1982.....	1.5	62.9	4895.0	2.4	51915	0.1
Oct. 31.....	.6	53.0	4832.5	2.6	50431	.1
Nov. 30.....	4.8	24.2	5199.7	3.7	47939	.1
Dec. 31.....	4.8	22.5	5066.2	38.3	49438	.1
Jan. 31, 1983.....	5.1	24.2	4459.6	31.0	50280	.1
Feb. 28.....	4.2	23.0	3687.6	29.2	51113	.1
Mar. 31.....	171.8	95.2	4189.5	22.9	54479	.2
Apr. 30.....	13.4	62.9	6964.3	5.0	55882	.2
May 31.....	20.1	24.8	7183.7	17.4	55940	.2
June 30.....	3.0	62.9	6705.4	3.1	54773	.1
July 31.....	1.5	57.4	5998.1	2.2	53422	0
Aug. 31.....	3.0	47.6	5165.7	2.9	52482	0
Sept. 30.....	1.5	42.4	4406.5	2.2	50792	0
	Ludlow Reservoir	Knightville Reservoir	Littleville Lake	Borden Brook and Cobble Mountain Reservoirs	Otis Reservoir	
Sept. 30, 1982.....	168.6	0.3	415.9	2688.2	688.0	
Oct. 31.....	175.8	.3	415.9	2572.9	535.1	
Nov. 30.....	179.4	1.5	422.4	2471.7	352.0	
Dec. 31.....	179.4	19.6	421.1	2416.5	355.1	
Jan. 31, 1983.....	177.5	26.2	425.0	2579.1	352.0	
Feb. 28.....	177.5	15.0	422.4	2459.6	458.0	
Mar. 31.....	177.5	22.1	432.8	2987.2	524.3	
Apr. 30.....	179.4	248.6	441.9	3095.9	711.0	
May 31.....	177.5	6.1	444.5	3124.5	703.3	
June 30.....	165.8	.9	421.1	2907.7	707.2	
July 31.....	159.7	.3	415.9	2718.1	695.7	
Aug. 31.....	149.3	4.5	415.9	2541.3	695.7	
Sept. 30.....	139.2	.2	414.6	2334.7	672.7	

† Affected by diversion from Ware River and diversion to Wachusett Reservoir and Chicopee Valley aqueduct.

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 downstream from Hubbard Avenue Bridge at Coltsville, 1.2 mi upstream from Unkamet Brook, and 2 mi northeast of Pittsfield.

DRAINAGE AREA.--57.1 mi².

PERIOD OF RECORD.--Discharge: March 1936 to current year. Prior to October 1945, published as Housatonic River at Coltsville.

Water-quality records: Water years 1963-65.

REVISED RECORDS.--WSP 851: 1936(M). WDR MA-RI-82-1: 1976-77, 1979-80.

GAGE.--Water-stage recorder. Datum of gage is 993.49 ft National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Oct. 21 to Nov. 29, which are poor. Flow regulated by powerplants upstream and, since 1949, by Cleveland Brook Reservoir, usable capacity, 214,000,000 ft³, 5.4 mi upstream; regulation greater prior to 1955. Diversion upstream from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 106 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s Sept. 21, 1938, gage height, 10.80 ft, from rating curve extended above 2,300 ft³/s on basis of computation of peak flow over dam; minimum daily, 4.4 ft³/s Aug. 15, 1936.

Maximum discharge since at least 1755, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Apr. 20	0045	a*2310	6.06	Apr. 24	2300	a1560	5.21

a From rating curve extended above 730 ft³/s on basis of slope-area measurement at gage height 6.59 ft.

Minimum daily discharge, 7.6 ft³/s Sept. 16.

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	19	19	47	35	46	43	135	258	171	34	22	19
2	19	17	34	34	40	170	137	418	143	57	25	17
3	19	16	30	33	191	188	182	315	120	51	24	13
4	19	16	28	26	236	143	225	268	168	35	22	12
5	19	73	24	31	126	104	225	239	205	67	23	12
6	19	42	28	39	82	94	170	193	145	171	21	11
7	20	28	28	39	57	126	123	160	193	116	18	11
8	32	23	28	36	59	168	283	143	158	61	16	11
9	58	20	26	30	57	182	349	168	114	47	15	9.8
10	57	19	22	30	48	184	400	145	96	40	15	10
11	54	19	23	184	44	204	848	122	85	39	19	10
12	55	19	20	182	47	222	380	99	60	40	24	11
13	55	76	18	89	45	184	212	85	52	38	21	10
14	64	47	18	51	48	160	144	77	50	35	17	10
15	62	37	20	43	48	176	126	101	55	37	16	8.9
16	58	32	62	39	47	190	172	136	68	38	15	7.6
17	55	29	110	42	47	195	324	116	99	28	14	8.7
18	55	27	50	36	49	193	319	90	63	23	20	12
19	55	26	33	34	46	595	653	74	50	22	20	11
20	56	25	31	42	42	771	1710	89	42	20	18	9.1
21	40	24	32	45	42	492	799	141	38	25	15	13
22	32	24	29	44	46	478	478	105	36	47	14	38
23	27	25	26	68	49	304	497	168	34	33	14	25
24	23	29	27	141	49	214	874	446	30	25	13	19
25	21	29	32	136	46	184	1210	282	27	24	13	14
26	20	28	65	117	41	158	728	153	24	22	12	16
27	19	27	51	87	37	148	450	374	25	22	15	20
28	18	32	45	62	41	153	346	330	73	21	17	20
29	18	92	48	55	---	184	279	190	92	21	14	19
30	17	82	39	51	---	164	282	163	48	18	14	20
31	18	---	34	54	---	142	---	190	---	16	18	---
TOTAL	1103	1002	1108	1935	1756	6913	13060	5838	2564	1273	544	428.1
MEAN	35.6	33.4	35.7	62.4	62.7	223	435	188	85.5	41.1	17.5	14.3
MAX	64	92	110	184	236	771	1710	446	205	171	25	38
MIN	17	16	18	26	37	43	123	74	24	16	12	7.6

CAL YR 1982	TOTAL	34549.6	MEAN	94.7	MAX	1900	MIN	7.9
WTR YR 1983	TOTAL	37524.1	MEAN	103	MAX	1710	MIN	7.6

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 upstream from bridge on Bridge Street at Lanesborough and 1.3 mi upstream from Pontoosuc Lake.

DRAINAGE AREA.--10.7 mi².

PERIOD OF RECORD.--June 1980 to May 1983 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 1111.64 ft Massachusetts Department of Public Works datum.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1-18, which are poor. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 443 ft³/s Feb. 20, 1981, gage height, 4.52 ft, from rating curve extended above 200 ft³/s; maximum gage height, 4.97 ft Feb. 11, 1981; minimum discharge, 0.40 ft³/s Sept. 12, 1980.

EXTREMES FOR PERIOD OCTOBER 1982 TO MAY 1983.--Peak discharges above base of 190 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Feb. 3	1130	*186	3.39			No peak above base	

Minimum daily discharge, 1.2 ft³/s Oct. 3-7.

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	1.4	1.8	9.3	11	14	9.0	22	56				
2	1.4	1.8	8.0	11	14	43	22	110				
3	1.2	1.5	7.8	9.3	110	25	29	76				
4	1.2	1.4	7.2	8.5	55	20	27	63				
5	1.2	10	6.4	8.8	32	20	27	54				
6	1.2	5.0	7.2	11	28	19	25	45				
7	1.2	3.6	6.1	10	25	26	27	40				
8	1.7	2.9	5.6	9.5	22	25	48	42				
9	3.0	2.5	5.0	7.9	20	28	40	47				
10	2.3	2.3	4.6	7.8	18	29	60	36				
11	1.9	2.4	5.1	40	17	33	89	---				
12	1.6	2.4	4.5	25	17	29	52	---				
13	1.6	8.5	3.8	17	18	26	44	---				
14	2.1	6.1	4.0	16	18	25	39	---				
15	2.2	5.0	4.0	15	16	29	35	---				
16	2.5	4.1	26	15	13	31	42	---				
17	2.3	3.8	23	13	13	31	52	---				
18	2.2	3.5	15	11	14	30	48	---				
19	2.0	3.2	13	10	13	53	78	---				
20	1.8	3.2	13	9.5	12	69	136	---				
21	1.6	3.7	11	9.0	11	59	123	---				
22	1.6	3.7	8.7	9.0	12	54	110	---				
23	1.6	3.9	8.6	30	11	40	111	---				
24	1.5	4.1	10	55	10	35	123	---				
25	1.6	4.1	12	29	10	30	131	---				
26	1.5	4.5	17	22	8.9	27	120	---				
27	1.4	3.7	13	18	9.7	25	89	---				
28	1.3	3.6	18	16	9.1	32	74	---				
29	1.3	9.6	17	16	---	31	58	---				
30	1.3	11	14	15	---	25	64	---				
31	1.3	---	12	15	---	23	---	---				
TOTAL	52.0	126.9	319.9	500.3	570.7	981.0	1945	---				
MEAN	1.68	4.23	10.3	16.1	20.4	31.6	64.8	---				
MAX	3.0	11	26	55	110	69	136	---				
MIN	1.2	1.4	3.8	7.8	8.9	9.0	22	---				
CFSM	.16	.40	.96	1.51	1.91	2.95	6.06	---				
IN.	.18	.44	1.11	1.74	1.98	3.41	6.76	---				

CAL YR 1982 TOTAL 6352.2 MEAN 17.4 MAX 326 MIN 1.1 CFSM 1.63 IN 22.08

HOUSATONIC RIVER BASIN

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 upstream from Williams River, and 2 mi north of Great Barrington.

DRAINAGE AREA.--280 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good except those for period of doubtful gage-height record, Feb. 1 to Apr. 7, which are fair.

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, 25.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s Jan. 1, 1949, gage height, 12.08 ft, from rating curve extended above 6,400 ft³/s on basis of computations of flow over dams at gage heights 11.72 ft and 12.08 ft; minimum daily, 1.0 ft³/s Oct. 18, 1914.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 21	0715	*5230	8.27	Apr. 26	0545	4600	7.81

Minimum daily discharge, 52 ft³/s Sept. 13.

REVISIONS.--The peak discharges and annual maximum (*) for water years 1980 and 1982 have been revised as shown in the following table. They supersede figures published in the reports for those years.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 23, 1980	0200	*5110	8.32	Apr. 5, 1982	0430	2930	6.20
Apr. 11, 1980	1345	3770	7.24	Apr. 19, 1982	1445	*4240	7.53

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	163	123	280	261	363	294	612	1380	1240	320	109	121
2	167	125	241	250	334	580	575	1390	1110	339	138	115
3	166	127	212	243	970	930	687	1480	933	226	157	112
4	157	129	199	220	1060	763	817	1400	1100	201	187	107
5	124	295	186	205	1000	699	803	1290	1270	338	189	105
6	147	403	172	266	760	656	757	1130	1110	671	194	103
7	237	282	178	306	580	803	680	959	1240	519	164	100
8	283	215	175	290	490	930	689	834	1100	379	142	99
9	389	192	165	256	440	982	987	882	890	270	122	93
10	334	181	159	234	450	1060	1040	870	738	229	112	85
11	307	173	150	548	450	1120	1760	788	641	210	120	84
12	290	174	154	840	440	1080	1960	716	577	196	150	83
13	290	352	141	627	420	945	1530	624	518	194	155	52
14	297	472	144	440	420	894	1030	577	462	183	139	74
15	303	341	155	369	430	894	872	575	360	175	116	80
16	276	270	250	330	430	865	808	772	401	180	110	57
17	266	229	586	295	415	887	1170	766	466	184	110	66
18	238	207	441	320	430	1480	1360	642	512	165	120	73
19	130	200	334	300	425	1940	1530	557	426	149	140	76
20	191	199	288	280	390	1930	3930	529	361	133	139	79
21	196	190	265	270	368	1670	5020	587	322	129	119	84
22	177	185	256	250	368	1330	3830	591	297	222	109	161
23	155	183	238	301	373	1060	2820	716	258	200	249	231
24	144	181	242	759	363	887	2620	1320	246	168	121	177
25	135	186	261	852	353	790	3910	1260	226	146	107	122
26	129	176	329	705	329	718	4400	1010	199	157	103	113
27	129	179	360	550	302	796	3310	1340	188	141	99	111
28	128	170	341	440	294	858	2390	1550	241	131	97	105
29	122	225	346	400	---	844	1830	1360	434	125	97	93
30	119	301	321	390	---	737	1540	1110	369	124	98	92
31	119	---	283	388	---	668	---	1170	---	120	114	---
TOTAL	6308	6665	7852	12185	13447	30090	55267	30175	18235	6924	4126	3053
MEAN	203	222	253	393	480	971	1842	973	608	223	133	102
MAX	389	472	586	852	1060	1940	5020	1550	1270	671	249	231
MIN	119	123	141	205	294	294	575	529	188	120	97	52
CFSM	.73	.79	.90	1.40	1.71	3.47	6.58	3.48	2.17	.80	.48	.36
IN.	.84	.89	1.04	1.62	1.79	4.00	7.34	4.01	2.42	.92	.55	.41

CAL YR 1982	TOTAL	179024	MEAN	490	MAX	3490	MIN	92	CFSM	1.75	IN	23.78
WTR YR 1983	TOTAL	194327	MEAN	532	MAX	5020	MIN	52	CFSM	1.90	IN	25.82

01331500 HOOSIC RIVER AT ADAMS, MA

LOCATION.--Lat 42°36'40", long 73°07'28", Berkshire County, Hydrologic Unit 02020003, on left bank at Adams, 500 ft downstream from Dry Brook, and 0.4 mi upstream from Pecks Brook.

DRAINAGE AREA.--46.3 mi².

PERIOD OF RECORD.--Discharge: October 1931 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1971-72.

GAGE.--Water-stage recorder. Datum of gage is 828.01 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, datum was 9.00 ft higher and Oct. 1, 1964, to May 29, 1974, 8.00 ft higher, at site 500 ft upstream.

REMARKS.--Records excellent. Diversion upstream for municipal supply of Adams. Some diurnal fluctuation by mill upstream prior to 1961. Flow regulated by Cheshire Reservoir 5.1 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--52 years, 89.6 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s Sept. 21, 1938, gage height, 9.25 ft, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of computation of peak flow over dam; minimum daily, 8.0 ft³/s Aug. 31, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 20	0145	a*1350	8.38	Apr. 24	2015	925	7.90

a From rating curve extended above 450 ft³/s on basis of slope-area measurement at gage height 8.84 ft.

Minimum discharge, 13 ft³/s Oct. 28, 29, Nov. 2-4, Sept. 15-17; minimum daily, 13 ft³/s Oct. 29, Nov. 3, Sept. 15, 16.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	15	48	58	66	44	97	263	248	46	33	27
2	18	14	43	54	64	179	99	463	207	97	49	23
3	19	13	38	50	306	150	126	306	176	77	36	20
4	19	14	38	36	227	105	135	267	231	54	31	19
5	18	82	36	39	126	92	141	238	207	75	30	19
6	18	39	39	48	99	92	126	203	166	97	28	18
7	18	24	41	48	97	129	150	182	196	56	28	18
8	20	19	35	44	94	119	282	176	153	48	25	17
9	31	17	32	39	86	114	267	207	129	46	23	16
10	26	16	27	36	75	116	328	172	116	41	22	16
11	22	16	31	238	68	138	491	159	105	38	29	16
12	22	16	31	153	75	150	263	147	94	36	43	16
13	21	64	27	86	68	126	210	138	84	34	33	16
14	27	39	27	62	64	116	186	135	84	31	28	15
15	25	27	28	64	62	126	163	169	89	31	27	13
16	25	22	156	64	59	135	179	186	77	36	25	13
17	20	20	163	64	58	135	231	153	99	30	25	14
18	18	19	70	59	58	132	220	138	79	27	35	16
19	16	20	64	52	56	351	497	114	72	27	37	16
20	16	19	58	52	54	400	878	119	68	26	34	15
21	17	20	56	48	52	294	442	129	68	27	29	15
22	16	21	48	48	52	275	356	94	54	36	26	41
23	15	24	46	86	52	200	365	252	52	28	25	22
24	14	27	52	217	50	163	592	328	46	28	22	20
25	14	27	70	144	50	141	670	182	39	31	20	18
26	16	26	105	108	46	122	469	166	36	27	20	18
27	16	27	75	86	44	114	361	415	36	26	19	17
28	14	25	77	77	44	126	323	267	77	25	27	17
29	13	64	84	72	---	144	275	213	72	25	48	16
30	14	68	70	70	---	114	290	310	52	24	28	16
31	14	---	58	68	---	102	---	385	---	25	30	---
TOTAL	581	844	1773	2370	2252	4744	9212	6676	3212	1255	915	543
MEAN	18.7	28.1	57.2	76.5	80.4	153	307	215	107	40.5	29.5	18.1
MAX	31	82	163	238	306	400	878	463	248	97	49	41
MIN	13	13	27	36	44	44	97	94	36	24	19	13
CAL YR 1982	TOTAL	30978	MEAN	84.9	MAX	1140	MIN	13				
WTR YR 1983	TOTAL	34377	MEAN	94.2	MAX	878	MIN	13				

HUDSON RIVER BASIN

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 downstream from Hudson Brook, and 1.5 mi upstream from mouth.

DRAINAGE AREA.--39.0 mi².

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 National Geodetic Vertical Datum of 1929. Prior to Sept. 23, 1938, at site 100 ft upstream at same datum. July 9, 1959, to July 29, 1960, nonrecording gage at site 500 ft upstream at datum about 4.6 ft lower.

REMARKS.--Records good. 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.--52 years, 96.4 ft³/s, 33.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s Sept. 21, 1938, gage height, 12.05 ft, from floodmarks, by computation of peak flow over dam; maximum gage height, 12.24 ft Aug. 10, 1976; minimum discharge, 1.7 ft³/s July 30, 1965; minimum daily, 3.1 ft³/s July 30, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1927 reached a discharge of 9,980 ft³/s, by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 10	2245	*1840	8.73	May 23	2300	1340	8.27
Apr. 24	2000	1560	8.48				

Minimum discharge, 4.9 ft³/s Sept. 15-17; minimum daily, 4.9 ft³/s Sept. 16.

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	8.4	19	80	63	53	40	80	212	188	34	17	8.6
2	7.7	22	64	57	50	111	87	668	140	129	24	7.9
3	7.5	15	55	52	440	109	121	314	120	86	17	6.7
4	7.4	14	51	29	345	80	133	233	170	49	12	6.1
5	7.3	114	46	41	148	70	137	184	132	42	11	6.1
6	7.3	60	48	48	114	74	123	147	102	59	11	6.1
7	7.1	37	48	44	100	114	157	118	140	49	9.8	5.8
8	11	28	41	41	88	113	426	120	100	31	9.0	5.6
9	22	24	37	30	75	101	335	195	93	30	8.4	5.3
10	17	21	25	31	62	98	597	153	72	26	7.9	5.5
11	12	19	36	234	64	106	775	132	59	21	10	5.2
12	10	23	29	147	67	113	348	118	50	19	27	5.2
13	9.9	133	22	84	62	94	239	102	43	17	17	5.2
14	16	85	31	59	58	87	208	93	46	15	12	5.2
15	16	57	31	62	54	99	182	129	47	14	9.4	5.0
16	19	43	215	62	52	110	194	144	215	13	8.3	4.9
17	16	35	194	57	50	118	239	107	224	12	7.5	5.6
18	14	33	86	52	49	115	198	90	97	12	9.4	6.9
19	12	30	73	50	47	473	474	82	75	11	11	6.9
20	11	28	64	46	45	532	673	120	56	11	9.0	6.3
21	13	26	58	43	45	309	324	195	46	11	7.7	7.4
22	14	27	49	43	46	278	253	118	37	16	7.7	51
23	11	45	46	94	46	170	317	382	31	12	8.7	17
24	10	45	53	270	45	130	747	605	27	12	8.0	11
25	10	45	78	138	43	107	853	237	24	15	7.2	9.2
26	9.9	43	163	95	39	93	488	195	23	11	7.7	8.3
27	9.8	39	108	75	37	86	312	555	24	9.8	6.8	7.8
28	9.5	27	112	65	37	94	267	284	77	8.9	6.6	7.4
29	9.4	93	111	66	---	102	214	199	68	8.5	6.5	7.0
30	9.4	122	84	61	---	84	250	284	51	8.9	7.0	6.7
31	9.6	---	66	57	---	78	---	274	---	24	8.7	---
TOTAL	354.2	1352	2204	2296	2361	4288	9751	6789	2577	817.1	330.3	252.9
MEAN	11.4	45.1	71.1	74.1	84.3	138	325	219	85.9	26.4	10.7	8.43
MAX	22	133	215	270	440	532	853	668	224	129	27	51
MIN	7.1	14	22	29	37	40	80	82	23	8.5	6.5	4.9
CFSM	.29	1.16	1.82	1.90	2.16	3.54	8.33	5.62	2.20	.68	.27	.22
IN.	.34	1.29	2.10	2.19	2.25	4.09	9.30	6.48	2.46	.78	.32	.24
CAL YR 1982	TOTAL	31572.8	MEAN	86.5	MAX	1500	MIN	5.8	CFSM	2.22	IN	30.11
WTR YR 1983	TOTAL	33372.5	MEAN	91.4	MAX	853	MIN	4.9	CFSM	2.34	IN	31.83

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'01", long 73°09'34", Berkshire County, Hydrologic Unit 02020003, on left bank 0.3 mi downstream from Sherman Brook and 2.7 mi east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi².

PERIOD OF RECORD.--Discharge: July 1940 to current year.

Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft, Corps of Engineers datum. Prior to June 6, 1979, at site 1.2 mi downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Prior to 1966, slight diurnal fluctuation at low flow caused by mills upstream. Some regulation by Cheshire Reservoir 16 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 273 ft³/s, 29.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Dec. 31, 1948, gage height, 14.85 ft, former site and datum, from rating curve extended above 4,300 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft³/s Aug. 30, 31, Oct. 26, 1940; minimum daily, 24 ft³/s Sept. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 10	2330	2750	8.46	Apr. 24	2030	2770	8.47
Apr. 19	2345	*3430	8.97				

Minimum discharge, 27 ft³/s Sept. 10, 11, 17; minimum daily, 29 ft³/s Sept. 11.

