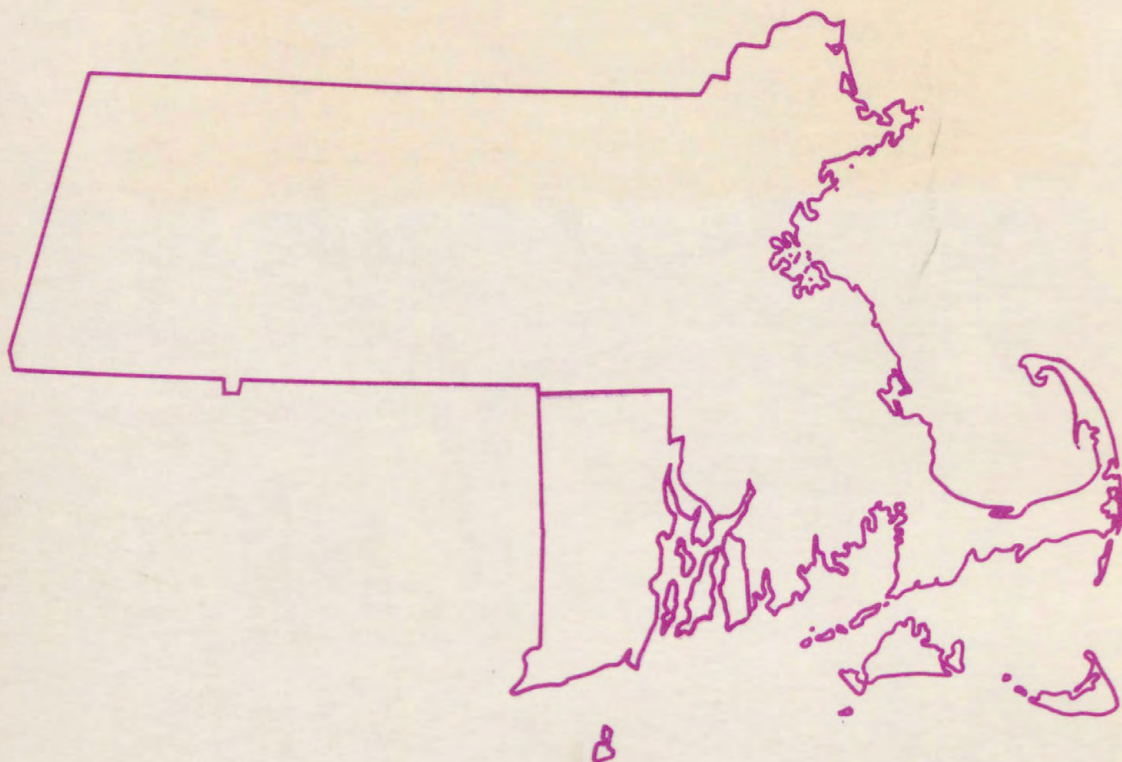
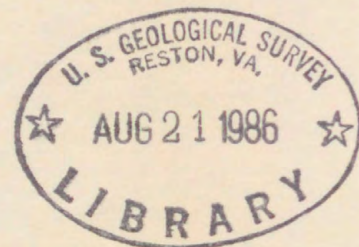


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Water Resources Data Massachusetts and Rhode Island Water Year 1984



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-84-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

CALENDAR FOR WATER YEAR 1984

1983

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Water Resources Data Massachusetts and Rhode Island Water Year 1984

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



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-84-1
Prepared in cooperation with the States of Massachusetts and
Rhode Island and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information write to
District Chief, Water Resources Division
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: D. G. Johnson, D. J. Kent, B. E. Krejmas, L. A. Rowse, J. P. Russell, and R. S. Socolow.

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

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INTRODUCTION

Water-resources data for the 1984 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 91 gaging stations, monthend contents for 30 lakes and reservoirs, water quality for 9 gaging stations, and water levels for 106 observation wells. Also included are data for 1 crest-stage partial-record station. 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 and observation wells are shown in figures 1 and 2, 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-84-1." 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: Department of Environmental Management, James Gutensohn, Commissioner, Division of Water Resources, C. F. Kennedy, Director and Chief Engineer; Department of Environmental Quality Engineering, A. D. Cortese, Commissioner, Division of Water Pollution Control, T. C. McMahon, Director; Metropolitan District Commission, W. J. Geary, Commissioner, Water Division, W. A. Brutsch, Director and Chief Engineer, F. D. Faucher, Director of Reservoir Operations.

Rhode Island: State Water Resources Board, W. M. Stetson, Chairman, P. P. Calise, Acting General Manager; Department of Environmental Management, R. L. Bendick Jr., Director, Division of Water Resources, J. W. Fester, Chief; 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.



Figure 1.--Location of gaging stations

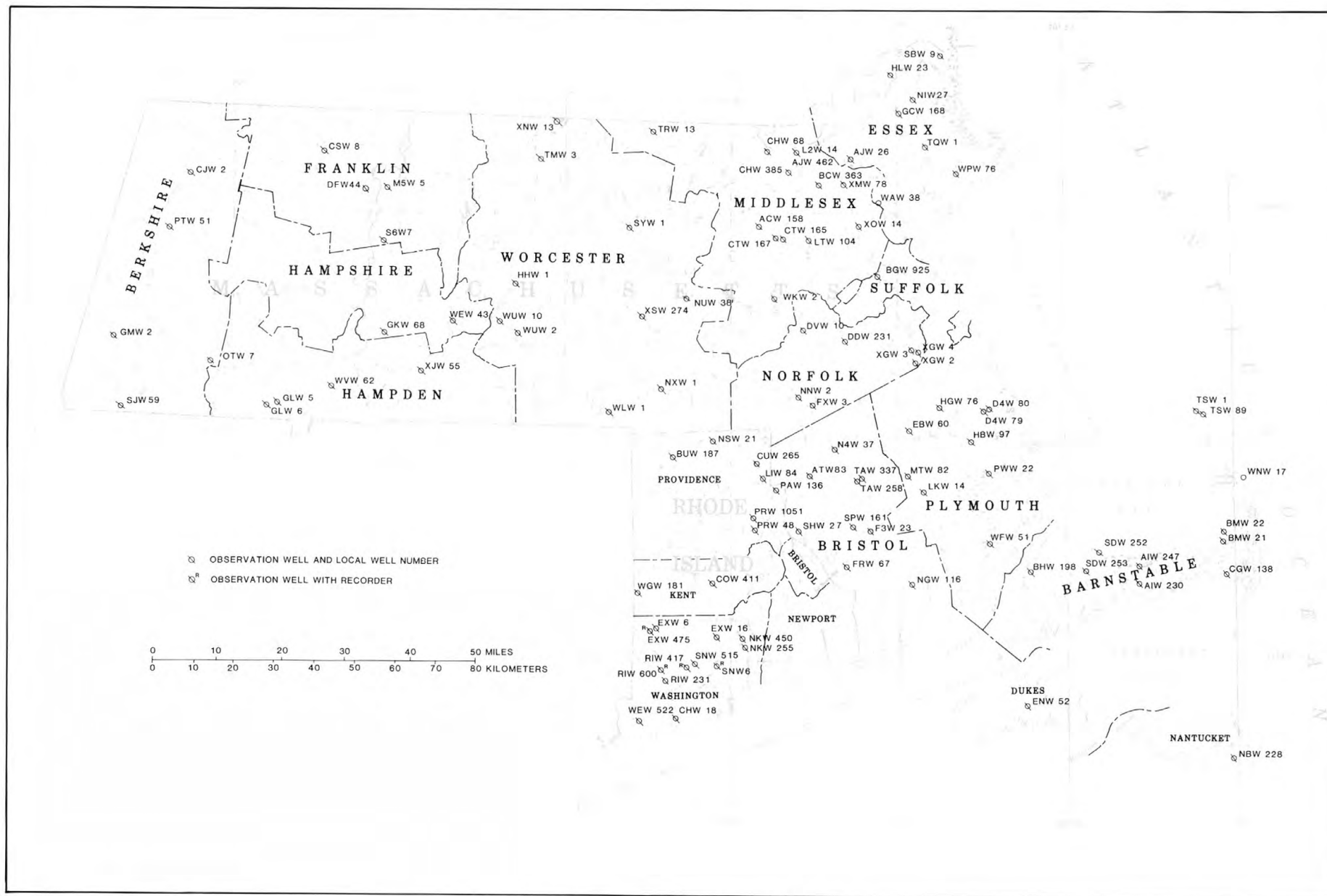


Figure 2.—Location of observation wells

SUMMARY OF HYDROLOGIC CONDITIONS

Runoff for the 1984 water year was in the upper quartile of record throughout Massachusetts and Rhode Island, and ranged from about 34 to 46 inches at selected long-term index stations in Massachusetts and about 39 to 42 inches at index stations in Rhode Island. New high annual discharges were recorded at the following gaging stations: Assabet River at Maynard, Mass., Concord River below River Meadow Brook at Lowell, Mass., Merrimack River below Concord River at Lowell, Mass., Ipswich River near Ipswich, Mass., Wading River near Norton, Mass. (Taunton River basin), Blackstone River at Woonsocket, R.I., Pawcatuck River at Wood River Junction, R.I., Millers River at Erving, Mass., and Deerfield River at West Deerfield, Mass.

Annual peaks on most streams occurred during the storm of May 28 to June 2. During this 6-day period, the National Weather Service precipitation gages reported 7.20 inches of rain at Boston, Mass., 6.96 inches at Worcester, Mass., 6.62 inches at Lanesborough, Mass., and 7.96 inches at Providence, R.I. Recurrence intervals for peak discharges on smaller streams were in the 4- to 10-year range, whereas some larger streams yielded peaks with higher recurrence intervals. The peak for Connecticut River at Montague City, Mass., was the fifth highest for the 81 years of record. The peak at Housatonic River near Great Barrington, Mass., had a recurrence interval of 60 years.

October runoff ranged from 44 to 136 percent of median and was in the deficient (lower quartile of record) range west of the Connecticut River. November runoff was normal west of the Connecticut River and excessive (upper quartile of record) to the east. Runoff in December, January, and February was, respectively, excessive, normal, and excessive throughout both States; in February new high monthly means occurred at index stations in the Chicopee and Housatonic River basins. March runoff was excessive in Rhode Island and eastern Massachusetts and in the normal range elsewhere. April runoff was generally excessive, except for eastern tributaries to the Connecticut River and in the Housatonic River basin, where runoff was in the normal range. The May-June storm produced excessive runoff in May in all areas except Rhode Island and southeastern Massachusetts, where runoff was above median but in the normal range. Runoff was excessive in June and July throughout both States. Runoff declined during the remainder of the year and was in the normal range in August and September, except that it was deficient in September in the Deerfield, Westfield, and Hoosic River basins. Monthly mean discharges for three index gaging stations and median discharges for the reference period 1951-80 are compared in figure 3.

The combined storage of Borden Brook and Cobble Mountain Reservoirs in southwestern Massachusetts increased from 65 percent of capacity at the beginning of October to 100 percent full May 31 and then declined to 69 percent full by the end of September. Storage in Quabbin Reservoir in central Massachusetts changed from 92.4 percent full at the end of October to 106.4 percent full at the end of May to 95.2 percent full by the end of September. Storage in Scituate Reservoir and 5 smaller reservoirs in Rhode Island changed from 56 percent full at the end of October to 94 percent full at the end of May to 68 percent full at the end of September.

Ground-water levels in October were in the normal range except in central and northeastern Massachusetts, where they were in the below-normal range (lowest 20 percent of recorded range for the month) and in Rhode Island and southeastern Massachusetts and Cape Cod, where levels showed mixed trends ranging from below normal to above normal (highest 20 percent of recorded range for the month). Water levels generally increased in November and December. November levels were below normal in far western Massachusetts, were normal in central Massachusetts and Cape Cod, and were generally above normal in Rhode Island and eastern Massachusetts. Forty percent of Rhode Island wells set new highs for November. Eighty percent of reporting wells were in the above-normal range in December, with only a small area on the southeastern coast of Massachusetts and eastern Cape Cod remaining in the normal range. Water levels declined and were in the normal range in January, except that levels in northeastern Massachusetts, southern Rhode Island and bordering areas in southeastern Massachusetts remained above normal. Water levels were generally in the above-normal range February to July, except that, in some months, some areas were in the normal range, as follows: In February, south-central Massachusetts and outer Cape Cod; in May prior to the heavy rains, in northeastern Massachusetts, southern Rhode Island, and a band along the Massachusetts-Connecticut border extending to the Massachusetts coast; in June, a narrow band extending north to south in central Massachusetts; and in July, along the western half of the Massachusetts-Connecticut border and a band from Worcester, Mass., to Providence, R.I. Nine wells in Massachusetts set new highs for periods of record during February to July, and new monthly highs were set at 75 wells in Massachusetts and 15 wells in Rhode Island.

In August, Rhode Island levels remained above normal, but in Massachusetts the areas of normal levels expanded to include the entire Berkshire region and a band extending from the New Hampshire border, through central Massachusetts to the Rhode Island border and eastward to the coast south of Boston, Mass. By September levels had declined and were in the normal range except for areas along the Connecticut-Rhode Island border, northern Rhode Island and eastern Massachusetts south of Boston, which were in the below-normal range and outer Cape Cod, which was the only area remaining above normal. Monthly water levels at three observation wells in western and eastern Massachusetts and northern Rhode Island with average, maximum, and minimum monthly levels for periods of record are compared in figure 4.

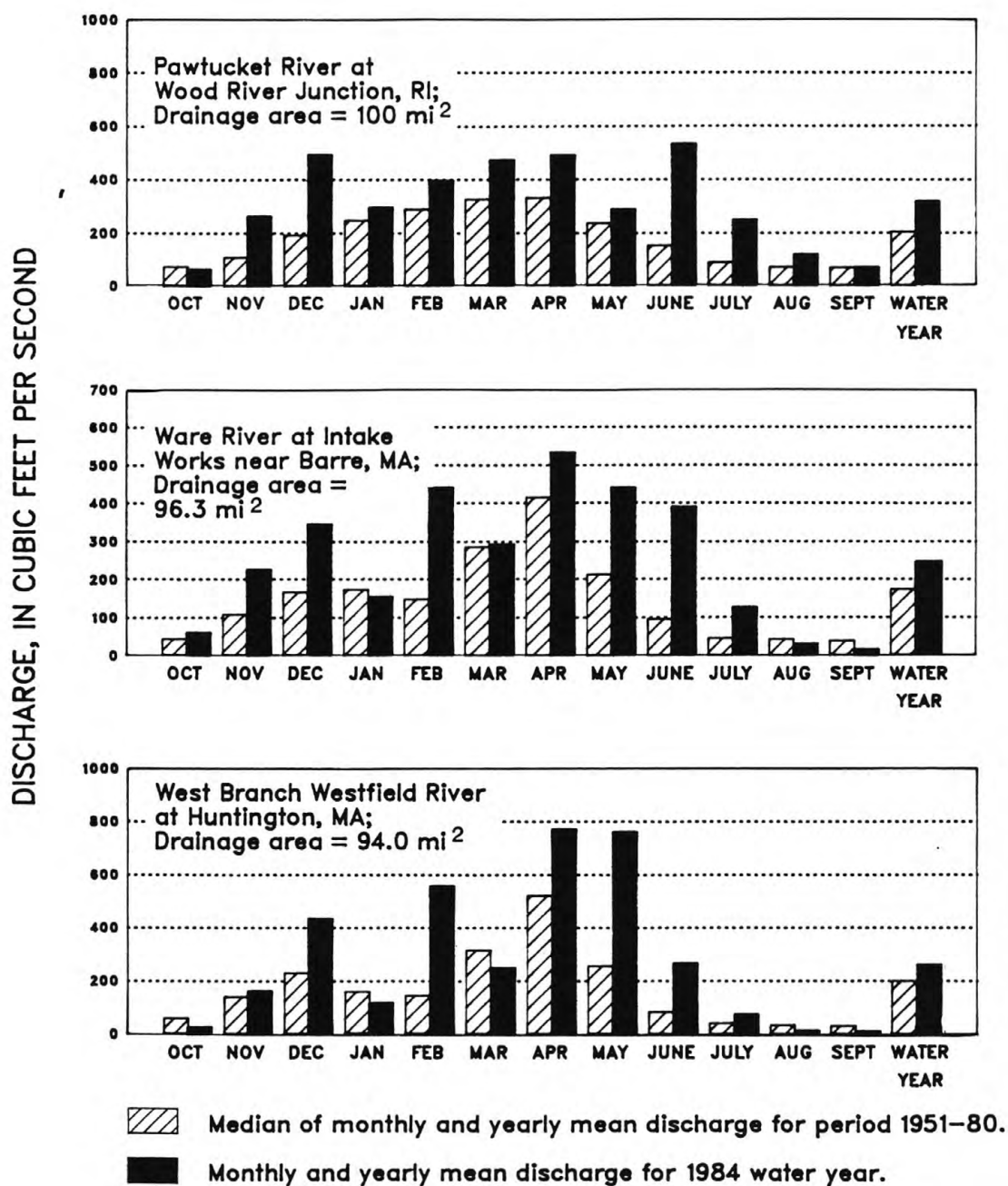
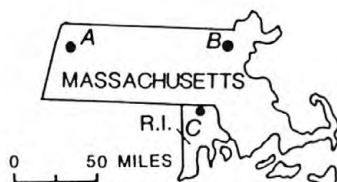


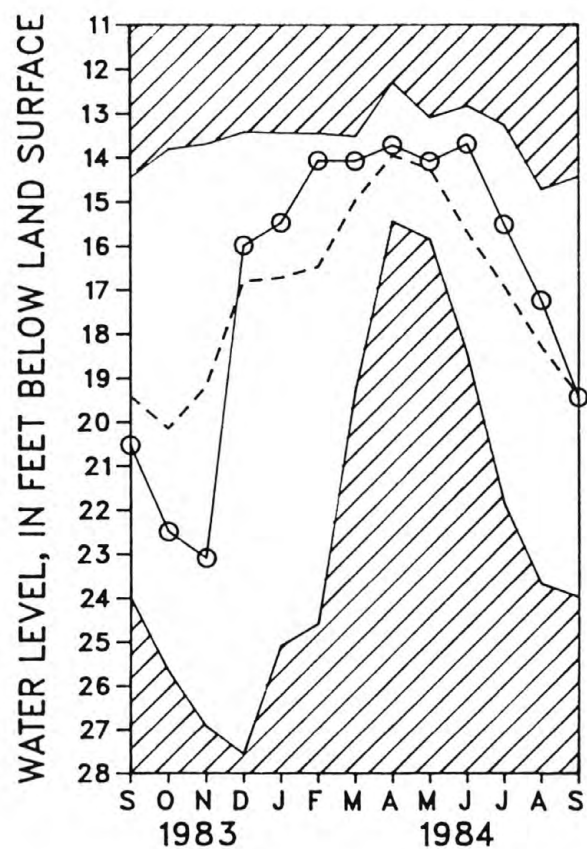
Figure 3.—Comparison of discharge at three long-term index gaging stations during 1984 water year with median discharge for period 1951–80.



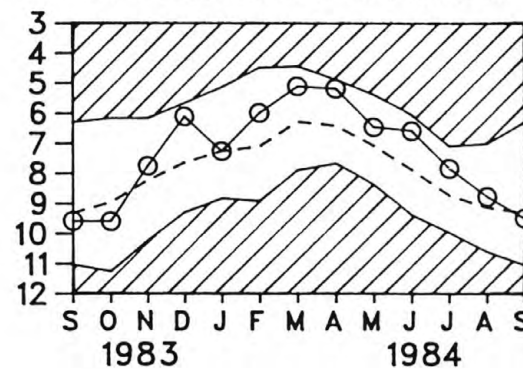
UNSHADED AREA SHOWS RANGE BETWEEN
HIGHEST AND LOWEST MONTHEND WATER LEVEL

CURRENT —○— AVERAGE - - - -

A. PITTSFIELD 51, MASS.



B. WILMINGTON 78, MASS.



C. COVENTRY 411, RI.

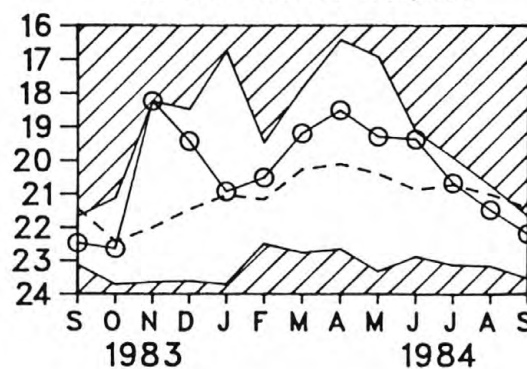


Figure 4.—Comparison of monthly water levels in selected observation wells during 1984 water year with average, maximum, and minimum levels for period of record.

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 (CaCO_3).

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Substrate is the physical surface upon which an organism lived.

Natural 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 5 below.

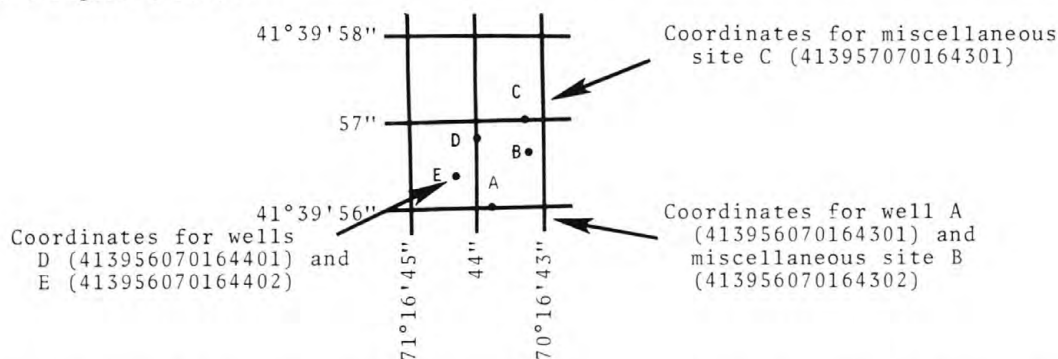


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude)

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

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-five 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 the 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 March 1986, 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, Chap. D1. 1975. 65 p. \$2.50.
- 1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents, by W. W. Wood: Book 1, Chap. D2. 1976. 24 p. \$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, Chap. D1. 1974. 116 p. \$5.00.
- 2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: Book 2, Chap. E1. 1971. 126 p. \$4.75.
- 3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: Book 3, Chap. A1. 1967. 30 p. \$2.00.
- 3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: Book 3, Chap. A2. 1967. 12 p. \$1.75.
- 3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: Book 3, Chap. A3. 1968. 60 p. \$5.00.
- 3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: Book 3, Chap. A4. 1967. 44 p. \$2.25.
- 3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: Book 3, Chap. A5. 1967. 29 p. \$2.25.
- 3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: Book 3, Chap. A6. 1968. 13 p. \$1.75.
- 3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A7. 1968. 28 p. \$4.50.
- 3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: Book 3, Chap. A8. 1969. 65 p. \$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, Chap. A9. 1982. 44 p. \$5.00.
- 3-A10 Discharge ratings at gaging stations, by E. J. Kennedy: Book 3, Chap. A10. 1985. 59 p. \$3.00.
- 3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: Book 3, Chap. A11. 1969. 22 p. \$2.00.
- 3-A13 Computation of continuous records of streamflow, by E. J. Kennedy: Book 3, Chap. A13. 1983. \$4.50.
- 3-A14 The use of flumes in measuring discharge, by F. A. Kilpatrick and V. R. Schneider: Book 3, Chap. A14. 1983. 46 p. \$4.50.
- 3-A15 Computation of water-surface profiles in open channels, by Jacob Davidian: Book 3, Chap. A15. \$2.50.
- 3-A16 Measurements of discharge using tracers, by F. A. Kilpatrick and E. D. Cobb: Book 3, Chap. A16. 1986. 52 p. \$2.50.
- 3-A17 Acoustic velocity meter systems, by Antonius Laenen: Book 3, Chap. A17. 1985. 38 p. \$1.75.
- 3-B1 Aquifer-test design, observation, and data analysis, by R. W. Stallman: Book 3, Chap. B1. 1971. 26 p. \$3.50.
- 3-B2 Introduction to ground-water hydraulics, a programmed text for self-instruction, by G. D. Bennett: Book 3, Chap. B2. 1976. 172 p. \$7.00.
- 3-B3 Type curves for selected problems of flow to wells in confined aquifers, by J. E. Reed: Book 3, Chap. B3. 1980. 106 p. \$6.00.
- 3-C1 Fluvial sediment concepts, by H. P. Guy: Book 3, Chap. C1. 1970. 55 p. \$3.75.
- 3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: Book 3, Chap. C2. 1970. 59 p. \$5.50.
- 3-C3 Computation of fluvial-sediment discharge, by George Porterfield: Book 3, Chap. C3. 1972. 66 p. \$3.25.
- 4-A1 Some statistical tools in hydrology, by H. C. Riggs: Book 4, Chap. A1. 1968. 39 p. \$2.50.
- 4-A2 Frequency curves, by H. C. Riggs: Book 4, Chap. A2. 1968. 15 p. \$2.00.
- 4-B1 Low-flow investigations, by H. C. Riggs: Book 4, Chap. B1. 1972. 18 p. \$3.50.
- 4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: Book 4, Chap. B2. 1973. 20 p. \$3.25.
- 4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: Book 4, Chap. B3. 1973. 15 p. \$3.50.
- 4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: Book 4, Chap. D1. 1970. 17 p. \$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, Chap. A1. 1979. 626 p. \$11.00.
- 5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: Book 5, Chap. A2. 1971. 31 p. \$2.75.
- 5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: Book 5, Chap. A3. 1972. 40 p. \$2.50.
- 5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T. A. Ehlike, G. A. Irwin, B. W. Lium, and K. V. Slack: Book 5, Chap. A4. 1977. 332 p. \$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, Chap. A5. 1977. 95 p. \$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, Chap. A6. 1982. 181 p. \$6.50.
- 5-C1 Laboratory theory and methods for sediment analysis, by H. P. Guy: Book 5, Chap. C1. 1969. 58 p. \$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, Chap. C1. 1976. 116 p. \$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, Chap. C2. 1978. 90 p. \$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, Chap. C3. 1981. 110 p. \$7.50.
- 8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: Book 8, Chap. A1. 1968. 23 p. \$2.00.
- 8-A2 Installation and service manual for U.S. Geological Survey manometers, by J. D. Craig: Book 8, Chap. A2. 1983. 57 p. \$6.00.
- 8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: Book 8, Chap. B2. 1968. 15 p. \$1.75.

HYDROLOGIC-DATA STATION RECORDS

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MERRIMACK RIVER BASIN

01094400 NORTH NASHUA RIVER AT FITCHBURG, MASS.

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

DRAINAGE AREA.--63.4 mi², revised.

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

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

REMARKS.--Records good. 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.--12 years, 130 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,740 ft³/s Apr. 5, 1984, gage height, 7.02; minimum, 6.7 ft³/s Oct. 19, 1980, and Sept. 10, 1984, 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 greater than base discharge of 700 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1445	811	4.37	Apr. 5	2145	*2,740	*7.02
Dec. 14	0730	1,220	5.04	May 31	1345	1,950	6.06
Feb. 16	1200	1,560	5.53				

Minimum discharge, 6.7 ft³/s Sept. 10; minimum daily, 11 ft³/s Sept. 2, 3, 9, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	26	226	126	78	241	228	150	1250	54	33	15
2	62	24	184	114	71	194	274	119	892	54	31	11
3	30	24	167	105	77	167	334	107	677	46	29	11
4	22	54	151	102	195	153	347	391	442	43	29	15
5	19	108	158	102	212	140	1230	340	319	48	26	17
6	20	117	159	103	194	162	1790	239	250	57	25	17
7	18	85	357	104	152	157	940	188	204	205	36	17
8	17	69	274	103	115	135	605	213	175	210	30	15
9	15	60	198	91	107	125	429	273	143	130	26	11
10	17	56	174	88	95	109	340	204	118	111	23	12
11	16	178	162	96	118	102	290	167	105	95	24	18
12	22	148	148	85	177	94	260	155	90	99	23	23
13	90	106	455	87	187	93	235	157	82	78	23	23
14	50	84	1060	87	195	130	221	203	76	61	26	20
15	37	72	716	86	328	124	268	197	74	49	25	17
16	32	421	478	74	1280	128	371	167	64	53	22	15
17	28	427	336	87	852	136	401	146	62	57	21	16
18	25	248	260	71	579	130	294	132	62	116	18	18
19	23	168	221	75	442	179	242	120	80	144	15	18
20	21	138	168	71	392	239	224	115	66	94	58	18
21	18	175	136	62	354	298	212	110	57	70	28	18
22	18	171	142	58	290	509	182	104	50	62	23	15
23	19	141	171	59	247	453	166	102	47	52	22	12
24	93	125	156	100	344	350	255	115	63	45	20	13
25	67	592	131	189	362	299	245	98	68	37	19	17
26	51	507	125	170	307	286	204	94	76	33	18	17
27	48	310	120	133	242	260	173	102	78	46	15	15
28	42	232	160	115	243	248	152	102	62	52	17	16
29	40	368	249	95	303	242	140	662	56	43	17	14
30	28	305	179	91	---	236	143	1590	54	39	18	11
31	26	---	141	89	---	216	---	1710	---	34	21	---
TOTAL	1036	5539	7762	3018	8538	6335	11195	8572	5842	2317	761	475
MEAN	33.4	185	250	97.4	294	204	373	277	195	74.7	24.5	15.8
MAX	93	592	1060	189	1280	509	1790	1710	1250	210	58	23
MIN	15	24	120	58	71	93	140	94	47	33	15	11

CAL YR 1983 TOTAL 65086.6 MEAN 178 MAX 1690 MIN 9.2
WTR YR 1984 TOTAL 61390 MEAN 168 MAX 1790 MIN 11

MERRIMACK RIVER BASIN

01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MASS.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Jan. 5 to Feb. 8, which are fair. Regulation at low flow by mills upstream. Flow includes diversion to basin for municipal supplies, for Fitchburg from Mare Meadow Reservoir since 1955, for Leominster from Wachusett Reservoir since 1966, and for the Southeast Well Field since 1958. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--49 years, 196 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 greater than base discharge of 1,100 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1645	1,290	4.11	Mar. 21	2330	1,110	3.85
Dec. 14	0830	2,210	5.27	Apr. 6	0345	*5,900	*8.79
Feb. 16	1430	3,310	6.45	May 31	1930	4,060	7.19

Minimum discharge, 25 ft³/s Sept. 30; minimum daily, 29 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	60	339	200	130	426	398	247	2470	121	75	38
2	136	59	274	180	115	331	477	202	1830	110	68	33
3	77	59	239	169	125	281	571	186	1440	97	60	36
4	59	108	226	163	320	250	596	777	936	101	55	47
5	49	182	235	165	340	232	1870	661	667	108	53	43
6	53	164	238	165	320	279	4030	444	510	120	53	42
7	50	121	563	165	250	249	1670	341	424	397	79	40
8	44	100	426	165	185	212	1080	415	355	367	68	37
9	41	90	311	145	172	195	781	557	295	229	55	32
10	45	81	276	140	151	172	612	391	240	197	53	32
11	43	276	250	150	170	164	513	296	212	171	50	36
12	54	201	233	135	271	152	454	279	182	184	53	41
13	195	144	700	140	281	149	408	284	167	148	55	45
14	100	118	1920	140	282	191	393	380	156	123	57	38
15	75	104	1230	135	499	198	459	345	145	108	54	42
16	60	668	815	120	2490	209	701	294	131	114	48	36
17	58	633	573	140	1580	214	752	252	124	119	44	36
18	54	368	436	110	993	197	539	226	126	191	40	36
19	59	257	372	120	752	338	437	205	155	238	38	37
20	51	200	300	110	662	456	407	198	128	163	95	37
21	49	258	242	100	569	546	378	191	110	131	58	36
22	48	236	252	92	458	941	318	174	100	113	46	34
23	53	188	284	94	386	788	291	174	95	96	45	33
24	195	174	255	160	612	613	467	193	124	91	45	31
25	121	946	220	310	590	504	450	163	145	86	41	35
26	92	744	200	280	481	476	369	157	135	76	41	36
27	90	448	185	220	382	424	311	158	151	105	41	34
28	84	351	180	190	421	396	271	166	128	117	41	36
29	77	575	370	155	581	380	240	1020	137	92	41	33
30	65	465	296	150	---	396	237	2950	123	82	41	29
31	62	---	231	145	---	369	---	3260	---	79	45	---
TOTAL	2287	8378	12671	4853	14568	10728	20480	15586	11941	4474	1638	1101
MEAN	73.8	279	409	157	502	346	683	503	398	144	52.8	36.7
MAX	195	946	1920	310	2490	941	4030	3260	2470	397	95	47
MIN	41	59	180	92	115	149	237	157	95	76	38	29

CAL YR 1983 TOTAL 105244 MEAN 288 MAX 3040 MIN 38
WTR YR 1984 TOTAL 108705 MEAN 297 MAX 4030 MIN 29

01095500 NASHUA RIVER AT CLINTON, MASS.

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 provided by Water Division of Metropolitan District Commission.

AVERAGE DISCHARGE.--88 years, 191 ft³/s, 24.09 in/yr, adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

	Mean	Per square mile	Runoff, in inches	Rainfall, in inches
October.....	51.4	0.48	0.55	4.72
November.....	292	2.71	3.03	8.73
December.....	489	4.54	5.23	6.31

Calendar year 1983.....	297	2.76	37.45	64.05

January.....	218	2.02	2.33	2.46
February.....	536	4.98	5.37	5.66
March.....	464	4.31	4.96	5.62
April.....	734	6.82	7.61	4.37
May.....	533	4.95	5.70	10.75
June.....	469	4.36	4.86	2.76
July.....	120	1.11	1.29	4.90
August.....	33.5	.31	.36	1.09
September.....	28.6	.27	.30	1.43

Water year 1984.....	329	3.06	41.60	58.80

MERRIMACK RIVER BASIN

01096000 SQUANNAHOOK RIVER NEAR WEST GROTON, MASS.

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

DRAINAGE AREA.--63.7 mi², revised, excludes 2.16 mi², revised, 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 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.16 mi² upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except for occasional periods of spill. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--35 years, 113 ft³/s, 24.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,010 ft³/s Oct. 16, 1955, gage height, 8.04 ft; 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)
Dec. 14	2300	1,260	5.78	Apr. 6	1130	*2,750	*7.21
Feb. 16	2100	2,040	6.61	June 1	0330	1,910	6.49

Minimum daily discharge, 7.8 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	18	212	129	74	274	249	148	1570	48	30	14
2	18	18	158	115	67	212	296	135	833	49	28	12
3	17	17	133	110	70	177	361	130	874	46	27	12
4	14	22	121	107	104	159	399	274	534	44	25	15
5	12	45	118	106	165	147	463	542	354	39	27	14
6	12	95	117	108	180	151	2080	329	269	64	27	13
7	9.8	70	177	117	159	152	1060	236	229	113	25	12
8	10	49	231	112	120	131	581	207	203	249	25	12
9	11	39	169	100	106	124	413	335	174	168	24	11
10	11	33	140	94	92	106	329	290	146	104	23	10
11	10	59	127	94	96	104	285	218	125	76	22	10
12	11	100	115	85	125	94	259	185	98	80	22	11
13	35	77	177	85	154	90	238	179	94	80	23	13
14	39	56	770	84	165	85	223	184	87	59	24	14
15	27	46	928	84	190	106	238	208	82	47	25	13
16	22	96	518	77	1090	116	306	181	74	41	23	14
17	19	308	353	77	1210	125	512	158	69	39	22	14
18	18	197	261	75	597	123	367	141	66	44	22	13
19	16	124	213	76	499	153	273	131	74	127	21	13
20	15	94	169	74	425	245	243	150	72	108	27	12
21	16	86	140	68	400	299	225	151	60	67	25	12
22	21	102	131	63	320	482	198	128	54	52	22	12
23	17	93	150	64	263	546	180	112	49	45	20	11
24	28	78	162	67	306	423	224	113	50	39	18	10
25	37	164	150	97	447	333	329	106	62	33	18	9.2
26	37	439	135	136	360	316	275	88	75	30	17	8.6
27	29	271	115	117	277	291	221	112	71	31	17	7.8
28	23	181	110	101	243	276	188	128	61	44	15	8.0
29	20	205	160	87	313	253	170	252	52	50	15	8.6
30	18	287	200	84	---	227	161	1410	48	40	14	9.8
31	18	---	153	80	---	244	---	1520	---	34	14	---
TOTAL	602.8	3469	6813	2873	8617	6564	11346	8481	6609	2090	687	349.0
MEAN	19.4	116	220	92.7	297	212	378	274	220	67.4	22.2	11.6
MAX	39	439	928	136	1210	546	2080	1520	1570	249	30	15
MIN	9.8	17	110	63	67	85	161	88	48	30	14	7.8
CFSM	.30	1.82	3.45	1.46	4.66	3.33	5.93	4.30	3.45	1.06	.35	.18
IN.	.35	2.03	3.98	1.68	5.03	3.83	6.63	4.95	3.86	1.22	.40	.20

CAL YR 1983	TOTAL	58515.6	MEAN 160	MAX 2280	MIN 9.4	CFSM 2.51	IN. 34.17
WTR YR 1984	TOTAL	58500.8	MEAN 160	MAX 2080	MIN 7.8	CFSM 2.51	IN. 34.16

01096500 NASHUA RIVER AT EAST PEPPERELL, MASS.

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

DRAINAGE AREA.--Total above gage, 435 mi², revised; net above gage, 316 mi², flow diverted from 119 mi², revised, 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 above 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.--49 years, 576 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, 6,820 ft³/s June 2, gage height, 11.73 ft; minimum daily, 46 ft³/s Sept. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	336	1460	950	398	1840	1550	831	6150	440	305	71
2	168	297	1140	840	359	1440	1740	789	6710	460	282	70
3	213	165	951	740	373	1180	1980	722	6300	450	182	73
4	245	81	846	680	434	1040	2170	1000	5420	415	68	195
5	222	69	825	615	720	962	2450	2020	4210	404	70	245
6	153	151	800	585	1060	980	3990	2070	3140	217	202	167
7	124	495	937	569	978	1030	5790	1510	2540	87	316	73
8	111	364	1410	491	782	922	5670	1180	2210	480	317	73
9	115	331	1250	669	705	827	4350	1490	1900	1030	203	81
10	128	318	979	682	644	754	3280	1570	1700	805	251	85
11	134	360	876	600	446	694	2670	1260	1420	759	186	217
12	135	361	821	475	512	703	2270	1040	1250	660	71	221
13	165	373	816	440	761	698	2040	995	1070	520	71	60
14	201	535	1970	442	804	577	1890	1000	919	411	78	54
15	240	420	3800	371	894	581	1860	1090	810	415	203	164
16	250	472	3200	357	2500	677	2060	1020	764	400	174	130
17	271	1220	2550	402	4410	702	2400	908	512	400	64	46
18	272	1340	2000	589	4370	627	2590	813	576	370	63	156
19	266	1010	1670	496	3370	834	2270	748	520	350	62	213
20	259	718	1450	366	2560	1330	1950	728	513	490	184	104
21	269	617	1200	370	2150	1640	1740	722	591	632	276	50
22	204	667	1030	310	1810	2080	1520	715	605	505	267	52
23	231	689	1120	338	1540	2510	1320	622	252	400	304	55
24	254	398	1220	571	1730	2340	1260	592	83	185	312	166
25	329	776	1100	457	2140	1940	1560	684	546	170	150	147
26	341	2010	950	677	1940	1680	1510	629	759	334	78	110
27	287	2070	860	725	1590	1540	1250	598	749	334	75	72
28	230	1500	810	696	1470	1410	1060	471	626	185	70	67
29	269	1390	780	469	1910	1180	944	770	495	73	70	64
30	126	1620	1650	480	---	1360	866	2660	545	300	71	63
31	145	---	1180	585	---	1380	---	4870	---	450	74	---
TOTAL	6463	21153	41651	17037	43360	37458	68000	36117	53885	13131	5099	3344
MEAN	208	705	1344	550	1495	1208	2267	1165	1796	424	164	111
MAX	341	2070	3800	950	4410	2510	5790	4870	6710	1030	317	245
MIN	106	69	780	310	359	577	866	471	83	73	62	46
CAL YR 1983	TOTAL	329878.0	MEAN	904	MAX	5480	MIN	7.0				
WTR YR 1984	TOTAL	346698	MEAN	947	MAX	6710	MIN	46				

MERRIMACK RIVER BASIN

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

LOCATION.--Lat 42°38'20", long 71°22'17", Middlesex County, Hydrologic Unit 01070002, on downstream side of Tyngsboro bridge on State Highway 113, 6.2 mi upstream from Pawtucket Dam, and 2 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY LAB (MG/L AS CAC03)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (CENT SATUR- ATION)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
NOV 1983											
09...	1430	6010	70	6.9	19.0	8.5	11	1.5	11.3	97	1800
MAR 1984											
08...	1400	9860	93	7.1	5.0	2.0	7.0	0.9	14.1	103	1600
APR											
20...	1530	25300	43	6.6	6.0	7.5	5.0	2.8	12.9	109	--
MAY											
07...	1300	15700	67	6.7	22.0	11.5	5.0	1.6	11.1	102	200
AUG											
11...	0815	--	--	--	--	--	--	--	--	--	--
16...	1100	2190	128	7.0	37.5	25.5	16	0.5	7.3	91	450
SEP											
05...	1100	2520	128	7.5	16.5	21.5	--	--	8.4	97	54

DATE	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	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)	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)
NOV 1983										
09...	1800	4.9	0.94	8.4	1.3	12	11	0.3	5.9	57
MAR 1984										
08...	400	4.7	0.83	11	0.8	9.2	18	<0.1	5.4	55
APR										
20...	--	3.0	0.55	5.4	0.6	6.8	8.8	0.1	4.1	40
MAY										
07...	19	3.5	0.66	6.8	0.7	7.2	10	0.2	4.7	47
AUG										
11...	--	--	--	--	--	--	--	--	--	--
16...	62	6.6	1.1	17	1.4	16	20	0.2	4.5	83
SEP										
05...	3	--	--	--	--	--	--	--	--	--

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SEDI- MENT, SUS- PENDED (MG/L)	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,AM- MONIA + ORGANIC 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)
NOV 1983										
09...	52	67	5	0.23	0.28	0.36	1.1	0.09	0.04	0.04
MAR 1984										
08...	55	71	4	0.23	0.52	0.67	1.0	0.04	0.03	0.03
APR										
20...	33	98	14	<0.11	0.33	0.43	3.3	0.04	0.01	0.01
MAY										
07...	37	86	10	0.10	0.06	0.08	0.4	0.04	0.01	0.02
AUG										
11...	--	89	3	--	--	--	--	--	--	--
16...	77	100	6	0.44	0.22	0.28	0.6	0.14	0.10	0.09
SEP										
05...	--	--	--	0.38	0.10	0.13	1.2	0.13	0.07	0.05

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

01096550 MERRIMACK RIVER ABOVE LOWELL, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 1983										
09...	50	1	22	<0.5	1	<1	<3	4	150	3
MAR 1984										
08...	50	1	17	<0.5	<1	<1	<3	3	110	5
APR										
20...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	90	<1	15	<1	<1	10	<3	6	130	3
AUG										
11...	--	--	--	--	--	--	--	--	--	--
16...	20	1	16	<0.5	1	<1	<3	6	110	2
SEP										
05...	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 1983										
09...	31	45	<0.1	<10	3	<1	<1	34	<6	12
MAR 1984										
08...	<4	44	<0.1	<10	1	<1	<1	33	<6	18
APR										
20...	--	--	--	--	--	--	--	--	--	--
MAY										
07...	<4	28	0.2	<10	2	<1	<1	25	<6	21
AUG										
11...	--	--	--	--	--	--	--	--	--	--
16...	<4	8	0.2	<10	3	<1	<1	47	<6	11
SEP										
05...	--	--	--	--	--	--	--	--	--	--

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

MERRIMACK RIVER BASIN

01097000 ASSABET RIVER AT MAYNARD, MASS.

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

DRAINAGE AREA.--116 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 142.12 ft above 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.--43 years, 188 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, 1,780 ft³/s June 3, gage height, 6.25 ft; minimum daily, 12 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	80	439	340	155	737	553	301	1490	138	77	12
2	68	80	378	280	150	634	600	282	1610	123	63	17
3	113	80	322	250	150	533	659	262	1730	119	60	21
4	116	101	289	235	230	465	685	352	1480	126	52	40
5	84	130	266	228	350	421	787	538	1350	118	47	46
6	61	132	258	231	400	421	1220	613	1100	111	46	46
7	46	117	345	239	360	443	1290	535	912	185	44	42
8	38	98	443	238	300	427	1140	456	777	358	43	36
9	33	83	450	225	240	383	952	450	669	454	44	40
10	31	74	394	209	225	341	803	467	557	407	46	45
11	27	141	350	201	212	315	698	416	462	312	43	18
12	30	180	324	195	233	286	626	362	393	237	42	30
13	83	177	377	196	260	273	570	338	300	186	44	31
14	115	148	626	184	273	243	530	344	261	153	46	33
15	116	118	813	181	309	278	508	347	236	126	46	43
16	106	212	784	175	530	298	567	330	212	105	44	53
17	95	323	657	163	872	338	672	302	196	116	39	55
18	87	364	557	160	861	375	653	276	179	129	35	41
19	93	317	486	167	712	421	571	254	181	144	34	35
20	95	256	421	160	609	532	506	238	173	134	46	32
21	89	204	354	155	541	634	456	231	153	125	50	31
22	84	180	329	145	489	728	406	224	137	121	63	29
23	83	172	329	140	437	816	369	206	120	108	49	28
24	140	158	332	150	480	774	442	208	118	105	51	24
25	183	302	294	190	601	684	512	208	124	86	44	23
26	170	500	305	220	602	602	520	195	159	77	58	24
27	135	624	306	210	515	539	460	176	188	64	36	21
28	116	509	302	195	488	484	406	169	184	102	13	21
29	101	471	328	180	655	479	362	254	160	102	21	21
30	89	461	394	170	---	484	329	548	148	102	39	27
31	84	---	384	160	---	496	---	991	---	91	38	---
TOTAL	2733	6792	12636	6172	12239	14884	18852	10873	15759	4864	1403	965
MEAN	88.2	226	408	199	422	480	628	351	525	157	45.3	32.2
MAX	183	624	813	340	872	816	1290	991	1730	454	77	55
MIN	22	74	258	140	150	243	329	169	118	64	13	12
CAL YR 1983	TOTAL	98088	MEAN	269	MAX	1230	MIN	13				
WTR YR 1984	TOTAL	108172	MEAN	296	MAX	1730	MIN	12				

01097300 NASHOBA BROOK NEAR ACTON, MASS.

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

DRAINAGE AREA.--12.8 mi², revised.

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. Elevation of gage is 155 ft, from topographic map.

REMARKS.--Records good except those for periods of no gage-height record, Nov. 28 to Jan. 4, Feb. 20 to Apr. 5, which are poor. Occasional regulation since 1967 by pond upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 21.6 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 279 ft³/s June 3, gage height, 4.73 ft; minimum, 0.42 ft³/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	2.9	40	28	16	80	50	20	254	13	6.1	1.7
2	.93	2.9	35	26	13	70	54	19	220	12	5.7	1.7
3	1.3	2.9	28	24	12	50	60	17	262	10	5.3	1.4
4	1.4	3.7	24	22	25	42	70	38	154	9.2	4.5	1.6
5	1.3	9.5	20	20	47	35	78	92	90	8.5	3.9	2.5
6	.97	15	19	20	54	34	183	64	65	8.5	3.5	2.3
7	.82	10	30	22	52	37	127	50	53	20	3.5	2.2
8	.59	6.8	52	23	40	39	84	35	45	69	3.6	1.9
9	.47	5.5	40	20	27	35	66	54	37	59	3.9	1.7
10	.60	5.0	32	17	22	30	57	45	29	31	3.5	1.4
11	.91	14	27	17	18	27	50	35	24	19	3.1	1.7
12	.98	22	23	17	23	24	45	30	19	15	3.7	1.7
13	3.0	14	30	16	30	22	40	25	16	13	3.9	1.8
14	4.8	8.9	90	16	32	25	36	23	15	10	3.5	1.7
15	3.9	7.1	74	16	40	30	35	33	14	8.8	3.3	2.2
16	2.8	23	60	16	151	37	47	28	12	7.8	3.1	2.9
17	2.3	59	50	16	239	49	74	24	11	7.3	2.7	2.3
18	2.1	47	42	16	124	64	58	19	10	8.6	2.5	2.1
19	2.0	28	35	15	89	74	44	18	13	16	2.5	1.9
20	2.1	18	31	15	73	90	37	18	16	13	3.6	1.6
21	2.0	16	27	15	62	100	34	20	13	9.1	3.9	1.7
22	2.0	20	24	14	53	110	30	17	11	9.2	2.8	1.8
23	2.0	16	23	14	40	100	26	15	9.7	8.7	2.5	1.7
24	5.6	13	22	14	60	80	38	16	9.4	7.5	2.3	1.2
25	11	44	21	20	94	64	61	16	10	6.4	2.4	1.0
26	6.8	102	22	27	74	52	48	13	14	5.9	2.3	1.4
27	5.0	73	25	27	56	47	36	12	20	6.0	2.1	1.8
28	3.7	52	33	24	52	43	29	11	17	9.8	1.9	1.7
29	3.3	54	43	20	94	41	25	26	12	10	1.9	1.7
30	3.1	54	35	17	---	45	22	109	13	8.1	1.9	1.6
31	2.9	---	31	16	---	47	---	168	---	6.8	1.7	---
TOTAL	81.30	749.2	1088	590	1712	1623	1644	1110	1488.1	446.2	101.1	53.9
MEAN	2.62	25.0	35.1	19.0	59.0	52.4	54.8	35.8	49.6	14.4	3.26	1.80
MAX	11	102	90	28	239	110	183	168	262	69	6.1	2.9
MIN	.47	2.9	19	14	12	22	22	11	9.4	5.9	1.7	1.0
CAL YR 1983	TOTAL	9518.14	MEAN	26.1	MAX 198	MIN .47						
WTR YR 1984	TOTAL	10686.80	MEAN	29.2	MAX 262	MIN .47						

MERRIMACK RIVER BASIN

01097500 SUDBURY RIVER AT FRAMINGHAM CENTER, MASS.

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 provided by Water Division of Metropolitan District Commission.

AVERAGE DISCHARGE.--109 years, 117 ft³/s, 21.13 in/yr, adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Month	Mean	Per square mile	Runoff in inches	Rainfall in inches
October.....	43.6	0.58	0.67	4.11
November.....	225	2.99	3.35	8.66
December.....	354	4.71	5.43	6.49
Calendar year 1983.....	205	2.73	37.03	57.02
January.....	144	1.91	2.20	1.97
February.....	434	5.77	6.22	6.35
March.....	465	6.18	7.13	5.84
April.....	454	6.04	6.74	4.20
May.....	290	3.86	4.45	9.03
June.....	297	3.95	4.41	2.71
July.....	134	1.78	2.06	5.35
August.....	36.5	.49	.56	.87
September.....	15.4	.20	.23	1.62
Water year 1984.....	240	3.19	43.45	57.20

01098530 SUDBURY RIVER AT SAXONVILLE, MASS.

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 good. 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, 1,250 ft³/s June 3, gage height, 11.98 ft; minimum daily, 9.7 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	73	337	307	158	514	537	201	916	83	102	37
2	40	70	315	289	152	488	545	243	1110	109	88	33
3	30	65	302	280	160	453	571	239	1230	64	83	33
4	24	91	296	262	236	423	574	338	1230	69	81	66
5	21	95	306	210	260	405	658	344	1090	85	77	52
6	24	93	301	206	290	411	833	319	888	81	75	45
7	24	83	360	212	273	398	808	309	813	226	73	43
8	22	81	320	214	251	385	740	304	711	344	74	43
9	22	81	310	210	234	378	667	316	591	310	73	43
10	22	94	305	203	216	366	614	297	542	302	75	43
11	20	156	298	207	209	356	582	282	464	256	76	42
12	24	128	293	196	216	339	550	272	366	226	73	42
13	105	108	415	173	218	314	528	271	324	182	73	64
14	64	101	588	173	218	346	509	271	284	143	74	38
15	81	99	593	173	278	337	502	263	264	141	73	37
16	90	284	562	172	468	339	529	254	237	144	70	50
17	90	233	507	161	540	374	512	246	212	144	65	40
18	87	206	463	146	508	382	490	230	201	160	60	36
19	115	195	436	147	468	468	458	199	196	131	58	36
20	128	196	417	148	437	526	436	204	147	120	67	24
21	123	221	392	148	412	553	395	208	126	111	64	17
22	115	168	360	150	395	610	383	199	104	120	56	14
23	118	161	363	150	377	608	369	197	78	112	53	13
24	223	158	335	153	454	571	420	203	78	101	54	13
25	158	376	323	174	469	531	388	183	83	95	49	13
26	101	383	321	162	453	502	364	176	112	87	46	13
27	98	353	306	157	424	490	339	182	99	115	45	12
28	97	334	298	158	464	490	304	183	88	134	42	9.7
29	97	394	351	157	542	510	296	285	93	112	40	10
30	92	365	306	157	---	547	260	397	93	112	38	10
31	84	---	314	161	---	533	---	664	---	112	38	---
TOTAL	2352	5445	11393	5816	9780	13947	15161	8279	12770	4531	2015	971.7
MEAN	75.9	182	368	188	337	450	505	267	426	146	65.0	32.4
MAX	223	394	593	307	542	610	833	664	1230	344	102	66
MIN	13	65	293	146	152	314	260	176	78	64	38	9.7
CAL YR 1983	TOTAL	92637.9	MEAN	254	MAX	1030	MIN	9.5				
WTR YR 1984	TOTAL	92460.7	MEAN	253	MAX	1230	MIN	9.7				

MERRIMACK RIVER BASIN

01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MASS.

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

DRAINAGE AREA.--Total above gage, 400 mi² (revised); net above gage, 307 mi² (revised) - 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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Low flow regulated by mills upstream. Daily discharge includes undiverted water from 92.6 mi² in basins of Sudbury River and Lake Cochituate. Prior to December 1961, diversion upstream for use of city of Lowell. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--48 years, 640 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, 4,010 ft³/s June 5, gage height, 8.56 ft; minimum daily, 70 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	269	1540	1300	670	2430	2280	1450	2250	547	376	131
2	74	249	1510	1240	640	2430	2340	1340	2960	521	348	121
3	90	236	1440	1180	619	2350	2380	1250	3550	491	326	115
4	125	263	1370	1130	758	2220	2420	1380	3820	479	298	130
5	155	372	1320	1090	878	2090	2540	1500	3950	451	272	155
6	155	412	1290	1060	1000	2020	2890	1540	3920	434	252	166
7	141	415	1450	1030	1080	1940	3120	1580	3750	582	241	167
8	127	394	1440	994	1110	1850	3280	1600	3510	801	240	162
9	110	364	1420	948	1090	1760	3280	1620	3240	864	225	156
10	97	332	1410	904	1050	1670	3170	1560	2950	946	219	150
11	92	464	1370	849	993	1600	3010	1520	2680	997	215	146
12	95	523	1320	1010	991	1490	2840	1460	2410	995	207	130
13	180	543	1480	902	998	1400	2670	1390	2150	941	206	130
14	220	538	1810	773	1000	1270	2510	1340	1890	871	210	133
15	234	515	1930	744	1090	1350	2370	1300	1650	795	211	152
16	236	729	2080	720	1550	1340	2370	1260	1470	732	205	160
17	242	872	2190	690	1950	1380	2400	1200	1320	674	192	164
18	237	908	2190	664	2200	1420	2350	1150	1190	681	183	166
19	235	932	2110	646	2430	1580	2290	1110	1100	696	175	159
20	236	936	1970	620	2470	1810	2200	1080	997	655	209	153
21	246	931	1830	610	2390	2000	2060	1020	913	614	207	132
22	254	891	1740	590	2260	2330	1930	974	834	584	206	122
23	257	840	1700	560	2130	2560	1830	936	759	545	204	117
24	336	795	1590	550	2190	2670	1860	886	705	505	188	110
25	390	1060	1510	598	2280	2700	1860	843	657	459	183	106
26	434	1220	1550	661	2280	2630	1830	805	618	421	178	103
27	432	1290	1300	687	2250	2530	1790	757	634	405	176	95
28	407	1380	1260	712	2220	2400	1730	718	622	418	166	101
29	358	1530	1370	712	2400	2280	1640	860	604	414	147	94
30	320	1560	1360	699	---	2250	1550	1170	576	404	137	81
31	293	---	1340	680	---	2240	---	1620	---	397	132	---
TOTAL	6878	21763	49190	25553	44967	61990	70790	38219	57679	19319	6734	4007
MEAN	222	725	1587	824	1551	2000	2360	1233	1923	623	217	134
MAX	434	1560	2190	1300	2470	2700	3280	1620	3950	997	376	167
MIN	70	236	1260	550	619	1270	1550	718	576	397	132	81
CAL YR 1983	TOTAL	337636	MEAN	925	MAX	3450	MIN	46				
WTR YR 1984	TOTAL	407089	MEAN	1112	MAX	3950	MIN	70				

01100000 MERRIMACK RIVER BELOW CONCORD RIVER, AT LOWELL, MASS.

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 above 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 (provided by Proprietors of the Locks and Canals on Merrimack River) was indicative of flow including that of Concord River.

REMARKS.--Records excellent except those below 1,500 ft³/s, which are fair. Daily discharge includes water released from 210 mi² in basins of Sudbury and Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnepesaukee, Winnisquam, and other lakes and reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--61 years, 7,610 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, 60,500 ft³/s June 1, gage height, 53.71 ft; minimum daily, 323 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	693	2100	19400	13000	5660	22900	16600	13800	59500	7100	3180	1560
2	549	2220	18100	11700	5790	19800	17300	13800	54800	7030	2810	1540
3	1460	2140	16100	11000	5480	17500	18100	12800	50700	6170	2790	1420
4	1480	2590	13700	10700	7280	15400	19200	12400	42600	5500	2750	2020
5	1810	4260	12600	10200	7410	13900	21800	17100	36600	4320	2700	2510
6	1970	9340	12100	10100	9340	13400	40200	19000	35500	5350	2720	2670
7	2110	9460	13500	9310	9800	12700	53900	17300	34300	8620	2710	2040
8	1490	8000	19300	8660	9200	12000	48200	15500	35400	14300	2620	2200
9	606	6250	20500	8050	8680	11200	43600	15200	34100	17800	2740	2540
10	1850	4530	17800	7800	8340	10400	41700	16900	31400	14200	2530	2350
11	1700	6030	15500	6690	8320	9810	40100	16400	29200	11500	2350	2060
12	2610	5910	14500	6480	7470	8530	36900	14400	27400	10500	1250	2040
13	2590	7290	15300	6970	8220	8910	33000	14400	25800	10100	2100	1960
14	2540	8090	25800	6680	8100	7500	28400	19700	23500	9860	2210	1940
15	1790	7760	41500	6700	9100	7910	25200	20900	21200	8600	1900	1500
16	3140	6720	42200	7040	15900	9800	25000	20500	19500	7730	1920	1480
17	3660	9300	38200	6820	28600	10600	28700	18000	17500	5640	2080	2040
18	3280	11800	34400	6730	32800	9970	30500	15500	14800	6700	1870	2060
19	2950	12600	29600	6600	32200	10500	30500	13700	13000	8580	1060	1830
20	2700	10900	24000	7160	29500	12800	28900	12600	11600	8360	1950	1700
21	2680	9930	19100	6950	27700	16400	26300	12700	10900	8050	2200	1860
22	2160	9880	17100	6810	25600	20900	23200	12900	9850	7450	1990	1250
23	2160	12200	15500	6350	23100	25300	21100	12200	8910	6010	2060	323
24	2650	11400	14900	5870	21900	24800	19700	10900	8330	6110	2130	1500
25	2870	12300	12100	6490	25100	22600	20300	11500	7400	4830	1890	1370
26	2900	20300	13000	6770	28200	21000	21700	11500	8500	4920	1580	1350
27	2880	24800	14600	7440	30600	19500	20400	10400	10900	3850	2050	1190
28	2890	21600	12700	6890	28400	18100	18000	9900	10700	4200	1920	1230
29	2530	20000	13400	6590	25500	17700	16200	11400	8580	4450	1900	829
30	2110	20000	14700	6190	---	16800	14700	28800	7420	4210	2120	845
31	2490	---	14100	5950	---	16500	---	51200	---	3750	2130	---
TOTAL	69298	299700	605300	240690	493290	465130	829400	503300	709890	235790	68210	51207
MEAN	2235	9990	19530	7764	17010	15000	27650	16240	23660	7606	2200	1707
MAX	3660	24800	42200	13000	32800	25300	53900	51200	59500	17800	3180	2670
MIN	549	2100	12100	5870	5480	7500	14700	9900	7400	3750	1060	323
CAL YR 1983	TOTAL	4045702	MEAN	11080	MAX	52000	MIN	544				
WTR YR 1984	TOTAL	4571205	MEAN	12490	MAX	59500	MIN	323				

MERRIMACK RIVER BASIN

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MASS.

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

DRAINAGE AREA.--36.5 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 80.44 ft above 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.--20 years (water years 1965-84), 62.8 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	1515	444	5.79	Mar. 22	2000	457	5.87
Dec. 14	1100	386	5.44	Apr. 6	1600	563	6.45
Feb. 17	1015	656	6.92	Apr. 17	0900	309	5.25
Feb. 25	1130	425	5.68	June 1	0900	*895	*7.93
Feb. 29	1700	432	5.72				

Minimum discharge, 3.8 ft³/s Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	5.7	192	114	58	358	285	75	862	27	19	11
2	8.9	5.5	144	85	54	245	319	68	777	25	15	9.9
3	14	5.2	109	70	53	189	317	62	711	23	12	9.2
4	8.9	12	89	63	102	158	295	84	498	26	9.7	12
5	7.7	55	82	60	238	137	294	230	341	28	8.5	19
6	7.2	73	82	64	268	133	521	217	237	24	7.7	19
7	6.7	72	129	70	238	146	444	150	179	35	8.7	16
8	6.0	49	219	70	175	150	300	113	144	108	9.8	12
9	6.1	21	200	66	133	131	242	119	120	189	8.2	10
10	6.0	15	147	60	103	118	211	136	100	134	7.8	9.6
11	6.1	59	112	57	82	105	191	115	85	77	7.4	9.0
12	6.6	95	95	66	83	101	175	94	72	50	7.4	9.4
13	36	110	112	54	86	87	161	80	62	38	9.7	10
14	57	84	311	51	85	105	148	77	54	31	15	9.0
15	43	41	359	51	99	115	143	80	46	25	15	12
16	13	70	318	51	294	119	181	78	46	21	15	22
17	7.3	210	232	50	621	186	288	69	38	21	14	20
18	5.9	254	185	49	467	278	222	60	35	24	13	14
19	7.0	173	151	48	316	259	165	54	42	31	12	12
20	8.3	108	120	48	242	370	138	56	39	34	21	11
21	5.4	74	105	46	205	391	121	59	34	31	35	10
22	4.4	63	88	43	176	427	107	57	29	26	53	9.8
23	4.0	55	93	41	151	418	95	51	25	22	43	9.3
24	31	44	91	43	191	313	113	49	25	20	32	9.2
25	55	96	88	62	402	246	267	51	27	16	23	10
26	48	363	84	81	318	213	204	46	30	14	18	10
27	22	344	77	91	225	188	146	40	32	13	15	9.7
28	13	230	72	95	198	168	115	36	30	19	13	9.0
29	9.3	180	129	85	379	155	96	57	28	25	13	9.0
30	7.1	203	233	76	---	169	84	181	29	28	12	9.0
31	5.9	---	181	68	---	211	---	448	---	25	11	---
TOTAL	473.4	3169.4	4629	1978	6042	6389	6388	3092	4777	1210	503.9	351.1
MEAN	15.3	106	149	63.8	208	206	213	99.7	159	39.0	16.3	11.7
MAX	57	363	359	114	621	427	521	448	862	189	53	22
MIN	4.0	5.2	72	41	53	87	84	36	25	13	7.4	9.0
(†)	6.98	11.8	6.92	1.22	3.40	.75	1.83	6.31	3.49	8.65	0	0

CAL YR 1983 TOTAL 34638.7 MEAN 94.9 MAX 659 MIN 1.0
WTR YR 1984 TOTAL 39002.8 MEAN 107 MAX 862 MIN 4.0

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

PARKER RIVER BASIN

31

01101000 PARKER RIVER AT BYFIELD, MASS.

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

DRAINAGE AREA.--21.3 mi², revised.