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	42	51	179	169	165	126	261	707	671	119	81	61
2	42	60	148	148	154	413	267	1550	521	300	108	57
3	37	57	129	142	977	380	353	925	435	233	78	52
4	37	57	124	104	820	280	382	746	591	143	70	41
5	37	284	117	119	400	234	390	630	494	147	61	40
6	37	195	121	148	305	246	354	526	391	219	62	41
7	37	93	126	138	268	346	429	448	480	147	56	42
8	50	76	116	129	266	339	922	429	361	115	44	41
9	92	66	106	108	244	324	827	591	311	111	50	41
10	69	60	82	105	186	311	1110	474	263	100	45	41
11	57	54	98	618	196	356	1740	422	228	93	60	29
12	49	60	94	420	210	385	874	379	204	86	98	33
13	49	278	81	242	190	327	640	344	182	76	75	35
14	65	214	86	171	180	304	564	316	168	76	56	37
15	66	123	86	179	170	334	498	404	191	69	54	38
16	73	100	470	185	160	362	534	467	385	73	51	37
17	63	90	493	192	157	374	706	361	441	63	50	40
18	57	79	230	179	161	365	629	316	238	54	56	44
19	57	76	186	170	147	1110	1300	284	200	57	62	40
20	54	72	173	150	146	1330	2420	356	168	54	54	40
21	63	69	158	140	142	883	1210	487	160	60	46	54
22	57	70	135	140	148	827	929	322	143	73	48	154
23	51	92	128	210	147	600	990	819	127	60	46	76
24	48	99	150	630	147	460	1650	1300	111	66	44	65
25	43	99	190	430	142	410	2110	612	100	69	39	52
26	48	93	358	283	126	355	1400	514	93	68	37	50
27	51	96	259	228	122	305	987	1320	93	62	35	53
28	51	76	251	195	129	324	879	787	228	59	38	53
29	48	198	267	192	---	359	729	591	209	54	103	51
30	48	265	213	185	---	290	801	860	147	57	53	49
31	48	---	172	173	---	270	---	1090	---	71	66	---
TOTAL	1626	3302	5526	6622	6605	13329	26885	19377	8334	3034	1826	1487
MEAN	52.5	110	178	214	236	430	896	625	278	97.9	58.9	49.6
MAX	92	284	493	630	977	1330	2420	1550	671	300	108	154
MIN	37	51	81	104	122	126	261	284	93	54	35	29
CFSM	.42	.87	1.41	1.70	1.87	3.41	7.11	4.96	2.21	.78	.47	.39
IN.	.48	.97	1.63	1.96	1.95	3.94	7.94	5.72	2.46	.90	.54	.44

CAL YR 1982	TOTAL	91328	MEAN	250	MAX	3530	MIN	37	CFSM	1.98	IN	26.96
WTR YR 1983	TOTAL	97953	MEAN	268	MAX	2420	MIN	29	CFSM	2.13	IN	28.92

01333000 GREEN RIVER AT WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'32", long 73°11'50", Berkshire County, Hydrologic Unit 02020003, on left bank 0.1 mi upstream from bridge on State Highway 2 at Williamstown and 0.8 mi upstream from mouth.

DRAINAGE AREA.--42.6 mi².

PERIOD OF RECORD.--Discharge: September 1949 to current year.
Water-quality records: Water years 1967-69.

GAGE.--Water-stage recorder. Altitude of gage is 615 ft, from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Slight diurnal fluctuation at times caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--34 years, 83.2 ft³/s, 26.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s Dec. 21, 1973, gage height, 5.68 ft in gage well, from rating curve extended above 750 ft³/s on basis of slope-area measurement at gage height 4.94 ft; maximum gage height, 6.35 ft Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Apr. 19	2100	a*2650	4.90				

a From rating curve extended as explained above.

Minimum discharge, 4.7 ft³/s Sept. 17.

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	7.8	13	43	54	56	51	93	247	247	28	16	13
2	7.0	11	39	51	56	133	87	477	192	44	18	11
3	7.3	10	36	47	521	99	135	306	154	32	13	9.1
4	7.8	11	35	41	311	80	121	277	208	27	11	8.4
5	6.8	68	33	47	180	78	114	225	156	30	11	8.0
6	6.8	35	36	48	130	80	105	183	133	32	11	7.6
7	6.4	25	33	44	110	116	110	151	143	25	10	6.8
8	7.8	21	32	41	89	128	171	154	116	23	8.8	6.2
9	22	18	31	38	78	143	159	186	99	23	9.0	5.9
10	14	17	29	38	68	131	298	146	86	21	8.2	5.9
11	11	16	31	159	71	143	387	133	75	19	13	5.8
12	10	16	26	105	75	135	258	126	67	18	18	5.6
13	10	55	26	74	71	126	198	116	60	17	12	5.5
14	15	36	26	63	69	123	177	103	59	16	10	5.5
15	13	30	26	65	65	135	159	121	55	17	8.6	5.2
16	17	25	133	63	64	133	195	123	84	18	8.7	5.2
17	14	23	112	59	61	128	221	105	82	15	8.0	5.5
18	12	22	68	53	63	128	218	95	56	14	13	7.9
19	12	20	65	43	56	205	791	87	51	13	12	6.1
20	11	19	58	45	50	302	958	108	46	13	8.4	5.5
21	15	19	53	43	53	254	495	119	42	16	7.5	8.1
22	13	19	47	43	54	239	392	97	38	20	7.7	46
23	12	24	45	100	55	183	366	218	36	14	7.7	14
24	11	24	55	198	54	154	502	306	33	17	6.9	10
25	11	23	61	128	52	135	660	198	31	16	6.5	9.1
26	11	23	72	99	47	119	527	183	29	13	6.3	8.4
27	10	23	61	86	46	112	381	381	28	11	6.2	7.8
28	9.8	21	69	74	47	154	346	258	59	11	15	7.3
29	9.8	53	68	71	---	131	294	218	40	11	34	6.8
30	9.5	52	60	67	---	112	298	298	32	12	14	6.7
31	9.5	---	55	61	---	101	---	328	---	13	15	---
TOTAL	340.3	772	1564	2148	2652	4291	9216	6073	2537	599	354.5	263.9
MEAN	11.0	25.7	50.5	69.3	94.7	138	307	196	84.6	19.3	11.4	8.80
MAX	22	68	133	198	521	302	958	477	247	44	34	46
MIN	6.4	10	26	38	46	51	87	87	28	11	6.2	5.2
CFSM	.26	.60	1.19	1.63	2.22	3.24	7.21	4.60	1.99	.45	.27	.21
IN.	.30	.67	1.37	1.88	2.32	3.75	8.05	5.30	2.22	.52	.31	.23
CAL YR 1982	TOTAL	27639.6	MEAN	75.7	MAX	1060	MIN	6.4	CFSM	1.78	IN	24.14
WTR YR 1983	TOTAL	30810.7	MEAN	84.4	MAX	958	MIN	5.2	CFSM	1.98	IN	26.90

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 1983

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Merrimack River basin						
01096800	North Brook at Berlin, MA	Lat 42°22'10", long 71°38'22", Worcester County, at bridge on Jones Rd., 0.8 mi south of Berlin, and 2.2 mi above mouth.	11.1	1962-66, 1978-81, 1983	7-20-83 8-26-83	0.45 .33
01097400	Spencer Brook near Concord, MA	Lat 42°30'07", long 71°22'55", Middlesex County, at bridge on Spencer Brook Rd., 3.3 mi northwest of Concord.	3.74	1962-65, 1978-81, 1983	7-11-83 9- 9-83	.45 .18
01100700	East Meadow River near Haverhill, MA	Lat 42°48'41", long 71°01'59", Essex County, 10 ft downstream from culvert on State Highway 110, and 3.5 mi north- east of Haverhill.	4.93	1963-74+, 1978-81, 1983	7-20-83 8-25-83	.29 .25
Taunton River basin						
01106500	Matfield River at Elmwood, MA	Lat 42°00'55", long 70°57'42", Plymouth County, 20 ft upstream from bridge on State Highway 18 at Elmwood.	40.6	1958-60+, 1965, 1978-81, 1983	7-20-83 9- 6-83	21 25
01107400	Fall Brook near Middleboro, MA	Lat 41°51'55", long 70°54'32", Plymouth County, at twin-box culvert on Wood St., 2 mi south of Middleboro.	9.34	1966-68, 1978-81, 1983	9-12-83	2.4
01108320	Canoe River near Norton, MA	Lat 41°58'38", long 71°08'40", Bristol county, at culvert on Plain St., 2.4 mi northwest of Norton.	18.6	1965-68, 1978-81, 1983	7-20-83 9- 7-83	2.4 1.7
Warren River basin						
01109225	Rocky Run near Rehoboth, MA	Lat 41°46'52", long 71°15'05", Bristol County, at culvert on Davis St., 4 mi south of Rehoboth.	7.37	1972-74, 1979-81, 1983	7-20-83 9- 6-83	1.5 1.2
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, 1979-83	9- 7-83	0.09
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+, 1978-83	9- 6-83	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.	2.54	1960-62, 1965-66, 1979-83	9- 6-83	0
Connecticut River basin						
01162900	Otter River at Gardner, MA	Lat 42°33'52", long 72°00'43", Worcester County, at bridge on State Highway 2A at Gardner.	19.1	1965-66, 1978-81, 1983	7-15-83 9- 8-83	9.3 5.0

† Operated as a continuous-record gaging station.

Discharge measurements made at low-flow partial-record stations during water year 1983--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Connecticut River basin--Continued						
01166100	Whetstone Brook at Wendell Depot, MA	Lat 42°35'22", long 72°21'31", Franklin County, 0.5 mi upstream from mouth, and 0.5 mi south of Wendell Depot.	4.88	1965-66, 1978-81, 1983	7-14-83 9- 6-83	2.5 1.4
01168300	Cold River near Zoar, MA	Lat 42°38'12", long 72°56'10", Franklin County, at bridge 150 ft east of State Highway 2, 0.9 mi upstream from mouth, and 1.1 mi south of Zoar.	29.6	1938†, 1965a, 1967-69, 1978-81, 1983	7-29-83 9- 6-83	3.1 1.9
01173050	Pleasant Brook at Barre, MA	Lat 42°25'10", long 72°05'22", Worcester County, 0.35 mi upstream from mouth, and 0.8 mi east of Barre.	2.46	1960-62, 1965, 1978-81, 1983	7-13-83 9- 8-83	.25 .08
01180800	Walker Brook near Becket Center, MA	Lat 42°15'49", long 73°02'48", Berkshire County, 20 ft upstream from culvert on U.S. Highway 20, and 1.7 mi southeast of Becket Center.	3.01	1962, 1963-77†, 1978-81, 1983	7-27-83 9- 8-83	.60 .26
01183400	Great Brook near Southwick, MA	Lat 42°03'58", long 72°44'10", Hampden County, 50 ft upstream from bridge on State Highway 57, and 2 mi northeast of Southwick.	23.2	1962-68, 1978-81, 1983	7-28-83 9- 8-83	9.3 7.3
Housatonic River basin						
01198000	Green River near Great Barrington, MA	Lat 42°11'31", long 73°23'28", Berkshire County, 250 ft downstream from Hurlburt Street Bridge, 0.2 mi downstream from Seekonk Brook, and 1.5 mi west of Great Barrington.	51	1952-71†, 1973†, 1980-81, 1983	7-28-83 9- 8-83	6.7 2.3
01198030	Schenob Brook at Sheffield, MA	Lat 42°06'33", long 73°22'09", Berkshire County, at upstream side of Berkshire School Road bridge, 0.8 mi west of Sheffield.	22.7	1971-72†, 1978-81, 1983	7-28-83 9- 8-83	6.0 2.6
Hudson River basin						
01331360	Kitchen Brook at Cheshire, MA	Lat 42°33'31", long 73°10'04", Berkshire County, at culvert on South St., 0.2 mi southwest of Cheshire, and 0.4 mi up- stream from mouth.	4.78	1965a 1967-69, 1978-81, 1983	7-28-83 9- 6-83	0.25 0
01333100	Hemlock Brook near Williamstown, MA	Lat 42°41'16", long 73°13'50", Berkshire County, at culvert on U.S. Highway 7 and State Highway 2, and 2.2 mi south- west of Williamstown.	5.25	1967-69, 1978-81, 1983	7-28-83 9- 6-83	.22 .16

a Published in table of miscellaneous measurements.

† Miscellaneous flood measurement.

‡ 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 1983

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (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	1964-83	3-19-83	7.09	20
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	1972-83	4-25-83	8.56	a53
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	1963-83	4-11-83	13.63	122
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	1963-83	3-13-83	9.74	91
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	1963-83	3- 3-83	13.09	b120
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	1964-83	3- 2-83	9.22	40
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	1964-83	4-10-83	13.73	108
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	1967-83	4-11-83	7.38	139
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.	-	1979-83	3-12-83	487.69	a265
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	1964-83	4-20-83	8.22	40
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	1963-83	4-20-83	10.88	53

a Does not include unknown amount of bypass flow.

b Estimated.

Annual maximum discharge at crest-stage partial-record stations during water year 1983--Continued

Annual maximum discharge at cross bridge partial record stations during water year 1983 continued							
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
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	1964-83	4-10-83	16.30	6120
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	1965-83	4-19-83	17.95	86
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	1965-83	4-19-83	7.74	82
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, 1978-83	4-19-83	14.91	a229
01183100	Dickinson Brook tributary at Granville, MA (c)	Lat 42°03'53", long 72°51'42", Hampden County, at culvert on State Highway 189, Granville.	.66	1964-77, 1979-83	4-19-83	11.40	69
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, 1979-83	4-20-83	5.46	87
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	1963-83	4-25-83	15.78	20

a Does not include unknown amount of bypass flow.

b Estimated.

c Prior to 1983, published as "Seymour Brook tributary."

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 1983

Discharge measurements made at miscellaneous sites during water year 1983						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Charles River basin						
01103206 Charles River	Boston Harbor (Atlantic Ocean)	Lat 42°07'14", long 71°27'11", Norfolk County, 200 ft downstream from bridge on Maple St., at North Bellingham, MA.	-	1982	7-19-83 8-26-83	7.1 6.6
01103210 Stall Brook	Charles River	Lat 42°07'26", long 71°27'20", Norfolk County, at culvert on State Highway 126, 0.2 mi north of North Bellingham, MA.	3.79	1968-71	6-24-83 7-11-83 7-19-83 8-10-83 8-24-83	*.54 0 0 0 0
01103217 Hopping Brook	do	Lat 42°08'31", long 71°27'21", Norfolk County, at culvert on West St., 1.2 mi west of West Medway, MA.	10.0	1968-71	8-17-83	*.53
01103225 Miscoe Brook	Mine Brook	Lat 42°03'21", long 71°26'00", Norfolk County, at culvert on Washington St., 2.6 mi southwest of Franklin, MA.	2.14	1968-71	9-12-83	*.05
01103232 Dix Brook	do	Lat 42°03'28", long 71°25'03", Norfolk County, at bridge on Washington St., 1.4 mi southwest of Franklin, MA.	-	-	9-12-83	*.01
01103234 Mine Brook	Charles River	Lat 42°05'03", long 71°24'53", Norfolk County, at culvert on Beaver St., 0.9 mi west of Franklin, MA.	-	-	9-12-83	*.62
01103235 Mine Brook	do	Lat 42°03'42", long 71°25'43", Norfolk County, at bridge on Grove St., 1.3 mi west of Franklin, MA.	-	1967	6-24-83 7-11-83 7-20-83 8-10-83 8-17-83 8-24-83	*4.8 *2.7 *2.1 *1.9 *2.7 *2.6
01103240 Mine Brook	do	Lat 42°07'29", long 71°25'52", Norfolk County, at bridge on Pond St., 3.4 mi northwest of Franklin, MA.	14.1	1968-71	8-17-83 8-24-83	*4.2 *3.9
01103253 Chicken Brook	do	Lat 42°08'27", long 71°25'26", Norfolk County, at culvert on Cottage St., 3.5 mi southeast of West Medway, MA.	7.19	1968-71	6-24-83 7-11-83 7-19-83 8-10-83 8-17-83 8-25-83	*3.7 *1.2 *5.6 *3.8 *6.4 *5.4
01103260 Charles River	Boston Harbor (Atlantic Ocean)	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, 1982	7-20-83	9.8
01103273 Shepards Brook	Charles River	Lat 42°06'55", long 71°23'46", Norfolk County, at more northerly of two culverts on Lincoln St., 2.2 mi north of Franklin, MA.	2.11	1968-71	8-17-83	*.14
01103292 Eagle Brook	Mill River	Lat 42°04'23", long 71°20'57", Norfolk County, at bridge on State Highway 140, 300 ft below outlet of Lake Pearl, 1.2 mi west of Wrentham, MA.	-	1967	6-24-83 7-11-83 7-19-83 8-10-83 8-17-83 8-24-83	*3.4 *4.0 *2.2 *2.6 *3.2 *3.2
01103300 Mill River	Charles River	Lat 42°07'21", long 71°21'59", Norfolk County, at bridge on Miller St., 0.9 mi above mouth, 2.1 mi west of Norfolk, MA.	13.8	1968-69, 1971	8-24-83	*11
01103303 Cress Brook	Mill River	Lat 42°07'30", long 71°21'40", Norfolk County, at culvert on Myrtle St., 1.9 mi west of Norfolk, MA.	1.54	1968-70	9-12-83	*.62
01103305 Charles River	Boston Harbor (Atlantic Ocean)	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†, 1982	6-24-83 7-11-83 7-20-83 8-10-83 8-25-83 8-26-83	60 31 24 23 29 26

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1983--Continued

Discharge measurements made at miscellaneous sites during water year 1988--Continued						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis- charge (ft ³ /s)
Charles River basin--Continued						
01103310 Stony Brook	Stop River	Lat 42°06'03", long 71°19'19", Norfolk County, at culvert on Diamond St., 1.3 mi south of Norfolk, MA.	1.46	1968-69	9-12-83	*1.2
01103315 Stop River	Charles River	Lat 42°07'04" , long 71°17'48", Norfolk County, at bridge on Winter St., 1.5 mi east of Norfolk, MA.	-	-	8-24-83	6.2
01103330 Stop River	do	Lat 42°09'03", long 71°18'18", Norfolk County, at culvert on Seekonk St., 2.5 mi south of Medfield, MA.	12.8	1967-71	8-24-83	*8.2
01103340 Charles River	Boston Harbor (Atlantic Ocean)	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	1982	7-20-83 8-25-83	28 42
01103390 Bogastow Brook	Charles River	Lat 42°11'01", long 71°23'27", Norfolk County, at culvert on Orchard St., 1.9 mi northwest of Millis, MA.	13.1	1968-71	8-25-83	*.64
01103393 Bogastow Brook	do	Lat 42°11'05", long 71°22'34", Norfolk County, at bridge on Orchard St., below outlet of Great Black Swamp, 1.4 mi northwest of Millis, MA.	-	-	6-24-83 7-11-83 7-19-83 8-10-83 8-25-83	*11 *3.0 *2.0 *1.1 *1.1
01103400 Charles River	Boston Harbor (Atlantic Ocean)	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, 1982	7-20-83 8-25-83	37 47
01103405 Sewall Brook	Charles River	Lat 42°13'22", long 71°21'20", Norfolk County, at culvert on Forest St., 1.5 mi south of Sherborn, MA.	2.58	1968-71	9-12-83	*.03
01103415 Indian Brook	do	Lat 42°15'34", long 71°21'25", Norfolk County, at culvert on Everett St., 1.4 mi north of Sherborn, MA.	-	1971	9-12-83	0
01103420 Charles River	Boston Harbor (Atlantic Ocean)	Lat 42°16'17", long 71°18'57", Middlesex County, 50 ft below dam and 50 ft up- stream from bridge on Pleasant St., at Natick, MA.	157	1982	7-20-83 8-25-83	34 42
01103429 Bogle Brook	Morses Pond	Lat 42°18'21", long 71°19'33", Norfolk County, 500 ft upstream from bridge on State Highway 9, at Wellesley, MA.	-	-	8-26-83	*.23
01103435 Waban Brook	Charles River	Lat 42°17'13", long 71°18'05", Norfolk County, on access road of Wellesley College golf course, 800 ft upstream from State Highway 16, 0.8 mi southwest of Wellesley, MA.	-	-	6-24-83 7-11-83 7-19-83 8-10-83 8-18-83 8-26-83	*5.5 *1.0 *.75 *.62 *.57 *.54
01103440 Fuller Brook	Waban Brook	Lat 42°17'45", long 71°17'18", Norfolk County, at Brook Street bridge, at Wellesley, MA.	3.94	1959-60, 1968-71	8-18-83	*.16
01103455 Trout Brook	Charles River	Lat 42°15'14", long 71°17'38", Norfolk County, at culvert on Haven St., 0.8 mi northwest of Dover, MA.	3.74	1968-71	8-26-83	*.77
01103905 Charles River	Boston Harbor (Atlantic Ocean)	Lat 42°16'02', long 71°12'16', Norfolk County, 200 ft upstream from southbound bridge on State Highway 128 (Interstate I-95), at Dedham, MA.	192	1982	7-20-83 8-10-83 8-26-83	47 43 55
01104050 Sawmill Brook	Charles River	Lat 42°17'27", long 71°10'28", Norfolk County, at culvert on Baker St., at west limits of Boston, 1.1 mi northwest of West Roxbury, MA.	1.97	1968-71	9-12-83	*.67
01104248 Rosemary Brook	do	Lat 42°17'41", long 71°14'50", Norfolk County, at bridge on Central Ave, 2.4 mi east of Wellesley, MA.	-	-	8-18-83	*.52
01104255 Rosemary Brook	do	Lat 42°18'32", long 71°15'17", Norfolk County, at bridge on Oakland St., 50 ft above inlet to Longfellow Pond, 2.1 mi northeast of Wellesley, MA.	-	1967	8-18-83	*.20
01104258 Rosemary Brook	do	Lat 42°19'10", long 71°14'47", Norfolk County, 400 ft above mouth, 2.9 mi northeast of Wellesley, MA.	-	-	7-20-83 8-18-83	*.13 *.06

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1983--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Jones River basin						
011058561 Jones River	Kingston Bay (Atlantic Ocean)	Lat 42°00'43", long 70°47'17", Plymouth County, below outlet of Silver Lake, 100 ft below culvert on Lake Rd, 2.0 mi northeast of North Plympton, MA.	0.09a	-	8- 2-83 8-22-83 9-12-83	*0.06 *.07 *.02
011058565 Jones River tributary	Jones River	Lat 41°59'54", long 70°47'29", Plymouth County, bog discharge at culvert on West St., 1.1 mi northeast of North Plympton, MA.	-b	-	8- 2-83 8-22-83 9-12-83	*.06 *.06 *.03
01105857 Jones River	Kingston Bay (Atlantic Ocean)	Lat 41°59'56", long 70°46'52", Plymouth County, at southwest corner of private bog road, 300 ft above confluence of Pine Brook 1.6 mi northeast of North Plympton, MA.	.65a	-	8- 2-83 8-22-83 9-12-83	*.64 *.62 *.52
01105859 Pine Brook	Jones River	Lat 42°00'03", long 70°46'34", Plymouth County, at culvert on Grove St., 1.8 mi northeast of North Plympton, MA.	4.72	-	8- 2-83 8-22-83 9-12-83	*1.2 *1.8 *.70
01105861 Jones River Brook	do	Lat 41°59'47", long 70°47'18", Plymouth County, at culvert on West St., 1.2 mi northeast of North Plympton, MA.	4.75c	-	8- 2-83 8-22-83 9-12-83	*2.4 *4.6 *2.1
01105862 Jones River	Kingston Bay (Atlantic Ocean)	Lat 41°59'53", long 70°46'23", Plymouth County, at culvert on abandoned dirt road, 2.0 mi west of Kingston, MA.	10.6a	1965	8- 2-83 8-22-83 9-12-83	*3.4 *6.0 *4.4
01105863 Jones River tributary	Jones River	Lat 42°00'05", long 70°46'00", Plymouth County, at culvert on Grove St., 1.9 mi west of Kingston, MA.	.62	-	8-22-83 9-12-83	*.04 *.01
01105869 Furnace Brook	do	Lat 41°59'26", long 70°44'43", Plymouth County, at footbridge on logging road in conservation land, 0.9 mi west of Kingston, MA.	1.99	-	8- 2-83 8-22-83 9-12-83	*3.2d *3.3d *2.6d
Taunton River basin						
01106455 Beaver Brook	Salisbury Plain River	Lat 42°05'22", long 70°58'35", Plymouth County, at culvert on State Highway 123, 1.0 mi east of Brockton, MA.	5.56	-	7-14-83 7-18-83 8-23-83 8-25-83	*0.41 *.18 *.32 *.27
01106460 Beaver Brook	do	Lat 42°02'43", long 70°58'17", Plymouth County, at culvert on Belmont St., 1.0 mi northwest of East Bridgewater, MA.	9.43	1965-68	7-14-83 7-18-83 8-23-83 8-25-83	*.69 *1.1 *.87 *.80
01106483 Meadow Brook	do	Lat 42°04'14", long 70°57'09", Plymouth County, at culvert on State Highway 14, 1.0 mi southwest of Whitman, MA.	1.50	-	7-19-83 8- 9-83 8-23-83 8-25-83	*.06 *.07 *.12 *.09
01106485 Meadow Brook tributary No. 1	Meadow Brook	Lat 42°04'10", long 70°57'35", Plymouth County, at culvert on State Highway 14, 1.3 mi southwest of Whitman, MA.	-	1967-74†	7-19-83 8- 9-83 8-23-83 8-25-83	0 0 0 0
01106487 Meadow Brook tributary No. 2	do	Lat 42°04'13", long 70°56'52", Plymouth County, at culvert on State Highway 14, 400 ft east of State Highway 18, 0.9 mi southwest of Whitman, MA.	-	-	7-14-83 7-19-83 8- 9-83 8-23-83 8-25-83	0 0 0 0 0
01106488 Meadow Brook	Salisbury Plain River	Lat 42°03'14", long 70°56'42", Plymouth County, at downstream side of culvert (above outfall) on Harvard St., 1.7 mi northeast of East Bridgewater, MA.	3.92	-	8- 9-83 8-18-83 8-23-83 8-25-83	*.10 *.02 *.13 *.10
01106489 Meadow Brook tributary	Meadow Brook	Lat 42°03'32", long 70°56'13", Plymouth County, at culvert on Pine St., 2.2 mi northeast of East Bridgewater, MA.	-	-	7-14-83 7-19-83 8- 9-83 8-18-83 8-23-83 8-25-83	0 0 0 *.05 0 0
01106490 Meadow Brook	Salisbury Plain River	Lat 42°02'17', long 70°57'04", Plymouth County, 100 ft north of Union St., 0.5 mi northeast of East Bridgewater, MA.	6.24	1967-68	7-14-83 7-18-83 8- 9-83 8-18-83 8-23-83 8-25-83	*.30 *.11 *.25 *.25 *.38 *.31

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1983--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Taunton River basin--Continued						
01106850	Poor Meadow Brook tributary	Lat 42°03'39", long 70°53'43", Plymouth County, at culvert on State Highway 14, 1.2 mi southeast of Hanson, MA.	2.01	-	7-14-83	*0.03
					7-18-83	0
					7-20-83	0
					7-22-83	0
					8- 9-83	0
					8-23-83	*.02
					8-25-83	0
01107060	Hockomock River	Lat 42°01'49", long 71°06'52", Bristol County, at culvert on Depot St., 2.0 mi southwest of South Easton, MA.	1.42	-	7-14-83	0
					7-19-83	0
					8-10-83	*.08
					8-23-83	*.16
					8-25-83	*.07
01107070	Town River	Lat 42°03'21", long 71°02'22", Plymouth County, at culvert on West Chestnut St., 2.0 mi southwest of Brockton, MA.	1.98	1967-68	7-18-83	*.22
					8- 9-83	*.33
					8-17-83	*.45
					8-25-83	*.45
01107080	do	Lat 42°00'58", long 71°01'53", Plymouth County, at culvert on State Highway 106, 1.3 mi west of West Bridgewater, MA.	6.25	-	7-13-83	*.37
					7-18-83	*.28
					8- 9-83	*.37
					8-17-83	*2.1
					8-25-83	*.55
01108305	Snake River	Lat 42°02'55", long 71°11'50", Bristol County, at bridge on Maple St., 1.8 mi northeast of Mansfield, MA.	4.59	-	7-15-83	*.36
					7-20-83	*.35
					8-10-83	*.45
					8-24-83	*.98
					8-26-83	*.69
01108315	do	Lat 41°59'15", long 71°09'57", Bristol County, at bridge on Interstate Highway I-495, 1.8 mi northeast of Norton, MA.	14.5	-	7-15-83	*1.5
					7-20-83	*1.0
					8-10-83	*1.6
					8-24-83	*4.0
					8-26-83	*3.2
01108590	Threemile River	Lat 41°58'39", long 71°14'42", Bristol County, at culvert on Richardson Ave., 3.1 mi west of Norton, MA.	21.3	-	7-15-83	*2.3
					7-19-83	*1.7
					8-10-83	*3.9
					8-24-83	*5.2
					8-26-83	*3.8
01109032	do	Lat 42°01'45", long 71°13'17", Bristol County, at culvert on West Church St., at Mansfield, MA.	10.8	-	7-15-83	*1.5
					7-19-83	*1.3
					8-10-83	*2.9
					8-24-83	*3.4
					8-26-83	*2.7
01109038	do	Lat 42°00'06", long 71°12'54", Bristol County, at bridge (below outfall) on Interstate Highway I-495, 2.1 mi south of Mansfield, MA.	13.2	-	7-15-83	.0
					7-19-83	*2.2
					8-10-83	*4.1
					8-24-83	*6.2
					8-26-83	*5.4
01109089	Assonet River	Lat 41°45'27", long 71°04'53", Bristol County, at culvert on gravel road in State Forest, 2.8 mi south of Assonet, MA.	3.18	-	7-18-83	*.47
					7-20-83	*.41
					8- 9-83	*.30
					8-17-83	*1.5
01109090	do	Lat 41°46'36", long 71°05'23", Bristol County, at culvert on South Main St., 1.7 mi southwest of Assonet, MA.	4.22	1957, 1966-68	7-18-83	*.89
					7-20-83	*.96
					8-17-83	2.5
Blackstone River basin						
01110500	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†, 1978-82	11-16-82	282
					12-28-82	186
					2- 1-83	327
					3-15-83	886
					4-27-83	1230
					6- 6-83	411
					7-19-83	74
					9- 9-83	115
Thames River basin						
01125000	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†, 1982	3-17-83	736
					4-25-83	499
					6-10-83	44
					6-13-83	206
					7-20-83	13
					9- 8-83	9.3

† Operated as a continuous-record station.

a Excludes 4.09 mile above outlet of Silver Lake, from which flow is diverted for municipal supply of Brockton, Whitman, and Hanson.

b Not computed because of unknown pumpage across divide.

c Includes area drained by bog at station 011058565.