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

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

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

AVERAGE DISCHARGE.--39 years, 37.4 ft³/s, 23.84 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, 260 ft³/s June 3, gage height, 4.20 ft; minimum daily, 0.29 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.29	5.1	128	70	34	180	131	89	167	19	7.5	3.0
2	.33	4.9	120	64	33	166	136	82	225	18	6.8	2.8
3	.31	5.1	110	60	32	151	137	75	255	16	6.1	2.9
4	.34	8.3	102	55	40	138	135	84	252	15	5.5	2.7
5	.35	24	99	53	47	126	145	97	235	14	5.1	2.2
6	.37	30	99	53	55	119	175	107	213	13	4.6	1.9
7	.34	33	119	52	61	113	190	106	199	19	4.3	1.3
8	.34	33	131	50	63	104	186	100	181	28	4.1	1.2
9	.34	31	131	47	62	95	176	99	161	34	3.8	1.2
10	.34	31	126	44	59	87	164	94	140	36	3.6	.85
11	.35	43	117	41	57	80	151	89	121	35	3.4	.35
12	.38	46	109	40	59	72	139	84	102	34	3.2	.46
13	1.2	48	122	39	60	65	129	79	86	32	3.5	.49
14	1.4	46	167	38	61	56	119	75	76	28	3.7	.50
15	3.8	42	196	37	74	63	109	71	66	25	3.7	.48
16	3.0	57	196	36	131	67	113	68	58	22	3.3	.50
17	2.6	70	184	35	204	72	121	64	50	19	3.1	.49
18	2.6	83	166	34	223	73	127	60	44	17	2.8	.51
19	2.8	83	149	33	218	83	128	57	41	17	2.5	.47
20	3.0	78	130	32	209	101	125	54	37	15	4.7	.45
21	2.8	74	112	31	195	137	120	51	33	14	5.0	.45
22	3.0	69	98	30	177	176	113	48	30	13	5.1	.40
23	3.5	65	91	28	160	196	106	46	27	12	4.9	.38
24	8.2	60	84	30	167	192	113	44	25	11	5.1	.46
25	9.0	87	79	34	179	178	121	41	24	9.5	5.1	.39
26	8.7	116	75	36	183	162	125	39	24	8.3	4.9	.38
27	7.8	133	70	37	170	148	121	36	23	8.4	5.4	.34
28	6.9	131	68	38	166	136	112	34	22	9.6	4.7	.34
29	6.3	135	78	36	180	128	104	42	21	9.8	4.1	.34
30	5.6	132	82	35	---	127	96	55	20	9.2	4.2	.34
31	5.4	---	77	35	---	128	---	102	---	8.4	3.9	---
TOTAL	91.68	1803.4	3615	1283	3359	3719	3967	2172	2958	569.2	137.7	28.57
MEAN	2.96	60.1	117	41.4	116	120	132	70.1	98.6	18.4	4.44	.95
MAX	9.0	135	196	70	223	196	190	107	255	36	7.5	3.0
MIN	.29	4.9	68	28	32	56	96	34	20	8.3	2.5	.34
CFSM	.14	2.82	5.49	1.94	5.45	5.63	6.20	3.29	4.63	.86	.21	.04
IN.	.16	3.15	6.31	2.24	5.87	6.50	6.93	3.79	5.17	.99	.24	.05
CAL YR 1983	TOTAL	26066.70	MEAN	71.4	MAX	369	MIN	.21	CFSM	3.35	IN.	45.52
WTR YR 1984	TOTAL	23703.55	MEAN	64.8	MAX	255	MIN	.29	CFSM	3.04	IN.	41.40

IPSWICH RIVER BASIN

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MASS.

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

DRAINAGE AREA.--44.5 mi², revised.

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 good. 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.--46 years, 63.3 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, 694 ft³/s June 3, gage height, 6.54 ft, minimum, 0.81 ft³/s Oct. 1, Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.85	18	244	110	77	305	271	131	521	32	13	3.4
2	1.2	16	211	105	74	266	292	118	620	30	12	2.8
3	1.1	14	179	100	70	238	291	108	686	25	11	2.7
4	1.2	37	163	100	98	214	275	150	633	22	10	3.8
5	1.1	81	163	100	123	194	305	189	552	20	8.8	4.4
6	1.2	87	164	103	142	185	410	175	472	19	8.1	3.9
7	1.2	74	237	103	151	183	386	168	401	46	7.9	3.2
8	1.1	58	225	101	145	168	356	162	350	90	8.9	2.9
9	.96	34	201	95	136	149	328	175	293	80	8.4	2.6
10	.94	29	195	90	125	140	291	163	237	76	7.6	2.3
11	.94	98	187	85	119	133	259	147	176	77	7.2	2.1
12	1.3	86	174	85	122	123	228	134	148	73	6.8	1.9
13	7.6	76	233	83	125	117	202	127	126	64	6.7	1.7
14	12	70	354	81	125	127	181	123	111	54	7.0	1.6
15	5.2	65	348	79	175	139	168	118	99	44	6.9	2.0
16	2.7	139	333	78	311	148	206	110	88	34	6.3	2.2
17	1.9	190	316	76	410	180	254	103	77	28	5.5	2.4
18	1.9	158	282	74	394	199	230	98	69	27	4.9	2.4
19	3.4	146	249	72	367	221	220	93	68	31	4.5	2.1
20	3.2	140	210	71	329	294	210	99	64	24	11	1.9
21	3.2	138	195	70	293	325	195	97	57	20	11	1.7
22	3.2	145	190	68	256	362	175	90	51	20	8.4	1.5
23	3.3	118	175	66	226	368	159	85	45	19	7.4	1.4
24	35	111	160	65	264	332	201	85	41	17	7.7	1.2
25	46	213	140	74	316	297	214	79	42	15	8.3	1.2
26	36	290	130	80	294	266	194	73	46	13	6.7	1.2
27	31	252	125	81	274	232	182	68	43	15	5.7	1.1
28	32	240	130	82	271	203	170	63	37	19	5.0	.94
29	32	274	140	81	337	196	156	86	37	18	4.6	.94
30	25	278	130	79	---	207	136	154	35	15	4.2	.96
31	21	---	120	78	---	231	---	298	---	14	3.8	---
TOTAL	318.69	3675	6303	2615	6149	6742	7145	3869	6225	1081	235.3	64.44
MEAN	10.3	123	203	84.4	212	217	238	125	208	34.9	7.59	2.15
MAX	46	290	354	110	410	368	410	298	686	90	13	4.4
MIN	.85	14	120	65	70	117	136	63	35	13	3.8	.94
CAL YR 1983	TOTAL	39160.54	MEAN	107	MAX	610	MIN	.53				
WTR YR 1984	TOTAL	44422.43	MEAN	121	MAX	686	MIN	.85				

01102000 IPSWICH RIVER NEAR IPSWICH, MASS.

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

DRAINAGE AREA.--125 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. 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.--54 years, 190 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, 1,940 ft³/s June 4, gage height, 7.17 ft, minimum, 3.5 ft³/s Oct. 12; minimum daily, 3.9 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	22	710	363	166	1010	705	428	738	115	50	13
2	7.7	28	677	323	164	959	747	394	1370	109	43	12
3	7.5	23	629	305	161	862	779	367	1820	101	38	12
4	6.7	26	574	278	185	773	787	381	1930	92	33	14
5	6.0	58	548	267	220	682	827	408	1820	83	28	14
6	5.6	83	506	261	265	625	991	448	1610	76	26	13
7	4.7	96	527	257	326	577	1100	478	1420	89	23	13
8	4.4	103	545	253	364	534	1110	478	1240	127	23	12
9	4.4	105	570	247	367	488	1030	475	1080	150	23	11
10	4.2	102	575	226	344	461	930	458	921	169	23	11
11	3.9	134	550	188	325	421	834	440	768	181	23	10
12	4.4	129	509	192	323	392	752	421	633	186	22	11
13	21	137	517	196	331	348	673	400	528	180	22	10
14	24	144	677	193	338	352	606	379	448	166	24	9.9
15	21	144	880	189	381	451	555	357	379	152	24	11
16	23	196	994	185	570	506	559	340	326	140	22	12
17	22	242	981	180	983	614	617	325	286	127	20	11
18	17	308	907	175	1240	650	657	307	256	115	18	9.9
19	15	362	821	167	1290	670	683	289	237	110	17	9.6
20	14	370	721	161	1230	777	658	278	218	101	21	9.0
21	11	357	610	158	1100	898	616	268	201	93	23	8.2
22	9.7	333	549	151	967	1020	578	259	188	85	23	8.6
23	9.8	304	520	145	853	1100	538	250	172	75	23	7.3
24	23	279	510	142	852	1110	556	243	157	65	22	7.5
25	32	349	470	148	948	1050	599	233	148	56	23	7.5
26	36	456	420	155	1000	942	626	221	141	49	22	7.3
27	39	594	360	162	976	839	608	212	134	47	20	6.5
28	37	688	344	171	926	745	561	202	127	59	18	6.1
29	31	734	360	177	997	681	512	205	123	50	16	5.7
30	27	729	360	175	---	690	468	222	120	57	15	5.2
31	23	---	370	170	---	672	---	343	---	56	14	---
TOTAL	500.0	7635	18291	6360	18192	21899	21262	10509	19539	3261	742	298.3
MEAN	16.1	255	590	205	627	706	709	339	651	105	23.9	9.94
MAX	39	734	994	363	1290	1110	1110	478	1930	186	50	14
MIN	3.9	22	344	142	161	348	468	202	120	47	14	5.2
CAL YR 1983	TOTAL	113902.4	MEAN	312	MAX	1900	MIN	1.7				
WTR YR 1984	TOTAL	128488.3	MEAN	351	MAX	1930	MIN	3.9				

MYSTIC RIVER BASIN

01102500 ABERJONA RIVER AT WINCHESTER, MASS.

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

DRAINAGE AREA.--24.1 mi², revised, 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.--45 years, 28.7 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, 823 ft³/s May 31, gage height, 14.04 ft, from rating curve extended as explained above; minimum, 1.6 ft³/s Oct. 9, minimum daily, 2.1 ft³/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	5.4	80	43	25	138	116	47	613	21	9.8	4.1
2	7.5	5.2	65	38	23	97	116	34	543	20	9.1	3.8
3	5.4	4.6	59	36	28	79	109	33	457	18	8.7	4.0
4	4.2	31	58	34	134	70	93	120	261	21	8.2	28
5	3.9	48	74	33	117	67	154	105	171	35	7.7	11
6	3.3	34	78	33	105	78	236	69	131	19	7.5	5.8
7	2.7	18	151	32	74	71	158	64	110	98	7.2	4.8
8	2.3	12	103	31	54	59	108	85	95	112	7.2	4.1
9	2.1	9.3	72	29	46	53	95	88	77	51	6.8	3.9
10	2.2	15	66	28	38	47	92	56	66	34	6.9	3.8
11	2.6	105	60	29	36	44	89	53	58	26	6.6	4.0
12	5.7	43	56	29	38	39	77	51	47	24	6.5	7.2
13	67	22	177	26	38	38	67	50	38	18	7.4	4.8
14	24	16	272	26	36	148	61	50	37	15	7.3	4.4
15	10	14	194	26	105	132	65	46	29	14	7.2	16
16	6.3	179	131	25	239	107	133	42	25	18	6.2	10
17	5.5	137	102	24	278	138	132	46	26	20	6.1	5.4
18	4.9	71	84	23	185	122	93	41	25	35	5.5	4.6
19	10	46	74	23	133	159	76	39	28	27	5.5	4.3
20	5.7	36	64	22	109	185	69	50	26	16	27	4.1
21	4.3	46	57	21	89	155	54	41	23	14	15	3.1
22	3.9	40	70	18	77	160	41	40	22	16	8.7	3.3
23	6.7	31	103	18	68	131	50	39	21	13	6.7	3.2
24	54	29	72	24	186	104	150	46	21	11	6.0	3.4
25	25	259	56	52	181	88	113	27	31	9.5	5.5	3.6
26	15	229	47	49	125	76	81	22	50	9.0	5.0	3.2
27	9.7	122	41	39	94	69	74	22	31	23	5.0	2.5
28	7.4	85	57	36	147	62	62	23	23	30	4.7	3.3
29	5.9	155	123	30	207	71	52	94	26	18	4.6	3.0
30	4.3	117	77	27	---	90	48	143	23	16	4.5	2.5
31	5.8	---	53	28	---	104	---	452	---	12	4.3	---
TOTAL	320.2	1964.5	2776	932	3015	2981	2864	2118	3134	813.5	234.4	169.2
MEAN	10.3	65.5	89.5	30.1	104	96.2	95.5	68.3	104	26.2	7.56	5.64
MAX	67	259	272	52	278	185	236	452	613	112	27	28
MIN	2.1	4.6	41	18	23	38	41	22	21	9.0	4.3	2.5
CAL YR 1983	TOTAL	18801.8	MEAN	51.5	MAX	401	MIN	2.1				
WTR YR 1984	TOTAL	21321.8	MEAN	58.3	MAX	613	MIN	2.1				

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

DRAINAGE AREA.--183 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

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

AVERAGE DISCHARGE.--47 years, 306 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, 2,310 ft³/s June 4, gage height, 7.36 ft; minimum, 30 ft³/s Oct. 10, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	73	751	592	320	1080	965	550	1260	294	147	55
2	38	80	719	554	300	1080	1000	507	1640	285	133	52
3	39	91	680	514	279	1040	1040	474	2110	271	124	53
4	38	100	646	476	411	976	1060	511	2280	253	115	67
5	37	116	633	449	525	904	1170	528	2290	225	107	68
6	39	127	598	434	641	863	1430	548	2180	206	102	71
7	36	129	660	419	731	801	1520	574	1980	241	98	72
8	35	124	634	404	740	745	1640	589	1770	304	134	72
9	34	114	638	384	731	706	1660	601	1540	327	157	67
10	33	103	642	364	660	658	1590	573	1300	348	156	61
11	32	165	624	300	614	616	1460	551	1120	354	150	59
12	33	202	604	290	583	552	1320	532	962	340	136	55
13	78	220	745	312	549	526	1180	513	819	304	126	50
14	81	219	948	301	525	651	1050	489	705	261	119	52
15	93	198	993	295	569	677	959	466	618	217	114	65
16	96	311	1080	290	776	757	961	447	554	184	107	68
17	87	386	1120	278	963	912	946	426	493	164	99	72
18	74	431	1090	269	1090	1010	912	403	431	177	93	74
19	71	463	1030	259	1180	1140	902	379	386	213	86	73
20	65	461	938	255	1200	1270	879	354	340	223	85	69
21	61	446	851	250	1130	1340	830	341	303	216	78	64
22	59	407	778	235	1040	1430	766	323	276	210	73	60
23	59	364	736	225	942	1400	723	305	250	204	73	55
24	98	323	674	222	995	1340	755	287	231	191	72	51
25	110	499	570	265	1010	1260	716	267	226	169	71	51
26	134	575	550	294	977	1160	697	253	238	150	69	51
27	135	630	560	319	956	1060	679	246	252	156	66	48
28	124	690	556	347	995	959	657	233	245	174	63	46
29	104	785	626	355	1100	928	626	315	281	178	63	46
30	88	779	602	352	---	947	588	410	293	176	60	48
31	79	---	600	339	---	942	---	778	---	163	58	---
TOTAL	2124	9611	22876	10642	22532	29730	30681	13773	27373	7178	3134	1795
MEAN	68.5	320	738	343	777	959	1023	444	912	232	101	59.8
MAX	135	785	1120	592	1200	1430	1660	778	2290	354	157	74
MIN	32	73	550	222	279	526	588	233	226	150	58	46
CAL YR 1983	TOTAL	156910	MEAN	430	MAX	1580	MIN	30				
WTR YR 1984	TOTAL	181449	MEAN	496	MAX	2290	MIN	32				

CHARLES RIVER BASIN

01103500 CHARLES RIVER AT DOVER, MASS.--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURES: November 1974 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LITY LAB (MG/L AS CACO3)	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)
NOV 1983											
10...	0900	103	222	6.7	10.0	7.5	24	1.0	10.9	92	32
JAN 1984											
12...	1340	294	--	--	--	0.5	--	--	--	--	--
MAR											
01...	1610	1080	133	--	-4.0	5.0	--	--	--	--	--
08...	0800	754	128	7.4	-4.5	2.5	12	0.8	13.9	103	38
APR											
18...	0730	910	145	--	--	10.0	--	--	--	--	--
MAY											
10...	1030	574	142	6.8	13.0	15.0	17	1.4	9.4	94	43
JUN											
04...	1550	2300	--	--	--	16.5	--	--	--	--	--
JUL											
31...	0900	169	172	--	23.5	22.5	--	--	--	--	--
AUG											
15...	1500	110	173	7.1	31.0	25.0	27	1.0	7.7	94	60
SEP											
10...	1005	62	215	--	21.0	19.0	--	--	--	--	--

DATE	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	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)	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)
NOV 1983										
10...	47	14	3.4	22	2.7	25	36	0.2	7.8	140
JAN 1984										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	16	7.3	1.8	16	1.1	13	26	<0.1	3.3	80
APR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	8	8.1	2.0	15	1.4	12	24	0.1	1.8	91
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
31...	--	--	--	--	--	--	--	--	--	--
AUG										
15...	19	10	2.5	18	2.0	13	29	0.1	6.8	107
SEP										
10...	--	--	--	--	--	--	--	--	--	--

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

01103500 CHARLES RIVER AT DOVER, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SEDI- MENT, SUS- PENDED (MG/L)	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,AM- MONIA + ORGANIC 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)
NOV 1983										
10...	130	87	4	0.78	0.19	0.24	0.7	0.24	0.20	0.22
JAN 1984										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	76	55	3	0.32	0.01	0.01	1.2	0.03	0.04	0.02
APR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	76	66	36	0.14	0.07	0.09	0.6	0.15	0.10	0.12
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
31...	--	--	--	--	--	--	--	--	--	--
AUG										
15...	99	100	6	0.47	0.12	0.15	0.5	0.26	0.22	0.23
SEP										
10...	--	--	--	--	--	--	--	--	--	--

DATE	ALUM- INUM, DIS- SOLVED (UG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, DIS- SOLVED (UG/L AS PB)
NOV 1983										
10...	20	1	35	<0.5	<1	<1	<3	2	140	4
JAN 1984										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	40	1	23	0.5	<1	<1	<3	2	93	6
APR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	50	<1	26	<1	<1	20	<3	3	370	3
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
31...	--	--	--	--	--	--	--	--	--	--
AUG										
15...	<10	1	27	<0.5	<1	1	<3	3	320	1
SEP										
10...	--	--	--	--	--	--	--	--	--	--

DATE	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, DIS- SOLVED (UG/L AS AG)	STRON- TIUM, DIS- SOLVED (UG/L AS SR)	VANA- DIUM, DIS- SOLVED (UG/L AS V)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 1983										
10...	33	30	<0.1	<10	3	<1	<1	75	<6	19
JAN 1984										
12...	--	--	--	--	--	--	--	--	--	--
MAR										
01...	--	--	--	--	--	--	--	--	--	--
08...	<4	10	0.2	<10	2	<1	<1	42	<6	15
APR										
18...	--	--	--	--	--	--	--	--	--	--
MAY										
10...	<4	48	<0.1	<10	2	<1	<1	50	<6	22
JUN										
04...	--	--	--	--	--	--	--	--	--	--
JUL										
31...	--	--	--	--	--	--	--	--	--	--
AUG										
15...	<4	97	0.2	<10	1	<1	<1	66	<6	5
SEP										
10...	--	--	--	--	--	--	--	--	--	--

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

CHARLES RIVER BASIN

01104000 MOTHER BROOK AT DEDHAM, MASS.

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. 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.--53 years, 79.4 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, 565 ft³/s June 5, gage height, 85.73 ft; minimum, 0.34 ft³/s Sept. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.48	.64	238	186	106	310	267	107	426	52	10	2.4
2	.65	.64	222	170	96	310	271	100	478	39	8.5	1.5
3	.48	.68	206	152	91	295	278	132	518	31	12	.87
4	.82	8.0	196	143	158	280	279	152	544	23	8.1	1.9
5	1.6	12	202	164	210	260	304	133	556	16	4.4	.86
6	1.4	12	185	158	239	240	363	117	547	35	2.1	2.5
7	.96	11	223	149	258	220	386	116	516	48	1.3	3.2
8	1.4	8.9	239	137	269	191	401	120	475	69	1.1	2.0
9	1.5	9.6	232	125	262	222	412	132	427	60	1.9	.97
10	1.2	11	227	113	239	209	408	116	376	78	1.4	.71
11	.60	30	215	102	218	189	388	150	317	72	.98	1.2
12	1.1	29	200	104	199	174	359	154	265	63	.94	1.9
13	11	28	265	100	175	147	326	153	256	50	1.4	1.5
14	3.8	25	343	99	142	238	287	142	214	51	7.4	1.9
15	2.6	21	346	94	172	241	254	126	172	32	9.6	3.2
16	1.6	82	345	86	251	232	251	112	128	21	6.7	1.9
17	2.2	107	346	79	323	266	242	98	92	23	6.1	1.7
18	8.0	91	338	67	327	297	213	84	63	28	3.5	4.3
19	9.9	92	323	57	337	335	192	71	45	27	1.7	4.8
20	7.6	88	295	53	344	371	187	63	29	17	1.3	4.7
21	5.7	87	260	44	332	386	184	57	28	13	3.3	3.6
22	3.9	79	235	34	307	402	160	45	56	9.4	3.1	1.7
23	3.0	108	210	36	272	405	138	43	43	9.1	1.7	.73
24	12	94	195	41	295	392	169	76	29	25	1.3	.44
25	9.7	194	185	65	300	371	182	67	28	18	2.0	1.1
26	6.9	246	160	94	290	348	157	64	39	9.4	1.5	1.8
27	6.9	219	182	100	285	315	137	62	37	8.3	1.2	2.1
28	4.6	218	188	109	295	279	128	51	41	8.5	1.4	2.2
29	3.6	239	230	110	320	278	115	76	76	4.3	.99	2.8
30	1.4	249	208	109	---	288	102	98	64	5.2	.67	2.2
31	.66	---	196	117	---	268	---	249	---	13	1.9	---
TOTAL	117.25	2400.46	7435	3197	7112	8759	7540	3266	6885	958.2	109.48	62.68
MEAN	3.78	80.0	240	103	245	283	251	105	230	30.9	3.53	2.09
MAX	12	249	346	186	344	405	412	249	556	78	12	4.8
MIN	.48	.64	160	34	91	147	102	43	28	4.3	.67	.44
CAL YR 1983	TOTAL	43154.93	MEAN	118	MAX	465	MIN	.30				
WTR YR 1984	TOTAL	47842.07	MEAN	131	MAX	556	MIN	.44				

CHARLES RIVER BASIN

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01104200 CHARLES RIVER AT WELLESLEY, MASS.

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

DRAINAGE AREA.--211 mi².

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

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

REMARKS.--Records good except those for period of no gage-height record, Aug. 20 to Sept. 30, which are fair. Flow affected by diversion to Mother Brook (station 01104000), and by diversions to and from basin for municipal supplies. Occasional regulation at dam 0.2 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--25 years, 284 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, 1,760 ft³/s June 5, gage height, 5.58 ft; minimum, 5.8 ft³/s Oct. 3; minimum daily, 15 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	103	700	517	285	1000	879	555	1170	314	159	52
2	43	95	678	499	264	980	892	414	1330	314	116	54
3	31	66	654	478	260	955	905	417	1520	310	117	60
4	15	83	644	406	406	920	921	566	1620	314	124	92
5	30	134	662	370	490	880	1010	563	1670	209	130	64
6	39	153	633	372	542	854	1130	547	1650	199	129	45
7	37	152	599	374	592	817	1180	544	1580	268	126	63
8	27	151	576	358	589	646	1230	581	1460	351	123	78
9	29	105	577	339	605	604	1280	602	1340	287	179	82
10	31	119	568	332	568	597	1280	479	1230	307	198	62
11	33	213	560	270	553	570	1230	453	1060	334	194	42
12	38	211	557	252	544	522	1160	482	840	336	170	50
13	137	230	709	260	515	505	1070	485	736	276	85	48
14	105	236	879	268	507	699	986	475	684	256	77	47
15	99	231	913	270	609	726	914	460	609	245	109	70
16	110	407	917	257	834	722	918	444	556	180	92	84
17	78	452	936	254	987	804	899	434	514	169	97	62
18	71	430	945	254	999	860	854	425	468	219	98	62
19	84	454	911	258	1040	942	850	408	432	252	94	66
20	77	460	859	252	1060	1040	838	394	392	245	88	66
21	72	462	776	250	1050	1110	794	391	255	248	57	64
22	72	385	741	242	1000	1170	767	380	242	250	45	68
23	75	320	647	242	942	1190	733	297	262	168	70	68
24	142	324	559	245	1020	1170	741	263	251	175	74	60
25	143	520	459	242	1040	1130	700	271	210	184	62	45
26	147	625	430	261	964	1060	682	266	225	177	74	48
27	155	593	461	280	944	993	673	281	273	188	60	52
28	156	565	486	301	988	927	656	262	250	218	62	48
29	132	655	576	305	1050	879	638	342	308	208	65	43
30	126	709	548	292	---	869	613	404	314	139	62	46
31	113	---	527	297	---	868	---	757	---	153	50	---
TOTAL	2487	9643	20687	9597	21247	27009	27423	13642	23451	7493	3186	1791
MEAN	80.2	321	667	310	733	871	914	440	782	242	103	59.7
MAX	156	709	945	517	1060	1190	1280	757	1670	351	198	92
MIN	15	66	430	242	260	505	613	262	210	139	45	42
CAL YR 1983	TOTAL	145131	MEAN	398	MAX	1340	MIN	12				
WTR YR 1984	TOTAL	167656	MEAN	458	MAX	1670	MIN	15				

01104500 CHARLES RIVER AT WALTHAM, MASS.

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

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

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft above 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 except those for periods of no gage-height record, Dec. 31 to Jan. 31, Apr. 5 to May 13, which are fair. 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.--53 years (water years 1932-84), 305 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, 2,410 ft³/s June 2, gage height, 4.88 ft; minimum, 25 ft³/s Aug. 22; minimum daily, 33 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	115	807	600	318	1320	1140	650	1920	329	178	54
2	64	107	793	580	301	1230	1170	540	2190	327	159	58
3	58	104	741	560	290	1170	1180	490	2370	321	132	62
4	33	93	731	500	482	1110	1200	660	2290	326	140	98
5	37	144	774	450	600	1060	1300	660	2220	275	139	80
6	49	167	742	430	678	1040	1500	640	2120	211	136	49
7	48	165	811	430	697	995	1650	630	1990	334	137	70
8	40	172	738	400	677	862	1700	660	1810	413	131	84
9	42	129	709	390	687	718	1700	700	1610	383	153	87
10	44	130	689	370	644	708	1650	560	1390	341	180	79
11	46	248	663	310	626	684	1600	500	1230	362	180	53
12	52	236	683	290	614	621	1500	520	1010	362	173	46
13	170	236	960	300	594	605	1400	530	804	328	166	54
14	133	248	1310	310	583	879	1300	510	748	272	85	52
15	110	247	1290	310	724	922	1200	487	673	270	107	80
16	114	501	1230	300	970	893	1150	461	606	240	116	91
17	108	549	1190	295	1030	990	1100	449	555	199	106	81
18	79	487	1170	295	1130	1060	1050	434	508	246	110	60
19	99	488	1130	295	1150	1210	1050	415	469	285	110	69
20	90	495	1050	290	1150	1400	1000	398	425	267	114	72
21	82	510	938	285	1150	1470	950	391	337	264	56	71
22	82	472	905	280	1150	1580	930	376	246	277	44	73
23	87	347	874	280	1110	1580	860	339	275	231	69	73
24	175	355	699	285	1250	1510	860	269	276	182	77	67
25	168	709	575	285	1380	1430	820	274	260	184	64	51
26	160	763	503	300	1240	1350	800	263	248	192	74	51
27	167	684	525	320	1150	1250	780	281	288	220	73	52
28	168	653	560	350	1270	1150	770	277	273	248	60	54
29	147	749	757	350	1430	1140	740	398	305	226	70	46
30	138	809	685	340	---	1130	720	490	327	196	70	49
31	127	---	630	340	---	1120	---	1160	---	157	53	---
TOTAL	2972	11112	25862	11120	25075	34187	34770	15412	29773	8468	3462	1966
MEAN	95.9	370	834	359	865	1103	1159	497	992	273	112	65.5
MAX	175	809	1310	600	1430	1580	1700	1160	2370	413	180	98
MIN	33	93	503	280	290	605	720	263	246	157	44	46
CAL YR 1983	TOTAL	176806	MEAN	484	MAX	1930	MIN	19				
WTR YR 1984	TOTAL	204179	MEAN	558	MAX	2370	MIN	33				

NEPONSET RIVER BASIN

41

01105000 NEPONSET RIVER AT NORWOOD, MASS.

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

DRAINAGE AREA.--34.7 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good October to March, fair thereafter. No gage-height record Apr. 11 to May 21. 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.--45 years, 55.1 ft³/s.

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

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, 943 ft³/s May 31, gage height, 10.22 ft, at upstream side of railroad bridge; minimum daily, 5.4 ft³/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	10	101	96	56	255	231	90	766	65	33	12
2	8.8	9.7	82	86	44	204	236	84	762	63	31	13
3	9.9	11	69	72	48	182	227	80	699	59	29	13
4	12	19	79	71	177	164	215	150	541	58	28	23
5	11	22	109	71	226	155	287	140	421	55	28	21
6	9.0	24	119	69	208	167	406	130	344	50	21	19
7	8.0	19	185	71	168	164	346	125	288	87	41	15
8	6.6	15	166	71	133	141	280	120	242	131	96	15
9	6.0	15	133	64	112	130	246	115	212	112	85	15
10	6.0	19	113	58	91	118	217	110	186	84	67	15
11	5.6	52	109	63	90	112	200	97	146	68	49	15
12	7.8	49	98	61	98	101	180	87	124	64	42	14
13	28	36	235	56	96	96	160	90	119	57	35	12
14	30	26	376	55	89	299	150	84	115	51	35	12
15	23	21	323	55	174	305	160	76	113	45	32	18
16	17	133	254	52	322	259	220	73	104	42	30	16
17	15	130	211	48	364	276	230	72	95	40	26	15
18	13	90	173	45	290	274	190	71	83	60	23	15
19	13	60	158	46	241	291	170	69	83	71	25	13
20	9.4	51	132	47	207	323	150	71	82	60	20	12
21	8.6	57	109	45	188	302	130	72	70	58	18	10
22	7.9	55	115	44	167	297	120	69	63	81	16	7.5
23	7.9	44	153	39	154	272	110	65	58	68	16	7.0
24	16	41	139	41	233	235	170	66	56	55	18	6.3
25	28	212	113	72	278	207	160	59	60	47	18	5.8
26	29	238	96	79	236	190	140	48	64	41	18	7.6
27	20	166	84	74	193	173	130	56	69	58	18	6.0
28	15	120	102	78	228	160	110	58	67	76	17	5.6
29	12	138	182	69	302	172	105	115	78	42	15	5.4
30	12	123	156	59	---	189	95	119	70	45	13	6.3
31	12	---	115	59	---	207	---	494	---	36	12	---
TOTAL	413.9	2005.7	4589	1916	5213	6420	5771	3155	6180	1929	955	370.5
MEAN	13.4	66.9	148	61.8	180	207	192	102	206	62.2	30.8	12.4
MAX	30	238	376	96	364	323	406	494	766	131	96	23
MIN	5.6	9.7	69	39	44	96	95	48	56	36	12	5.4
CAL YR 1983	TOTAL	30910.9	MEAN	84.7	MAX	415	MIN	4.3				
WTR YR 1984	TOTAL	38918.1	MEAN	106	MAX	766	MIN	5.4				

NEPONSET RIVER BASIN

01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MASS.

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 above National Geodetic Vertical Datum of 1929 (Massachusetts Department of Public Works benchmark).

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 diversions for municipal supply of Canton and Stoughton. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--32 years, 52.3 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, 780 ft³/s May 31, gage height, 5.30 ft, from rating curve extended above 140 ft³/s; minimum daily, 7.4 ft³/s Oct. 10, 11, 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	16	132	74	56	162	168	60	587	34	23	14
2	11	15	116	70	48	135	166	57	524	32	21	13
3	12	14	106	68	50	116	162	56	470	34	19	13
4	11	22	107	65	166	100	152	96	321	40	18	24
5	10	32	139	65	170	91	199	94	266	35	17	25
6	9.9	42	122	63	140	110	285	80	236	32	17	21
7	9.0	37	153	65	112	105	211	73	233	60	27	17
8	8.1	32	124	62	96	94	178	72	206	112	72	13
9	7.8	28	105	57	90	89	160	73	154	77	49	13
10	7.4	26	99	54	82	83	145	60	132	48	41	12
11	7.4	67	94	57	82	81	136	55	89	46	36	12
12	8.0	55	89	57	86	78	127	55	75	44	33	12
13	49	38	145	53	81	74	119	62	62	39	31	12
14	35	31	214	52	73	225	111	56	57	37	31	22
15	21	28	163	51	100	192	114	59	77	32	29	41
16	14	147	139	49	173	146	163	59	61	30	24	45
17	12	140	126	48	200	162	173	56	58	32	23	32
18	11	71	115	46	148	164	135	50	54	41	22	26
19	13	56	107	46	126	193	120	43	67	59	21	18
20	13	63	96	46	116	230	112	41	62	50	23	14
21	11	81	86	43	114	198	96	47	46	43	22	13
22	7.4	82	92	38	108	191	83	45	34	55	19	11
23	9.3	67	132	38	87	168	81	40	34	43	18	10
24	34	60	103	42	167	135	125	38	41	34	17	9.9
25	40	269	86	77	186	111	119	34	47	32	17	9.7
26	29	295	78	72	142	104	108	36	51	28	17	8.9
27	29	181	72	61	121	110	93	35	45	31	16	9.1
28	24	139	78	64	163	110	76	36	42	44	14	9.3
29	22	172	145	56	223	123	63	71	38	36	13	9.9
30	18	155	103	53	---	137	58	79	36	31	14	9.8
31	17	---	81	57	---	156	---	368	---	27	15	---
TOTAL	520.1	2461	3547	1749	3506	4173	4038	2086	4205	1318	759	499.6
MEAN	16.8	82.0	114	56.4	121	135	135	67.3	140	42.5	24.5	16.7
MAX	49	295	214	77	223	230	285	368	587	112	72	45
MIN	7.4	14	72	38	48	74	58	34	34	27	13	8.9
CAL YR 1983	TOTAL	25178.7	MEAN	69.0	MAX	365	MIN	7.0				
WTR YR 1984	TOTAL	28861.7	MEAN	78.9	MAX	587	MIN	7.4				

01105585 TOWN BROOK AT QUINCY, MASS.

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

DRAINAGE AREA.--4.22 mi², revised.

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. Elevation of gage is 5 ft, from topographic map.

REMARKS.--Records poor. No gage-height record Oct. 1-14, Feb. 24 to Mar. 14, May 1 to June 8. 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.--12 years, 9.26 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 U.S. Army 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 recorded discharge, 347 ft³/s Nov. 25, gage height, 6.66 ft, but greater maximum discharge may have occurred during periods of no gage-height record; minimum daily, 0.80 ft³/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.3	14	7.3	6.7	25	35	20	180	3.7	3.6	3.0
2	1.4	2.2	12	6.2	5.2	20	29	18	150	4.0	3.3	3.0
3	1.1	4.3	11	6.0	8.1	15	23	20	80	21	3.3	3.4
4	.98	23	31	5.6	77	14	20	35	50	4.3	3.3	16
5	.94	18	30	5.2	44	18	61	25	30	3.6	3.3	11
6	.86	13	25	5.8	30	15	53	20	20	3.2	3.2	11
7	.84	12	36	5.8	19	13	28	16	25	23	3.3	11
8	.82	12	16	5.3	13	12	21	15	23	5.2	3.3	11
9	.81	9.5	12	5.0	11	14	17	14	19	3.4	3.2	11
10	.80	9.8	11	4.9	9.6	12	17	13	15	4.7	3.4	11
11	.81	22	10	4.4	12	11	17	12	16	3.3	3.3	11
12	3.5	4.3	11	4.6	12	10	15	12	16	3.3	3.3	12
13	10	3.5	47	6.1	10	60	14	13	16	3.2	12	11
14	3.3	3.3	53	5.7	8.4	120	14	14	17	3.0	5.2	11
15	1.6	2.8	23	5.4	22	31	20	13	17	3.1	4.4	21
16	1.7	61	17	5.6	108	22	56	12	18	6.0	4.3	11
17	1.8	9.7	14	4.8	65	33	21	11	18	3.5	3.8	8.2
18	1.6	6.4	13	3.9	38	26	17	11	19	15	3.6	2.1
19	4.1	5.1	12	4.7	26	59	14	11	11	4.3	4.1	2.0
20	1.8	4.4	11	3.9	23	45	18	12	5.5	3.7	3.6	2.0
21	1.9	14	9.6	3.3	18	37	21	15	3.2	13	3.5	1.9
22	2.1	5.3	29	3.2	15	35	19	13	2.9	6.6	3.4	1.8
23	5.2	4.4	24	3.3	13	23	22	11	2.8	4.3	3.4	1.8
24	18	6.3	13	10	60	19	53	9.4	6.2	4.1	3.5	1.7
25	3.2	128	10	18	40	16	23	8.6	6.7	4.0	3.3	1.6
26	3.3	32	8.7	8.9	20	14	21	10	5.0	3.2	3.4	1.7
27	2.7	27	7.5	9.6	16	13	20	9.0	3.7	13	3.2	1.7
28	2.5	23	25	7.7	80	11	19	17	3.8	4.5	3.3	1.8
29	2.0	36	22	6.2	40	30	19	30	3.6	3.7	3.0	1.7
30	2.4	18	10	5.6	---	35	21	27	3.7	4.3	3.2	1.8
31	2.3	---	8.4	12	---	40	---	120	---	3.6	3.1	---
TOTAL	85.56	522.6	576.2	194.0	850.0	848	748	587.0	787.1	188.8	117.1	200.2
MEAN	2.76	17.4	18.6	6.26	29.3	27.4	24.9	18.9	26.2	6.09	3.78	6.67
MAX	18	128	53	18	108	120	61	120	180	23	12	21
MIN	.80	2.2	7.5	3.2	5.2	10	14	8.6	2.8	3.0	3.0	1.6
CAL YR 1983	TOTAL	4660.63	MEAN	12.8	MAX	128	MIN	.80				
WTR YR 1984	TOTAL	5704.56	MEAN	15.6	MAX	180	MIN	.80				

WEYMOUTH BACK RIVER BASIN

01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MASS.

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. Elevation 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.--18 years, 9.59 ft³/s, 30.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 590 ft³/s May 31, 1984, gage height, 5.02 ft; maximum gage height, 5.35 ft Feb. 15, 1971 (ice jam); minimum discharge, 0.11 ft³/s Sept. 5, 6, 9, 10, 1971.

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 16	1000	91	3.38	Feb. 16	2100	a123	3.57
Nov. 25	1230	a269	4.19	Apr. 6	0500	91	3.38
Feb. 4	1815	a110	3.50	May 31	1900	a*590	*5.02

a From rating curve extended above 51 ft³/s.

Minimum discharge, 0.55 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.6	11	7.6	11	21	38	10	308	4.5	2.2	.86
2	1.5	3.6	9.5	7.0	9.2	12	37	9.5	234	4.1	1.7	.86
3	1.5	3.7	8.7	6.8	8.2	10	32	9.3	140	7.2	1.6	.87
4	1.2	8.8	13	6.7	71	9.6	22	21	34	9.4	1.6	4.3
5	1.1	8.9	27	6.7	69	8.9	37	19	18	5.5	1.5	2.5
6	1.1	8.1	16	7.1	40	9.9	76	14	14	4.4	1.6	1.9
7	.93	6.4	32	8.5	19	9.6	29	12	13	10	1.7	1.5
8	.89	5.5	18	7.8	13	9.1	16	12	12	11	2.6	1.3
9	.91	5.3	10	6.9	10	8.8	15	12	11	6.8	2.3	1.2
10	.91	5.7	9.1	6.5	9.1	8.9	14	11	9.6	6.2	2.1	1.0
11	.93	22	8.4	6.6	8.5	7.6	14	9.6	8.4	4.7	1.6	.99
12	.99	15	8.3	6.7	9.9	8.7	13	9.9	7.8	4.1	1.6	1.0
13	7.9	9.6	20	6.2	9.5	6.8	12	11	7.4	3.3	4.8	1.0
14	3.6	7.7	46	6.1	8.6	48	12	12	7.5	2.8	4.3	1.1
15	2.5	6.6	25	6.0	11	44	13	10	7.9	2.3	3.5	3.0
16	2.0	56	14	5.9	63	22	38	9.9	6.5	2.5	2.2	2.1
17	1.9	49	11	5.4	91	30	40	9.1	6.1	3.0	2.0	1.5
18	1.7	15	10	5.2	34	31	17	9.5	5.6	10	1.9	1.2
19	2.8	12	9.3	5.2	17	35	16	9.2	6.4	14	1.9	.95
20	2.5	10	8.0	5.2	13	61	14	9.1	5.8	6.8	1.9	.84
21	2.2	13	7.0	5.0	11	34	14	13	5.1	4.6	1.6	.83
22	2.3	14	11	4.7	9.5	29	13	9.7	4.6	7.0	1.6	.75
23	2.4	11	18	4.4	8.9	17	13	8.3	4.1	4.2	1.5	.65
24	11	9.3	13	5.0	37	12	48	7.8	5.5	3.0	1.5	.62
25	9.2	140	9.6	12	43	10	27	7.0	8.3	2.7	1.4	.62
26	6.2	127	8.5	13	17	10	15	6.6	11	2.2	1.4	.62
27	4.6	25	7.3	12	11	9.9	14	6.5	8.2	4.7	1.3	.58
28	4.1	15	12	12	29	9.8	13	10	5.7	6.2	1.2	.62
29	4.0	27	23	10	62	12	11	21	5.0	4.3	1.1	.62
30	3.7	20	13	8.6	---	21	11	19	4.7	3.2	1.1	.62
31	3.7	---	9.3	11	---	25	---	271	---	2.7	.87	---
TOTAL	91.46	663.8	446.0	227.8	753.4	591.6	684	609.0	925.2	167.4	59.17	36.50
MEAN	2.95	22.1	14.4	7.35	26.0	19.1	22.8	19.6	30.8	5.40	1.91	1.22
MAX	11	140	46	13	91	61	76	271	308	14	4.8	4.3
MIN	.89	3.6	7.0	4.4	8.2	6.8	11	6.5	4.1	2.2	.87	.58
CFSM	.69	5.15	3.36	1.71	6.06	4.45	5.32	4.57	7.18	1.26	.45	.28
IN.	.79	5.75	3.87	1.97	6.53	5.13	5.93	5.28	8.02	1.45	.51	.32
CAL YR 1983	TOTAL	5284.75	MEAN 14.5	MAX 199	MIN .43	CFSM 3.38	IN 45.82					
WTR YR 1984	TOTAL	5255.33	MEAN 14.4	MAX 308	MIN .58	CFSM 3.36	IN 45.56					

01105730 INDIAN HEAD RIVER AT HANOVER, MASS.

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.--30.2 mi², revised.

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 above 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.--18 years, 63.8 ft³/s 28.59 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 greater than base discharge of 310 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	0700	474	4.69	Mar. 20	0800	313	4.03
Feb. 5	2200	337	4.14	Apr. 6	1445	340	4.15
Feb. 17	1545	333	4.12	June 1	1300	*827	*5.78
Feb. 29	1145	348	4.19				

Minimum discharge, 0.42 ft³/s Oct. 17; minimum daily, 3.5 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	14	144	68	86	253	248	77	773	39	21	8.0
2	5.4	13	114	60	65	181	242	70	731	37	18	7.5
3	8.7	14	99	58	59	147	226	67	689	33	17	7.0
4	5.9	24	107	55	206	127	201	140	421	38	16	10
5	4.3	38	179	54	326	110	219	157	255	38	15	14
6	4.0	33	168	54	291	130	322	117	185	44	14	14
7	4.0	27	174	60	212	127	258	91	145	56	13	12
8	7.7	22	150	60	148	104	193	81	120	79	13	9.1
9	6.3	20	116	53	117	89	160	92	99	59	13	7.4
10	3.9	20	100	49	92	83	138	78	81	49	13	7.0
11	3.5	74	89	51	91	76	125	67	70	43	13	7.0
12	3.6	72	82	52	112	71	115	63	66	37	13	7.2
13	16	46	137	48	104	66	105	67	58	30	17	7.2
14	29	35	198	47	96	193	96	64	56	25	21	6.7
15	22	30	180	47	114	231	104	65	65	22	20	10
16	14	131	151	45	199	195	187	71	53	22	17	13
17	6.6	209	125	44	315	197	243	62	45	23	15	12
18	9.4	139	107	42	273	207	183	55	42	34	13	10
19	13	84	93	42	205	237	144	50	61	70	12	8.3
20	13	63	77	41	169	305	123	47	58	48	11	7.0
21	12	88	62	38	145	259	109	59	43	35	10	6.3
22	10	103	59	35	126	230	94	55	36	49	9.6	5.3
23	9.8	75	134	35	112	193	86	46	32	42	9.3	4.5
24	40	61	120	39	189	157	185	40	31	33	8.0	4.3
25	53	263	82	88	250	134	204	36	52	26	7.3	4.3
26	36	445	66	104	197	118	154	34	129	21	7.0	4.4
27	29	276	57	87	153	106	123	33	95	27	6.1	4.5
28	23	176	53	87	189	96	104	35	63	46	6.0	4.5
29	18	191	122	73	335	127	92	94	51	39	6.5	4.5
30	15	186	132	64	---	190	84	128	43	30	6.2	4.5
31	15	---	87	85	---	218	---	367	---	25	6.4	---
TOTAL	445.5	2972	3564	1765	4976	4957	4867	2508	4648	1199	387.4	231.5
MEAN	14.4	99.1	115	56.9	172	160	162	80.9	155	38.7	12.5	7.72
MAX	53	445	198	104	335	305	322	367	773	79	21	14
MIN	3.5	13	53	35	59	66	84	33	31	21	6.0	4.3
CFSM	.48	3.28	3.81	1.88	5.70	5.30	5.36	2.68	5.13	1.28	.41	.26
IN.	.55	3.66	4.39	2.17	6.13	6.11	5.99	3.09	5.73	1.48	.48	.29

CAL YR 1983	TOTAL	32171.0	MEAN 88.1	MAX 669	MIN 2.4	CFSM 2.92	IN 39.63
WTR YR 1984	TOTAL	32520.4	MEAN 88.9	MAX 773	MIN 3.5	CFSM 2.94	IN 40.06

01105870 JONES RIVER AT KINGSTON, MASS.

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

DRAINAGE AREA.--15.7 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 above National Geodetic Vertical Datum of 1929 (levels by Massachusetts Department of Public Works).

REMARKS.--Records fair. Flow regulated by pond upstream. Flow affected at times during 1968-76, 1978-79, 1982-84 by wastage from 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.--18 years, 32.9 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, 222 ft³/s Mar. 20, gage height, 4.02 ft; minimum daily, 11 ft³/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	16	44	28	44	171	153	60	183	36	33	31
2	15	17	34	28	38	139	146	55	189	33	31	29
3	17	16	29	27	36	119	136	51	176	31	31	28
4	16	20	29	26	79	108	127	61	137	31	31	32
5	15	28	47	26	119	103	136	74	108	28	31	32
6	17	30	52	28	120	110	170	70	86	28	31	30
7	15	26	58	35	92	108	157	62	81	36	32	26
8	14	22	50	30	65	101	140	60	96	78	35	23
9	14	21	41	27	50	89	124	61	80	76	38	23
10	13	20	36	26	40	86	113	57	66	61	39	22
11	12	42	32	29	37	72	103	52	55	51	38	22
12	14	43	28	30	37	65	99	50	48	43	35	21
13	21	39	33	30	41	51	91	55	41	37	37	20
14	21	36	42	31	45	100	84	54	38	31	37	18
15	18	34	44	37	52	129	90	48	40	28	37	20
16	16	40	44	35	82	131	131	47	39	27	35	20
17	15	55	39	31	128	128	155	48	32	29	32	18
18	14	58	34	29	114	131	134	50	32	30	30	16
19	17	50	30	32	104	157	116	52	39	35	30	16
20	17	42	22	32	95	185	103	53	44	36	30	16
21	16	46	16	29	86	169	97	57	40	35	30	14
22	16	54	18	25	79	163	91	60	25	36	30	11
23	17	49	27	23	75	146	84	54	28	37	30	12
24	30	44	26	25	100	132	111	50	28	35	30	12
25	36	50	29	43	122	122	118	45	49	31	29	12
26	32	58	26	47	119	114	111	42	81	31	28	13
27	29	60	22	48	107	107	96	36	71	36	28	12
28	25	47	22	46	122	101	82	35	60	45	28	13
29	23	54	40	38	188	121	72	48	49	45	28	13
30	20	52	38	34	---	158	65	52	42	43	28	12
31	18	---	32	41	---	157	---	89	---	38	29	---
TOTAL	577	1169	1064	996	2416	3773	3435	1688	2083	1197	991	587
MEAN	18.6	39.0	34.3	32.1	83.3	122	115	54.5	69.4	38.6	32.0	19.6
MAX	36	60	58	48	188	185	170	89	189	78	39	32
MIN	12	16	16	23	36	51	65	35	25	27	28	11

CAL YR 1983 TOTAL 18586 MEAN 50.9 MAX 254 MIN 12
WTR YR 1984 TOTAL 19976 MEAN 54.6 MAX 189 MIN 11

01105880 HERRING RIVER AT NORTH HARWICH, MASS.

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. Elevation of gage is 10 ft, from topographic map.

REMARKS.--Records poor. No gage-height record Feb. 22 to Apr. 22. 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.--18 years, 10.2 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, 52 ft³/s June 25, gage height, 3.51 ft; minimum, 2.3 ft³/s Oct. 12, Jan. 9, 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	8.6	15	9.6	13	21	29	17	28	21	18	10
2	7.7	8.6	14	8.9	13	19	27	17	28	19	17	11
3	7.9	8.6	13	8.7	11	18	25	16	26	17	17	10
4	11	12	13	9.4	12	18	24	22	24	16	17	12
5	13	16	16	9.5	13	22	29	22	22	15	16	13
6	11	14	14	9.2	13	21	27	22	21	14	16	12
7	6.1	12	15	9.2	13	19	26	19	20	16	17	12
8	2.7	11	14	9.2	13	17	25	19	20	33	17	11
9	2.5	11	13	5.9	13	19	24	20	20	28	17	10
10	3.0	11	13	2.4	12	19	25	18	18	25	17	9.8
11	4.4	13	12	4.3	13	18	23	18	17	21	16	9.9
12	3.8	12	12	4.8	16	18	22	18	16	19	17	10
13	4.8	12	12	6.0	15	17	21	19	16	18	17	10
14	4.4	12	13	6.6	14	18	20	19	16	17	17	10
15	4.1	11	13	7.3	14	22	27	18	14	16	17	15
16	4.0	13	14	8.0	16	21	27	18	14	16	17	13
17	4.0	14	13	8.3	18	20	26	18	12	16	17	13
18	6.7	13	12	8.4	17	21	25	17	12	23	16	11
19	6.9	12	12	9.1	16	25	24	16	14	28	15	9.9
20	7.3	12	12	9.2	17	25	22	16	14	23	15	9.2
21	7.0	13	11	11	16	24	21	18	14	21	13	9.1
22	7.0	13	11	9.5	15	23	20	18	13	19	5.4	8.8
23	7.0	10	12	9.5	15	22	19	17	12	17	6.3	8.3
24	11	8.0	12	9.6	17	21	21	17	11	17	7.5	8.3
25	12	9.2	11	11	20	20	20	17	30	15	8.1	8.5
26	11	8.8	9.4	11	19	19	20	16	36	14	8.3	8.6
27	10	8.0	9.5	10	20	18	19	19	31	21	8.6	8.3
28	9.9	8.0	9.1	11	21	17	19	18	26	25	8.9	8.0
29	9.2	18	11	11	23	33	17	17	24	22	9.2	8.0
30	8.8	18	11	10	---	32	17	17	22	20	9.5	7.8
31	8.6	---	10	13	---	31	---	18	---	19	9.7	---
TOTAL	223.6	350.8	382.0	270.6	448	658	691	561	591	611	427.5	305.5
MEAN	7.21	11.7	12.3	8.73	15.4	21.2	23.0	18.1	19.7	19.7	13.8	10.2
MAX	13	18	16	13	23	33	29	22	36	33	18	15
MIN	2.5	8.0	9.1	2.4	11	17	17	16	11	14	5.4	7.8
CAL YR 1983	TOTAL	5638.94	MEAN	15.4	MAX	51	MIN	.64				
WTR YR 1984	TOTAL	5520.00	MEAN	15.1	MAX	36	MIN	2.4				

TAUNTON RIVER BASIN

01108500 WADING RIVER AT WEST MANSFIELD, MASS.

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.--19.5 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those below 10 ft³/s and those for January and February, 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.--31 years, 33.5 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, 368 ft³/s June 3, gage height, 5.85 ft; minimum, 0.49 ft³/s Oct. 5, 9; minimum daily, 0.57 ft³/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	7.8	97	78	46	130	117	57	315	29	11	4.1
2	1.8	6.9	84	72	43	116	119	52	345	28	9.2	3.7
3	1.7	7.1	76	66	41	110	119	50	355	26	7.5	4.2
4	1.0	10	73	62	84	101	116	61	279	25	6.4	8.0
5	.61	14	82	57	98	96	135	68	236	23	5.4	9.6
6	.93	14	79	57	107	97	181	63	188	21	4.5	7.2
7	1.1	14	96	57	102	89	181	59	149	26	5.1	6.1
8	.85	13	95	54	93	81	175	58	118	39	8.7	6.3
9	.57	9.8	87	52	88	79	164	61	103	35	8.2	6.0
10	.88	11	82	50	80	78	148	56	89	29	7.8	5.0
11	1.8	22	79	51	74	77	133	52	79	27	7.2	4.9
12	2.3	27	75	48	69	75	118	50	72	24	6.3	4.8
13	12	24	107	46	66	75	105	49	65	21	6.4	4.0
14	10	21	160	44	66	111	98	48	57	17	6.2	3.8
15	7.5	19	162	42	70	130	96	47	51	15	5.9	7.4
16	6.0	39	155	40	100	123	109	45	45	14	4.9	7.5
17	5.3	63	142	38	140	132	118	44	43	13	3.7	6.1
18	5.0	56	127	37	135	133	105	42	43	14	3.1	4.9
19	6.7	53	110	37	125	139	98	39	47	17	3.3	3.9
20	6.2	44	95	36	120	149	92	37	46	16	4.1	3.5
21	5.7	41	80	34	115	141	83	38	42	15	5.5	3.1
22	6.9	41	81	33	110	144	72	36	37	19	6.0	2.8
23	7.3	36	98	31	105	134	69	34	33	18	5.3	2.7
24	13	33	91	32	110	118	77	33	33	15	5.2	2.8
25	15	87	78	43	120	110	80	31	36	13	8.5	2.9
26	13	136	76	57	115	101	76	29	38	12	6.5	8.3
27	11	128	73	54	110	93	71	29	40	12	5.5	6.1
28	10	122	70	50	130	84	68	31	37	16	4.9	4.9
29	9.1	124	94	49	150	94	64	42	33	16	4.1	5.0
30	8.4	115	92	48	---	133	60	47	31	14	3.8	5.7
31	8.2	---	86	48	---	122	---	134	---	12	3.7	---
TOTAL	180.67	1338.6	2982	1503	2812	3395	3247	1522	3085	621	183.9	155.3
MEAN	5.83	44.6	96.2	48.5	97.0	110	108	49.1	103	20.0	5.93	5.18
MAX	15	136	162	78	150	149	181	134	355	39	11	9.6
MIN	.57	6.9	70	31	41	75	60	29	31	12	3.1	2.7
CAL YR 1983	TOTAL	18869.25	MEAN	51.7	MAX	220	MIN	.22				
WTR YR 1984	TOTAL	21025.47	MEAN	57.4	MAX	355	MIN	.57				

01109000 WADING RIVER NEAR NORTON, MASS.

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

DRAINAGE AREA.--43.3 mi², revised.

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 above 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. No gage-height record Feb. 13-21. 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.--59 years, 74.1 ft³/s.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 26	0600	595	9.46	Mar. 15	1800	351	8.28
Dec. 7	1900	287	7.94	Mar. 20	0800	396	8.50
Dec. 14	2200	452	8.83	Mar. 31	2400	287	7.94
Feb. 5	0400	322	8.13	Apr. 6	1500	545	9.13
Feb. 17	--	360	--	Apr. 17	0700	294	7.98
Feb. 25	0600	280	7.90	June 1	1300	*900	*10.30
Feb. 29	1300	422	8.62				

Minimum discharge, 4.2 ft³/s Oct. 10-12.

REVISIONS.--Some peak discharges reported for water year 1983 have been revised, as shown in the following table. They supersede figures published in the report for 1983.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 3	1000	485	9.07	Mar. 22	1500	387	8.69
Mar. 12	2300	432	8.87				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	12	239	137	90	326	280	108	848	58	30	11
2	5.6	11	197	125	78	250	281	102	797	53	28	10
3	6.2	11	175	117	73	215	278	95	760	49	26	9.3
4	5.4	13	169	111	192	192	254	114	599	46	27	11
5	5.5	17	207	109	316	177	292	136	452	45	24	14
6	5.1	19	202	106	290	186	512	128	367	41	21	14
7	4.9	18	271	108	242	183	443	117	305	44	20	12
8	4.6	17	250	106	187	162	357	111	249	100	24	11
9	4.4	15	199	96	167	144	314	121	197	100	27	9.2
10	4.2	13	178	91	145	141	275	116	175	75	22	8.6
11	4.4	33	164	87	139	131	240	105	159	62	19	8.2
12	4.5	54	155	86	144	120	211	98	154	54	18	8.2
13	16	50	220	85	130	116	186	96	139	48	17	8.1
14	34	41	425	80	120	212	170	85	131	41	16	7.9
15	26	34	409	78	140	329	169	82	120	36	16	9.4
16	16	90	338	76	200	290	228	79	105	31	14	13
17	12	188	289	72	340	296	280	76	91	32	13	13
18	10	154	249	70	350	318	226	73	83	40	11	11
19	12	125	215	68	300	313	189	70	93	59	10	9.6
20	13	109	181	67	250	383	174	67	105	52	9.4	8.7
21	11	104	152	65	230	325	162	70	89	44	9.2	7.9
22	10	109	149	59	200	318	147	70	77	60	9.4	7.4
23	9.0	91	212	52	182	291	132	65	67	65	9.7	7.2
24	20	76	203	57	217	246	162	60	61	52	9.8	7.1
25	36	330	165	84	270	210	172	55	68	43	12	6.8
26	36	566	145	103	234	191	157	52	78	36	14	6.4
27	27	363	130	102	200	174	143	50	82	37	13	5.9
28	22	286	125	105	228	162	131	49	78	46	12	6.0
29	18	310	198	97	401	166	123	79	72	46	12	6.8
30	15	296	194	89	---	197	117	107	64	41	10	6.1
31	13	---	155	92	---	260	---	319	---	36	10	---
TOTAL	415.9	3555	6560	2780	6055	7024	6805	2955	6665	1572	513.5	274.8
MEAN	13.4	119	212	89.7	209	227	227	95.3	222	50.7	16.6	9.16
MAX	36	566	425	137	401	383	512	319	848	100	30	14
MIN	4.2	11	125	52	73	116	117	49	61	31	9.2	5.9
CAL YR 1983	TOTAL	41930.5	MEAN 115	MAX 671	MIN 4.0							
WTR YR 1984	TOTAL	45175.2	MEAN 123	MAX 848	MIN 4.2							

01109060 THREEMILE RIVER AT NORTH DIGHTON, MASS.

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

DRAINAGE AREA.--84.3 mi², revised.

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

GAGE.--Water-stage recorder. Datum of gage is 11.38 ft above 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.--18 years, 178 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 greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 27	0115	852	5.31	Mar. 1	0045	773	5.13
Dec. 15	1915	764	5.11	Mar. 20	2215	733	5.04
Feb. 6	0900	643	4.83	Apr. 7	0830	935	5.49
Feb. 17	2115	799	5.19	June 2	1400	*1,740	*7.05

Minimum discharge, 21 ft³/s Oct. 7-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	39	528	312	190	750	563	230	1240	130	72	30
2	24	37	446	273	161	614	583	211	1670	118	64	29
3	25	35	386	245	166	503	581	195	1590	108	63	28
4	25	40	352	226	274	438	560	237	1370	102	110	40
5	23	48	374	215	494	382	571	265	1060	95	92	56
6	22	48	402	207	633	379	774	278	833	91	70	54
7	22	48	445	205	579	382	907	261	701	93	60	50
8	21	48	502	202	476	359	778	242	609	128	63	45
9	21	45	458	191	394	323	655	251	496	165	65	40
10	21	43	392	176	330	261	572	232	403	174	64	39
11	21	75	351	165	296	277	508	221	352	148	57	38
12	22	87	317	149	299	245	450	206	320	130	52	37
13	44	87	357	145	285	231	404	197	294	112	49	36
14	48	81	560	145	268	345	364	191	270	97	48	36
15	54	70	741	140	276	531	351	179	255	83	46	45
16	46	156	694	137	444	627	423	170	222	76	43	48
17	37	239	591	130	744	608	542	162	189	75	41	48
18	33	268	510	129	765	629	550	153	169	84	38	46
19	37	233	447	125	648	645	467	144	180	128	36	42
20	38	183	386	120	568	700	406	138	184	127	35	42
21	35	181	304	118	500	709	364	137	182	110	35	40
22	34	180	313	116	440	653	329	138	162	118	33	39
23	33	163	366	116	388	616	294	135	142	121	32	39
24	57	145	350	118	418	555	354	127	126	119	33	38
25	74	371	310	171	491	479	385	116	138	102	37	37
26	73	708	310	188	509	423	378	108	169	85	35	36
27	68	808	288	197	448	382	336	102	181	85	33	36
28	57	636	273	207	480	346	299	98	174	97	32	36
29	50	587	344	201	679	350	270	126	161	97	31	36
30	45	579	399	187	---	401	248	175	145	92	30	35
31	41	---	358	188	---	489	---	499	---	82	29	---
TOTAL	1174	6268	12854	5444	12643	14632	14266	5924	13987	3372	1528	1201
MEAN	37.9	209	415	176	436	472	476	191	466	109	49.3	40.0
MAX	74	808	741	312	765	750	907	499	1670	174	110	56
MIN	21	35	273	116	161	231	248	98	126	75	29	28
CAL YR 1983	TOTAL	88288	MEAN	242	MAX	1480	MIN	20				
WTR YR 1984	TOTAL	93293	MEAN	255	MAX	1670	MIN	21				

01109070 SEGREGANSET RIVER NEAR DIGHTON, MASS.

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. Elevation 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.--18 years, 23.3 ft³/s, 29.85 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 greater than base discharge of 170 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 26	0330	424	5.49	Apr. 6	1045	195	4.21
Feb. 5	0430	189	4.17	June 1	0300	*748	*6.79
Feb. 29	1145	231	4.42				

Minimum discharge, 0.06 ft³/s Oct. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	1.4	52	28	23	122	87	19	595	14	5.5	1.3
2	.11	1.3	38	23	22	61	93	17	325	12	4.4	1.3
3	.11	1.2	31	20	21	42	84	15	255	8.8	3.6	1.1
4	.11	2.8	32	20	98	34	62	37	131	7.4	6.6	1.6
5	.11	4.6	57	20	179	30	86	56	70	6.6	7.3	2.9
6	.10	3.9	58	20	124	39	185	44	46	6.6	4.7	2.9
7	.09	3.0	59	22	74	44	118	31	35	8.2	3.2	2.1
8	.07	2.4	57	22	46	35	63	26	28	25	2.9	1.7
9	.07	2.1	40	19	36	27	44	31	23	25	2.8	1.5
10	.07	1.9	32	17	27	23	36	30	18	17	2.7	1.3
11	.07	1.9	28	17	26	21	31	24	14	12	2.6	1.2
12	.06	2.0	25	17	36	20	27	20	17	9.1	2.4	1.2
13	.32	1.4	46	16	39	19	25	21	18	6.6	2.4	1.1
14	.77	8.9	133	16	32	98	22	21	15	4.4	2.5	.86
15	.67	6.6	115	16	41	137	27	21	19	3.7	3.7	1.1
16	.47	4.8	68	15	85	84	76	19	16	3.5	2.9	2.0
17	.44	9.9	48	14	120	76	116	17	12	4.9	2.4	1.8
18	.41	5.8	37	13	79	81	67	15	10	9.2	2.2	1.6
19	1.4	3.3	31	13	54	80	44	12	20	24	1.8	1.4
20	1.8	2.3	26	13	44	103	36	12	25	20	1.5	1.4
21	1.2	2.7	19	13	38	74	30	13	18	12	1.2	1.3
22	.87	3.6	23	12	33	68	26	14	12	20	1.2	1.1
23	.78	3.1	65	12	29	56	23	12	8.5	20	1.0	1.0
24	9.5	2.3	64	13	50	42	64	11	6.3	13	1.0	.88
25	13	22.9	48	35	76	34	76	9.1	14	7.9	1.8	.74
26	7.5	33.7	34	47	53	30	50	7.8	38	5.0	2.7	.64
27	5.0	12.8	21	41	38	27	36	6.9	54	9.5	2.2	.40
28	3.4	6.3	21	38	72	24	29	6.5	41	22	1.9	.35
29	2.4	7.3	61	32	21.2	27	24	14	27	17	1.6	.35
30	1.8	7.7	61	26	---	46	20	24	18	11	1.4	.36
31	1.5	---	39	25	---	66	---	29.3	---	7.9	1.2	---
TOTAL	54.31	1378.1	1469	655	1807	1670	1707	899.3	1928.8	373.3	85.3	38.48
MEAN	1.75	45.9	47.4	21.1	62.3	53.9	56.9	29.0	64.3	12.0	2.75	1.28
MAX	13	33.7	133	47	212	137	185	29.3	595	25	7.3	2.9
MIN	.06	1.2	19	12	21	19	20	6.5	6.3	3.5	1.0	.35
CFSM	.17	4.33	4.47	1.99	5.88	5.09	5.37	2.74	6.07	1.13	.26	.12
IN.	.19	4.84	5.15	2.30	6.34	5.86	5.99	3.16	6.77	1.31	.30	.14
CAL YR 1983	TOTAL	12239.48	MEAN	33.5	MAX	553	MIN	.01	CFSM	3.16	IN	42.95
WTR YR 1984	TOTAL	12065.59	MEAN	33.0	MAX	595	MIN	.06	CFSM	3.11	IN	42.34

BLACKSTONE RIVER BASIN

01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MASS.