d May be influenced by pumpage from three water-supply wells upstream.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
MERRIMACK RIVER BASIN									
01094400 NORTH NASHUA RIVER AT FITCHBURG, MA (LAT 42 34 34 LONG 071 47 19)									
OCT 1982					APR 1983				
26...	1500	39	200	8.0	21...	1530	500	78	7.0
DEC					JUN				
06...	1330	77	124	11.0	07...	1015	210	95	18.0
JAN 1983					JUL				
19...	1315	97	122	0.5	12...	1500	30	222	25.0
MAR					25...	1700	21	--	25.0
07...	1500	297	115	2.0	AUG				
22...	1630	637	--	3.5	30...	1500	33	215	25.0
01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA (LAT 42 30 06 LONG 071 43 23)									
OCT 1982					APR 1983				
26...	1115	76	215	8.0	25...	1145	1360	84	9.0
DEC					JUN				
06...	1130	141	163	11.5	06...	1100	435	110	19.0
JAN 1983					JUL				
14...	1215	265	153	1.0	12...	1145	67	230	22.5
MAR					25...	1145	56	--	25.0
07...	1100	490	134	1.0	AUG				
22...	1500	1080	--	3.5	30...	1130	78	189	24.0
01096000 SQUANNAHOOK RIVER NEAR WEST GROTON, MA (LAT 42 38 03 LONG 071 39 30)									
OCT 1982					APR 1983				
25...	1430	34	105	6.5	26...	1350	571	48	8.0
DEC					JUN				
06...	1430	94	72	0.5	08...	1430	153	73	17.0
JAN 1983					JUL				
04...	1300	106	59	0.0	20...	1500	20	62	24.0
MAR					SEP				
04...	1420	555	57	2.0	09...	1345	11	59	18.0
01096500 NASHUA RIVER AT EAST PEPPERELL, MA (LAT 42 40 03 LONG 071 34 32)									
OCT 1982					APR 1983				
25...	1115	122	172	6.0	26...	1130	3590	--	8.0
25...	1545	230	--	7.0	JUN				
DEC...					08...	1130	966	117	19.0
08...	1115	384	153	6.0	JUL				
JAN 1983					20...	1115	33	172	25.5
20...	1000	591	126	0.5	SEP				
MAR					09...	1030	157	195	--
04...	1145	3350	90	1.0					
22...	1100	4860	--	4.0					
01096910 BOULDER BROOK AT EAST BOLTON, MA (LAT 42 27 04 LONG 071 34 39)									
NOV 1982					JUN 1983				
12...	1430	1.1	220	11.0	10...	0930	2.2	395	17.0
DEC					14...	1430	1.5	--	26.0
29...	1400	2.3	161	7.0	JUL				
FEB 1983					22...	0800	0.36	395	20.5
14...	1200	3.6	--	0.5	AUG				
					26...	0745	0.09	380	18.0
01097000 ASSABET RIVER AT MAYNARD, MA (LAT 42 25 55 LONG 071 27 01)									
NOV 1982					JUN 1983				
02...	1230	60	270	13.5	10...	1300	173	156	18.5
DEC					JUL				
29...	1030	133	280	6.5	22...	1100	73	244	22.5
FEB 1983					AUG				
09...	1010	342	--	0.5	26...	1030	17	278	23.0
01097300 NASHOBA BROOK NEAR ACTON, MA (LAT 42 31 19 LONG 071 24 15)									
OCT 1982					JUN 1983				
29...	1000	7.6	--	9.5	07...	1430	20	138	18.5
DEC					JUL				
09...	1030	8.5	175	4.0	11...	1345	3.3	156	25.5
JAN 1983					AUG				
21...	1030	13	62	0.5	15...	1530	1.8	--	26.0
MAR					29...	1415	0.57	145	22.0
08...	1415	60	--	1.0					
APR									
25...	1415	130	87	--					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
MERRIMACK RIVER BASIN--Continued									
01098530 SUDBURY RIVER AT SAXONVILLE, MA (LAT 42 19 31 LONG 071 23 53)									
NOV 1982					MAR 1983				
01...	0800	45	290	13.5	21...	1120	857	--	6.0
12...	0800	70	--	10.0	22...	1115	965	--	5.0
DEC					JUN				
28...	1440	89	--	6.0	08...	0840	259	185	20.0
29...	0800	87	265	--	JUL				
FEB 1983					25...	0840	26	--	21.0
04...	1600	583	--	1.0	SEP				
					01...	1110	89	176	22.0
01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK, AT LOWELL, MA (LAT 42 38 12 LONG 071 18 09)									
NOV 1982					JUN 1983				
18...	1315	668	--	4.5	09...	1030	899	195	19.5
DEC					JUL				
15...	1245	254	--	0.5	20...	1015	143	156	22.5
JAN 1983					AUG				
26...	0920	851	240	0.0	24...	1245	66	178	23.0
MAR									
16...	1130	3350	265	2.5					
01100000 MERRIMACK RIVER BELOW CONCORD RIVER, AT LOWELL, MA (LAT 42 38 45 LONG 071 17 56)									
NOV 1982					JUN 1983				
18...	1100	5110	--	4.5	09...	1000	13200	245	20.5
DEC					JUL				
15...	1100	3240	--	0.5	20...	0930	2300	218	22.5
JAN 1983					AUG				
26...	1000	12400	188	0.0	24...	0940	2020	286	23.5
MAR									
16...	1030	30700	315	2.0					
01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA (LAT 42 34 05 LONG 071 12 55)									
JAN 1983					JUL 1983				
25...	0940	99	276	0.0	21...	1230	2.9	172	22.5
MAR					AUG				
16...	1415	218	192	2.0	26...	1430	4.6	132	20.5
JUN									
09...	1300	58	114	17.5					
PARKER RIVER BASIN									
01101000 PARKER RIVER AT BYFIELD, MA (LAT 42 45 10 LONG 070 56 46)									
NOV 1982					JUN 1983				
12...	1300	17	190	6.5	06...	1100	57	48	17.0
DEC					JUL				
14...	1245	17	156	0.0	19...	1130	2.7	164	23.5
JAN 1983					AUG				
25...	1130	38	144	0.0	23...	0830	0.29	94	22.5
MAR									
15...	1000	294	145	2.0					
IPSWICH RIVER BASIN									
01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA (LAT 42 34 10 LONG 071 01 39)									
NOV 1982					JUN 1983				
12...	1130	58	204	6.5	06...	0800	111	92	16.5
DEC					JUL				
16...	0730	36	156	1.5	19...	1320	2.7	209	24.0
JAN 1983					AUG				
25...	0815	100	208	0.0	23...	1320	0.58	124	22.5
MAR									
18...	0730	293	148	2.5					
01102000 IPSWICH RIVER NEAR IPSWICH, MA (LAT 42 39 35 LONG 070 53 39)									
NOV 1982					JUN 1983				
12...	1600	97	128	7.5	06...	1500	276	107	16.5
DEC					JUL				
14...	1500	29	145	0.5	19...	0630	5.1	174	23.5
JAN 1983					AUG				
25...	1430	142	116	0.0	23...	1100	3.3	132	23.0
MAR									
15...	1245	1660	286	2.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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MYSTIC RIVER BASIN									
01102500 ABERJONA RIVER AT WINCHESTER, MA (LAT 42 26 50 LONG 071 08 22)									
NOV 1982					JUN 1983				
12...	0900	8.4	365	7.5	07...	1415	29	405	19.5
DEC					JUL				
16...	1315	17	410	0.5	21...	0945	3.8	365	24.5
JAN 1983					AUG				
27...	1300	39	445	0.0	25...	1300	2.1	410	23.0
MAR									
17...	1330	112	275	2.5					
CHARLES RIVER BASIN									
01104000 MOTHER BROOK AT DEDHAM, MA (LAT 42 15 18 LONG 071 09 53)									
NOV 1982					JUN 1983				
10...	1015	18	220	8.5	15...	0900	4.1	240	23.0
DEC					JUL				
17...	1435	22	242	1.5	28...	0845	0.34	--	21.0
MAR 1983					AUG				
24...	1000	324	146	6.0	30...	1520	12	540	23.0
APR									
29...	0800	457	113	14.5					
01104200 CHARLES RIVER AT WELLESLEY, MA (LAT 42 18 59 LONG 071 13 42)									
NOV 1982					JUN 1983				
23...	1130	206	168	4.0	07...	0815	342	165	19.5
DEC					JUL				
16...	0930	145	228	1.0	21...	0700	65	192	24.5
JAN 1983					AUG				
27...	0730	347	132	0.0	25...	0940	51	210	23.5
MAR									
17...	0715	1230	204	2.5					
01104500 CHARLES RIVER AT WALTHAM, MA (LAT 42 22 20 LONG 071 14 03)									
NOV 1982					JUN 1983				
23...	0900	240	210	4.5	07...	1055	381	225	18.0
DEC					JUL				
16...	1100	148	255	0.5	29...	1115	60	260	24.5
JAN 1983					AUG				
27...	1000	404	190	0.5	25...	1145	57	197	23.5
MAR									
17...	1100	1660	345	3.5					
NEPONSET RIVER BASIN									
01105000 NEPONSET RIVER AT NORWOOD, MA (LAT 42 10 39 LONG 071 12 05)									
NOV 1982					APR 1983				
10...	1220	30	210	9.0	28...	1100	230	149	14.0
DEC					JUN				
20...	1520	34	320	1.5	15...	1320	28	210	26.0
FEB 1983					JUL				
01...	1225	99	131	3.0	29...	1150	4.0	260	23.5
MAR					AUG				
24...	1330	210	156	6.5	30...	1100	13	235	22.5
01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MA (LAT 42 09 16 LONG 071 08 47)									
NOV 1982					APR 1983				
10...	1545	24	145	8.0	28...	1430	163	148	17.5
DEC					JUN				
20...	1310	47	180	0.5	08...	1455	45	167	20.5
FEB 1983					JUL				
01...	1430	126	118	4.0	29...	0800	7.6	188	24.0
MAR					AUG				
25...	1305	118	152	5.0	30...	1400	16	188	23.0
WEYMOUTH FORE RIVER BASIN									
01105585 TOWN BROOK AT QUINCY, MA (LAT 42 14 52 LONG 070 59 52)									
NOV 1982					APR 1983				
04...	1300	1.6	520	15.0	29...	1220	21	490	14.0
DEC					JUN				
14...	1030	3.5	--	0.5	16...	1050	2.0	525	17.0
16...	1530	34	435	0.5	JUL				
JAN 1983					25...	1430	12	460	22.0
31...	1340	14	173	5.0	AUG				
MAR					29...	1205	16	300	20.5
21...	1030	20	545	8.0					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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WEYMOUTH BACK RIVER BASIN									
01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA (LAT 42 11 25 LONG 070 56 43)									
NOV 1982					MAY 1983				
04...	1500	2.0	230	--	02...	0945	11	173	15.0
DEC					JUN				
17...	1125	14	161	4.0	09...	0830	5.0	192	13.5
FEB 1983					JUL				
08...	1000	17	163	1.0	26...	1715	1.4	210	21.0
MAR					AUG				
21...	1355	17	156	8.0	29...	1510	18	156	19.5
NORTH RIVER BASIN									
01105730 INDIAN HEAD RIVER AT HANOVER, MA (LAT 42 06 02 LONG 070 49 23)									
NOV 1982					MAY 1983				
05...	1130	47	230	17.0	05...	0845	93	178	15.0
DEC					JUN				
21...	1450	59	220	0.5	09...	1245	47	174	18.5
FEB 1983					JUL				
08...	1415	163	127	0.5	27...	0815	5.1	265	23.0
MAR					SEP				
23...	1035	358	111	6.0	08...	0900	5.5	270	24.0
JONES RIVER BASIN									
01105870 JONES RIVER AT KINGSTON, MA (LAT 41 59 27 LONG 070 44 03)									
NOV 1982					MAY 1983				
05...	1340	27	95	17.0	04...	1315	68	92	16.0
DEC					JUN				
22...	1100	33	89	1.0	10...	1100	40	86	15.5
FEB 1983					JUL				
09...	0815	84	64	1.0	27...	1230	20	93	23.0
MAR					SEP				
23...	1505	128	82	8.0	08...	1340	17	93	22.5
HERRING RIVER BASIN									
01105880 HERRING RIVER AT NORTH HARWICH, MA (LAT 41 42 00 LONG 070 06 27)									
NOV 1982					MAY 1983				
08...	1530	7.2	90	13.0	02...	1330	31	81	15.0
DEC					JUN				
03...	0800	5.0	99	9.0	13...	0955	22	90	19.5
28...	1440	6.2	94	7.0	JUL				
FEB 1983					21...	0800	12	88	24.0
10...	1510	5.5	72	2.5	SEP				
MAR					06...	1030	12	89	23.0
18...	0820	27	83	7.0					
TAUNTON RIVER BASIN									
01108500 WADING RIVER AT WEST MANSFIELD, MA (LAT 42 00 00 LONG 071 15 38)									
NOV 1982					APR 1983				
16...	1000	40	220	4.5	27...	1535	205	135	13.0
DEC					JUN				
23...	1540	29	193	0.5	08...	1115	31	173	19.0
FEB 1983					JUL				
04...	0915	105	119	4.5	28...	1425	1.8	210	24.0
MAR					AUG				
15...	0845	147	144	6.5	31...	1110	5.5	176	22.0
01109000 WADING RIVER NEAR NORTON, MA (LAT 41 56 51 LONG 071 10 38)									
NOV 1982					APR 1983				
09...	1510	53	155	9.5	26...	1310	517	95	11.0
DEC					JUN				
23...	1335	62	165	0.5	07...	0930	104	124	19.0
FEB 1983					JUL				
04...	1330	261	96	4.5	19...	1315	5.4	183	25.0
MAR					AUG				
25...	0850	231	119	5.0	31...	1530	11	198	22.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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TAUNTON RIVER BASIN--Continued									
01109060 THREEMILE RIVER AT NORTH DIGHTON, MA (LAT 41 51 58 LONG 071 07 24)									
NOV 1982					APR 1983				
09...	1035	117	150	10.0	26...	0815	1260	92	11.0
DEC					JUN				
22...	1420	135	148	1.0	07...	1245	227	119	20.0
FEB 1983					JUL				
02...	0900	265	102	1.5	19...	0900	28	164	25.0
MAR					SEP				
16...	1135	541	126	8.0	07...	0845	24	187	24.0
01109070 SEGREGANSET RIVER NEAR DIGHTON, MA (LAT 41 50 25 LONG 071 08 36)									
NOV 1982					APR 1983				
09...	1235	12	70	9.0	25...	1345	331	46	11.5
DEC					JUN				
23...	1155	16	77	0.5	06...	1130	34	54	17.5
FEB 1983					JUL				
02...	1430	36	65	2.5	18...	1130	0.75	87	24.0
MAR					SEP				
16...	0830	45	59	7.5	07...	1215	0.45	97	25.0
BLACKSTONE RIVER BASIN									
01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA (LAT 42 13 49 LONG 071 42 41)									
NOV 1982					MAR 1983				
16...	0900	37	260	6.0	16...	1030	136	--	5.0
DEC					JUN				
16...	0900	12	300	4.0	08...	1230	54	254	21.0
JAN 1983					AUG				
31...	1340	42	--	0.5	31...	1110	50	218	22.5
01110500 BLACKSTONE RIVER AT NORTHBRIDGE, MA (LAT 42 09 13 LONG 071 39 09)									
NOV 1982					MAR 1983				
16...	1300	282	280	7.5	15...	1610	886	--	4.5
DEC					JUN				
28...	1230	186	420	7.5	06...	1300	411	--	20.0
01111200 WEST RIVER BELOW WEST HILL DAM, NEAR UXBRIDGE, MA (LAT 42 06 17 LONG 071 36 28)									
NOV 1982					MAR 1983				
16...	1430	45	125	5.5	15...	0800	281	--	3.5
DEC					JUN				
20...	1345	22	162	1.5	06...	0815	87	--	15.5
JAN 1983					AUG				
31...	0800	62	--	0.5	31...	1350	7.3	165	21.0
01111300 NIPMUC RIVER NEAR HARRISVILLE, RI (LAT 41 58 52 LONG 071 41 11)									
NOV 1982					JAN 1983				
29...	1430	26	53	--	17...	1400	35	53	0.5
01112500 BLACKSTONE RIVER AT WOONSOCKET, RI (LAT 42 00 22 LONG 071 30 13)									
OCT 1982									
04...	1015	172	265	17.0					
MOSHASSUCK RIVER BASIN									
01114000 MOSHASSUCK RIVER AT PROVIDENCE, RI (LAT 41 50 02 LONG 071 24 42)									
DEC 1982					JAN 1983				
02...	1150	27	270	9.5	19...	0900	28	260	0.5
WOONASQUATUCKET RIVER BASIN									
01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI (LAT 41 51 32 LONG 071 29 16)									
DEC 1982					JUN 1983				
02...	1000	41	143	8.5	09...	0815	84	1050	19.0
JAN 1983									
19...	1230	66	145	0.5					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
PAWTUXET RIVER BASIN									
01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI (LAT 41 41 24 LONG 071 33 59)									
JAN 1983 24...	1200	134	85	1.5					
PAWCATUCK RIVER BASIN									
01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI (LAT 41 26 42 LONG 071 40 53)									
DEC 1982 27...	1000	195	63	5.0	JAN 1983 26...	1200	395	51	1.0
THAMES RIVER BASIN									
01123360 QUINEBAUG RIVER BELOW EAST BRIMFIELD DAM, AT FISKDALE, MA (LAT 42 06 31 LONG 072 07 27)									
NOV 1982 03...	1525	31	81	14.5	JUN 1983 09...	1610	161	64	20.0
DEC 21...	0945	96	72	2.0	SEP 07...	1440	23	87	27.0
01123600 QUINEBAUG RIVER BELOW WESTVILLE DAM, NEAR SOUTHBRIDGE, MA (LAT 42 04 58 LONG 072 03 27)									
NOV 1982 03...	0900	42	121	13.0	JUN 1983 13...	1225	139	87	24.0
DEC 21...	1245	139	94	2.0	SEP 07...	1710	37	117	27.0
01124350 FRENCH RIVER BELOW HODGES VILLAGE DAM, AT HODGES VILLAGE, MA (LAT 42 07 06 LONG 071 52 54)									
NOV 1982 15...	1215	93	141	7.0	JUN 1983 09...	0950	62	90	17.0
DEC 17...	0900	56	103	3.0	SEP 02...	1500	3.9	108	23.5
FEB 1983 02...	1500	53	--	1.0					
01124500 LITTLE RIVER NEAR OXFORD, MA (LAT 42 06 57 LONG 071 53 26)									
NOV 1982 10...	1300	138	93	9.5	MAR 1983 17...	1335	282	--	4.0
DEC 17...	1245	121	83	4.5	JUN 08...	1540	69	73	20.0
FEB 1983 11...	1000	79	--	0.5	SEP 02...	1705	5.7	75	23.5
CONNECTICUT RIVER BASIN									
01162000 MILLERS RIVER NEAR WINCHENDON, MA (LAT 42 41 03 LONG 072 05 02)									
OCT 1982 18...	1145	97	54	8.0	APR 1983 20...	1215	606	47	7.5
DEC 07...	1315	54	67	6.0	JUN 03...	1015	300	48	16.5
JAN 1983 18...	1115	140	74	0.5	JUL 19...	1430	15	74	26.0
MAR 03...	1230	397	62	1.0	SEP 06...	1300	23	100	26.0
01162500 PRIEST BROOK NEAR WINCHENDON, MA (LAT 42 40 57 LONG 072 06 56)									
OCT 1982 18...	1400	5.3	48	7.5	APR 1983 20...	1500	131	38	7.0
DEC 07...	1045	15	57	5.5	JUN 03...	1230	59	38	16.0
JAN 1983 18...	1430	28	50	0.5	JUL 18...	1600	1.7	33	24.0
MAR 03...	1045	72	36	1.0	SEP 06...	1430	1.6	54	21.5
01163200 OTTER RIVER AT OTTER RIVER, MA (LAT 42 35 18 LONG 072 02 29)									
OCT 1982 28...	1445	18	195	10.0	APR 1983 18...	1200	162	93	8.0
DEC 06...	1530	43	118	12.0	JUN 06...	1300	177	87	18.5
JAN 1983 19...	0932	69	105	0.5	JUL 15...	0945	18	149	25.0
MAR 08...	1030	140	--	1.0	SEP 02...	0930	71	123	19.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
CONNECTICUT RIVER BASIN--Continued									
01164000 MILLERS RIVER AT SOUTH ROYALSTON, MA (LAT 42 37 47 LONG 072 09 03)									
OCT 1982					APR 1983				
27...	1530	140	122	9.0	18...	1515	1190	68	7.5
DEC					JUN				
07...	0900	181	130	6.0	02...	1445	1070	63	16.5
JAN 1983					JUL				
14...	0915	765	75	0.5	19...	1045	61	210	24.0
MAR					SEP				
03...	0900	844	86	0.5	08...	1315	52	182	22.0
01165000 EAST BRANCH TULLY RIVER NEAR ATHOL, MA (LAT 42 38 32 LONG 072 13 34)									
OCT 1982					APR 1983				
18...	1615	24	42	8.0	20...	0905	163	32	7.0
DEC					JUN				
03...	1330	61	44	6.0	01...	1045	228	40	16.0
JAN 1983					JUL				
17...	1215	88	45	1.0	18...	1330	12	39	26.0
MAR					SEP				
01...	0930	48	38	1.0	01...	1445	15	40	21.0
01165300 LAKE ROHUNTA OUTLET NEAR ATHOL, MA (LAT 42 34 13 LONG 072 16 22)									
OCT 1982					APR 1983				
21...	1430	3.1	74	9.0	19...	1200	116	60	7.5
DEC					JUN				
03...	1115	19	90	7.0	02...	1100	130	62	17.5
JAN 1983					JUL				
17...	1545	43	42	1.0	14...	1430	9.2	58	26.0
MAR					SEP				
01...	1245	30	82	1.0	08...	1045	2.5	60	18.0
01166500 MILLERS RIVER AT ERVING, MA (LAT 42 35 51 LONG 072 26 19)									
OCT 1982					APR 1983				
21...	0915	183	127	7.5	19...	1530	2500	64	8.0
DEC					JUN				
03...	0915	443	103	3.5	07...	1430	2120	55	16.0
JAN 1983					JUL				
13...	1110	1520	65	1.0	14...	1030	153	156	26.0
MAR					SEP				
02...	1615	1010	84	1.0	01...	1115	334	198	21.0
01168151 DEERFIELD RIVER NEAR ROWE, MA (LAT 42 40 57 LONG 072 58 37)									
OCT 1982					MAR 1983				
07...	0925	72	44	17.0	24...	1340	858	42	4.5
NOV					MAY				
19...	0800	72	50	9.0	04...	0950	3400	34	7.5
DEC					JUN				
28...	0825	1070	--	5.0	15...	1100	776	36	17.0
FEB 1983					AUG				
10...	1300	1000	40	3.5	31...	0955	1050	45	21.5
01168500 DEERFIELD RIVER AT CHARLEMONT, MA (LAT 42 37 33 LONG 072 51 20)									
OCT 1982					MAY 1983				
13...	0810	217	49	14.0	04...	0850	4510	36	8.5
NOV					JUN				
19...	0950	163	54	7.0	15...	1315	213	53	21.0
DEC					JUL				
28...	1030	1030	48	5.0	28...	0840	142	50	20.0
FEB 1983					SEP				
11...	0905	1030	37	0.5	01...	1050	139	45	21.0
MAR									
23...	1035	1680	46	2.0					
01169000 NORTH RIVER AT SHATTUCKVILLE, MA (LAT 42 38 18 LONG 072 43 32)									
OCT 1982					MAY 1983				
08...	0820	20	370	14.0	03...	1430	552	60	23.0
NOV					JUN				
16...	0920	48	140	2.0	16...	1045	87	123	19.0
DEC					AUG				
28...	1300	88	114	1.0	05...	0940	19	375	22.5
FEB 1983					SEP				
10...	1525	149	133	0.0	01...	0800	32	235	19.5
MAR									
24...	1000	438	77	0.0					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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CONNECTICUT RIVER BASIN--Continued									
01169900 SOUTH RIVER NEAR CONWAY, MA (LAT 42 32 31 LONG 072 41 39)									
OCT 1982					MAY 1983				
04...	1255	4.3	182	15.0	03...	0915	110	90	11.0
NOV					06...	0835	80	98	11.0
16...	0745	11	95	1.0	JUN				
DEC					16...	1525	30	128	23.0
27...	1340	17	138	1.0	AUG				
JAN 1983					02...	0755	7.2	186	21.0
13...	0945	30	--	0.5	SEP				
FEB					01...	1415	12	136	22.0
14...	1535	44	114	0.0					
MAR									
02...	1345	445	--	2.0					
22...	0735	316	72	2.5					
31...	1250	84	102	4.0					
01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA (LAT 42 32 09 LONG 072 39 14)									
OCT 1982					MAR 1983				
12...	1255	565	103	12.0	22...	1240	4170	67	3.0
NOV					MAY				
15...	1435	851	95	5.5	03...	0805	6710	53	9.0
DEC					AUG				
27...	1500	1060	83	2.0	04...	0820	118	84	23.0
FEB 1983					SEP				
15...	0930	1240	90	0.5	07...	1325	132	74	25.0
01170100 GREEN RIVER NEAR COLRAIN, MA (LAT 42 42 12 LONG 072 40 16)									
OCT 1982					MAY 1983				
07...	1335	8.0	117	14.0	02...	1355	470	51	10.0
NOV					JUN				
17...	0800	17	107	0.0	16...	0745	40	98	17.0
DEC					SEP				
29...	1005	44	80	0.5	02...	0745	9.0	104	15.0
MAR 1983									
23...	1220	305	68	0.0					
01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA (LAT 42 34 48 LONG 072 34 30)									
OCT 1982					JUN 1983				
12...	1150	8800	136	15.0	17...	1200	14100	110	22.0
NOV					JUL				
15...	1320	11400	97	805.0	29...	1115	5030	146	24.0
DEC					SEP				
28...	1630	12000	104	2.0	07...	1400	9310	129	25.0
MAY 1983									
02...	1255	59100	67	10.0					
25...	0830	31500	75	1.0					
01171300 FORT RIVER NEAR AMHERST, MA (LAT 42 21 30 LONG 072 30 23)									
JAN 1983					JUN 1983				
12...	1425	235	127	5.0	16...	1045	31	87	19.5
FEB					JUL				
15...	1220	70	72	0.5	26...	0950	16	106	19.0
MAR					SEP				
02...	0945	260	60	1.5	07...	1000	6.4	127	22.0
24...	1415	113	72	3.5					
MAY									
05...	1230	130	59	12.0					
01171500 MILL RIVER AT NORTHAMPTON, MA (LAT 42 19 05 LONG 072 39 21)									
OCT 1982					MAY 1983				
20...	1500	15	123	8.0	03...	1145	221	90	12.5
DEC					JUN				
02...	1500	28	110	4.0	16...	0745	54	109	19.5
JAN 1983					JUL				
12...	1245	162	84	6.0	26...	1530	18	120	23.0
FEB					SEP				
10...	1320	107	111	0.0	15...	1430	7.0	187	13.5
MAR									
25...	0655	215	118	0.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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CONNECTICUT RIVER BASIN--Continued									
01172500 WARE RIVER NEAR BARRE, MA (LAT 42 25 35 LONG 072 01 30)									
OCT 1982					APR 1983				
27...	1200	21	--	9.0	21...	1130	669	--	6.5
DEC					MAY				
01...	1045	83	61	4.0	31...	1245	209	44	17.0
JAN 1983					JUL				
13...	1500	231	68	0.5	13...	1130	19	48	25.0
FEB					AUG				
28...	1145	117	48	2.0	31...	1030	33	52	20.5
01173500 WARE RIVER AT GIBBS CROSSING, MA (LAT 42 14 10 LONG 072 16 23)									
NOV 1982					MAY 1983				
10...	0815	154	59	6.5	02...	1000	703	51	16.0
DEC					JUN				
27...	1315	278	64	1.5	13...	1200	209	64	21.5
FEB 1983					JUL				
14...	1440	305	62	0.5	25...	1045	90	382	20.5
MAR					SEP				
28...	0945	496	65	3.5	06...	1300	29	80	24.0
01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA (LAT 42 23 36 LONG 072 14 21)									
OCT 1982					APR 1983				
27...	1015	21	43	10.0	14...	0915	204	42	8.5
DEC					19...	0905	184	--	6.5
01...	1205	65	46	4.0	MAY				
JAN 1983					31...	1500	383	45	18.0
13...	1315	197	20	0.5	JUL				
FEB					13...	1430	18	51	26.0
28...	1430	55	47	1.5	AUG				
					31...	1440	24	44	23.0
01174600 CADWELL CREEK NEAR PELHAM, MA (LAT 42 21 16 LONG 072 23 18)									
OCT 1982					MAY 1983				
19...	1500	0.21	73	5.5	06...	0810	1.5	59	8.5
DEC					JUN				
01...	1315	1.1	48	3.5	17...	0810	0.22	49	19.0
JAN 1983					JUL				
11...	1100	16	38	8.0	26...	0710	0.05	59	15.0
FEB					SEP				
16...	0855	0.87	57	0.5	15...	0945	0.00	44	11.5
MAR									
24...	0710	1.9	73	0.0					
01174900 CADWELL CREEK NEAR BELCHERTOWN, MA (LAT 42 20 08 LONG 072 22 12)									
OCT 1982					JUN 1983				
19...	1330	1.0	75	7.0	17...	1010	1.2	32	17.0
DEC					JUL				
01...	1445	3.9	48	4.0	26...	0815	0.42	36	15.0
JAN 1983					SEP				
11...	1330	39	43	8.0	01...	1030	--	27	17.0
FEB					15...	1020	0.11	30	11.5
16...	0730	4.4	35	0.5					
MAR									
24...	1020	8.3	39	1.0					
01175500 SWIFT RIVER AT WEST WARE, MA (LAT 42 16 04 LONG 072 19 59)									
OCT 1982					MAY 1983				
07...	1200	126	39	16.0	05...	1710	724	34	7.0
NOV					JUN				
09...	1415	123	42	12.5	16...	1400	390	40	19.0
DEC					JUL				
22...	0745	12	43	5.0	25...	1305	123	42	14.0
FEB 1983					SEP				
15...	0715	17	55	0.5	01...	1130	131	36	14.0
MAR					06...	1500	125	37	14.0
25...	1145	118	45	2.5					
APR									
14...	1245	532	40	5.0					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

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CONNECTICUT RIVER BASIN--Continued									
01175670 SEVENMILE RIVER NEAR SPENCER, MA (LAT 42 15 54 LONG 072 00 19)									
NOV 1982					MAR 1983				
05...	1130	15	66	15.0	24...	1100	37	--	2.5
DEC					25...	1345	31	--	1.0
27...	1100	11	51	2.0	APR				
FEB 1983					25...	1225	104	--	9.0
10...	1545	24	--	0.5	JUN				
					10...	0950	15	m46	14.0
01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA (LAT 42 10 56 LONG 072 15 51)									
NOV 1982					MAY 1983				
10...	1015	111	107	7.5	02...	0830	785	55	16.5
17...	1530	257	110	5.0	JUN				
DEC					13...	0830	293	74	21.0
23...	0815	115	87	1.0	JUL				
FEB 1983					25...	0810	65	87	19.5
14...	0925	411	74	0.0	SEP				
MAR					06...	0845	49	94	22.5
28...	0815	795	76	4.5					
01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA (LAT 42 09 38 LONG 072 30 52)									
OCT 1982					MAY 1983				
08...	0800	60	94	16.5	02...	1215	2690	54	14.5
NOV					JUN				
09...	0900	685	88	10.5	13...	1500	1310	70	20.0
DEC					JUL				
22...	1330	603	86	1.5	29...	0840	189	120	24.0
FEB 1983					SEP				
09...	1450	1210	74	0.5	09...	0930	82	96	22.0
MAR									
28...	1200	1870	82	4.0					
01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA (LAT 42 17 16 LONG 072 51 53)									
OCT 1982					MAY 1983				
05...	0830	24	100	11.0	04...	1400	714	45	14.0
NOV					JUN				
22...	1240	62	82	8.0	15...	1225	208	69	22.5
JAN 1983					JUL				
05...	0845	52	78	0.5	27...	0715	54	78	17.0
FEB					SEP				
11...	1355	214	61	0.0	16...	1215	15	82	14.0
MAR									
23...	1215	2920	40	2.5					
01180500 MIDDLE BRANCH WESTFIELD RIVER AT GOSS HEIGHTS, MA (LAT 42 15 31 LONG 072 52 23)									
OCT 1982					MAY 1983				
05...	1210	6.5	55	15.0	04...	1300	197	35	13.0
NOV					JUN				
22...	1420	21	53	9.0	15...	0800	56	45	22.0
JAN 1983					JUL				
05...	1100	23	58	2.0	27...	0930	15	48	21.0
FEB					SEP				
11...	1100	84	47	0.0	16...	0845	1.2	54	10.5
MAR									
23...	0710	976	53	2.5					
01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA (LAT 42 14 14 LONG 072 53 46)									
OCT 1982					MAY 1983				
25...	1300	21	--	4.5	04...	0730	346	52	13.0
NOV					JUN				
23...	0805	44	102	8.0	15...	0930	122	75	18.5
JAN 1983					JUL				
05...	1330	43	100	0.0	27...	1015	23	96	19.0
FEB					SEP				
11...	0745	188	79	0.0	07...	1230	9.1	103	23.5
MAR									
22...	1335	1100	52	4.5					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

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CONNECTICUT RIVER BASIN--Continued									
01183500 WESTFIELD RIVER NEAR WESTFIELD, MA (LAT 42 06 24 LONG 072 41 58)									
OCT 1982					MAY 1983				
06...	0835	86	162	15.0	03...	0700	2460	61	12.5
DEC					JUN				
01...	1040	441	120	4.5	14...	0715	585	104	19.5
JAN 1983					JUL				
06...	0810	328	176	1.5	28...	1400	98	150	22.0
FEB					SEP				
09...	1145	964	89	0.5	08...	1550	136	135	20.0
MAR									
22...	0845	3810	63	4.0					
01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA (LAT 42 04 45 LONG 073 04 24)									
MAY 1983					JUL 1983				
05...	0745	312	47	9.5	28...	0945	11	97	18.0
HOUSATONIC RIVER BASIN									
01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA (LAT 42 28 10 LONG 073 11 49)									
OCT 1982					MAY 1983				
19...	1500	57	220	11.0	09...	1315	171	124	10.0
NOV					JUN				
30...	0830	83	187	4.5	13...	1320	55	225	20.0
JAN 1983					JUL				
04...	1420	23	310	3.5	26...	1405	23	325	20.0
FEB					AUG				
08...	1340	61	190	1.5	29...	1310	14	360	21.0
MAR									
30...	0835	145	149	1.0					
01197015 TOWN BROOK AT BRIDGE STREET, AT LANESBOROUGH, MA (LAT 42 31 12 LONG 073 13 48)									
OCT 1982					FEB 1983				
19...	1110	2.6	370	11.0	08...	1450	22	144	0.5
NOV					MAR				
18...	1050	4.4	320	4.0	29...	1350	31	220	5.0
JAN 1983					MAY				
04...	1110	11	280	0.0	10...	0755	36	--	5.5
01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA (LAT 42 13 55 LONG 073 21 19)									
OCT 1982					JUN 1983				
05...	1215	119	--	16.5	08...	1255	1100	--	18.0
DEC					JUL				
06...	1055	170	--	10.0	27...	1500	139	330	21.0
JAN 1983					29...	1211	124	--	24.5
26...	1530	656	--	0.5	SEP				
APR					20...	1054	79	--	21.0
25...	0835	3780	--	7.0					
HUDSON RIVER BASIN									
01331500 HOOSIC RIVER AT ADAMS, MA (LAT 42 36 40 LONG 073 07 28)									
OCT 1982					MAY 1983				
14...	0755	30	260	11.0	09...	1400	207	146	10.0
NOV					JUN				
29...	1320	70	215	3.0	14...	1020	79	197	19.0
JAN 1983					JUL				
04...	0935	34	250	0.0	27...	0820	240	240	16.5
FEB					AUG				
09...	1120	86	166	1.5	30...	0925	27	230	18.0
MAR									
30...	1410	126	185	3.0					
01332000 NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA (LAT 42 42 08 LONG 073 05 37)									
OCT 1982					MAY 1983				
13...	1045	9.8	153	11.0	05...	1510	170	54	10.5
NOV					JUN				
18...	0810	32	97	1.0	14...	1550	245	101	19.0
JAN 1983					AUG				
04...	0815	19	95	0.0	03...	1425	15	146	21.5
FEB					31...	0835	9.8	173	20.0
10...	0820	47	--	0.0					
MAR									
28...	1420	97	72	2.5					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UMHOS)	TEMPER- ATURE (DEG C)
HUDSON RIVER BASIN--Continued									
01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA (LAT 42 42 21 LONG 073 10 50)									
OCT 1982					MAY 1983				
13...	1435	48	365	12.0	05...	1040	627	153	10.0
NOV					JUN				
18...	1000	83	290	3.0	15...	0920	191	280	18.0
JAN 1983					JUL				
03...	1600	139	230	15.0	26...	1150	69	350	21.0
FEB					AUG				
09...	1605	248	210	1.0	31...	0815	76	345	20.0
MAR									
31...	1025	248	205	3.0					
01333000 GREEN RIVER AT WILLIAMSTOWN, MA (LAT 42 42 32 LONG 073 11 50)									
OCT 1982					MAY 1983				
13...	1530	10	235	12.0	05...	1225	225	132	9.5
NOV					JUN				
18...	1345	23	197	4.5	14...	1340	55	173	18.0
JAN 1983					JUL				
03...	1325	47	168	2.0	25...	1400	16	350	21.5
FEB					AUG				
09...	1630	78	128	0.0	30...	1440	13	345	23.0
MAR									
29...	1005	133	174	3.5					

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Taunton Well TAW 258.....	203	Boston Well BGW 925.....	221
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BARNSTABLE COUNTY

413956070164301. Barnstable well A1W 230.

LOCATION.--Lat 41°39'56", long 70°16'43", Hydrologic Unit 01090002, 50 ft west of Mary Dunn Road at Hyannis Airport and 0.3 mi north of intersection of Willow Street and State Highway 28 in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 35.8 ft, screened 32.8 to 35.8 ft.

DATUM.--Land-surface datum is 43.23 ft 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 below land-surface datum, May 12, 1973; lowest, 26.22 ft below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	24.70	JAN 20, 1983	24.71	APR 22, 1983	21.27	JUL 21, 1983	22.80
NOV 22	24.93	FEB 22	23.97	MAY 20	21.58	AUG 23	23.79
DEC 24	24.73	MAR 25	21.45	JUN 24	22.23	SEP 26	24.55

414154070165001. Barnstable well A1W 247.

LOCATION.--Lat 41°41'54", long 70°16'50", Hydrologic Unit 01090002, 30 ft east of Mary Dunn Road and 0.2 mi south of State Highway 6A in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 52 ft, screened 49 to 52 ft. DATUM.--Land-surface datum is 44.52 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft below land-surface datum, May 25, 1973; lowest measured, 28.64 ft below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	25.90	JAN 26, 1983	26.04	APR 22, 1983	22.55	JUL 21, 1983	22.71
NOV 22	26.07	FEB 22	25.67	MAY 23	22.07	AUG 23	23.24
DEC 24	26.10	MAR 23	23.50	JUN 24	22.26	SEP 23	23.76

414129070361401. Bourne well BHW 198.

LOCATION.--Lat 41°41'29", long 70°36'14", Hydrologic Unit 01090002, 50 ft west of County Road and 0.3 mi south of Pocasset Road in Bourne.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 50 ft, screened 47 to 50 ft. DATUM.--Land-surface datum is 55.56 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.43 ft below land-surface datum, Dec. 27, 1972; lowest measured, 36.17 ft 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, 1982	34.60	JAN 24, 1983	34.18	APR 25, 1983	31.25	JUL 21, 1983	32.50
NOV 23	34.70	FEB 21	33.55	MAY 23	30.46	AUG 24	33.13
DEC 21	34.60	MAR 22	31.14	JUN 23	31.50	SEP 27	33.69

BARNSTABLE COUNTY--Continued

414518070020301. Brewster well BMW 21.

LOCATION.--Lat 41°45'18", long 70°02'03", Hydrologic Unit 01090002, about 50 ft north of Nook Road, 0.1 mi south of Cliff Pond, 0.3 mi east of Silas Road, and at Nickerson State Park in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.5 in, depth 25 ft, screened 22 to 25 ft.

DATUM.--Land-surface datum is 36.97 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land-surface datum, Apr. 25, 1974; lowest measured, 13.34 ft below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	10.97	JAN 26, 1983	10.87	APR 25, 1983	8.21	JUL 21, 1983	7.76
NOV 23	10.94	FEB 23	10.56	MAY 26	7.76	AUG 25	7.96
DEC 22	10.95	MAR 23	9.29	JUN 24	7.55	SEP 26	8.29

414630070014901. Brewster well BMW 22.

LOCATION.--Lat 41°46'30", long 70°01'49", Hydrologic Unit 01090002, 50 ft east of entrance to Nickerson State Park and 50 ft south of State Highway 6A in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 52 ft, screened 49 to 52 ft.

DATUM.--Land-surface datum is 50.45 ft 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 below land-surface datum, June 27, 1973; lowest measured, 33.60 ft below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	31.70	JAN 26, 1983	31.75	MAY 26, 1983	28.13	AUG 25, 1983	29.47
NOV 23	31.85	MAR 23	29.24	JUN 24	28.48	SEP 26	29.95
DEC 22	31.80	APR 25	28.15	JUL 21	28.92		

414100070011101. Chatham well CGW 138.

LOCATION.--Lat 41°41'00", long 70°01'11", Hydrologic Unit 01090002, 50 ft east of State Highway 137 and 300 ft north of State Highway 28 in Chatham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 44 ft, screened 41 to 44 ft.

DATUM.--Land-surface datum is 35.28 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.77 ft above land-surface datum; prior to June 1980, 3.80 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.94 ft below land-surface datum, Apr. 25, 1983; lowest measured, 26.22 ft below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	24.13	JAN 20, 1983	24.01	APR 25, 1983	20.94	JUL 25, 1983	22.33
NOV 23	24.14	FEB 23	23.65	MAY 26	21.22	AUG 25	23.04
DEC 22	23.51	MAR 22	21.88	JUN 23	21.66	SEP 28	23.67

GROUND-WATER LEVELS IN MASSACHUSETTS

BARNSTABLE COUNTY--Continued

414418070241601. Sandwich well SDW 252.

LOCATION.--Lat 41°44'18", long 70°24'16", Hydrologic Unit 01090002, 0.5 mi north of State Highway 6A and 15 ft east of Private Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 57 ft, screened 55 to 57 ft.

DATUM.--Land-surface datum is 53.47 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.88 ft below land-surface datum, Apr. 25, 1983; lowest measured, 48.23 ft below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	47.50	JAN 24, 1983	47.66	APR 25, 1983	45.88	JUL 22, 1983	46.58
NOV 22	47.70	FEB 21	47.32	MAY 23	45.94	AUG 24	46.90
DEC 28	47.62	MAR 22	46.35	JUN 24	46.35	SEP 26	47.18

414124070265901. Sandwich well SDW 253.

LOCATION.--Lat 41°41'24", long 70°26'59", Hydrologic Unit 01090002, 800 ft west of Stowe Road and 50 ft south of Farmersville Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 70 ft, screened 67 to 70 ft.

DATUM.--Land-surface datum is 111.20 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.78 ft below land-surface datum, July 30, 1973; lowest measured, 55.05 ft below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	51.30	JAN 24, 1983	51.50	APR 25, 1983	48.03	JUL 22, 1983	47.88
NOV 22	51.42	FEB 21	51.20	MAY 23	47.52	AUG 24	48.18
DEC 21	51.43	MAR 22	49.33	JUN 24	47.53	SEP 26	48.58

420239070062001. Truro well TSW 1.

LOCATION.--Lat 42°02'39", long 70°06'20", Hydrologic Unit 01090002, near old pumping station about 200 ft north of State Highway 6A and 1.2 mi northwest of North Truro.

Owner: Town of Provincetown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 68 ft, cased to 68 ft, open end.

DATUM.--Land-surface datum is 16.80 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--Water levels affected by pumping, barometric pressure, and tide.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, Mar. 23, 1983; lowest measured, 12.1 ft below land-surface datum, Sept. 11, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	10.79	JAN 26, 1983	11.04	APR 25, 1983	9.82	JUL 25, 1983	10.67
NOV 23	10.95	FEB 23	10.64	MAY 26	10.48	AUG 25	10.89
DEC 22	10.45	MAR 23	9.28	JUN 22	10.75	SEP 26	10.92

BARNSTABLE COUNTY--Continued

420206070045901. Truro well TSW 89.

LOCATION.--Lat 42°02'06", long 70°04'59", Hydrologic Unit 01090002, 300 ft west of U.S. Highway 6 and 50 ft north of Highland Road in Truro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 27.7 ft, screened 24.7 to 27.7 ft.

DATUM.--Land-surface datum is 16.60 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--September 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.20 ft below land-surface datum, Apr. 25, 1983; lowest measured, 12.96 ft below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	12.25	JAN 26, 1983	12.33	APR 25, 1983	10.20	JUL 25, 1983	11.84
NOV 23	12.35	FEB 23	11.90	MAY 26	10.75	AUG 25	12.14
DEC 22	12.28	MAR 23	10.25	JUN 22	11.27	SEP 26	12.40

415353069585401. Wellfleet well WNW 17.

LOCATION.--Lat 41°53'53", long 69°58'54", Hydrologic Unit 01090002, about 150 ft east of old pumping station and 45 ft west of road to the public beach at Cape Cod National Seashore in Wellfleet.

Owner: Cape Cod National Seashore.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in, depth 42 ft, screen information not available.

DATUM.--Land-surface datum is 19.10 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.13 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft below land-surface datum, June 27, 1967; lowest measured, 12.75 ft below land-surface datum, Jan. 31, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	10.67	JAN 26, 1983	10.97	APR 25, 1983	7.97	JUL 25, 1983	9.10
NOV 23	10.84	FEB 23	10.63	MAY 26	8.01	AUG 25	9.62
DEC 22	10.94	MAR 23	8.86	JUN 22	8.39	SEP 26	10.15

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 northeast of Cheshire.

Owner: John Jayko.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 22 ft, cased with stone to 22 ft, open end.

DATUM.--Altitude of land-surface datum is 1,210 ft. Measuring point: Inside rim of concrete well top, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft below land-surface datum, Jan. 19, 1952; lowest measured, 14.03 ft below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	11.05	FEB 22, 1983	7.35	MAY 22, 1983	1.99	AUG 22, 1983	8.40
DEC 22	8.33	MAR 21	1.96	JUN 21	4.27	SEP 21	10.61
JAN 22, 1983	7.41	APR 21	0.55	JUL 22	6.43		

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 west of State Highway 41 and 1.5 mi north of intersection of State Highway 41 and U.S. Highway 7 in Great Barrington.

Owner: Mr. Jacobson.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in, depth 15 ft, cased with stone to 15 ft, open end.

DATUM.--Altitude of land-surface datum is 732 ft. Measuring point: Top of stone curbing, east side of well 0.33 ft above land-surface datum. Prior to July 25, 1978, measured at land-surface datum.

REMARKS.--Water level affected by stream.

PERIOD OF RECORD.--June 1951 to current year. Water-level recorder January 1968 to August 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.99 ft below land-surface datum, Apr. 21, 1983; lowest measured, 14.97 ft below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	12.54	JAN 22, 1983	10.90	APR 21, 1983	3.99	JUL 22, 1983	12.09
NOV 22	12.18	FEB 22	8.67	MAY 22	8.24	AUG 21	12.73
DEC 22	12.12	MAR 21	5.36	JUN 21	10.21	SEP 21	12.59

420912073043001. Otis well OTW 7.

LOCATION.--Lat 42°09'12", long 73°04'30", Hydrologic Unit 01080207, about 400 ft south of Hawley Road and 15 ft west of State Highway 8 in Otis.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 17.5 ft, screened 15.5 to 17.5 ft.

DATUM.--Altitude of land-surface datum is 1,145 ft. Measuring point: Top of casing, 3.5 ft above land-surface datum.

REMARKS.--Water levels affected by Minor Brook and Farmington River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.55 ft below land-surface datum, Apr. 21, 1983; lowest measured, 10.16 ft below land-surface datum, Sept. 21, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	9.27	JAN 22, 1983	8.23	APR 21, 1983	4.55	JUL 22, 1983	9.44
NOV 22	8.52	FEB 21	7.97	MAY 22	7.53	AUG 21	9.56
DEC 22	8.49	MAR 21	5.26	JUN 21	8.30	SEP 21	10.16

422745073112001. Pittsfield well PTW 51.

LOCATION.--Lat 42°27'45", long 73°11'20", Hydrologic Unit 01100005, 30 ft east of Hubbard Ave. and about 100 ft north of Barton Brook in Pittsfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft, depth 31.5 ft, screened 29.5 to 31.5 ft.

DATUM.--Altitude of land-surface datum is 1,050 ft. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft below land-surface datum, Apr. 25, 1969; lowest measured, 27.57 ft below land-surface datum, Dec. 22, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	22.50	JAN 22, 1983	16.86	APR 21, 1983	13.27	JUL 22, 1983	15.73
NOV 22	22.75	FEB 22	15.23	MAY 22	13.53	AUG 21	17.97
DEC 22	21.57	MAR 21	14.37	JUN 21	13.39	SEP 21	20.54

BERKSHIRE COUNTY--Continued

420351073193601. Sheffield well SJW 59.

LOCATION.--Lat 42°03'51", long 73°19'36", Hydrologic Unit 01100005, about 200 ft east of U.S. Highway 7 and 30 ft north of Hewins Road in Sheffield.

Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft, depth 24 ft, screened 22 to 24 ft. DATUM.--Altitude of land-surface datum is 680 ft. Measuring point: Top of casing, 3.70 ft 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 below land-surface datum, Mar. 28, 1978; lowest measured, 19.69 ft below land-surface datum, Jan. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	15.46	JAN 22, 1983	16.49	APR 21, 1983	14.93	JUL 22, 1983	13.13
NOV 22	15.83	FEB 21	15.87	MAY 22	13.35	AUG 21	13.52
DEC 22	16.21	MAR 21	15.46	JUN 21	12.98	SEP 23	14.10

BRISTOL COUNTY

415447071155301. Attleboro well ATW 83.

LOCATION.--Lat 41°54'47", long 71°15'53", Hydrologic Unit 01090004, about 150 ft north of parking lot and 200 ft west of dirt road at Bristol County Nursing Home in Attleboro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 20.6 ft, screened 18.6 to 20.6 ft.

DATUM.--Altitude of land-surface datum is 145 ft. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Jan. 27, 1978; lowest measured, 5.23 ft below land-surface datum, Aug. 26, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	3.88	JAN 25, 1983	3.10	APR 22, 1983	2.78	JUL 22, 1983	4.58
NOV 22	3.52	FEB 23	2.98	MAY 25	3.50	AUG 25	4.45
DEC 23	3.67	MAR 24	2.73	JUN 23	3.99	SEP 23	4.78

414228071091401. Fall River well FRW 67.

LOCATION.--Lat 41°42'28", long 71°09'14", Hydrologic Unit 01090004, about 200 ft east of Main Street and 50 ft 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, depth 12.0 ft, cased with stone to 12.0 ft, open end.

DATUM.--Altitude of land-surface datum is 135 ft. 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 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 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1982	8.80	DEC 24, 1982	8.70	FEB 28, 1983	6.30	SEP 30, 1983	9.30
NOV 30	8.90	JAN 31, 1983	8.90				

BRISTOL COUNTY--Continued

414705071045301. Freetown well F3W 23.

LOCATION.--Lat 41°47'05", long 71°04'53", Hydrologic Unit 01090004, about 300 ft west of State Highway 24 and 200 ft north of State Highway 79 in Freetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 42 ft, screened 40 to 42 ft.

DATUM.--Altitude of land-surface datum is 38 ft. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Water level affected by tide.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.72 ft below land-surface datum, Apr. 22, 1983; lowest measured, 15.70 ft below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	12.93	JAN 25, 1983	13.34	APR 22, 1983	8.72	JUL 21, 1983	12.22
NOV 22	13.22	FEB 23	12.68	MAY 25	9.96	AUG 25	12.80
DEC 23	13.35	MAR 24	9.85	JUN 23	11.09	SEP 22	13.20

414025070572801. New Bedford well NGW 116.

LOCATION.--Lat 41°40'25", long 70°57'28", Hydrologic Unit 01090002, New Bedford Municipal Airport, 30 ft east of control tower building in New Bedford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 27.3 ft, screened 25.3 to 27.3 ft.

DATUM.--Altitude of land-surface datum is 65 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.31 ft below land-surface datum, Mar. 26, 1969; lowest measured, 5.20 ft below land-surface datum, July 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	4.16	JAN 25, 1983	3.48	APR 22, 1983	3.42	JUL 21, 1983	4.50
NOV 22	3.91	FEB 23	3.21	MAY 25	3.72	AUG 25	4.38
DEC 23	3.79	MAR 24	3.66	JUN 23	4.25	SEP 23	4.45

415812071111101. Norton well N4W 37.

LOCATION.--Lat 41°58'12", long 71°11'11", Hydrologic Unit 01090004, at Wheaton College, 250 ft northeast of observatory in Norton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 19.4 ft, screened 17.4 to 19.4 ft.

DATUM.--Altitude of land-surface datum is 105 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft below land-surface datum, Dec. 29, 1969; lowest measured, 11.24 ft below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	8.02	JAN 25, 1983	5.35	APR 22, 1983	3.93	JUL 22, 1983	9.43
NOV 23	6.65	FEB 23	4.80	MAY 25	6.83	AUG 25	9.82
DEC 23	6.79	MAR 24	3.68	JUN 23	7.82	SEP 23	10.55

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 west of Palmer River in Seekonk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 14.4 ft, screened 12.4 to 14.4 ft.

DATUM.--Altitude of land-surface datum is 21 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.20 ft below land-surface datum, Apr. 22, 1983; lowest measured, 8.02 ft below land-surface datum, Sept. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	6.26	JAN 25, 1983	5.36	APR 22, 1983	5.20	JUL 21, 1983	6.85
NOV 22	5.87	FEB 23	5.22	MAY 25	5.79	AUG 25	7.02
DEC 23	5.91	MAR 24	5.31	JUN 23	6.17	SEP 22	7.22

414420071084401. Somerset well SPW 161.

LOCATION.--Lat 41°44'20", long 71°08'44", Hydrologic Unit 01090004, 110 ft east of Riverside Avenue and 335 ft 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, depth 1,500 ft, cased to 26 ft, open hole.

DATUM.--Altitude of land-surface datum is 40 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.87 ft below land-surface datum, Jan. 29, 1979; lowest measured, 22.09 ft below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	16.71	FEB 23, 1983	8.63	MAY 25, 1983	11.98	AUG 25, 1983	18.78
NOV 22	16.69	MAR 24	6.77	JUN 23	13.90	SEP 23	19.10
JAN 25, 1983	13.78	APR 22	6.90	JUL 21	16.00		

415454071061801. Taunton well TAW 258.

LOCATION.--Lat 41°54'54", long 71°06'18", Hydrologic Unit 01090004, 420 ft northwest of Danforth Street and 520 ft 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, depth 1,006.0 ft, cased to 10.0 ft, open hole.

DATUM.--Altitude of land-surface datum is 60 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.10 ft below land-surface datum, Jan. 27, 1978; lowest measured, 15.85 ft below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	13.45	JAN 25, 1983	11.66	APR 22, 1983	10.20	JUL 21, 1983	13.62
NOV 22	12.77	FEB 23	10.89	MAY 25	11.47	AUG 25	14.53
DEC 23	12.64	MAR 24	10.12	JUN 23	12.45	SEP 23	15.08

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 west of Mill River and about 300 ft east of Danforth Street in Taunton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 20 ft, screened 18 to 20 ft.

DATUM.--Altitude of land-surface datum is 50 ft. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water levels affected by Mill River.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft below land-surface datum, Dec. 29, 1969; lowest measured, 10.33 ft below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	9.31	JAN 25, 1983	8.40	APR 22, 1983	6.93	JUL 21, 1983	9.30
NOV 22	8.82	FEB 23	7.75	MAY 25	8.04	AUG 25	9.80
DEC 22	9.09	MAR 24	6.80	JUN 23	8.88	SEP 23	9.89

DUKES COUNTY

412346070353403. Edgartown well ENW 52.

LOCATION.--Lat 41°23'46", long 70°35'34", Hydrologic Unit 01090002, 0.5 mi west of Airport Road and 0.6 mi north of West Tisbury Road in Edgartown.

Owner: Martha's Vineyard State Forest.

AQUIFER.--Glacial sand, gravel and cobbles of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in, depth 64.02 ft, screened 61.02 to 64.02 ft.

DATUM.--Altitude of land-surface datum is 34 ft. Measuring point: Top of casing, 0.02 ft below land-surface datum.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.17 ft below land-surface datum, July 28, 1979; lowest measured, 20.51 ft below land-surface datum, Feb. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1982	19.20	JAN 27, 1983	20.34	APR 25, 1983	16.13	JUL 24, 1983	15.52
NOV 22	19.59	FEB 21	20.22	MAY 26	14.93	AUG 23	16.12
DEC 24	19.92	MAR 24	17.50	JUN 21	15.13	SEP 24	16.74

ESSEX COUNTY

423734071080901. Andover well AJW 26.

LOCATION.--Lat 42°37'34", long 71°08'09", Hydrologic Unit 01070002, 90 ft north of Ballardvale Road and 30 ft 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, depth 15 ft, cased with stone to 15 ft, open end.

DATUM.--Altitude of land-surface datum is 189 ft. Measuring point: Upper edge of brick lip in corner of opening, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.47 ft below land-surface datum, Mar. 26, 1969; lowest measured, 13.44 ft below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	12.12	JAN 24, 1983	11.83	APR 21, 1983	8.16	JUL 22, 1983	12.38
NOV 21	11.73	FEB 22	8.55	MAY 24	10.18	AUG 24	12.68
DEC 21	12.00	MAR 23	7.17	JUN 22	11.49	SEP 22	12.80

ESSEX COUNTY--Continued

423641071102501. Andover well AJW 462.

LOCATION.--Lat 42°36'41", long 71°10'25", Hydrologic Unit 01070002, about 1,200 ft south of Shawsheen River, and 30 ft west of Interstate Highway 93 in Andover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 32.5 ft, screened 30.5 to 32.5 ft.