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 Bummert Brook.

DRAINAGE AREA.--25.6 mi², revised.

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

GAGE.--Water-stage recorder. Elevation 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.--45 years, 41.7 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, 365 ft³/s June 2, gage height, 3.46 ft; minimum daily, 2.1 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	15	105	84	43	134	109	68	306	38	18	5.9
2	30	14	94	77	39	127	112	65	337	32	17	4.3
3	36	14	85	71	38	116	114	59	340	31	14	4.1
4	33	18	81	66	58	106	115	60	293	35	13	11
5	29	20	81	62	64	97	148	21	244	31	12	11
6	27	21	78	60	68	103	222	32	200	31	12	9.7
7	23	20	112	60	67	101	228	40	167	68	11	7.8
8	20	17	106	58	62	94	216	48	142	126	10	6.7
9	18	16	98	55	57	88	192	66	119	106	9.5	5.7
10	16	16	94	52	53	81	170	66	101	92	9.1	4.9
11	15	29	88	56	51	76	152	60	88	76	8.6	4.4
12	15	34	84	52	52	70	138	59	76	64	8.2	4.7
13	28	31	112	49	52	67	125	65	68	53	7.9	4.3
14	28	27	176	47	51	76	115	68	63	44	7.4	3.9
15	25	25	186	46	61	72	112	66	63	37	7.6	7.5
16	21	59	178	44	107	69	122	61	55	32	7.2	8.7
17	18	78	163	41	120	70	129	56	50	33	6.7	6.8
18	17	78	145	40	125	70	120	53	47	36	5.7	5.7
19	18	70	132	41	121	78	110	49	48	45	7.0	5.0
20	17	62	117	39	114	93	103	47	46	37	20	4.5
21	16	63	105	37	107	106	98	48	41	31	17	3.9
22	15	58	101	35	99	132	90	44	37	31	14	3.3
23	14	55	104	33	90	142	82	42	33	28	12	3.0
24	28	51	97	34	105	140	93	49	33	25	11	2.6
25	29	99	87	47	112	131	95	46	37	22	9.6	2.4
26	27	127	82	51	110	121	93	42	42	19	8.7	2.3
27	25	120	75	50	98	112	86	45	40	19	8.3	2.2
28	23	110	73	50	106	103	80	42	35	24	7.6	2.1
29	22	121	103	47	140	106	76	79	36	22	6.9	2.5
30	18	114	100	44	---	115	71	158	38	20	8.0	2.4
31	16	---	92	46	---	110	---	254	---	18	8.5	---
TOTAL	688	1582	3334	1574	2370	3106	3716	1958	3225	1306	323.5	153.3
MEAN	22.2	52.7	108	50.8	81.7	100	124	63.2	108	42.1	10.4	5.11
MAX	36	127	186	84	140	142	228	254	340	126	20	11
MIN	14	14	73	33	38	67	71	21	33	18	5.7	2.1
CAL YR 1983	TOTAL	21944.8	MEAN 60.1	MAX 240	MIN 1.8							
WTR YR 1984	TOTAL	23335.8	MEAN 63.8	MAX 340	MIN 2.1							

01111200 WEST RIVER BELOW WEST HILL DAM, NEAR UXBRIDGE, MASS.

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.

REVISED RECORDS.--WDR MA-RI-83-1: 1982(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 234.35 ft above National Geodetic Vertical datum of 1929 (U.S. Army Corps of Engineers benchmark).

REMARKS.--Records good below 400 ft³/s, poor 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.--22 years, 49.1 ft³/s, 23.90 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 607 ft³/s June 6, 1984, gage height, about 4.27 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, 607 ft³/s June 6, gage height, about 4.27 ft (mean of surge); minimum, 4.0 ft³/s Oct. 10-12; minimum daily, 4.0 ft³/s Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	9.0	187	99	47	300	100	66	7.3	31	21	6.8
2	5.5	8.6	128	86	42	225	110	58	39	29	18	6.4
3	6.9	8.5	90	78	40	165	165	49	150	27	17	6.4
4	7.0	9.2	77	77	55	105	155	59	399	26	16	8.0
5	7.0	13	78	77	84	84	38	90	565	23	14	11
6	6.6	14	67	77	103	87	59	178	563	21	13	15
7	5.4	14	76	72	109	91	205	184	581	34	13	21
8	5.1	12	106	60	109	93	265	179	561	84	16	20
9	4.8	11	111	48	107	93	330	172	523	163	18	12
10	4.3	11	111	43	95	91	370	174	478	220	16	6.8
11	4.0	16	111	41	81	89	345	163	436	184	14	6.3
12	4.0	26	107	42	74	81	320	157	344	106	13	6.4
13	13	25	105	42	74	74	275	148	178	57	13	6.3
14	19	18	159	42	74	70	155	144	79	38	13	6.2
15	14	15	237	42	75	71	96	137	54	29	13	7.3
16	9.6	35	268	39	108	77	155	94	50	24	13	8.7
17	7.9	72	291	37	205	81	235	66	45	23	11	8.9
18	7.0	81	222	36	276	94	195	61	42	24	10	19
19	7.0	81	112	36	213	105	152	55	41	32	9.0	37
20	7.2	72	87	36	142	115	102	51	34	34	8.8	38
21	7.3	54	87	36	183	115	87	49	41	32	8.8	29
22	7.3	45	87	36	224	195	89	45	31	31	8.8	19
23	7.3	41	87	34	198	275	87	43	28	29	8.8	15
24	11	45	87	33	162	300	109	42	27	27	8.3	12
25	21	32	87	43	163	280	124	42	27	25	8.2	11
26	20	32	86	58	175	240	124	42	29	22	8.1	9.6
27	15	48	76	62	161	190	115	37	31	20	7.9	9.5
28	12	74	67	62	104	110	99	37	31	26	7.8	9.5
29	11	155	80	60	205	86	86	43	31	28	7.4	9.5
30	11	225	98	53	---	87	75	92	31	26	7.3	9.5
31	9.4	---	100	50	---	91	---	92	---	23	7.0	---
TOTAL	282.2	1302.3	3672	1637	3688	4160	4822	2849	5476.3	1498	368.2	391.1
MEAN	9.10	43.4	118	52.8	127	134	161	91.9	183	48.3	11.9	13.0
MAX	21	225	291	99	276	300	370	184	581	220	21	38
MIN	4.0	8.5	67	33	40	70	38	37	7.3	20	7.0	6.2
(†)	1.1	25.7	18.6	4.4	29.8	25.7	6.2	76.5	3.7	3.0	1.5	1.3
MEAN†	9.22	52.9	116	47.5	137	133	153	118	154	48.1	11.3	13.0
CFSM†	.33	1.90	4.16	1.70	4.91	4.77	5.48	4.23	5.52	1.72	.41	.47
IN†	.38	2.12	4.79	1.96	5.31	5.48	6.13	4.88	6.18	1.99	.47	.52

CAL YR 1983 TOTAL 27392.9 MEAN 75.0 MAX 498 MIN 4.0 MEAN† 75.6 CFSM† 2.71 IN† 36.77
WTR YR 1984 TOTAL 30146.1 MEAN 82.4 MAX 581 MIN 4.0 MEAN† 82.4 CFSM† 2.95 IN† 40.20

† Monthend contents, in millions of cubic feet, in West Hill Reservoir; records provided by U.S. Army Corps of Engineers.

‡ Adjusted for change in contents in West Hill Reservoir.

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MASS.
(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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	ALKA- LINITY LAB (MG/L AS CA O3)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATU- ATION)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)
OCT 1983												
04...	1135	215	215	6.0	25.0	18.0	--	--	--	7.3	--	--
NOV												
09...	1015	174	270	6.7	13.0	8.5	20	--	1.4	9.2	79	3.0
DEC												
14...	1115	2350	140	5.6	7.5	4.5	--	--	4.5	11.8	93	--
JAN 1984												
10...	0950	441	225	5.9	4.5	2.0	--	--	--	13.0	94	1.0
FEB												
08...	1115	729	240	6.0	-4.5	1.0	--	--	--	13.3	93	--
MAR												
07...	0915	1130	240	6.5	--	4.0	12	40	3.0	12.9	101	1.0
APR												
10...	1210	1840	147	7.0	21.0	8.0	--	--	--	11.2	95	--
MAY												
09...	0945	860	181	6.7	16.5	14.0	10	--	3.5	9.9	99	4.0
JUN												
12...	1200	964	141	6.4	27.0	22.5	--	--	3.6	7.0	81	--
JUL												
18...	1100	327	210	6.4	24.0	23.0	--	--	--	6.4	76	2.0
AUG												
15...	1030	163	265	6.9	35.5	23.5	20	--	1.0	6.6	79	--
SEP												
12...	1220	117	275	6.9	20.5	21.0	21	<1	1.0	7.5	84	1.0

DATE	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (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)	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)	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)
OCT 1983												
04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
09...	--	4500	580	340	14	2.3	29	4.2	23	41	0.3	5.8
DEC												
14...	12	--	--	--	--	--	--	--	--	29	--	--
JAN 1984												
10...	--	12200	830	640	--	--	--	--	--	--	--	--
FEB												
08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
07...	13	20200	8700	560	9.5	1.6	31	1.9	15	51	0.1	5.9
APR												
10...	--	--	--	--	--	--	--	--	--	--	--	--
MAY												
09...	--	4600	120	31	9.5	1.7	20	2.2	25	31	0.2	5.0
JUN												
12...	10	2300	130	22	--	--	--	--	--	39	--	--
JUL												
18...	--	4800	780	490	--	--	--	--	--	--	--	--
AUG												
15...	--	--	390	28	13	2.2	29	3.9	23	46	0.3	5.8
SEP												
12...	11	2600	110	10	13	2.3	31	4.6	22	48	--	--

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

01111230 BLACKSTONE RIVER AT MILLVILLE, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	SEDI- MENT, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 DIS- SOLVED TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (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)
OCT 1983												
04...	--	--	--	--	--	--	1.80	--	0.01	0.12	--	--
NOV												
09...	148	130	--	--	--	--	2.50	2.40	0.08	1.10	1.30	1.7
DEC												
14...	--	--	--	--	31	114	0.50	--	0.01	0.40	--	--
JAN 1984												
10...	--	--	--	--	--	--	0.80	--	<0.01	1.30	--	--
FEB												
08...	--	--	--	--	--	--	0.60	--	0.02	0.91	--	--
MAR												
07...	135	120	--	--	6	129	0.50	0.52	0.02	0.87	0.55	0.71
APR												
10...	--	--	--	--	--	--	0.40	--	0.02	0.36	--	--
MAY												
09...	121	100	80	11	--	--	0.70	0.67	0.04	0.89	0.71	0.91
JUN												
12...	--	--	--	--	10	255	0.70	--	0.08	0.30	--	--
JUL												
18...	--	--	--	--	--	--	1.60	--	0.08	0.15	--	--
AUG												
15...	159	140	100	2	--	--	2.90	2.90	0.01	0.01	0.06	0.08
SEP												
12...	--	--	--	--	8	171	3.10	--	0.05	0.05	--	--

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	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)
OCT 1983											
04...	0.3	0.28	--	0.22	--	--	--	--	--	--	--
NOV											
09...	1.4	0.45	0.32	0.39	0.33	--	10	--	2	26	<0.5
DEC											
14...	0.8	0.16	--	0.09	--	--	--	--	--	--	--
JAN 1984											
10...	2.1	0.22	--	0.11	--	--	--	--	--	--	--
FEB											
08...	1.3	0.16	--	0.08	--	--	--	--	--	--	--
MAR											
07...	1.4	0.11	0.05	0.05	0.04	220	30	1	1	21	<0.5
APR											
10...	2.3	0.11	--	0.05	--	--	--	--	--	--	--
MAY											
09...	1.2	0.21	0.07	0.09	0.06	--	40	--	1	23	<1
JUN											
12...	0.6	0.26	--	0.15	--	--	--	--	--	--	--
JUL											
18...	0.8	0.48	--	0.30	--	--	--	--	--	--	--
AUG											
15...	0.5	0.34	0.28	0.29	0.26	--	10	--	2	21	<0
SEP											
12...	0.9	0.51	--	0.51	--	40	--	4	--	--	--

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

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	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)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
OCT 1983											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	--	--	3	--	<1	<3	--	8	--	100	--
DEC											
14...	--	--	--	--	--	--	--	--	--	--	--
JAN 1984											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	<20	5	4	20	3	<3	20	15	550	170	6
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	--	--	1	--	20	<3	--	11	--	370	--
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
15...	--	--	2	--	6	<3	--	13	--	150	--
SEP											
12...	160	2	--	20	--	--	21	--	550	--	7

DATE	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, TOTAL RECOV- ERABLE (UG/L AS MO)	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)
OCT 1983											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	5	30	--	100	--	0.2	--	<10	--	65	--
DEC											
14...	--	--	--	--	--	--	--	--	--	--	--
JAN 1984											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	5	<4	80	79	<0.1	0.1	<1	<10	26	22	<1
APR											
10...	--	--	--	--	--	--	--	--	--	--	--
MAY											
09...	5	<4	--	110	--	0.2	--	<10	--	25	--
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
15...	6	7	--	19	--	0.2	--	<10	--	32	--
SEP											
12...	--	--	40	--	<0.1	--	34	--	40	--	<1

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

01111230 BLACKSTONE RIVER AT MILLVILLE, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	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)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PCN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 1983										
04...	--	--	--	--	--	--	--	--	--	--
NOV										
09...	1	--	1	71	6	--	100	--	--	--
DEC										
14...	--	--	--	--	--	--	--	--	--	--
JAN 1984										
10...	--	--	--	--	--	--	--	--	--	--
FEB										
08...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	1	1	1	58	6	120	69	1	--	--
APR										
10...	--	--	--	--	--	--	--	--	0.1	--
MAY										
09...	1	--	1	59	6	--	62	--	--	--
JUN										
12...	--	--	--	--	--	--	--	--	--	--
JUL										
18...	--	--	--	--	--	--	--	--	--	--
AUG										
15...	1	--	1	75	6	--	44	--	--	--
SEP										
12...	--	1	--	--	--	50	--	1	0.1	32

DATE	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)
OCT											
04...	--	--	--	--	--	--	--	--	--	--	--
NOV											
09...	--	--	--	--	--	--	--	--	--	--	--
DEC											
14...	--	--	--	--	--	--	--	--	--	--	--
JAN											
10...	--	--	--	--	--	--	--	--	--	--	--
FEB											
08...	--	--	--	--	--	--	--	--	--	--	--
MAR											
07...	--	--	--	--	--	--	--	--	--	--	--
APR											
10...	<0.00	--	<0.1	--	<0.00	--	<0.00	--	<0.00	--	<0.00
MAY											
09...	--	--	--	--	--	--	--	--	--	--	--
JUN											
12...	--	--	--	--	--	--	--	--	--	--	--
JUL											
18...	--	--	--	--	--	--	--	--	--	--	--
AUG											
15...	--	--	--	--	--	--	--	--	--	--	--
SEP											
12...	<0.01	<0.1	<0.1	25	<0.01	28	<0.01	10	<0.01	5.8	<0.01

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

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MASS.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	DI-ELDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ENDO- SULFAN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 09...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	<0.00	--	<0.00	--	<0.00	--	<0.00	--	<0.00	--	--
MAY 09...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 15...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 12...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1

DATE	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. 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)	PHENOLS TOTAL (UG/L)
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 09...	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--	--	<1
APR 10...	<0.0	--	<0.01	<0.1	--	<0.1	--	<1	--	--
MAY 09...	--	--	--	--	--	--	--	--	--	--
JUN 12...	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--
AUG 15...	--	--	--	--	--	--	--	--	--	--
SEP 12...	<0.01	<0.1	<0.01	<0.1	83	<0.1	<1.00	<1	<10	<1

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

01111300 NIPMUC RIVER NEAR HARRISVILLE, R.I.

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. Elevation of gage is 340 ft, from topographic map.

REMARKS.--Records good except those for winter period, periods of no gage-height record, Mar. 23 to May 2 and May 28 to June 21, and period of doubtful gage-height record, Aug. 1 to Sept. 30, which are poor. One observation of water temperature and specific conductance was made during the year.

AVERAGE DISCHARGE.--20 years, 31.1 ft³/s, 26.40 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, 0.0 ft³/s Sept. 10, 1964.

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 16	2015	277	5.31	June 1	--	*800	--
Apr. 6	--	750	--	July 8	0015	415	5.88

Minimum discharge, 0.17 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	1.6	45	50	20	109	80	35	500	18	6.6	1.3
2	.58	1.6	35	45	18	75	95	32	300	15	5.5	1.3
3	.66	1.6	32	40	21	61	110	30	290	12	4.8	1.2
4	.65	3.9	30	35	80	53	150	80	180	10	4.4	3.6
5	.56	5.9	36	30	120	49	350	126	100	10	4.1	3.3
6	.50	5.2	37	28	80	69	500	71	70	8.7	3.9	2.6
7	.50	4.3	133	26	60	64	270	52	50	126	3.9	2.2
8	.43	3.4	77	25	50	50	170	47	40	232	4.1	1.8
9	.47	3.0	51	24	42	45	120	57	35	70	4.1	1.7
10	.50	2.8	44	23	38	40	90	47	30	55	4.1	1.5
11	.50	10	39	22	35	38	75	39	25	41	4.1	1.5
12	.67	10	36	22	48	35	60	38	22	33	3.6	1.3
13	6.2	6.3	112	21	47	33	45	51	19	24	3.3	1.3
14	3.9	4.8	229	21	44	65	60	49	17	17	3.3	1.3
15	2.5	3.8	127	20	67	80	75	45	16	13	3.1	3.7
16	1.7	73	86	20	186	76	100	39	15	12	3.1	4.1
17	1.5	69	63	19	187	93	140	35	14	12	2.8	3.1
18	1.3	32	53	19	145	97	100	31	14	18	2.6	2.4
19	1.5	21	47	18	121	95	80	29	18	30	2.4	2.0
20	1.6	16	44	18	85	133	65	28	18	18	2.2	1.7
21	1.6	19	40	17	69	116	55	26	15	15	2.0	1.5
22	1.6	21	52	16	58	165	50	25	12	28	2.0	1.3
23	1.6	15	71	20	52	130	45	23	10	20	2.0	1.3
24	8.9	13	55	30	116	110	70	23	14	14	1.8	1.3
25	7.7	129	50	45	122	90	90	21	14	10	1.8	1.3
26	4.6	109	45	56	79	70	70	18	15	8.8	1.7	1.3
27	3.2	53	40	40	60	60	55	17	13	8.3	1.7	1.3
28	2.5	40	60	33	101	55	50	20	11	14	1.7	1.3
29	2.3	85	100	28	219	50	45	60	33	13	1.7	1.3
30	2.0	65	80	25	--	60	40	150	26	10	1.5	1.3
31	1.8	--	60	22	--	70	--	300	--	8.3	1.5	--
TOTAL	64.23	828.2	2009	858	2370	2336	3305	1644	1936	924.1	95.4	56.1
MEAN	2.07	27.6	64.8	27.7	81.7	75.4	110	53.0	64.5	29.8	3.08	1.87
MAX	8.9	129	229	56	219	165	500	300	500	232	6.6	4.1
MIN	.21	1.6	30	16	18	33	40	17	10	8.3	1.5	1.2
CFSM	.13	1.72	4.05	1.73	5.11	4.71	6.87	3.31	4.03	1.86	.19	.12
IN.	.15	1.93	4.67	1.99	5.51	5.43	7.68	3.82	4.50	2.15	.22	.13
CAL YR 1983	TOTAL	15128.07	MEAN	41.4	MAX	432	MIN	.14	CFSM	2.59	IN.	35.17
WTR YR 1984	TOTAL	16426.03	MEAN	44.9	MAX	500	MIN	.21	CFSM	2.81	IN.	38.19

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, R.I.

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. Elevation 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. Occasional regulation by pond upstream. Prior to 1957, greater regulation by mills and reservoirs upstream.

AVERAGE DISCHARGE.--44 years, 174 ft³/s, 25.91 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 greater than base discharge of 880 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Feb. 17	0230	1,090	5.51	June 1	0430	3,140	9.21
Feb. 29	0815	1,060	5.43	July 8	1015	945	5.16
Apr. 6	0530	*3,190	*9.28				

Minimum daily discharge, 22 ft³/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	55	259	280	154	702	436	217	2520	133	60	27
2	35	53	210	250	136	516	537	187	1560	121	54	25
3	36	53	186	220	138	418	616	180	1490	106	51	26
4	35	73	184	200	425	362	627	322	991	97	50	39
5	30	82	217	190	650	315	1170	525	717	90	47	37
6	38	74	226	190	542	373	2680	426	471	87	45	35
7	76	68	558	180	400	383	1410	314	385	140	53	32
8	80	61	530	170	289	326	960	264	300	790	51	30
9	78	51	366	160	241	262	739	285	250	446	45	29
10	77	51	300	157	208	229	617	254	212	294	44	26
11	75	106	267	180	202	217	472	217	198	231	42	26
12	83	105	255	155	249	202	424	196	171	168	41	26
13	146	83	501	150	264	198	345	214	146	138	42	26
14	116	65	1040	150	276	471	299	227	137	106	45	31
15	99	53	792	149	374	597	348	223	133	89	46	93
16	96	222	570	143	765	517	601	203	121	75	42	97
17	106	337	420	141	965	658	782	187	113	70	38	57
18	96	197	315	136	745	697	544	174	111	104	36	37
19	92	142	270	139	688	634	482	166	144	154	35	33
20	72	117	250	132	497	786	420	160	148	123	34	32
21	69	121	230	123	402	738	367	163	123	105	32	26
22	74	133	300	111	337	816	322	164	107	170	31	27
23	66	116	400	117	264	711	297	151	101	146	29	26
24	110	104	320	128	426	570	440	148	125	111	28	24
25	120	395	280	210	581	479	474	140	139	88	29	24
26	113	630	260	251	427	369	386	128	128	69	29	24
27	112	354	240	217	332	311	330	121	116	72	28	22
28	97	247	350	219	432	287	295	128	106	128	27	25
29	78	330	560	189	975	297	272	274	141	107	27	26
30	66	351	450	171	---	338	242	599	154	78	27	27
31	58	---	380	169	---	373	---	1350	---	67	27	---
TOTAL	2454	4829	11486	5377	12384	14152	17934	8307	11558	4703	1215	1015
MEAN	79.2	161	371	173	427	457	598	268	385	152	39.2	33.8
MAX	146	630	1040	280	975	816	2680	1350	2520	790	60	97
MIN	25	51	184	111	136	198	242	121	101	67	27	22
CFSM	.87	1.77	4.07	1.90	4.68	5.01	6.56	2.94	4.22	1.67	.43	.37
IN.	1.00	1.97	4.69	2.19	5.05	5.77	7.32	3.39	4.71	1.92	.50	.41

CAL YR 1983	TOTAL	90860	MEAN	249	MAX	2020	MIN	19	CFSM	2.73	IN.	37.06
WTR YR 1984	TOTAL	95414	MEAN	261	MAX	2680	MIN	22	CFSM	2.86	IN.	38.92

01111500 BRANCH RIVER AT FORESTDALE, R.I.--Continued

WATER-QUALITY RECORDS

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 04...	1000	35	102	6.5	19.0	--	--	9.7	--	--
NOV 09...	1300	49	78	6.0	8.5	--	--	11.7	100	--
DEC 14...	1300	1140	58	6.2	4.5	1.5	--	13.2	104	<10
JAN 10...	1240	153	72	6.0	2.5	--	--	13.7	100	--
FEB 08...	1310	274	64	6.4	1.5	--	--	14.0	100	--
MAR 07...	1420	378	59	6.2	4.0	1.4	45	13.0	100	13
APR 10...	1350	614	51	7.3	8.5	--	--	11.8	101	--
MAY 09...	1245	291	56	5.8	15.0	--	--	9.9	100	--
JUN 12...	1355	178	58	6.6	26.0	1.4	--	8.2	101	<10
JUL 18...	1235	142	57	6.7	25.0	--	--	8.2	101	--
AUG 15...	1225	49	80	6.5	25.0	--	--	8.1	99	--
SEP 12...	1445	26	89	6.8	22.0	1.3	<1	8.5	98	11

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 04...	--	--	--	--	--	--	--	--	--	--
NOV 09...	2.0	1200	220	50	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--
JAN 10...	<1.0	1400	60	340	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 07...	<1.0	140	180	4	10	7	3.0	0.7	7.1	0.7
APR 10...	--	150	18	3	--	--	--	--	--	--
MAY 09...	1.0	980	32	3	--	--	--	--	--	--
JUN 12...	--	1600	K360	24	--	--	--	--	--	--
JUL 18...	1.0	7000	680	430	--	--	--	--	--	--
AUG 15...	--	--	820	62	--	--	--	--	--	--
SEP 12...	1.0	2900	460	K24	17	6	5.1	1.1	11	1.3

< 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).

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	ALKA- LITY 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 04...	--	--	--	--	--	0.19	<0.01	0.2	0.20
NOV 09...	--	--	--	--	--	0.29	<0.01	0.3	0.19
DEC 14...	--	--	10	22	66	0.19	<0.01	0.2	0.08
JAN 10...	--	--	--	--	--	0.39	<0.01	0.4	0.01
FEB 08...	--	--	--	--	--	0.19	<0.01	0.2	0.05
MAR 07...	3.0	8.6	12	4	56	0.19	<0.01	0.2	0.19
APR 10...	--	--	--	--	--	0.09	<0.01	0.1	0.04
MAY 09...	--	--	--	--	--	0.09	<0.01	0.1	0.21
JUN 12...	--	--	10	3	102	0.09	<0.01	0.1	0.06
JUL 18...	--	--	--	--	--	0.09	<0.01	<0.1	0.09
AUG 15...	--	--	--	--	--	0.09	<0.01	0.1	0.05
SEP 12...	11	7.5	18	6	64	0.09	<0.01	<0.1	0.08

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 04...	0.3	0.5	0.7	3.1	0.04	0.12	0.01	--	--
NOV 09...	0.61	0.8	1.1	4.9	0.02	0.06	0.02	--	--
DEC 14...	0.22	0.3	0.5	2.2	0.04	0.12	0.01	--	--
JAN 10...	0.49	0.5	0.9	4.0	0.03	0.09	<0.01	--	--
FEB 08...	0.35	0.4	0.6	2.7	0.03	0.09	<0.01	--	--
MAR 07...	0.91	1.10	1.3	5.8	<0.01	--	<0.01	<1	1
APR 10...	0.36	0.4	0.5	2.2	0.02	0.06	<0.01	--	--
MAY 09...	1.6	1.80	1.9	8.4	<0.01	--	<0.01	--	--
JUN 12...	0.24	0.3	0.4	1.8	0.01	<0.03	<0.01	--	--
JUL 18...	0.11	0.2	0.3	1.3	0.02	0.06	<0.01	--	--
AUG 15...	0.15	0.2	0.3	1.3	0.03	0.09	0.01	--	--
SEP 12...	0.62	0.7	0.8	3.5	<0.01	--	0.02	<1	1

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

01111500 BRANCH RIVER AT FORESTDALE, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 RECOV- ERABLE (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)
MAR 07...	1	<20.00	1	10	5.00	290	8.00	60	<0.1	2.00	<1	<1.00
SEP 12...	1	30.00	1	<10	3.00	680	3.00	60	<0.1	4.00	<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)
MAR 07...	80	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	<0.1	--	--	<0.1	<0.01	--	<0.1	--	<0.01	--	<0.01
SEP 12...	10	<0.1	31	<1.0	<0.1	<0.01	<0.1	<0.1	1.0	<0.01	0.6	<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 IN BOT- TOM MA- TERIAL (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)
APR 10...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
SEP 12...	<0.1	<0.01	0.8	<0.01	0.8	<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, 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)
APR 10...	--	<0.01	--	<0.01	--	<0.01	--	<0.1	--	<1	--
SEP 12...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	10

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

BLACKSTONE RIVER BASIN

01112500 BLACKSTONE RIVER AT WOONSOCKET, R.I.

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 above 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. One observation of water temperature and specific conductance was made during the year.

AVERAGE DISCHARGE.--55 years, 770 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, 9,980 ft³/s June 1, gage height, 11.45 ft; minimum daily, 85 ft³/s Sept 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	217	1510	1340	693	3090	1940	1010	8410	551	335	170
2	343	221	1240	1190	569	2390	2160	947	6060	534	315	130
3	480	253	1030	1120	654	1950	2390	885	6110	433	277	158
4	209	296	1030	1020	1560	1750	2450	1280	4480	506	283	240
5	285	405	1140	935	1780	1560	3350	1930	3480	473	268	305
6	218	311	1180	947	1990	1740	7520	1740	2710	422	244	218
7	187	304	2100	934	1670	1770	5490	1490	2380	731	355	203
8	257	276	2260	895	1330	1570	3900	1300	2070	2780	289	178
9	173	242	1770	768	1130	1410	3090	1350	1780	1910	268	172
10	209	248	1590	747	960	1270	2710	1340	1560	1510	254	169
11	200	535	1470	767	943	1130	2380	1110	1390	1310	247	180
12	280	572	1380	716	1040	1070	2160	1120	1300	1050	211	178
13	568	445	2130	661	1110	1030	1850	1150	1130	820	217	182
14	505	356	4120	669	1120	1690	1720	1230	925	636	228	195
15	355	309	3990	725	1350	1940	1610	1200	793	542	243	325
16	267	1060	2970	591	2790	1850	2090	1110	738	440	218	320
17	262	1800	2460	663	3800	2090	2770	1020	678	506	208	254
18	255	1240	2100	589	3010	2250	2360	931	586	534	195	227
19	233	925	1790	606	2690	2150	2090	870	780	837	175	191
20	291	717	1510	638	2150	2740	1810	848	688	619	256	188
21	221	718	1350	563	1920	2690	1600	788	611	622	258	85
22	238	721	1370	588	1780	3070	1440	797	551	675	215	144
23	211	602	1670	548	1580	3070	1380	744	499	560	213	198
24	457	543	1590	576	1890	2640	1660	741	508	508	225	160
25	574	1550	1350	981	2530	2350	1890	728	588	402	195	164
26	436	2770	1320	1180	2150	1990	1710	668	611	380	169	163
27	398	1860	1230	1010	1750	1850	1520	654	508	348	186	184
28	339	1390	1230	986	1940	1620	1380	597	503	551	160	143
29	322	1670	2290	874	3550	1550	1200	1280	575	446	176	181
30	269	1860	2120	738	---	1660	1050	2440	649	422	201	171
31	226	---	1620	767	---	1810	---	4830	---	366	205	---
TOTAL	9393	24416	55910	25332	51429	60740	70670	38128	53651	22424	7289	5776
MEAN	303	814	1804	817	1773	1959	2356	1230	1788	723	235	193
MAX	574	2770	4120	1340	3800	3090	7520	4830	8410	2780	355	325
MIN	125	217	1030	548	569	1030	1050	597	499	348	160	85
CAL YR 1983	TOTAL	417862	MEAN	1145	MAX	7030	MIN	35				
WTR YR 1984	TOTAL	425158	MEAN	1162	MAX	8410	MIN	85				

01112900 BLACKSTONE RIVER AT MANVILLE, R.I.

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 1983 TO SEPTEMBER 1984

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 04...	1045	474	225	7.0	18.0	--	--	8.8	--	--
NOV 09...	1400	338	245	7.0	8.5	--	--	11.1	95	--
DEC 14...	1350	4500	116	6.1	4.5	6.6	--	12.8	101	<10
JAN 10...	1340	628	150	5.9	2.0	--	--	13.0	94	--
FEB 08...	1400	1320	175	6.4	1.5	--	--	13.8	98	--
MAR 07...	1615	1630	173	6.1	4.0	2.6	40	13.2	102	13
APR 10...	1450	2780	118	7.2	8.0	--	--	11.5	98	--
MAY 09...	1410	1730	133	6.6	15.0	--	--	9.6	97	--
JUN 12...	1510	1220	127	6.6	24.5	2.1	--	7.8	93	12
JUL 18...	1325	537	160	6.6	24.0	--	--	8.2	98	--
AUG 15...	1320	267	260	6.7	25.0	--	--	8.1	98	--
SEP 12...	0945	197	270	7.0	20.5	1.6	12	9.3	103	12

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 CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 09...	3.0	1800	130	K20	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--
JAN 10...	2.0	1100	100	50	--	--	--	--	--	--
FEB 08...	--	--	--	--	--	--	--	--	--	--
MAR 07...	2.0	2600	>1500	140	24	15	7.5	1.3	25	1.6
APR 10...	--	2800	570	23	--	--	--	--	--	--
MAY 09...	3.0	1700	270	65	--	--	--	--	--	--
JUN 12...	--	3100	500	K22	--	--	--	--	--	--
JUL 18...	2.0	9600	2900	>2600	--	--	--	--	--	--
AUG 15...	--	--	480	130	--	--	--	--	--	--
SEP 12...	3.0	2500	400	K40	41	21	13	2.1	30	4.2

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

> ACTUAL VALUE IS KNOWN TO BE GREATER THAN THE VALUE SHOWN.

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	ALKA- LITY LAB (MG/L AS CAC03)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 04...	--	--	--	--	--	2.0	0.10	2.1	1.20
NOV 09...	--	--	--	--	--	1.7	0.08	1.8	1.20
DEC 14...	--	--	23	25	107	0.39	0.01	0.4	0.24
JAN 10...	--	--	--	--	--	0.59	0.01	0.6	0.91
FEB 08...	--	--	--	--	--	0.48	0.02	0.5	0.61
MAR 07...	9.0	19	40	5	102	0.48	0.02	0.5	0.64
APR 10...	--	--	--	--	--	0.39	<0.01	0.4	0.61
MAY 09...	--	--	--	--	--	0.57	0.03	0.6	0.81
JUN 12...	--	--	34	9	217	0.56	0.04	0.6	0.31
JUL 18...	--	--	--	--	--	1.2	0.03	1.2	0.14
AUG 15...	--	--	--	--	--	2.1	0.03	2.1	0.81
SEP 12...	20	25	46	6	156	2.1	0.09	2.2	0.72

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 N03)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P04)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 04...	1.4	2.60	4.7	21	0.60	1.8	0.55	--	--
NOV 09...	1.2	2.40	4.2	19	0.43	1.3	0.39	--	--
DEC 14...	0.36	0.6	1.0	4.4	0.26	0.8	0.06	--	--
JAN 10...	0.39	1.30	1.9	8.4	0.22	0.67	0.15	--	--
FEB 08...	0.39	1.00	1.5	6.6	0.18	0.55	0.14	--	--
MAR 07...	1.3	1.90	2.4	11	0.12	0.37	0.09	<1	<1
APR 10...	1.6	2.20	2.6	12	0.09	0.28	0.05	--	--
MAY 09...	4.3	5.10	5.7	25	0.14	0.43	0.13	--	--
JUN 12...	0.09	0.4	1.0	4.4	0.20	0.61	0.14	--	--
JUL 18...	0.36	0.5	1.7	7.5	0.30	0.92	0.24	--	--
AUG 15...	0.59	1.40	3.5	15	0.45	1.4	0.38	--	--
SEP 12...	0.78	1.50	3.7	16	0.53	1.6	0.52	9	1

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

BLACKSTONE RIVER BASIN

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01112900 BLACKSTONE RIVER AT MANVILLE, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)
MAR 07...	1	40.00	2	20	10	450	10	70	0.1	10	<1	<1.00
SEP 12...	2	130	2	10	10	560	5.00	90	<0.1	30	<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)
MAR 07...	60	--	--	--	--	--	--	--	--	--	--	--
APR 10...	--	<0.1	--	--	<0.1	<0.01	--	<0.1	--	<0.01	--	<0.01
SEP 12...	30	<0.1	96	<1.0	<0.1	<0.01	<0.1	<0.1	16	<0.01	13	<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)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
APR 10...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
SEP 12...	4.3	<0.01	0.9	<0.01	16	<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, 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)
APR 10...	--	<0.01	--	<0.01	--	<0.01	--	<0.1	--	<1	--
SEP 12...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

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

MOSHASSUCK RIVER BASIN

01114000 MOSHASSUCK RIVER AT PROVIDENCE, R.I.

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 above 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, Aug. 17 to Sept. 19, which are poor. Occasional regulation at low flow. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--21 years, 41.9 ft³/s, 24.63 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 greater than base discharge of 600 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Oct. 13	0115	695	4.29	Apr. 5	2130	653	4.20
Nov. 25	0930	952	4.78	May 31	1830	*964	*4.80
Mar. 14	0330	729	4.36				

Minimum discharge, 6.6 ft³/s Sept. 29, 30; minimum daily, 6.6 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.0	63	49	39	106	113	43	411	24	15	8.5
2	15	8.0	55	45	33	82	121	41	266	22	14	8.4
3	11	8.4	49	43	42	75	115	42	196	20	14	10
4	11	38	78	43	236	67	101	124	113	20	13	14
5	10	14	78	43	142	70	330	100	93	19	13	12
6	9.9	11	104	42	102	87	385	67	77	17	13	11
7	9.2	10	157	42	76	73	184	57	70	68	14	10
8	9.0	9.9	84	41	58	70	128	63	61	43	14	9.5
9	8.7	9.9	65	38	54	69	108	77	54	27	14	9.2
10	8.7	33	56	37	50	62	97	62	47	25	13	9.0
11	9.1	97	51	41	55	61	86	55	42	21	12	9.0
12	28	36	66	36	58	54	78	60	41	20	12	16
13	113	20	198	35	53	54	71	54	49	17	11	12
14	15	16	272	34	51	365	65	62	64	16	12	11
15	11	16	137	34	143	187	95	56	51	14	13	25
16	8.8	269	98	32	157	130	167	42	36	14	12	18
17	8.4	97	77	32	133	136	135	37	32	15	12	12
18	8.7	46	65	30	107	126	116	34	31	63	11	10
19	24	33	60	31	88	156	98	33	88	31	11	9.5
20	10	28	53	31	79	147	87	35	45	20	11	8.7
21	8.7	59	46	29	69	126	75	33	34	54	10	8.7
22	8.3	36	151	28	62	138	60	30	30	41	10	8.5
23	11	28	119	27	59	101	58	29	32	23	9.8	7.3
24	84	32	72	40	145	84	100	27	34	19	9.8	7.9
25	20	415	55	62	97	78	77	26	54	17	9.6	8.5
26	15	167	47	48	74	77	64	24	38	16	9.4	8.7
27	13	82	42	44	63	76	56	23	31	28	9.2	8.4
28	11	69	116	47	198	74	53	33	29	23	9.0	11
29	9.9	125	133	37	197	88	51	72	22	18	8.9	8.0
30	8.7	78	73	35	---	101	46	62	24	17	8.8	6.6
31	8.0	---	55	45	---	106	---	570	---	16	8.6	---
TOTAL	542.1	1899.2	2775	1201	2720	3226	3320	2073	2195	788	357.1	316.4
MEAN	17.5	63.3	89.5	38.7	93.8	104	111	66.9	73.2	25.4	11.5	10.5
MAX	113	415	272	62	236	365	385	570	411	68	15	25
MIN	8.0	8.0	42	27	33	54	46	23	22	14	8.6	6.6
CFSM	.76	2.74	3.87	1.68	4.06	4.50	4.81	2.90	3.17	1.10	.50	.45
IN.	.87	3.06	4.47	1.93	4.38	5.20	5.35	3.34	3.53	1.27	.58	.51
CAL YR 1983	TOTAL	21609.2	MEAN	59.2	MAX	541	MIN	8.0	CFSM	2.56	IN.	34.80
WTR YR 1984	TOTAL	21412.8	MEAN	58.5	MAX	570	MIN	6.6	CFSM	2.53	IN.	34.48

01114500 WOONASQUATUCKET RIVER AT CENTERDALE, R.I.

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

DRAINAGE AREA.--38.3 mi².

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

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

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

AVERAGE DISCHARGE.--43 years, 74.0 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, 985 ft³/s June 1, gage height, 5.97 ft; minimum daily, 5.3 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	8.8	138	179	88	280	180	115	682	48	31	11
2	9.0	7.7	119	163	81	230	210	105	588	48	27	13
3	6.3	8.5	112	140	59	199	240	101	544	49	25	14
4	8.6	16	121	119	127	178	280	166	393	37	23	15
5	34	10	158	110	239	169	400	180	300	22	22	13
6	6.2	11	170	107	232	198	600	157	238	35	21	11
7	5.9	20	360	107	190	185	400	138	206	60	25	11
8	6.2	20	261	102	152	168	350	132	177	99	22	11
9	5.8	20	215	95	124	162	300	141	150	80	20	11
10	5.7	26	195	90	105	150	260	126	130	78	18	9.0
11	5.5	80	173	92	100	144	230	114	115	70	17	8.8
12	11	87	162	88	107	136	200	103	100	64	16	9.9
13	38	63	304	83	99	139	180	106	90	55	15	8.8
14	14	50	468	82	97	481	160	101	80	48	16	8.5
15	12	49	365	81	163	388	200	94	70	41	17	16
16	13	271	320	80	258	329	270	88	65	41	15	13
17	11	173	281	79	286	345	340	82	60	39	14	12
18	12	110	254	79	267	328	280	79	50	61	14	16
19	23	83	226	78	253	330	230	76	60	67	14	18
20	21	71	197	78	242	331	190	76	56	53	13	19
21	21	91	178	65	223	302	170	77	52	61	13	18
22	20	81	216	46	202	331	155	73	48	65	13	17
23	21	67	289	45	188	287	145	66	52	56	13	18
24	45	64	237	49	280	257	190	66	56	45	12	16
25	32	351	200	59	280	210	220	60	58	40	12	15
26	26	282	177	74	228	175	190	56	54	35	12	15
27	24	189	162	79	186	150	160	54	50	30	12	14
28	31	151	190	94	266	130	145	52	54	55	12	15
29	29	211	305	96	360	120	135	87	55	45	12	16
30	27	171	242	90	---	135	125	98	57	40	11	16
31	23	---	201	91	---	150	---	293	---	35	11	---
TOTAL	552.5	2843.0	6996	2820	5482	7117	7135	3262	4690	1602	518	409.0
MEAN	17.8	94.8	226	91.0	189	230	238	105	156	51.7	16.7	13.6
MAX	45	351	468	179	360	481	600	293	682	99	31	19
MIN	5.3	7.7	112	45	59	120	125	52	48	22	11	8.5
CAL YR 1983	TOTAL	46150.8	MEAN 126	MAX 979	MIN 4.5							
WTR YR 1984	TOTAL	43426.5	MEAN 119	MAX 682	MIN 5.3							

PAWTUXET RIVER BASIN

01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, R.I.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Oct. 1-13, 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. One observation of water temperature was made during the year.

AVERAGE DISCHARGE.--44 years, 131 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, 1,260 ft³/s June 1, gage height, 4.21 ft; minimum daily, 29 ft³/s Oct. 1, 2, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	38	69	167	117	210	329	201	1180	138	55	35
2	29	37	131	167	114	205	94	121	1150	133	53	34
3	40	37	425	167	129	204	88	110	1070	129	53	34
4	39	37	441	163	201	256	86	100	798	113	50	35
5	37	37	441	163	200	379	144	158	509	77	49	35
6	32	37	425	163	265	531	767	188	211	74	46	34
7	32	35	436	163	408	326	757	176	345	91	44	34
8	31	35	425	171	395	76	556	213	211	338	91	33
9	31	34	414	195	379	74	433	470	240	141	61	33
10	30	34	403	193	357	74	359	135	238	217	48	154
11	30	44	393	193	306	73	309	77	126	168	46	307
12	29	44	382	189	190	72	282	76	141	69	45	52
13	55	43	387	186	185	71	324	112	160	65	44	49
14	53	41	414	180	182	248	631	142	392	64	43	49
15	51	41	414	174	234	622	612	149	533	61	42	111
16	49	54	403	171	307	609	580	145	218	60	42	52
17	48	53	398	162	310	597	229	135	138	74	41	49
18	43	109	382	127	312	580	209	127	144	92	41	48
19	41	109	367	76	332	578	208	121	200	144	40	46
20	39	109	356	74	370	561	208	125	194	185	40	44
21	37	117	330	74	358	538	208	141	182	149	39	43
22	35	149	356	74	342	521	208	141	164	157	38	44
23	34	46	393	74	270	500	205	132	148	153	38	43
24	40	72	387	76	195	475	212	128	137	137	38	43
25	44	140	377	81	189	293	217	118	146	111	37	41
26	43	249	351	76	187	76	220	111	156	71	37	41
27	41	289	335	75	186	75	214	106	155	84	37	41
28	40	315	335	74	206	73	208	104	146	138	36	40
29	40	299	351	86	222	72	204	130	137	68	35	39
30	40	79	345	113	---	81	202	215	134	58	35	38
31	38	---	270	117	---	423	---	629	---	57	35	---
TOTAL	1200	2763	11336	4164	7448	9473	9303	5036	9703	3616	1379	1681
MEAN	38.7	92.1	366	134	257	306	310	162	323	117	44.5	56.0
MAX	55	315	441	195	408	622	767	629	1180	338	91	307
MIN	29	34	69	74	114	71	86	76	126	57	35	33
(†)	51.5	226	108	139	146.5	144	250	287	257.5	257.5	243	179.5

CAL YR 1983 TOTAL 72436 MEAN 198 MAX 1440 MIN 29
WTR YR 1984 TOTAL 67102 MEAN 183 MAX 1180 MIN 29

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

01116500 PAWTUXET RIVER AT CRANSTON, R.I.

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 above 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, East Providence, North Providence, Cranston, Greenville, Johnston, East Smithfield, Smithfield, Warwick, West Warwick, Coventry, East Greenwich, and West Greenwich. See table below for figures of diversion and monthend contents in Scituate Reservoir and five smaller reservoirs, and see table with station 01116000 for monthend contents in Flat River Reservoir.

AVERAGE DISCHARGE.--44 years (water years 1941-84), 349 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, 3,330 ft³/s Apr. 7, gage height, 11.35 ft, minimum daily, 105 ft³/s Oct. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	143	272	383	386	819	919	693	2500	322	225	175
2	164	139	247	414	348	680	733	614	2770	312	221	174
3	137	122	477	422	362	681	768	455	3200	305	221	184
4	197	161	612	418	930	580	736	564	2570	297	218	229
5	193	139	713	422	731	705	1250	590	1630	253	205	223
6	195	121	645	419	661	1020	2650	559	1100	232	192	210
7	202	118	895	413	732	959	3100	573	1030	301	205	179
8	204	123	656	342	688	548	2170	562	857	515	272	172
9	188	122	580	371	643	384	1530	883	692	390	302	171
10	187	136	545	420	615	437	1290	673	618	381	254	176
11	191	340	505	391	622	357	1190	498	454	403	202	578
12	205	186	514	349	458	355	1170	375	380	278	194	271
13	357	140	745	346	460	423	1010	330	371	218	195	193
14	237	129	1110	404	464	1120	1170	456	607	201	201	190
15	192	126	822	351	621	1320	1230	463	846	201	215	283
16	209	704	746	386	774	1240	1320	450	758	235	194	260
17	152	362	659	402	756	1210	1130	434	477	239	186	196
18	162	285	561	396	751	1120	1070	418	410	332	182	185
19	176	311	557	312	609	1190	1100	404	529	360	183	178
20	113	291	562	276	714	1270	987	329	501	352	183	164
21	105	334	528	270	797	1220	879	397	422	394	180	142
22	120	362	790	199	805	1290	709	375	373	412	180	136
23	112	259	1100	248	767	1150	717	365	328	369	181	135
24	233	207	740	301	852	1200	832	361	292	344	182	132
25	176	1230	562	439	648	1020	786	337	335	305	179	134
26	147	936	591	382	569	668	829	325	324	256	178	147
27	137	600	608	336	521	643	789	246	314	289	180	134
28	128	583	684	342	823	585	769	300	332	328	179	136
29	132	799	983	253	1140	610	560	386	325	289	179	135
30	121	448	707	320	---	584	640	446	313	239	180	132
31	147	---	601	384	---	815	---	1560	---	232	180	---
TOTAL	5343	9956	20317	11111	19247	26203	34033	15421	25658	9584	6228	5754
MEAN	172	332	655	358	664	845	1134	497	855	309	201	192
MAX	357	1230	1110	439	1140	1320	3100	1560	3200	515	302	578
MIN	105	118	247	199	348	355	560	246	292	201	178	132
(†)	3270	3692	4528	4564	5210	5467	5363	5543	5311	5020	4465	3996
(‡)	95.5	91.8	94.4	90.4	89.6	88.1	87.4	96.2	115	109	127	101

CAL YR 1983 TOTAL 203226 MEAN 557 MAX 4190 MIN 102
WTR YR 1984 TOTAL 188855 MEAN 516 MAX 3200 MIN 105

† 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, East Providence, North Providence, Cranston, Greenville, Johnston, East Smithfield, Smithfield, Warwick, West Warwick, Coventry, East Greenwich, and West Greenwich. Figures of diversion and monthend contents provided by Providence Water Supply Board.

PAWTUXET RIVER BASIN

01116500 - PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to September 1981.

WATER TEMPERATURES: November 1961 to September 1981.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 04...	1445	198	370	6.9	20.5	--	--	6.6	--	--
NOV 08...	0930	109	445	6.6	9.0	--	--	8.3	71	--
DEC 13...	1215	693	123	7.1	6.0	8.0	--	12.2	99	<10
JAN 11...	1100	399	150	6.3	2.5	--	--	13.2	97	--
FEB 07...	0940	657	137	6.6	3.5	--	--	13.4	101	--
MAR 06...	1035	929	103	6.6	4.0	2.5	35	13.0	100	15
APR 11...	0805	1110	102	6.9	7.0	--	--	12.1	100	--
MAY 08...	0955	470	137	6.8	15.0	--	--	9.6	95	--
JUN 11...	1230	452	130	6.1	24.0	2.8	--	7.6	91	18
JUL 17...	1340	267	285	6.4	23.0	--	--	7.1	83	--
AUG 14...	1310	198	250	6.5	22.0	--	--	6.9	79	--
SEP 11...	1400	740	135	6.6	20.0	4.4	20	9.2	101	14

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 04...	--	--	--	--	--	--	--	--	--	--
NOV 08...	3.0	780	K18	16	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--	--
JAN 11...	2.0	100	K4	3	--	--	--	--	--	--
FEB 07...	--	--	--	--	--	--	--	--	--	--
MAR 06...	1.0	640	K30	<4	18	12	5.2	1.2	13	2.1
APR 11...	--	>10000	36	7	--	--	--	--	--	--
MAY 08...	1.0	17000	210	12	--	--	--	--	--	--
JUN 11...	--	1000	200	24	--	--	--	--	--	--
JUL 17...	3.0	>230000	8500	K20	--	--	--	--	--	--
AUG 14...	--	--	160	38	--	--	--	--	--	--
SEP 11...	2.0	>20000	>4000	740	24	15	8.0	0.9	16	2.1

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

> ACTUAL VALUE IS KNOWN TO BE GREATER THAN THE VALUE SHOWN.

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTANCE RANGE (NON-IDEAL COLONY COUNT).

01116500 - PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLORIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 04...	--	--	--	--	--	0.75	0.05	0.8	1.10
NOV 08...	--	--	--	--	--	0.65	0.05	0.7	1.50
DEC 13...	--	--	20	32	116	0.39	0.01	0.4	0.47
JAN 11...	--	--	--	--	--	0.49	<0.01	0.5	0.74
FEB 07...	--	--	--	--	--	0.39	<0.01	0.4	0.47
MAR 06...	6.0	12	20	7	64	0.39	<0.01	0.4	0.44
APR 11...	--	--	--	--	--	0.29	<0.01	0.3	0.25
MAY 08...	--	--	--	--	--	0.29	<0.01	0.3	0.59
JUN 11...	--	--	36	8	218	0.27	0.03	0.3	0.49
JUL 17...	--	--	--	--	--	0.66	0.14	0.8	1.10
AUG 14...	--	--	--	--	--	0.64	0.06	0.7	1.20
SEP 11...	9.0	18	25	18	97	0.17	0.03	0.2	0.34

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 P04)	PHOS- PHORUS, ORTHO, TOTAL (MG/L AS P)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 04...	0.4	1.50	2.3	10	0.54	1.7	0.43	--	--
NOV 08...	1.0	2.50	3.2	14	0.48	1.5	0.37	--	--
DEC 13...	0.73	1.20	1.6	7.1	0.18	0.55	0.12	--	--
JAN 11...	0.26	1.00	1.5	6.6	0.18	0.55	0.15	--	--
FEB 07...	0.53	1.00	1.4	6.2	0.13	0.4	0.07	--	--
MAR 06...	0.26	0.7	1.1	4.9	0.13	0.4	0.08	<1	1
APR 11...	0.35	0.6	0.9	4.0	0.09	0.28	0.07	--	--
MAY 08...	4.0	4.60	4.9	22	0.19	0.58	0.16	--	--
JUN 11...	0.01	0.5	0.8	3.5	0.18	0.55	0.11	--	--
JUL 17...	0.2	1.30	2.1	9.3	0.67	2.0	0.61	--	--
AUG 14...	0.2	1.40	2.1	9.3	0.27	0.83	0.20	--	--
SEP 11...	0.66	1.00	1.2	5.3	0.38	1.2	0.16	13	<1

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

PAWTUXET RIVER BASIN

01116500 - PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)
MAR 06...	1	40.00	1	10	7.00	450	5.00	70	<0.1	7.00	<1	<1.00
SEP 11...	1	30.00	1	<10	9.00	1200	10	120	<0.1	9.00	<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)
MAR 06...	40	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	<0.1	--	--	<0.1	<0.01	--	<0.1	--	<0.01	--	0.01
SEP 11...	20	<0.1	9	<1.0	<0.1	<0.01	<0.1	<0.1	3.0	<0.01	2.2	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)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
APR 11...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
SEP 11...	0.8	<0.01	0.7	<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 MATERIAL (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 MATERIAL (UG/KG)	MIREX, TOTAL (UG/L)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PER- THANE TOTAL (UG/L)	PER- THANE IN BOTTOM MATERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
APR 11...	--	<0.01	--	<0.01	--	<0.01	--	<0.1	--	<1	--
SEP 11...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

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

PAWTUXET RIVER BASIN

75

01116617 PAWTUXET RIVER AT PAWTUXET, R.I.

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 1983 TO SEPTEMBER 1984

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 04...	1345	232	395	6.0	19.0	--	--	4.6	--	--
NOV 08...	1030	152	440	7.4	9.0	--	--	7.5	65	--
DEC 13...	1030	913	133	6.1	6.5	3.2	--	12.1	99	<10
JAN 11...	1245	466	168	6.2	3.0	--	--	12.5	93	--
FEB 07...	1100	852	165	6.8	3.5	--	--	12.8	97	--
MAR 06...	1330	1000	127	5.6	4.0	2.0	45	12.4	95	18
APR 11...	0905	1350	118	6.9	7.0	--	--	11.7	97	--
MAY 08...	1135	559	162	7.0	15.0	--	--	8.8	88	--
JUN 11...	1035	579	152	6.2	24.0	2.6	--	6.8	81	13
JUL 17...	1245	308	300	6.4	22.0	--	--	5.7	65	--
AUG 14...	1210	232	260	6.3	22.0	--	--	4.9	56	--
SEP 11...	1100	701	280	6.6	19.0	6.0	25	7.7	83	14

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 KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)
OCT 04...	--	--	--	--	--	--	--	--	--	--
NOV 08...	4.0	440	68	140	--	--	--	--	--	--
DEC 13...	--	--	--	--	--	--	--	--	--	--
JAN 11...	3.0	K60	12	K10	--	--	--	--	--	--
FEB 07...	--	--	--	--	--	--	--	--	--	--
MAR 06...	1.0	K200	<4	<7	22	14	6.7	1.4	15	2.0
APR 11...	--	7400	15	190	--	--	--	--	--	--
MAY 08...	2.0	K60	1	<2	--	--	--	--	--	--
JUN 11...	--	560	36	K2	--	--	--	--	--	--
JUL 17...	4.0	13000	330	130	--	--	--	--	--	--
AUG 14...	--	--	520	140	--	--	--	--	--	--
SEP 11...	5.0	31000	>1800	170	47	34	17	1.1	29	4.5

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

> ACTUAL VALUE IS KNOWN TO BE GREATER THAN THE VALUE SHOWN.

K RESULTS BASED ON COLONY COUT OUTSIDE THE ACCEPTANCE RANGE (NON-IDEAL COLONY COUNT).

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 04...	--	--	--	--	--	0.78	0.12	0.9	1.80
NOV 08...	--	--	--	--	--	0.71	0.09	0.8	2.30
DEC 13...	--	--	22	26	112	0.49	<0.01	0.5	0.60
JAN 11...	--	--	--	--	--	0.59	<0.01	0.6	1.40
FEB 07...	--	--	--	--	--	0.49	0.11	0.6	0.95
MAR 06...	8.0	16	24	8	75	0.56	0.04	0.6	0.71
APR 11...	--	--	--	--	--	0.29	<0.01	0.3	0.36
MAY 08...	--	--	--	--	--	0.48	0.02	0.5	1.10
JUN 11...	--	--	38	11	--	0.26	0.04	0.3	0.65
JUL 17...	--	--	--	--	--	0.86	0.14	1.0	1.20
AUG 14...	--	--	--	--	--	0.99	0.11	1.1	1.10
SEP 11...	13	39	46	30	171	0.36	0.04	0.4	0.64

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 04...	0.7	2.50	3.4	15	0.95	2.9	0.84	--	--
NOV 08...	0.6	2.90	3.7	16	0.77	2.4	0.66	--	--
DEC 13...	0.5	1.10	1.6	7.1	0.20	0.61	0.14	--	--
JAN 11...	0.7	2.10	2.7	12	0.33	1.0	0.28	--	--
FEB 07...	2.0	2.90	3.5	15	0.21	0.64	0.13	--	--
MAR 06...	--	0.7	1.3	5.8	0.22	0.67	0.15	<1	1
APR 11...	0.54	0.9	1.2	5.3	0.14	0.43	0.09	--	--
MAY 08...	4.0	5.10	5.6	25	0.30	0.92	0.30	--	--
JUN 11...	0.25	0.9	1.2	5.3	0.25	0.77	0.17	--	--
JUL 17...	0.4	1.60	2.6	12	0.52	1.6	0.48	--	--
AUG 14...	0.4	1.50	2.6	12	0.42	1.3	0.36	--	--
SEP 11...	0.76	1.40	1.8	8.0	0.57	1.8	0.34	<1	<1

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

01116617 PAWTUXET RIVER AT PAWTUXET, R.I.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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)
MAR 06...	1	30.00	1	10	10	480	10	80	<0.1	6.00	<1	<1.00
SEP 11...	2	30.00	2	10	30	1600	20	210	<0.1	10	<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. (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)
MAR 06...	70	--	--	--	--	--	--	--	--	--	--	--
APR 11...	--	<0.1	--	--	<0.1	<0.01	--	<0.1	--	<0.01	--	<0.01
SEP 11...	40	<0.1	48	<1.0	<0.1	<0.01	<0.1	<0.1	10	<0.01	1.8	<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)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
APR 11...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
SEP 11...	2.1	<0.01	1.1	<0.01	<0.1	<0.01	2.2	<0.01	<0.1	0.02	<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)
APR 11...	--	<0.01	--	<0.01	--	<0.01	--	<0.1	--	<1	--
SEP 11...	<0.1	<0.01	<0.1	<0.01	<0.1	<0.01	<0.1	<0.1	<1.00	<1	<10

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

POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, R.I.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair above 40 ft³/s, poor below. Flow affected by diversions for supply of East Greenwich, North Kingstown, Warwick, and Quonset Point (formerly U.S. Naval establishments). One observation of water temperature and specific conductance was made during the year.

AVERAGE DISCHARGE.--44 years 46.3 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 greater than base discharge of 230 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 16	1530	284	2.31	Feb. 28	2300	368	2.53
Nov. 25	1630	541	2.92	Mar. 14	1030	333	2.44
Dec. 14	0830	253	2.22	Apr. 6	0330	333	2.44
Dec. 23	0100	440	2.70	May 31	2400	*770	*3.36
Feb. 4	1730	246	2.20	June 14	0430	233	2.16

Minimum discharge, 2.5 ft³/s Oct. 6, 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	13	116	100	76	184	126	70	582	52	33	4.9
2	15	13	97	92	64	135	126	67	434	48	30	4.7
3	13	13	91	90	62	115	117	65	366	44	28	5.7
4	9.8	27	102	88	197	106	105	105	245	42	33	15
5	7.9	32	169	86	207	103	185	105	180	40	33	16
6	7.0	26	133	85	168	133	296	83	142	40	32	11
7	6.7	20	171	84	125	124	201	70	125	61	30	7.9
8	6.3	16	140	79	100	106	153	70	110	124	27	6.8
9	4.4	15	109	73	90	97	128	91	100	80	22	5.7
10	3.8	18	98	71	81	94	116	78	90	58	22	5.3
11	3.3	97	90	82	83	92	109	67	84	47	25	5.1
12	3.6	63	87	75	105	88	105	63	75	43	24	5.2
13	22	43	134	74	95	87	100	68	82	39	24	4.5
14	20	30	224	72	85	271	96	68	197	35	24	4.8
15	11	25	180	66	114	234	117	64	128	30	29	16
16	7.0	184	147	64	139	171	171	60	91	61	26	18
17	4.7	174	121	63	132	153	175	57	77	70	21	11
18	3.5	100	106	62	133	146	132	54	74	72	18	7.8
19	17	64	97	61	122	174	111	52	117	101	13	6.7
20	16	49	89	58	107	177	103	67	111	64	8.9	5.9
21	10	61	80	56	99	148	96	69	83	58	7.5	5.2
22	8.3	61	142	54	91	169	88	59	68	85	8.3	4.6
23	8.1	47	347	52	86	145	83	52	63	61	7.9	4.2
24	48	43	211	63	137	125	118	49	60	49	7.4	4.2
25	48	334	160	131	132	113	113	46	84	41	7.3	4.1
26	31	325	130	105	107	102	99	44	89	34	7.3	3.9
27	22	188	100	86	93	90	88	44	72	55	6.7	3.3
28	17	126	110	85	167	86	82	44	58	74	5.9	3.5
29	15	165	198	77	284	105	77	76	54	56	5.5	3.3
30	13	153	150	68	---	126	72	99	51	44	5.6	3.3
31	13	---	110	84	---	125	---	354	---	37	5.6	---
TOTAL	422.5	2525	4239	2386	3481	4124	3688	2360	4092	1745	577.9	207.6
MEAN	13.6	84.2	137	77.0	120	133	123	76.1	136	56.3	18.6	6.92
MAX	48	334	347	131	284	271	296	354	582	124	33	18
MIN	3.3	13	80	52	62	86	72	44	51	30	5.5	3.3

CAL YR 1983 TOTAL 30617.2 MEAN 83.9 MAX 775 MIN 3.3
WTR YR 1984 TOTAL 29848.0 MEAN 81.6 MAX 582 MIN 3.3

01117350 CHIPUXET RIVER AT WEST KINGSTON, R.I.

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

DRAINAGE AREA.--9.99 mi².

PERIOD OF RECORD.--Discharge: February 1958 to July 1960 in Rhode Island Water Resources Board Geologic Bulletin 13. September 1973 to current year.
Water-quality records: Water years 1974-83.

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

REMARKS.--Records good October to March, poor thereafter. Diversion upstream for supply of University of Rhode Island.