DATUM.--Altitude of land-surface datum is 110 ft. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.83 ft below land-surface datum, Mar. 23, 1983; lowest measured, 15.80 ft below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	14.20	JAN 21, 1983	14.69	APR 21, 1983	12.17	JUL 23, 1983	13.85
NOV 21	14.28	FEB 22	13.74	MAY 24	12.93	AUG 24	14.32
DEC 21	13.67	MAR 23	11.83	JUN 22	13.52	SEP 22	14.28

424322070592401. Georgetown well GCW 168.

LOCATION.--Lat 42°43'22", long 70°59'24", Hydrologic Unit 01090001, 18 ft south of State Highway 133 and 25 ft east of Winter Street at Murca Park in Georgetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 21 ft, screened 19 to 21 ft.

DATUM.--Altitude of land-surface datum is 80 ft. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft below land-surface datum, Mar. 27, 1969; lowest measured, 6.65 ft below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	4.82	JAN 21, 1983	4.65	APR 21, 1983	3.29	JUL 22, 1983	5.37
NOV 21	4.50	FEB 22	3.33	MAY 24	3.87	AUG 24	6.08
DEC 21	5.00	MAR 23	2.48	JUN 22	4.70	SEP 22	6.09

424841071004101. Haverhill well HLW 23.

LOCATION.--Lat 42°48'41", long 71°00'41", Hydrologic Unit 01070002, about 50 ft north of Amesbury Line Road and 0.9 mi 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, depth 15.1 ft, cased with tile to 15.1 ft, open end.

DATUM.--Altitude of land-surface datum is 105 ft. Measuring point: Top of hole in base of wooden recorder shelter, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1960 to current year. Water-level recorder October 1960 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.80 ft below land-surface datum, Mar. 23, 1983; lowest recorded, 15.02 ft below land-surface datum, Feb. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	13.52	JAN 21, 1983	13.33	APR 21, 1983	7.93	JUL 22, 1983	11.97
NOV 21	13.52	FEB 22	12.07	MAY 24	9.14	AUG 24	14.77
DEC 21	13.44	MAR 23	6.80	JUN 22	10.22	SEP 22	13.98

ESSEX COUNTY--Continued

424520070562401. Newbury well NIW 27.

LOCATION.--Lat 42°45'20", long 70°56'24", Hydrologic Unit 01090001, about 300 ft east of Interstate Highway 95 and 100 ft 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, depth 19.8 ft, cased with tile to 19.8 ft, open end.

DATUM.--Altitude of land-surface datum is 55 ft. Measuring point: Top of hole in base of wooden recorder shelter, 1.95 ft above land-surface datum. Prior to October 1978, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Water-level recorder January 1967 to September 1982. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.15 ft below land-surface datum, Mar. 25, 1969; lowest, 12.68 ft below land-surface datum, Nov. 24, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	7.97	JAN 21, 1983	6.95	APR 21, 1983	4.44	JUL 22, 1983	8.74
NOV 21	6.81	FEB 22	4.83	MAY 24	5.23	AUG 24	10.52
DEC 21	7.25	MAR 24	3.70	JUN 22	6.29	SEP 22	11.47

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 north of Salisbury.

Owner: Eugene G. Folsum.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 11 ft, cased with tile to 11 ft, open end.

DATUM.--Altitude of land-surface datum is 35 ft. Measuring point: Top inside lip of tile casing, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--August 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.90 ft below land-surface datum, Mar. 23, 1983; lowest measured, 8.37 ft below land-surface datum, Sept. 22, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	5.58	JAN 21, 1983	5.29	APR 21, 1983	4.60	JUL 22, 1983	7.23
NOV 21	4.77	FEB 22	4.20	MAY 24	4.74	AUG 24	7.95
DEC 21	5.02	MAR 23	2.90	JUN 22	5.90	SEP 22	8.37

423845070542501. Topsfield well TQW 1.

LOCATION.--Lat 42°38'45", long 70°54'25", Hydrologic Unit 01090001, 0.7 mi south of Ipswich Road and 120 ft 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, depth 22.0 ft, cased with stone to 22.0 ft, open end.

DATUM.--Altitude of land-surface datum is 130 ft. Measuring point: Top edge of steel rim in concrete cover, 0.6 ft above land-surface datum.

PERIOD OF RECORD.--February 1936 to October 1947, April 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.22 ft below land-surface datum, Mar. 23, 1983; lowest measured, 17.52 ft below land-surface datum, Jan. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	14.31	JAN 21, 1983	13.07	APR 21, 1983	8.03	JUL 22, 1983	13.41
NOV 21	14.37	FEB 22	6.86	MAY 24	10.93	AUG 24	14.96
DEC 21	14.09	MAR 23	5.22	JUN 22	11.76	SEP 22	15.75

ESSEX COUNTY--Continued

423505070491702. Wenham well WPW 76.

LOCATION.--Lat 42°35'05", long 70°49'17", Hydrologic Unit 01090001, 45 ft west of State Highway 128 and 120 ft of Grapevine Road in Wenham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 22.0 ft, screened 20.0 to 22.0 ft.

DATUM.--Altitude of land-surface datum is 60 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.39 ft below land-surface datum, Jan. 26, 1978; lowest measured, 4.36 ft below land-surface datum, Sept. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	2.54	JAN 21, 1983	2.10	APR 21, 1983	1.09	JUL 22, 1983	2.72
NOV 21	2.34	FEB 22	1.17	MAY 24	1.38	AUG 24	3.73
DEC 21	2.58	MAR 23	0.82	JUN 22	1.94	SEP 22	3.79

FRANKLIN COUNTY

423809072435601. Colrain well CSW 8.

LOCATION.--Lat 42°38'09", long 72°43'56", Hydrologic Unit 01080203, 15 ft east of State Highway 112 and 100 ft north of North River Bridge in Colrain.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 32.3 ft, screened 30.3 to 32.3 ft.

DATUM.--Altitude of land-surface datum is 460 ft. Measuring point: Top of casing, 1.5 ft 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 below land-surface datum, Apr. 24, 1969; lowest measured, 23.48 ft below land-surface datum, Jan. 31, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	21.60	JAN 22, 1983	21.56	APR 21, 1983	14.68	JUL 22, 1983	19.09
NOV 22	22.00	FEB 22	21.72	MAY 22	16.96	AUG 22	20.22
DEC 22	22.42	MAR 21	16.58	JUN 21	18.56	SEP 21	20.64

423310072355801. Deerfield well DFW 44.

LOCATION.--Lat 42°33'10", long 72°35'58", Hydrologic Unit 01080203, 1.2 mi south of Deerfield River Bridge and 15 ft east of U.S. Highway 5 in Deerfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 27.6 ft, screened 25.6 to 27.6 ft.

DATUM.--Altitude of land-surface datum is 140 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.42 ft below land-surface datum, May 29, 1979; lowest measured, 6.16 ft below land-surface datum, Sept. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	4.15	JAN 22, 1983	2.97	APR 21, 1983	1.84	JUL 23, 1983	4.15
NOV 22	3.23	FEB 22	2.52	MAY 22	2.42	AUG 22	5.36
DEC 22	3.04	MAR 21	1.92	JUN 21	2.67	SEP 29	4.55

GROUND-WATER LEVELS IN MASSACHUSETTS

FRANKLIN COUNTY--Continued

423305072320301. Montague well MSW 5.

LOCATION.--Lat 42°33'05", long 72°32'03", Hydrologic Unit 01080201, about 15 ft west of Montague Road, 0.2 mi north of Old Northfield Road, and 1.0 mi north of Montague.

Owner: Thomas C. Kurtyka.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 12 ft, screened 9 to 12 ft. DATUM.--Altitude of land-surface datum is 240 ft. Measuring point: Top of casing, 1.75 ft above land-surface datum.

PERIOD OF RECORD.--January 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft below land-surface datum, Feb. 26, 1976; lowest measured, 8.00 ft below land-surface datum, Dec. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	3.65	JAN 22, 1983	4.30	APR 22, 1983	1.45	JUL 23, 1983	3.31
NOV 22	4.85	FEB 22	2.91	MAY 23	1.39	AUG 22	4.40
DEC 22	4.73	MAR 22	1.76	JUN 21	2.02	SEP 22	4.19

423424072170301. Orange well ORW 5.

LOCATION.--Lat 42°34'24", long 72°17'03", Hydrologic Unit 01080202, Orange Airport, 300 ft east of main building and 600 ft 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, depth 20.6 ft, screened 18.6 to 20.6 ft.

DATUM.--Altitude of land-surface datum is 530 ft. Measuring point: Top of casing, 2.40 ft 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, 4.00 ft below land-surface datum, Apr. 22, 1983; lowest measured, 7.56 ft below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	6.54	JAN 22, 1983	5.93	APR 22, 1983	4.00	JUL 23, 1983	5.57
NOV 22	6.30	FEB 22	5.87	MAY 23	4.49	AUG 22	6.14
DEC 23	6.29	MAR 22	4.65	JUN 21	4.75	SEP 22	6.16

422607072324401. Sunderland well S6W 7.

LOCATION.--Lat 42°26'07", long 72°32'44", Hydrologic Unit 01080201, about 100 ft east of State Highway 116 and 30 ft north of Russellville Brook in Sunderland.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in, depth 54 ft, cased to 54 ft, open end.

DATUM.--Altitude of land-surface datum is 210 ft. 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 below land-surface datum, Apr. 25, 1973; lowest measured, 23.26 ft below land-surface datum, Feb. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	14.55	JAN 22, 1983	17.42	APR 21, 1983	7.49	JUL 23, 1983	10.99
NOV 22	15.32	FEB 22	16.06	MAY 22	7.43	AUG 22	12.20
DEC 22	15.98	MAR 22	11.28	JUN 21	8.44	SEP 22	14.87

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 south of State Highway 57 and 0.2 mi west of Sodom Street in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 67.7 ft, screened 65.7 to 67.7 ft.

DATUM.--Altitude of land-surface datum is 675 ft. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.06 ft below land-surface datum, June 21, 1983; lowest, 37.20 ft below land-surface datum, Jan. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	32.89	JAN 22, 1983	33.89	APR 21, 1983	30.61	JUL 22, 1983	30.07
NOV 22	33.48	FEB 21	33.39	MAY 22	28.71	AUG 21	31.11
DEC 22	34.05	MAR 21	33.05	JUN 21	28.06	SEP 21	32.10

420259072581701. Granville well GLW 6.

LOCATION.--Lat 42°02'59", long 72°58'17", Hydrologic Unit 01080207, at Granville State Forest, 20 ft west of West Hartland Road and 0.9 mi north of state boundary in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 20.8 ft, screened 18.8 to 20.8 ft.

DATUM.--Altitude of land-surface datum is 1,160 ft. Measuring point: Top of casing, 2.5 ft 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 below land-surface datum, Apr. 26, 1972; lowest measured, 8.42 ft below land-surface datum, Aug. 25, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	7.49	JAN 22, 1983	5.50	APR 21, 1983	2.78	JUL 22, 1983	7.40
NOV 22	6.49	FEB 21	4.08	MAY 22	3.74	AUG 21	6.91
DEC 22	6.06	MAR 21	2.86	JUN 21	5.17	SEP 21	8.23

420646072420101. Westfield well WWV 62.

LOCATION.--Lat 42°06'46", long 72°42'01", Hydrologic Unit 01080206, at Western Massachusetts Hospital about 200 ft east of East Mountain Road and 0.4 mi north of U.S. Highway 20 in Westfield.

Owner: Commonwealth of Massachusetts.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in, depth 25 ft, casing information not available.

DATUM.--Altitude of land-surface datum is 210 ft. Measuring point: Top of casing, 3.5 ft above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.70 ft below land-surface datum, Oct. 29, 1975; lowest measured, well dry Sept. 22, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1982	9.33	JAN 22, 1983	8.48	APR 21, 1983	3.71	JUL 22, 1983	9.58
NOV 22	8.16	FEB 21	6.02	MAY 22	8.68	AUG 21	11.98
DEC 22	9.27	MAR 21	4.85	JUN 21	6.03	SEP 22	DRY

HAMPDEN COUNTY--Continued

420905072254001. Wilbraham well XJW 55.

LOCATION.--Lat 42°09'05", long 72°25'40", Hydrologic Unit 01080204, 45 ft south of U.S. Highway 20 and 0.1 mi west of North Main Street in Wilbraham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 62.5 ft, screened 60.5 to 62.5 ft.

DATUM.--Altitude of land-surface datum is 255 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.56 ft below land-surface datum, Mar. 28, 1979; lowest measured, 45.44 ft below land-surface datum, Jan. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	43.00	JAN 21, 1983	44.14	APR 21, 1983	32.72	JUL 22, 1983	38.56
NOV 24	43.67	FEB 21	42.12	MAY 22	31.33	AUG 21	41.07
DEC 21	44.15	MAR 21	35.97	JUN 21	34.35	SEP 22	42.74

HAMPSHIRE COUNTY

421355072322001. Granby well GWK 68.

LOCATION.--Lat 42°13'55", long 72°32'20", Hydrologic Unit 01080201, about 15 ft east of Morgan Street, 0.3 mi south of East Street, and 2.0 mi southwest of Granby.

Owner: Holyoke Water Power Co.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 18 ft, screened 16 to 18 ft.

DATUM.--Land-surface datum is 239.17 ft 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, 4.25 ft below land-surface datum, Apr. 21, 1983; lowest measured, 11.17 ft below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	9.38	JAN 21, 1983	7.80	APR 21, 1983	4.25	JUL 22, 1983	8.28
NOV 24	8.60	FEB 21	6.84	MAY 22	5.83	AUG 21	9.18
DEC 21	8.47	MAR 21	5.40	JUN 21	6.80	SEP 21	10.08

421627072201701. Ware well WEW 43.

LOCATION.--Lat 42°16'27", long 72°20'17", Hydrologic Unit 01080204, 30 ft north of State Highway 9 and 200 ft east of Swift River in Ware.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 27.2 ft, screened 25.2 to 27.2 ft.

DATUM.--Altitude of land-surface datum is 380 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

REMARKS.--Water levels affected by Swift River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1975, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.61 ft below land-surface datum, Apr. 21, 1983; lowest measured, 10.34 ft below land-surface datum, Jan. 26, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	8.78	JAN 21, 1983	8.93	APR 21, 1983	5.61	JUL 22, 1983	8.80
NOV 24	8.64	FEB 21	9.20	MAY 22	6.33	AUG 21	9.17
DEC 21	9.26	MAR 21	8.63	JUN 21	7.19	SEP 22	8.90

MIDDLESEX COUNTY

422812071244401. Acton well ACW 158.

LOCATION.--Lat 42°28'12", long 71°24'44", Hydrologic Unit 01070005, 30 ft north of State Highway 2 and 150 ft east of Wetherbee Street in Acton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 33.8 ft, screened 31.8 to 33.8 ft.

DATUM.--Altitude of land-surface datum is 153 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.37 ft below land-surface datum, Apr. 21, 1983; lowest measured, 21.86 ft below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1982	19.13	JAN 24, 1983	19.35	APR 21, 1983	15.37	JUL 22, 1983	18.02
NOV 23	19.30	FEB 22	18.18	MAY 24	15.99	AUG 24	19.10
DEC 22	19.53	MAR 23	15.94	JUN 22	16.91	SEP 22	19.72

423349071134101. Billerica well BCW 363.

LOCATION.--Lat 42°33'49", long 71°13'41", Hydrologic Unit 01070002, 20 ft south of Baldwin Road and 50 ft 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, depth 15.5 ft, cased with stone to 15.5 ft, open end.

DATUM.--Altitude of land-surface datum is 166 ft. Measuring point: Top of hole in wooden cover, 2.35 ft above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.52 ft below land-surface datum, Mar. 23, 1983; lowest measured, well dry Aug. 24, Sept. 22, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	8.60	JAN 24, 1983	7.68	APR 21, 1983	2.56	JUL 22, 1983	9.00
NOV 21	7.91	FEB 22	4.08	MAY 24	4.57	AUG 24	DRY
DEC 22	8.61	MAR 23	1.52	JUN 22	6.45	SEP 22	DRY

423845071231401. Chelmsford well CHW 68.

LOCATION.--Lat 42°38'45", long 71°23'14", Hydrologic Unit 01070002, 1,300 ft north of intersection of Wharton Lane and the B and M Railroad, 400 ft east of Middlesex Street, and 0.5 mi north of Vinal Square in North Chelmsford.

Owner: Wellman Realty Company.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 50 ft, cased to 50 ft, open end.

DATUM.--Land-surface datum is 100.83 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of hole in cap on casing, 1.40 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.04 ft below land-surface datum; Mar. 23, 1983; lowest measured, 12.24 ft below land-surface datum, Sept. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	8.85	JAN 24, 1983	7.33	APR 21, 1983	5.05	JUL 22, 1983	9.83
NOV 21	8.16	FEB 22	6.90	MAY 24	6.38	AUG 24	10.42
DEC 22	8.37	MAR 23	4.04	JUN 22	7.74	SEP 22	10.28

MIDDLESEX COUNTY--Continued

423546071190702. Chelmsford well CHW 385.

LOCATION.--Lat 42°35'46", long 71°19'07", Hydrologic Unit 01070002, 15 ft east of U.S. Highway 3 and 0.4 mi north of State Highway 129 in Chelmsford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 42.8 ft, screened 40.8 to 42.8 ft.

DATUM.--Land-surface datum is 123.30 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.83 ft below land-surface datum, June 25, 1982; lowest measured, 19.04 ft below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	15.95	JAN 24, 1983	16.85	APR 21, 1983	14.20	JUL 22, 1983	16.60
NOV 21	15.89	FEB 22	16.12	MAY 24	14.70	AUG 24	17.45
DEC 22	17.08	MAR 23	14.44	JUN 22	15.60	SEP 22	17.40

422637071202701. Concord well CTW 165.

LOCATION.--Lat 42°26'37", long 71°20'27", Hydrologic Unit 01070005, 30 ft south of State Highway 2 and 0.1 mi west of State Highway 126 in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 66.7 ft, screened 64.7 to 66.7 ft.

DATUM.--Land-surface datum is 201.12 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.92 ft below land-surface datum, June 22, 1983; lowest measured, 47.10 ft below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1982	42.09	JAN 24, 1983	41.25	APR 23, 1983	39.11	JUL 22, 1983	38.22
NOV 23	40.43	FEB 22	41.25	MAY 24	38.17	AUG 24	38.86
DEC 22	40.99	MAR 23	40.25	JUN 22	37.92	SEP 22	39.35

422650071214402. Concord well CTW 167.

LOCATION.--Lat 42°26'50", long 71°21'44", Hydrologic Unit 01070005, 10 ft south of State Highway 2 and 10 ft west of Sudbury Road in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 24.8 ft, screened 21.8 to 24.8 ft.

DATUM.--Altitude of land-surface datum is 135 ft. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.50 ft below land-surface datum, Mar. 23, 1983; lowest measured, 10.59 ft below land-surface datum, Sept. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1982	8.00	MAR 23, 1983	4.50	JUN 22, 1983	6.85	SEP 22, 1983	9.20
NOV 23	7.27	APR 21	4.73	JUL 22	7.90		
DEC 22	7.72	MAY 24	5.79	AUG 24	8.80		

MIDDLESEX COUNTY--Continued

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 west of State Highway 128 and 500 ft south of State Highway 2A in Lexington.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 20.7 ft, screened 18.7 to 20.7 ft.

DATUM.--Altitude of land-surface datum is 180 ft. Measuring point: Top of casing, 4.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.44 ft below land-surface datum, Jan. 27, 1978; lowest measured, 4.35 ft below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	2.95	FEB 28, 1983	1.96	MAY 24, 1983	2.42	AUG 24, 1983	3.73
NOV 23	2.72	MAR 23	1.55	JUN 22	3.00	SEP 22	3.28
DEC 22	2.97	APR 21	1.93	JUL 22	3.40		

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 north of Rogers Street, and 800 ft 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, depth 30 ft, cased with stone to 30 ft, open end.

DATUM.--Land-surface datum is 157.78 ft National Geodetic Vertical Datum of 1929. Measuring point: Top edge of stone slab under wooden cover, 0.20 ft below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.79 ft below land-surface datum, Mar. 27, 1958; lowest measured, 19.79 ft below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	13.94	JAN 24, 1983	13.32	APR 21, 1983	8.46	JUL 22, 1983	12.78
NOV 21	14.14	FEB 22	10.56	MAY 24	9.46	AUG 24	14.32
DEC 22	14.04	MAR 23	7.84	JUN 22	10.63	SEP 22	14.60

424055071435301. Townsend well TRW 13.

LOCATION.--Lat 42°40'55", long 71°43'53", Hydrologic Unit 01070004, 15 ft south of Dudley Road and 15 ft north of Turnpike Road in Townsend.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 32.9 ft, screened 30.9 to 32.9 ft.

DATUM.--Altitude of land-surface datum is 313 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.65 ft below land-surface datum, Apr. 22, 1983; lowest measured, 17.41 ft below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	13.48	JAN 23, 1983	13.42	APR 22, 1983	9.65	JUL 23, 1983	11.86
NOV 24	13.64	FEB 22	13.11	MAY 23	10.14	AUG 22	12.87
DEC 23	13.83	MAR 22	11.17	JUN 21	10.77	SEP 23	13.69

GROUND-WATER LEVELS IN MASSACHUSETTS

MIDDLESEX COUNTY--Continued

423115071032001. Wakefield well WAW 38.

LOCATION.--Lat 42°31'15", long 71°03'20", Hydrologic Unit 01090001, 75 ft north of State Highway 128 and 0.4 mi southeast of Saugus River in Wakefield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 25.5 ft, screened 23.5 to 25.5 ft.

DATUM.--Altitude of land-surface datum is 80 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.51 ft below land-surface datum, Mar. 27, 1969; lowest measured, 9.99 ft below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	7.86	JAN 21, 1983	7.44	APR 21, 1983	5.64	JUL 22, 1983	8.15
NOV 21	7.47	FEB 22	5.68	MAY 24	6.43	AUG 24	9.04
DEC 21	7.77	MAR 23	5.09	JUN 22	7.20	SEP 22	8.65

421852071220501. Wayland well WKW 2.

LOCATION.--Lat 42°18'52", long 71°22'05", Hydrologic Unit 01070005, 0.25 mi west of State Highway 27 and 100 ft south of State Highway 30, at Cochituate State Park in Wayland.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 33.0 ft, screened 31.0 to 33.0 ft.

DATUM.--Land-surface datum is 157.75 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.96 ft below land-surface datum, Mar. 27, 1972; lowest measured, 17.47 ft below land-surface datum, Jan. 22, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1982	16.59	JAN 24, 1983	17.22	APR 21, 1983	14.57	JUL 21, 1983	16.33
NOV 23	16.82	FEB 22	16.60	MAY 24	15.07	AUG 24	17.05
DEC 22	17.23	MAR 23	14.86	JUN 22	15.58	SEP 22	17.00

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 west of State Highway 62, and 0.3 mi north of Concord Street.