AVERAGE DISCHARGE.--12 years (water years 1959, 1974-84), 22.2 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, 186 ft³/s June 1, gage height, 7.43 ft; minimum, 4.3 ft³/s Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	6.7	61	56	31	69	44	33	161	27	20	13
2	5.7	6.2	52	49	31	62	43	32	180	25	19	13
3	5.9	5.9	46	45	28	53	43	30	165	25	18	13
4	5.7	6.0	43	41	36	47	41	32	126	25	18	13
5	5.6	6.3	46	39	62	44	44	36	93	23	18	13
6	5.3	6.5	51	38	69	46	57	37	74	23	17	13
7	5.2	6.5	54	37	64	50	59	34	62	26	17	13
8	5.0	6.2	54	36	54	49	53	31	55	37	16	13
9	4.8	6.0	50	36	46	46	47	32	50	42	16	13
10	4.6	6.3	45	34	40	43	41	33	45	37	16	13
11	4.4	9.7	39	33	37	40	38	32	41	32	16	12
12	4.5	14	38	31	39	38	35	30	37	29	15	12
13	5.6	16	38	32	41	38	33	30	35	28	15	11
14	5.7	16	46	32	41	58	31	29	34	26	15	11
15	5.7	14	55	31	39	85	32	29	33	23	15	13
16	5.8	23	57	31	41	79	38	29	31	25	14	13
17	5.5	48	52	29	44	68	44	28	31	28	14	13
18	5.4	52	47	27	46	62	44	27	30	31	14	13
19	6.1	41	43	26	46	58	39	25	34	38	14	12
20	6.5	32	39	25	44	57	34	25	41	41	14	11
21	6.5	27	36	25	41	55	34	28	42	36	13	10
22	6.5	25	36	23	38	54	34	29	36	31	13	10
23	6.4	23	61	21	36	52	32	28	32	29	13	9.1
24	9.4	21	75	22	37	49	35	27	29	27	13	9.8
25	11	42	66	32	43	44	39	25	31	25	13	7.8
26	11	104	56	45	46	41	39	23	34	24	12	8.2
27	11	94	49	44	42	38	36	23	35	23	12	7.0
28	10	70	46	40	41	35	34	23	34	25	12	8.0
29	9.0	63	50	36	63	38	33	24	32	25	12	7.1
30	8.0	64	56	32	---	44	33	28	29	24	13	7.9
31	7.3	---	58	31	---	44	---	55	---	22	12	---
TOTAL	204.5	861.3	1545	1059	1266	1586	1189	927	1692	882	459	335.9
MEAN	6.60	28.7	49.8	34.2	43.7	51.2	39.6	29.9	56.4	28.5	14.8	11.2
MAX	11	104	75	56	69	85	59	55	180	42	20	13
MIN	4.4	5.9	36	21	28	35	31	23	29	22	12	7.0
CAL YR 1983	TOTAL	11987.4	MEAN	32.8	MAX	185	MIN	3.0				
WTR YR 1984	TOTAL	12006.7	MEAN	32.8	MAX	180	MIN	4.4				

PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, R.I.

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

DRAINAGE AREA.--36.1 mi².

PERIOD OF RECORD.--Discharge: February 1958 to July 1960 in Rhode Island Water Resources Board Geologic Bulletin 13. December 1974 to current year.
Water-quality records: Water years 1975-83.

GAGE.--Water-stage recorder. Datum of gage is 81.28 ft State of Rhode Island datum.

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

AVERAGE DISCHARGE.--10 years, (water years 1959, 1976-84), 82.7 ft³/s, 31.11 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, 662 ft³/s June 2, gage height, 7.55 ft; minimum, 7.6 ft³/s Oct. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	22	207	161	93	241	165	108	534	78	45	22
2	15	21	174	145	80	192	175	104	645	80	44	21
3	16	21	156	137	78	157	186	99	597	71	44	22
4	14	30	150	132	125	140	181	109	474	65	49	26
5	14	36	186	128	224	131	207	132	339	61	45	30
6	13	31	204	124	231	154	334	126	258	63	43	26
7	12	26	206	121	191	171	337	111	217	69	41	23
8	11	24	213	117	155	153	260	101	193	117	40	23
9	11	24	191	110	132	138	210	110	173	127	40	21
10	11	23	162	104	118	125	187	116	157	99	38	21
11	9.9	69	148	108	113	119	174	105	141	75	38	21
12	11	79	138	108	125	113	164	96	128	65	36	22
13	22	58	145	100	131	107	156	99	119	60	36	21
14	23	43	199	93	123	209	146	99	118	53	36	22
15	18	38	242	91	122	313	147	98	120	49	42	30
16	16	96	226	88	147	265	187	93	113	56	39	32
17	16	169	193	84	165	211	233	87	104	75	36	28
18	15	161	168	81	161	192	212	81	100	75	34	25
19	22	120	152	81	159	184	179	77	120	102	32	23
20	25	87	141	79	148	195	158	83	161	94	31	21
21	21	78	128	70	135	188	147	99	138	70	30	21
22	18	85	136	72	124	183	137	98	110	81	29	20
23	17	74	291	74	114	182	129	85	92	78	28	19
24	38	64	331	78	125	166	144	81	83	63	27	19
25	60	178	268	119	154	151	163	72	97	54	26	18
26	43	407	203	141	146	140	153	68	120	48	26	18
27	31	349	170	124	128	132	140	67	113	54	25	17
28	27	231	165	112	126	125	129	65	94	75	25	18
29	25	214	218	102	215	132	120	79	80	67	24	19
30	23	229	231	91	---	163	114	103	73	55	24	20
31	22	---	193	90	---	166	---	162	---	50	23	---
TOTAL	631.9	3087	5935	3265	4088	5238	5374	3013	5811	2229	1076	669
MEAN	20.4	103	191	105	141	169	179	97.2	194	71.9	34.7	22.3
MAX	60	407	331	161	231	313	337	162	645	127	49	32
MIN	9.9	21	128	70	78	107	114	65	73	48	23	17
CFSM	.57	2.85	5.29	2.91	3.91	4.68	4.96	2.69	5.37	1.99	.96	.62
IN.	.65	3.18	6.12	3.36	4.21	5.40	5.54	3.10	5.99	2.30	1.11	.69
CAL YR 1983	TOTAL	43486.9	MEAN	119	MAX	694	MIN	9.9	CFSM	3.30	IN.	44.81
WTR YR 1984	TOTAL	40416.9	MEAN	110	MAX	645	MIN	9.9	CFSM	3.05	IN.	41.65

01117468 BEAVER RIVER NEAR USQUEPAUG, R.I.

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

DRAINAGE AREA.--8.87 mi².

PERIOD OF RECORD.--Discharge: December 1974 to current year.
Water-quality records: Water years 1979-83.

REVISED RECORDS.--WDR MA-RI-79-1: 1978. WDR MA-RI-81-1: 1978-80 (P).

GAGE.--Water-stage recorder. Datum of gage is 107.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair October to March, good thereafter. No gage-height record Mar. 13, 14.

AVERAGE DISCHARGE.--9 years (water years 1976-84), 23.5 ft³/s, 35.98 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 greater than base discharge of 70 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 25	2115	150	2.82	Apr. 5	2330	92	2.39
Dec. 23	0830	96	2.42	June 1	0100	*160	*2.88
Mar. 14	--	105	--				

Minimum discharge, 2.7 ft³/s Oct. 9-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	6.5	65	45	24	41	44	32	134	23	15	6.5
2	4.3	6.3	55	45	21	41	47	30	120	23	14	6.0
3	4.3	6.3	52	42	21	38	48	29	117	22	14	5.9
4	3.8	8.6	51	38	21	36	48	34	93	20	16	7.8
5	3.5	10	66	38	28	34	61	37	79	19	15	8.1
6	3.2	8.9	61	37	36	35	89	32	67	19	14	7.3
7	3.1	7.7	62	35	36	39	75	29	59	24	13	6.4
8	2.9	7.6	60	33	35	37	64	29	52	41	12	5.8
9	2.9	7.4	50	32	32	34	57	34	47	28	12	5.7
10	2.7	7.9	45	30	31	32	53	31	44	22	12	5.6
11	2.7	24	44	31	31	32	50	28	40	20	11	5.6
12	2.9	20	42	31	34	31	48	27	37	19	11	5.6
13	8.1	15	46	29	34	32	45	30	35	17	11	5.6
14	8.5	12	60	28	32	86	43	31	36	16	11	5.4
15	6.2	12	61	27	34	72	43	29	36	15	13	7.9
16	5.3	42	56	26	39	58	50	28	33	18	12	8.8
17	4.8	50	51	25	39	54	55	28	31	25	11	7.0
18	4.5	35	44	25	35	53	49	27	30	25	9.6	6.2
19	5.7	26	43	25	36	50	45	26	48	32	9.3	5.6
20	6.3	23	39	23	35	51	42	26	45	23	9.2	5.4
21	5.9	26	35	23	32	47	40	29	33	20	8.7	5.3
22	5.2	27	40	23	31	47	38	27	28	27	8.6	5.2
23	4.8	23	93	21	29	47	36	25	26	23	8.3	5.2
24	12	22	77	20	32	43	40	24	25	19	8.0	5.1
25	15	90	65	33	38	40	43	24	36	17	7.5	5.0
26	10	123	50	32	33	38	38	23	36	16	7.4	4.9
27	8.6	92	47	27	31	36	35	23	28	19	7.2	4.8
28	7.6	78	47	27	33	36	34	22	24	24	7.0	4.6
29	7.0	79	65	25	40	38	33	27	23	20	7.0	4.6
30	6.7	77	67	24	---	45	32	34	23	17	7.0	4.6
31	6.5	---	52	24	---	45	---	73	---	16	6.9	---
TOTAL	178.2	973.2	1691	924	933	1348	1425	928	1465	669	328.7	177.5
MEAN	5.75	32.4	54.5	29.8	32.2	43.5	47.5	29.9	48.8	21.6	10.6	5.92
MAX	15	123	93	45	40	86	89	73	134	41	16	8.8
MIN	2.7	6.3	35	20	21	31	32	22	23	15	6.9	4.6
CFSM	.65	3.65	6.14	3.36	3.63	4.90	5.36	3.37	5.50	2.44	1.20	.67
IN.	.75	4.08	7.09	3.88	3.91	5.65	5.98	3.89	6.14	2.81	1.38	.74

CAL YR 1983	TOTAL	12651.7	MEAN	34.7	MAX	268	MIN	2.7	CFSM	3.91	IN.	53.06
WTR YR 1984	TOTAL	11040.6	MEAN	30.2	MAX	134	MIN	2.7	CFSM	3.40	IN.	46.30

PAWCATUCK RIVER BASIN

01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, R.I.

LOCATION.--Lat 41°26'42", long 71°40'53", Washington County, Hydrologic Unit 01090005, on right bank 10 ft downstream from bridge on Alton-Carolina road, 0.8 mi northeast of Wood River Junction, 1.5 mi southwest of Carolina, and 2.9 mi upstream from Wood River. Prior to June 19, 1984, at site 10 ft upstream.

DRAINAGE AREA.--100 mi²

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 43.86 ft above 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.--44 years, 197 ft³/s, 26.75 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, 1,400 ft³/s June 3, gage height, 6.74 ft; minimum, 31 ft³/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	66	653	441	290	539	485	324	859	249	179	74
2	50	64	580	403	271	543	489	310	1230	245	164	71
3	52	63	515	380	260	490	495	298	1390	237	152	71
4	50	72	481	365	344	437	493	321	1320	221	145	79
5	48	85	513	358	463	405	549	341	1180	207	141	84
6	46	85	518	349	553	449	676	343	1020	202	142	81
7	44	80	544	341	546	463	759	330	848	213	150	75
8	42	74	526	326	480	447	740	316	706	288	148	71
9	41	70	509	307	419	414	655	327	593	313	145	69
10	40	71	473	295	377	377	568	321	501	301	137	67
11	39	140	431	304	359	360	508	313	435	270	134	67
12	40	162	400	294	387	341	470	300	387	245	130	68
13	54	163	406	283	386	332	442	301	353	231	128	66
14	61	139	464	272	375	487	419	305	328	215	125	68
15	59	117	515	264	381	631	421	300	316	199	127	91
16	53	232	552	255	403	696	476	293	301	208	127	91
17	49	320	526	248	422	656	541	282	286	264	121	83
18	48	346	476	241	434	596	564	271	279	279	113	72
19	60	316	431	237	426	553	529	258	308	322	107	70
20	66	262	390	232	411	531	480	247	348	320	104	67
21	63	238	349	224	389	517	437	260	356	293	100	65
22	57	228	364	211	365	514	402	268	325	282	96	63
23	54	222	502	203	343	490	382	262	290	269	91	61
24	93	211	592	214	376	466	418	252	264	256	89	59
25	129	398	639	287	401	436	431	240	293	231	86	52
26	130	667	573	319	403	409	429	229	328	218	83	47
27	112	788	467	329	381	387	408	221	327	231	82	51
28	94	754	420	320	392	371	384	216	310	249	81	53
29	81	732	476	300	483	401	361	229	285	249	79	54
30	73	705	519	284	---	463	341	264	261	227	79	52
31	68	---	504	288	---	480	---	416	---	200	78	---
TOTAL	1942	7870	15308	9174	11520	14681	14752	8958	16027	7734	3663	2042
MEAN	62.6	262	494	296	397	474	492	289	534	249	118	68.1
MAX	130	788	653	441	553	696	759	416	1390	322	179	91
MIN	39	63	349	203	260	332	341	216	261	199	78	47
CFSM	.63	2.62	4.94	2.96	3.97	4.74	4.92	2.89	5.34	2.49	1.18	.68
IN.	.72	2.93	5.69	3.41	4.29	5.46	5.49	3.33	5.96	2.88	1.36	.76

CAL YR 1983 TOTAL 117539 MEAN 322 MAX 1380 MIN 39 CFSM 3.22 IN. 43.72
WTR YR 1984 TOTAL 113671 MEAN 311 MAX 1390 MIN 39 CFSM 3.11 IN. 42.29

01117800 WOOD RIVER NEAR ARCADIA, R.I.

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

DRAINAGE AREA.--35.2 mi².

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

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

REMARKS.--Records good except those for period of no gage-height record, July 15 to Sept. 30, which are fair.

AVERAGE DISCHARGE.--19 years (water years 1965-81, 1983-84), 79.3 ft³/s, 30.59 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 greater than base discharge of 280 ft³/s, revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 25	1815	370	5.92	Mar. 15	0030	335	5.67
Dec. 23	0300	328	5.62	Apr. 6	1345	565	7.07
Feb. 5	2200	292	5.35	June 2	1730	*573	*7.11

Minimum discharge not determined; minimum daily discharge, 10 ft³/s Oct. 9-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	15	184	150	83	252	164	106	513	71	44	20
2	14	16	150	133	74	208	184	100	542	66	40	19
3	17	24	131	126	73	161	204	95	504	60	45	18
4	14	34	132	122	198	139	209	142	371	55	42	22
5	13	37	166	115	280	131	323	162	277	52	39	25
6	12	31	161	113	266	153	540	148	220	52	37	22
7	11	27	240	111	210	150	400	128	186	58	35	20
8	11	24	232	106	160	138	330	115	161	105	45	19
9	10	25	195	100	131	128	260	125	141	85	41	18
10	10	23	159	96	115	122	210	117	127	80	39	17
11	10	63	136	103	110	113	190	108	116	71	37	17
12	15	59	124	94	128	106	170	100	106	65	35	16
13	25	49	174	91	126	103	160	101	103	58	33	16
14	30	41	244	89	119	292	150	103	123	52	37	15
15	23	35	246	87	141	333	175	100	115	46	42	20
16	19	164	220	82	169	294	220	94	103	70	38	28
17	16	191	181	82	174	249	240	89	94	90	35	24
18	14	148	152	77	174	222	210	85	95	80	32	22
19	23	113	136	78	161	213	190	81	124	120	30	20
20	24	88	124	76	150	211	175	103	118	95	28	19
21	19	88	113	71	135	194	160	110	101	80	27	18
22	16	90	157	68	122	220	145	100	90	105	26	17
23	14	83	311	69	113	202	140	90	82	90	25	16
24	53	75	267	74	140	179	160	87	77	80	24	15
25	71	263	212	110	146	156	150	80	89	70	24	15
26	48	354	173	112	137	143	140	74	87	60	23	14
27	34	282	145	105	121	133	135	67	78	65	23	14
28	27	207	149	105	156	124	125	63	71	75	22	13
29	22	227	237	97	267	147	120	84	67	62	22	13
30	20	214	219	90	---	155	111	100	62	54	21	13
31	17	---	181	92	---	154	---	282	---	48	20	---
TOTAL	663	3090	5651	3024	4379	5525	6090	3339	4943	2220	1011	545
MEAN	21.4	103	182	97.5	151	178	203	108	165	71.6	32.6	18.2
MAX	71	354	311	150	280	333	540	282	542	120	45	28
MIN	10	15	113	68	73	103	111	63	62	46	20	13
CFSM	.61	2.93	5.17	2.77	4.29	5.06	5.77	3.07	4.69	2.03	.93	.52
IN.	.70	3.27	5.97	3.20	4.63	5.84	6.44	3.53	5.22	2.35	1.07	.58

CAL YR 1983 TOTAL 42171.0 MEAN 116 MAX 736 MIN 6.8 CFSM 3.30 IN. 44.57
WTR YR 1984 TOTAL 40480 MEAN 111 MAX 542 MIN 10 CFSM 3.15 IN. 42.78

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, R.I.

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

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good. 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.--43 years, 158 ft³/s, 29.64 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 greater than base discharge of 580 ft³/s, revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Nov. 26	0330	991	6.31	Mar. 14	2330	812	5.63
Dec. 23	1400	751	5.45	Apr. 6	1130	1,020	6.41
Feb. 5	0500	617	4.92	June 1	0800	*1,270	*7.23
Feb. 29	1230	597	4.83				

Minimum discharge, 23 ft³/s Oct. 1, 8-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	38	406	310	200	494	344	213	1180	141	95	31
2	28	36	341	275	169	406	378	200	1150	142	95	38
3	34	38	304	260	168	344	401	193	1120	129	95	40
4	31	55	305	250	404	295	399	264	822	117	91	48
5	28	71	388	240	596	274	582	314	599	110	86	56
6	26	63	369	235	545	341	988	276	470	112	81	53
7	25	52	484	230	442	325	891	246	395	146	76	48
8	24	47	462	225	351	286	687	228	342	296	87	44
9	23	43	388	210	296	269	540	253	302	216	80	41
10	23	47	334	200	259	242	448	236	270	165	76	40
11	23	134	297	210	251	235	408	214	245	141	73	39
12	24	144	267	200	297	222	371	203	222	130	71	39
13	49	104	338	195	289	221	336	204	208	115	70	39
14	60	82	498	190	270	634	315	209	225	102	73	38
15	45	69	483	180	290	729	343	204	224	93	88	48
16	37	340	438	175	340	590	452	196	198	123	88	66
17	33	493	372	170	370	499	500	184	182	194	76	63
18	31	326	324	165	360	450	429	175	184	182	67	55
19	41	244	293	160	320	420	396	167	288	290	62	49
20	48	196	263	155	290	400	365	180	285	209	59	45
21	40	193	236	150	270	390	332	204	219	170	57	42
22	35	201	335	145	250	400	300	191	188	251	54	39
23	33	176	713	140	240	370	283	176	168	223	51	38
24	75	159	582	150	310	340	319	173	157	174	51	37
25	140	656	433	259	312	310	309	158	191	143	49	38
26	104	877	370	262	280	280	286	149	203	122	48	37
27	75	610	326	233	252	265	266	144	171	127	47	34
28	60	461	322	230	311	259	258	136	150	157	49	34
29	53	516	477	211	563	313	244	176	141	137	50	35
30	45	506	430	195	---	342	231	245	133	117	67	35
31	40	---	370	210	---	329	---	607	---	105	54	---
TOTAL	1358	6977	11948	6420	9295	11274	12401	6718	10632	4879	2166	1289
MEAN	43.8	233	385	207	321	364	413	217	354	157	69.9	43.0
MAX	140	877	713	310	596	729	988	607	1180	296	95	66
MIN	23	36	236	140	168	221	231	136	133	93	47	31
CFSM	.60	3.22	5.32	2.86	4.43	5.03	5.70	3.00	4.89	2.17	.97	.59
IN.	.70	3.58	6.14	3.30	4.78	5.79	6.37	3.45	5.46	2.51	1.11	.66
CAL YR 1983	TOTAL	86132	MEAN	236	MAX	1350	MIN	23	CFSM	3.26	IN.	44.26
WTR YR 1984	TOTAL	85357	MEAN	233	MAX	1180	MIN	23	CFSM	3.22	IN.	43.86

01118000 WOOD RIVER AT HOPE VALLEY, R.I.--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, 244 microsiemens Oct. 13, 1983; minimum recorded, 21 microsiemens 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, 244 microsiemens Oct. 13; minimum recorded, 39 microsiemens June 2.

WATER TEMPERATURES: Maximum recorded, 24.5°C Aug. 6, 16, 17; minimum recorded, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 2, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	118	85	97	89	87	88	46	44	45	59	56	58
2	118	107	111	89	87	87	47	45	46	60	59	59
3	104	80	87	89	87	88	49	47	48	60	59	59
4	82	79	81	113	84	94	62	49	52	61	59	60
5	84	80	82	84	76	78	52	47	48	61	59	60
6	84	83	84	79	77	78	51	47	49	61	60	60
7	84	83	83	83	79	81	54	45	49	61	60	60
8	83	83	83	84	82	83	46	45	45	62	61	62
9	83	83	83	84	82	83	49	46	47	63	62	63
10	84	83	83	83	70	80	51	48	50	72	63	64
11	84	83	83	121	72	82	51	50	51	72	63	66
12	85	83	84	74	70	71	57	52	53	65	63	64
13	244	76	118	76	73	75	65	50	54	66	65	65
14	78	74	76	77	75	76	54	47	49	67	65	66
15	79	74	76	78	77	78	50	48	49	67	65	66
16	81	79	80	94	60	70	51	49	50	68	66	67
17	82	81	82	60	57	57	52	50	51	69	67	68
18	83	81	82	59	57	58	53	52	52	69	68	68
19	129	80	97	61	58	59	55	54	54	79	69	72
20	93	75	79	62	61	62	56	54	55	70	69	69
21	75	73	74	68	61	63	59	55	57	72	69	70
22	76	74	75	60	58	59	168	58	82	73	70	72
23	80	76	78	60	58	59	61	47	53	74	72	73
24	126	74	91	59	58	59	49	47	48	126	72	88
25	72	62	65	72	45	53	52	49	51	115	72	81
26	74	64	69	46	42	43	55	47	53	71	66	68
27	74	73	73	43	41	42	57	54	56	72	66	67
28	75	72	74	43	42	43	88	56	64	67	63	64
29	76	74	75	46	42	44	67	53	58	65	63	64
30	78	76	77	44	43	43	54	52	53	64	63	64
31	79	75	78	---	---	---	56	52	54	88	63	76
MONTH	244	62	83	121	41	68	168	44	52	126	56	67

01118000 WOOD RIVER AT HOPE VALLEY, R.I.--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 2, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	66	64	65	42	41	42	59	55	56	64	59	60
2	66	63	65	45	42	44	56	55	56	61	58	59
3	75	65	68	48	44	47	56	54	55	62	59	60
4	108	54	70	50	48	49	55	54	55	72	55	61
5	53	48	50	58	50	51	58	53	56	56	52	54
6	47	46	47	60	49	51	53	43	47	55	52	53
7	49	47	48	50	48	49	45	43	44	57	53	55
8	51	48	49	49	48	49	48	45	47	66	54	61
9	51	50	51	52	50	51	51	48	50	65	55	61
10	53	51	52	56	52	54	52	49	50	62	55	59
11	59	52	54	57	53	54	54	51	53	63	55	60
12	59	51	52	55	53	54	56	54	55	64	56	60
13	53	52	52	96	56	64	56	54	55	65	57	60
14	53	51	52	93	48	61	57	55	56	60	56	57
15	58	51	54	48	44	46	69	54	59	58	56	57
16	49	46	48	45	43	44	54	52	53	60	57	58
17	47	45	46	47	45	46	51	49	50	60	57	58
18	50	46	47	47	46	46	51	49	50	59	57	58
19	47	45	46	49	47	48	52	50	51	60	58	59
20	48	47	47	49	47	48	53	51	52	61	57	59
21	47	46	46	59	49	50	55	53	54	63	57	58
22	48	47	47	58	48	50	56	54	55	59	57	57
23	48	46	47	50	49	49	57	55	56	60	57	58
24	64	47	49	51	50	51	62	55	57	63	58	60
25	48	46	47	55	52	53	56	55	55	63	59	61
26	49	47	48	56	54	55	56	54	55	64	59	61
27	50	48	49	56	54	55	56	54	55	65	61	62
28	59	46	52	57	55	56	58	55	57	71	62	65
29	46	41	43	68	57	62	59	57	59	71	61	66
30	---	---	---	62	57	59	61	59	60	71	58	62
31	---	---	---	59	56	57	---	---	---	65	47	56
MONTH	108	41	51	96	41	51	69	43	54	72	47	59
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	48	41	45	64	61	62	63	61	62	89	77	85
2	46	39	43	62	61	61	63	61	63	83	77	79
3	44	40	42	63	62	62	63	61	62	79	76	77
4	47	40	44	64	62	63	63	61	62	99	77	87
5	50	42	46	65	63	64	65	62	63	80	72	76
6	51	45	49	66	64	65	67	65	66	72	70	71
7	54	47	50	87	61	68	68	65	66	72	70	71
8	50	47	48	66	56	58	71	65	68	71	70	71
9	51	49	50	60	58	59	67	65	66	72	70	72
10	52	50	51	61	60	60	68	66	67	74	72	73
11	54	52	53	61	60	61	67	66	67	75	73	74
12	55	53	54	62	61	62	68	66	68	77	73	75
13	57	55	55	63	61	62	69	67	68	76	74	75
14	57	54	55	64	62	63	75	68	69	77	76	76
15	55	54	55	65	63	64	89	66	74	131	75	97
16	56	55	55	94	62	69	68	66	67	87	67	74
17	57	56	56	61	59	60	70	68	69	67	65	66
18	60	56	58	79	59	64	73	69	71	68	65	67
19	76	53	58	62	53	58	73	70	72	69	66	68
20	55	53	54	57	55	56	73	71	72	70	68	69
21	56	55	56	67	57	59	73	71	72	71	69	70
22	56	55	56	63	52	55	74	72	73	71	68	70
23	58	56	57	54	52	53	76	73	74	72	71	71
24	59	58	58	56	54	55	75	73	74	73	71	72
25	72	58	62	57	55	56	75	73	75	72	72	72
26	58	57	57	59	57	58	77	75	76	72	70	71
27	60	58	59	76	58	63	77	75	75	73	72	73
28	60	59	60	61	56	59	75	72	74	89	80	84
29	61	60	60	60	57	58	74	72	73	88	82	85
30	63	60	61	61	59	60	74	72	73	82	80	82
31	---	---	---	61	60	61	78	70	75	---	---	---
MONTH	76	39	54	94	52	61	89	61	70	131	65	75
YEAR	244	39	62									

01118000 WOOD RIVER AT HOPE VALLEY, R.I.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

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

01118500 PAWCATUCK RIVER AT WESTERLY, R.I.
(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.--43 years (water years 1942-84), 583 ft³/s, 26.84 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, 3,770 ft³/s June 3, gage height, 9.05 ft; maximum gage height, 9.13 ft June 3, backwater from tide; minimum daily discharge, 127 ft³/s Oct. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	207	1820	1350	797	1720	1360	797	2520	613	370	211
2	163	207	1660	1250	696	1620	1440	740	3290	600	351	195
3	168	207	1490	1100	668	1480	1460	703	3680	574	347	192
4	163	238	1460	1100	1120	1290	1450	814	3410	535	333	207
5	160	267	1610	1050	1670	1190	1660	936	3070	505	324	214
6	160	271	1650	1000	1790	1380	2090	927	2500	499	324	217
7	155	260	1700	970	1720	1440	2200	848	2090	542	316	207
8	152	249	1690	940	1590	1320	2100	797	1830	822	307	198
9	147	245	1600	900	1400	1210	1920	848	1630	865	303	195
10	141	249	1460	870	1220	1110	1750	839	1430	710	299	189
11	134	405	1310	840	1120	1020	1550	780	1220	620	287	186
12	131	453	1200	820	1170	979	1420	718	1090	561	283	186
13	155	426	1210	800	1170	944	1280	733	971	493	275	183
14	152	385	1430	780	1140	1760	1180	733	883	447	275	183
15	149	351	1580	760	1110	2060	1190	718	839	426	275	217
16	141	822	1590	730	1190	1870	1490	718	805	437	279	227
17	131	1300	1520	700	1240	1770	1640	689	748	561	275	224
18	127	1200	1370	670	1250	1660	1590	640	725	613	260	211
19	136	988	1230	640	1250	1550	1510	613	865	788	252	201
20	152	831	1110	610	1200	1480	1390	587	1010	780	245	192
21	144	756	988	580	1120	1400	1240	593	953	668	234	186
22	136	740	1000	510	1040	1420	1110	620	822	675	227	180
23	134	689	1300	440	979	1400	1020	607	740	661	224	177
24	238	647	1600	487	1110	1310	1110	600	689	600	221	174
25	342	1640	1750	788	1240	1190	1170	580	748	523	217	171
26	316	2250	1600	944	1180	1090	1110	548	831	447	214	163
27	283	2140	1400	936	1100	1020	1030	529	780	431	211	163
28	252	1960	1250	901	1170	971	971	517	725	499	211	165
29	231	2000	1420	814	1680	1090	910	554	675	487	211	168
30	224	1970	1500	756	---	1250	860	675	633	442	211	165
31	217	---	1450	764	---	1340	---	1340	---	395	217	---
TOTAL	5486	24353	44948	25800	35130	42334	42201	22341	42202	17819	8378	5747
MEAN	177	812	1450	832	1211	1366	1407	721	1407	575	270	192
MAX	342	2250	1820	1350	1790	2060	2200	1340	3680	865	370	227
MIN	127	207	988	440	668	944	860	517	633	395	211	163
CFSM	.60	2.75	4.92	2.82	4.11	4.63	4.77	2.44	4.77	1.95	.92	.65
IN.	.69	3.07	5.67	3.25	4.43	5.34	5.32	2.82	5.32	2.25	1.06	.72
CAL YR 1983	TOTAL	333779	MEAN	914	MAX	4200	MIN	127	CFSM	3.10	IN.	42.09
WTR YR 1984	TOTAL	316739	MEAN	865	MAX	3680	MIN	127	CFSM	2.93	IN.	39.94

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, R.I.--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

INSTRUMENTATION.--Water-quality monitor since June 1978.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 255 micro siemens September 15, 1981; minimum, 27 micro siemens 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, 193 micro siemens Sept. 16; minimum, 48 micro siemens June 4.

WATER TEMPERATURES: Maximum, 25.0°C June 11; minimum, 0.0°C on many days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD 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 27...	0920	287	190	7.0	12.0	8.5	40	0.8	10.7	92	--	--
NOV 17...	1345	1310	100	6.5	7.0	8.0	--	0.7	10.7	--	--	2.0
DEC 16...	1000	1600	71	6.0	10.0	8.0	--	0.6	10.6	89	<10	--
29...	1400	1440	84	6.2	5.5	0.5	--	--	13.3	93	--	--
JAN 26...	1400	962	114	6.6	6.0	0.5	--	0.6	13.7	95	--	1.0
FEB 24...	1145	1100	80	6.6	10.0	6.0	--	.0	13.0	107	--	--
MAR 15...	1315	2090	69	6.2	12.5	2.0	40	0.78	13.6	98	10	--
APR 24...	1045	971	74	6.4	12.0	11.0	--	0.9	11.2	104	--	--
MAY 17...	0915	633	85	7.2	18.0	12.5	--	0.55	10.0	94	--	1.0
JUN 20...	1045	1020	71	7.1	28.0	19.5	--	1.5	8.5	93	28	--
JUL 11...	1145	620	70	6.3	26.5	21.0	--	0.51	7.9	89	--	1.0
AUG 14...	0945	275	95	6.7	28.5	23.0	--	0.85	7.8	91	--	--
SEP 07...	1200	204	132	7.8	24.0	18.5	30	0.77	11.1	117	75	--

DATE	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L 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)	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 27...	1200	1100	--	--	--	--	--	--	--	40	16	--
NOV 17...	2000	22000	15	4	4.0	1.3	12	1.5	11	23	10	0.2
DEC 16...	--	--	--	--	--	--	--	--	--	10	9.4	--
29...	100	680	--	--	--	--	--	--	--	--	--	--
JAN 26...	40	80	14	2	3.6	1.2	14	1.0	12	17	14	<0.1
FEB 24...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	22	K15	10	6	2.6	0.8	7.9	0.7	4.0	9.8	10	--
APR 24...	140	220	12	--	3.3	1.0	--	--	--	12	9.6	--
MAY 17...	44	K3	13	5	3.6	1.0	9.4	0.9	8.0	14	10	0.1
JUN 20...	1600	360	13	--	3.4	1.0	--	--	--	10	9.4	--
JUL 11...	130	120	13	6	3.6	1.0	7.3	0.8	7.0	11	11	0.1
AUG 14...	800	110	17	--	4.8	1.3	--	--	--	14	12	--
SEP 07...	420	61	20	3	5.4	1.5	16	1.3	17	20	14	--

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

K RESULTS BASED ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	SILICA, DIS- SOLVED (MG/L AS SI02)	SOLIDS, RESIDUE AT 180 DEG. C 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)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N)
OCT 27...	--	139	0.19	108	--	140	0.39	<0.01	0.40	--	0.09	--
NOV 17...	6.9	71	0.1	251	--	90	0.09	<0.01	0.10	0.20	--	0.27
DEC 16...	--	53	0.07	229	--	61	0.19	<0.01	0.20	--	0.03	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	7.3	76	0.1	197	--	75	0.47	0.03	0.50	0.43	0.10	0.07
FEB 24...	--	--	--	--	--	--	0.29	0.01	0.30	--	0.04	--
MAR 15...	--	46	0.06	259	6	51	0.19	<0.01	0.20	--	0.03	--
APR 24...	--	--	--	--	--	44	0.29	0.01	0.30	--	0.05	--
MAY 17...	3.6	56	0.08	96	--	64	0.29	<0.01	0.30	0.30	--	0.65
JUN 20...	--	61	0.08	168	--	66	0.27	0.03	0.30	--	0.12	--
JUL 11...	7.3	56	0.08	94	--	--	0.29	<0.01	0.30	0.23	0.02	0.08
AUG 14...	--	68	0.09	50	--	68	0.59	<0.01	0.60	--	0.02	--
SEP 07...	--	76	0.1	42	--	89	0.69	<0.01	0.70	--	0.03	--

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)	PHOS- PHORUS, TOTAL (MG/L AS P)	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)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	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)
OCT 27...	1.8	1.9	2.3	0.09	0.06	0.06	--	--	--	--	--	--
NOV 17...	0.59	0.6	0.7	0.07	0.04	--	0.05	--	170	--	<1	27
DEC 16...	0.07	0.1	0.3	0.04	0.03	<0.01	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	0.8	0.9	1.4	0.03	0.04	0.06	0.02	--	100	--	1	20
FEB 24...	0.06	0.1	0.4	0.01	--	0.01	--	--	--	--	--	--
MAR 15...	0.37	0.4	0.6	0.04	0.05	<0.01	--	310	--	1	--	--
APR 24...	0.55	0.6	0.9	0.02	<0.01	<0.01	--	--	--	--	--	--
MAY 17...	0.86	0.93	1.2	0.03	0.02	0.01	0.02	--	70	--	<1	16
JUN 20...	0.78	0.9	1.2	0.04	0.02	<0.01	--	--	--	--	--	--
JUL 11...	0.58	0.6	0.9	0.03	0.02	0.01	<0.01	--	100	--	<1	17
AUG 14...	0.58	0.6	1.2	0.07	0.04	0.03	--	--	--	--	--	--
SEP 07...	0.57	0.6	1.3	0.03	0.02	0.02	--	--	--	--	--	--

< 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 1983 TO SEPTEMBER 1984

DATE	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)	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)
OCT 27...	--	--	--	1	--	<1	--	--	4	--	--
NOV 17...	<0.5	--	--	<1	--	<1	<3	--	2	--	230
DEC 16...	--	--	--	1	--	<1	--	--	1	--	--
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	<0.5	--	--	<1	--	<1	<3	--	1	--	130
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	--	60	<2	1	30	<1	--	2	<1	740	--
APR 24...	--	--	--	<1	--	<1	--	--	1	--	--
MAY 17...	<1	--	--	<1	--	<1	<3	--	6	--	280
JUN 20...	--	--	--	<1	--	<1	--	--	4	--	--
JUL 11...	1	--	--	<1	--	<1	<3	--	1	--	450
AUG 14...	--	--	--	<1	--	<1	--	--	2	--	--
SEP 07...	--	--	--	<1	--	<1	--	--	1	--	--

DATE	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, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, DIS- SOLVED (UG/L AS NI)
OCT 27...	--	4	--	--	--	--	--	--	--	--	1
NOV 17...	--	2	<4	--	74	--	0.5	--	<10	--	<1
DEC 16...	--	2	--	--	--	--	--	--	--	--	1
29...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	2	<4	--	59	--	0.2	--	<10	--	1
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	6	1	--	40	--	0.3	--	<1	--	3	1
APR 24...	--	5	--	--	--	--	--	--	--	--	1
MAY 17...	--	5	6	--	34	--	0.3	--	<10	--	1
JUN 20...	--	2	--	--	--	--	--	--	--	--	3
JUL 11...	--	2	<4	--	37	--	0.2	--	<10	--	2
AUG 14...	--	1	--	--	--	--	--	--	--	--	2
SEP 07...	--	1	--	--	--	--	--	--	1	--	<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 1983 TO SEPTEMBER 1984

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 TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
OCT 27...	--	--	--	--	--	--	--	10	11	--	--
NOV 17...	--	<1	--	<1	30	<6	--	22	8.6	--	--
DEC 16...	--	--	--	--	--	--	--	10	7.9	--	--
DEC 29...	--	--	--	--	--	--	--	--	--	--	--
JAN 26...	--	<1	--	<1	26	<6	--	12	5.4	--	--
FEB 24...	--	--	--	--	--	--	--	--	--	--	--
MAR 15...	<1	--	<1	--	--	--	50	10	4.3	4	1
APR 24...	--	--	--	--	--	--	--	14	4.7	--	--
MAY 17...	--	<1	--	<1	27	<6	--	17	5.9	--	--
JUN 20...	--	--	--	--	--	--	--	41	7.5	--	--
JUL 11...	--	<1	--	<1	28	<6	--	15	9.1	--	--
AUG 14...	--	--	--	--	--	--	--	24	6.4	--	--
SEP 07...	--	--	1	--	--	--	--	4	--	3	--

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)
APR 24...	1045	<0.1	--	<0.1	--	<0.01	--	<0.1	--	<0.01	--	<0.01
SEP 07...	1200	<0.1	<1	<0.1	<1.0	<0.01	<0.1	<0.1	5.0	<0.01	<0.1	<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)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
APR 24...	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01	--	<0.01
SEP 07...	<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	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)
APR 24...	--	<0.01	--	<0.01	--	<0.01	--	<0.1	--	<1	--
SEP 07...	<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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 17...	1345	1310	10	35	96
JAN 26...	1400	962	2	5.2	43
MAY 17...	0915	633	47	80	55
JUL 11...	1145	620	22	37	49

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

01118500 PAWCATUCK RIVER AT WESTERLY, R.I.--Continued

SPECIFIC CONDUCTANCE, MICROSIEMENS PER CENTIMETER AT 2, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	101	68	84	---	---	---	---	---	---	---	---	---
2	94	68	81	---	---	---	---	---	---	---	---	---
3	66	49	55	---	---	---	---	---	---	---	---	---
4	50	48	49	---	---	---	---	---	---	---	---	---
5	52	49	51	---	---	---	---	---	---	---	---	---
6	55	52	54	---	---	---	---	---	---	---	---	---
7	56	55	55	---	---	---	---	---	---	---	---	---
8	59	56	58	74	71	73	---	---	---	134	129	132
9	61	58	60	73	68	71	---	---	---	135	132	134
10	63	61	61	---	---	---	---	---	---	140	136	138
11	64	62	63	---	---	---	---	---	---	135	122	128
12	66	64	65	---	---	---	---	---	---	121	115	117
13	68	65	66	---	---	---	---	---	---	135	116	124
14	---	---	---	---	---	---	---	---	---	143	136	141
15	---	---	---	---	---	---	---	---	---	149	142	146
16	---	---	---	---	---	---	---	---	---	193	149	166
17	---	---	---	---	---	---	---	---	---	192	154	174
18	---	---	---	---	---	---	---	---	---	153	124	137
19	---	---	---	77	72	75	---	---	---	127	120	122
20	73	70	71	73	70	72	---	---	---	142	128	135
21	72	67	69	---	---	---	---	---	---	154	143	147
22	---	---	---	---	---	---	---	---	---	158	155	156
23	---	---	---	---	---	---	---	---	---	161	156	159
24	---	---	---	---	---	---	---	---	---	161	153	157
25	---	---	---	---	---	---	---	---	---	153	134	143
26	---	---	---	---	---	---	---	---	---	134	125	128
27	---	---	---	---	---	---	---	---	---	133	125	128
28	---	---	---	---	---	---	---	---	---	164	133	145
29	---	---	---	---	---	---	---	---	---	165	161	163
30	---	---	---	---	---	---	---	---	---	181	162	171
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	101	48	63	77	68	73	---	---	---	193	115	143
YEAR	193	48	107	---	---	---	---	---	---	---	---	---

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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

01118500 PAWCATUCK RIVER AT WESTERLY, R.I.--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

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

01123360 QUINEBAUG RIVER BELOW EAST BRIMFIELD DAM, AT FISKDALE, MASS.

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.--67.4 mi², revised.

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

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

REMARKS.--Records good. Flow regulated by East Brimfield Lake (Reservoirs in Thames River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--12 years, 139 ft³/s, 28.01 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, 926 ft³/s June 12, gage height, 6.29 ft; minimum daily, 6.4 ft³/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	34	277	240	110	341	234	197	80	76	26	8.1
2	47	34	234	211	94	303	234	170	96	72	24	6.9
3	82	34	203	194	90	260	304	149	269	66	23	6.8
4	98	38	182	180	131	226	339	177	555	62	22	14
5	82	48	172	173	185	199	323	224	597	56	21	20
6	58	51	150	170	219	203	363	228	642	57	20	20
7	40	50	195	168	212	217	489	239	662	102	20	18
8	29	46	238	165	183	206	536	212	657	201	22	16
9	24	42	305	140	157	191	534	213	675	243	21	14
10	21	37	318	121	137	173	637	206	780	218	20	12
11	19	54	260	166	127	157	697	190	812	171	19	12
12	18	76	235	156	138	140	672	178	873	130	17	12
13	32	76	224	137	154	136	634	180	888	96	17	10
14	47	67	344	121	165	147	355	189	850	72	17	10
15	49	56	497	110	200	151	241	190	803	57	17	12
16	41	102	582	96	301	162	318	181	737	49	15	12
17	34	180	683	94	444	175	436	165	490	46	14	11
18	30	212	657	90	495	186	540	150	255	46	12	10
19	32	193	441	88	319	199	551	137	184	50	11	9.8
20	33	162	312	78	245	219	436	127	149	50	13	9.2
21	33	146	248	83	392	230	351	123	126	46	13	8.7
22	34	137	223	77	451	340	257	118	109	46	12	7.7
23	35	129	224	71	342	437	232	121	98	43	11	7.1
24	55	122	224	73	282	429	300	155	101	39	11	7.0
25	73	187	189	116	296	379	302	162	108	35	10	10
26	87	237	197	152	303	333	252	156	110	29	9.9	20
27	79	242	197	171	263	298	235	141	102	27	9.3	21
28	64	306	189	168	228	267	272	127	87	29	8.6	21
29	49	368	249	148	316	262	285	206	78	30	8.3	25
30	36	340	286	130	---	253	222	384	77	30	8.1	30
31	34	---	279	123	---	232	---	194	---	28	8.7	---
TOTAL	1407	3806	9014	4210	6979	7451	11581	5589	12050	2302	480.9	401.3
MEAN	45.4	127	291	136	241	240	386	180	402	74.3	15.5	13.4
MAX	98	368	683	240	495	437	697	384	888	243	26	30
MIN	12	34	150	71	90	136	222	118	77	27	8.1	6.8
MEAN†	46.6	135	290	132	247	239	383	302	273	72.4	14.3	13.4
CFSM†	.69	2.00	4.30	1.96	3.66	3.55	5.68	4.48	4.05	1.07	.21	.20
IN†	.80	2.23	4.96	2.25	3.95	4.10	6.35	5.16	4.52	1.24	.24	.22
CAL YR 1983	TOTAL	64029.0	MEAN 175	MAX 709	MIN 2.2	MEAN† 176	CFSM† 2.61	IN† 35.42				
WTR YR 1984	TOTAL	65271.2	MEAN 178	MAX 888	MIN 6.8	MEAN† 178	CFSM† 2.64	IN† 36.02				

† Adjusted for change in contents in East Brimfield Lake.

THAMES RIVER BASIN

01123600 QUINEBAUG RIVER BELOW WESTVILLE DAM, NEAR SOUTHBRIDGE, MASS.

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.--99.0 mi², revised.

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 U.S. Army Corps of Engineers datum.

REMARKS.--Records good below 200 ft³/s, fair above. Doubtful gage-height record above 200 ft³/s. 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.--22 years, 176 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, 1,520 ft³/s June 12, gage height, 6.56 ft; minimum daily, 13 ft³/s Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	47	412	412	130	461	347	266	225	120	44	15
2	26	47	329	375	127	408	366	231	246	110	41	15
3	73	44	283	312	133	336	401	205	354	101	39	14
4	122	51	257	280	212	296	415	247	840	95	37	19
5	130	56	251	277	250	278	397	289	885	89	36	24
6	98	67	207	250	286	301	676	296	916	92	34	27
7	80	76	275	250	283	310	924	289	1080	190	34	25
8	62	54	350	236	259	281	1030	283	1070	382	37	23
9	57	50	428	198	209	273	980	274	1170	339	36	20
10	52	57	456	171	186	247	997	270	1230	283	34	18
11	27	92	397	183	174	225	980	265	1270	224	32	18
12	30	95	303	209	200	205	900	265	1390	181	30	17
13	45	101	241	185	212	188	836	280	1310	139	30	16
14	59	89	424	168	220	214	494	290	1180	113	27	15
15	61	85	726	148	262	220	350	280	1020	98	26	15
16	51	176	888	135	442	230	432	270	924	84	26	17
17	44	268	916	133	691	242	696	253	784	68	26	22
18	38	271	870	126	790	250	745	230	331	81	24	41
19	48	262	791	127	463	271	724	204	236	91	21	39
20	43	218	600	125	312	302	600	180	199	82	22	33
21	43	193	316	119	735	300	447	168	168	76	23	19
22	45	182	299	115	804	453	388	161	146	78	22	15
23	46	165	312	111	496	656	318	166	133	72	20	14
24	74	148	286	120	412	636	386	180	147	67	20	13
25	101	254	242	200	444	526	437	171	149	61	19	13
26	104	332	253	222	437	478	387	171	150	52	18	24
27	96	346	250	222	357	421	336	166	136	50	18	39
28	84	415	250	214	315	377	336	178	121	53	16	38
29	68	494	353	190	615	370	367	271	124	52	16	39
30	53	546	428	180	---	379	305	452	123	50	15	42
31	44	---	432	140	---	343	---	282	---	47	15	---
TOTAL	1922	5281	12825	6133	10456	10477	16997	7533	18057	3620	838	689
MEAN	62.0	176	414	198	361	338	567	243	602	117	27.0	23.0
MAX	130	546	916	412	804	656	1030	452	1390	382	44	42
MIN	18	44	207	111	127	188	305	161	121	47	15	13
CAL YR 1983	TOTAL	94884	MEAN 260	MAX 1460	MIN 12							
WTR YR 1984	TOTAL	94828	MEAN 259	MAX 1390	MIN 13							

01124000 QUINEBAUG RIVER AT QUINEBAUG, CONN.

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

DRAINAGE AREA.--155 mi².

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder. Datum of gage is 341.52 ft above 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.--53 years, 275 ft³/s, 24.12 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, 2,680 ft³/s Apr. 6, gage height, 6.41 ft; minimum, 18 ft³/s Sept. 1, 26, 27, gage height, 2.08 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	67	752	637	243	951	608	392	1520	161	58	19
2	108	74	584	517	230	778	689	340	1530	145	54	22
3	105	66	493	472	220	631	772	303	1280	137	52	23
4	145	97	454	425	488	542	822	485	1480	128	50	52
5	163	94	455	372	522	496	1550	551	1440	115	47	42
6	126	108	440	357	533	573	2240	507	1300	127	44	39
7	98	111	850	355	490	555	1770	468	1300	589	43	39
8	82	96	781	331	440	482	1580	473	1250	810	44	35
9	68	72	756	310	359	442	1430	497	1250	613	48	30
10	63	88	769	257	310	396	1350	449	1250	483	61	28
11	44	200	678	250	280	347	1300	399	1280	360	59	26
12	46	250	540	240	342	323	1170	380	1360	285	51	25
13	76	190	1030	230	370	290	1080	429	1370	215	46	24
14	82	160	1380	230	378	356	818	441	1270	169	42	24
15	84	150	1440	220	629	359	640	414	1170	142	36	30
16	73	693	1380	220	1080	389	879	374	1050	127	32	28
17	65	639	1340	210	1200	442	1130	340	926	116	33	26
18	59	517	1240	205	1320	452	1120	308	481	138	31	48
19	68	455	1140	199	1020	533	1080	280	348	155	28	55
20	67	371	911	195	736	646	948	260	270	129	32	51
21	64	364	586	190	975	693	752	264	221	115	33	42
22	63	337	507	190	1070	963	630	242	188	120	28	31
23	68	290	583	190	809	1140	526	241	169	107	26	28
24	166	258	538	190	851	1060	649	351	189	95	28	26
25	172	1000	594	382	887	889	719	314	195	85	26	26
26	159	988	720	376	799	773	631	286	190	74	24	23
27	148	786	727	367	652	667	530	275	169	70	23	43
28	122	779	701	354	766	599	506	265	156	75	22	56
29	102	970	835	335	1210	611	545	680	184	71	22	55
30	82	969	696	269	---	616	445	1390	173	67	21	58
31	77	---	722	250	---	573	---	1990	---	63	21	---
TOTAL	2887	11239	24622	9325	19209	18567	28909	14388	24959	6086	1165	1054
MEAN	93.1	375	794	301	662	599	964	464	832	196	37.6	35.1
MAX	172	1000	1440	637	1320	1140	2240	1990	1530	810	61	58
MIN	42	66	440	190	220	290	445	241	156	63	21	19
MEAN†	96.0	384	797	292	669	598	961	637	650	194	36.2	35.3
CFSM†	.62	2.48	5.14	1.88	4.32	3.86	6.20	4.11	4.19	1.25	.23	.23
IN†	.72	2.77	5.93	2.17	4.66	4.45	6.92	4.74	4.68	1.44	.26	.26

CAL YR 1983 TOTAL 154000 MEAN 422 MAX 1970 MIN 15 MEAN† 423 CFSM† 2.73 IN† 37.03
WTR YR 1984 TOTAL 162410 MEAN 444 MAX 2240 MIN 19 MEAN† 444 CFSM† 2.86 IN† 39.00

† 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.

INSTRUMENTATION.--Multiple parameter water-quality monitor located on right bank 50 ft upstream from bridge on Massachusetts State Highway 131, 0.2 miles upstream from State line, 0.4 mile upstream from gaging station, 2.0 miles southwest of Dudley, Massachusetts.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 308 micro siemens Jan. 31, 1969; minimum, 49 micro siemens 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 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD 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- TOCOC- CI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 28...	0900	114	140	6.7	8.5	7.5	1.3	12.1	103	110	160
NOV 16...	1035	608	107	7.0	11.5	6.0	1.1	12.6	105	5000	150000
DEC 14...	1030	1220	86	6.6	6.0	4.0	0.4	13.3	105	--	--
29...	1010	792	146	6.6	3.0	0.5	--	14.3	101	780	15000
JAN 18...	1110	205	110	6.7	4.5	0.5	0.9	14.4	100	K1	K1
MAR 16...	1000	358	124	6.8	8.0	3.0	1.0	14.0	105	K1	K6
APR 19...	1010	1050	89	6.9	6.0	9.0	1.2	11.4	100	210	75
MAY 16...	1010	375	100	6.5	11.0	12.5	1.5	10.5	100	92	K16
JUN 19...	0900	365	91	7.5	23.0	19.0	1.1	9.0	99	540	260
JUL 12...	0930	292	89	6.8	23.0	22.0	1.3	8.6	101	240	150
AUG 14...	1415	14	133	6.9	27.0	27.0	0.9	8.3	106	500	84
SEP 06...	0920	39	152	7.4	16.5	16.5	1.1	9.3	96	100	140

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, DIS- SOLVED (TONS PER AC-FT)
OCT 28...	--	--	--	--	--	16	21	--	85	0.12
NOV 16...	23	11	6.3	1.7	12	14	15	4.8	74	0.1
DEC 14...	--	--	--	--	--	11	12	--	56	0.08
29...	--	--	--	--	--	--	--	--	--	--
JAN 18...	21	10	5.6	1.6	11	15	18	8.3	72	0.1
MAR 16...	--	--	--	--	--	11	26	--	83	0.11
APR 19...	15	--	3.8	1.3	--	9.5	14	--	--	--
MAY 16...	17	9	4.6	1.4	8.0	9.8	17	3.8	62	0.08
JUN 19...	20	--	5.2	1.6	--	8.5	14	--	69	0.09
JUL 12...	18	8	4.8	1.4	10	11	14	5.6	70	0.09
AUG 14...	23	--	6.1	1.8	--	12	22	--	80	0.11
SEP 06...	26	--	7.4	1.9	--	12	24	--	104	0.14

K RESULTS ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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 28...	26	87	0.18	0.02	0.20	0.35	5.0	5.3	5.5	0.31
NOV 16...	121	100	--	<0.01	0.30	0.18	1.0	1.2	1.5	0.33
DEC 14...	184	68	--	<0.01	0.40	0.04	3.1	3.1	3.5	0.06
DEC 29...	--	--	--	--	--	--	--	--	--	--
JAN 18...	40	80	--	<0.01	0.30	0.16	1.5	1.7	2.0	0.15
MAR 16...	80	90	--	<0.01	0.20	0.09	0.21	0.3	0.5	0.04
APR 19...	--	48	--	<0.01	0.10	0.06	0.84	0.9	1.0	0.03
MAY 16...	63	81	--	<0.01	<0.10	0.11	0.99	1.1	--	0.07
JUN 19...	68	71	0.19	0.01	0.20	0.18	0.42	0.6	0.8	0.09
JUL 12...	55	82	0.17	0.03	0.20	0.07	0.33	0.4	0.6	0.14
AUG 14...	3.0	84	0.74	0.06	0.80	0.08	0.72	0.8	1.6	0.39
SEP 06...	11	102	0.92	0.08	1.00	0.29	0.61	0.9	1.9	0.36

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 28...	0.27	<1	<1	6	--	3	--	2	10	4.4
NOV 16...	0.10	<1	<1	6	150	2	40	1	19	5.6
DEC 14...	0.04	2	<1	5	--	1	--	2	30	4.0
DEC 29...	--	--	--	--	--	--	--	--	--	--
JAN 18...	0.11	<1	<1	2	160	1	51	1	15	3.1
MAR 16...	0.05	1	<1	<1	--	2	--	1	20	3.0
APR 19...	<0.01	<1	<1	1	--	2	--	2	17	3.0
MAY 16...	0.04	<1	<1	2	210	2	35	2	12	3.7
JUN 19...	0.03	<1	<1	4	--	3	--	4	22	6.7
JUL 12...	0.08	<1	<1	2	370	4	58	1	9	6.1
AUG 14...	0.33	1	<1	4	--	3	--	1	11	5.9
SEP 06...	0.32	<1	<1	4	--	7	--	<1	14	3.5

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

THAMES RIVER BASIN

01124350 FRENCH RIVER BELOW HODGES VILLAGE DAM, AT HODGES VILLAGE, MASS.

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.--31.2 mi², revised.

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 U.S. Army 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.--22 years, 57.0 ft³/s, 24.81 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, 414 ft³/s Dec. 16, gage height, 3.01 ft; minimum, 1.6 ft³/s Sept. 27-30; minimum daily, 1.6 ft³/s Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	15	215	105	47	261	99	56	69	22	9.1	4.5
2	18	15	86	90	41	219	122	51	60	20	7.5	4.0
3	33	17	93	80	41	152	136	42	132	18	6.8	3.7
4	24	37	86	72	72	92	141	57	279	18	6.7	6.6
5	17	29	86	65	103	86	68	90	327	21	6.4	8.6
6	15	17	70	62	108	93	132	100	329	22	5.6	7.8
7	14	13	110	60	108	96	290	101	363	44	4.8	6.4
8	12	12	188	57	97	96	337	92	361	114	4.6	5.4
9	12	10	187	56	76	83	335	90	343	207	4.6	4.8
10	9.7	9.1	162	53	57	75	365	90	326	167	4.8	4.6
11	6.8	14	125	48	51	66	364	85	339	88	5.8	4.4
12	5.6	28	97	43	58	58	342	76	324	60	6.7	6.3
13	8.3	25	89	34	65	53	313	75	290	44	7.4	9.6
14	15	18	169	38	69	55	195	80	237	33	7.7	8.1
15	15	15	292	39	80	64	97	79	159	27	8.0	6.8
16	13	39	364	35	195	65	125	76	84	23	7.4	7.4
17	13	90	383	35	328	66	245	68	44	24	6.4	6.7
18	11	92	362	33	335	71	278	59	34	31	5.6	5.3
19	12	69	294	34	348	76	198	52	33	40	5.0	4.6
20	12	48	162	32	353	97	125	47	32	33	7.7	3.8
21	11	38	79	30	326	91	73	46	27	26	9.5	3.5
22	7.7	44	65	27	263	154	70	47	25	25	7.7	3.3
23	6.8	46	77	27	174	215	73	44	22	23	6.7	3.1
24	25	39	81	29	144	218	112	49	22	19	6.7	3.0
25	41	67	76	52	208	212	115	58	23	17	6.7	2.6
26	28	131	74	74	205	196	103	54	23	17	6.4	2.1
27	21	156	70	72	149	171	91	52	19	28	5.3	1.7
28	19	199	70	69	104	130	76	50	18	32	4.8	1.6
29	18	254	106	63	226	105	66	69	22	33	4.6	1.6
30	16	284	149	55	---	104	60	186	24	30	4.8	1.6
31	15	---	130	52	---	100	---	104	---	16	4.8	---
TOTAL	478.5	1870.1	4597	1621	4431	3620	5146	2225	4390	1322	196.6	143.5
MEAN	15.4	62.3	148	52.3	153	117	172	71.8	146	42.6	6.34	4.78
MAX	41	284	383	105	353	261	365	186	363	207	9.5	9.6
MIN	3.6	9.1	65	27	41	53	60	42	18	16	4.6	1.6
MEAN†	15.5	65.5	146	51.6	158	114	170	104	112	42.6	6.27	4.74
CFSM†	.50	2.10	4.68	1.65	5.06	3.65	5.45	3.33	3.59	1.37	.20	.15
IN†	.57	2.34	5.41	1.91	5.45	4.20	6.09	3.86	4.02	1.58	.23	.17
CAL YR 1983	TOTAL	30643.7	MEAN	84.0	MAX	432	MIN	1.7	MEAN†	84.0	CFSM†	2.69
WTR YR 1984	TOTAL	30040.7	MEAN	82.1	MAX	383	MIN	1.6	MEAN†	82.1	CFSM†	2.63
										IN†	36.57	
											35.82	

† Adjusted for change in contents in Hodges Village Reservoir.

01124500 LITTLE RIVER NEAR OXFORD, MASS.

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.--26.0 mi², revised.

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 above National Geodetic Vertical Datum of 1929, (levels by U.S. Army 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.--45 years, 50.1 ft³/s, 26.17 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, 335 ft³/s June 8, gage height, 4.85 ft; minimum, 2.4 ft³/s Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	2.8	4.6	164	126	65	193	115	65	84	32	15	4.9		
2	3.4	4.7	127	103	58	190	125	60	124	30	14	5.0		
3	2.8	4.5	103	89	54	186	137	56	123	27	13	5.2		
4	2.5	6.3	91	79	74	168	141	75	249	26	12	7.5		
5	2.6	6.0	88	73	107	134	130	112	308	24	12	6.7		
6	3.0	6.4	82	71	126	126	149	123	300	24	11	6.3		
7	2.9	6.4	96	70	123	129	260	104	294	57	10	6.1		
8	2.9	8.1	140	69	110	121	270	91	316	145	9.8	6.0		
9	3.0	9.8	139	67	94	111	250	107	322	169	9.3	5.7		
10	3.0	11	138	63	79	100	280	100	302	155	8.9	5.4		
11	2.9	18	134	66	72	89	280	87	283	127	8.4	5.2		
12	3.0	20	130	63	73	80	240	78	259	103	8.1	4.9		
13	3.4	20	135	59	81	74	175	83	177	80	7.9	4.8		
14	3.1	21	144	55	89	80	131	89	111	63	7.8	4.5		
15	3.0	21	200	54	106	81	96	90	80	50	7.6	4.9		
16	3.1	50	260	51	158	82	107	83	64	41	7.0	7.7		
17	3.1	110	285	49	188	86	157	75	52	38	6.5	7.5		
18	3.2	119	260	49	196	95	173	68	45	39	6.3	8.4		
19	3.6	97	230	48	180	107	148	62	44	43	6.0	11		
20	3.7	74	200	48	160	127	128	57	40	40	6.7	13		
21	3.8	61	138	45	210	140	112	56	37	37	6.3	16		
22	3.8	57	91	42	228	157	99	53	34	35	6.3	18		
23	4.0	52	100	39	168	184	86	52	35	32	5.9	20		
24	7.1	45	106	40	163	184	94	58	34	28	5.7	21		
25	5.0	93	103	54	191	180	108	61	32	25	5.9	22		
26	4.6	138	93	73	188	176	110	58	29	23	6.0	23		
27	4.6	138	83	85	160	156	101	56	26	23	5.3	23		
28	4.4	147	81	85	151	128	90	58	28	22	4.4	23		
29	4.3	160	120	79	177	120	79	96	34	20	4.4	23		
30	4.3	176	137	72	---	121	72	163	32	19	4.7	22		
31	4.5	---	136	69	---	116	---	126	---	17	5.0	---		
TOTAL	111.4	1684.8	4334	2035	3829	4021	4443	2502	3898	1594	247.2	341.7		
MEAN	3.59	56.2	140	65.6	132	130	148	80.7	130	51.4	7.97	11.4		
MAX	7.1	176	285	126	228	193	280	163	322	169	15	23		
MIN	2.5	4.5	81	39	54	74	72	52	26	17	4.4	4.5		
MEAN†	8.30	65.9	142	63.0	139	124	147	105	103	49.8	6.37	13.7		
CFSM†	.32	2.53	5.46	2.42	5.35	4.77	5.65	4.04	3.96	1.92	.24	.53		
IN†	.37	2.83	6.09	2.79	5.79	5.52	6.30	4.68	4.42	2.21	.28	.59		
CAL YR 1983	TOTAL	30364.2	MEAN	83.2	MAX	356	MIN	2.0	MEAN†	83.4	CFSM†	3.21	IN†	43.55
WTR YR 1984	TOTAL	29041.1	MEAN	79.3	MAX	322	MIN	2.5	MEAN†	79.9	CFSM†	3.07	IN†	41.86

† Adjusted for change in contents in Buffumville Lake.

THAMES RIVER BASIN

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, Mass., 1.2 mi east of East Brimfield. DRAINAGE AREA, 67.5 mi². PERIOD OF RECORD, July 1960 to current year. Completed in 1960 by U.S Army 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 provided by U.S. Army 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, Mass. DRAINAGE AREA, 99.1 mi². PERIOD OF RECORD, February 1962 to current year. Completed in 1962 by U.S Army 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 provided by U.S. Army 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, Mass. DRAINAGE AREA, 31.0 mi². PERIOD OF RECORD, February 1960 to current year. Completed in 1960 by U.S Army Corps of Engineers for storage of water for flood control. Usable capacity, 577,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
- 01124400 BUFFUMVILLE LAKE.--Lat 42°06'58", long 71°54'29", Worcester County, Hydrologic Unit 01100001, on Little River at Charlton, Mass., 2.2 mi west of Oxford. DRAINAGE AREA, 26.5 mi². PERIOD OF RECORD, September 1958 to current year. Completed in 1958 by U.S. Army 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 provided by U.S. Army Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

	East Brimfield Lake	Westville Lake	Hodges Village Reservoir	Buffumville Lake
Sept. 30, 1983.....	101.1	0.4	0.4	42.3
Oct. 31.....	104.4	4.9	.6	54.9
Nov. 30.....	124.4	8.9	8.7	80.1
Dec. 31.....	122.1	19.6	3.3	73.4
Jan. 31, 1984.....	111.0	5.7	1.4	66.2
Feb. 29.....	126.7	6.7	13.2	84.9
Mar. 31.....	124.4	6.7	4.9	70.6
Apr. 30.....	117.6	6.4	1.4	67.1
May 31.....	443.0	143.8	88.9	133.3
June 30.....	109.3	5.4	.7	63.6
July 31.....	104.4	4.8	.6	59.2
Aug. 31.....	101.1	4.4	.4	54.9
Sept. 30.....	101.1	4.8	.3	61.0

01162000 MILLERS RIVER NEAR WINCHENDON, MASS.

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

DRAINAGE AREA.--81.8 mi², revised.

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 above 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 and period of no gage-height record, May 31 to June 15, which are poor. 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.--68 years, 145 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,500 ft³/s June 1, minimum daily, 11 ft³/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	29	325	197	131	351	257	159	3400	33	23	13
2	71	26	288	187	120	313	267	150	2500	30	25	12
3	69	26	258	179	123	263	287	140	2000	25	24	13
4	51	45	238	171	241	231	310	227	1500	24	19	14
5	39	84	239	165	262	206	434	248	1100	43	18	18
6	35	109	227	162	265	205	1130	221	800	183	23	22
7	30	98	348	158	224	191	1460	187	650	377	19	19
8	28	89	336	146	181	175	1300	182	540	422	18	21
9	26	85	312	135	163	161	1070	245	440	375	17	19
10	25	80	264	130	149	150	802	244	370	308	15	46
11	24	111	235	150	148	140	577	221	340	240	15	51
12	36	115	212	145	173	125	458	205	300	240	14	15
13	102	100	326	135	177	120	410	213	270	195	16	13
14	89	89	639	135	183	115	394	238	220	155	16	15
15	69	84	784	135	256	140	439	244	200	121	16	11
16	57	195	710	130	640	145	498	226	106	111	15	13
17	49	263	578	125	755	145	558	201	96	104	15	25
18	45	233	458	125	763	141	518	179	94	141	15	16
19	62	211	373	125	690	168	448	159	98	182	15	13
20	72	207	309	120	636	203	393	173	72	145	24	14
21	71	230	282	115	597	234	358	163	50	118	17	15
22	70	216	245	112	525	240	309	145	43	103	16	16
23	66	190	248	115	443	188	269	142	37	90	16	19
24	104	177	227	134	437	313	279	171	29	60	16	13
25	102	370	197	215	481	311	280	150	34	39	15	17
26	88	426	198	205	495	302	269	144	32	29	13	18
27	83	380	187	191	465	286	242	185	33	22	13	20
28	77	330	184	178	415	272	224	172	38	25	12	18
29	69	364	252	153	404	268	206	384	36	29	12	20
30	48	356	221	145	---	273	178	1330	35	24	12	16
31	35	---	203	146	---	261	---	2600	---	22	12	---
TOTAL	1817	5318	9903	4664	10542	6636	14624	9648	15463	4015	516	555
MEAN	58.6	177	319	150	364	214	487	311	515	130	16.6	18.5
MAX	104	426	784	215	763	351	1460	2600	3400	422	25	51
MIN	24	26	184	112	120	115	178	140	29	22	12	11
CAL YR 1983	TOTAL	71680.6	MEAN	196	MAX	1030	MIN	8.1				
WTR YR 1984	TOTAL	83701	MEAN	229	MAX	3400	MIN	11				

01162500 PRIEST BROOK NEAR WINCHENDON, MASS.

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 above National Geodetic Vertical Datum of 1929. Prior to Sept. 11, 1936, nonrecording gage on left bank at same datum.

REMARKS.--Records good below 200 ft³/s, fair above. No gage-height record May 31. 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.--68 years, 32.8 ft³/s, 22.96 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	1730	207	4.25	Apr. 6	0930	362	4.77
Feb. 17	1030	360	4.77	May 31	--	*850	--

Minimum discharge, 0.98 ft³/s part of each day Sept. 22-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	3.3	85	29	18	81	61	17	655	4.2	4.9	1.4
2	4.3	3.2	72	25	16	70	67	15	367	4.1	4.3	1.3
3	6.2	3.1	77	24	16	58	81	13	257	3.3	3.7	1.4
4	4.3	5.2	67	22	28	47	97	39	194	3.0	3.3	1.7
5	3.2	11	52	22	43	41	120	70	152	5.8	3.3	1.8
6	2.5	13	45	21	46	37	330	67	118	14	4.2	1.6
7	2.1	12	59	21	46	36	310	55	92	60	4.2	1.5
8	1.8	9.2	76	19	39	31	243	47	68	140	4.7	1.4
9	1.7	7.5	73	16	30	28	186	66	46	99	3.4	1.4
10	1.6	6.4	55	16	26	24	148	64	43	67	2.9	1.3
11	1.5	10	45	17	25	22	120	50	34	53	2.7	1.4
12	1.6	17	36	17	31	20	103	44	25	58	2.7	1.6
13	9.3	15	48	16	34	19	95	53	16	52	2.7	1.4
14	11	11	167	16	36	20	90	60	14	34	2.7	1.5
15	6.6	8.9	174	16	44	24	103	74	13	23	2.6	1.6
16	4.5	20	142	15	203	25	121	68	11	18	2.3	1.6
17	4.5	47	116	15	346	28	153	56	9.3	18	2.1	1.5
18	3.9	45	91	14	280	27	134	46	9.1	27	1.8	1.4
19	3.5	38	73	14	220	32	112	39	12	60	1.7	1.4
20	3.1	30	59	13	186	45	96	38	10	48	4.5	1.3
21	2.9	30	42	13	171	54	89	27	7.6	29	5.6	1.3
22	2.8	37	33	13	145	74	75	21	6.4	22	4.2	1.1
23	2.8	34	35	13	139	95	60	21	5.5	17	3.1	1.1
24	6.9	39	34	16	154	100	56	45	4.7	14	2.6	1.1
25	11	54	30	28	153	97	56	44	8.1	11	2.3	1.1
26	8.9	104	26	32	149	86	51	35	10	8.2	1.9	1.0
27	7.1	105	25	31	134	74	44	49	7.2	7.7	1.7	1.0
28	5.8	86	23	27	113	68	34	40	5.3	9.0	1.6	.98
29	4.8	91	33	23	96	65	23	82	4.6	8.6	1.5	1.0
30	4.0	100	41	20	---	60	19	578	4.2	6.9	1.5	1.1
31	3.6	---	36	20	---	66	---	820	---	6.0	1.4	---
TOTAL	139.5	995.8	1970	604	2967	1554	3277	2743	2209.0	930.8	92.1	40.28
MEAN	4.50	33.2	63.5	19.5	102	50.1	109	88.5	73.6	30.0	2.97	1.34
MAX	11	105	174	32	346	100	330	820	655	140	5.6	1.8
MIN	1.5	3.1	23	13	16	19	19	13	4.2	3.0	1.4	.98
CFSM	.23	1.71	3.27	1.01	5.26	2.58	5.62	4.56	3.79	1.55	.15	.07
IN.	.27	1.91	3.78	1.16	5.69	2.98	6.28	5.26	4.24	1.78	.18	.08
CAL YR 1983	TOTAL	13888.65	MEAN	38.1	MAX	253	MIN	.40	CFSM	1.96	IN.	26.63
WTR YR 1984	TOTAL	17522.48	MEAN	47.9	MAX	820	MIN	.98	CFSM	2.47	IN.	33.60

01163200 OTTER RIVER AT OTTER RIVER, MASS.

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

DRAINAGE AREA.--34.1 mi², revised.

PERIOD OF RECORD.--Discharge: December 1964 to current year.
Water-quality records: Water years 1965-66.

GAGE.--Water-stage recorder. Elevation of gage is 900 ft, from topographic map.

REMARKS.--Records good except those for winter period and April to July, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1966-84), 63.6 ft³/s, 25.33 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, 832 ft³/s May 31, gage height, 4.73 ft; minimum, 6.0 ft³/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	22	142	79	50	126	112	89	758	31	18	8.3
2	44	21	116	67	47	111	120	81	571	28	17	7.9
3	54	21	98	61	42	92	125	76	470	26	15	8.3
4	40	32	88	58	90	80	140	127	367	22	14	8.7
5	31	52	85	57	110	73	200	193	276	20	15	8.6
6	31	64	83	59	110	76	500	184	208	22	15	8.3
7	24	56	132	63	96	80	610	143	170	78	17	7.9
8	20	44	166	60	68	73	400	120	138	147	21	7.5
9	18	37	147	54	62	66	290	138	114	141	17	7.3
10	17	31	118	51	55	58	200	135	89	120	15	7.1
11	15	53	100	53	56	53	160	114	67	97	14	7.0
12	16	73	88	52	80	47	140	99	53	71	12	8.9
13	52	67	125	50	90	44	120	99	43	55	12	8.2
14	68	53	288	48	92	60	120	114	44	41	14	8.0
15	61	41	364	47	115	66	140	135	42	33	14	8.9
16	44	96	306	47	319	61	180	124	38	30	13	8.8
17	33	182	245	46	412	69	230	107	35	44	12	8.1
18	28	164	196	43	329	68	180	93	34	68	12	7.8
19	27	132	154	44	282	83	140	83	39	118	11	7.4
20	24	100	115	43	248	112	120	76	37	108	18	7.2
21	21	89	89	42	224	132	120	72	34	74	17	7.0
22	20	93	76	41	191	176	100	68	29	52	15	6.8
23	19	82	82	40	158	208	90	65	25	41	14	6.6
24	48	70	80	47	152	192	120	75	24	33	13	6.4
25	63	138	77	108	178	169	138	73	32	27	12	6.4
26	54	236	73	104	176	152	134	65	38	23	11	6.3
27	43	212	68	89	153	135	121	72	41	22	10	6.6
28	35	166	66	81	131	126	109	68	40	25	9.7	6.9
29	30	156	102	68	130	114	100	149	35	25	9.6	7.0
30	26	161	105	57	---	112	94	520	34	22	9.3	7.7
31	23	---	93	53	---	109	---	751	---	19	8.7	---
TOTAL	1044	2744	4067	1812	4246	3123	5353	4308	3925	1663	425.3	227.9
MEAN	33.7	91.5	131	58.5	146	101	178	139	131	53.6	13.7	7.60
MAX	68	236	364	108	412	208	610	751	758	147	21	8.9
MIN	15	21	66	40	42	44	90	65	24	19	8.7	6.3
CFSM	.99	2.68	3.84	1.72	4.28	2.96	5.22	4.08	3.84	1.57	.40	.22
IN.	1.14	2.99	4.44	1.98	4.63	3.41	5.84	4.70	4.28	1.81	.46	.25
CAL YR 1983	TOTAL	30714.8	MEAN	84.2	MAX	411	MIN	6.9	CFSM	2.47	IN.	33.51
WTR YR 1984	TOTAL	32938.2	MEAN	90.0	MAX	758	MIN	6.3	CFSM	2.64	IN.	35.93

CONNECTICUT RIVER BASIN

01164000 MILLERS RIVER AT SOUTH ROYALSTON, MASS.

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.--189 mi², revised.

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 above National Geodetic Vertical Datum of 1929 (levels by U.S. Army 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.--45 years, 329 ft³/s, 23.64 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, 2,180 ft³/s June 7, gage height, 7.37 ft; maximum gage height, 7.99 ft Dec. 28 (ice jam); minimum daily discharge, 41 ft³/s Sept. 25, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	51	90	811	525	335	819	447	409	486	153	103	48		
2	127	113	712	500	320	712	472	378	375	145	96	47		
3	184	81	630	470	315	610	499	351	494	129	91	48		
4	147	104	570	440	470	530	521	503	840	118	85	52		
5	110	187	534	392	619	467	593	706	1420	157	76	54		
6	98	264	494	358	627	457	1050	716	1840	361	89	57		
7	85	246	659	354	561	450	1510	628	2100	637	97	56		
8	73	210	799	340	460	416	1650	541	2090	903	121	53		
9	66	181	751	315	390	387	1850	630	2040	910	94	53		
10	63	167	682	298	340	347	2090	661	1990	899	83	52		
11	60	217	587	320	331	320	2100	599	2070	744	74	89		
12	62	297	511	340	421	285	2000	532	2060	628	70	61		
13	194	280	583	330	468	320	1600	537	2090	524	69	44		
14	266	231	938	325	483	260	1160	584	2050	405	70	45		
15	213	189	1140	320	567	370	1040	667	2030	316	71	48		
16	162	319	1360	315	1110	370	1310	650	1780	278	67	43		
17	100	653	1430	310	1600	372	1650	580	1340	332	66	49		
18	43	675	1350	305	1830	357	1740	504	812	404	64	52		
19	48	583	1320	300	1490	392	1540	442	487	652	62	45		
20	163	494	1080	295	1370	505	1190	422	320	595	92	45		
21	228	469	729	285	1600	589	988	403	244	440	87	45		
22	127	512	547	275	1660	726	856	368	206	336	74	45		
23	114	454	535	275	1430	766	732	346	182	278	66	47		
24	190	409	730	285	1190	833	693	425	160	224	65	48		
25	264	606	605	330	1120	830	702	422	176	169	62	41		
26	183	965	520	535	1110	788	681	378	189	137	59	42		
27	88	983	475	500	998	731	630	446	179	129	56	42		
28	238	892	450	470	876	597	561	444	178	143	53	43		
29	209	871	590	420	920	568	510	675	165	145	50	41		
30	100	877	600	385	---	526	455	757	157	128	49	43		
31	92	---	550	355	---	425	---	619	---	113	51	---		
TOTAL	4148	12619	23272	11267	25011	16125	32820	16323	30550	11532	2312	1478		
MEAN	134	421	751	363	862	520	1094	527	1018	372	74.6	49.3		
MAX	266	983	1430	535	1830	833	2100	757	2100	910	121	89		
MIN	43	81	450	275	315	260	447	346	157	113	49	41		
MEAN†	136	425	746	362	869	532	1076	779	756	372	74.3	49.3		
CFSM†	.72	2.25	3.95	1.92	4.60	2.81	5.69	4.12	4.00	1.97	.39	.26		
IN†	.83	2.51	4.55	2.21	4.96	3.25	6.36	4.75	4.47	2.27	.45	.29		
CAL YR 1983	TOTAL	170185	MEAN	466	MAX	2040	MIN	28	MEAN†	466	CFSM†	2.47	IN†	33.50
WTR YR 1984	TOTAL	187457	MEAN	512	MAX	2100	MIN	41	MEAN†	512	CFSM†	2.71	IN†	36.90

† Adjusted for change in contents in Birch Hill Reservoir.

01165000 EAST BRANCH TULLY RIVER NEAR ATHOL, MASS.

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.--50.5 mi², revised.

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 U.S. Army 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 above 100 ft³/s, 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.--69 years, 82.2 ft³/s, 22.10 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, 710 ft³/s June 11, gage height, 4.90 ft; minimum, 1.0 ft³/s Sept. 20-22, 28; minimum daily, 5.3 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	18	351	124	67	482	97	97	13	24	18	12
2	5.5	18	329	99	60	287	99	97	21	24	17	12
3	5.5	18	273	86	60	210	102	97	21	24	16	12
4	5.5	56	141	86	60	204	153	139	131	24	16	12
5	17	41	141	86	77	141	101	201	322	24	16	12
6	9.7	21	109	86	142	136	162	200	476	24	15	11
7	9.5	21	192	85	169	122	292	164	606	24	15	11
8	12	53	310	83	167	102	440	149	653	64	15	11
9	15	78	214	54	111	80	487	150	644	174	15	11
10	15	76	194	54	85	80	485	151	669	301	15	11
11	15	74	203	76	85	80	510	152	693	338	15	11
12	15	74	174	82	86	50	516	152	688	366	15	11
13	15	74	121	82	112	38	484	151	628	262	15	11
14	15	74	138	67	125	96	308	188	530	214	15	11
15	15	73	161	59	141	125	232	204	574	120	15	11
16	15	72	357	60	151	74	338	251	574	40	15	11
17	15	118	478	46	308	75	492	268	513	18	15	11
18	15	220	469	40	477	76	464	184	418	33	15	11
19	16	265	457	40	319	76	597	151	323	73	15	10
20	16	200	440	40	254	78	504	108	130	104	15	9.5
21	16	168	473	56	396	93	341	95	61	104	15	8.8
22	16	166	266	63	571	203	351	95	47	103	15	9.1
23	17	132	168	63	636	271	327	95	47	102	15	9.2
24	17	88	138	63	636	288	275	96	31	101	14	9.1
25	17	141	123	47	607	293	265	166	24	77	13	8.6
26	17	178	96	70	576	235	200	196	24	24	13	8.7
27	17	191	84	84	428	211	132	130	24	18	13	8.6
28	17	249	84	84	203	123	97	99	24	18	13	8.6
29	17	318	107	84	354	90	97	101	24	18	13	8.7
30	18	366	124	83	---	93	97	41	24	18	13	8.7
31	18	---	124	83	---	96	---	6.6	---	18	12	---
TOTAL	439.0	3641	7039	2215	7463	4608	9045	4374.6	8957	2876	457	310.6
MEAN	14.2	121	227	71.5	257	149	302	141	299	92.8	14.7	10.4
MAX	18	366	478	124	636	482	597	268	693	366	18	12
MIN	5.3	18	84	40	60	38	97	6.6	13	18	12	8.6
MEAN†	19.4	119	218	70.8	270	146	308	255	180	92.8	10.5	5.53
CFSM†	.38	2.36	4.32	1.40	5.35	2.89	6.10	5.05	3.56	1.84	.21	.11
IN†	.44	2.64	4.97	1.62	5.78	3.34	6.80	5.83	3.97	2.12	.24	.12

CAL YR 1983 TOTAL 36290.0 MEAN 99.4 MAX 481 MIN 5.2 MEAN† 99.6 CFSM† 1.97 IN† 26.77
WTR YR 1984 TOTAL 51425.2 MEAN 141 MAX 693 MIN 5.3 MEAN† 140 CFSM† 2.77 IN† 37.87

† Adjusted for change in contents in Tully Reservoir.

CONNECTICUT RIVER BASIN

01165300 LAKE ROHUNTA OUTLET NEAR ATHOL, MASS.

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

REMARKS.--Records excellent except those for period of no gage-height record, Aug. 14 to Sept. 20, which are poor. Flow regulated by Lake Rohunta. Several observations of water temperature were made during the year.

AVERAGE DISCHARGE.--19 years (water years 1966-84), 37.3 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 760 ft³/s May 31, 1984, gage height, 7.36 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, 760 ft³/s May 31, gage height, 7.36 ft; minimum daily, 1.5 ft³/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	24	77	53	35	109	93	61	655	15	4.4	3.4
2	41	23	73	49	31	101	93	49	415	16	5.4	3.0
3	42	21	66	45	31	93	85	43	288	16	6.0	3.4
4	40	22	64	44	40	86	80	49	200	16	6.1	4.3
5	34	20	61	42	46	81	94	57	155	17	6.5	4.0
6	25	19	57	42	53	79	161	65	130	20	6.7	3.6
7	17	17	66	41	53	74	235	68	116	47	6.6	3.3
8	13	16	68	41	51	68	226	68	48	71	6.2	3.1
9	8.2	14	70	40	47	63	195	59	38	79	6.2	2.9
10	6.7	12	69	41	44	58	164	50	47	72	5.9	2.8
11	5.7	21	65	43	42	52	144	47	48	58	5.7	3.3
12	6.2	21	63	40	43	48	133	43	47	49	5.6	3.8
13	20	23	74	37	45	46	119	44	43	43	5.8	3.3
14	22	23	93	37	46	52	110	55	40	36	5.4	3.6
15	19	23	109	36	57	47	108	69	34	30	5.0	5.6
16	16	36	117	31	114	45	122	71	33	29	4.6	5.0
17	14	96	116	33	192	45	151	66	30	38	4.3	4.5
18	11	104	107	31	232	45	154	60	29	45	4.0	4.1
19	11	73	95	31	226	51	141	55	30	66	3.8	3.7
20	9.1	57	86	30	204	56	129	49	27	75	9.5	3.4
21	7.9	53	82	26	179	62	113	46	25	65	8.2	1.7
22	7.4	49	81	17	155	75	109	44	23	52	6.8	2.1
23	7.3	45	77	25	135	81	104	43	21	85	6.0	2.4
24	15	44	70	28	127	86	100	44	19	98	5.4	2.3
25	16	58	64	34	124	89	95	46	21	63	4.8	2.8
26	17	75	57	38	123	89	90	43	19	15	4.3	2.6
27	16	79	50	40	119	88	88	40	19	1.5	4.0	2.2
28	16	80	48	39	118	86	82	40	17	1.6	3.7	2.3
29	13	85	53	38	118	87	76	72	15	1.6	3.5	1.9
30	20	85	55	37	---	93	71	337	15	1.7	3.4	1.8
31	23	---	56	37	---	93	---	682	---	2.6	3.7	---
TOTAL	540.5	1318	2289	1146	2830	2228	3665	2565	2647	1225.0	167.5	96.2
MEAN	17.4	43.9	73.8	37.0	97.6	71.9	122	82.7	88.2	39.5	5.40	3.21
MAX	42	104	117	53	232	109	235	682	655	98	9.5	5.6
MIN	5.7	12	48	17	31	45	71	40	15	1.5	3.4	1.7
CAL YR 1983	TOTAL	16759.79	MEAN	45.9	MAX	189	MIN	.49				
WTR YR 1984	TOTAL	20717.2	MEAN	56.6	MAX	682	MIN	1.5				

01166500 MILLERS RIVER AT ERVING, MASS.

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.--372 mi², revised.

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. Elevation 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.--70 years, 636 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, 6,810 ft³/s May 30, gage height, 7.63 ft; minimum daily, 55 ft³/s Sept. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	132	1620	1070	593	1850	980	835	4800	270	178	55
2	186	128	1450	995	530	1600	1070	771	3300	249	175	70
3	262	122	1270	899	526	1150	1190	718	2400	236	165	118
4	237	180	1110	819	786	1140	1280	930	2000	230	140	138
5	185	290	924	705	1070	1010	2170	1350	2100	323	87	83
6	161	336	945	673	1220	893	4000	1340	2700	706	181	59
7	135	350	1280	689	1250	938	3640	1220	3390	1670	167	88
8	116	345	1650	660	1080	834	3390	1070	3480	1690	186	84
9	107	294	1490	630	957	756	3360	1200	3290	1400	166	71
10	101	332	1280	590	792	678	3550	1190	3170	1530	157	104
11	97	421	1150	671	686	665	3560	1090	3140	1400	162	98
12	102	535	1040	733	751	560	3600	1020	3280	1330	63	123
13	303	522	1480	660	853	578	3070	1050	3150	1130	181	96
14	424	427	3120	640	943	482	2450	1210	3020	838	95	86
15	342	389	2640	610	1290	727	2060	1350	2920	611	119	57
16	267	681	2250	590	4260	774	2550	1310	2800	553	131	81
17	212	1180	2580	580	3450	742	3390	1220	2330	634	107	101
18	138	1240	2390	570	4260	710	3260	1040	1580	682	77	85
19	109	1100	2230	560	3620	768	3070	908	994	1070	80	81
20	107	938	2040	540	2850	938	2770	833	744	1010	237	78
21	245	920	1560	530	2870	1120	2060	772	508	818	181	80
22	122	974	1320	510	3110	1540	1790	713	398	663	150	67
23	156	856	942	510	2920	1790	1560	668	356	589	140	63
24	296	737	1020	530	2850	1710	1550	848	319	569	115	101
25	372	1360	751	640	2730	1700	1520	837	324	477	114	81
26	361	1910	839	1040	2740	1540	1430	812	323	341	68	69
27	223	1740	818	1030	2410	1470	1260	859	299	252	124	81
28	162	1580	825	898	1810	1330	1100	774	288	248	95	85
29	342	1660	1150	838	1710	1130	985	1650	282	264	91	59
30	270	1800	1220	675	---	1120	882	5710	275	249	91	78
31	166	---	1140	610	---	950	---	6180	---	201	98	---
TOTAL	6392	23479	45524	21695	54917	33193	68547	41478	57960	22233	4121	2520
MEAN	206	783	1469	700	1894	1071	2285	1338	1932	717	133	84.0
MAX	424	1910	3120	1070	4260	1850	4000	6180	4800	1690	237	138
MIN	86	122	751	510	526	482	882	668	275	201	63	55
CAL YR 1983	TOTAL	317898	MEAN	871	MAX	3340	MIN	53				
WTR YR 1984	TOATL	382059	MEAN	1044	MAX	6180	MIN	55				

CONNECTICUT RIVER BASIN

01167000 CONNECTICUT RIVER AT TURNERS FALLS, MASS.

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 provided by Western Massachusetts Electric Co.

AVERAGE DISCHARGE.--69 years, 11,890 ft³/s.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	3410	25200	12300	8000	18100	13100	18400	100000	3870	4490	1540
2	1540	5490	20600	12200	7890	16100	15700	20400	81800	6120	4710	1520
3	3540	5570	16600	11800	7080	14900	20000	19400	64600	7280	4820	2940
4	4470	6350	16000	11600	6570	16100	23500	20600	52800	2780	1520	2510
5	5640	9000	15700	11900	7110	15400	28300	30800	45500	7240	1500	1790
6	4640	10500	16000	11400	9800	12900	61600	23700	37500	8740	6670	1540
7	3540	9730	22300	10800	9790	9740	69600	22100	30900	16700	5060	1500
8	3060	8640	37600	9050	10100	10300	69400	19700	39600	25600	3990	1540
9	1720	8580	24200	11600	8270	10400	61400	21800	31800	18300	4650	2210
10	2190	6820	16000	8860	9130	7280	50100	21300	30800	21000	3440	3490
11	3790	10500	16700	9980	9400	5140	36900	22600	24900	14500	2270	6540
12	4170	10000	17100	10700	7190	8490	31200	19300	19700	18000	2670	3860
13	7400	9460	23900	9490	8300	10400	31700	22200	20200	13300	3930	3650
14	8890	10500	62100	6920	10300	8690	35600	30000	17500	11800	4960	3650
15	3910	9950	81300	7000	11600	10500	40100	35600	13100	9040	3980	2470
16	1580	13000	77500	8050	32200	9820	43200	28300	12300	6980	3220	1470
17	3660	12900	69100	7720	40300	9300	51500	22200	6660	9330	1530	1810
18	3650	13000	51000	7400	39200	11200	54800	21900	9180	9360	1500	1460
19	3800	14000	37300	7130	37500	10500	50200	19400	9050	11900	1550	1850
20	4450	14600	25200	7360	36300	11300	47700	14200	13700	11600	2820	3450
21	5190	14400	17100	5620	33000	16600	40800	17600	9680	10000	2640	1570
22	1800	18100	15100	4870	29100	25500	28300	17400	5970	6370	3270	1540
23	2480	23100	13200	5130	24900	30200	23600	14800	4260	8140	3620	1580
24	8350	19200	13600	5320	23300	25400	25100	17900	6920	8850	3000	3130
25	5490	27000	14100	6470	29800	20100	28800	12100	8090	6080	1570	3280
26	4130	33500	13800	8000	34400	20900	25900	18500	7140	4440	1590	1510
27	3820	34200	12300	6970	28600	18600	25400	15000	7780	4420	3230	1510
28	2890	30100	11600	5510	26900	19200	26000	16300	8230	3420	2290	1510
29	1910	23200	10500	9320	20800	18000	22300	31300	8720	2160	2880	1540
30	1580	27200	11200	8340	---	14400	20000	78900	6800	4380	3100	1490
31	4370	---	14300	6270	---	16400	---	103000	---	4830	3770	---
TOTAL	119180	442000	818200	265080	566830	451860	1101800	796700	735180	296530	100240	69450
MEAN	3845	14730	26390	8551	19550	14580	36730	25700	24510	9565	3234	2315
MAX	8890	34200	81300	12300	40300	30200	69600	103000	100000	25600	6670	6540
MIN	1530	3410	10500	4870	6570	5140	13100	12100	4260	2160	1500	1460
CAL YR 1983	TOTAL	5244300	MEAN	14370	MAX	81300	MIN	1490				
WTR YR 1984	TOTAL	5763050	MEAN	15750	MAX	103000	MIN	1460				

01168151 DEERFIELD RIVER NEAR ROWE, MASS.

LOCATION.--Lat 42°40'S7", long 72°58'37", Franklin County, Hydrologic Unit 01080203, on left bank 400 ft downstream from Fife Brook, 600 ft downstream from Fife Brook Dam, 1.2 mi northeast of Hoosac Tunnel, and 4 mi west of Rowe.

DRAINAGE AREA.--254 mi².

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

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

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

REMARKS.--Records excellent except those for period of no gage-height record, May 29-31, which are fair. Flow regulated by Somerset and Harriman Reservoirs (Reservoirs in Connecticut River basin) and by several power-plants upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--10 years, 752 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,900 ft³/s May 29, 1984, gage height, 14.73 ft, from floodmark in stilling well, from rating curve extended above 8,300 ft³/s, on basis of slope-area measurement of peak flow and conveyance-slope study; maximum gage height, 14.79 ft Aug. 10, 1976; minimum daily discharge, 28 ft³/s Nov. 14, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,900 ft³/s May 29, gage height, 14.73 ft, from floodmark in stilling well, from rating extended as explained above; minimum daily, 73 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	170	474	396	1020	1010	1340	1030	965	4160	135	624	101
2	100	400	662	979	1040	1190	1060	1010	2450	340	597	96
3	468	346	276	1060	1020	1050	1070	821	2000	320	626	99
4	568	361	324	948	1040	1050	1070	1250	774	105	274	475
5	547	217	567	1040	1060	1040	1570	2160	763	290	104	85
6	478	117	732	1040	1010	1060	2470	1180	1040	130	534	476
7	505	376	1170	1060	1060	1040	1970	871	1070	860	497	242
8	240	270	883	984	1000	1030	1470	858	1060	380	517	78
9	102	273	495	1030	1050	1030	1400	1100	950	560	459	76
10	105	330	615	976	1010	1040	1390	911	768	680	329	544
11	512	296	507	1010	1010	1030	1400	760	757	500	193	408
12	504	219	698	995	1030	1040	1420	815	953	1360	94	618
13	625	173	1670	1050	1010	1030	1500	3120	1060	964	386	589
14	461	226	3540	1000	825	1050	1510	2430	477	680	211	662
15	213	224	2090	1050	1030	1040	1590	1850	184	328	380	236
16	79	401	1840	1010	1670	1030	2060	1570	132	761	204	104
17	531	657	1560	1040	1400	1050	2940	1300	123	802	101	472
18	568	597	1340	992	1300	1020	2680	1240	342	850	101	562
19	461	82	1200	995	1120	1070	2700	214	638	1060	103	371
20	533	199	962	1060	1250	1050	2010	659	588	673	167	366
21	492	776	849	1010	1150	1190	1950	849	459	143	96	395
22	192	788	897	992	1100	1310	1520	1020	357	180	435	80
23	107	636	889	1020	1060	1220	1280	977	103	687	470	73
24	526	191	414	999	1190	1080	1440	922	310	690	373	417
25	582	1100	468	1040	1210	1040	1590	972	290	753	98	509
26	578	457	545	997	1150	1060	2220	90	110	244	92	266
27	427	310	692	1050	1130	1040	1890	197	110	347	401	299
28	624	655	652	1030	1250	1040	823	1440	420	166	454	183
29	212	554	814	1050	1270	1100	860	8200	480	100	500	80
30	116	511	1050	1010	---	1040	1160	12000	100	378	390	79
31	521	---	1060	1020	---	1040	---	8200	---	359	432	---
TOTAL	12147	12216	29857	31557	32455	33440	49043	59951	23028	15825	10242	9041
MEAN	392	407	963	1018	1119	1079	1635	1934	768	510	330	301
MAX	625	1100	3540	1060	1670	1340	2940	12000	4160	1360	626	662
MIN	79	82	276	948	825	1020	823	90	100	100	92	73
CAL YR 1983	TOTAL	280141	MEAN	768	MAX	4600	MIN	78				
WTR YR 1984	TOTAL	318802	MEAN	871	MAX	12000	MIN	73				

CONNECTICUT RIVER BASIN

01168500 DEERFIELD RIVER AT CHARLEMONT, MASS.

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

DRAINAGE AREA.--361 mi², revised.

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 above 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.--71 years, 901 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, 24,300 ft³/s May 29, gage height, 13.12 ft; minimum daily, 101 ft³/s Oct. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	521	663	1180	1060	1620	1340	1260	5810	217	572	144
2	144	398	726	1130	1110	1500	1430	1290	3150	396	554	128
3	456	360	493	1180	1080	1300	1520	1100	2560	354	654	148
4	519	393	537	1100	1220	1300	1550	2200	1350	171	385	454
5	528	251	644	1140	1250	1280	4200	2680	1180	330	159	174
6	512	165	771	1150	1190	1280	6100	1790	1340	255	547	437
7	520	401	1870	1150	1160	1230	3430	1300	1400	1130	525	306
8	269	284	1300	1100	1120	1220	2480	1320	1320	791	482	115
9	101	316	689	1110	1140	1180	2100	1700	1220	665	509	107
10	121	320	927	1100	1100	1170	1990	1390	869	582	367	478
11	498	388	674	1090	1130	1160	2000	1140	973	631	234	433
12	511	319	832	1110	1190	1160	2230	1280	1000	1620	146	589
13	644	231	3860	1090	1210	1180	2380	3560	1170	1070	381	560
14	511	269	7650	1080	1090	1140	2560	3190	725	758	265	631
15	258	279	3610	1100	2090	1170	3200	2750	325	381	402	350
16	114	625	2880	1090	4660	1150	4030	1960	252	737	243	125
17	500	779	2280	1110	2630	1230	4780	1810	187	809	146	469
18	543	814	1920	1050	2690	1180	4020	1540	477	961	135	539
19	476	201	1760	1080	2140	1230	3830	1230	644	1170	140	391
20	537	222	1420	1080	2330	1270	2850	396	603	826	277	365
21	493	915	1290	1070	1900	1470	2700	1200	630	289	153	414
22	221	1020	1360	1070	1630	1840	2120	1140	435	263	431	120
23	139	733	1370	1060	1530	1680	1800	1300	170	603	473	102
24	596	442	973	1070	1960	1440	2230	1190	286	671	404	373
25	579	1560	715	1170	2030	1390	2210	1260	466	771	149	507
26	601	990	991	1090	2030	1390	2640	888	161	409	133	299
27	459	473	779	1120	1640	1370	2460	408	175	398	378	305
28	601	888	906	1100	1650	1370	1420	954	432	275	464	174
29	257	934	1090	1120	1650	1410	1130	12100	508	178	506	131
30	146	884	1260	1110	---	1350	1500	18000	221	412	399	103
31	484	---	1230	1080	---	1300	---	12800	---	390	437	---
TOTAL	12488	16375	47470	34280	48610	40960	78230	86126	30039	18513	11050	9471
MEAN	403	546	1531	1106	1676	1321	2608	2778	1001	597	356	316
MAX	644	1560	7650	1180	4660	1840	6100	18000	5810	1620	654	631
MIN	101	165	493	1050	1060	1140	1130	396	161	171	133	102
CAL YR 1983	TOTAL	380710	MEAN	1043	MAX	7650	MIN	101				
WTR YR 1984	TOTAL	433612	MEAN	1185	MAX	18000	MIN	101				

01169000 NORTH RIVER AT SHATTUCKVILLE, MASS.

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

DRAINAGE AREA.--89.0 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of doubtful or no gage-height record, Apr. 6 to June 12, 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.--45 years, 185 ft³/s, 28.23 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 greater than base discharge 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)
Dec. 14	0345	4,560	7.39	May 29	--	7,070	8.56
Feb. 16	0445	3,450	6.76	July 11	2345	2,510	6.14
Apr. 5	2030	*10,500	*9.77				

Minimum discharge, 12 ft³/s Oct. 1, 10; minimum daily, 13 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	217	170	77	282	272	233	1800	46	44	26
2	17	19	170	150	76	251	346	206	1000	51	40	23
3	19	19	149	140	77	220	416	206	660	42	45	26
4	16	21	122	135	135	195	398	1380	470	47	77	40
5	15	22	142	133	204	189	4000	614	360	40	63	36
6	15	25	158	132	160	190	3890	360	290	103	107	28
7	20	25	800	130	125	160	1480	290	240	390	62	24
8	17	22	323	120	110	150	827	600	200	224	53	26
9	15	21	225	110	105	145	635	423	170	98	44	22
10	14	21	202	105	105	145	576	299	150	80	42	20
11	14	88	167	105	108	140	698	277	130	283	41	20
12	16	137	159	100	129	125	853	633	120	763	39	35
13	90	62	1880	105	144	125	704	449	109	200	39	29
14	55	44	2790	105	170	130	758	619	103	118	40	27
15	41	38	1040	98	652	135	1260	439	94	86	36	28
16	29	286	760	94	2230	150	1700	350	83	81	34	25
17	24	255	479	92	1030	226	1380	291	77	99	30	24
18	22	132	358	88	1770	185	1420	264	80	239	28	22
19	21	89	287	87	1040	210	1410	242	91	207	26	21
20	19	74	185	84	1110	308	1070	224	73	120	89	20
21	18	249	150	84	704	451	795	209	63	89	57	19
22	17	175	155	84	500	614	520	190	57	80	40	18
23	18	110	170	86	429	445	455	199	52	69	35	17
24	81	107	150	89	873	335	818	284	49	62	39	17
25	54	707	130	137	836	318	622	193	70	53	33	17
26	38	354	120	125	932	305	446	166	61	47	29	16
27	36	210	110	104	497	300	370	194	50	57	26	15
28	30	169	150	98	401	275	321	305	44	114	25	15
29	25	390	400	88	356	255	284	4400	42	71	24	15
30	19	351	260	87	---	234	257	5100	44	57	21	15
31	20	---	200	85	---	229	---	4300	---	49	23	---
TOTAL	848	4241	12608	3350	15085	7422	28981	23939	6832	4065	1331	686
MEAN	27.4	141	407	108	520	239	966	772	228	131	42.9	22.9
MAX	90	707	2790	170	2230	614	4000	5100	1800	763	107	40
MIN	13	19	110	84	76	125	257	166	42	40	21	15
CFSM	.31	1.58	4.57	1.21	5.84	2.69	10.9	8.67	2.56	1.47	.48	.26
IN.	.35	1.77	5.27	1.40	6.31	3.10	12.11	10.01	2.86	1.70	.56	.29

CAL YR 1983	TOTAL	88936	MEAN 244	MAX 3690	MIN 10	CFSM 2.74	IN. 37.17
WTR YR 1984	TOTAL	109388	MEAN 299	MAX 5100	MIN 13	CFSM 3.36	IN. 45.72

CONNECTICUT RIVER BASIN

01169900 SOUTH RIVER NEAR CONWAY, MASS.

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

DRAINAGE AREA.--24.1 mi², revised.

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. Elevation 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, 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.--18 years, 53.8 ft³/s, 30.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,470 ft³/s Apr. 5, 1984, gage height, 8.52 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 greater than base discharge of 660 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0230	1,060	5.84	Apr. 16	1630	806	5.39
Feb. 16	0600	1,600	6.62	May 29	2030	2,750	7.89
Apr. 5	1815	*3,470	*8.52				

Minimum discharge, 3.3 ft³/s Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.5	9.0	54	58	27	93	89	61	318	22	9.3	5.8
2	10	8.9	48	53	26	84	114	58	335	22	8.9	4.4
3	8.7	8.9	45	50	28	77	138	55	193	19	8.2	6.2
4	7.1	9.2	38	48	45	70	106	243	138	18	7.8	9.3
5	6.9	9.3	49	47	70	62	1330	106	109	28	8.0	7.7
6	7.0	11	51	46	50	64	864	80	94	35	11	6.2
7	7.0	12	158	46	41	59	372	71	89	92	8.6	5.7
8	6.4	11	69	41	37	52	251	97	73	55	8.4	5.6
9	6.4	9.9	61	38	35	51	201	99	63	32	7.9	5.3
10	6.3	10	53	34	35	51	170	73	56	25	8.3	5.1
11	5.7	60	50	30	36	48	163	65	49	21	8.3	4.7
12	10	45	51	29	44	46	173	87	44	21	7.2	5.3
13	51	23	555	32	50	45	154	88	41	17	7.2	5.4
14	25	18	625	35	60	47	195	121	39	15	6.9	5.8
15	15	16	231	32	300	50	277	81	37	14	6.6	6.6
16	11	139	168	30	750	57	457	70	33	13	5.8	6.3
17	9.2	62	124	30	233	86	248	63	30	14	5.4	5.6
18	8.7	36	99	29	331	70	166	58	33	28	5.4	5.4
19	9.7	28	86	28	203	77	138	55	43	22	5.8	5.4
20	9.0	25	66	26	318	110	127	49	32	16	31	5.3
21	8.7	78	52	25	164	135	111	49	27	14	11	5.1
22	8.5	42	54	25	131	200	95	44	25	13	8.3	4.8
23	8.8	31	56	25	121	132	89	84	22	12	7.5	4.7
24	35	36	50	27	207	99	165	89	22	11	7.1	4.7
25	20	203	44	50	190	96	117	55	33	10	6.5	4.7
26	14	73	40	41	250	98	92	47	24	9.7	6.3	4.7
27	13	54	45	36	126	98	83	43	21	13	5.8	4.5
28	12	49	60	33	115	89	79	63	19	22	5.7	4.3
29	10	112	100	30	109	81	70	999	18	13	5.6	4.3
30	9.7	74	82	29	---	76	65	1220	22	11	5.4	4.3
31	9.6	---	67	29	---	72	---	925	---	10	5.9	---
TOTAL	375.9	1303.2	3331	1112	4132	2475	6699	5298	2082	667.7	251.1	163.2
MEAN	12.1	43.4	107	35.9	142	79.8	223	171	69.4	21.5	8.10	5.44
MAX	51	203	625	58	750	200	1330	1220	335	92	31	9.3
MIN	5.7	8.9	38	25	26	45	65	43	18	9.7	5.4	4.3
CFSM	.50	1.80	4.44	1.49	5.89	3.31	9.25	7.10	2.88	.89	.34	.23
IN.	.58	2.01	5.14	1.72	6.38	3.82	10.34	8.18	3.21	1.03	.39	.25
CAL YR 1983	TOTAL	24493.2	MEAN	67.1	MAX	1080	MIN	4.5	CFSM	2.78	IN.	37.81
WTR YR 1984	TOTAL	27890.1	MEAN	76.2	MAX	1330	MIN	4.3	CFSM	3.16	IN.	43.05

01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MASS.

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

DRAINAGE AREA.--557 mi², revised.

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. Elevation 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.--44 years (water years 1941-84), 1,296 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, 38,000 ft³/s May 29, gage height, 13.45 ft; minimum daily, 197 ft³/s Oct. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	648	1210	1760	1310	2280	1980	1770	8850	337	644	224
2	210	528	1040	1500	1370	2080	2190	1750	5120	568	641	219
3	472	379	949	1500	1350	1870	2440	1560	4010	495	766	223
4	508	489	796	1450	1630	1750	2480	3990	2430	343	589	385
5	630	299	928	1510	1700	1720	11100	3810	2020	492	347	553
6	522	302	1240	1370	1700	1690	14000	2800	1920	481	675	283
7	631	375	3280	1440	1570	1610	6530	1950	1930	2050	627	427
8	303	467	2090	1420	1410	1560	4640	1990	1830	1780	609	218
9	198	314	1160	1370	1440	1550	3560	2840	1800	651	666	229
10	197	363	1270	1430	1430	1470	3280	2210	1300	738	504	425
11	394	737	1080	1360	1430	1500	3110	1640	1350	960	348	578
12	694	612	1230	1420	1490	1460	3500	1880	1410	2710	230	637
13	910	397	6860	1330	1600	1430	3750	4620	1450	1590	417	797
14	638	399	12500	1350	1780	1470	3940	4370	1020	981	467	525
15	372	371	5470	1380	3370	1600	5760	3780	701	644	323	515
16	247	1360	4380	1310	9830	1550	6950	2730	364	848	274	244
17	509	1350	3120	1370	4990	1650	7390	2500	403	1180	446	472
18	614	1090	2560	1300	5970	1730	5910	2100	694	1360	219	642
19	574	540	2260	1360	4340	1700	6140	1960	940	1860	211	531
20	579	368	1690	1240	4720	2040	4460	837	823	892	428	398
21	460	1220	1390	1340	3500	2410	4060	1380	927	636	260	432
22	349	1580	1400	1390	2770	3370	3200	1430	597	403	545	227
23	348	1030	1580	1480	2530	2850	2640	1730	443	767	621	215
24	805	821	1300	1450	3560	2270	3500	2100	632	873	451	305
25	561	2760	889	1460	3640	2080	3320	1580	525	737	241	456
26	825	2080	1380	1500	4080	2140	3400	1280	322	804	224	403
27	552	956	1270	1360	2690	2030	3430	863	274	552	325	423
28	644	1140	2030	1450	2530	2030	2230	1270	519	411	469	225
29	404	1720	1990	1300	2490	1980	1500	17200	652	332	655	215
30	236	1590	2040	1370	---	1950	2110	26800	473	477	459	213
31	386	---	2240	1340	---	1770	---	20200	---	583	523	---
TOTAL	14988	26285	72622	43610	82220	58590	132500	126920	45729	27535	14204	11639
MEAN	483	876	2343	1407	2835	1890	4417	4094	1524	888	458	388
MAX	910	2760	12500	1760	9830	3370	14000	26800	8850	2710	766	797
MIN	197	299	796	1240	1310	1430	1500	837	274	332	211	213
CAL YR 1983	TOTAL	565970	MEAN	1551	MAX	12500	MIN	197				
WTR YR 1984	TOTAL	656842	MEAN	1795	MAX	26800	MIN	197				

01170100 GREEN RIVER NEAR COLRAIN, MASS.

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. Elevation 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.--17 years, 94.7 ft³/s, 31.06 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0330	1,870	5.96	Apr. 16	1945	933	4.79
Feb. 16	0345	1,010	4.89	May 29	1345	2,590	6.67
Apr. 5	1915	a*3,770	*7.64				

a From rating curve extended as explained above.

Minimum discharge, 4.9 ft³/s Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	8.8	104	79	41	150	131	129	540	26	21	11
2	8.6	8.9	81	73	37	130	160	116	421	24	20	9.7
3	8.6	8.7	71	74	35	120	196	108	312	21	19	11
4	6.9	9.5	57	73	76	110	200	436	232	23	41	14
5	6.1	10	69	65	100	100	1530	261	186	21	29	13
6	6.5	14	75	65	76	100	1400	184	160	64	30	11
7	10	14	342	65	57	88	605	152	149	210	22	9.9
8	8.1	12	151	57	50	80	455	226	125	118	20	9.3
9	7.2	10	106	53	50	77	345	261	107	61	17	9.0
10	6.4	10	99	51	50	74	295	180	91	43	17	9.0
11	6.1	46	80	49	52	67	261	151	80	87	17	9.3
12	8.2	77	79	43	56	61	318	224	69	208	16	13
13	45	31	576	42	61	59	342	244	62	77	16	10
14	25	22	970	43	78	61	362	279	59	50	15	9.9
15	21	22	422	43	295	67	540	205	54	39	15	11
16	13	148	330	39	715	74	600	171	47	40	14	10
17	11	133	228	39	396	105	546	149	45	44	13	9.7
18	9.0	65	178	37	595	92	443	133	47	99	12	8.9
19	9.0	45	144	39	398	109	434	121	50	85	12	8.4
20	8.1	37	83	40	421	154	458	110	41	51	31	8.4
21	7.4	142	74	39	314	184	366	106	36	41	18	8.1
22	7.9	99	76	39	241	284	255	94	33	39	15	7.5
23	8.1	60	84	40	216	225	221	113	29	33	14	7.5
24	30	56	74	43	378	172	375	130	28	28	15	7.5
25	23	322	64	65	374	157	323	97	45	25	13	7.5
26	16	177	58	61	415	154	230	86	37	21	12	7.5
27	13	107	54	51	252	147	197	103	29	32	11	7.0
28	12	82	74	45	217	141	172	103	25	61	10	6.7
29	10	174	200	40	190	130	154	1310	24	37	10	7.0
30	9.3	164	130	39	---	124	141	1570	31	29	11	7.2
31	8.8	---	90	41	---	115	---	1330	---	25	11	---
TOTAL	374.4	2114.9	5223	1572	6236	3711	12055	8882	3194	1762	537	279.0
MEAN	12.1	70.5	168	50.7	215	120	402	287	106	56.8	17.3	9.30
MAX	45	322	970	79	715	284	1530	1570	540	210	41	14
MIN	5.1	8.7	54	37	35	59	131	86	24	21	10	6.7
CFSM	.29	1.70	4.06	1.23	5.19	2.90	9.71	6.93	2.56	1.37	.42	.23
IN.	.34	1.90	4.69	1.41	5.60	3.33	10.83	7.98	2.87	1.58	.48	.25

CAL YR 1983	TOTAL	39284.9	MEAN 108	MAX 1530	MIN 3.3	CFSM 2.61	IN 35.30
WTR YR 1984	TOTAL	45940.3	MEAN 126	MAX 1570	MIN 5.1	CFSM 3.04	IN 41.28

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MASS.

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.--7,860 mi², revised.

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 above 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 except those for winter period and periods of doubtful or no gage-height record, June 17-19, June 22 to July 6, July 16-18, July 21 to Sept. 18, which are good. 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.--80 years, 13,840 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, 143,000 ft³/s May 31, gage height, 38.17 ft; minimum daily, 1,820 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2000	4350	30400	16000	9480	23300	17700	23200	126000	5000	6000	2000
2	1910	6460	24800	16000	9700	21300	20100	25000	103000	8000	6200	2000
3	4220	6470	20500	15000	8900	18200	24800	23600	82300	9000	6400	3500
4	5300	7060	19000	15000	9090	18700	29800	28000	64700	3700	2400	3300
5	6750	10000	18700	14900	10100	19100	37800	38100	53400	9000	2200	2700
6	6220	11700	19600	14400	12400	16900	80900	31800	44400	11000	8400	2100
7	4800	11300	27600	13100	12000	12800	82000	28200	38500	18100	6600	2200
8	3870	9990	42200	11200	12100	12900	79100	25200	46400	31900	5400	2000
9	2200	9830	32600	13600	10300	12900	70800	28500	42200	22500	6000	2800
10	2510	7460	20700	11400	11300	9630	59100	27500	39200	25700	4500	4500
11	4320	12100	19200	12200	11600	8280	46800	27900	33500	17400	3100	8000
12	5190	12200	20000	13300	9170	10300	39100	25400	26700	22900	3300	5000
13	8530	10700	31000	12000	10700	12200	40400	30000	26400	17200	5000	5000
14	10800	11800	73000	10000	13100	11500	44800	37900	23700	14200	6200	4800
15	5280	11100	90200	8600	16300	13300	50600	44900	17000	11700	5000	3400
16	2080	15400	86700	10000	44200	12600	54900	37900	14700	9200	4000	2000
17	4300	16200	78500	9800	48900	11400	64400	29800	8400	11000	2300	2600
18	4610	15500	62700	9400	48800	14400	67000	27800	11000	12000	2000	2400
19	4810	15900	47000	9000	45100	13400	64100	25400	12000	14600	2100	2450
20	5520	16400	32600	9000	43700	14600	58700	17700	16300	14600	3700	4180
21	6170	17500	22800	7700	40200	20500	52200	21100	12800	11500	3300	2300
22	2490	21800	18800	6600	36500	30700	38700	22700	7000	8000	4300	2020
23	2850	26400	16900	7100	31900	38100	31600	19200	5600	10000	4700	1890
24	9660	22300	16600	7600	30900	32800	32600	23400	9000	11000	4000	3590
25	7180	30600	17000	9000	36600	27100	34700	15900	10000	8000	2100	3960
26	5480	40000	17000	10500	42600	25800	36200	22400	8800	6200	2100	2160
27	4670	38600	15000	8500	35900	24000	33300	18500	9400	5800	4000	2080
28	3690	35600	15000	8650	34300	24600	31900	19800	10000	4500	3200	1960
29	2570	28800	14000	10800	28500	23400	27500	45900	11000	3000	4000	1840
30	1940	33000	15000	10200	---	19300	25600	113000	8600	5600	4000	1820
31	5050	---	18000	8380	---	20500	---	138000	---	6200	4800	---
TOTAL	146970	516520	983100	338930	714340	574510	1377200	1043700	922000	368500	131300	90550
MEAN	4741	17220	31710	10930	24630	18530	45910	33670	30730	11890	4235	3018
MAX	10800	40000	90200	16000	48900	38100	82000	138000	126000	31900	8400	8000
MIN	1910	4350	14000	6600	8900	8280	17700	15900	5600	3000	2000	1820
CAL YR 1983	TOTAL	6463650	MEAN	17710	MAX	90200	MIN	1820				
WTR YR 1984	TOTAL	7207620	MEAN	19690	MAX	138000	MIN	1820				

01171300 FORT RIVER NEAR AMHERST, MASS.

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.--36.3 mi², revised, excludes 5.16 mi², revised, 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. Elevation of gage is 147 ft, from topographic map. Prior to May 10, 1974, at site 400 ft upstream at same datum.

REMARKS.--Records good except those for winter period, which are poor. Diversions upstream for municipal supply of Amherst. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 65.0 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,100 ft³/s, revised, Mar. 6, 1979, gage height, 9.94 ft; minimum, 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 greater than base discharge of 500 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0645	863	5.85	Apr. 6	0415	712	5.28
Feb. 16	0900	1,190	7.03	May 30	1430	*1,890	*9.32

Minimum discharge, 7.7 ft³/s Oct. 1, Sept. 27, 28; minimum daily, 7.8 ft³/s Sept. 27.

REVISIONS.--The peak discharges greater than base discharge of 500 ft³/s and annual maximum (*) for some water years have been revised as shown in the following table. They supersede figures published in WSP 2101 and the reports for 1970, 1974-77, 1979-80, 1983.

Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)	Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)
1968	Mar. 18, 1968	*1,350	7.74	1976	Jan. 28, 1976	*1,000	a*8.52
1969	Aug. 5, 1969	*1,300	*7.57	1977	Mar. 14, 1977	*1,390	*7.75
1970	Feb. 3, 1970	1,570	8.39	1979	Mar. 6, 1979	*2,100	*9.94
	Apr. 2, 1970	*1,680	*8.70	1980	Oct. 3, 1979	*1,240	*7.21
1974	Dec. 21, 1973	*2,080	*9.88		Apr. 10, 1980	1,230	7.20
1975	Sept. 27, 1975	*1,450	*7.94	1983	Apr. 20, 1983	*1,400	*7.78

a Ice jam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	14	80	60	38	154	133	55	739	35	21	11
2	46	13	57	53	37	112	139	51	416	36	17	9.7
3	30	13	51	51	40	89	140	48	307	32	16	12
4	19	13	47	49	160	79	139	141	205	30	16	23
5	15	13	48	47	200	73	221	139	150	27	16	20
6	14	14	57	48	120	101	529	94	115	31	16	14
7	13	14	243	48	90	99	254	68	100	214	16	12
8	12	13	158	45	76	77	166	86	92	186	22	12
9	13	13	95	41	64	65	129	154	75	89	19	11
10	13	13	77	39	56	62	109	104	62	54	17	11
11	12	52	71	38	62	58	98	74	56	41	16	10
12	14	54	69	36	98	54	89	74	52	39	14	10
13	65	35	416	35	105	55	81	103	49	33	15	9.6
14	46	26	732	36	111	60	92	142	49	27	16	10
15	29	22	327	36	289	66	158	132	49	24	15	11
16	22	112	179	34	916	76	237	113	44	23	12	12
17	19	130	129	33	437	118	269	88	41	28	13	11
18	19	75	102	32	414	107	158	74	45	68	12	10
19	18	43	87	32	342	125	119	65	53	70	11	10
20	16	35	69	31	260	167	107	61	45	47	46	9.3
21	14	64	56	31	194	187	97	63	39	33	31	9.0
22	13	65	60	30	145	331	84	55	35	34	19	8.2
23	13	45	90	30	118	268	79	59	32	30	16	8.1
24	58	39	70	35	162	188	111	115	36	28	16	8.1
25	46	224	58	85	169	155	107	76	43	22	13	8.1
26	30	276	53	90	163	145	90	56	39	20	12	8.1
27	22	134	50	65	115	132	75	53	33	22	12	7.8
28	19	88	70	54	117	126	66	56	31	30	12	7.9
29	17	130	200	48	190	128	61	372	29	25	12	8.1
30	15	118	110	44	---	123	58	1580	33	24	12	8.1
31	14	---	80	40	---	126	---	1530	---	25	11	---
TOTAL	722	1900	3991	1376	5288	3706	4195	5881	3094	1427	512	320.1
MEAN	23.3	63.3	129	44.4	182	120	140	190	103	46.0	16.5	10.7
MAX	65	276	732	90	916	331	529	1580	739	214	46	23
MIN	12	13	47	30	37	54	58	48	29	20	11	7.8

CAL YR 1983 TOTAL 30215.0 MEAN 82.8 MAX 1070 MIN 4.5
WTR YR 1984 TOTAL 32412.1 MEAN 88.6 MAX 1580 MIN 7.8

01171500 MILL RIVER AT NORTHAMPTON, MASS.

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. Elevation of gage is 140 ft, from topographic map.

REMARKS.--Records good except those for winter period and period of doubtful or no gage-height record, Apr. 5 to June 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, 98.0 ft³/s, 24.65 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0330	1,670	5.60	Apr. 5	--	*4,450	a*10.42
Feb. 16	0630	2,360	6.73	May 30	--	3,640	b9.02

a From highwater mark in well.

b From highwater mark.

Minimum discharge, 7.0 ft³/s Sept. 27, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	19	113	120	62	205	202	125	1000	52	20	9.0
2	17	18	93	110	64	171	238	115	850	59	18	8.1
3	17	18	84	100	72	146	263	109	467	43	27	11
4	13	20	76	98	133	135	254	450	317	36	23	27
5	12	20	86	94	127	124	1700	260	238	42	19	24
6	12	20	86	90	133	151	1800	175	199	89	18	16
7	11	20	249	86	98	137	698	150	190	279	17	12
8	10	20	163	80	86	111	484	200	154	176	16	10
9	9.2	20	116	75	79	100	376	280	126	82	15	9.4
10	9.3	24	105	71	74	94	320	187	106	57	15	9.9
11	9.8	92	98	75	71	90	283	154	92	47	14	9.8
12	21	88	98	76	90	86	274	180	78	47	14	10
13	94	45	889	83	99	80	250	190	72	37	14	16
14	63	34	1120	85	117	90	300	230	73	32	15	17
15	38	30	433	84	623	100	450	193	68	29	14	17
16	23	254	292	80	1470	119	800	160	58	29	13	16
17	19	165	221	78	554	155	500	140	55	31	12	14
18	17	83	184	76	644	129	317	126	63	77	11	12
19	19	60	162	73	451	163	263	117	90	63	11	12
20	18	49	140	69	537	237	244	111	62	38	42	11
21	17	95	130	64	349	282	220	114	51	32	24	9.8
22	33	95	140	62	260	487	189	106	44	32	17	9.0
23	28	63	160	60	222	331	179	150	39	30	15	8.2
24	77	63	140	68	334	247	390	170	39	27	14	9.5
25	48	369	110	171	299	224	280	131	65	23	12	8.4
26	33	216	90	157	459	226	204	103	50	21	11	8.1
27	30	124	90	127	274	212	174	91	40	26	11	7.3
28	29	104	110	104	246	204	156	90	36	40	11	7.6
29	27	206	180	90	270	194	142	1500	34	30	11	7.8
30	22	163	160	80	---	178	133	2500	44	25	10	7.1
31	21	---	140	67	---	172	---	1500	---	22	9.9	---
TOTAL	808.3	2597	6258	2753	8297	5380	12083	10107	4800	1653	493.9	354.0
MEAN	26.1	86.6	202	88.8	286	174	403	326	160	53.3	15.9	11.8
MAX	94	369	1120	171	1470	487	1800	2500	1000	279	42	27
MIN	9.2	18	76	60	62	80	133	90	34	21	9.9	7.1
CFSM	.48	1.60	3.74	1.64	5.30	3.22	7.46	6.04	2.96	.99	.29	.22
IN.	.56	1.79	4.31	1.90	5.72	3.71	8.32	6.96	3.31	1.14	.34	.24
CAL YR 1983	TOTAL	48789.3	MEAN 134	MAX 1490	MIN 6.4	CFSM 2.48	IN. 33.61					
WTR YR 1984	TOTAL	55584.2	MEAN 152	MAX 2500	MIN 7.1	CFSM 2.81	IN. 38.29					

CONNECTICUT RIVER BASIN

01172500 WARE RIVER NEAR BARRE, MASS.

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 east of Barre, and at mile 33.3.

DRAINAGE AREA.--55.1 mi², revised.

PERIOD OF RECORD.--Discharge: July 1946 to current year.
Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Elevation 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.--38 years, 94.4 ft³/s, 23.27 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, 826 ft³/s June 12, gage height, 5.10 ft; minimum, 2.1 ft³/s Sept. 25-30; minimum daily, 2.1 ft³/s Sept. 25-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	21	236	134	79	232	210	117	21	43	18	4.2
2	50	19	194	133	70	232	224	107	23	43	16	3.8
3	71	19	165	131	70	191	226	94	23	38	15	3.9
4	49	29	143	129	105	174	213	155	52	34	14	6.3
5	34	49	149	109	119	170	136	243	196	31	12	7.3
6	27	59	143	101	187	135	93	225	329	35	11	6.5
7	22	56	151	101	179	145	250	179	379	84	9.8	5.5
8	18	47	217	101	139	155	402	159	373	121	9.4	4.9
9	15	39	218	101	126	131	609	192	372	195	8.7	4.5
10	13	34	218	91	91	119	719	186	371	218	8.2	4.3
11	11	62	180	78	78	119	742	157	572	146	7.6	4.0
12	11	92	164	78	114	85	673	144	769	99	7.3	4.7
13	32	84	165	78	127	68	484	163	799	77	7.2	4.6
14	54	65	243	77	155	69	317	193	779	57	7.4	4.3
15	45	54	443	77	191	136	278	210	691	44	7.6	4.4
16	34	93	620	76	289	132	352	183	656	44	7.0	4.8
17	26	211	621	62	555	117	394	158	638	79	6.3	4.5
18	22	263	454	52	733	117	445	138	564	81	5.4	3.8
19	22	190	279	52	561	118	529	124	566	106	4.9	3.5
20	22	128	207	53	487	184	556	114	371	87	18	3.3
21	19	122	154	53	397	181	488	114	88	62	21	2.8
22	17	141	131	58	303	222	206	106	64	58	16	2.5
23	16	130	134	58	270	318	174	99	53	48	12	2.5
24	50	115	135	57	269	334	186	119	51	39	10	2.4
25	79	154	138	59	278	295	202	112	62	31	8.7	2.1
26	65	280	137	99	281	276	191	96	67	25	7.3	2.1
27	49	447	135	137	281	245	169	95	60	24	6.3	2.1
28	39	374	133	147	278	231	150	92	51	32	5.5	2.1
29	32	257	133	144	246	226	135	126	46	31	5.1	2.1
30	27	268	136	117	---	187	125	18	43	26	4.8	2.1
31	23	---	135	101	---	173	---	20	---	22	4.5	---
TOTAL	1001.6	3902	6711	2844	7058	5517	9878	4238	9129	2060	302.0	115.9
MEAN	32.3	130	216	91.7	243	178	329	137	304	66.5	9.74	3.86
MAX	79	447	621	147	733	334	742	243	799	218	21	7.3
MIN	7.6	19	131	52	70	68	93	18	21	22	4.5	2.1
MEAN†	32.5	131	230	85.6	245	178	319	246	191	66.4	9.52	3.79
CFSM†	.59	2.38	4.17	1.55	4.45	3.23	5.79	4.46	3.47	1.21	.17	.07
IN†	.68	2.65	4.82	1.79	4.80	3.73	6.45	5.14	3.87	1.39	.20	.08
CAL YR 1983	TOTAL	48873.0	MEAN 134	MAX 669	MIN 2.7	MEAN† 134	CFSM† 2.43	IN† 33.03				
WTR YR 1984	TOTAL	52756.5	MEAN 144	MAX 799	MIN 2.1	MEAN† 144	CFSM† 2.61	IN† 35.61				

† Adjusted for change in contents in Barre Falls Reservoir.

01173000 WARE RIVER AT INTAKE WORKS, NEAR BARRE, MASS.

LOCATION.--Lat 42°23'26", long 72°03'39", Worcester County, Hydrologic Unit 01080204, on right bank above diversion dam at Ware River intake works, 2.7 mi downstream from Burnshirt River, 3 mi southeast of Barre, and at mile 29.1.

DRAINAGE AREA.--96.3 mi² revised.