Owner: Town of Wilmington.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 42 in, depth 12 ft, cased with stone to 12 ft, open end.

DATUM.--Altitude of land-surface datum is 95 ft. Measuring point: Hole in base of wooden recorder shelter, 0.33 ft above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year. Water-level recorder March 1958 to September 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.44 ft below land-surface datum, Mar. 23, 1983; lowest measured, 11.27 ft below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	7.98	JAN 24, 1983	7.80	APR 21, 1983	5.25	JUL 22, 1983	8.56
NOV 21	7.69	FEB 22	6.49	MAY 24	6.49	AUG 24	9.56
DEC 22	8.19	MAR 23	4.44	JUN 22	7.35	SEP 22	9.60

MIDDLESEX COUNTY--Continued

422819071065701. Winchester well XOW 14.

LOCATION.--Lat 42°28'19", long 71°06'57", Hydrologic Unit 01090001, at 220 Forest Street and 100 ft 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, depth 17.0 ft, cased with stone to 17.0 ft, open end.

DATUM.--Land-surface datum is 116.29 ft 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 below land-surface datum, Mar. 26, 1969; lowest measured, 15.60 ft below land-surface datum, Oct. 31, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1982	12.62	JAN 21, 1983	9.47	APR 21, 1983	6.82	JUL 22, 1983	12.90
NOV 21	10.27	FEB 22	6.27	MAY 24	10.10	AUG 24	13.97
DEC 21	10.89	MAR 23	5.04	JUN 22	11.14	SEP 22	13.66

NANTUCKET COUNTY

411555070021901. Nantucket well NBW 228.

LOCATION.--Lat 41°15'55", long 70°02'19", Hydrologic Unit 01090002, 165 ft south of Milestone Road and 300 ft east of Madequecham Valley Brook in Nantucket.

Owner: Nantucket Conservation Foundation.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 35.6 ft, screened 32.6 to 35.6 ft.

DATUM.--Altitude of land-surface datum is 39 ft. Measuring point: Top of casing, 0.7 ft above land-surface datum.

PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.45 ft below land-surface datum, Apr. 21, 1978; lowest measured, 27.90 ft below land-surface datum, Feb. 23, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1982	25.29	JAN 07, 1983	25.95	MAR 27, 1983	25.55	JUL 31, 1983	23.00
NOV 10	25.29	25	26.03	APR 22	24.03	AUG 31	23.51
27	25.52	FEB 21	26.01	MAY 26	22.65	SEP 27	24.07
DEC 21	25.80	MAR 20	25.55	JUL 06	22.65		

NORFOLK COUNTY

421250071090901. Dedham well DDW 231.

LOCATION.--Lat 42°12'50", long 71°09'09", Hydrologic Unit 01090001, 50 ft south of State Highway 128 and 0.3 mi west of University Avenue in Dedham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 21.9 ft, screened 19.9 to 21.9 ft.

DATUM.--Altitude of land-surface datum is 65 ft. Measuring point: Top of casing, 2.3 ft above land-surface datum. Prior to July 17, 1978, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.45 ft below land-surface datum, Mar. 28, 1978; lowest measured, 13.81 ft below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	10.12	JAN 24, 1983	4.95	APR 22, 1983	3.68	JUL 21, 1983	10.40
NOV 22	7.83	FEB 23	3.57	MAY 25	5.38	AUG 25	12.12
DEC 22	7.64	MAR 24	3.37	JUN 23	7.54	SEP 23	12.49

NORFOLK COUNTY--Continued

421435071165701. Dover well DVW 10.

LOCATION.--Lat 42°14'35", long 71°16'57", Hydrologic Unit 01090001, at Dover Public School about 400 ft southwest of and about 400 ft west of Center Street in Dover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 54 ft, screened 52 to 54 ft.

DATUM.--Altitude of land-surface datum is 160 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.25 ft below land-surface datum, Feb. 20, 1970; lowest measured, 36.87 ft below land-surface datum, Jan. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	33.97	JAN 24, 1983	34.75	APR 21, 1983	30.34	JUL 21, 1983	33.03
NOV 22	34.37	FEB 22	33.66	MAY 24	31.11	AUG 24	33.90
DEC 22	34.64	MAR 23	30.92	JUN 22	32.08	SEP 22	34.40

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 east of driveway, and 250 ft north of Chestnut Street in Foxborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 32 ft, screened 30 to 32 ft.

DATUM.--Altitude of land-surface datum is 290 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.24 ft below land-surface datum, Mar. 25, 1968; lowest measured, 21.42 ft below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	19.79	JAN 25, 1983	18.73	APR 22, 1983	17.08	JUL 22, 1983	19.60
NOV 22	19.18	FEB 23	17.88	MAY 25	17.98	AUG 25	19.82
DEC 23	19.32	MAR 24	16.88	JUN 23	18.74	SEP 22	20.30

420545071174001. Norfolk well NNW 27.

LOCATION.--Lat 42°05'45", long 71°17'40", Hydrologic Unit 01090001, 15 ft northwest of State Highway 1A and 0.1 mi northeast of Valley Street in Norfolk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 18.4 ft, screened 16.4 to 18.4 ft.

DATUM.--Altitude of land-surface datum is 160 ft. Measuring point: Top of casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.73 ft below land-surface datum, Sept. 26, 1975; lowest measured, 7.97 ft below land-surface datum, Sept. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	6.46	JAN 25, 1983	5.82	APR 22, 1983	5.28	JUL 22, 1983	7.00
NOV 22	5.97	FEB 23	5.64	MAY 25	5.85	AUG 25	6.89
DEC 23	7.17	MAR 24	5.13	JUN 23	6.29	SEP 23	7.05

NORFOLK COUNTY--Continued

420954070564501. Weymouth well XGW 2.

LOCATION.--Lat 42°09'54", long 70°56'45", Hydrologic Unit 01090001, 40 ft south of main gate guard house at U.S. Naval Air Station at Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 30 ft, screened 28 to 30 ft.

DATUM.--Altitude of land-surface datum is 180 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.25 ft below land-surface datum, Jan. 28, 1970; lowest measured, 22.63 ft below land-surface datum, Nov. 21, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	16.28	JAN 25, 1983	14.85	APR 22, 1983	6.44	JUL 21, 1983	14.14
NOV 22	15.07	FEB 23	7.38	MAY 25	8.62	AUG 25	17.68
DEC 22	14.19	MAR 24	5.73	JUN 23	10.60	SEP 23	19.23

421147070571901. Weymouth well XGW 3.

LOCATION.--Lat 42°11'47", long 70°57'19", Hydrologic Unit 01090001, about 100 ft east of State Highway 18 and about 600 ft off State Highway 3 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 22.3 ft, screened 20.3 to 22.3 ft.

DATUM.--Altitude of land-surface datum is 90 ft. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.91 ft below land-surface datum, Jan. 27, 1978; lowest, 18.10 ft below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	5.50	JAN 25, 1983	5.65	APR 22, 1983	4.02	JUL 21, 1983	7.29
NOV 22	4.95	FEB 23	3.90	MAY 25	4.48	AUG 25	9.00
DEC 22	5.10	MAR 24	3.67	JUN 23	5.09		

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 south of State Highway 18 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 22.6 ft, screened 20.6 to 22.6 ft.

DATUM.--Altitude of land-surface datum is 90 ft. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 4.75 ft below land-surface datum, Mar. 29, 1983; lowest measured, 10.45 ft below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	7.49	JAN 25, 1983	7.66	APR 22, 1983	5.33	JUL 21, 1983	8.32
NOV 22	6.93	FEB 23	6.38	MAY 25	6.34	AUG 25	8.63
DEC 22	6.86	MAR 24	4.75	JUN 23	7.14		

GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY

420321070433502. Duxbury well D4W 79.

LOCATION.--Lat 42°03'21", long 70°43'35", Hydrologic Unit 01090002, 30 ft west of State Highway 3 and about 300 ft north of State Highway 14 in Duxbury.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and silty clay of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 23.5 ft, screened 21.5 to 23.5 ft.

DATUM.--Altitude of land-surface datum is 55 ft. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft below land-surface datum, Jan. 26, 1978; lowest measured, 10.68 ft below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	8.28	JAN 24, 1983	7.44	APR 22, 1983	7.11	JUL 21, 1983	9.13
NOV 22	8.12	FEB 23	7.15	MAY 24	8.03	AUG 25	9.26
DEC 22	8.00	MAR 24	6.77	JUN 23	8.43	SEP 23	9.13

420317070432901. Duxbury well D4W 80.

LOCATION.--Lat 42°03'17", long 70°43'29", Hydrologic Unit 01090002, 78 ft south of State Highway 14 and 250 ft east of State Highway 3 in Duxbury.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Bedrock.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6.0 in, depth 181 ft, cased to 59 ft, open hole.

DATUM.--Altitude of land-surface datum is 65 ft. Measuring point: Top of hole in concrete cover, at land-surface datum.

PERIOD OF RECORD.--April 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.53 ft below land-surface datum, Jan. 26, 1978; lowest measured, 24.02 ft below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	21.81	JAN 24, 1983	20.56	APR 22, 1983	20.50	JUL 21, 1983	22.46
NOV 22	21.80	FEB 23	20.59	MAY 25	21.57	AUG 25	22.67
DEC 22	21.58	MAR 24	20.03	JUN 23	21.88	SEP 23	22.68

420056070575701. East Bridgewater well EBW 30.

LOCATION.--Lat 42°00'56", long 70°57'57", Hydrologic Unit 01090004, about 100 ft north of State Highway 106 and 800 ft west of State Highway 18 in East Bridgewater.

Owner: East Bridgewater Medical Center.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in, depth 24 ft, cased with stone to 24 ft, open end.

DATUM.--Altitude of land-surface datum is 85 ft. Measuring point: Top of stone casing curb, 2.6 ft above land-surface datum.

PERIOD OF RECORD.--July 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.40 ft below land-surface datum, Mar. 27, 1969; lowest measured, 17.83 ft below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	9.47	JAN 25, 1983	5.69	APR 22, 1983	3.57	AUG 25, 1983	12.95
NOV 22	8.81	FEB 23	4.15	MAY 25	5.76	SEP 23	14.25
DEC 22	9.03	MAR 24	2.98	JUL 21	10.46		

PLYMOUTH COUNTY--Continued

415820070522801. Halifax well HBW 97.

LOCATION.--Lat 41°58'20", long 70°52'28", Hydrologic Unit 01090004, 1,950 ft west of South Street and 130 ft 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, depth 945 ft, cased to 90 ft, open hole.

DATUM.--Altitude of land-surface datum is 35 ft. Measuring point: Top of casing, 0.5 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.30 ft below land-surface datum, Jan. 26, 1978; lowest measured, 5.82 ft below land-surface datum, Oct. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	3.76	FEB 23, 1983	2.95	MAY 25, 1983	3.13	AUG 25, 1983	4.85
NOV 22	3.58	MAR 24	2.57	JUN 23	3.60	SEP 23	4.91
JAN 25, 1983	3.24	APR 22	2.79	JUL 21	4.34		

420353070520301. Hanson well HGW 76.

LOCATION.--Lat 42°03'53", long 70°52'03", Hydrologic Unit 01090002, 100 ft south of State Highway 14 and 150 ft west of town hall in Hanson.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 26.6 ft, screened 24.6 to 26.6 ft.

DATUM.--Altitude of land-surface datum is 71 ft. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Water level affected by Wampatuck Pond.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft below land-surface datum, Mar. 26, 1969; lowest measured, 6.53 ft below land-surface datum, Sept. 25, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	4.65	JAN 24, 1983	4.10	APR 22, 1983	3.76	JUL 21, 1983	5.39
NOV 22	4.45	FEB 23	3.68	MAY 25	4.38	AUG 25	5.47
DEC 22	4.29	MAR 24	3.10	JUN 23	4.85	SEP 23	5.81

415228070554601. Lakeville well LKW 14.

LOCATION.--Lat 41°52'28", long 70°55'46", Hydrologic Unit 01090004, 30 ft west of parking lot at Lakeville State Hospital in Lakeville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 41 ft, screened 39 to 41 ft.

DATUM.--Altitude of land-surface datum is 105 ft. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Water-level recorder January 1968 to Apr. 1, 1982.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, Mar. 29, 1983; lowest measured, 23.59 ft below land-surface datum, Oct. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	16.52	JAN 25, 1983	15.64	APR 22, 1983	9.52	JUL 21, 1983	14.12
NOV 22	16.66	FEB 23	13.97	MAY 25	11.08	AUG 25	15.83
DEC 23	16.37	MAR 24	9.28	JUN 23	12.13	SEP 23	16.75

GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY--Continued

415433070583302. Middleborough well MTW 82.

LOCATION.--Lat 41°54'33", long 70°58'33", Hydrologic Unit 01090004, 15 ft southeast of southbound side of State Highway 25 and 435 ft southeast of Puddingshear Brook in Middleborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 26.5 ft, screened 24.5 to 26.5 ft.

DATUM.--Altitude of land-surface datum is 45 ft. Measuring point: Top of casing, 3.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft below land-surface datum, Mar. 24, 1983; lowest measured, 17.58 ft below land-surface datum, Oct. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	12.12	JAN 25, 1983	6.08	APR 22, 1983	2.87	JUL 21, 1983	10.20
NOV 22	11.38	FEB 23	3.85	MAY 25	4.98	AUG 25	14.10
DEC 23	9.15	MAR 24	1.50	JUN 23	5.74	SEP 23	15.52

415453070434901. Plymouth well PWV 22.

LOCATION.--Lat 41°54'53", long 70°43'49", Hydrologic Unit 01090004, 10 ft from northeast corner of main building at Plymouth Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in, depth 42 ft, screened 40 to 42 ft.

DATUM.--Altitude of land-surface datum is 145 ft. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.82 ft below land-surface datum, May 26, 1958; lowest measured, 28.99 ft below land-surface datum, Jan. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	24.30	JAN 25, 1983	25.25	APR 22, 1983	20.43	JUL 21, 1983	21.64
NOV 22	24.84	FEB 23	24.54	MAY 25	20.00	AUG 25	22.63
DEC 23	25.36	MAR 24	21.68	JUN 23	20.80	SEP 23	23.37

414518070435701. Wareham well WFW 51.

LOCATION.--Lat 41°45'18", long 70°43'57", Hydrologic Unit 01090002, 50 ft east of U.S. Highway 6 and 100 ft 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, depth 9.65 ft, cased with tile to 9.65 ft, open end. Prior to September 1980, well depth was 12.5 ft.

DATUM.--Altitude of land-surface datum is 21 ft. Measuring point: Top edge of tile casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--July 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft below land-surface datum, Jan. 26, 1978; lowest measured, 10.98 ft below land-surface datum, Dec. 28, 1965; well found dry several months in water years 1980-83.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	7.99	JAN 25, 1983	7.04	APR 22, 1983	3.57	JUL 21, 1983	DRY
NOV 22	7.61	FEB 23	5.48	MAY 25	4.58	AUG 25	DRY
DEC 23	7.31	MAR 24	3.92	JUN 23	5.41	SEP 23	DRY

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, depth 624 ft, cased to 90 ft, open hole.

DATUM.--Altitude of land-surface datum is 35 ft. Measuring point: Top of casing, 15 ft below land-surface datum.

REMARKS.--Water levels affected by tide and barometric pressure.

PERIOD OF RECORD.--February 1960 to current year. Water-level recorder October 1977 to September 1982. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 18.61 ft below measuring point, Oct. 31, 1975; lowest measured, 26.20 ft below measuring point, Oct. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1982	23.08	JAN 24, 1983	22.98	APR 21, 1983	22.93	SEP 22, 1983	23.35
NOV 24	22.67	FEB 22	23.36	MAY 24	22.93		
DEC 23	23.44	MAR 23	23.14	AUG 24	23.35		

WORCESTER COUNTY

422058072085501. Hardwick well HHW 1.

LOCATION.--Lat 42°20'58", long 72°08'55", Hydrologic Unit 01080204, 30 ft southeast of State Highway 32 and 0.6 mi southwest of Hardwick Road in Hardwick.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 33.2 ft, screened 31.2 to 33.2 ft.

DATUM.--Altitude of land-surface datum is 580 ft. Measuring point: Top of casing, 3.5 ft above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.21 ft below land-surface datum, Apr. 21, 1983; lowest measured, 17.77 ft below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	16.23	JAN 21, 1983	14.07	APR 21, 1983	9.21	JUL 22, 1983	14.98
NOV 24	15.75	FEB 21	13.15	MAY 22	12.14	AUG 21	15.99
DEC 21	15.85	MAR 21	10.69	JUN 21	12.92	SEP 21	16.64

421837071380901. Northborough well NUW 38.

LOCATION.--Lat 42°18'37", long 71°38'09", Hydrologic Unit 01070005, 0.7 mi south of U.S. Highway 20 and about 400 ft 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, depth 14 ft, cased with concrete to 14 ft, open end.

DATUM.--Altitude of land-surface datum is 285 ft. Measuring point: Top edge of concrete casing, 1.0 ft 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 below land-surface datum, Mar. 25, 1969; lowest measured, 13.30 ft below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	8.35	MAR 21, 1983	1.43	JUN 21, 1983	5.33	SEP 23, 1983	10.71
NOV 23	6.20	APR 21	1.69	JUL 22	8.06		
DEC 21	5.66	MAY 22	4.28	AUG 21	10.74		

WORCESTER COUNTY--Continued

420610071421401. Northbridge well NXW 1.
 LOCATION.--Lat 42°06'10", long 71°42'14", Hydrologic Unit 01090003, about 100 ft northeast of the intersection of State Highway 146 and Main Street in Northbridge.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in, depth 12 ft, screened 10 to 12 ft.
 DATUM.--Altitude of land-surface datum is 370 ft. Measuring point: Top of casing, 2.0 ft above land-surface datum.
 PERIOD OF RECORD.--January 1965 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.88 ft below land-surface datum, Mar. 27, 1978; lowest measured, 4.75 ft below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	2.98	JAN 21, 1983	2.75	APR 21, 1983	1.98	JUL 22, 1983	2.70
NOV 23	2.74	FEB 21	2.41	MAY 22	2.39	AUG 21	2.94
DEC 21	3.01	MAR 21	2.00	JUN 21	2.52	SEP 21	3.19

422805071480801. Sterling well SYW 1.
 LOCATION.--Lat 42°28'05", long 71°48'08", Hydrologic Unit 01070004, 45 ft northeast of Justice Hill Road and 0.8 mi 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, depth 15 ft, cased with stone to 15 ft, open end.
 DATUM.--Altitude of land-surface datum is 710 ft. 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 below land-surface datum, Mar. 26, 1969; dry, Nov. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	9.65	JAN 21, 1983	2.93	APR 21, 1983	2.58	JUL 23, 1983	8.20
NOV 24	6.76	FEB 21	2.45	MAY 22	2.95	AUG 21	11.14
DEC 21	4.85	MAR 21	2.62	JUN 21	4.38	SEP 21	12.70

423717072043101. Templeton well TMW 3.
 LOCATION.--Lat 42°37'17", long 72°04'31", Hydrologic Unit 01080202, 60 ft east of U.S. Highway 202 and 0.2 mi south of Winchendon town line in Templeton.
 Owner: U.S. Geological Survey.
 AQUIFER.--Glacial sand and gravel of Pleistocene age.
 WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 14 ft, screened 12 to 14 ft.
 DATUM.--Altitude of land-surface datum is 900 ft. Measuring point: Top of casing, 4.2 ft above land-surface datum.
 PERIOD OF RECORD.--December 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.46 ft below land-surface datum, Mar. 26, 1969; lowest measured, 5.10 ft below land-surface datum, Sept. 29, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	3.77	JAN 22, 1983	3.45	APR 22, 1983	2.69	JUL 23, 1983	4.10
NOV 24	3.52	FEB 22	3.53	MAY 23	3.31	AUG 22	4.48
DEC 23	3.54	MAR 22	2.60	JUN 21	3.71		

WORCESTER COUNTY--Continued

420314071514001. Webster well WLW 1.

LOCATION.--Lat 42°03'14", long. 71°51'40", Hydrologic Unit 01100001, 100 ft east of State Highway 52 and 100 ft south of Memorial Beach Drive in Webster.

Owner: Town of Webster.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in, depth 27.0 ft, cased to 27.0 ft, open end.

DATUM.--Altitude of land-surface datum is 500 ft. 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 below land-surface datum, Mar. 25, 1968; lowest measured, 17.90 ft below land-surface datum, Dec. 20, 1965; dry, Oct. 27, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	14.75	JAN 21, 1983	14.27	APR 21, 1983	11.17	JUL 22, 1983	14.47
NOV 23	14.40	FEB 21	13.35	MAY 22	12.00	AUG 21	14.24
DEC 21	14.63	MAR 21	11.77	JUN 21	13.23	SEP 21	15.45

421410072081301. West Brookfield well WUW 2.

LOCATION.--Lat 42°14'10", long 72°08'13", Hydrologic Unit 01080204, about 50 ft north of State Highway 9 and about 500 ft south of State Highway 67 in West Brookfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in, depth 43.0 ft, screened 40 to 43 ft.

DATUM.--Altitude of land-surface datum is 630 ft. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.79 ft below land-surface datum, May 22, 1983; lowest measured, 23.63 ft below land-surface datum, Feb. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	18.26	JAN 21, 1983	18.72	APR 21, 1983	16.69	JUL 22, 1983	16.53
NOV 24	18.52	FEB 21	18.23	MAY 22	15.79	AUG 21	17.03
DEC 21	18.77	MAR 21	17.64	JUN 21	15.98	SEP 21	17.66

421522072113401. West Brookfield well WUW 10.

LOCATION.--Lat 42°15'22", long 72°11'34", Hydrologic Unit 01080204, 15 ft east of Coy Hill Road and 1,850 ft south of State Highway 9 in West Brookfield.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Brimfield schist.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.5 in, depth 64.5 ft, cased to 40 ft, open hole.

DATUM.--Land-surface datum is 833.23 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.85 ft above land-surface datum.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft below land-surface datum, Feb. 2, 1976; lowest measured, 12.12 ft below land-surface datum, Oct. 27, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	10.93	JAN 21, 1983	6.45	APR 21, 1983	1.63	JUL 22, 1983	7.84
NOV 24	9.06	FEB 21	4.39	MAY 22	2.65	AUG 21	10.04
DEC 21	8.79	MAR 21	1.78	JUN 21	5.61	SEP 21	11.48

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

423430072015201. Winchendon well XNW 13.

LOCATION.--Lat 42°42'04", long 72°01'52", Hydrologic Unit 01080202, about 50 ft east of Forristall Road, 0.2 mi north of Elmwood Road, and 1.6 mi northeast of Winchendon.