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 above 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 U. S. Army Corps of Engineers; 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.--56 years, 168 ft³/s, 23.69 in/yr, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s Sept. 21, 1938, gage height, 664.28 ft, by computation of flow over dam; minimum daily, 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, 1,400 ft³/s May 31; minimum daily, 11 ft³/s Sept. 28-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	38	349	222	138	419	341	205	950	88	50	17
2	106	38	294	217	130	368	365	184	751	88	61	17
3	108	38	253	212	131	313	392	181	573	78	42	17
4	80	84	186	207	212	263	385	371	418	71	37	22
5	59	86	289	172	259	272	621	451	463	67	35	26
6	49	94	252	172	319	237	858	379	536	78	33	22
7	42	88	378	172	291	249	773	276	566	224	32	20
8	38	75	376	159	189	241	766	287	534	260	33	18
9	34	55	388	139	160	171	905	337	511	284	31	17
10	30	62	330	158	176	183	1010	304	494	302	29	17
11	28	119	285	140	143	153	1050	257	741	213	28	17
12	32	159	272	139	200	150	886	252	958	160	28	18
13	80	130	460	138	235	138	627	286	996	142	27	17
14	97	103	718	137	281	139	491	337	986	114	27	17
15	78	91	825	137	435	218	482	343	925	87	22	17
16	60	232	929	134	954	208	598	298	885	98	16	17
17	49	389	888	124	1110	199	622	259	841	137	13	16
18	44	404	641	111	1290	199	630	229	713	155	12	15
19	44	258	396	112	932	221	670	210	678	207	22	15
20	43	172	304	108	727	316	682	197	408	172	38	14
21	39	256	257	106	655	320	582	193	156	140	42	14
22	36	226	244	108	517	437	338	182	139	137	42	13
23	38	193	259	105	460	525	295	180	112	105	31	12
24	103	180	239	125	522	518	320	222	104	84	27	12
25	123	483	216	150	513	453	327	187	124	69	25	12
26	100	568	225	212	500	427	306	166	127	57	23	12
27	82	644	218	261	412	383	274	173	117	58	22	12
28	39	543	245	235	432	360	242	207	100	71	21	11
29	68	463	307	213	410	337	229	574	97	66	20	11
30	50	437	268	166	---	320	246	1170	82	61	19	11
31	29	---	239	179	---	297	---	1400	---	49	18	---
TOTAL	1840	6708	11530	4970	12733	9034	16313	10297	15085	3922	906	476
MEAN	59.4	224	372	160	439	291	544	332	503	127	29.2	15.9
MAX	123	644	929	261	1290	525	1050	1400	996	302	61	26
MIN	28	38	186	105	130	138	229	166	82	49	12	11
MEAN†	59.5	225	386	154	441	292	533	441	390	126	29.0	15.8
CFSM†	.62	2.34	4.01	1.60	4.58	3.03	5.53	4.58	4.05	1.31	.30	.16
INT†	.71	2.60	4.62	1.85	4.94	3.49	6.18	5.28	4.52	1.51	.35	.18

CAL YR 1983 TOTAL 85705 MEAN 235 MAX 941 MIN 13 MEAN† 235 CFSM† 2.44 INT† 33.13
WTR YR 1984 TOTAL 93814 MEAN 256 MAX 1400 MIN 11 MEAN† 256 CFSM† 2.66 INT† 36.24

† Adjusted for change in contents in Barre Falls Reservoir.

CONNECTICUT RIVER BASIN

01173500 WARE RIVER AT GIBBS CROSSING, MASS.

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

DRAINAGE AREA.--197 mi², revised.

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 above 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 96.3 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; 54 years (water years 1931-84), affected by diversion and storage, 284 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, 4,580 ft³/s May 31, gage height, 7.88 ft; minimum, 16 ft³/s Sept. 29; minimum daily, 17 ft³/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	99	360	290	280	781	730	370	3410	148	68	36
2	88	64	323	290	250	481	880	294	2170	156	36	38
3	163	84	298	280	255	401	986	315	1870	153	93	56
4	128	72	292	275	350	366	1040	610	1350	144	77	36
5	106	149	277	250	450	356	1260	835	1040	120	74	50
6	96	150	282	250	420	417	2660	680	998	155	93	47
7	65	128	502	250	360	449	1920	541	1010	396	83	44
8	60	133	502	240	320	382	1540	598	998	776	82	44
9	63	95	381	230	280	349	1400	813	890	510	39	42
10	49	96	349	230	290	380	1480	762	797	496	50	42
11	83	138	336	230	270	326	1510	625	706	457	56	42
12	41	168	300	230	310	345	1510	553	482	334	56	43
13	37	190	608	225	350	288	1290	664	543	218	86	41
14	155	171	1230	220	420	288	1050	806	598	197	31	40
15	141	150	893	220	615	442	1050	851	651	164	78	40
16	103	274	671	215	1460	456	1260	740	672	133	63	40
17	83	442	566	210	1360	466	1460	619	619	250	43	40
18	101	325	441	210	1410	463	1250	526	578	261	42	39
19	66	252	401	205	1410	485	1180	468	453	426	42	36
20	82	184	334	200	859	690	1160	439	417	390	56	35
21	80	271	320	200	697	956	1140	429	413	272	45	34
22	66	297	293	200	562	1200	934	406	209	246	78	33
23	68	234	320	205	490	1280	669	380	207	224	61	32
24	125	189	310	230	592	1170	701	479	185	171	65	43
25	155	534	290	260	661	1050	758	404	202	116	39	41
26	165	711	300	380	561	947	693	376	202	131	40	42
27	100	454	310	400	473	886	613	372	196	122	55	31
28	142	361	310	370	612	801	545	371	179	123	42	18
29	98	446	350	330	956	775	494	1010	164	124	88	17
30	92	436	340	290	---	741	457	3760	168	89	44	19
31	82	---	310	290	---	690	---	4310	---	178	36	---
TOTAL	2936	7297	12799	7905	17323	19107	33620	24406	22377	7680	1841	1141
MEAN	94.7	243	413	255	597	616	1121	787	746	248	59.4	38.0
MAX	165	711	1230	400	1460	1280	2660	4310	3410	776	93	56
MIN	37	64	277	200	250	288	457	294	164	89	31	17
CAL YR 1983	TOTAL	128707	MEAN	353	MAX	2430	MIN	21				
WTR YR 1984	TOTAL	158432	MEAN	433	MAX	4310	MIN	17				

01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MASS.

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

DRAINAGE AREA.--43.7 mi².

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

Water-quality records: Water year 1957.

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

REMARKS.--Records good except those for period of backwater from Quabbin Reservoir, Mar. 6 to July 13, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--47 years, 70.3 ft³/s, 21.85 in/yr.

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

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 26	0300	378	20.26	Apr. 6	0700	998	21.17
Dec. 14	1500	574	20.55	May 31	1800	*1,650	*22.02
Feb. 16	1800	867	20.96				

Minimum discharge, 3.7 ft³/s Sept. 27-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	22	136	90	55	155	115	69	1100	26	21	6.5
2	24	21	110	79	47	133	137	69	549	28	19	5.6
3	28	21	96	73	48	116	166	59	521	28	18	6.1
4	27	28	93	69	102	103	201	115	381	26	16	8.8
5	23	35	89	65	169	98	305	207	288	24	14	8.8
6	21	36	84	67	159	109	900	147	242	24	13	8.1
7	18	35	166	69	125	112	598	99	222	97	14	6.8
8	15	31	209	66	95	99	364	95	190	183	16	6.2
9	13	28	151	60	81	92	241	150	161	121	14	5.7
10	12	27	121	62	72	76	187	130	136	94	12	5.5
11	10	46	107	70	74	72	163	98	133	74	11	5.9
12	11	71	96	55	97	66	150	98	119	49	11	7.3
13	25	62	171	51	116	69	136	114	111	41	9.9	6.5
14	37	47	507	53	123	81	134	143	115	32	9.9	7.3
15	36	39	430	53	182	74	174	177	117	29	9.5	14
16	30	93	272	50	699	74	220	134	92	35	8.9	13
17	24	176	193	48	650	82	316	109	87	77	8.1	11
18	22	138	151	47	490	83	221	99	70	144	7.5	9.1
19	23	98	130	49	432	99	154	90	88	277	6.5	8.0
20	21	74	105	47	336	129	142	80	76	156	21	7.0
21	18	79	84	45	281	159	151	78	68	94	18	6.7
22	17	90	92	43	224	229	128	72	59	72	15	5.9
23	16	79	99	42	183	271	106	75	53	54	15	5.2
24	38	70	95	47	198	227	111	92	40	44	14	5.2
25	52	211	80	83	224	183	127	86	46	35	12	5.0
26	47	335	70	110	208	164	110	81	53	28	10	4.9
27	39	221	68	99	177	152	91	74	38	27	8.9	4.5
28	33	157	72	86	169	141	91	73	34	28	8.1	3.7
29	29	160	125	73	176	149	83	221	30	28	7.6	3.7
30	25	166	140	67	---	134	71	1180	29	26	7.2	3.7
31	23	---	111	65	---	118	---	1530	---	23	7.3	---
TOTAL	770	2696	4453	1983	5992	3849	6093	5844	5248	2024	383.4	205.7
MEAN	24.8	89.9	144	64.0	207	124	203	189	175	65.3	12.4	6.86
MAX	52	335	507	110	699	271	900	1530	1100	277	21	14
MIN	10	21	68	42	47	66	71	59	29	23	6.5	3.7
CFSM	.57	2.06	3.30	1.46	4.74	2.84	4.65	4.32	4.00	1.49	.28	.16
IN.	.66	2.29	3.79	1.69	5.10	3.28	5.19	4.97	4.47	1.72	.33	.18

CAL YR 1983	TOTAL	35336.4	MEAN	96.8	MAX	530	MIN	3.4	CFSM	2.22	IN.	30.08
WTR YR 1984	TOTAL	39541.1	MEAN	108	MAX	1530	MIN	3.7	CFSM	2.47	IN.	33.66

01174600 CADWELL CREEK NEAR PELHAM, MASS.

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.--0.60 mi², revised.

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Elevation of gage is 860 ft, from topographic map.

REMARKS.--Records good except those for period of doubtful gage height record, Aug. 9 to Sept. 17, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--23 years, 1.17 ft³/s, 26.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 62 ft³/s, revised, Mar. 6, 1979, gage height, 5.26 ft; no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 19 ft³/s, revised, and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0045	22	4.62	Apr. 5	2145	22	4.61
Feb. 16	0300	27	4.73	May 29	1915	*50	*5.11

No flow part of each day Sept. 17-19, 21, 22, 25.

REVISIONS.--The peak discharges greater than base discharge of 19 ft³/s and annual maximum (*) for some water years have been revised, as shown in the following table. They supersede figures published in WSP 1901, 2101, and the reports for 1971-77, 1979-80, 1982-83.

Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)	Water Year	Date	Discharge (ft ³ /s)	Gage height (ft)
1962	Apr. 1, 1962	*35	*4.88	1976	Jan. 27, 1976	33	4.85
1964	Jan. 25, 1964	*25	*4.68		Apr. 1, 1976	*36	*4.90
1968	Mar. 18, 1968	*31	4.81	1977	Mar. 13, 1977	*52	*5.14
1969	Aug. 5, 1969	*35	*4.88		Aug. 1, 1977	30	4.79
1970	Dec. 11, 1969	33	4.86	1979	Jan. 8, 1979	26	4.70
	Feb. 3, 1970	*46	*5.06		Mar. 6, 1979	*62	*5.26
	Mar. 27, 1970	31	4.82		Apr. 27, 1979	43	5.02
	Apr. 2, 1970	44	5.03	1980	Oct. 1, 1979	27	4.74
1972	Mar. 22, 1972	*38	*4.94		Oct. 3, 1979	*61	*5.25
	June 1, 1972	37	4.92		Mar. 18, 1980	30	4.80
1973	Dec. 7, 1972	35	4.88		Mar. 21, 1980	41	4.99
	Feb. 2, 1973	a*43	b*5.09		Apr. 10, 1980	48	5.09
	Apr. 2, 1973	32	4.83	1982	June 2, 1982	31	4.81
	May 21, 1973	33	4.85		June 6, 1982	*41	*4.98
1974	Dec. 21, 1973	*48	*5.08	1983	Jan. 11, 1983	30	4.79
1975	Mar. 20, 1975	25	4.68		Feb. 3, 1983	39	4.96
	Apr. 3, 1975	32	4.84		Apr. 10, 1983	35	4.89
	July 14, 1975	30	4.80		Apr. 19, 1983	*45	*5.05
	Sept. 25, 1975	25	4.68				
	Sept. 27, 1975	*49	*5.10				

a About.

b Ice jam.

01174600 CADWELL CREEK NEAR PELHAM, MASS.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.09	1.6	1.1	.59	2.2	3.0	.83	8.7	.54	.06	.01
2	.42	.10	1.3	.98	.58	1.6	3.8	.76	7.0	.42	.05	.01
3	.18	.12	1.1	.94	.70	1.3	3.8	.75	4.2	.27	.05	.02
4	.07	.23	1.1	.89	5.0	1.2	3.2	5.6	2.7	.23	.05	.10
5	.04	.23	.98	.94	3.3	1.2	10	3.2	1.9	.19	.04	.08
6	.05	.22	1.9	.87	2.1	1.8	9.7	1.9	1.5	.34	.03	.05
7	.04	.19	7.2	.87	1.5	1.5	4.1	1.4	1.3	8.3	.13	.02
8	.03	.15	2.6	.79	1.3	1.1	2.7	2.9	1.0	2.6	.48	.02
9	.03	.13	1.6	.69	.97	.95	2.0	3.3	.77	1.2	.16	.01
10	.01	.16	1.5	.66	.84	.84	1.7	1.9	.62	.73	.10	.01
11	.01	1.6	1.4	.68	1.4	.75	1.5	1.4	.52	.53	.07	.01
12	.12	.86	1.4	.63	2.6	.71	1.4	2.0	.41	.45	.06	.01
13	1.5	.49	13	.60	2.6	.63	1.3	2.5	.32	.29	.05	.01
14	.57	.36	13	.61	2.8	.78	2.0	5.1	.40	.21	.04	.01
15	.20	.31	4.4	.59	12	.91	3.1	2.8	.34	.16	.03	.01
16	.12	4.7	2.6	.56	17	1.2	7.1	2.2	.26	.15	.02	.01
17	.08	2.4	2.0	.54	5.5	2.0	4.4	1.7	.22	.13	.02	.01
18	.07	1.1	1.6	.53	9.3	1.5	2.5	1.4	.45	.96	.01	.01
19	.15	.77	1.4	.53	4.9	1.7	2.0	1.2	.54	.68	.02	.01
20	.13	.59	1.1	.49	3.8	3.0	1.8	1.1	.29	.30	.36	.01
21	.08	2.2	.90	.46	2.7	4.5	1.5	1.2	.20	.29	.13	.01
22	.07	1.4	1.2	.56	2.1	8.3	1.3	.92	.16	.39	.06	.01
23	.11	.90	1.5	.44	1.7	5.3	1.3	1.7	.14	.22	.05	.01
24	1.6	.99	1.2	.98	3.1	3.5	2.2	2.4	.19	.16	.03	.01
25	.53	9.9	1.1	1.9	2.6	3.2	1.9	1.4	.38	.11	.02	.01
26	.32	3.7	.94	1.4	2.1	3.1	1.5	1.2	.22	.08	.02	.01
27	.24	2.2	.81	1.2	1.6	2.7	1.2	1.1	.15	.17	.01	.01
28	.19	1.8	1.7	.95	2.1	2.6	1.1	1.5	.11	.29	.01	.01
29	.15	4.2	4.7	.81	3.8	2.4	.96	23	1.7	.17	.01	.01
30	.13	2.3	2.2	.70	---	2.1	.91	37	.61	.11	.01	.01
31	.10	---	1.4	.66	---	2.0	---	27	---	.08	.01	---
TOTAL	7.41	44.39	80.43	24.55	100.58	66.57	84.97	142.36	37.30	20.75	2.19	.53
MEAN	.24	1.48	2.59	.79	3.47	2.15	2.83	4.59	1.24	.67	.07	.02
MAX	1.6	9.9	13	1.9	17	8.3	10	37	8.7	8.3	.48	.10
MIN	.01	.09	.81	.44	.58	.63	.91	.75	.11	.08	.01	.01
CFSM	.40	2.47	4.32	1.32	5.78	3.58	4.72	7.65	2.07	1.12	.12	.03
IN.	.46	2.75	4.99	1.52	6.24	4.13	5.27	8.83	2.31	1.29	.14	.03
CAL YR 1983	TOTAL	561.29	MEAN	1.54	MAX	17	MIN	.00	CFSM	2.57	IN.	34.80
WTR YR 1984	TOTAL	612.03	MEAN	1.67	MAX	37	MIN	.01	CFSM	2.78	IN.	37.95

CONNECTICUT RIVER BASIN

01174900 CADWELL CREEK NEAR BELCHERTOWN, MASS.

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

DRAINAGE AREA.--2.55 mi², revised.

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Elevation 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.--23 years, 4.95 ft³/s, 26.36 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 greater than base discharge of 75 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
May 29	1945	*180	*7.01				

Minimum discharge, 0.14 ft³/s Oct. 1, Sept. 22, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	.65	6.8	4.9	2.8	9.0	12	4.1	40	3.4	.72	.19
2	2.7	.63	5.7	4.4	2.9	7.0	16	3.8	32	2.8	.62	.18
3	1.0	.68	5.2	4.3	3.1	5.9	17	3.8	21	2.1	.59	.29
4	.59	1.2	5.0	4.1	18	5.5	14	21	14	1.8	.57	1.3
5	.41	1.2	4.6	4.0	12	5.2	33	12	10	1.5	.49	.74
6	.39	1.2	7.1	4.1	8.3	7.2	35	7.7	8.2	2.4	.47	.47
7	.29	.99	26	4.0	6.1	6.4	19	6.1	7.2	34	.81	.35
8	.24	.83	11	3.7	4.9	5.1	12	12	6.0	12	2.5	.29
9	.23	.76	7.3	3.3	4.7	4.2	9.5	13	4.9	6.2	1.1	.25
10	.22	.75	6.7	3.2	4.3	4.0	8.2	7.9	4.2	4.7	.79	.23
11	.21	5.5	6.1	3.2	5.7	3.8	7.3	6.3	3.5	3.7	.65	.21
12	.47	3.2	6.0	3.0	9.0	3.5	6.6	8.0	2.9	3.1	.57	.25
13	6.4	2.1	42	2.9	8.9	3.2	6.1	9.5	2.6	2.0	.59	.21
14	2.6	1.6	47	3.0	9.7	3.7	8.8	21	3.0	1.5	.52	.23
15	1.2	1.3	20	3.0	35	4.2	13	12	2.5	1.2	.44	.31
16	.80	18	12	2.8	54	5.1	26	9.2	2.1	1.2	.34	.35
17	.63	9.1	8.9	2.8	24	7.7	19	9.4	1.9	1.1	.29	.24
18	.58	4.6	7.3	2.7	35	6.0	11	6.5	2.8	7.1	.25	.20
19	.96	3.3	6.3	2.7	22	7.0	8.9	5.8	3.7	5.1	.26	.19
20	.74	2.8	4.8	2.5	18	11	8.0	5.2	2.2	2.7	2.8	.17
21	.60	7.5	4.5	2.5	12	16	7.0	5.3	1.6	2.4	.94	.16
22	.53	5.4	5.4	2.5	9.4	28	6.1	4.4	1.3	2.9	.61	.15
23	.64	3.8	6.9	2.6	8.1	21	6.0	7.3	1.2	1.9	.63	.15
24	6.7	4.0	5.4	3.5	14	15	9.5	11	1.6	1.5	.56	.16
25	2.6	35	4.5	8.8	11	14	7.9	6.6	2.5	1.1	.40	.16
26	1.6	16	4.2	5.6	8.9	13	6.4	5.2	1.7	.89	.31	.15
27	1.2	9.2	4.0	4.7	7.1	12	5.5	5.3	1.2	1.6	.28	.15
28	1.0	7.8	6.0	4.0	9.3	12	5.0	6.2	1.0	2.1	.26	.16
29	.85	16	17	3.7	16	11	4.6	77	7.1	1.3	.25	.17
30	.72	9.4	8.4	3.3	---	9.3	4.4	139	4.1	1.0	.25	.16
31	.69	---	5.9	3.2	---	8.8	---	108	---	.87	.24	---
TOTAL	38.51	174.49	318.0	113.0	384.2	274.8	352.8	559.6	198.0	117.16	20.10	8.22
MEAN	1.24	5.82	10.3	3.65	13.2	8.86	11.8	18.1	6.60	3.78	.65	.27
MAX	6.7	35	47	8.8	54	28	35	139	40	34	2.8	1.3
MIN	.21	.63	4.0	2.5	2.8	3.2	4.4	3.8	1.0	.87	.24	.15
CFSM	.49	2.28	4.04	1.43	5.18	3.47	4.63	7.10	2.59	1.48	.25	.11
IN.	.56	2.55	4.64	1.65	5.60	4.01	5.15	8.16	2.89	1.71	.29	.12
CAL YR 1983	TOTAL	2345.81	MEAN	6.43	MAX	71	MIN	.09	CFSM	2.52	IN.	34.22
WTR YR 1984	TOTAL	2558.88	MEAN	6.99	MAX	139	MIN	.15	CFSM	2.74	IN.	37.33

CONNECTICUT RIVER BASIN

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01175500 SWIFT RIVER AT WEST WARE, MASS.

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

DRAINAGE AREA.--189 mi², revised, 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 above 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, 22.56 in/yr; 45 years (water years 1940-84), affected by storage and diversions, 98.9 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft³/s Mar. 19, 1936, gage height, 15.00 ft; minimum daily, 9.1 ft³/s Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 3,070 ft³/s June 1, 1984, gage height, 11.58 ft.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,070 ft³/s June 1, gage height, 11.58 ft; minimum daily, 32 ft³/s Jan. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	134	125	42	116	124	664	590	3040	252	120	121
2	132	134	122	42	117	123	657	548	2980	207	120	121
3	130	134	122	42	117	122	660	514	2730	171	119	121
4	130	134	123	42	117	122	679	683	2510	145	121	79
5	130	135	122	42	118	123	792	740	2270	128	121	52
6	132	135	123	42	118	124	1090	741	2050	128	122	44
7	132	135	126	42	117	125	1230	722	1830	188	124	49
8	132	135	124	42	117	129	1280	725	1630	258	126	49
9	132	134	122	41	117	151	1220	761	1440	232	125	49
10	132	134	123	42	117	142	1150	731	1280	211	125	48
11	132	136	123	32	118	143	1060	673	1150	182	124	48
12	133	135	84	52	118	148	985	676	1090	164	123	48
13	134	135	51	42	118	173	928	701	1010	135	110	48
14	133	135	49	42	118	296	922	793	1020	130	98	48
15	132	135	46	42	123	261	984	770	1010	128	121	48
16	132	140	44	42	125	253	1090	757	901	128	122	48
17	131	137	44	41	123	284	1130	721	804	128	122	48
18	131	134	43	41	127	274	1120	671	779	97	123	48
19	132	135	43	42	124	322	1070	612	791	124	123	48
20	132	129	43	42	125	350	1010	582	798	122	123	48
21	131	126	42	42	123	388	996	568	710	123	123	48
22	132	125	43	41	123	451	889	504	623	121	122	48
23	132	125	43	41	123	513	831	504	554	118	121	48
24	135	126	43	41	126	548	865	589	498	119	121	48
25	134	134	43	43	123	567	831	536	477	121	121	48
26	132	126	42	41	130	590	792	511	461	120	121	47
27	132	124	42	41	133	574	734	555	390	120	120	46
28	132	125	44	41	134	592	692	561	335	121	121	52
29	134	126	45	41	131	717	644	858	318	121	121	92
30	134	125	43	79	---	690	594	1780	291	121	121	109
31	134	---	42	115	---	696	---	2730	---	121	120	---
TOTAL	4097	3957	2274	1403	3536	10115	27589	23407	35770	4584	3744	1799
MEAN	132	132	73.4	45.3	122	326	920	755	1192	148	121	60.0
MAX	135	140	126	115	134	717	1280	2730	3040	258	126	121
MIN	130	124	42	32	116	122	594	504	291	97	98	44

CAL YR 1983 TOTAL 68266 MEAN 187 MAX 1150 MIN 29
WTR YR 1984 TOTAL 122275 MEAN 334 MAX 3040 MIN 32

CONNECTICUT RIVER BASIN

01175670 SEVENMILE RIVER NEAR SPENCER, MASS.

LOCATION.--Lat 42°15'54", long 72°00'19", Worcester County, Hydrologic Unit 01080204, on right bank 40 ft upstream from bridge on Cooney Road and 1.5 mi north of Spencer.

DRAINAGE AREA.--8.68 mi², revised.

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. Elevation of gage is 630 ft, from topographic map. Prior to Sept. 25, 1984, at datum 8.83 ft higher.

REMARKS.--Records good except those for period of no gage-height record or indefinite stage-discharge relation, Aug. 16 to Sept. 24, which are poor. Occasional regulation by ponds upstream since 1971. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--24 years, 14.8 ft³/s, 23.15 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 greater than base discharge of 60 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Nov. 25	1700	141	3.42	Feb. 24	1915	64	3.05
Dec. 7	1000	67	3.07	Apr. 5	2400	260	*3.82
Dec. 14	0945	143	3.43	May 31	1715	*349	3.77
Feb. 19	0215	79	3.14				

Minimum discharge not determined, minimum daily, 0.29 ft³/s Sept. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.6	37	21	13	45	28	14	223	9.4	2.6	.34
2	7.3	2.5	32	20	12	36	31	13	171	8.5	2.0	.32
3	5.5	2.0	29	19	14	31	36	12	145	8.3	2.3	.30
4	4.2	4.0	26	19	25	28	39	23	99	8.4	2.1	1.6
5	1.7	5.5	29	18	40	25	118	33	71	6.9	1.6	.92
6	3.7	5.2	27	18	35	23	204	26	52	7.7	1.2	.50
7	2.0	4.5	58	17	28	22	118	20	43	28	8.6	.45
8	1.2	4.0	45	16	23	21	80	21	36	35	7.0	.42
9	1.4	3.8	35	15	20	20	59	26	30	21	4.2	.41
10	1.6	5.5	31	14	17	19	47	22	26	18	3.4	.40
11	1.5	8.4	28	13	17	18	39	19	22	14	2.9	.40
12	1.6	9.6	25	12	21	18	34	19	19	11	2.4	.45
13	4.1	7.4	75	12	24	19	30	20	16	9.0	2.0	.40
14	3.0	6.3	128	11	27	20	29	22	16	7.6	1.9	.45
15	3.3	5.5	98	11	31	19	31	21	15	7.0	2.0	.90
16	3.5	24	85	10	45	20	36	18	13	7.5	.50	.60
17	3.1	30	61	10	59	20	37	16	12	10	.44	.50
18	2.6	19	47	10	70	21	32	11	10	9.9	.39	.44
19	2.9	16	40	10	76	23	28	6.1	12	11	.35	.39
20	2.5	13	36	10	67	34	24	5.0	12	8.3	1.7	.36
21	2.3	15	35	9.8	59	40	22	4.5	11	7.4	.80	.33
22	1.9	15	31	9.6	50	55	20	3.6	9.3	7.9	.50	.31
23	2.2	15	32	9.5	44	51	18	5.5	8.2	6.5	.43	.30
24	5.3	14	28	11	56	42	24	11	11	5.5	.87	.29
25	6.5	86	26	25	58	35	25	7.4	11	4.6	.69	.29
26	8.3	81	24	28	49	31	22	5.0	11	3.9	.50	.52
27	5.2	57	23	22	42	28	18	4.1	11	4.0	.46	.74
28	4.1	45	25	19	41	25	16	3.5	9.4	4.5	.43	.86
29	3.7	55	35	17	51	25	17	35	12	4.1	.41	.86
30	2.3	46	23	16	---	28	15	159	10	3.3	.39	.80
31	2.5	---	22	15	---	27	---	265	---	2.8	.37	---
TOTAL	102.2	607.8	1276	467.9	1114	869	1277	870.7	1146.9	301.0	55.43	15.85
MEAN	3.30	20.3	41.2	15.1	38.4	28.0	42.6	28.1	38.2	9.71	1.79	.53
MAX	8.3	86	128	28	76	55	204	265	223	35	8.6	1.6
MIN	1.2	2.0	22	9.5	12	18	15	3.5	8.2	2.8	.35	.29
CFSM	.38	2.34	4.75	1.74	4.42	3.23	4.91	3.24	4.40	1.12	.21	.06
IN.	.44	2.60	5.47	2.01	4.77	3.72	5.47	3.73	4.92	1.29	.24	.07
CAL YR 1983	TOTAL	8255.80	MEAN	22.6	MAX	168	MIN	.24	CFSM	2.60	IN.	35.38
WTR YR 1984	TOTAL	8103.78	MEAN	22.1	MAX	265	MIN	.29	CFSM	2.55	IN.	34.73

01176000 QUABOAG RIVER AT WEST BRIMFIELD, MASS.

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

DRAINAGE AREA.--150 mi², revised.

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. Elevation 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.--72 years (water years 1913-84), 247 ft³/s, 22.36 in/yr.

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	2130	1,040	5.57	Apr. 7	1300	1,490	6.34
Feb. 19	2330	861	5.22	June 2	1300	*2,510	*7.66

Minimum discharge, 28 ft³/s Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	99	518	420	230	684	583	410	2210	128	79	33
2	128	97	494	400	210	654	605	378	2420	125	73	30
3	136	96	475	390	210	614	626	371	2350	134	69	31
4	134	112	463	380	310	575	639	484	2140	151	66	42
5	129	136	453	360	350	546	821	528	1870	129	64	40
6	119	138	444	347	375	559	1330	514	1620	135	63	38
7	108	129	556	331	370	537	1470	501	1400	289	67	37
8	100	138	519	306	316	507	1460	511	1220	310	67	36
9	93	124	518	300	310	483	1360	527	1050	300	74	34
10	86	124	495	293	280	453	1220	499	905	303	77	33
11	82	169	480	290	280	424	1090	480	784	293	74	33
12	79	162	465	280	280	325	982	472	679	274	70	34
13	111	153	628	270	280	381	881	471	599	251	67	32
14	126	157	829	260	290	369	823	483	533	230	65	34
15	109	155	1000	240	460	361	802	464	467	209	62	35
16	102	278	1020	230	633	373	884	443	416	188	56	34
17	100	297	964	215	684	387	857	422	364	174	53	32
18	95	272	891	210	800	397	804	395	331	177	51	32
19	98	276	826	205	846	421	764	369	306	180	48	31
20	93	276	750	200	847	489	711	342	273	171	50	30
21	89	296	650	200	817	576	647	324	243	163	47	37
22	83	291	580	195	773	727	605	301	217	160	46	45
23	80	278	520	180	730	741	581	297	193	146	45	48
24	117	271	460	190	749	728	592	334	184	133	44	47
25	121	489	400	250	743	718	566	315	179	121	42	70
26	122	507	390	280	697	686	542	296	168	113	42	90
27	118	508	380	275	682	650	525	282	154	110	40	43
28	109	513	400	270	709	621	498	273	129	107	39	43
29	106	577	500	260	737	621	466	593	128	98	38	42
30	105	550	470	245	---	581	439	1220	127	93	37	41
31	103	---	450	230	---	572	---	1990	---	85	36	---
TOTAL	3260	7668	17988	8502	14998	16760	24173	15289	23659	5480	1751	1187
MEAN	105	256	580	274	517	541	806	493	789	177	56.5	39.6
MAX	136	577	1020	420	847	741	1470	1990	2420	310	79	90
MIN	79	96	380	180	210	325	439	273	127	85	36	30
CFSM	.70	1.71	3.87	1.83	3.45	3.61	5.37	3.29	5.26	1.18	.38	.26
IN.	.81	1.90	4.46	2.11	3.72	4.16	5.99	3.79	5.87	1.36	.43	.29

CAL YR 1983	TOTAL	132088	MEAN	362	MAX	1620	MIN	24	CFSM	2.41	IN.	32.76
WTR YR 1984	TOTAL	140715	MEAN	384	MAX	2420	MIN	30	CFSM	2.56	IN.	34.90

01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MASS.

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

DRAINAGE AREA.--689 mi², revised.

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. Elevation 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, Oct. 3 to Nov. 16, 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.--56 years, 914 ft³/s.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 14,500 ft³/s May 31, gage height, 13.96 ft; minimum daily, 124 ft³/s Sept. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	327	390	1250	1170	838	2210	2400	1730	13100	848	492	252
2	511	400	1070	1080	829	1810	2590	1580	10500	799	435	201
3	480	420	1160	1040	752	1590	2700	1500	9300	752	339	278
4	540	540	1080	1000	1350	1470	2710	2010	7700	794	405	526
5	430	480	1080	980	1610	1380	3060	2790	6600	715	422	192
6	540	430	1140	1000	1500	1500	5580	2520	5700	660	373	256
7	540	410	1510	1000	1290	1610	5600	2190	5000	1230	428	182
8	430	400	1690	920	1070	1480	4930	2210	4400	2160	554	191
9	430	400	1530	850	997	1350	4470	2590	3900	1630	458	215
10	480	500	1450	780	908	1260	4190	2500	3450	1430	348	291
11	480	600	1260	870	941	1120	4020	2230	3130	1310	382	167
12	540	700	1200	850	1110	1010	3840	2030	2770	1060	381	193
13	540	650	1200	820	1160	1060	3560	2250	2530	907	384	297
14	540	600	2980	770	1140	944	3200	2430	2640	797	312	188
15	480	600	2840	760	1350	1320	3360	2500	2540	753	365	176
16	480	540	2350	733	2520	1410	3790	2360	2370	737	360	192
17	480	1200	2050	695	3160	1490	4270	2170	2170	728	343	275
18	430	940	1820	661	2800	1580	3820	1990	2050	751	306	166
19	540	790	1630	689	3140	1610	3590	1840	2000	962	309	124
20	430	720	1510	728	2590	1970	3340	1710	1850	967	336	224
21	480	790	1320	582	2200	2450	3100	1660	1730	831	351	177
22	480	790	1320	842	1970	3140	2900	1580	1510	807	291	183
23	430	720	1330	459	1800	3280	2700	1470	1220	733	322	229
24	540	720	1290	598	1950	3020	2600	1850	1220	685	325	177
25	600	1400	1170	835	2110	2810	2620	1730	1270	590	333	176
26	540	1900	1170	1240	1920	2670	2520	1550	1160	499	312	285
27	480	1400	1130	1160	1730	2500	2310	1540	1040	531	365	243
28	430	1400	970	1010	1770	2390	2130	1490	934	569	176	159
29	400	1400	1660	863	2460	2340	1980	2510	902	532	296	199
30	380	1430	1630	780	---	2360	1850	8230	896	513	359	236
31	300	---	1330	857	---	2370	---	12600	---	481	301	---
TOTAL	14708	23660	46120	26622	48965	58504	99730	79340	105582	26761	11163	6650
MEAN	474	789	1488	859	1688	1887	3324	2559	3519	863	360	222
MAX	600	1900	2980	1240	3160	3280	5600	12600	13100	2160	554	526
MIN	300	390	970	459	752	944	1850	1470	896	481	176	124

CAL YR 1983 TOTAL 433680 MEAN 1188 MAX 7530 MIN 130
WTR YR 1984 TOTAL 547805 MEAN 1497 MAX 13100 MIN 124

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MASS.

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

DRAINAGE AREA.--161 mi², revised.

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

REMARKS.--Records 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.--75 years, 330 ft³/s, 27.83 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, 3,410 ft³/s June 8, gage height, 6.05 ft; minimum, 2.6 ft³/s Oct. 25; minimum daily, 20 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	47	594	306	165	469	319	431	95	165	54	28
2	33	44	365	304	165	443	326	382	618	174	48	26
3	43	43	296	301	163	447	336	344	1730	125	45	29
4	37	45	284	298	172	411	457	876	1760	103	53	53
5	32	50	213	268	399	388	299	1370	1940	97	46	59
6	30	54	200	260	584	391	844	919	2510	213	93	43
7	29	57	534	287	417	398	1670	520	3110	538	66	34
8	29	52	738	255	265	296	1630	513	3330	787	52	30
9	27	47	694	226	210	265	2170	937	3280	705	46	27
10	26	44	636	221	240	255	2380	614	3130	221	43	25
11	25	123	459	204	242	243	2540	465	3040	161	42	24
12	30	320	343	185	247	238	2550	523	3040	153	41	27
13	171	171	280	175	365	225	2070	849	2060	124	40	34
14	148	120	135	173	489	207	1510	909	1510	100	40	33
15	98	100	606	207	490	221	1000	902	1180	85	37	52
16	65	375	1900	197	681	237	1210	644	325	80	35	46
17	58	714	2250	155	1760	375	2230	481	169	92	34	38
18	61	305	2160	177	2350	437	2540	411	163	166	31	32
19	59	205	2450	186	1560	413	2660	365	250	258	30	29
20	55	179	2390	183	1170	420	2740	338	265	141	190	30
21	48	326	1240	146	1940	573	2620	345	169	103	116	29
22	42	520	397	155	2500	802	2480	295	133	92	68	26
23	41	250	305	146	2570	917	2070	328	116	80	51	25
24	169	217	321	185	2440	869	1730	829	107	71	47	26
25	158	537	306	225	2070	770	1710	346	137	61	43	35
26	100	725	273	354	1870	413	1350	254	121	54	37	29
27	79	702	261	324	1570	267	882	261	99	57	34	22
28	69	738	261	229	1160	287	665	268	88	106	30	22
29	59	559	628	217	767	300	597	645	81	92	28	21
30	51	626	597	224	---	308	511	166	195	71	26	20
31	47	---	367	195	---	314	---	103	---	61	26	---
TOTAL	1940	8295	22483	6968	29021	12599	46096	16633	34751	5336	1572	954
MEAN	62.6	277	725	225	1001	406	1537	537	1158	172	50.7	31.8
MAX	171	738	2450	354	2570	917	2740	1370	3330	787	190	59
MIN	21	43	135	146	163	207	299	103	81	54	26	20
MEAN†	62.6	287	724	222	998	438	1503	1194	477	172	50.7	31.8
CFSM†	.39	1.78	4.50	1.38	6.20	2.72	9.34	7.42	2.96	1.07	.31	.20
INT†	.45	1.99	5.19	1.59	6.69	3.14	10.42	8.55	3.30	1.23	.36	.22
CAL YR 1983 TOTAL	169009			MEAN 463	MAX 3530	MIN 14	MEAN† 463	CFSM† 2.88	INT† 39.06			
WTR YR 1984 TOTAL	186648			MEAN 510	MAX 3330	MIN 20	MEAN† 510	CFSM† 3.17	INT† 43.13			

† Adjusted for change in contents in Knightville Reservoir.

CONNECTICUT RIVER BASIN

01180500 MIDDLE BRANCH WESTFIELD RIVER AT GOSS HEIGHTS, MASS.

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.--52.7 mi², revised.

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 above 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 except those for January, which are fair. 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.--74 years, 106 ft³/s, 27.32, adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s Sept. 12, 1938, gage height, 11.61 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, 1,380 ft³/s June 8, gage height, 5.76 ft; minimum, 3.0 ft³/s Sept. 30; minimum daily, 3.0 ft³/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	4.7	10	159	106	57	191	88	116	90	22	11	4.2		
2	7.2	9.4	117	91	51	147	88	103	90	31	10	3.7		
3	7.8	9.5	93	82	52	125	88	94	90	31	9.4	4.4		
4	7.2	9.7	82	73	79	110	115	286	166	27	8.8	7.7		
5	6.6	9.8	75	72	140	101	107	399	450	23	8.4	8.3		
6	6.5	12	74	73	137	111	327	256	866	30	7.9	7.6		
7	5.4	13	255	75	110	110	642	179	1190	104	7.5	6.5		
8	4.4	13	340	74	88	93	693	165	1340	145	7.2	5.6		
9	4.2	12	243	68	83	89	936	264	1330	142	6.7	4.9		
10	3.9	12	150	69	78	88	1050	217	1240	104	6.5	4.5		
11	3.7	21	112	73	77	88	1040	166	1190	59	5.9	4.4		
12	5.0	45	93	54	95	80	977	154	1190	43	6.0	4.7		
13	20	44	163	51	125	65	716	203	978	34	5.8	4.4		
14	28	34	27	52	156	66	510	267	401	27	5.9	4.8		
15	24	27	221	50	262	68	451	264	119	22	6.0	5.8		
16	18	69	849	48	436	70	563	199	66	20	5.9	6.6		
17	14	144	951	46	974	85	970	158	48	19	6.1	6.5		
18	11	103	856	46	1100	102	1070	132	41	22	5.5	6.0		
19	11	68	835	45	611	104	928	114	43	30	5.0	5.6		
20	9.9	50	579	45	436	124	670	103	43	29	13	5.1		
21	8.9	75	177	44	673	185	369	100	37	24	21	5.1		
22	7.9	120	113	43	820	332	236	93	32	21	19	4.4		
23	8.0	90	110	42	650	342	187	99	27	19	15	3.9		
24	20	71	102	50	403	248	279	208	24	16	12	4.0		
25	29	249	89	66	399	195	358	164	26	14	9.8	3.9		
26	26	344	86	89	461	183	271	121	25	12	8.1	4.1		
27	22	264	86	88	318	154	203	99	22	12	6.9	3.5		
28	18	148	86	83	229	107	167	94	20	14	6.0	3.2		
29	16	147	137	73	227	89	144	318	19	15	5.4	3.1		
30	13	204	162	69	---	89	128	90	19	14	5.1	3.0		
31	11	---	128	65	---	88	---	90	---	13	5.0	---		
TOTAL	382.3	2427.4	7550	2005	9327	4029	14371	5315	11222	1138	261.8	149.5		
MEAN	12.3	80.9	244	64.7	322	130	479	171	374	36.7	8.45	4.98		
MAX	29	344	951	106	1100	342	1070	399	1340	145	21	8.3		
MIN	3.7	9.4	27	42	51	65	88	90	19	12	5.0	3.0		
MEAN†	12.8	87.4	242	62.3	327	140	466	428	104	36.7	7.47	4.98		
CFSM†	.24	1.66	4.59	1.18	6.20	2.66	8.84	8.12	1.97	.70	.14	.09		
IN†	.28	1.85	5.29	1.36	6.70	3.07	9.86	9.38	2.21	.80	.16	.11		
CAL YR 1983	TOTAL	51863.1	MEAN	142	MAX	1220	MIN	1.1	MEAN†	142	CFSM†	2.69	IN†	36.66
WTR YR 1984	TOTAL	58178.0	MEAN	159	MAX	1340	MIN	3.0	MEAN†	159	CFSM†	3.02	IN†	41.07

† Adjusted for change in contents in Littleville Lake.

01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MASS.

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

DRAINAGE AREA.--94.0 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, 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.--49 years, 192 ft³/s, 27.74 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 greater than base discharge 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)
Dec. 14	0115	a4,040	5.92	Apr. 5	2115	a8,260	8.50
Feb. 16	0700	a3,760	5.71	May 29	2000	a*13,200	*10.78

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

Minimum discharge, 8.3 ft³/s Sept. 26-29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	265	170	105	298	250	200	1640	57	20	9.7
2	18	19	216	150	100	269	308	177	1330	108	19	9.1
3	19	19	189	135	105	241	400	165	946	58	18	10
4	15	19	162	125	289	215	416	782	679	45	16	25
5	13	20	180	120	314	194	3680	486	514	38	15	24
6	12	24	177	120	248	243	3090	326	421	73	14	16
7	13	28	909	120	200	214	1380	266	406	558	13	13
8	12	56	410	120	175	168	860	323	316	359	13	11
9	12	51	275	115	155	162	647	450	238	146	12	11
10	11	44	241	110	150	152	582	312	188	87	13	10
11	11	101	210	100	157	159	521	269	152	66	14	9.9
12	15	168	191	85	283	131	653	295	120	64	13	10
13	84	82	2030	105	286	117	629	356	103	51	13	11
14	60	57	2590	125	333	135	686	538	94	40	13	16
15	34	41	1100	105	1200	157	1080	375	92	33	13	16
16	23	305	808	90	2780	160	1580	307	77	31	13	16
17	19	262	519	85	1240	233	1090	265	69	40	13	13
18	18	137	385	84	1210	209	693	233	69	50	12	11
19	20	91	328	82	885	208	563	207	79	76	11	10
20	21	74	230	80	1190	269	479	189	68	45	55	9.9
21	18	234	165	80	719	391	401	198	55	35	35	9.8
22	17	210	175	78	489	648	339	169	46	36	19	9.3
23	17	127	215	78	394	471	315	270	41	35	16	9.0
24	90	135	180	81	667	347	580	460	41	28	14	8.9
25	64	857	165	230	614	309	497	249	50	20	14	9.2
26	39	446	155	216	710	304	367	192	42	17	13	8.9
27	31	285	150	155	419	294	305	182	34	22	12	8.3
28	27	231	160	140	373	292	271	205	34	33	11	8.3
29	24	346	220	125	365	270	246	5010	32	29	11	8.4
30	22	367	250	120	---	262	219	6140	34	26	10	8.4
31	21	---	200	110	---	239	---	4010	---	23	10	---
TOTAL	812	4855	13450	3639	16155	7761	23127	23606	8010	2329	488	350.1
MEAN	26.2	162	434	117	557	250	771	761	267	75.1	15.7	11.7
MAX	90	857	2590	230	2780	648	3680	6140	1640	558	55	25
MIN	11	19	150	78	100	117	219	165	32	17	10	8.3
CFSM	.28	1.72	4.62	1.24	5.93	2.66	8.20	8.10	2.84	.80	.17	.12
IN.	.32	1.92	5.32	1.44	6.39	3.07	9.15	9.34	3.17	.92	.19	.14

CAL YR 1983	TOTAL	96552.0	MEAN 265	MAX 3560	MIN 7.0	CFSM 2.82	IN. 38.21
WTR YR 1984	TOTAL	104582.1	MEAN 286	MAX 6140	MIN 8.3	CFSM 3.04	IN. 41.39

CONNECTICUT RIVER BASIN

01183000 LITTLE RIVER AT OUTLET OF COBBLE MOUNTAIN RESERVOIR, NEAR WESTFIELD, MASS.

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 provided by Springfield Board of Water Commissioners.

AVERAGE DISCHARGE.--74 years (water years 1911-84), 90.5 ft³/s, 26.83 in/yr, adjusted for storage.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

Month	Meant	Per square mile†	Runoff in inches†
October	17.1	0.37	0.43
November	80.9	1.77	1.97
December	184	4.02	4.62
Calendar year 1983	131	2.86	38.86
January	60.2	1.31	1.52
February	237	5.17	5.58
March	117	2.55	2.95
April	380	8.30	9.26
May	275	6.00	6.92
June	105	2.29	2.55
July	27.3	.60	.69
August	-3.44	-.08	-.09
September	-3.92	-.09	-.10
Water year 1984	122	2.66	36.32

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

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

01183500 WESTFIELD RIVER NEAR WESTFIELD, MASS.

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 above National Geodetic Vertical Datum of 1929. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records excellent except those for period of no gage-height record, Feb. 6 to Mar. 7, which are fair. Flow regulated by Borden Brook Reservoir, Cobble Mountain Reservoir since 1931, Knightville Reservoir since 1941, and Littleville Lake since 1965 (Reservoirs in Connecticut River basin). High flow slightly affected by retarding reservoirs since 1963. Diversion from Little River for municipal supply of Springfield. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--70 years, 928 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, 14,200 ft³/s May 30, gage height, 14.60 ft; minimum, 69 ft³/s Sept. 27; minimum daily, 77 ft³/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	170	1330	918	647	1700	1140	1250	5000	459	192	110
2	152	155	1040	853	625	1500	1480	1080	4540	474	334	106
3	178	163	815	835	548	1300	1510	962	4910	442	274	105
4	140	166	768	799	899	1200	1680	2310	4030	375	170	177
5	143	158	792	775	1080	1100	5340	3010	3920	317	179	170
6	129	169	708	751	1400	1400	9000	2220	4210	360	293	176
7	107	178	1960	749	1200	1300	6000	1500	5210	1380	319	155
8	106	191	1930	706	1100	1130	4500	1430	5560	1630	360	130
9	117	197	1540	646	900	1080	4700	2270	5200	1340	255	131
10	106	198	1320	624	920	790	4900	1780	4880	801	175	132
11	107	370	1110	621	820	750	4900	1380	4940	500	149	136
12	159	659	936	712	1200	848	5200	1320	4650	445	136	138
13	578	514	3420	737	1500	901	4500	1810	3990	402	131	132
14	498	364	5330	579	1900	852	3630	2140	2640	319	126	136
15	327	303	2780	552	3300	781	3850	2110	1890	288	344	139
16	248	986	3770	547	7000	798	4920	1670	1090	473	208	139
17	216	1630	4170	551	5400	1050	6090	1330	601	299	135	153
18	202	916	3790	532	5600	1170	5730	1160	558	439	114	141
19	201	603	3930	735	4700	1280	5410	1040	809	613	113	151
20	194	478	3830	706	4500	1500	4670	968	885	400	193	104
21	175	763	2660	596	4300	1990	3950	944	701	346	333	101
22	154	1140	1570	499	4200	2860	3530	874	483	281	212	97
23	154	759	1230	562	4100	2750	3140	813	410	298	192	97
24	331	586	1010	663	4000	2190	3160	1870	372	243	156	98
25	478	2040	900	858	4000	1890	3440	1220	573	203	123	95
26	327	2110	820	954	3700	1700	2660	872	477	193	122	77
27	263	1620	800	1100	3000	1390	2150	803	385	213	119	84
28	224	1440	900	837	2500	1350	1610	832	354	267	120	102
29	211	1420	1400	770	2200	1420	1450	6040	318	295	120	106
30	179	1580	1610	827	---	1410	1300	12100	314	272	118	103
31	169	---	1140	757	---	1120	---	9900	---	214	114	---
TOTAL	6726	22026	59309	22351	77239	42500	115540	69008	73900	14581	5929	3721
MEAN	217	734	1913	721	2663	1371	3851	2226	2463	470	191	124
MAX	578	2110	5330	1100	7000	2860	9000	12100	5560	1630	360	177
MIN	106	155	708	499	548	750	1140	803	314	193	113	77
CAL YR 1983	TOTAL	484423	MEAN	1327	MAX	10400	MIN	80				
WTR YR 1984	TOTAL	512830	MEAN	1401	MAX	12100	MIN	77				

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.
(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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1928 to current year.

REVISED RECORDS.--WSP 741: 1932. WDR CT-77-1: 1976. WDR MA-RI-83-1: Drainage area, 1982.

GAGE.--Water-stage recorders on river and on canal of The Dexter Corporation. Datum of gage is 38.48 ft above 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.--56 years, 16,560 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, 184,000 ft³/s May 31, gage height, 10.80 ft; minimum daily, 2,610 ft³/s Oct. 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4720	6210	36000	20700	9780	31700	25300	29100	176000	10700	7470	4930
2	4170	7080	31900	19100	9660	28400	23200	27700	150000	8270	7000	3120
3	4050	8580	26800	18500	11200	23900	27100	28300	123000	8930	6920	3060
4	5470	8970	23500	18200	12700	22200	32800	30900	96800	9970	6190	3410
5	7160	9660	22400	18000	14300	22000	38500	41400	75600	6910	3810	3730
6	7930	12300	22500	16700	16200	23200	80800	43100	61700	10400	4040	3160
7	7250	12700	27400	16200	16600	19800	103000	35700	54700	17400	9360	3100
8	5620	12700	40000	15200	15300	17100	101000	32400	53400	32100	7440	3040
9	3500	12500	44300	14700	14500	16900	92600	33700	57500	30700	6760	2970
10	3090	10300	31600	14200	13400	15300	82800	34400	50400	27700	6480	2980
11	4360	12700	23900	13700	14100	12400	68300	33400	45400	23600	4670	4510
12	6290	14500	23300	13200	14500	12200	54500	32100	39000	21200	3540	7670
13	9010	14400	30400	13000	13200	14400	50000	31900	33800	22000	4330	6030
14	12700	13500	62900	12700	15700	14300	52100	38900	32000	17600	5380	5500
15	10400	13900	96300	12200	20400	16000	57800	48700	26200	15500	6550	4470
16	5330	16200	101000	12000	39100	17700	65200	48900	19900	11100	6110	3360
17	4430	21700	96100	11600	59900	16100	77400	39500	17000	11500	4130	3070
18	5200	19300	81200	11100	60500	18100	83000	33700	12700	14000	3420	3070
19	6520	18800	63100	10600	58800	18700	82500	31900	14200	15800	3380	2950
20	6120	18200	49000	10300	53400	19400	75100	26600	16700	17600	3370	2970
21	7240	19500	35000	10100	50700	22900	69100	22300	18600	14600	3540	2980
22	6290	22600	25900	9840	46000	33200	55800	26400	13900	12600	4240	2970
23	4040	27500	23800	9600	42100	44000	43400	25400	8720	9730	4040	2970
24	7250	26800	21300	9410	38800	42300	40400	26500	8500	13000	5090	2970
25	11200	29600	17700	10700	41300	37100	42200	24100	13600	11000	4260	3260
26	9090	44000	25000	13000	46000	31700	43200	22300	12500	9530	3180	3870
27	6840	43400	24400	14200	46100	30600	41700	25100	11900	6540	3140	3090
28	5540	42400	19700	11800	41400	29400	38500	21600	11400	6190	3790	2910
29	4990	36900	21300	11200	40600	29100	35200	35600	12400	6090	4250	2890
30	3850	36000	20900	10400	---	27200	32000	112000	10600	5630	3300	2840
31	2610	---	20200	9970	---	24500	---	173000	---	5550	4030	---
TOTAL	192260	592900	1188800	412120	876240	731800	1714500	1216600	1278120	433440	153210	107850
MEAN	6202	19760	38350	13290	30220	23610	57150	39250	42600	13980	4942	3595
MAX	12700	44000	101000	20700	60500	44000	103000	173000	176000	32100	9360	7670
MIN	2610	6210	17700	9410	9660	12200	23200	21600	8500	5550	3140	2840
CAL YR 1983	TOTAL	8015680	MEAN	21960	MAX	101000	MIN	2370				
WTR YR 1984	TOTAL	8897840	MEAN	24310	MAX	176000	MIN	2610				

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 micro siemens Oct. 18, 1981; minimum, 46 micro siemens 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, 246 micro siemens Jan. 26; minimum, 62 micro siemens May 30, 31.

WATER TEMPERATURES: Maximum, 28.0°C Aug. 15-17; minimum, 0.0°C on many days during winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	PH (STAND- ARD 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, (PER- UM-MF 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CACO3)
OCT												
25...	0830	11700	153	7.3	6.5	11.0	3.0	9.3	84	4300	3000	--
NOV												
15...	0915	13600	124	7.5	4.0	7.0	0.5	10.7	88	2100	1000	40
DEC												
15...	0945	96700	76	7.1	10.5	2.5	4.0	14.2	105	--	--	--
28...	0900	19800	110	7.3	-4.0	0.0	--	14.9	101	3200	2100	--
JAN												
25...	0930	11000	181	7.1	3.5	0.5	1.3	14.0	99	5800	1400	38
MAR												
13...	1130	14500	113	7.1	-2.0	0.0	1.7	14.6	98	2000	840	--
APR												
18...	1230	82500	62	7.0	21.0	6.0	2.3	13.8	113	100	38	19
MAY												
14...	1015	37700	83	7.0	12.0	12.0	0.6	10.1	95	600	88	26
JUN												
21...	0745	18900	108	7.6	22.5	21.0	0.6	7.6	85	400	180	34
JUL												
10...	0845	26200	91	7.2	24.5	21.0	2.1	8.2	92	220	160	34
AUG												
09...	1030	--	--	--	--	--	--	--	--	--	--	--
17...	0900	3800	148	7.5	29.0	27.0	1.3	8.1	102	110	K5	43
SEP												
05...	0900	3760	158	7.5	18.0	20.5	1.2	7.8	87	3000	27	47

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											
25...	--	--	--	--	--	--	12	13	--	--	91
NOV											
15...	9	13	1.9	6.4	1.6	31	14	10	0.2	5.2	81
DEC											
15...	--	--	--	--	--	--	8.0	5.8	0.1	--	52
28...	--	--	--	--	--	--	--	--	--	--	--
JAN											
25...	11	12	1.9	18	1.2	27	14	28	<0.1	6.6	103
MAR											
13...	--	--	--	--	--	--	12	11	--	--	66
APR											
18...	--	5.9	0.94	--	--	--	8.4	5.6	--	--	--
MAY											
14...	9	8.2	1.3	4.2	0.8	17	9.0	6.7	<0.1	4.8	55
JUN											
21...	--	11	1.6	--	--	--	11	9.3	--	--	73
JUL											
10...	8	11	1.5	4.9	1.1	26	10	7.9	<0.1	5.0	74
AUG											
09...	--	--	--	--	--	--	--	--	--	--	--
17...	--	14	1.9	--	--	--	15	7.9	--	--	72
SEP											
05...	--	15	2.2	--	--	--	15	16	--	--	111

K RESULTS ON COLONY COUNT OUTSIDE THE ACCEPTABLE RANGE (NON-IDEAL COLONY COUNT).

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

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	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)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 25...	0.12	2870	94	0.38	0.02	0.40	--	0.25	--	--	--
NOV 15...	0.11	2970	88	0.29	0.01	0.30	0.33	0.07	0.17	0.63	0.7
DEC 15...	0.07	13660	--	--	<0.01	0.20	--	0.11	--	0.09	0.2
DEC 28...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	0.14	3060	110	0.53	0.07	0.60	0.53	0.44	0.33	0.46	0.9
MAR 13...	0.09	22580	74	--	<0.01	0.50	--	0.16	--	0.24	0.4
APR 18...	0.03	--	37	--	<0.01	0.20	--	0.04	--	0.76	0.8
MAY 14...	0.08	5600	68	--	<0.01	0.20	0.27	0.05	0.06	0.76	0.81
JUN 21...	0.1	3720	89	--	<0.01	0.30	--	0.10	--	0.5	0.6
JUL 10...	0.1	5230	85	0.40	--	0.40	0.32	--	0.12	0.39	0.4
AUG 09...	--	--	--	--	--	--	--	--	--	--	--
AUG 17...	0.1	739	77	0.29	0.01	0.30	--	0.12	--	0.38	0.5
SEP 05...	0.15	1130	109	0.51	0.09	0.60	--	0.33	--	0.47	0.8

DATE	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 (MG/L AS AL)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)
OCT 25...	--	0.10	0.06	--	--	--	--	--	--	--	--
NOV 15...	1.0	0.07	0.04	0.05	30	<1	--	23	--	<0.5	--
DEC 15...	0.4	0.18	0.02	--	--	--	--	--	--	--	--
DEC 28...	--	--	--	--	--	--	--	--	--	<1	--
JAN 25...	1.5	0.11	0.08	0.04	50	<1	--	25	--	0.5	--
MAR 13...	0.9	0.05	0.08	--	--	--	--	--	--	--	--
APR 18...	1.0	0.02	<0.01	--	--	--	--	--	--	--	--
MAY 14...	1.0	0.03	0.01	0.01	30	<1	--	20	--	<1	--
JUN 21...	0.9	0.03	<0.01	--	--	--	--	--	--	--	--
JUL 10...	0.8	0.06	0.04	0.02	30	<1	--	20	--	1	--
AUG 09...	--	--	--	--	--	--	<1	--	20	--	<1
AUG 17...	0.8	0.06	0.02	--	--	--	--	--	--	--	--
SEP 05...	1.4	0.19	0.18	--	--	--	--	--	--	--	--

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

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 25...	2	1	--	13	<1	--	--	29	4	--	350
NOV 15...	1	<1	--	3	<1	--	<3	4	2	--	400
DEC 15...	<1	2	--	22	<1	--	--	10	3	--	3100
28...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	1	<1	--	5	1	--	<3	5	3	--	330
MAR 13...	1	1	--	7	<1	--	--	3	1	--	330
APR 18...	1	<1	--	5	<1	--	--	3	<1	--	1000
MAY 14...	1	1	--	3	<1	--	<3	5	2	--	610
JUN 21...	1	<1	--	4	<1	--	--	11	3	--	580
JUL 10...	<1	<1	--	4	<1	--	<3	3	1	--	670
AUG 09...	--	--	<1	--	--	10	--	--	--	10	--
17...	1	<1	--	4	<1	--	--	9	5	--	410
SEP 05...	<1	<1	--	<1	2	--	--	5	3	--	320

DATE	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM DIS- SOLVED (UG/L AS LI)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (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 25...	--	4	<1	--	--	--	--	--	--	23	5
NOV 15...	82	5	<1	--	<4	18	0.4	--	<10	4	2
DEC 15...	--	12	4	--	--	--	--	--	--	2	12
28...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	110	4	3	--	<4	48	0.1	--	<10	8	7
MAR 13...	--	3	<1	--	--	--	--	--	--	8	5
APR 18...	--	3	3	--	--	--	--	--	--	2	3
MAY 14...	66	80	3	--	<4	17	<0.1	--	<10	5	1
JUN 21...	--	1	2	--	--	--	--	--	--	6	3
JUL 10...	92	5	1	--	<4	8	0.9	--	<10	2	2
AUG 09...	--	--	--	20	--	--	--	0.12	--	--	--
17...	--	6	2	--	--	--	--	--	--	7	2
SEP 05...	--	8	2	--	--	--	--	--	--	3	<1

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

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)	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)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	TOLUENE TOTAL (UG/L)
OCT 25...	--	--	--	--	--	--	30	10	--	3.5	--
NOV 15...	--	<1	--	<1	62	<6	30	31	--	4.7	--
DEC 15...	--	--	--	--	--	--	50	10	--	5.8	--
28...	--	--	--	--	--	--	--	--	--	--	--
JAN 25...	--	<1	--	<1	58	<6	10	12	--	3.8	--
MAR 13...	--	--	--	--	--	--	40	20	--	2.6	--
APR 18...	--	--	--	--	--	--	20	11	--	2.5	--
MAY 14...	--	<1	--	<1	40	<6	20	11	--	2.9	--
JUN 21...	--	--	--	--	--	--	10	10	--	3.7	--
JUL 10...	--	<1	--	<1	56	<6	20	16	--	4.2	--
AUG 09...	10	--	<1	--	--	--	--	--	50	--	84
17...	--	--	--	--	--	--	10	16	--	3.3	--
SEP 05...	--	--	--	--	--	--	20	<3	--	3.1	--

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	GROSS ALPHA, DIS- SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/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 (PCI/L AS SR/ YT-90)	URANIUM DIS- SOLVED, EXTRAC- TION (UG/L)
NOV 15...	0915	<1.7	<0.4	2.2	<0.4	1.9	<0.4	0.08	0.09
APR 18...	1230	<0.8	<0.4	0.9	<0.4	0.8	<0.4	0.03	0.12

SUSPENDED SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 15...	0915	13600	4	147	60
JAN 25...	0930	11000	23	683	40
MAY 14...	1015	37700	47	4780	51
JUL 10...	0845	26200	52	3680	53

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

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE, MICRO SIEMENS PER CENTIMETER AT 2, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	159	153	157	157	151	155	85	83	84	106	103	104
2	164	152	160	155	150	153	86	84	85	109	104	107
3	164	153	159	158	153	155	91	86	88	109	107	108
4	154	151	153	157	151	154	92	90	91	112	108	110
5	157	150	154	151	145	148	97	91	93	114	112	113
6	161	157	159	148	141	144	101	98	100	116	111	113
7	158	153	155	144	141	143	110	100	105	116	113	114
8	156	153	154	143	141	142	99	87	90	115	113	114
9	157	151	154	144	142	143	87	85	86	115	113	114
10	160	156	158	143	137	141	88	86	87	115	111	113
11	159	156	158	145	137	141	88	86	87	124	115	120
12	160	147	157	140	139	139	94	88	89	124	119	122
13	154	148	151	139	125	132	109	95	103	124	117	120
14	149	142	144	126	122	124	94	76	81	118	115	117
15	147	142	144	123	119	121	79	76	77	126	119	123
16	147	144	146	121	119	120	78	72	75	127	121	125
17	151	146	148	119	103	111	72	69	71	121	114	118
18	156	150	153	105	102	103	70	68	69	119	116	118
19	166	154	160	107	105	106	70	68	69	122	117	119
20	166	157	161	106	104	105	69	67	68	126	122	124
21	159	152	156	109	105	107	73	69	71	123	118	120
22	156	150	153	110	106	108	87	74	79	125	119	123
23	155	151	153	105	95	100	104	89	100	130	126	128
24	168	140	157	97	95	96	100	97	99	138	126	131
25	160	151	153	103	96	100	100	95	98	241	136	190
26	150	142	146	94	83	87	100	95	98	246	168	213
27	149	144	147	84	80	82	99	95	97	165	133	149
28	153	148	150	84	82	83	118	98	105	136	130	134
29	151	148	150	87	84	85	171	119	157	136	128	132
30	154	149	152	88	85	87	150	110	127	127	122	123
31	---	---	---	---	---	---	110	107	109	136	121	127
MONTH	168	140	153	158	80	121	171	67	92	246	103	125
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	150	138	146	82	80	81	101	100	100	86	83	84
2	143	125	130	86	82	84	104	100	103	86	84	85
3	129	123	126	89	84	86	102	97	98	86	85	85
4	152	131	139	91	89	90	98	94	96	88	85	87
5	154	134	142	94	90	92	97	84	94	85	76	80
6	139	133	135	111	95	107	79	68	71	76	74	75
7	138	117	128	105	99	101	71	68	70	78	74	76
8	122	116	119	104	99	102	72	69	70	83	78	80
9	120	115	117	106	100	103	69	66	68	82	78	80
10	122	115	118	109	104	106	67	65	66	78	76	77
11	123	118	120	116	110	113	67	64	65	78	76	77
12	128	124	126	119	116	117	65	63	64	82	78	80
13	128	122	124	119	107	113	65	63	64	82	78	81
14	123	112	117	118	108	113	71	66	68	79	73	76
15	112	97	107	125	118	122	71	69	70	74	70	72
16	95	79	85	128	120	123	71	69	70	73	72	73
17	80	74	77	131	128	130	68	65	66	75	73	74
18	74	71	73	128	116	122	66	64	65	78	74	76
19	72	69	71	117	114	116	66	64	65	81	76	78
20	74	72	73	115	112	113	64	63	64	83	79	81
21	73	70	72	112	105	109	65	63	64	89	83	86
22	70	68	68	105	97	100	67	65	66	89	71	82
23	69	67	68	98	93	96	69	66	67	71	66	68
24	71	68	70	94	92	93	72	69	71	74	71	73
25	71	68	69	94	91	92	70	67	68	74	69	71
26	71	69	70	94	91	92	71	69	70	82	74	79
27	71	69	70	96	92	94	74	71	72	86	81	83
28	86	71	75	97	94	95	78	73	76	91	85	88
29	90	79	83	104	95	98	82	78	80	92	71	86
30	---	---	---	106	101	103	83	81	82	69	62	64
31	---	---	---	104	99	101	---	---	---	67	62	64
MONTH	154	67	101	131	80	103	104	63	74	92	62	78

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SPECIFIC CONDUCTANCE, MICRO SIEMENS PER CENTIMETER AT 2, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	83	68	75	134	128	131	135	127	133	154	150	152
2	104	83	94	129	126	127	139	135	137	---	---	---
3	129	105	117	133	128	130	141	136	140	---	---	---
4	138	119	132	136	126	131	141	134	138	---	---	---
5	119	98	107	127	123	125	---	---	---	---	---	---
6	102	93	98	128	124	125	---	---	---	---	---	---
7	132	91	103	125	108	118	140	138	139	---	---	---
8	---	---	---	106	96	101	143	138	141	---	---	---
9	---	---	---	102	88	96	150	142	146	---	---	---
10	---	---	---	95	88	92	153	147	150	---	---	---
11	---	---	---	106	96	102	152	130	140	173	159	163
12	---	---	---	111	105	109	---	---	---	163	149	157
13	---	---	---	112	107	110	---	---	---	154	148	152
14	---	---	---	112	108	110	143	138	140	160	154	158
15	---	---	---	116	113	114	148	140	145	164	158	160
16	---	---	---	130	117	124	151	147	149	159	157	158
17	---	---	---	134	130	133	150	143	147	---	---	---
18	---	---	---	133	122	125	---	---	---	---	---	---
19	---	---	---	125	122	123	---	---	---	---	---	---
20	---	---	---	130	122	125	---	---	---	---	---	---
21	83	80	82	142	130	135	---	---	---	---	---	---
22	99	86	93	150	142	146	154	146	151	---	---	---
23	103	97	100	160	150	155	149	146	147	---	---	---
24	116	104	110	167	161	164	148	142	145	---	---	---
25	119	114	116	160	133	144	148	142	144	---	---	---
26	120	115	117	133	124	127	---	---	---	---	---	---
27	122	111	115	134	127	131	---	---	---	---	---	---
28	127	120	124	134	127	131	---	---	---	---	---	---
29	128	124	126	128	125	127	151	147	149	---	---	---
30	129	126	127	134	124	129	---	---	---	---	---	---
31	---	---	---	129	120	124	153	149	151	---	---	---
MONTH	138	68	108	167	88	125	154	127	144	173	148	157
YEAR	246	62	111									

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.0	18.5	9.5	9.0	9.5	4.0	3.5	3.5	.5	.0	.5
2	19.5	18.0	19.0	10.0	9.5	9.5	3.5	3.5	3.5	.5	.0	.0
3	20.0	19.0	19.5	10.0	9.5	10.0	3.5	3.0	3.5	.5	.0	.0
4	20.0	19.5	20.0	10.0	9.5	10.0	3.0	2.0	2.5	.5	.0	.0
5	20.5	20.0	20.5	9.5	9.0	9.5	3.0	2.0	2.5	.5	.0	.0
6	20.5	20.0	20.5	10.0	9.5	9.5	3.0	2.5	3.0	.5	.0	.0
7	20.0	19.5	19.5	9.5	9.5	9.5	3.0	2.5	3.0	.0	.0	.0
8	19.0	18.5	18.5	9.5	9.0	9.5	2.5	1.5	2.0	.0	.0	.0
9	18.5	17.5	18.0	9.0	9.0	9.0	1.5	1.0	1.5	.5	.0	.0
10	17.0	16.0	16.5	9.5	8.5	9.0	2.0	1.0	1.5	.5	.0	.5
11	16.5	16.0	16.5	9.5	9.5	9.5	2.0	1.5	1.5	.5	.0	.5
12	16.5	16.0	16.5	9.5	8.5	9.0	2.0	1.5	1.5	.5	.5	.5
13	17.0	16.5	17.0	8.5	7.0	7.5	2.5	2.0	2.0	.5	.5	.5
14	17.5	17.0	17.5	7.0	6.5	7.0	3.0	2.5	2.5	.5	.0	.5
15	17.0	16.0	16.5	7.0	7.0	7.0	2.5	2.5	2.5	.5	.0	.0
16	16.0	15.0	15.5	7.0	7.0	7.0	3.0	2.5	3.0	.5	.0	.5
17	15.0	14.5	15.0	7.0	6.0	6.5	3.0	2.5	3.0	.5	.0	.0
18	15.5	14.5	15.0	6.0	5.5	5.5	2.5	2.0	2.5	.5	.0	.0
19	15.5	14.5	15.0	5.5	5.0	5.5	2.5	2.0	2.0	.5	.0	.5
20	14.5	13.5	14.0	6.0	5.5	5.5	1.5	1.0	1.0	.0	.0	.0
21	13.5	13.0	13.0	6.5	6.0	6.5	1.0	.0	.5	.0	.0	.0
22	13.0	12.5	12.5	6.5	6.0	6.0	.0	.0	.0	.5	.0	.0
23	12.5	11.5	12.0	6.0	5.5	6.0	.5	.0	.0	.5	.0	.5
24	11.5	11.0	11.5	5.5	5.5	5.5	.5	.0	.5	.5	.0	.0
25	11.0	10.5	11.0	6.0	5.5	6.0	.5	.5	.5	.5	.0	.5
26	10.5	10.0	10.0	5.5	5.0	5.0	.5	.5	.5	1.0	.0	.5
27	10.5	10.0	10.0	5.0	4.5	5.0	.5	.5	.5	.5	.0	.5
28	10.0	9.5	10.0	4.5	4.5	4.5	.5	.0	.5	.0	.0	.0
29	10.5	10.0	10.0	4.5	4.0	4.0	.5	.0	.5	.5	.0	.0
30	10.0	9.0	9.5	4.0	4.0	4.0	.5	.0	.5	.5	.0	.0
31	---	---	---	---	---	---	.5	.0	.0	.5	.0	.0
MONTH	20.5	9.0	15.5	10.0	4.0	7.5	4.0	.0	1.5	1.0	.0	.0

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	.5	.0	.0	1.5	1.0	1.5	5.5	4.0	5.0	14.0	13.0	13.5
2	.5	.0	.0	1.5	1.0	1.0	7.0	5.0	6.0	13.5	12.5	13.0
3	1.0	.0	.5	1.5	1.0	1.5	7.0	6.0	6.5	13.0	12.0	12.5
4	1.0	.5	.5	1.5	.5	1.5	7.0	6.0	6.0	13.0	11.5	12.5
5	.5	.5	.5	1.5	1.0	1.5	6.5	5.5	6.0	11.5	11.0	11.5
6	1.5	.0	.5	2.0	1.5	1.5	5.5	4.5	4.5	11.5	11.0	11.5
7	1.5	1.0	1.0	2.5	1.5	2.0	4.5	4.5	4.5	12.5	11.0	11.5
8	1.0	.5	1.0	2.0	1.5	2.0	4.5	4.5	4.5	12.0	12.0	12.0
9	1.0	.5	.5	2.0	1.0	1.5	4.5	4.0	4.5	13.0	12.0	12.5
10	1.0	.5	.5	2.0	.5	1.5	4.5	4.0	4.5	12.5	11.5	12.0
11	1.5	1.0	1.0	2.0	1.0	1.5	5.5	4.0	5.0	13.0	11.5	12.5
12	2.0	1.5	2.0	1.5	1.0	1.0	6.5	5.0	6.0	12.5	12.5	12.5
13	2.5	2.0	2.0	1.5	.0	.5	6.5	6.0	6.5	13.5	12.0	13.0
14	2.5	2.0	2.5	1.0	.0	.5	6.5	6.0	6.5	13.0	12.5	13.0
15	2.5	2.0	2.0	2.0	.5	1.0	6.5	6.0	6.5	12.5	12.0	12.5
16	2.0	1.5	2.0	3.0	1.0	2.0	6.0	6.0	6.0	12.0	11.0	11.5
17	2.0	1.5	2.0	3.0	2.5	3.0	7.0	6.0	6.5	12.0	11.0	11.5
18	2.0	1.5	2.0	2.5	2.5	2.5	7.5	6.0	7.0	12.0	11.5	12.0
19	2.0	1.5	2.0	3.0	2.0	2.5	7.5	6.5	7.0	12.5	11.5	12.0
20	2.5	2.0	2.5	3.5	3.0	3.5	7.0	6.5	7.0	13.0	12.5	13.0
21	2.5	2.5	2.5	3.5	3.5	3.5	7.5	7.0	7.5	15.0	13.0	14.0
22	2.5	2.0	2.5	3.5	3.0	3.0	7.5	7.0	7.0	16.0	14.5	15.5
23	3.0	2.0	2.5	3.0	2.5	3.0	8.0	7.5	8.0	17.5	15.5	16.5
24	3.5	3.0	3.0	3.0	2.5	2.5	8.0	8.0	8.0	18.0	16.5	17.0
25	3.5	3.0	3.0	3.0	2.5	3.0	8.0	7.5	8.0	18.0	16.0	17.0
26	3.5	3.0	3.0	4.0	2.5	3.5	9.0	8.0	8.5	19.5	17.5	18.5
27	3.0	2.5	2.5	4.5	3.5	4.0	10.0	9.0	9.5	19.5	18.0	18.5
28	2.5	1.5	2.0	5.0	4.0	4.5	11.0	10.0	10.5	18.5	17.5	18.0
29	1.5	1.0	1.5	4.5	3.0	3.5	12.0	11.0	11.5	17.5	14.5	16.0
30	---	---	---	3.5	2.5	3.0	13.5	12.0	12.5	14.0	12.5	13.5
31	---	---	---	4.5	3.0	4.0	---	---	---	12.5	11.5	12.0
MONTH	3.5	.0	1.5	5.0	.0	2.5	13.5	4.0	7.0	19.5	11.0	13.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	12.0	11.5	11.5	23.0	22.5	22.5	26.0	24.0	25.0	25.0	24.0	24.5
2	12.5	12.0	12.0	24.5	22.5	23.5	26.5	25.0	26.0	---	---	---
3	12.5	12.0	12.5	24.5	23.5	24.0	27.0	25.5	26.5	---	---	---
4	13.5	12.5	13.0	25.0	23.0	24.0	27.5	26.0	26.5	---	---	---
5	14.5	13.5	14.0	25.0	24.0	24.5	---	---	---	---	---	---
6	15.0	14.5	14.5	24.5	24.0	24.0	---	---	---	---	---	---
7	15.5	14.5	15.0	23.5	22.0	23.0	27.0	26.5	27.0	---	---	---
8	16.5	15.0	16.0	22.0	21.5	22.0	27.5	26.0	27.0	---	---	---
9	17.0	16.0	16.5	22.0	21.0	21.5	27.0	26.5	27.0	---	---	---
10	17.5	17.0	17.0	22.0	20.5	21.5	27.0	26.0	26.5	---	---	---
11	18.5	17.5	18.0	22.0	21.5	21.5	27.0	26.5	26.5	22.0	20.5	21.0
12	19.5	18.0	18.5	23.0	21.0	22.0	---	---	---	22.0	21.5	22.0
13	20.0	18.5	19.5	23.5	22.0	22.5	---	---	---	21.5	21.0	21.5
14	21.0	20.0	20.5	24.0	22.5	23.5	27.0	26.0	26.5	21.5	21.0	21.5
15	20.5	19.5	20.0	24.5	23.5	24.0	28.0	26.5	27.0	21.0	19.0	20.0
16	21.0	19.5	20.5	24.5	24.0	24.0	28.0	26.5	27.5	---	---	---
17	20.5	20.0	20.5	25.0	24.0	24.5	28.0	27.0	27.5	---	---	---
18	20.0	19.5	19.5	24.5	23.5	24.0	---	---	---	---	---	---
19	21.5	19.5	20.5	24.0	23.0	23.5	---	---	---	---	---	---
20	22.0	20.5	21.5	24.5	23.0	23.5	---	---	---	---	---	---
21	22.5	21.0	21.5	23.5	23.0	23.0	---	---	---	---	---	---
22	23.0	21.0	22.0	24.5	22.5	23.5	24.5	23.5	24.0	---	---	---
23	23.5	21.5	22.5	25.5	23.5	24.5	24.5	23.5	24.0	---	---	---
24	22.5	21.5	22.0	25.5	24.5	25.0	24.0	23.5	23.5	---	---	---
25	22.5	21.0	22.0	25.0	24.5	25.0	24.5	23.0	23.5	---	---	---
26	22.5	21.5	22.0	25.0	23.5	24.5	---	---	---	---	---	---
27	23.0	21.5	22.5	24.5	22.5	23.5	---	---	---	---	---	---
28	23.5	22.0	23.0	23.5	22.0	23.0	---	---	---	---	---	---
29	24.0	22.5	23.5	24.5	22.5	23.5	24.5	24.0	24.5	---	---	---
30	23.5	23.0	23.5	24.0	23.0	24.0	---	---	---	---	---	---
31	---	---	---	24.5	23.5	24.0	25.5	24.5	25.0	---	---	---
MONTH	24.0	11.5	19.0	25.5	20.5	23.5	28.0	23.0	26.0	25.0	19.0	22.0
YEAR	28.0	.0	10.5									

CONNECTICUT RIVER BASIN

01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MASS.

LOCATION.--Lat 42°04'45", long 73°04'24", Berkshire County, Hydrologic Unit 01080207, on left bank 5 ft downstream from highway bridge, 0.3 mi downstream from Clam River, 1 mi south of New Boston, and at mile 65.0.

DRAINAGE AREA.--91.7 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period and period of doubtful or no gage-height record, July 21 to Aug. 21, which are poor. 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.--71 years, 184 ft³/s, 27.25 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, 7,740 ft³/s May 30, gage height, 9.24 ft; minimum daily, 7.4 ft³/s Sept. 2, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	23	39	358	270	110	356	334	160	2200	62	20	8.1		
2	31	35	140	250	105	295	360	123	1840	114	17	7.4		
3	29	33	118	240	120	253	350	102	1360	91	16	9.5		
4	27	35	108	230	210	227	323	426	818	79	18	51		
5	31	33	112	224	240	208	1550	419	540	58	16	32		
6	29	33	131	219	210	237	2060	307	445	56	15	20		
7	25	33	452	216	180	223	1400	243	425	413	15	16		
8	24	33	287	208	160	193	1000	270	343	293	18	14		
9	21	86	230	193	150	180	822	353	271	178	16	12		
10	20	182	180	166	140	168	748	268	217	119	15	11		
11	19	252	144	143	160	154	698	218	156	90	14	11		
12	24	270	125	130	220	180	733	211	102	78	16	11		
13	69	237	916	115	240	169	711	226	87	62	14	9.9		
14	67	225	1320	109	268	277	730	359	77	51	13	10		
15	50	135	854	105	600	241	903	300	67	40	12	11		
16	38	276	606	100	1200	177	1050	246	58	36	11	10		
17	32	338	432	90	1140	181	964	203	54	40	15	13		
18	32	277	325	84	1040	160	712	173	56	58	13	9.9		
19	35	339	257	90	934	165	591	155	65	56	12	8.3		
20	33	363	181	86	970	204	478	142	55	45	26	7.8		
21	32	486	155	84	804	294	395	139	46	40	20	7.8		
22	31	462	190	84	671	451	331	126	43	37	16	7.5		
23	31	413	260	84	557	383	294	204	41	34	14	7.4		
24	71	406	250	90	655	305	403	429	40	30	14	8.0		
25	68	728	240	160	614	261	419	275	43	24	13	8.1		
26	58	633	230	220	636	242	343	212	41	20	12	8.3		
27	56	539	230	160	465	227	276	202	39	26	10	7.8		
28	52	476	240	140	438	221	233	228	36	32	9.4	8.1		
29	49	500	380	125	445	261	203	2500	35	27	9.0	8.2		
30	45	488	320	120	---	332	177	5760	38	24	9.1	8.0		
31	42	---	290	115	---	332	---	4450	---	26	8.9	---		
TOTAL	1194	8385	10061	4650	13682	7557	19591	19429	9638	2339	447.4	362.1		
MEAN	38.5	280	325	150	472	244	653	627	321	75.5	14.4	12.1		
MAX	71	728	1320	270	1200	451	2060	5760	2200	413	26	51		
MIN	19	33	108	84	105	154	177	102	35	20	8.9	7.4		
MEAN†	35.6	147	357	123	504	265	709	682	289	82.6	11.6	9.10		
CFSM†	.39	1.60	3.89	1.34	5.50	2.89	7.73	7.44	3.15	.90	.13	.10		
IN†	.45	1.79	4.49	1.55	5.93	3.33	8.63	8.58	3.51	1.04	.15	.11		
CAL YR 1983	TOTAL	88309.5	MEAN	242	MAX	2260	MIN	5.4	MEAN†	244	CFSM†	2.66	IN†	36.08
WTR YR 1984	TOTAL	97335.5	MEAN	266	MAX	5760	MIN	7.4	MEAN†	266	CFSM†	2.90	IN†	39.56

† Adjusted for change in contents in Otis Reservoir.

Reservoirs in Connecticut River basin

- 01127850; 01128000. FIRST CONNECTICUT AND SECOND CONNECTICUT LAKES on Connecticut River are operated as a unit for storage of water for power and are used for recreation. The downstream order and usable capacity of each are as follows: Second Lake, 12 mi northeast of Pittsburg, N.H., 506,000,000 ft³; First Lake, 5.6 mi northeast of Pittsburg, N.H., 3,330,000,000 ft³. Records provided by New England Power Co.
01129000. LAKE FRANCIS on Connecticut River at Pittsburg, N.H., completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft³. Records provided 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, N.H., filled in April 1956, 4,970,000,000 ft³; Comerford Reservoir, 5 mi northeast of Monroe, N.H., completed in 1930, 1,279,000,000 ft³. Records provided 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 provided by U.S. Army 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, N.H., 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 provided 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 provided by U.S. Army Corps of Engineers.
01152000. SUNAPEE LAKE on Sugar River at Sunapee, N.H., used for recreation and storage of water for power, has usable capacity of 862,000,000 ft³. Records provided 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 provided by U.S. Army 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 provided by U.S. Army 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 provided by U.S. Army Corps of Engineers.
01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi north of Keene, N.H., completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi northeast of Keene, N.H., completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01163500. BIRCH HILL RESERVOIR on Millers River, 1 mi east of South Royalston, Mass., completed in 1941 for flood control, has usable capacity of 2,180,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01164500. TULLY RESERVOIR on East Branch Tully River, 3.5 mi north of Athol, Mass., completed in 1948 for flood control, has usable capacity of 958,000,000 ft³. Records provided by U.S. Army 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 provided by New England Power Co.
01172400. BARRE FALLS RESERVOIR on Ware River, 4 mi east of Barre, Mass., completed in 1958 for flood control, has usable capacity of 1,050,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01175000. QUABBIN RESERVOIR on Swift River, 3.2 mi east of Belchertown, Mass., completed in August 1939 for storage of water for municipal supply, has usable capacity of 53,800,000,000 ft³. Records provided by Water Division, Metropolitan District Commission.
01176410. CONANT BROOK RESERVOIR in Chicopee River basin, 1.5 mi southeast of South Monson, Mass., completed in September 1966 for flood control, has usable capacity of 163,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01176500. LUDLOW RESERVOIR in Chicopee River basin, 3.2 mi northwest of Three Rivers, Mass., completed in 1875 for storage of water for municipal supply, has usable capacity of 201,000,000 ft³. Records provided by Board of Water Commissioners, Springfield, Mass.
01179000. KNIGHTVILLE RESERVOIR on Westfield River, 4 mi north of Huntington, Mass., completed in 1941 for flood control, has usable capacity of 2,130,000,000 ft³. Records provided by U.S. Army Corps of Engineers.
01180450. LITTLEVILLE LAKE on Middle Branch Westfield River, 2 mi north of Huntington, Mass., completed in 1965, used for flood control, water supply, and recreation, has usable capacity of 1,410,000,000 ft³. Records provided by U.S. Army 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, Mass., completed in 1909, 344,000,000 ft³; Cobble Mountain Reservoir on Little River, 6.5 mi west of Westfield, Mass., completed in 1931, 3,050,000,000 ft³. Records provided by Board of Water Commissioners, Springfield, Mass.

CONNECTICUT RIVER BASIN

Reservoirs in Connecticut River basin--Continued

01185000. OTIS RESERVOIR in Farmington River basin, 3 mi southeast of Otis, Mass., completed in 1865, used for storage of water for power and for recreation, has usable capacity of 780,000,000 ft³. Records provided by Massachusetts Department of Natural Resources, Division of Forests and Parks.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

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, 1983.....	2416.5	2580.2	4889.7	1.4	971.5	104.6
Oct. 31.....	1883.3	2339.4	4810.3	1.5	812.9	94.7
Nov. 30.....	2199.8	3167.5	5995.6	21.4	754.9	40.7
Dec. 31.....	2395.3	3461.2	5340.7	20.5	565.7	116.0
Jan. 31, 1984.....	1578.1	1952.2	4706.7	16.8	514.1	120.0
Feb. 29.....	1208.4	1521.5	3183.1	13.7	841.1	106.4
Mar. 31.....	1156.3	1134.0	1683.3	17.9	811.5	111.0
Apr. 30.....	3524.9	2710.3	5752.9	4.9	1102.6	39.0
May 31.....	3738.4	4190.6	6074.8	443.5	1296.5	1142.9
June 30.....	3334.4	3877.7	5819.8	3.2	1061.0	23.6
July 31.....	3189.4	3621.4	5780.0	2.7	1074.0	43.4
Aug. 31.....	2937.6	2879.5	5337.4	1.5	1042.2	24.2
Sept. 30.....	2568.9	2484.8	5948.5	1.5	935.2	66.4
	Sunapee Lake	North Springfield Reservoir	Ball Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1983.....	275	21.8	94.9	35.2	62.2	1.2
Oct. 31.....	236	21.3	11.3	35.8	58.6	6.9
Nov. 30.....	578	32.7	17.6	43.6	88.8	47.4
Dec. 31.....	447	26.9	28.1	39.4	95.5	41.8
Jan. 31, 1984.....	391	24.0	15.9	37.6	76.9	36.2
Feb. 29.....	549	26.9	17.7	42.5	234	91.2
Mar. 31.....	484	29.1	15.0	29.9	75.6	35.4
Apr. 30.....	675	112.6	141.7	40.8	79.5	39.3
May 31.....	840	1117.2	1352.5	860	980.5	481
June 30.....	612	24.7	83.4	35.5	59.8	36.8
July 31.....	588	21.8	76.3	35.2	59.8	37.6
Aug. 31.....	486	23.3	91.7	36.6	55.3	36.5
Sept. 30.....	381	24.0	13.0	35.8	59.8	36.8
	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs	Barre Falls Reservoir	Quabbin Reservoir†	Conant Brook Reservoir
Sept. 30, 1983.....	1.5	42.4	4406.5	2.2	50792	0
Oct. 31.....	7.0	56.3	3702.1	2.6	49709	0
Nov. 30.....	19.0	51.2	4680.8	5.2	50280	.1
Dec. 31.....	7.5	26.6	5789.7	42.5	52289	.1
Jan. 31, 1984.....	4.5	24.8	3753.5	26.0	52665	.1
Feb. 29.....	21.2	57.4	4662.7	31.0	54836	.2
Mar. 31.....	52.5	51.2	3175.8	31.9	55698	.1
Apr. 30.....	6.5	67.9	6137.3	4.4	55641	.1
May 31.....	681.6	373.5	7054.7	296.2	57221	25.6
June 30.....	2.8	65.3	6233.0	2.9	55311	.1
July 31.....	2.3	65.3	6262.4	2.6	54479	0
Aug. 31.....	1.5	54.1	5798.5	2.0	52777	0
Sept. 30.....	1.5	41.6	5247.7	1.8	51213	0
	Ludlow Reservoir	Knightville Reservoir	Littleville Lake	Borden Brook and Cobble Mountain Reservoirs	Otis Reservoir	
Sept. 30, 1983.....	139.2	0.2	414.6	2334.7	672.7	
Oct. 31.....	134.2	.2	415.9	2256.0	665.0	
Nov. 30.....	186.6	26.2	432.8	2366.8	322.0	
Dec. 31.....	186.6	24.0	427.6	2666.4	408.5	
Jan. 31, 1984.....	184.9	15.8	421.1	2501.0	337.0	
Feb. 29.....	188.5	9.1	435.4	2785.4	418.2	
Mar. 31.....	186.6	94.5	462.7	2750.9	475.0	
Apr. 30.....	184.9	7.1	427.6	3027.6	619.5	
May 31.....	197.7	1767.4	1116.0	3412.3	768.5	
June 30.....	179.4	.5	417.2	2946.3	684.2	
July 31.....	179.4	.2	417.2	2833.3	703.3	
Aug. 31.....	161.5	.1	414.6	2508.8	695.7	
Sept. 30.....	145.8	.1	414.6	2345.0	688.0	

† Affected by diversion from Ware River and diversion to Wachusett Reservoir and Chicopee Valley aqueduct.

REVISIONS.--The monthend contents of Quabbin Reservoir for June 1964, reported in WSP 1901, was in error. The correct figure is 48,354 million cubic feet.

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MASS.

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.--57.6 mi², revised.

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 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by powerplants upstream and, since 1949, by Cleveland Brook Reservoir, usable capacity, 214,000,000 ft³, 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.--48 years, 107 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 greater than base discharge of 1,200 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage Height (ft)	Date	Time	Discharge (ft ³ /s)	Gage Height (ft)
Dec. 14	0500	1,270	4.82	Apr. 6	0315	a1,660	5.33
Feb. 16	0745	1,440	5.05	May 29	2045	a*3,340	*7.00

a From rating curve extended above 730 ft³/s on basis of slope-area measurements.

Minimum daily discharge, 15 ft³/s Sept. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	30	93	100	38	161	96	116	913	71	25	18
2	22	32	67	94	37	153	120	108	537	60	24	16
3	23	32	56	90	45	139	145	103	400	50	23	21
4	22	33	43	73	111	131	150	293	296	44	23	25
5	24	31	52	58	120	127	431	325	227	50	26	26
6	29	34	68	57	109	147	1300	199	188	100	23	23
7	25	34	203	54	87	139	672	148	183	250	23	21
8	20	33	168	45	63	119	397	150	163	295	24	19
9	19	33	126	46	59	114	296	257	136	146	21	16
10	21	34	89	48	56	102	271	204	119	93	21	18
11	22	47	74	48	62	96	243	131	110	71	22	21
12	25	58	69	40	98	74	317	169	94	67	20	26
13	35	42	482	41	119	73	368	269	90	57	19	24
14	32	36	987	42	149	71	396	338	91	51	18	35
15	25	36	567	40	364	92	600	268	86	34	29	30
16	20	82	424	36	1190	97	679	180	58	34	25	25
17	22	110	286	39	687	122	723	140	47	34	25	28
18	23	73	206	39	627	121	540	117	58	105	23	29
19	25	48	166	40	505	119	493	104	112	106	28	22
20	25	41	119	36	646	120	373	97	66	62	80	21
21	23	81	108	34	447	170	314	103	50	33	46	20
22	25	90	112	29	292	226	242	94	44	35	32	18
23	26	58	118	31	236	202	207	148	35	33	32	15
24	52	49	118	39	333	145	261	312	32	32	31	17
25	47	205	107	82	384	120	268	167	41	28	28	19
26	41	188	79	90	421	122	245	113	44	26	22	19
27	38	109	70	85	257	120	219	123	33	29	22	19
28	36	73	80	67	218	117	184	146	30	34	22	21
29	31	104	180	52	190	97	130	1660	30	30	21	21
30	28	123	150	48	---	95	122	2750	67	27	21	19
31	29	---	110	47	---	91	---	2000	---	26	21	---
TOTAL	855	1979	5557	1670	7950	3822	10802	11332	4380	2113	820	652
MEAN	27.6	66.0	179	53.9	274	123	360	366	146	68.2	26.5	21.7
MAX	52	205	987	100	1190	226	1300	2750	913	295	80	35
MIN	19	30	43	29	37	71	96	94	30	26	18	15

CAL YR 1983	TOTAL	42702.1	MEAN 117	MAX 1710	MIN 7.6
WTR YR 1984	TOTAL	51932	MEAN 142	MAX 2750	MIN 15

HOUSATONIC RIVER BASIN

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MASS.

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.--282 mi², revised.

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). WDR MA-RI-83-1: 1980(P), 1982(P).

GAGE.--Water-stage recorder. Datum of gage is 683.04 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good. 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.--71 years, 529 ft³/s, 25.47 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 greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 15	0530	2,590	5.82	Apr. 7	1330	2,900	6.17
Feb. 17	0945	3,350	6.67	May 31	unknown	*10,300	*10.96

Minimum daily discharge, 63 ft³/s Aug. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	162	575	610	330	1140	691	600	8270	377	196	148
2	135	133	477	540	340	1010	765	560	5740	395	319	80
3	138	147	412	513	330	916	854	580	3810	383	160	119
4	140	145	376	503	580	824	913	940	2650	242	87	165
5	161	138	351	472	770	776	1080	1290	1920	252	63	164
6	167	147	358	445	632	811	2280	1220	1530	339	113	161
7	175	146	909	443	540	832	2800	950	1420	717	188	199
8	171	114	992	410	420	729	2490	840	1230	1080	270	224
9	164	113	718	390	430	688	1860	1160	1030	899	166	217
10	157	112	587	380	390	680	1500	1120	886	656	81	212
11	148	147	501	380	370	640	1280	940	750	529	99	214
12	125	209	450	360	543	620	1210	870	592	482	159	234
13	167	201	1040	340	630	570	1210	1010	504	432	168	230
14	290	177	2250	371	748	520	1320	1200	437	351	154	239
15	205	161	2540	360	1370	660	1600	1310	463	293	158	265
16	205	171	2120	340	2720	620	1900	1160	423	270	206	232
17	207	277	1640	340	3310	670	2160	960	375	265	183	200
18	215	283	1300	320	3070	710	2140	840	351	315	171	201
19	227	239	1030	310	2660	760	1900	760	417	443	128	206
20	227	205	690	290	2610	800	1640	700	452	459	256	170
21	223	259	670	280	2430	940	1320	730	368	377	290	171
22	218	344	650	280	2030	1210	1140	700	321	318	215	160
23	214	306	680	290	1630	1250	1000	710	296	289	182	151
24	255	284	660	290	1570	1080	989	1180	278	250	178	143
25	252	656	610	520	1660	917	1110	1160	304	197	170	142
26	240	938	590	690	1760	847	1060	830	419	198	133	138
27	234	730	540	552	1640	782	901	750	322	198	118	174
28	227	538	580	460	1420	761	821	800	178	232	120	184
29	210	582	640	440	1310	758	740	2540	220	221	134	162
30	198	649	820	360	---	718	700	8200	305	200	132	180
31	181	---	750	340	---	677	---	9940	---	186	130	---
TOTAL	5969	8713	26506	12619	38243	24916	41374	46550	36261	11845	5127	5485
MEAN	193	290	855	407	1319	804	1379	1502	1209	382	165	183
MAX	290	938	2540	690	3310	1250	2800	9940	8270	1080	319	265
MIN	93	112	351	280	330	520	691	560	178	186	63	80
CFSM	.68	1.03	3.03	1.44	4.68	2.85	4.89	5.33	4.29	1.35	.59	.65
IN.	.79	1.15	3.50	1.66	5.04	3.29	5.46	6.14	4.78	1.56	.68	.72
CAL YR 1983	TOTAL	214690	MEAN	588	MAX	5020	MIN	52	CFSM	2.09	IN.	28.32
WTR YR 1984	TOTAL	263608	MEAN	720	MAX	9940	MIN	63	CFSM	2.55	IN.	34.77

01331500 HOOSIC RIVER AT ADAMS, MASS.

LOCATION.--Lat 42°36'40", long 73°07'28", Berkshire County, Hydrologic Unit 02020003, on left bank at Adams, 500 ft downstream from Dry Brook, and 0.4 mi upstream from Pecks Brook.

DRAINAGE AREA.--46.7 mi², revised.

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 above 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 good. Diversion upstream for municipal supply of Adams. Some diurnal fluctuation by mill upstream prior to 1961. Flow regulated by Cheshire Reservoir 5.1 mi upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE--53 years, 90.1 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s Sept. 21, 1938, gage height, 9.25 ft, site and datum then in use, from rating curve extended above 1,100 ft³/s on basis of computation of peak flow over dam; minimum daily, 8.0 ft³/s Aug. 31, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 900 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 13	2245	989	7.98	Apr. 5	2130	901	7.87
Feb. 16	0600	1,070	8.08	May 29	2000	*1,810	*8.82

Minimum discharge, 16 ft³/s Sept. 10, 11; minimum daily, 16 ft³/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	95	70	44	149	115	115	586	45	46	24
2	25	21	79	65	43	138	146	104	428	54	43	22
3	23	21	72	64	44	127	176	98	354	49	26	28
4	21	22	64	63	127	114	165	254	300	46	24	29
5	21	23	71	61	100	108	416	191	263	45	25	25
6	31	26	122	59	83	118	605	142	237	89	26	23
7	24	26	292	59	71	111	382	121	234	289	22	22
8	20	26	149	56	62	96	258	143	206	196	22	22
9	20	26	108	53	63	95	206	197	184	103	22	19
10	19	25	98	52	59	87	191	144	167	82	22	16
11	19	34	85	54	67	87	184	126	135	74	22	17
12	19	49	78	47	97	81	238	225	54	72	22	23
13	27	35	605	47	100	82	263	244	54	62	22	20
14	28	29	637	50	146	84	299	312	76	55	21	28
15	24	28	360	49	383	85	376	226	65	49	24	27
16	20	87	282	45	872	87	429	192	58	46	25	24
17	19	70	210	45	476	116	449	165	54	44	23	21
18	19	50	168	44	550	107	387	147	59	92	21	20
19	19	41	136	44	411	102	344	139	103	78	23	20
20	18	39	94	41	493	106	275	127	73	58	38	20
21	17	112	82	38	341	150	245	123	63	50	27	20
22	17	69	88	36	270	194	205	111	58	52	25	20
23	18	48	93	39	237	163	183	149	53	51	26	20
24	67	70	86	48	324	125	247	206	50	48	28	20
25	39	266	70	82	329	123	241	130	57	44	26	20
26	34	165	69	64	365	127	196	130	51	43	23	20
27	33	114	65	57	243	127	166	156	46	46	20	19
28	31	98	68	55	186	126	149	172	43	55	20	18
29	29	154	136	49	172	114	137	1070	41	51	20	18
30	24	135	92	50	---	108	123	1320	42	48	22	18
31	24	---	74	49	---	105	---	1070	---	46	28	---
TOTAL	768	1930	4728	1635	6758	3542	7796	8049	4194	2162	784	643
MEAN	24.8	64.3	153	52.7	233	114	260	260	140	69.7	25.3	21.4
MAX	67	266	637	82	872	194	605	1320	586	289	46	29
MIN	17	21	64	36	43	81	115	98	41	43	20	16

CAL YR 1983 TOTAL 38605 MEAN 106 MAX 878 MIN 13
WTR YR 1984 TOTAL 42989 MEAN 117 MAX 1320 MIN 16

01332000 NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MASS.

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.--40.9 mi², revised.

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 above 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, except those for winter period, which are poor. No gage-height record Jan. 7 to Feb. 22. 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.--53 years, 96.8 ft³/s, 32.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s Sept. 21, 1938, gage height, 12.05 ft, from flood-marks, 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 greater than base discharge of 1,300 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 13	1845	1,810	8.70	Apr. 5	2345	2,100	8.94
Feb. 16	--	1,300	--	May 29	1300	a*2,680	*9.38

a From rating curve extended above 1,100 ft³/s on basis of computations of flow over dam at gage heights 10.28 ft and 12.24 ft.

Minimum discharge, 6.5 ft³/s Oct. 1; minimum daily, 7.2 ft³/s Oct. 1, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	10	105	74	34	117	88	109	460	13	18	16
2	9.6	10	84	65	32	105	115	94	261	13	16	13
3	9.5	10	73	60	34	99	149	84	180	15	15	20
4	8.5	17	62	56	120	93	154	345	137	16	14	24
5	8.1	18	67	53	82	78	659	252	137	15	13	19
6	10	21	75	52	62	86	1130	168	94	49	12	14
7	11	19	596	49	54	69	556	129	90	300	11	12
8	9.1	16	198	47	46	58	322	162	70	122	16	11
9	8.3	15	125	44	43	54	235	231	57	63	14	9.9
10	7.7	14	103	42	45	46	212	149	48	41	13	9.4
11	7.2	28	84	41	52	46	196	121	40	138	30	12
12	7.6	61	74	38	82	46	312	323	34	453	21	22
13	18	34	977	36	86	42	358	303	30	122	15	14
14	15	24	1150	36	160	42	457	441	32	70	13	18
15	12	21	516	34	500	49	506	251	31	49	15	22
16	9.6	98	309	33	1000	57	562	193	25	47	14	17
17	8.8	110	187	32	420	93	629	155	22	54	17	14
18	8.3	64	135	32	480	79	563	127	23	179	13	12
19	8.2	47	104	31	350	68	518	112	32	139	13	11
20	7.9	40	66	29	400	75	445	101	24	80	36	11
21	8.1	223	62	27	250	118	355	97	19	57	20	11
22	8.0	136	70	25	170	147	236	83	16	49	14	9.4
23	9.2	86	78	26	156	124	199	98	15	41	26	8.9
24	51	86	67	32	362	98	299	125	14	35	24	9.0
25	28	431	59	76	379	91	284	88	29	27	19	8.8
26	18	211	54	64	458	92	218	90	22	23	14	9.6
27	15	129	51	52	230	89	183	111	16	27	12	9.6
28	15	101	65	44	183	89	156	129	14	48	11	9.2
29	13	164	200	42	152	81	135	1500	13	30	9.9	8.9
30	11	154	110	41	---	79	119	1610	13	24	10	8.9
31	11	---	82	40	---	73	---	1150	---	21	18	---
TOTAL	378.9	2398	5988	1353	6422	2483	10350	8931	1998	2360	506.9	394.6
MEAN	12.2	79.9	193	43.6	221	80.1	345	288	66.6	76.1	16.4	13.2
MAX	51	431	1150	76	1000	147	1130	1610	460	453	36	24
MIN	7.2	10	51	25	32	42	88	83	13	13	9.9	8.8
CFSM	.30	1.95	4.72	1.07	5.40	1.96	8.44	7.04	1.63	1.86	.40	.32
IN.	.34	2.18	5.45	1.23	5.84	2.26	9.41	8.12	1.82	2.15	.46	.36

CAL YR 1983	TOTAL	38227.2	MEAN 105	MAX 1150	MIN 4.9	CFSM 2.57	IN. 34.77
WTR YR 1984	TOTAL	43563.4	MEAN 119	MAX 1610	MIN 7.2	CFSM 2.91	IN. 39.62

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MASS.

LOCATION.--Lat 42°42'01", long 73°09'34", Berkshire County, Hydrologic Unit 02020003, on left bank 0.3 mi downstream from Sherman Brook and 2.7 mi east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi².

PERIOD OF RECORD.--Discharge: July 1940 to current year.
Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft above National Geodetic Vertical Datum of 1929, (U.S. Army Corps of Engineers benchmark). Prior to June 6, 1979, at site 1.2 mi downstream at different datum.

REMARKS.--Records good except those for winter period and period of doubtful gage-height record, Apr. 10 to June 12, 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.--44 years, 275 ft³/s, 29.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s Dec. 31, 1948, gage height, 14.85 ft, former site and datum, from rating curve extended above 4,300 ft³/s on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft³/s Aug. 30, 31, Oct. 26, 1940; minimum daily, 24 ft³/s Sept. 9, 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 14	0215	3,140	8.76	Apr. 5	2100	3,170	8.78
Feb. 16	0900	2,500	8.26	aMay 30	a0015	*4,670	*9.82

a About.

Minimum discharge, 35 ft³/s Oct. 12; minimum daily, 42 ft³/s Oct. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	56	300	220	110	371	330	350	2300	100	92	69
2	64	55	246	200	105	331	413	311	1260	111	90	64
3	54	58	220	175	110	305	504	284	910	110	69	80
4	52	67	189	170	310	277	467	850	671	100	66	82
5	53	71	194	162	279	255	1610	627	548	103	62	72
6	69	76	237	164	219	277	2160	467	467	217	66	67
7	51	70	1180	157	186	250	1320	397	461	836	62	63
8	49	68	492	146	150	223	840	470	404	440	60	63
9	48	66	322	135	140	213	654	627	344	242	65	55
10	45	60	287	136	145	194	592	448	305	185	61	47
11	42	91	238	133	170	180	547	391	273	308	90	60
12	42	147	214	125	275	175	736	958	168	665	79	79
13	67	100	1710	120	288	160	841	752	149	265	78	74
14	69	79	2370	120	422	155	1000	1090	176	185	64	84
15	60	75	1220	115	1270	160	1200	701	168	150	68	92
16	50	256	832	110	2240	185	1310	576	146	152	71	79
17	43	271	571	110	1360	293	1420	487	136	150	64	75
18	47	168	434	105	1490	257	1250	441	141	375	60	66
19	45	133	347	105	1110	240	1180	397	190	316	65	61
20	45	115	220	100	1290	273	962	350	165	202	109	61
21	44	413	198	90	893	420	853	333	144	156	76	61
22	44	303	215	84	663	529	645	294	126	143	70	58
23	45	198	225	90	552	413	566	488	119	136	75	57
24	163	187	200	110	893	329	727	441	113	126	80	57
25	107	898	185	240	924	335	790	316	141	114	74	57
26	84	553	180	195	1080	334	625	359	131	108	66	57
27	79	359	175	170	643	333	544	379	114	114	57	54
28	76	290	200	150	510	328	478	442	104	142	57	54
29	68	457	390	135	447	300	428	3210	99	117	57	54
30	56	419	314	132	---	288	385	3910	100	110	62	51
31	55	---	248	131	---	281	---	3200	---	102	82	---
TOTAL	1869	6159	14353	4335	18274	8664	25377	24346	10573	6580	2197	1953
MEAN	60.3	205	463	140	630	279	846	785	352	212	70.9	65.1
MAX	163	898	2370	240	2240	529	2160	3910	2300	836	109	92
MIN	42	55	175	84	105	155	330	284	99	100	57	47
CFSM	.48	1.63	3.68	1.11	5.00	2.21	6.71	6.23	2.79	1.68	.56	.52
IN.	.55	1.82	4.24	1.28	5.40	2.56	7.49	7.19	3.12	1.94	.65	.58

CAL YR 1983 TOTAL 109880 MEAN 301 MAX 2420 MIN 29 CFSM 2.39 IN 32.44
WTR YR 1984 TOTAL 124680 MEAN 341 MAX 3910 MIN 42 CFSM 2.71 IN 36.81

HUDSON RIVER BASIN

01333000 GREEN RIVER AT WILLIAMSTOWN, MASS.

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. Elevation 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.--35 years, 83.6 ft³/s, 26.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s Dec. 21, 1973, gage height, 5.68 ft in gage well, from rating curve extended above 750 ft³/s on basis of slope-area measurement at gage height 4.94 ft; maximum gage height, 6.35 ft Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 850 ft³/s and maximum (*):

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Dec. 7	0115	859	3.63	Feb. 15	2330	1,140	3.97
Dec. 13	1715	1,170	4.02	May 30	0930	*1,970	*4.89

Minimum discharge, 6.1 ft³/s Oct. 1.

REVISIONS.--Revised peak discharges for water years 1977-83 and revised daily discharges, in cubic feet per second, for high-water periods in water year 1979 are given below. These figures supersede those published in the reports for 1977-83.

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Mar. 30, 1977	1915	859	3.63	May 25, 1979	1500	974	3.78
Oct. 1, 1977	2215	859	3.63	Nov. 26, 1979	2015	1,230	4.09
Oct. 17, 1977	0745	1,300	4.17	Mar. 18, 1980	0815	919	3.71
Nov. 26, 1977	0800	912	3.70	Mar. 22, 1980	0115	*1,630	*4.55
Dec. 14, 1977	2330	982	3.79	Apr. 10, 1980	0545	1,600	4.52
Dec. 25, 1977	1245	823	3.58	Feb. 20, 1981	1930	*1,560	4.47
Jan. 9, 1978	1345	1,070	3.90	Feb. 4, 1982	0200	966	3.77
Jan. 26, 1978	1445	*1,410	*4.30	Apr. 4, 1982	2130	990	3.80
Mar. 14, 1978	1845	852	3.62	Apr. 18, 1982	0345	*1,610	*4.53
Mar. 27, 1978	1345	896	3.68	June 29, 1982	1715	1,070	3.90
Jan. 2, 1979	1730	1,690	4.61	Apr. 19, 1983	2100	*1,980	*4.90
Mar. 6, 1979	1730	*2,040	*4.95				

* Annual maximum.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
Jan. 2, 1979.....	1,330	Mar. 5, 1979.....	1,050	Mar. 6, 1979.....	1,730	Mar. 7, 1979.....	1,200
Month	Total	Mean	Max	Min	Cfsm	In	
January 1979	6,788	219	1,330	68	5.14	5.93	
March 1979	11,643	376	1,730	78	8.83	10.17	
Wtr Yr 1979	36,997.9	101	1,730	4.4	2.37	32.31	
Cal Yr 1979	42,884.3	117	1,730	4.4	2.75	37.45	

01333000 GREEN RIVER AT WILLIAMSTOWN, MASS.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	11	101	80	37	137	113	99	530	25	16	12
2	11	10	82	74	36	121	135	86	361	23	15	10
3	8.8	10	72	68	38	108	151	77	266	24	14	18
4	7.4	12	66	62	130	94	141	208	206	22	14	17
5	7.7	12	61	58	68	87	307	148	162	23	16	13
6	11	13	127	54	59	98	483	125	138	36	17	12
7	8.6	13	427	51	52	77	367	114	138	183	16	11
8	6.9	12	188	49	47	67	261	125	113	75	19	10
9	6.7	12	137	45	47	63	202	144	96	52	14	9.4
10	6.7	12	119	42	50	56	173	120	83	43	13	8.8
11	6.7	24	98	43	89	56	154	109	74	58	22	11
12	8.1	34	88	36	183	49	153	230	65	51	15	17
13	17	23	732	37	149	45	159	214	59	37	13	11
14	12	19	654	37	265	45	216	411	61	32	13	16
15	11	17	417	35	649	53	278	289	52	28	21	14
16	9.5	41	284	33	853	54	370	234	47	29	14	13
17	9.4	43	206	33	504	88	364	186	43	27	15	12
18	9.1	33	161	34	509	62	345	157	44	49	13	11
19	8.6	28	132	32	393	59	272	136	46	38	13	10
20	8.2	25	91	30	460	68	246	123	38	29	22	9.6
21	7.7	73	74	29	320	152	208	116	34	26	14	9.3
22	8.3	54	80	27	239	201	169	97	31	25	13	8.4
23	9.0	42	84	28	196	139	151	106	29	23	19	8.1
24	32	48	75	32	321	114	193	109	28	21	15	8.2
25	20	284	58	80	308	123	190	84	35	19	13	7.8
26	15	144	56	61	328	121	157	86	28	18	12	7.9
27	14	112	53	50	230	118	140	91	25	24	11	7.7
28	13	101	60	46	203	119	129	120	24	26	11	7.0
29	12	176	170	44	175	112	121	1040	23	20	10	7.2
30	11	126	110	43	---	94	112	1500	29	18	11	7.3
31	11	---	90	43	---	92	---	1100	---	17	20	---
TOTAL	334.5	1564	5153	1416	6938	2872	6460	7784	2908	1121	464	324.7
MEAN	10.8	52.1	166	45.7	239	92.6	215	251	96.9	36.2	15.0	10.8
MAX	32	284	732	80	853	201	483	1500	530	183	22	18
MIN	6.7	10	53	27	36	45	112	77	23	17	10	7.0
CFSM	.25	1.22	3.90	1.07	5.61	2.17	5.05	5.89	2.28	.85	.35	.25
IN.	.29	1.37	4.50	1.24	6.06	2.51	5.64	6.80	2.54	.98	.41	.28
CAL YR 1983	TOTAL	35185.9	MEAN	96.4	MAX	958	MIN	5.2	CFSM	2.26	IN	30.72
WTR YR 1984	TOTAL	37339.2	MEAN	102	MAX	1500	MIN	6.7	CFSM	2.39	IN	32.61

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 or miscellaneous sites are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage partial record stations. The second is a table of discharge measurements made at miscellaneous sites. No low-flow partial record stations were operated during the year.

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 station during water year 1984

Annual maximum discharge at crest stage partial record station during water year 1984							
Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Blackstone River basin							
01109480	Kettle Brook Diversion Weir at Auburn, Mass.	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.	-	1979-84	6- 1-84	488.36	a734

a Does not include unknown amount of bypass flow.

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 1984

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Merrimack River basin						
01094520 Wekepeke Brook	do	Lat 42°28'05", long 71°44'51", Worcester County, at bridge on State Highway 12, and 2.2 mi north of Sterling, Mass.	-	-	9-28-84	*1.3
01094550 Wekepeke Brook	do	Lat 42°29'19", long 71°42'51", Worcester County, at bridge on State Highway 117, and 3.1 mi northwest of Lancaster, Mass.	11.5	1971-73	9-28-84	*2.9
01094950 Stillwater River	Wachusett Reservoir	Lat 42°26'48", long 71°49'07", Worcester County, 300 ft downstream from bridge on State Highway 140, and 3.0 mi west of Sterling, Mass.	-	-	9-27-84	*.35
01095000 Rocky Brook	Stillwater River	Lat 42°26'58", long 71°48'07", Worcester County, at bridge on Beaman Road, and 2.3 mi west of Sterling, Mass.	-	-	9-27-84	*1.0
01095020 Wachusett Brook	do	Lat 42°26'27", long 71°48'57", Worcester County, at bridge at intersection of Burpee Road, and State Highway 140, and 2.8 mi west of Sterling, Mass.	-	-	9-27-84	*.01
01095050 Stillwater River	Wachusett Reservoir	Lat 42°26'00", long 71°48'41", Worcester County, at bridge on State Highway 62, 2.5 mi west of Sterling, Mass.	25.7	1971-73	9-27-84	*1.9
01095200 Houghton Brook	Stillwater River	Lat 42°24'57", long 71°48'12", Worcester County, at bridge on State Highway 140, and 2.7 mi west of Sterling, Mass.	.69	1965-66††	9-27-84	*.07
01095225 Stillwater River	Wachusett Reservoir	Lat 42°24'37", long 71°47'27", Worcester County, 300 ft downstream of bridge on Muddy Pond Road, and 2.4 mi southwest of Sterling, Mass.	-	-	9-27-84	*3.1
01095750 Catacoonamug Brook	Nashua River	Lat 42°34'27", long 71°42'46", Worcester County, at bridge on Lancaster Avenue, and 1.6 mi southeast of Lunenburg, Mass.	-	-	9-27-84	*.05
01095765 Catacoonamug Brook	do	Lat 42°34'02", long 71°41'49", Worcester County, 0.25 mi below bridge on Reservoir Road, and 2.4 mi southeast of Lunenburg, Mass.	-	-	9-26-84	*.27
01095770 Catacoonamug Brook tributary No. 3	Catacoonamug Brook	Lat 42°33'36", long 71°41'41", Worcester County, at bridge on Reservoir Road, 1.0 mi north of Round Street, and 2.9 mi southeast of Lunenburg, Mass.	-	-	9-26-84	*.10
01095805 Easter Brook	do	Lat 42°33'16", long 71°41'34", Worcester County, at culvert on Reservoir Road, and 3.3 mi southeast of Lunenburg, Mass.	-	-	9-26-84	*.27
01095840 Catacoonamug Brook	Nashua River	Lat 42°32'38", long 71°39'25", Middlesex County, at culvert on Lancaster Road, 1 mi above mouth, and 0.1 mi north of Shirley, Mass.	19.1	1971-73	9-26-84	*5.2
01095987 Bixby Brook tributary	Bixby Brook	Lat 42°38'36", long 71°42'35", Middlesex County, at bridge below Graves Pond Dam on Emery Road, and 1.6 mi south of Townsend, Mass.	-	-	9-26-84	*.25
01095989 Bixby Brook	Squannacook River	Lat 42°38'53", long 71°41'18", Middlesex County, 200 ft below bridge on South Row Road, and 1.6 mi southeast of Townsend, Mass.	-	-	9-26-84	*.19
01095992 Witch Brook	do	Lat 42°37'45", long 71°41'12", Middlesex County, at old dam 150 ft downstream from bridge on Pierce Road, and 2.8 mi south of Townsend, Mass.	-	-	9-25-84	*.10

See footnotes at end of table.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Discharge measurements made at miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Merrimack River basin--Continued						
01095997 Witch Brook	Squannacook River	Lat 42°38'26", long 71°40'17", Middlesex County, at bridge on Warren Road, and 2.6 mi southeast of Townsend, Mass.	-	-	9-25-84	*0.49
01096960 Assabet River	Concord River	Lat 42°25'51", long 71°28'02", Middlesex County, at bridge on Mill Street, 0.4 mi downstream of mouth of Taylor Brook, at Maynard, Mass.	-	-	9- 1-83 10- 6-83 7-26-84	91 34 57
01096980 Assabet River	do	Lat 42°25'54", long 71°27'20", Middlesex County, at bridge on Main Street and State Highway Route 62, 1.0 mi downstream from mouth of Taylor Brook, at Maynard, Mass.	-	-	10- 6-83 7-26-84	28 51
01096990 Assabet River	do	Lat 42°25'52", long 71°27'15", Middlesex County, at bridge on Walnut Street, 1.1 mi downstream from mouth of Taylor Brook, at Maynard, Mass.	-	-	9- 1-83	101
01097030 Assabet River	do	Lat 42°26'31", long 71°25'37", Middlesex County, at bridge on State Highway Route 62 and Mill Road, 0.1 mi upstream from mouth of Second Division Brook, 2 mi southwest of West Concord, Mass.	-	-	9-20-83 4-27-84	22 512
01097040 Assabet River	do	Lat 42°27'12" long 71°24'40", Middlesex County, at Damondale Dam, 1.5 mi upstream from mouth of Second Division Brook, 1 mi west of West Concord, Mass.	-	-	9-20-83 4-27-84	21 462
01098840 Sudbury River	do	Lat 42°27'06", long 71°22'20", Middlesex County, at bridge on State Highway 2, 1.6 mi upstream from mouth, 1.1 mi west of Concord, Mass.	-	-	5-22-84 7-30-84 7-31-84	426 184 187
01098860 Sudbury River	do	Lat 42°27'35", long 71°21'35", Middlesex County, at Nashawtuc Bridge on Nashawtuc Street, 0.5 mi upstream from mouth, at Concord, Mass.	-	-	5-22-84 7-31-84 8- 1-84	395 169 184
Mystic River basin						
01102464 Aberjona River	Mystic River	Lat 42°28'56", long 71°07'08", Middlesex County, 0.2 mi upstream from bridge on Montvale Avenue, at Montvale, Mass.	-	-	4-11-84 4-12-84 7-16-84 7-17-84	29 30 6.3 11
01102473 Aberjona River	do	Lat 42°28'12", long 71°07'30", Middlesex County, 300 ft upstream from bridge on Washington Street, 1.3 mi northeast of Winchester, Mass.	-	-	4-12-84 7-17-84	34 10
Mattapoisett River basin						
011059116 Mattapoisett River	Buzzards Bay (Atlantic Ocean)	Lat 41°42'54", long 70°51'28", Plymouth County, 0.4 mi downstream from culvert on Perry Hill Road, 2.3 mi southwest of Rochester, Mass.	-	-	5-10-84 5-11-84 8-21-84	34 28 8.5
01105912 Mattapoisett River	do	Lat 41°42'45", long 70°50'45", Plymouth County, 1.4 mi downstream from culvert on Perry Hill Road, 1.9 mi southwest of Rochester, Mass.	-	1965, 1982	5-11-84 8-22-84	32 8.0
Blackstone River basin						
01110500 Blackstone River	Providence River (Narragansett Bay)	Lat 42°09'13", long 71°39'09", Worcester County, 100 ft downstream from Sutton Street Bridge, at Northbridge, Mass.	139	1940-77†, 1978-83	10-14-83 1-10-84 3 1-84	183 281 942
Thames River basin						
01125000 French River	Quinebaug River	Lat 42°03'03", long 71°53'08", Worcester County, on right bank in Dudley, 50 ft upstream from Pleasant Street Bridge at Webster, 1.1 mi upstream from Potash Brook, in Dudley, Mass.	85.3	1949-81†, 1982-83	2-28-84 8-30-84	375 9.3

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Connecticut River basin						
01164030 Millers River	Connecticut River	Lat 42°37'22", long 72°09'53", Worcester County, at mouth of Rich Brook, 3.8 mi northwest of Athol, Mass.	-	-	6-26-84 6-27-84 8-28-84	190 189 50
01164080 Millers River	do	Lat 42°37'24", long 72°10'51", Worcester County, 1.5 mi downstream from mouth of Rich Brook, 3.2 mi northeast of Athol, Mass.	-	-	6-27-84 8-29-84	161 46
01168780 East Branch North River	North River	Lat 42°40'29", long 72°41'46", Franklin County, at bridge on State Highway 112, at Colrain, Mass.	46.1	-	5-15-84 5-17-84	215 150
01168788 East Branch North River	do	Lat 42°40'34", long 72°42'48", Franklin County, 0.4 mi upstream from mouth of Foundry Brook, at abandon dam site, 0.3 mi north of Lyonsville, Mass.	-	-	5-17-84	147
01168920 West Branch North River	do	Lat 42°41'27", long 72°45'32", Franklin County, 0.1 mi upstream from mouth of Tissdell Brook, 0.9 mi northwest of Adamsville, Mass.	-	1938 (p), 1965	6-12-84 6-13-84	29 23
01168930 West Branch North River	do	Lat 42°40'58", long 72°45'05", Franklin County, at bridge on Archambo Road, 0.7 mi downstream from mouth of Tissdell Brook, 0.1 mi North of Adamsville, Mass.	-	-	6-13-84	28
01168945 West Branch North River	do	Lat 42°40'41", long 72°44'08", Franklin County, 0.2 mi downstream from mouth of Taylor Brook, 0.7 mi east of Adamsville, Mass.	-	-	10-20-83 6-20-84 6-21-84	5.8 27 23
01168955 West Branch North River	do	Lat 42°40'04", long 72°43'34", Franklin County, 0.2 mi upstream from mouth of Cary Brook, 1.0 mi northwest of Griswoldville, Mass.	-	-	10-20-83 6-21-84	6.0 22
01168990 North River	Deerfield River	Lat 42°38'53", long 72°42'50", Franklin County, 20 ft downstream from mouth of McCellan Brook, 0.5 mi south of Griswoldville, Mass.	-	-	10-18-83 6-18-84 6-19-84	22 86 88
01172680 Natty Pond Brook	Canesto Brook	Lat 42°29'44", long 72°01'24", Worcester County, at bridge on New Templeton Road, 1.7 mi northwest of Hubbardston, Mass.	1.59	-	8- 7-84 8-15-84 9-11-84 9-12-84 9-25-84	.87 .98 .40 .40 .24
01172700 Natty Pond Brook	do	Lat 42°28'41", long 72°01'26", Worcester County, at bridge on Williamsville Road, 0.9 mi west of Hubbardston, Mass.	2.51	-	9-18-84	.63
01172800 Natty Pond Brook	do	Lat 42°27'06", long 72°01'48", Worcester County, at bridge on Hale Road, 2.0 mi southwest of Hubbardston, Mass.	5.50	-	8- 7-84 8-15-84 9-25-84	1.4 1.4 .08
01175680 Sevenmile River	East Brookfield River	Lat 42°13'43", long 72°01'21", Worcester County, 0.2 mi downstream from bridge on State Highway 49; 2.0 mi upstream from mouth, 1.4 mi southwest of Spencer, Mass.	-	-	5- 2-84 5- 3-84 7-24-84 7-25-84	88 83 27 27
01175695 Sevenmile River	do	Lat 42°13'26", long 72°02'42", Worcester County, at bridge on Podunk Street, 0.6 mi upstream from mouth, at East Brookfield, Mass.	-	-	5- 3-84 7-25-84	97 25
01178100 Center Brook	Westfield River	Lat 42°34'10", long 73°01'56", Berkshire County, 35 ft above confluence with Drowned Land Brook, 200 ft north of State Highway 116, and a quarter of a mile northwest of Savoy, Mass.	2.94	1962-65	8-28-84 9-12-84	*.37 1.2
01178150 Drowned Land Brook	do	Lat 42°34'10", long 73°01'57", Berkshire County, 80 ft above confluence with Center Brook, 200 ft north of State Highway 116, and quarter of a mile northwest of Savoy, Mass.	4.43	1962-63, 1965	8-28-84 9-12-84	*.23 1.2
01178200 Westfield Brook	do	Lat 42°28'41", long 72°59'09", Berkshire County, at bridge on High Street at East Windsor, Mass., 1.6 mi above mouth.	11.00	1962-65	8-28-84 9-13-84	*2.0 1.8
01178240 Westfield River	Connecticut River	Lat 42°27'21", long 72°53'07", Hampshire County, at bridge on State Route 9, at Cummington, Mass.	58.22	-	9-13-84	13

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1984--Continued

Discharge measurements made at miscellaneous sites during water year 1964--Continued						
Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Connecticut River basin--Continued						
01178245 Swift River	Westfield River	Lat 42°30'08", long 72°51'00", Franklin County, at culvert on State Highway 116, at Spruce Corner, Mass.	10.96	-	9-12-84	3.6
01178250 Stones Brook	Swift River	Lat 42°27'20", long 72°50'26", Hampshire County, at bridge on Loomis Road, 0.2 mi west of Lithia, Mass., and 0.4 mi above mouth.	7.45	1962-65 (as East Brook)	8-28-84 9-13-84	*1.6 1.7
01178300 Swift River	Westfield River	Lat 42°26'50", long 72°51'29", Hampshire County, at bridge on State Highway 9, at Swift River, Mass., a quarter of a mile above mouth.	22.9	1962-65	8-28-84 9-13-84	*4.4 5.00
01178400 Kearney Brook	do	Lat 42°26'47", long 72°56'09", Hampshire County, at culvert on State Highway 112, 2 1/3 mi southwest of Cummington, Mass.	1.91	1962-65	8-28-84 9-13-84	*.48 .40
01180130 Middle Branch Westfield River	do	Lat 42°23'51", long 72°58'50", Hampshire County, at culvert on River Road, 1.8 mi south of West Worthington, Mass.	16.88	-	9-13-84	1.7
01180150 Middle Branch Westfield River	do	Lat 42°22'20", long 72°58'04", Hampshire County, 1.6 mi upstream from mouth of Glendale Brook, 2.9 mi northeast of Middlefield, Mass.	-	-	6- 6-84 6- 7-84	54 56
01180200 Middle Branch Westfield River	do	Lat 42°21'22", long 72°57'52", Hampshire County, 0.4 mi upstream from mouth of Glendale Brook, 2.9 mi east of Middlefield, Mass.	-	-	6- 7-84	63
01180300 Middle Branch Westfield River	do	Lat 42°18'51", long 72°55'23", Hampden County, 1.3 mi upstream from mouth of Day Brook, 0.7 mi southeast of North Chester, Mass.	-	-	6- 4-84 6- 5-84 8- 6-84 8- 7-84	165 138 8.6 6.5
01180350 Middle Branch Westfield River	do	Lat 42°18'23", long 72°54'29", Hampden County, 0.4 mi upstream from mouth of Day Brook, 1.6 mi southeast of North Chester, Mass.	-	-	6- 5-84 8- 7-84	141 5.7
01180400 Kinne Brook	Middle Branch Westfield River	Lat 42°18'20", long 72°54'26", Hampden County, 0.1 mi above mouth and 1.5 mi northwest of Littleville, Mass.	5.71	1962 1963 1965 (as Kinney Brook)	8-29-84 9-12-84	*.57 .57
01180600 Depot Brook	West Branch Westfield River	Lat 42°21'53", long 73°06'28", Berkshire County, at bridge on State Highway 8, half a mile east of Washington, Mass.	3.06	1962-65	8-29-84 9-12-84	*.50 .78
01180700 Factory Brook	do	Lat 42°20'34", long 73°02'01", Hampshire County, at bridge on Town Hill Road at Brush Hollow, 1 mi southwest of Middlefield, Mass., and 2 1/2 mi above mouth.	8.54	1962-65	8-29-84 9-12-84	*.42 1.3
01180740 West Branch Westfield River	Westfield River	Lat 42°18'02", long 72°59'06", Hampden County, at bridge on Middlefield Road, 0.4 mi upstream from mouth of Otis Wait Brook, 1.5 mi north of Chester, Mass.	-	-	6- 6-84 6- 7-84	143 148
01180750 West Branch Westfield River	do	Lat 42°16'46", long 72°58'53", Hampden County, at bridge on Main Street, at Chester, Mass.	-	1910-11, 1915	6- 7-84	171
01180800 Walker Brook	West Branch Westfield River	Lat 42°15'49", long 73°02'48", Berkshire County, at bridge on U.S. Highway 20, 0.2 mi east of Bonny Rigg Corners, 400 ft upstream from West Branch Walker Brook, and 1.7 mi southeast of Becket Center, Mass.	2.94	1962, 1978-81	8-29-84 9-12-84	*.47 .35
01180850 West Branch Westfield River	Westfield River	Lat 42°15'09", long 72°55'52", Hampden County, 0.3 mi downstream from bridge on Old State Highway, 1.2 mi downstream from mouth of Sanderson Brook, 3.1 mi southeast of Chester, Mass.	-	-	6- 4-84 6- 5-84 8- 8-84 8- 9-84	405 320 19 18
01180870 West Branch Westfield River	do	Lat 42°14'45", long 72°55'00", Hampden County, 0.9 mi upstream from mouth of Roaring Brook, 4.2 mi southeast of Chester, Mass.	-	-	6- 5-84 8- 9-84	325 17

See footnotes at end of table.