Owner: W. B. Hart.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 12 ft, cased with stone to 12 ft, open end.

DATUM.--Land-surface datum is 1,209.36 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of extension pipe, 3.8 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.86 ft below land-surface datum, Mar. 20, 1948; lowest measured, 13.36 ft below land-surface datum, Dec. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1982	9.34	JAN 23, 1983	4.97	APR 22, 1983	3.00	JUL 23, 1983	8.64
NOV 24	6.34	FEB 22	4.94	MAY 23	3.57	AUG 22	10.74
DEC 23	6.02	MAR 22	2.76	JUN 21	5.64	SEP 23	10.94

421538071451301. Worcester well XSW 274.

LOCATION.--Lat 42°15'38", long 71°45'13", Hydrologic Unit 01090003, about 300 ft north of Hamilton Street and about 300 ft east of North Lake Avenue in Worcester.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in, depth 54.6 ft, screened 52.6 to 54.6 ft.

DATUM.--Altitude of land-surface datum is 400 ft. Measuring point: Top of casing, 3.0 ft above land-surface datum.

REMARKS.--Water levels affected by Lake Quinsigamond.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.23 ft below land-surface datum, Mar. 27, 1972; lowest measured, 24.62 ft below land-surface datum, Oct. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1982	23.90	JAN 21, 1983	23.41	APR 21, 1983	22.34	JUL 22, 1983	23.97
NOV 23	23.74	FEB 21	23.32	MAY 22	23.25	AUG 21	23.90
DEC 21	23.78	MAR 21	22.25	JUN 21	23.65	SEP 21	24.47

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 west of house on Powhattan Avenue, 1.3 mi southeast of Washington.

Owner: Robert Card.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 26 ft, cased with concrete to 26 ft, open end.

DATUM.--Altitude of land-surface datum is 260 ft. Measuring point: Hole in top of wooden cover, 1.98 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.43 ft below land-surface datum, Apr. 23, 1983; lowest measured, 23.73 ft below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	22.60	JAN 22, 1983	22.86	APR 23, 1983	16.43	JUL 26, 1983	21.33
NOV 26	18.26	FEB 20	21.00	MAY 21	18.12	AUG 28	22.06
DEC 27	22.58	MAR 26	17.84	JUN 25	20.09	SEP 24	22.48

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 from southeast corner of a house 1.3 mi north of intersection of Hazard and Muddy Brook Roads, and 1.8 mi northwest of West Greenwich Center.

Owner: E. Lambert.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 18.5 ft, lined with stone to 18.5 ft, shored.

DATUM.--Altitude of land-surface datum is 380 ft. Measuring point: Edge of shelter floor, 2.19 ft above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.15 ft below land-surface datum, Jan. 27, 1979; lowest measured, 17.68 ft below land-surface datum, Sept. 28, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	16.81	JAN 22, 1983	15.46	APR 23, 1983	12.98	JUL 26, 1983	16.56
NOV 26	13.33	FEB 20	14.64	MAY 21	15.67	AUG 28	16.81
DEC 27	15.75	MAR 26	13.58	JUN 25	16.09	SEP 24	17.05

PROVIDENCE COUNTY

415710071402201. Burrillville well BUW 187.

LOCATION.--Lat 41°57'10", long 71°40'22", Hydrologic Unit 01090003, town of Burrillville, 25 ft east of road and 75 ft southwest of a house 0.6 mi north of intersection of Harrisville and Lapham Farm Roads, and 0.9 mi south of Harrisville.

Owner: Brothers of the Sacred Heart.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 19.8 ft, lined with stone to 19.8 ft, shored.

DATUM.--Altitude of land-surface datum is 462 ft. Measuring point: Hole in base of shelter, 0.59 ft above land-surface datum.

PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.74 ft below land-surface datum, Apr. 23, 1983; lowest, 18.83 ft below land-surface datum, Nov. 3, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	17.54	JAN 22, 1983	16.41	APR 23, 1983	10.74	JUL 26, 1983	15.68
NOV 26	17.57	FEB 20	15.17	MAY 21	12.39	AUG 28	16.95
DEC 27	16.85	MAR 26	12.00	JUN 25	13.96	SEP 24	17.84

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 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, depth 20 ft, lined with stone to 20 ft, shored.

DATUM.--Altitude of land-surface datum is 130 ft. Measuring point: Hole in wooden cover, 0.06 ft above land-surface datum.

PERIOD OF RECORD.--August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft below land-surface datum, Jan. 27, 1979; lowest measured, 17.20 ft below land-surface datum, Sept. 29, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	14.58	JAN 22, 1983	11.47	APR 23, 1983	10.50	JUL 26, 1983	14.80
NOV 26	10.71	FEB 20	10.82	MAY 21	12.42	AUG 28	15.57
DEC 27	11.82	MAR 26	10.19	JUN 25	12.96	SEP 24	15.97

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 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, depth 107 ft, cased to 107 ft, open end.

DATUM.--Altitude of land-surface datum is 60 ft. Measuring point: Inside lower lip of 8-in pipe, 3.32 ft above land-surface datum.

REMARKS.--Water level affected by Blackstone River floods.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft above land-surface datum, Jan. 28, 1976, revised; lowest measured, 7.30 ft below land-surface datum, Aug. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	5.89	JAN 22, 1983	5.26	APR 23, 1983	1.78	JUL 26, 1983	5.39
NOV 26	3.18	FEB 20	3.41	MAY 21	4.04	AUG 28	5.80
DEC 27	5.64	MAR 26	2.46	JUN 25	4.92	SEP 24	5.76

415948071325001. North Smithfield well NSW 21.

LOCATION.--Lat 41°59'48", long 71°32'50", Hydrologic Unit 01090003, town of North Smithfield, 500 ft southwest of State Highway 146A, 900 ft west of intersection of State Highway 146A and Harkness Road at Branch Village.

Owner: Thomas E. Esty.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug domestic water-table well, diameter 24 in, depth 16 ft, cased with tile to 16 ft, open end.

DATUM.--Land-surface datum is 238.68 ft National Geodetic Vertical Datum of 1929. Measuring point: Hole in wooden cover at top of tile casing, 2.08 ft 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 below land-surface datum, Mar. 26, 1969; lowest measured, 11.71 ft below land-surface datum, Oct. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	10.18	JAN 22, 1983	7.98	APR 23, 1983	4.75	JUL 26, 1983	9.55
NOV 26	8.09	FEB 20	5.79	MAY 21	7.34	AUG 28	10.23
DEC 27	8.78	MAR 26	4.62	JUN 25	8.26	SEP 24	10.81

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 northeast of intersection of Cottage Street and Central Avenue.

Owner: Greenhalgh Mills, Inc.

AQUIFER.--Gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in, depth 43 ft, cased to about 40 ft, screened about 40 to 43 ft.

DATUM.--Altitude of land-surface datum is 86 ft. Measuring point: Top of casing, 3.15 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Apr. 23, 1983; lowest measured, 7.28 ft below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	5.10	JAN 22, 1983	5.59	APR 23, 1983	1.98	JUL 26, 1983	4.28
NOV 26	4.67	FEB 20	4.37	MAY 21	2.38	AUG 28	5.09
DEC 27	5.44	MAR 26	2.80	JUN 25	3.44	SEP 24	5.58

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 northwest of Adelaide and 800 ft west of Narragansett Avenues.

Owner: Gorham Division of Textron.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in, depth 124 ft, cased to 116 ft, screened 116 to 124 ft.

DATUM.--Land-surface datum is 45.79 ft, National Geodetic Vertical Datum of 1929. Measuring point: Top edge of hole in center of steel cover, 0.48 ft below land-surface datum.

REMARKS.--Water level affected by pumping from one or more nearby wells.

PERIOD OF RECORD.--December 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.78 ft below land-surface datum, Apr. 23, 1983; lowest, 10.22 ft below land-surface datum, Oct. 20, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	4.73	JAN 22, 1983	4.75	APR 23, 1983	2.78	JUL 26, 1983	4.12
NOV 26	3.68	FEB 20	4.33	MAY 21	3.30	AUG 28	4.44
DEC 27	4.54	MAR 26	3.71	JUN 25	3.83	SEP 24	4.66

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 south of Valley and 300 ft east of Eagle Streets.

Owner: Licht Industries.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in, depth 82 ft, cased to 82 ft, open end.

DATUM.--Altitude of land-surface datum is 10 ft. Measuring point: Floor of recorder shelter, 1.65 ft 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 below land-surface datum, Jan. 16, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	0.05	JAN 22, 1983	0.02	APR 23, 1983	0.01	JUL 26, 1983	0.06
NOV 26	0.07	FEB 20	0.01	MAY 21	0.00	AUG 28	0.07
DEC 27	0.01	MAR 26	6.02	JUN 25	0.05	SEP 24	0.02

GROUND-WATER LEVELS IN RHODE ISLAND

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 southeast of U.S. Highway 1, at former U.S. Navy Auxiliary Air Station.

Owner: U.S. General Services Administration.

AQUIFER.--Sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 32 ft, cased to 32 ft, open end.

DATUM.--Altitude of land-surface datum is 26 ft. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.09 ft below land-surface datum, Apr. 23, 1983; lowest measured, 21.63 ft below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	19.19	JAN 22, 1983	18.66	APR 23, 1983	10.09	JUL 26, 1983	16.89
NOV 26	17.02	FEB 20	15.14	MAY 21	12.84	AUG 28	17.56
DEC 27	18.66	MAR 26	13.09	JUN 25	15.02	SEP 24	18.50

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 west of Wood River, 250 ft south of Ten Rod Road, and 2.0 mi west of Millville.

Owner: State Dept. of Natural Resources.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 10 ft, cased with concrete to 10 ft, open end.

DATUM.--Land-surface datum is 132.80 ft 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 below land-surface datum, Jan. 27, 1979; lowest measured, 7.97 ft below land-surface datum, Sept. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	6.52	JAN 22, 1983	5.87	APR 23, 1983	2.84	JUL 25, 1983	5.90
NOV 26	3.78	FEB 20	4.14	MAY 21	3.66	AUG 28	6.54
DEC 27	5.80	MAR 26	3.73	JUN 25	5.17	SEP 24	6.78

413307071323601. Exeter well EXW 16.

LOCATION.--Lat 41°33'07", long 71°32'36", Hydrologic Unit 01090005, town of Exeter, about 25 ft 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, depth 27 ft, cased to 27 ft, open end.

DATUM.--Land-surface datum is 154.47 ft National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.78 ft 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, 5.98 ft below land-surface datum, May 21, 1983; lowest measured, 15.40 ft below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	10.90	JAN 22, 1983	8.59	APR 23, 1983	6.06	JUL 26, 1983	7.99
NOV 26	7.49	FEB 20	8.92	MAY 21	5.98	AUG 28	8.07
DEC 27	9.48	MAR 26	7.37	JUN 25	7.65	SEP 24	7.43

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 east of Mt. Tom Road, 50 ft north of Blitzkrieg Trail, and 2.4 mi northwest of Barbersville.

Owner: State Department of Environmental Management.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, cased to 38 ft, screened 38 to 40 ft.

DATUM.--Land-surface datum is 146.40 ft, National Geodetic Vertical Datum of 1929. Measuring point: floor of recorder shelter, 3.48 ft above land-surface datum.

PERIOD OF RECORD.--March 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.58 ft below land-surface datum, Apr. 28, 29, 1983; lowest, 16.74 ft below land-surface datum, Oct. 19, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1982	15.09	JAN 15, 1983	14.95	APR 15, 1983	10.91	JUL 15, 1983	13.16
10	15.16	20	14.91	20	10.35	20	13.41
15	15.23	22	a14.91	23	a10.20	25	13.61
20	15.32	25	14.72	25	9.69	26	a13.68
23	a15.40	31	14.49	30	9.59	31	13.89
25	15.42	FEB 05	14.26	MAY 05	9.72	AUG 05	14.09
31	15.50	10	14.08	10	10.03	10	14.29
NOV 05	15.53	15	13.96	15	10.31	15	14.42
10	15.54	20	13.78	20	10.60	20	14.58
15	15.42	25	13.54	21	a10.65	25	14.76
20	15.34	28	13.45	31	11.14	28	a14.87
26	a14.71	MAR 05	13.25	JUN 05	11.28	31	14.93
30	15.31	10	12.98	10	11.49	SEP 05	15.08
DEC 05	15.28	15	12.68	15	11.72	10	15.23
10	15.25	20	12.43	20	11.98	15	15.39
27	a15.08	26	a12.06	25	12.24	20	15.52
31	15.04	31	11.82	30	12.45	24	a15.62
JAN 05, 1983	15.03	APR 05	11.76	JUL 05	12.68	25	15.63
10	15.02	10	11.53	10	12.91	30	15.74

WTR YR 1983 MAX 9.58 APR 28, 29 MIN 15.76 SEPT 30

a Measured water level.

413148071281601. North Kingstown well NKW 255.

LOCATION.--Lat 41°31'48", long 71°28'16", Hydrologic Unit 01090004, town of North Kingstown, 100 ft east of Pendar Road, 0.6 mi south of intersection of Pendar and Tower Hill Roads, and 1.0 mi south of Allenton.

Owner: Carlton Cook.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in, depth 14 ft, cased with concrete to 14 ft, open end.

DATUM.--Altitude of land-surface datum is 50 ft. 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 below land-surface datum, Mar. 26, 1968; lowest measured, 13.03 ft below land-surface datum, Oct. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	9.33	JAN 22, 1983	9.10	APR 23, 1983	4.28	JUL 26, 1983	7.82
NOV 26	5.64	FEB 20	7.29	MAY 21	6.02	AUG 28	9.39
DEC 27	8.88	MAR 26	5.89	JUN 25	7.56	SEP 24	9.89

WASHINGTON COUNTY--Continued

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 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, depth 17 ft, cased with concrete to 17 ft, open end.

DATUM.--Altitude of land-surface datum is 60 ft. Measuring point: Hole in top of wooden base, 2.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.32 ft below land-surface datum, Apr. 23, 1983; lowest measured, well dry several times in water years 1981-82.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	14.31	JAN 22, 1983	14.19	APR 23, 1983	8.32	JUL 26, 1983	11.89
NOV 26	12.15	FEB 20	12.49	MAY 21	9.88	AUG 28	14.15
DEC 27	14.24	MAR 26	9.90	JUN 25	11.65	SEP 24	14.62

412717071415301. Richmond well RIW 231.

LOCATION.--Lat 41°27'17", long 71°41'53", Hydrologic Unit 01090005, town of Richmond, about 50 ft west of Narragansett Trail, and 1.2 mi 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, depth 29 ft, lined with stone to 29 ft, shored.

DATUM.--Altitude of land-surface datum is 84 ft. Measuring point: Hole in top of wooden cover, 0.36 ft above land-surface datum.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.38 ft below land-surface datum, May 21, 1983.

Dry several times in water years 1965-67, 1977, 1981-82.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	24.95	JAN 22, 1983	26.44	APR 23, 1983	20.61	JUL 26, 1983	21.56
NOV 26	25.49	FEB 20	25.67	MAY 21	19.38	AUG 28	22.94
DEC 27	26.26	MAR 26	23.67	JUN 25	20.31	SEP 24	24.04

412932071374302. Richmond well RIW 417.

LOCATION.--Lat 41°29'32", long 71°37'43", Hydrologic Unit 01090005, town of Richmond, about 50 ft south of State Highway 138, about 75 ft west of Beaver River, and 3.3 mi north of Kenyon.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in, depth 40 ft, cased to 37 ft, screened 37 to 40 ft.

DATUM.--Land-surface datum is 115.56 ft, National Geodetic Vertical Datum of 1929. Measuring point: Floor of recorder shelter, 0.65 ft above land-surface datum.

REMARKS.--Water level affected by stage of nearby Beaver River.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.08 ft below land-surface datum, Apr. 25, 1983; lowest, 8.02 ft below land-surface datum, Oct. 3, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1982	7.32	JAN 10, 1983	6.89	APR 25, 1983	4.08	JUL 25, 1983	7.07
10	7.14	15	6.79	30	4.70	26	a7.13
15	7.26	20	6.78	MAY 05	5.07	31	7.20
20	7.34	22	a6.82	10	5.42	AUG 05	7.27
23	a7.40	25	6.41	15	5.68	10	7.34
25	7.39	31	6.39	20	5.78	15	7.23
31	7.40	FEB 20	5.89	21	a5.80	20	7.37
NOV 05	7.24	25	5.81	25	5.90	25	7.47
10	7.31	28	5.84	31	5.77	28	a7.54
15	7.14	MAR 05	5.70	JUN 05	5.74	31	7.53
20	7.16	10	5.47	10	5.92	SEP 05	7.57
25	7.19	15	5.40	15	6.09	10	7.65
26	a6.08	20	5.37	20	6.25	15	7.71
30	7.02	25	5.35	25	6.44	20	7.74
DEC 05	7.06	26	a5.45	30	6.40	24	a7.76
10	7.00	31	5.47	JUL 05	6.66	25	7.76
27	a6.85	APR 05	5.55	10	6.76	30	7.80
31	6.85	10	4.77	15	6.93		
JAN 05, 1983	6.88	23	a4.76	20	7.03		

WTR YR 1983 MAX 4.08 APR 25 MIN 7.80 SEPT 30

a Measured water level.

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 west of Hope Valley Road, and 1.5 mi northeast of Woodville.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 54 ft, cased to 49 ft, screened 49 to 54 ft.

DATUM.--Land-surface datum is 100.17 ft, National Geodetic Vertical Datum of 1929. Measuring point: Floor of recorder shelter, 2.68 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 31.42 ft below land-surface datum, June 11, 1982; lowest, 35.94 ft below land-surface datum, Feb. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1982	34.13	DEC 31, 1982	34.13	APR 05, 1983	32.63	JUL 05, 1983	33.30
10	34.16	JAN 05, 1983	34.15	10	32.61	10	33.37
15	34.14	10	34.15	15	32.12	15	33.47
20	34.19	15	34.11	20	31.87	20	33.58
23	a34.25	20	34.10	23	a31.76	25	33.66
25	34.23	22	a34.11	25	31.65	31	33.77
31	34.27	25	33.98	30	31.54	AUG 05	33.86
NOV 05	34.30	31	33.79	MAY 05	31.71	10	33.93
10	34.30	FEB 05	33.71	10	31.96	15	33.92
15	34.25	10	33.64	15	32.22	20	33.98
20	34.23	15	33.60	20	32.42	25	34.06
25	34.26	20	33.52	21	a32.47	28	a34.13
26	a33.97	25	33.35	25	32.57	31	34.17
30	34.26	28	33.30	31	32.72	SEP 05	34.25
DEC 05	34.20	MAR 05	33.22	JUN 05	32.78	10	34.33
10	34.18	10	33.09	10	32.84	15	34.42
15	34.19	15	32.92	15	32.93	20	34.49
20	34.16	20	32.82	20	33.02	24	a34.56
25	34.16	26	a32.68	25	33.12	25	34.55
27	a34.14	31	32.61	30	33.22	30	34.61

WTR YR 1983 MAX 31.53 APR 28, 29 MIN 34.63 SEPT 30

a Measured water level.

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 northwest of Kingston.

Owner: University of Rhode Island.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 10 in, depth 34 ft, cased to 34 ft, open end.

DATUM.--Land-surface datum is 111.89 ft National Geodetic Vertical Datum of 1929. Measuring point: Floor of recorder shelter, 0.57 ft 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, 6.91 ft below land-surface datum, Apr. 25, 26, 1983; lowest, 15.06 ft below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	a13.20	MAR 20, 1983	9.20	JUN 10, 1983	9.77	AUG 15, 1983	12.24
25	13.22	25	9.11	15	10.00	20	12.35
31	13.32	26	a9.16	20	10.25	25	12.49
NOV 05	13.37	31	9.18	25	10.48	28	a12.60
10	13.38	APR 05	9.34	30	10.66	31	12.67
26	a12.06	10	9.39	JUL 05	10.84	SEP 05	12.80
DEC 27	13.19	15	7.84	10	11.06	10	12.93
31	13.18	20	7.88	15	11.30	15	13.06
JAN 22, 1983	a12.64	23	a7.51	20	11.52	20	13.16
FEB 20	11.24	25	6.91	25	11.66	24	a13.27
25	11.02	30	7.17	26	a11.73	25	13.27
MAR 05	10.66	MAY 21	a8.86	31	11.88	30	13.39
10	9.96	31	9.35	AUG 05	12.04		
15	9.38	JUN 05	9.50	10	12.20		

WTR YR 1983 MAX 6.91 APR 25, 26 MIN 13.48 NOV 26

a Measured water level.

GROUND-WATER LEVELS IN RHODE ISLAND

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 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, depth 30 ft, lined with stone to 30 ft, shored.

DATUM.--Land-surface datum is 127.84 ft National Geodetic Vertical Datum of 1929. Measuring point: Top edge of concrete casing on south rim of well, 2.11 ft above land-surface datum. Dec. 27, 1975, to Apr. 25, 1981, measuring point 1.61 ft lower.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.73 ft below land-surface datum, Apr. 23, 1983, Dry several times in water years 1978, 1980-83.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	28.49	JAN 22, 1983	27.57	APR 23, 1983	23.73	JUL 26, 1983	27.92
NOV 26	27.90	FEB 20	26.35	MAY 21	25.00	AUG 28	28.51
DEC 27	27.67	MAR 26	24.66	JUN 25	26.43	SEP 24	DRY

412154071462901. Westerly well WEW 522.

LOCATION.--Lat 41°21'54", long 71°46'29", Hydrologic Unit 01090005, town of Westerly, 350 ft northwest of intersection of Pound and Old Shore Roads and 1.0 mi north of Dunn Corner.

Owner: S. Panciera.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in, depth 16 ft, lined with stone to 16 ft, shored.

DATUM.--Altitude of land-surface datum is 45 ft. Measuring point: Southwest corner of stone casing, 0.91 ft above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land-surface datum, Apr. 23, 1983; lowest measured, 14.61 ft below land-surface datum, Sept. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1982	13.28	JAN 22, 1983	12.35	APR 23, 1983	9.23	JUL 26, 1983	12.62
NOV 26	10.75	FEB 20	11.10	MAY 21	10.68	AUG 28	13.14
DEC 27	12.31	MAR 26	9.47	JUN 25	11.91	SEP 24	13.67

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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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