Discharge measurements made at miscellaneous sites during water year 1984--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Connecticut River basin--Continued						
01180900 Roaring Brook	West Branch Westfield River	Lat 42°14'22", long 72°54'12", Hampshire County, at bridge on Fisk Avenue, 200 ft above mouth, and 1 1/3 mi west of Huntington, Mass.	3.63	1962-65	8-29-84	*0.05
				(as Cook Brook)		
01181100 Roaring Brook	do	Lat 42°13'34", long 72°51'25", Hampden County, at bridge on Carrington Road, 0.4 mi above mouth, and 1 1/4 mi south-east of Huntington, Mass.	5.58	1962-64	8-29-84 9-12-84	*.42 .25
01181400 Stage Brook	Bradley Brook	Lat 42°10'59", long 72°52'26", Hampden County, 1 mi southwest of Russell, Mass., and 1.4 mi above mouth.	5.21	1962-65	8-29-84 9-12-84	*1.0 *.99
01183130 Dickinson Brook	Munn Brook	Lat 42°04'11", long 72°50'53", Hampden County, at culvert on State Highway 57, 0.7 mi east of Granville, Mass.	6.29	-	8-30-84 9-11-84	*1.5 *1.3
01183200 Shurtleff Brook	do	Lat 42°05'12", long 72°48'47", Hampden County, at culvert on Loomis Street, 0.4 mi above mouth, and 3 3/4 mi southwest of Westfield, Mass.	3.62	1962-66	8-30-84 9-11-84	*.78 *.66
01183290 Powdermill Brook	Westfield River	Lat 42°09'45", long 72°45'49", Hampden County, at culvert on Russellville Road, 2.9 mi north of Westfield, Mass.	2.50	-	8-29-84 9-12-84	*.11 .14
01183302 Arm Brook	Powdermill Brook	Lat 42°08'38", long 72°44'22", Hampden County, at culvert on Lockhouse Road, at Westfield, Mass.	4.43	1957-58	8-29-84 9-12-84	*1.80 1.7
01183365 Johnson Brook	Great Brook	Lat 42°02'24", long 72°47'07", Hampden County, at culvert on U.S. Highway 202, 1 1/2 mi north of Congamond, Mass.	3.67	1967	8-30-84 9-11-84	*.07 *.10
01183375 Great Brook	Westfield River	Lat 42°03'08", long 72° 46'03", Hampden County, at culvert on Sheep Pasture Road, at Southwick, Mass.	12.1	1967	8-29-84 9-11-84	*1.9 *1.6
01184750 Thomas Brook	West Branch Farmington River	Lat 42°14'49", long 73°06'46", Berkshire County, at culvert on Werden Cross Road, 1.1 mi north of North Otis, Mass.	7.03	-	9-10-84 9-25-84 9-26-84	*.52 -- *.15
01184800 Dimmock Brook	do	Lat 42°11'43", long 73°04'40", Berkshire County, at culvert on State Highway 23, 0.8 mi east of Otis, Mass.	4.04	-	9-10-84 9-26-84	*.08 *.02
01184850 Benton Brook	do	Lat 42°11'05", long 73°05'03", Berkshire County, at culvert on State Highway 8, 0.7 mi southeast of Otis, Mass.	2.45	-	9-10-84 9-26-84	*.41 *.24
01185130 Miner Brook	do	Lat 42°09'11", long 73°04'29", Berkshire County, at culvert on State Highway 8, 2.9 mi south of Otis, Mass.	1.53	-	9-10-84 9-26-84	*.15 *.09
01185450 Clam River	do	Lat 42°06'05", long 73°05'48", Berkshire County, at bridge on Beech Plain Road at intersection with State Highway 57, 1.2 mi northwest of New Boston, Mass.	28.9	1965	8-30-84 9-11-84 9-26-84	*2.8 *2.6 *2.3
01185485 Silver Brook	Clam River	Lat 42°06'04", long 73°05'48", Berkshire County, at culvert on State Highway 57, 1.2 mi northwest of New Boston, Mass.	6.79	-	8-30-84 9-11-84 9-26-84	*.60 *.86 *.48
01185550 Thorp Brook	West Branch Farmington River	Lat 42°03'51", long 73°03'55", Berkshire County, at culvert on State Highway 8, 2.1 mi south of New Boston, Mass.	2.62	-	9-10-84 9-26-84	*.64 *.12
01185600 Slocum Brook	do	Lat 42°02'45", long 73°01'36", Hampden County, at culvert on dirt road, just off New Colebrook River Road, at the entrance to Camp Kinderland, 2.6 mi south of Tolland Center, Mass.	2.66	-	9-10-84 9-26-84	*.27 *.12
01186300 Sandy Brook	Still River	Lat 42°02'37", long 73°08'13", Berkshire County, at culvert on New Marlborough Road, 0.1 mi north of state line, 4.6 mi south of Sandisfield, Mass.	9.85	-	9-10-84 9-26-84	*1.4 *.96
01187280 Halfway Brook	Hubbard River	Lat 42°03'00", long 72°58'16", Hampden County, at culvert on West Hartland Road, in Granville State Forest, 2.3 mi south-west of West Granville, Mass.	1.05	-	9-27-84	*.07

† Operated as a continuous-record station.

†† Also a crest-stage partial-record station.

(p) Peak flow.

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
MERRIMACK RIVER BASIN									
01094400 NORTH NASHUA RIVER AT FITCHBURG, MA (LAT 42 34 34N LONG 071 47 19W)									
JAN 1984					JUL 1984				
04...	1030	102	178	0.0	03...	0745	46	143	23.0
FEB					AUG				
08...	1310	107	--	0.0	20...	0815	50	280	20.0
APR					SEP				
04...	1030	345	122	4.0	14...	1110	22	--	20.5
MAY									
15...	0920	200	110	12.0					
01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA (LAT 42 30 06N LONG 071 43 23W)									
JAN 1984					JUL 1984				
04...	0835	160	162	0.0	03...	1120	98	210	22.0
FEB					AUG				
08...	0830	173	--	0.0	20...	1245	90	230	21.0
APR					SEP				
04...	1235	589	143	5.0	14...	0800	33	--	19.0
MAY									
15...	1400	339	141	14.0					
01096000 SQUANNA COOK RIVER NEAR WEST GROTON, MA (LAT 42 38 03N LONG 071 39 30W)									
JAN 1984					JUL 1984				
04...	1300	106	59	0.0	31...	1605	33	91	21.0
APR					SEP				
26...	1155	272	70	7.5	26...	0900	9.8	123	--
01096500 NASHUA RIVER AT EAST PEPPERELL, MA (LAT 42 40 03N LONG 071 34 32W)									
JAN 1984					JUL 1984				
06...	1200	585	202	0.0	31...	1320	320	145	23.5
FEB					SEP				
15...	1145	826	--	1.0	26...	1205	230	226	16.0
APR									
26...	0930	1530	123	9.0					
01097000 ASSABET RIVER AT MAYNARD, MA (LAT 42 25 55N LONG 071 27 01W)									
JAN 1984					JUL 1984				
05...	1325	225	143	0.0	10...	1315	397	126	21.0
FEB					26...	0940	75	--	23.0
10...	1145	225	--	0.0	AUG				
APR					23...	1240	50	280	22.0
04...	1433	688	159	7.5	SEP				
MAY					07...	0815	42	0	15.0
21...	1357	227	173	18.5					
01097300 NASHOBA BROOK NEAR ACTON, MA (LAT 42 31 19N LONG 071 24 15W)									
JAN 1984					JUL 1984				
05...	0800	20	91	0.0	10...	1452	29	122	21.0
FEB					AUG				
10...	1000	23	--	0.0	23...	0825	2.6	179	19.0
APR					SEP				
05...	1038	78	134	5.5	14...	1430	1.8	--	19.0
MAY									
21...	1009	20	150	16.0					
01098530 SUDBURY RIVER AT SAXONVILLE, MA (LAT 42 19 31N LONG 071 23 53W)									
JAN 1984					JUL 1984				
05...	1145	209	240	0.0	09...	1330	299	175	22.0
FEB					AUG				
10...	1420	214	--	1.0	29...	0815	41	220	23.0
APR					SEP				
03...	1015	569	210	5.5	12...	1615	42	--	22.0
MAY									
17...	0745	247	200	13.0					
01099500 CONCORD R BELOW R MEADOW BROOK, AT LOWELL, MA (LAT 42 38 12N LONG 071 18 09W)									
JAN 1984					AUG 1984				
09...	1030	950	181	0.0	08...	1400	236	215	26.5
APR									
27...	1315	1790	170	12.5					
01100000 MERRIMACK RIVER BL CONCORD RIVER AT LOWELL, MA (LAT 42 38 45N LONG 071 17 56W)									
JAN 1984					APR 1984				
09...	0745	7820	146	0.0	27...	1000	20900	155	12.0
FEB									
09...	1000	8200	--	0.5					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (UM/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
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MERRIMACK RIVER BASIN--Continued

01100600 SHAWSHEEN RIVER NEAR WILMINGTON, MA (LAT 42 34 05N LONG 071 12 55W)

JAN 1984					JUL 1984				
03...	1230	71	228	0.0	13...	0855	40	220	22.0
MAR					AUG				
30...	1420	166	340	1.0	27	0910	15	260	19.5
MAY					SEP				
22...	1215	57	240	--	05...	1500	20	--	18.0

PARKER RIVER BASIN

01101000 PARKER RIVER AT BYFIELD, MA (LAT 42 45 10N LONG 070 56 46W)

JAN 1984					JUL 1984				
03...	0745	60	108	0.0	12...	0740	35	113	20.5
FEB					AUG				
07...	1200	60	0	2.0	24...	0905	4.7	166	19.5
MAR					SEP				
28...	0936	136	104	6.0	10...	1100	1.1	--	18.0
MAY									
18...	0845	61	122	13.0					

IPSWICH RIVER BASIN

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA (LAT 42 34 10N LONG 071 01 39W)

JAN 1984					JUL 1984				
03...	0945	101	165	0.0	13...	1301	64	158	23.0
FEB					AUG				
07...	0930	151	--	0.0	28...	1435	4.8	230	23.0
MAR					SEP				
27...	0900	236	153	5.5	11...	1226	20	--	20.0
MAY									
18...	1223	98	172	13.5					

01102000 IPSWICH RIVER NEAR IPSWICH, MA (LAT 42 39 35N LONG 070 53 39W)

JAN 1984					JUL 1984				
03...	0645	315	173	0.0	12...	1039	187	146	20.5
FEB					AUG				
07...	1310	334	--	0.0	24...	1200	21	220	22.0
MAR					SEP				
30...	1013	689	134	1.0	10...	1557	10	--	20.0
MAY									
23...	1308	249	160	--					

MYSTIC RIVER BASIN

01102500 ABERJONA RIVER AT WINCHESTER, MA (LAT 42 26 50N LONG 071 08 22W)

JAN 1984					JUL 1984				
03...	1400	35	406	0.0	06...	0745	20	410	24.0
FEB					AUG				
06...	1200	107	--	0.5	27...	1245	5.3	570	20.0
MAR					SEP				
26...	0852	79	448	5.0	04...	1435	22	--	17.5
MAY									
17...	1250	47	395	14.0					

CHARLES RIVER BASIN

01104000 MOTHER BROOK AT DEDHAM, MA (LAT 42 15 18N LONG 071 09 53W)

JAN 1984					JUL 1984				
12...	1505	99	--	0.5	09...	0943	54	156	21.5
MAR					AUG				
06...	0830	254	--	2.5	29...	1330	1.1	440	23.0
APR					SEP				
02...	1030	270	155	5.0	12...	1312	2.2	--	22.0
MAY									
16...	1000	115	156	14.5					

01104200 CHARLES RIVER AT WELLESLEY, MA (LAT 42 18 59N LONG 071 13 42W)

JAN 1984					JUL 1984				
09...	1230	333	255	0.0	05...	0708	283	178	26.0
APR					AUG				
02...	1245	894	174	6.0	21...	0903	60	210	23.0
MAY					SEP				
14...	0715	484	163	16.0	12...	0856	41	--	20.5

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CHARLES RIVER BASIN--Continued									
01104500 CHARLES RIVER AT WALTHAM, MA (LAT 42 22 20N LONG 071 14 03W)									
JAN 1984					JUL 1984				
09...	1330	386	168	0.0	05...	1059	302	195	26.0
APR					AUG				
02...	1445	1190	199	6.0	21...	1515	40	250	23.0
MAY					SEP				
14...	1257	516	183	16.0	06...	0859	47	--	18.0
NEPONSET RIVER BASIN									
01105000 NEPONSET RIVER AT NORWOOD, MA (LAT 42 10 39N LONG 071 12 05W)									
JAN 1984					JUL 1984				
13...	0950	55	150	1.0	01...	0900	36	179	23.0
MAR					AUG				
06...	1230	167	161	3.0	01...	0900	34	179	23.0
APR					SEP				
25...	0750	168	164	10.5	18...	1155	17	240	17.0
JUN									
12...	1300	127	148	25.0					
01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MA (LAT 42 09 16N LONG 071 08 47W)									
JAN 1984					JUN 1984				
13...	1335	53	43	1.0	12...	1520	78	145	28.0
MAR					JUL				
06...	1455	114	149	3.5	31...	1345	28	164	22.5
APR					SEP				
25...	1500	111	145	11.0	18...	0810	26	143	15.0
WEYMOUTH FORE RIVER BASIN									
01105585 TOWN BROOK AT QUINCY, MA (LAT 42 14 52N LONG 070 59 52W)									
JAN 1984					JUN 1984				
18...	1130	3.8	585	4.0	04...	0840	19	450	17.0
MAR					JUL				
14...	0915	120	580	1.5	25...	1130	4.0	540	18.5
APR					SEP				
18...	1430	14	630	10.0	17...	1310	10	440	16.5
WEYMOUTH BACK RIVER BASIN									
01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA (LAT 42 11 25N LONG 070 56 43W)									
OCT 1983					JUN 1984				
11...	1400	0.8	--	--	08...	1110	12	166	17.5
JAN 1984					JUL				
18...	0900	4.8	215	0.5	25...	1350	2.7	210	20.5
MAR					SEP				
05...	1030	8.5	182	2.0	17...	0815	1.5	210	12.5
APR									
24...	0840	47	91	8.5					
NORTH RIVER BASIN									
01105730 INDIAN HEAD RIVER AT HANOVER, MA (LAT 42 06 02N LONG 070 49 23W)									
JAN 1984					JUN 1984				
16...	1100	44	225	1.0	08...	1340	120	141	22.5
MAR					JUL				
05...	1235	105	130	2.5	24...	1215	33	188	25.0
APR					SEP				
24...	1240	212	160	10.5	14...	0800	7.0	270	20.5
JONES RIVER BASIN									
01105870 JONES RIVER AT KINGSTON, MA (LAT 41 59 27N LONG 070 44 03W)									
JAN 1984					JUN 1984				
16...	1220	33	69	1.0	11...	1350	54	80	26.0
MAR					JUL				
07...	1545	108	81	6.0	24...	0800	36	86	23.0
APR					SEP				
23...	1145	82	92	11.0	13...	1505	18	98	19.0
HERRING RIVER BASIN									
01105880 HERRING RIVER AT NORTH HARWICH, MA (LAT 41 42 00N LONG 070 06 27W)									
JAN 1984					JUN 1984				
17...	0930	8.3	--	3.5	06...	0800	21	--	17.5
MAR					JUL				
08...	1445	17	79	5.0	23...	1030	17	81	24.0
APR					SEP				
20...	1300	22	87	9.5	04...	0950	13	83	19.5

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
TAUNTON RIVER BASIN									
01108500 WADING RIVER AT WEST MANSFIELD, MA (LAT 42 00 00N LONG 071 15 38W)									
JAN 1984					JUN 1984				
10...	1100	49	66	1.5	05...	0800	245	117	17.5
MAR					JUL				
02...	1000	117	141	1.5	26...	0830	12	168	22.5
APR					SEP				
19...	0800	99	158	10.5	11...	1215	5.1	189	20.0
01109000 WADING RIVER NEAR NORTON, MA (LAT 41 56 51N LONG 071 10 38W)									
JAN 1984					JUN 1984				
09...	1010	96	44	1.0	05...	1300	449	105	17.0
FEB					JUL				
22...	1125	205	--	5.0	26...	1345	36	156	23.0
MAR					SEP				
02...	1300	241	114	2.0	11...	1400	8.5	215	20.5
APR									
19...	1200	190	125	11.0					
01109060 THREEMILE RIVER AT NORTH DIGHTON, MA (LAT 41 51 58N LONG 071 07 24W)									
JAN 1984					JUN 1984				
09...	1255	189	39	1.5	12...	0825	321	106	26.0
MAR					AUG				
07...	1205	384	125	4.0	01...	1510	70	143	24.0
APR					SEP				
20...	0815	417	132	10.5	12...	1300	38	173	20.5
01109070 SEGREGANSET RIVER NEAR DIGHTON, MA (LAT 41 50 25N LONG 071 08 36W)									
JAN 1984					JUN 1984				
09...	1400	19	57	1.0	11...	1630	13	105	26.5
MAR					AUG				
07...	0930	45	64	3.0	01...	1305	5.2	63	22.5
APR					SEP				
19...	1525	42	125	10.5	12...	0810	1.2	90	19.5
BLACKSTONE RIVER BASIN									
01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA (LAT 42 13 49N LONG 071 42 41W)									
JAN 1984					JUN 1984				
12...	1035	52	130	1.0	13...	0800	68	210	25.5
MAR					JUL				
01...	1315	133	116	1.5	30...	1300	20	220	23.0
APR					SEP				
17...	0820	128	280	8.5	10...	1330	4.7	245	18.0
01111200 WEST RIVER BELOW WEST HILL DAM, NR UXBRIDGE, MA (LAT 42 06 17N LONG 071 36 28)									
JAN 1984					JUN 1984				
11...	0815	40	105	1.0	13...	1230	162	94	21.5
FEB					JUL				
29...	1115	202	81	3.5	27...	1010	19	120	20.5
APR									
17...	1345	250	95	9.5					
01111300 NIPMUC RIVER NEAR HARRISVILLE, RI (LAT 41 58 52N LONG 071 41 11W)									
AUG 1984									
09...	1145	4.1	52	21.0					
01112500 BLACKSTONE RIVER AT WOONSOCKET, RI (LAT 42 00 22N LONG 071 30 13W)									
AUG 1984									
09...	1245	280	240	25.0					
MOSHASSUCK RIVER BASIN									
01114000 MOSHASSUCK RIVER AT PROVIDENCE, RI (LAT 41 50 02N LONG 071 24 42W)									
MAY 1984					AUG 1984				
24...	1440	33	280	19.5	08...	1015	14	400	22.5
WOONASQUATUCKET RIVER BASIN									
01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI (LAT 41 51 32N LONG 071 29 16W)									
MAY 1984									
22...	1300	73	117	19.0					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
PAWTUXET RIVER BASIN									
01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI (LAT 41 41 24N LONG 071 33 59W)									
JUL 1984 02...	1500	134	--	24.0					
POTOWOMUT RIVER BASIN									
01117000 HUNT RIVER NEAR EAST GREENWICH, RI (LAT 41 38 28N LONG 071 26 45W)									
AUG 1984 07...	1250	30	102	24.5					
PAWCATUCK RIVER BASIN									
01117500 PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI (LAT 41 26 42N LONG 071 40 53W)									
AUG 1984 29...	0745	78	75	20.5	SEP 1984 27...	0850	50	83	16.0
01117800 WOOD RIVER NEAR ARCADIA, RI (LAT 41 34 26N LONG 071 43 16W)									
MAR 1984 14...	1400	327	35	2.5	AUG 1984 13...	1400	33	33	19.5
MAY 23...	1530	88	32	18.5					
THAMES RIVER BASIN									
01123360 QUINEBAUG R BL E BRIMFIELD DAM AT FISKDALE, MA (LAT 42 06 31N LONG 072 07 27W)									
JAN 1984 16...	1517	104	80	0.5	JUN 1984 15...	1255	7.7	63	19.5
MAR 09...	0950	192	--	2.0	JUL 30...	1055	28	74	22.0
APR 26...	1420	234	70	11.0	SEP 20...	1140	8.9	--	19.5
01123600 QUINEBAUG R BL WESTVILLE DAM NR SOUTHBRIDGE, MA (LAT 42 04 58N LONG 072 03 27)									
JAN 1984 16...	1230	139	98	0.5	JUN 1984 15...	0920	1030	68	20.0
MAR 09...	0750	265	--	1.5	JUL 30...	0825	49	121	19.5
APR 23...	0830	332	90	9.5	SEP 17...	0840	15	--	16.0
01124350 FRENCH RIVER BELOW DAM, AT HODGES VILLAGE, MA (LAT 42 07 06N LONG 071 52 54W)									
JAN 1984 11...	1105	48	--	0.5	JUN 1984 13...	1445	283	82	20.5
FEB 28...	1015	104	--	3.0	AUG 03...	1230	6.4	112	--
APR 25...	1335	115	94	10.0	SEP 25...	1220	2.0	103	16.0
01124500 LITTLE RIVER NEAR OXFORD, MA (LAT 42 06 57N LONG 071 53 26W)									
JAN 1984 11...	1500	65	--	3.0	JUN 1984 13...	1530	161	64	22.5
FEB 28...	1330	152	--	4.0	AUG 03...	1115	13	69	25.5
APR 25...	1510	110	78	10.5	SEP 25...	1030	22	71	14.5
CONNECTICUT RIVER BASIN									
01162000 MILLERS RIVER NEAR WINCHENDON, MA (LAT 42 41 03N LONG 072 05 02W)									
JAN 1984 13...	0925	135	59	0.0	AUG 1984 01...	1525	26	50	24.0
MAR 06...	1150	204	57	1.5	SEP 27...	0940	18	62	17.0
APR 24...	1110	280	50	9.0					
01162500 PRIEST BROOK NEAR WINCHENDON, MA (LAT 42 40 57N LONG 072 06 56W)									
JAN 1984 13...	0810	17	51	0.5	AUG 1984 02...	1145	4.1	30	23.0
MAR 06...	0900	36	45	0.0	SEP 27...	1155	1.1	37	13.0
APR 24...	1140	56	39	8.0					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
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CONNECTICUT RIVER BASIN--Continued

01163200 OTTER RIVER AT OTTER RIVER, MA (LAT 42 35 18N LONG 072 02 29W)

JAN 1984					JUN 1984				
12...	1400	52	52	0.5	05...	1300	274	--	10.0
MAR					AUG				
06...	1500	76	168	2.5	02...	0845	17	136	21.5
APR									
25...	0900	138	107	9.0					

01164000 MILLERS RIVER AT SOUTH ROYALSTON, MA (LAT 42 37 47N LONG 072 09 03W)

JAN 1984					AUG 1984				
12...	1110	330	110	0.5	28...	1123	50	289	21.5
MAR					SEP				
01...	1345	810	140	0.5	27...	1355	45	215	13.0
APR									
24...	1405	692	80	9.0					

01165000 EAST BRANCH TULLY RIVER NEAR ATHOL, MA (LAT 42 38 32N LONG 072 13 34W)

JAN 1984					JUN 1984				
12...	1000	82	42	1.0	14...	1555	528	28	17.0
MAR					JUL				
05...	1230	192	39	0.5	24...	0830	99	30	22.0
APR					SEP				
12...	0855	536	30	4.0	19...	0915	11	34	16.5

01165300 LAKE ROHUNTA OUTLET NEAR ATHOL, MA (LAT 42 34 13N LONG 072 16 22W)

JAN 1984					JUN 1984				
12...	0845	40	96	1.5	14...	1245	42	50	25.5
MAR					JUL				
01...	1100	110	58	2.0	23...	1500	163	57	24.0
APR					SEP				
04...	1610	80	65	4.0	28...	1400	2.7	70	18.0

01166500 MILLERS RIVER AT ERVING, MA (LAT 42 35 51N LONG 072 26 19W)

FEB 1984					JUL 1984				
29...	1655	1740	68	1.0	23...	1035	569	85	22.5
APR					SEP				
11...	1540	3560	55	6.0	14...	0940	53	265	19.0
JUN									
14...	1145	3010	57	17.0					

01168151 DEERFIELD RIVER NEAR ROWE, MA (LAT 42 40 57N LONG 072 58 37W)

JAN 1984					JUL 1984				
04...	1525	1070	36	3.5	19...	0850	1170	31	16.5
APR					SEP				
10...	1130	1350	35	2.0	13...	0755	71	43	20.0
MAY									
31...	1345	9260	30	10.0					

01168500 DEERFIELD RIVER AT CHARLEMONT, MA (LAT 42 37 33N LONG 072 51 20W)

JAN 1984					MAY 1984				
05...	1010	1150	40	3.5	31...	1830	10300	32	10.0
FEB					JUL				
28...	1315	1660	45	1.0	18...	1130	1310	38	17.0
APR					SEP				
11...	0845	1940	46	2.5	12...	1550	1030	38	22.0

01169000 NORTH RIVER AT SHATTUCKVILLE, MA (LAT 42 38 18N LONG 072 43 32W)

JAN 1984					JUL 1984				
05...	0850	132	105	0.0	19...	1245	186	78	18.0
FEB					SEP				
28...	0825	418	59	0.0	13...	1355	26	250	19.0
APR									
05...	1520	5420	41	1.5					
JUN									
13...	1510	121	104	20.5					
19...	1420	87	106	20.0					

01169900 SOUTH RIVER NEAR CONWAY, MA (LAT 42 32 31N LONG 072 41 39W)

JAN 1984					JUL 1984				
05...	1620	47	100	0.0	20...	0750	16	138	16.0
FEB					SEP				
29...	1500	110	90	1.0	18...	0820	5.4	176	10.0
JUN									
14...	0815	39	122	17.0					

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CONNECTICUT RIVER BASIN--Continued									
01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA (LAT 42 32 09N LONG 072 39 14W)									
JAN 1984					JUN 1984				
11...	0950	1220	98	0.5	13...	1640	1580	83	22.0
FEB					JUL				
27...	1140	2580	74	0.5	20...	1035	506	74	20.5
APR					SEP				
05...	1115	4800	--	2.0	18...	1235	1130	79	16.0
01170100 GREEN RIVER NEAR COLRAIN, MA (LAT 42 42 12N LONG 072 40 16W)									
FEB 1984					JUL 1984				
27...	1710	249	62	2.0	18...	1325	145	86	16.5
APR					SEP				
05...	1435	1840	46	2.0	13...	0945	9.1	105	14.0
JUN									
13...	0810	63	91	14.5					
01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA (LAT 42 34 48N LONG 072 34 30W)									
JAN 1984					JUL 1984				
11...	1400	13800	104	0.0	20...	1300	14100	94	23.0
JUN									
01...	0800	124000	58	10.0					
01171300 FORT RIVER NEAR AMHERST, MA (LAT 42 21 30N LONG 072 30 23W)									
JAN 1984					JUN 1984				
18...	1130	32	88	0.0	13...	1350	48	76	19.0
MAR					JUL				
06...	1440	105	80	2.0	31...	1005	24	92	17.5
APR					SEP				
24...	1210	113	67	9.0	18...	1050	9.1	120	11.5
MAY									
31...	1545	1600	36	11.5					
01171500 MILL RIVER AT NORTHAMPTON, MA (LAT 42 19 05N LONG 072 39 21W)									
JAN 1984					JUN 1984				
18...	0800	80	84	0.0	14...	0730	70	93	18.0
MAR					JUL				
07...	0740	140	75	0.5	31...	1340	21	107	19.0
APR					SEP				
24...	1440	385	90	8.0	18...	1355	12	115	15.0
MAY									
30...	1230	2680	--	10.5					
01172500 WARE RIVER NEAR BARRE, MA (LAT 42 25 35N LONG 072 01 30W)									
JAN 1984					AUG 1984				
19...	0900	55	59	0.0	01...	1225	19	43	25.5
APR					SEP				
23...	1530	170	47	11.0	28...	1130	3.2	53	15.0
01173500 WARE RIVER AT GIBBS CROSSING, MA (LAT 42 14 10N LONG 072 16 23W)									
JAN 1984					JUN 1984				
17...	1310	210	69	0.0	12...	1020	471	53	19.5
MAR					AUG				
08...	1225	372	70	2.0	02...	0810	30	88	21.0
APR					SEP				
23...	1230	652	56	8.0	17...	1340	40	87	16.5
01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA (LAT 42 23 36N LONG 072 14 21W)									
JAN 1984					APR 1984				
17...	1600	46	60	0.0	23...	1630	103	44	--
MAR					AUG				
05...	1415	96	--	2.0	01...	0905	22	34	24.0
01174600 CADWELL CREEK NEAR PELHAM, MA (LAT 42 21 16N LONG 072 23 18W)									
JAN 1984					JUN 1984				
18...	1515	0.53	55	0.5	13...	0735	0.34	42	16.0
MAR					JUL				
06...	0800	1.6	51	1.0	31...	0700	0.1	44	15.0
APR					SEP				
24...	0750	2.0	54	7.5	18...	0715	0.01	46	9.5
MAY									
31...	0955	36	47	10.5					

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CONNECTICUT RIVER BASIN--Continued									
01174900 CADWELL CREEK NEAR BELCHERTOWN, MA (LAT 42 20 08N LONG 072 22 12W)									
JAN 1984					JUN 1984				
18...	1610	2.7	34	0.5	13...	1035	2.9	28	15.5
MAR					JUL				
06...	1110	7.1	32	1.0	31...	0810	0.97	28	15.0
APR					AUG				
24...	1040	9.7	31	7.5	08...	1414	1.9	28	--
MAY					SEP				
31...	1215	130	28	10.5	18...	0840	0.21	--	9.0
01175500 SWIFT RIVER AT WEST WARE, MA (LAT 42 16 04N LONG 072 19 59W)									
JAN 1984					JUN 1984				
17...	1700	19	--	0.0	12...	1430	1080	38	17.5
MAR					JUL				
05...	1700	123	35	2.0	30...	1350	120	38	12.5
APR					SEP				
23...	1530	790	39	5.5	17...	1545	48	38	16.0
MAY									
03...	1040	509	39	6.0					
30...	1645	1970	35	12.0					
01175670 SEVENMILE RIVER NEAR SPENCER, MA (LAT 42 15 54N LONG 072 00 19W)									
JAN 1984					APR 1984				
19...	1140	9.9	54	0.5	23...	1145	17	46	10.5
FEB					AUG				
17...	1515	67	46	1.0	03...	1515	1.1	62	20.5
MAR									
09...	1335	20	--	1.5					
01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA (LAT 42 10 56N LONG 072 15 51W)									
JAN 1984					JUN 1984				
17...	0930	214	91	0.0	12...	0855	692	69	23.0
MAR					AUG				
08...	1625	504	--	2.0	02...	1025	75	111	23.0
APR					SEP				
23...	1030	577	69	10.0	17...	1145	33	--	16.0
01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA (LAT 42 09 38N LONG 072 30 52W)									
OCT 1983					JUN 1984				
21...	1200	583	--	--	19...	0610	2040	64	17.0
JAN 1984					AUG				
16...	1005	825	91	1.0	02...	0635	704	87	22.0
MAR					SEP				
08...	0815	1480	--	1.5	20...	0720	573	--	17.0
APR									
26...	0620	2550	64	8.0					
01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA (LAT 42 17 16N LONG 072 51 53W)									
JAN 1984					JUN 1984				
17...	1225	141	62	0.5	14...	1200	1500	52	18.0
MAR					AUG				
07...	0930	400	64	0.5	01...	0645	56	73	18.5
APR					SEP				
25...	0640	2230	44	7.0	19...	0710	29	80	11.5
01180500 MIDDLE B WESTFIELD RIVER AT GOSS HEIGHTS, MA (LAT 42 15 31N LONG 072 52 23W)									
JAN 1984					JUN 1984				
16...	1550	46	49	1.0	14...	1315	324	48	14.5
MAR					AUG				
07...	1115	109	45	2.0	01...	1020	11	44	22.5
APR					SEP				
25...	0840	373	46	7.5	19...	0915	5.6	49	13.5
01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA (LAT 42 14 14N LONG 072 53 46W)									
JAN 1984					JUN 1984				
16...	1355	86	78	1.0	18...	1315	69	82	15.0
MAR					AUG				
07...	1300	211	79	1.0	01...	1135	20	94	21.0
APR					SEP				
25...	1050	510	54	6.5	19...	1020	10	102	15.5

SUPPLEMENTAL WATER-QUALITY DATA FOR GAGING STATIONS

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (US/CM)	TEMPER- ATURE (DEG C)
CONNECTICUT RIVER BASIN--Continued									
01183500 WESTFIELD RIVER NEAR WESTFIELD, MA (LAT 42 06 24N LONG 072 41 58W)									
JAN 1984					JUN 1984				
16...	1150	565	99	1.0	19...	0920	579	115	15.5
MAR 07...	1520	1990	75	2.0	AUG 01...	1420	256	141	21.0
APR 25...	1430	3100	59	8.0	SEP 19...	1300	188	164	16.0
01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA (LAT 42 04 45N LONG 073 04 24)									
NOV 1983					MAY 1984				
01...	1115	40	--	6.0	03...	1100	100	--	12.0
JAN 1984 04...	1530	225	--	2.0	31...	1000	5260	--	12.0
FEB 06...	1340	207	--	0.5	AUG 22...	1425	15	--	23.0
16...	1520	1430	57	1.0	SEP 11...	1215	11	98	19.0
17...	1135	1110	60	1.0	21...	1415	7.8	--	17.5
MAR 05...	1030	208	--	0.5					
HOUSATONIC RIVER BASIN									
01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA (LAT 42 28 10N LONG 073 11 49W)									
JAN 1984					MAY 1984				
03...	1450	91	162	1.0	29...	1245	1600	82	16.5
FEB 21...	1300	432	60	1.0	JUL 16...	0930	32	245	19.5
APR 09...	1415	286	95	4.0	SEP 11...	0905	21	365	18.0
01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA (LAT 42 13 55N LONG 073 21 19W)									
NOV 1983					MAR 1984				
01...	1334	196	--	8.0	05...	1435	763	--	6.0
JAN 1984 04...	1150	505	--	1.0	APR 10...	1155	1500	--	6.0
FEB 17...	0645	3330	137	1.0	AUG 23...	1244	183	--	28.0
HUDSON RIVER BASIN									
01331500 HOOSIC RIVER AT ADAMS, MA (LAT 42 36 40N LONG 073 07 28W)									
JAN 1984					MAY 1984				
04...	0800	63	188	1.0	29...	1410	1370	93	10.0
FEB 21...	1515	328	140	2.5	JUL 17...	1115	41	222	20.0
APR 09...	1540	203	132	5.0	SEP 11...	1055	18	245	17.0
01332000 NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA (LAT 42 42 08N LONG 073 05 37W)									
FEB 1984					JUL 1984				
23...	1115	153	57	1.5	18...	0955	84	87	17.0
APR 10...	1025	211	47	2.0	SEP 12...	1255	24	122	17.0
JUN 12...	0855	34	102	16.0					
01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA (LAT 42 42 21N LONG 073 10 50W)									
JAN 1984					JUN 1984				
04...	1140	170	205	0.0	12...	1450	168	280	22.0
FEB 22...	1550	634	148	3.0	JUL 18...	0925	385	239	18.0
APR 10...	0800	619	136	2.0	SEP 12...	1125	79	300	18.0
01333000 GREEN RIVER AT WILLIAMSTOWN, MA (LAT 42 42 32N LONG 073 11 50W)									
JAN 1984					MAY 1984				
04...	1245	67	147	0.0	30...	1500	1780	108	10.0
FEB 22...	1130	236	116	3.0	JUL 17...	1615	26	195	23.5
APR 10...	0920	174	130	2.0	SEP 11...	1450	9.2	205	22.0

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GROUND-WATER LEVELS IN MASSACHUSETTS

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	24.65	JAN 24, 1984	23.53	APR 23, 1984	22.12	JUL 20, 1984	21.44
NOV 22	24.55	FEB 21	23.07	MAY 22	21.65	AUG 21	21.31
DEC 26	22.67	MAR 23	22.20	JUN 22	21.92	SEP 24	22.45

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1983	24.27	JAN 24, 1984	24.58	APR 25, 1984	22.50	JUL 20, 1984	22.24
NOV 22	24.57	FEB 21	24.30	MAY 25	22.52	AUG 21	21.98
DEC 26	24.62	MAR 22	23.63	JUN 22	22.51	SEP 24	22.46

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 above 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, 30.31 ft below land-surface datum, Apr. 26, 1984; lowest measured, 36.17 ft below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	33.84	FEB 22, 1984	32.23	JUN 26, 1984	31.15	SEP 22, 1984	32.69
NOV 28	33.55	MAR 26	31.55	JUL 26	31.46		
DEC 23	33.03	APR 26	30.31	AUG 21	31.92		
JAN 23, 1984	32.60	MAY 21	30.59	22	31.92		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	8.37	JAN 25, 1984	8.87	APR 25, 1984	7.95	JUL 23, 1984	10.07
NOV 22	8.68	FEB 27	8.82	MAY 25	7.82	AUG 21	7.62
DEC 27	8.82	MAR 26	8.44	JUL 03	7.61	SEP 25	7.95

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 above 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, 28.50 ft below land-surface datum, Apr. 25, 1984; lowest measured, 33.60 ft below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	30.20	JAN 25, 1984	30.16	APR 25, 1984	28.50	JUL 23, 1984	31.21
NOV 22	30.35	FEB 27	29.98	MAY 25	28.51	AUG 21	28.77
DEC 27	30.19	MAR 26	29.33	JUL 03	28.65	SEP 25	29.37

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	23.94	JAN 25, 1984	23.85	APR 25, 1984	22.09	JUL 20, 1984	22.06
NOV 22	24.08	FEB 27	23.55	MAY 21	22.01	AUG 21	22.34
DEC 27	23.77	MAR 22	23.03	JUN 25	22.32	SEP 24	23.01

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	47.23	FEB 22, 1984	47.23	JUN 26, 1984	46.55	SEP 22, 1984	47.12
NOV 28	47.29	MAR 23	46.75	JUL 20	46.68		
DEC 26	47.40	APR 20	46.17	AUG 21	46.79		
JAN 23, 1984	47.47	MAY 21	46.28	22	46.79		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	48.77	FEB 22, 1984	48.99	JUN 26, 1984	47.05	SEP 24, 1984	47.52
NOV 23	49.00	MAR 23	48.54	JUL 20	46.94		
DEC 26	49.07	APR 20	47.80	AUG 21	47.14		
JAN 23, 1984	49.22	MAY 21	47.35	22	47.14		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	10.77	JAN 25, 1984	10.98	APR 25, 1984	10.12	JUL 25, 1984	10.90
NOV 22	10.30	FEB 27	10.59	MAY 22	10.49	AUG 21	10.84
DEC 27	10.57	MAR 26	10.47	JUL 03	10.60	SEP 25	10.83

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	12.35	JAN 25, 1984	12.01	APR 25, 1984	10.79	JUL 25, 1984	11.83
NOV 22	12.00	FEB 27	11.79	MAY 22	11.01	AUG 21	12.08
DEC 27	11.88	MAR 26	11.35	JUL 03	11.53	SEP 25	12.30

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	10.50	JAN 25, 1984	10.39	APR 25, 1984	8.59	JUL 25, 1984	8.65
NOV 22	10.75	FEB 27	10.11	MAY 22	8.49	AUG 21	8.89
DEC 27	10.54	MAR 26	9.40	JUN 03	8.75	SEP 25	9.32

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	9.90	FEB 23, 1984	1.37	JUN 21, 1984	4.80	SEP 21, 1984	9.54
NOV 22	8.45	MAR 22	3.81	JUL 26	5.65		
DEC 19	2.38	APR 23	1.24	AUG 21	8.17		
JAN 23, 1984	7.50	MAY 21	2.54	SEP 05	8.98		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	12.60	FEB 22, 1984	6.42	MAY 21, 1984	8.14	AUG 21, 1984	12.35
NOV 21	12.77	MAR 22	7.67	JUN 21	9.97	SEP 05	12.43
DEC 19	8.51	APR 23	6.37	JUL 26	11.68	21	12.46

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	9.60	FEB 22, 1984	6.08	JUN 21, 1984	7.53	SEP 21, 1984	9.95
NOV 21	8.54	MAR 22	6.42	JUL 26	9.01		
DEC 19	6.75	APR 23	6.45	AUG 21	9.50		
JAN 23, 1984	8.55	MAY 21	7.54	SEP 05	9.58		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	22.50	FEB 23, 1984	14.08	JUN 21, 1984	13.70	SEP 21, 1984	19.45
NOV 22	23.10	MAR 22	14.09	JUL 26	15.52		
DEC 19	15.99	APR 23	13.73	AUG 21	17.25		
JAN 23, 1984	15.48	MAY 21	14.10	SEP 05	18.26		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	14.00	FEB 22, 1984	13.48	JUN 21, 1984	9.77	SEP 21, 1984	11.59
NOV 21	15.10	MAR 22	13.54	JUL 26	10.29		
DEC 19	14.90	APR 23	12.74	AUG 21	11.38		
JAN 23, 1984	14.44	MAY 21	12.48	SEP 05	11.25		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 27, 1984	3.56	APR 24, 1984	3.13	JUL 26, 1984	4.04	SEP 27, 1984	4.68
FEB 22	3.05	MAY 24	3.73	AUG 17	4.32		
MAR 22	2.72	JUN 21	3.55	28	4.49		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 1983	9.10	JAN 20, 1984	9.05	APR 24, 1984	7.73	JUL 26, 1984	9.20
NOV 21	9.25	FEB 23	8.07	MAY 24	8.87		
DEC 20	7.84	MAR 22	7.20	JUN 21	8.56		

GROUND-WATER LEVELS IN MASSACHUSETTS

BRISTOL COUNTY--Continued

414705071045301. Freetown well F3W 23.

LOCATION.--Lat 41°47'05", long 71°04'53", Hydrologic Unit 01090004, about 300 ft 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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	13.39	FEB 23, 1984	12.35	JUN 21, 1984	10.50	SEP 28, 1984	12.85
NOV 21	12.66	MAR 22	11.61	JUL 26	11.60		
DEC 20	11.55	APR 24	10.76	AUG 17	12.02		
JAN 20, 1984	12.40	MAY 24	11.38	29	12.30		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	4.25	FEB 23, 1984	3.73	JUN 22, 1984	3.83	SEP 28, 1984	4.59
NOV 21	2.99	MAR 23	3.33	JUL 26	4.01		
DEC 20	3.64	APR 24	3.13	AUG 17	4.13		
JAN 20, 1984	4.08	MAY 24	4.06	29	4.37		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	10.46	FEB 23, 1984	4.45	JUN 21, 1984	5.90	SEP 27, 1984	9.70
NOV 26	3.30	MAR 22	3.53	JUL 26	7.85		
DEC 24	4.40	APR 25	5.01	AUG 17	7.88		
JAN 27, 1984	6.26	MAY 24	7.25	28	8.66		

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.--Elevation 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, 5.18 ft below land-surface datum, Mar. 22, 1984; lowest measured, 8.02 ft below land-surface datum, Sept. 26, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	7.05	FEB 22, 1984	5.48	JUN 21, 1984	5.82	SEP 28, 1984	7.13
NOV 21	5.64	MAR 22	5.18	JUL 26	5.97		
DEC 20	5.53	APR 24	5.37	AUG 17	6.55		
JAN 20, 1984	6.04	MAY 24	6.00	29	6.83		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	19.61	FEB 23, 1984	10.65	JUN 21, 1984	10.88	SEP 28, 1984	18.22
NOV 21	16.46	MAR 22	9.03	JUL 26	13.50		
DEC 20	9.68	APR 24	9.42	AUG 17	15.05		
JAN 20, 1984	12.90	MAY 24	12.81	29	16.14		

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 Mozzone.

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	15.34	FEB 22, 1984	10.96	JUN 21, 1984	11.24	SEP 27, 1984	14.46
NOV 21	13.52	MAR 22	10.15	JUL 26	12.73		
DEC 20	11.25	APR 24	10.36	AUG 17	13.22		
JAN 21, 1984	12.20	MAY 24	11.60	28	13.70		

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.--Elevation 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, 10.85 ft below land-surface datum, Sept. 27, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	9.91	FEB 22, 1984	7.58	JUN 21, 1984	7.90	SEP 27, 1984	10.85
NOV 21	8.60	MAR 22	6.97	JUL 26	8.83		
DEC 20	7.52	APR 24	7.29	AUG 17	9.19		
JAN 21, 1984	8.35	MAY 24	8.30	28	9.53		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1983	17.33	JAN 25, 1984	18.55	MAY 19, 1984	15.91	AUG 26, 1984	14.77
NOV 20	17.90	FEB 20	18.45	JUN 25	15.65	SEP 24	15.13
DEC 23	18.35	MAR 18	17.93	JUL 24	15.39		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	13.18	FEB 22, 1984	7.77	JUN 20, 1984	10.64	SEP 27, 1984	12.66
NOV 22	10.34	MAR 21	7.78	JUL 25	12.17		
DEC 19	7.85	APR 23	8.43	AUG 14	12.50		
JAN 20, 1984	10.46	MAY 23	10.18	28	12.57		

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.--Elevation 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, 11.72 ft below land-surface datum, June 20, 1984; lowest measured, 15.80 ft below land-surface datum, Oct. 23, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	13.98	FEB 22, 1984	12.90	JUN 20, 1984	11.72	SEP 27, 1984	13.99
NOV 22	13.68	MAR 21	12.38	JUL 25	12.90		
DEC 19	12.35	APR 23	11.94	AUG 14	13.30		
JAN 20, 1984	13.57	MAY 23	12.63	28	13.54		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	5.49	FEB 22, 1984	3.02	JUN 20, 1984	4.06	SEP 27, 1984	6.01
NOV 22	3.91	MAR 21	2.54	JUL 25	4.82		
DEC 19	3.15	APR 23	3.28	AUG 15	5.27		
JAN 20, 1984	3.38	MAY 23	4.01	28	5.40		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	14.27	FEB 22, 1984	8.98	JUN 20, 1984	9.02	SEP 27, 1984	13.69
NOV 22	12.62	MAR 21	8.34	JUL 25	11.46		
DEC 19	9.70	APR 23	8.02	AUG 15	12.50		
JAN 20, 1984	10.43	MAY 23	9.07	28	12.90		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	11.78	FEB 22, 1984	4.45	JUN 20, 1984	4.90	SEP 27, 1984	10.55
NOV 22	6.55	MAR 21	4.01	JUL 25	7.45		
DEC 19	4.50	APR 23	4.40	AUG 15	8.81		
JAN 20, 1984	5.66	MAY 23	5.03	28	9.30		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	7.32	FEB 22, 1984	3.86	JUN 20, 1984	5.66	SEP 27, 1984	7.18
NOV 22	4.58	MAR 21	3.66	JUL 25	6.28		
DEC 19	3.80	APR 23	4.34	AUG 15	6.57		
JAN 20, 1984	5.12	MAY 23	4.96	28	6.83		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	16.47	FEB 22, 1984	6.66	JUN 20, 1984	10.66	SEP 27, 1984	14.77
NOV 22	15.66	MAR 21	5.95	JUL 25	12.21		
DEC 19	6.57	APR 23	7.90	AUG 15	13.16		
JAN 20, 1984	9.63	MAY 23	10.13	28	13.67		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	2.85	FEB 27, 1984	0.95	JUN 28, 1984	1.98	SEP 27, 1984	3.36
NOV 29	1.22	MAR 28	1.08	JUL 25	1.94		
DEC 28	1.24	APR 26	0.97	AUG 21	2.08		
JAN 26, 1984	1.68	MAY 24	1.33	28	2.43		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	21.70	FEB 23, 1984	16.85	JUN 21, 1984	17.04	SEP 21, 1984	20.99
NOV 22	21.70	MAR 22	16.08	JUL 26	18.93		
DEC 19	19.55	APR 23	15.53	AUG 21	19.94		
JAN 23, 1984	18.21	MAY 21	16.84	SEP 05	20.57		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	2.60	FEB 23, 1984	2.08	JUN 22, 1984	2.91	SEP 22, 1984	4.78
NOV 22	2.13	MAR 22	1.86	JUL 27	3.05		
DEC 19	2.28	APR 24	2.26	AUG 22	3.41		
JAN 24, 1984	2.82	MAY 22	2.51	SEP 06	4.05		

GROUND-WATER LEVELS IN MASSACHUSETTS

FRANKLIN COUNTY--Continued

423305072320301. Montague well M5W 5.

LOCATION.--Lat 42°33'05", long 72°32'03", Hydrologic Unit 01080201, about 15 ft 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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 20, 1983	1.47	MAR 22, 1984	0.78	JUL 27, 1984	0.55	SEP 22, 1984	1.66
JAN 24, 1984	1.81	APR 24	0.62	AUG 22	1.07		
FEB 23	0.88	MAY 25	0.71	SEP 06	1.32		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	16.10	FEB 23, 1984	9.08	JUN 22, 1984	6.90	SEP 22, 1984	13.55
NOV 22	17.78	MAR 22	7.95	JUL 27	9.56		
DEC 19	13.30	APR 24	6.25	AUG 22	10.77		
JAN 24, 1984	13.69	MAY 22	6.42	SEP 06	12.21		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	32.80	FEB 22, 1984	32.16	JUN 21, 1984	28.94	SEP 21, 1984	31.98
NOV 21	33.35	MAR 22	31.72	JUL 26	29.80		
DEC 20	32.94	APR 23	29.88	AUG 21	30.81		
JAN 23, 1984	32.42	MAY 21	30.11	SEP 05	31.37		

HAMPDEN COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	6.60	FEB 22, 1984	3.15	JUN 21, 1984	5.69	SEP 21, 1984	8.24
NOV 21	4.74	MAR 22	3.28	JUL 26	6.42		
DEC 20	3.42	APR 23	3.74	AUG 21	6.88		
JAN 23, 1984	5.46	MAY 21	4.05	SEP 05	7.26		

420646072420101. Westfield well WVW 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.--Elevation 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, Nov. 21, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	12.30	FEB 22, 1984	6.76	MAY 21, 1984	6.22	SEP 04, 1984	11.54
NOV 21	DRY	MAR 23	9.49	JUN 22	5.38	21	10.06
DEC 19	7.25	APR 23	6.35	JUL 26	7.55		
JAN 23, 1984	7.76	25	5.30	AUG 21	11.35		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	43.90	FEB 22, 1984	39.29	JUL 09, 1984	32.44	SEP 21, 1984	41.52
NOV 21	43.98	MAR 23	35.37	26	35.85		
DEC 20	42.87	APR 23	32.52	AUG 22	39.64		
JAN 24, 1984	40.64	MAY 22	33.75	SEP 04	41.55		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	9.60	FEB 22, 1984	5.80	JUN 22, 1984	5.84	SEP 22, 1984	9.45
NOV 21	8.88	MAR 23	5.38	JUL 27	7.23		
DEC 20	6.19	APR 24	5.52	AUG 22	8.48		
JAN 24, 1984	7.18	MAY 22	6.20	SEP 06	9.03		

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.--Elevation 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, 5.17 ft below land-surface datum, June 22, 1984; lowest measured, 10.34 ft below land-surface datum, Jan. 26, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	8.80	FEB 22, 1984	8.30	JUN 22, 1984	5.17	SEP 22, 1984	9.24
NOV 21	8.66	MAR 23	7.30	JUL 26	7.85		
DEC 20	8.45	APR 23	5.53	AUG 22	8.49		
JAN 24, 1984	9.20	MAY 22	6.24	SEP 06	9.06		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	20.21	FEB 22, 1984	17.55	JUN 22, 1984	15.55	SEP 18, 1984	18.60
NOV 29	19.72	MAR 20	16.68	JUL 20	16.56	24	18.78
DEC 21	17.70	APR 21	15.58	AUG 14	17.41		
JAN 24, 1984	17.82	MAY 22	15.97	22	17.71		

MIDDLESEX COUNTY--Continued

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.--Elevation 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, 1.13 ft below land-surface datum, Mar. 22, 1984; lowest measured, 13.11 ft below land-surface datum, Oct. 27, 1978.

CORRECTION.--The water level observations of Aug. 24 and Sept. 22, 1983, reported as being "DRY" in WDR MA-RI-83-1, should have been reported as "OBSTRUCTED". No new monthly extremes occurred.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	OBSTRUCTED	FEB 23, 1984	2.71	JUN 25, 1984	5.30	SEP 18, 1984	10.51
NOV 22	8.37	MAR 22	1.13	JUL 20	6.59		
DEC 21	4.02	APR 21	1.91	AUG 14	8.29		
JAN 23, 1984	5.84	MAY 24	4.50	22	8.81		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	9.61	FEB 23, 1984	6.65	JUN 25, 1984	6.64	SEP 18, 1984	10.07
NOV 22	7.74	MAR 20	6.29	JUL 20	8.14	24	10.18
DEC 21	5.65	APR 21	5.45	AUG 14	9.22		
JAN 23, 1984	7.85	MAY 24	6.81	22	9.66		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1983	17.38	FEB 23, 1984	15.23	JUN 25, 1984	14.47	SEP 18, 1984	16.60
NOV 21	16.51	MAR 22	14.54	JUL 20	14.97	24	16.74
DEC 21	15.33	APR 21	13.96	AUG 14	15.82		
JAN 23, 1984	15.98	MAY 24	14.55	22	15.97		

MIDDLESEX COUNTY--Continued

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 above 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, 35.50 ft below land-surface datum, July 20, 1984; lowest measured, 47.10 ft below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	39.89	FEB 22, 1984	39.86	JUN 22, 1984	35.69	SEP 18, 1984	36.56
NOV 21	40.17	MAR 20	39.04	JUL 20	35.50	24	36.66
DEC 21	39.95	APR 21	37.56	AUG 14	35.96		
JAN 24, 1984	39.89	MAY 22	36.85	22	35.90		

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.--Elevation 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, 4.47 ft below land-surface datum, Apr. 21, 1984; lowest measured, 10.59 ft below land-surface datum, Sept. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1983	9.11	FEB 22, 1984	5.30	JUN 22, 1984	6.15	SEP 18, 1984	8.21
NOV 21	7.46	MAR 20	5.21	JUL 20	6.31	24	8.37
DEC 21	5.92	APR 21	4.47	AUG 14	7.30		
JAN 24, 1984	6.77	MAY 22	5.85	22	7.53		

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.--Elevation 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, 1.22 ft below land-surface datum, Mar. 20, 1984; lowest measured, 4.35 ft below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	3.21	FEB 22, 1984	1.75	MAY 22, 1984	2.40	AUG 22, 1984	3.03
NOV 21	2.45	MAR 20	1.22	JUN 22	2.61	SEP 18	3.19
DEC 21	2.12	APR 04	1.34	JUL 20	2.87	24	3.33
JAN 23, 1984	2.58	21	1.72	AUG 14	3.20		

MIDDLESEX COUNTY--Continued

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 above 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 August 1984 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.68 ft below land-surface datum, Mar. 22, 1984; lowest measured, 19.79 ft below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	15.05	JAN 23, 1984	11.28	APR 21, 1984	7.71	JUL 20, 1984	10.49
NOV 22	12.37	FEB 23	9.32	MAY 24	8.80	AUG 14	11.84
DEC 21	9.82	MAR 22	7.68	JUN 25	9.44	22	12.28

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	14.30	FEB 22, 1984	12.72	JUN 25, 1984	10.08	SEP 18, 1984	13.08
NOV 21	14.34	MAR 22	11.90	JUL 20	10.93	25	13.26
DEC 21	13.54	APR 21	10.33	AUG 22	12.18		
JAN 24, 1984	13.03	MAY 24	10.57	SEP 07	12.75		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	8.58	FEB 23, 1984	5.62	JUN 22, 1984	6.31	SEP 18, 1984	8.63
NOV 21	6.31	MAR 20	4.96	JUL 20	6.92	24	8.78
DEC 21	5.73	APR 21	5.38	AUG 14	7.78		
JAN 23, 1984	6.80	MAY 22	6.39	22	7.97		

MIDDLESEX COUNTY--Continued

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	16.95	FEB 22, 1984	15.68	JUN 22, 1984	14.92	SEP 18, 1984	16.44
NOV 21	16.70	MAR 20	15.08	JUL 20	15.95	25	16.52
DEC 21	15.16	APR 21	14.59	AUG 15	15.85		
JAN 24, 1984	16.15	MAY 22	15.28	22	16.44		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	9.61	FEB 23, 1984	6.00	JUN 25, 1984	6.60	SEP 18, 1984	9.43
NOV 22	7.77	MAR 22	5.12	JUL 23	7.86	24	9.50
DEC 21	6.12	APR 22	5.20	AUG 14	8.60		
JAN 23, 1984	7.28	MAY 24	6.48	22	8.79		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	14.13	FEB 22, 1984	5.66	JUN 22, 1984	10.25	SEP 18, 1984	13.66
NOV 21	7.36	MAR 20	5.82	JUL 20	11.34	24	13.80
DEC 21	6.52	APR 21	7.76	AUG 14	12.21		
JAN 23, 1984	10.22	MAY 22	9.65	22	12.26		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1983	24.68	FEB 02, 1984	26.02	MAY 28, 1984	22.93	AUG 28, 1984	23.22
DEC 05	25.38	APR 02	25.15	JUN 07	23.06	SEP 27	23.39
JAN 04, 1984	25.80	MAY 02	23.46	AUG 16	23.18		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	12.65	FEB 22, 1984	3.70	JUN 21, 1984	5.07	SEP 28, 1984	11.68
NOV 26	5.90	MAR 22	2.77	JUL 26	7.30		
DEC 24	3.55	APR 23	3.33	AUG 15	8.82		
JAN 27, 1984	5.33	MAY 23	4.88	29	9.98		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	34.84	FEB 25, 1984	30.52	MAY 23, 1984	31.21	AUG 15, 1984	32.56
DEC 21	32.97	MAR 26	30.47	JUN 27	30.84	28	32.97
JAN 25, 1984	31.35	APR 25	30.29	JUL 25	31.95	SEP 27	33.78

GROUND-WATER LEVELS IN MASSACHUSETTS

NORFOLK COUNTY--Continued

420432071151201. Foxborough well FXW 3.

LOCATION.--Lat 42°04'32", long 71°15'12", Hydrologic Unit 01090004, at Foxborough State Hospital, near railroad tracks, 100 ft 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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	20.44	FEB 22, 1984	17.44	JUN 20, 1984	17.48	SEP 27, 1984	20.06
NOV 26	18.85	MAR 22	16.87	JUL 26	18.65		
DEC 24	17.63	APR 24	17.23	AUG 15	19.15		
JAN 27, 1984	18.42	MAY 23	18.08	28	19.47		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	7.43	FEB 22, 1984	6.06	JUN 20, 1984	5.65	SEP 27, 1984	7.06
NOV 26	5.57	MAR 22	4.91	JUL 26	5.52		
DEC 24	5.88	APR 23	6.01	AUG 15	6.55		
JAN 27, 1984	6.52	MAY 23	5.78	28	6.81		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	20.45	FEB 24, 1984	6.75	JUN 22, 1984	9.17	SEP 28, 1984	17.57
NOV 26	17.02	MAR 23	5.71	JUL 27	11.32		
DEC 24	8.32	APR 25	6.34	AUG 16	13.07		
JAN 23, 1984	10.40	MAY 25	9.10	29	14.57		

NORFOLK COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	8.54	JAN 23, 1984	4.90	MAY 25, 1984	4.78	AUG 16, 1984	5.83
NOV 26	3.38	MAR 23	3.66	JUN 22	4.84	29	7.35
DEC 24	4.00	APR 25	3.92	JUL 27	5.11	SEP 28	9.54

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	8.15	FEB 24, 1984	5.08	JUN 22, 1984	6.52	SEP 28, 1984	8.84
NOV 28	5.05	MAR 23	4.91	JUL 27	6.87		
DEC 24	5.59	APR 25	5.11	AUG 16	7.37		
JAN 23, 1984	6.11	MAY 25	6.61	29	8.11		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	8.84	FEB 23, 1984	7.30	MAY 25, 1984	7.96	AUG 29, 1984	9.58
DEC 26	7.44	MAR 23	6.74	JUN 22	8.31	SEP 28	9.34
JAN 23, 1984	8.01	APR 25	7.05	AUG 16	9.08		

PLYMOUTH COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1983	22.32	MAR 23, 1984	20.39	JUN 22, 1984	21.74	AUG 29, 1984	22.83
JAN 23, 1984	21.70	APR 25	20.61	JUL 27	22.30	SEP 28	22.70
FEB 24	20.84	MAY 25	21.55	AUG 16	22.44		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	15.65	FEB 22, 1984	4.29	JUN 22, 1984	5.66	SEP 28, 1984	13.41
NOV 26	13.94	MAR 23	3.06	JUL 27	8.73		
DEC 26	5.84	APR 25	3.69	AUG 16	10.24		
JAN 23, 1984	7.45	MAY 24	6.38	29	11.34		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	5.00	FEB 23, 1984	3.13	MAY 24, 1984	3.35	AUG 16, 1984	4.20
NOV 26	3.73	MAR 23	2.72	JUN 22	3.40	29	4.56
JAN 23, 1984	3.65	APR 25	2.79	JUL 27	3.83	SEP 28	5.34

PLYMOUTH COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	5.29	FEB 22, 1984	3.84	JUN 22, 1984	4.34	SEP 28, 1984	5.74
NOV 26	3.72	MAR 23	3.44	JUL 27	4.75		
DEC 26	4.43	APR 25	3.80	AUG 16	4.99		
JAN 23, 1984	4.61	MAY 25	4.54	29	5.30		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	17.32	APR 25, 1984	9.68	JUN 22, 1984	11.40	AUG 16, 1984	14.20
FEB 23, 1984	11.52	MAY 24	11.31	JUL 27	13.27	29	14.92
MAR 23	9.94						

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	16.34	FEB 23, 1984	3.48	JUN 22, 1984	4.68	SEP 28, 1984	15.28
NOV 26	10.94	MAR 23	2.62	JUL 27	9.43		
DEC 24	3.52	APR 25	3.04	AUG 16	11.90		
JAN 27, 1984	5.85	MAY 24	5.17	29	13.23		

GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	24.00	JAN 27, 1984	23.28	APR 25, 1984	20.89	AUG 16, 1984	21.49
NOV 26	24.47	FEB 23	23.14	MAY 23	20.83	29	21.81
DEC 24	23.85	MAR 23	21.18	JUN 22	20.55	SEP 28	22.65

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.--Elevation 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 1980-84.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1983	8.68	MAR 23, 1984	5.70	JUN 22, 1984	5.65	AUG 29, 1984	6.94
NOV 21	DRY	APR 25	4.74	JUL 27	5.43	SEP 28	7.32
FEB 23, 1984	6.68	MAY 24	5.47	AUG 17	6.01		

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.--Elevation 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, 17.87 ft below measuring point, Sept. 28, 1984; lowest measured, 26.20 ft below measuring point, Oct. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 23, 1983	23.62	FEB 24, 1984	22.38	MAY 23, 1984	19.42	AUG 28, 1984	17.88
DEC 21	23.47	MAR 26	21.25	JUN 26	18.33	SEP 28	17.87
JAN 25, 1984	22.84	APR 26	19.97	JUL 25	18.00		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	16.50	FEB 21, 1984	11.35	JUN 21, 1984	12.56	SEP 21, 1984	16.27
NOV 21	16.19	MAR 21	12.67	JUL 23	14.30		
DEC 21	12.78	APR 23	10.78	AUG 21	15.49		
JAN 23, 1984	14.66	MAY 21	11.90	SEP 06	16.13		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	7.30	FEB 21, 1984	3.62	JUN 21, 1984	4.96	SEP 21, 1984	7.86
NOV 21	4.98	MAR 21	2.42	JUL 23	4.84		
DEC 21	4.03	APR 23	3.46	AUG 21	6.52		
JAN 23, 1984	4.80	MAY 21	4.40	SEP 04	9.54		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	3.00	FEB 21, 1984	2.19	JUN 21, 1984	2.21	SEP 21, 1984	4.41
NOV 21	2.50	MAR 21	2.04	JUL 23	3.49		
DEC 21	2.21	APR 23	2.06	AUG 21	4.10		
JAN 23, 1984	2.64	MAY 21	2.30	SEP 04	4.23		

WORCESTER COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	14.10	FEB 21, 1984	2.55	MAY 21, 1984	3.14	AUG 21, 1984	9.22
NOV 21	7.85	MAR 21	2.14	JUN 21	4.76	SEP 07	10.39
JAN 23, 1984	3.14	APR 23	2.87	JUL 23	5.35	21	11.26

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1983	3.60	FEB 21, 1984	2.67	JUN 21, 1984	3.74	SEP 21, 1984	4.35
NOV 21	3.16	MAR 21	3.28	JUL 23	3.17		
DEC 21	3.11	APR 23	3.00	AUG 21	4.04		
JAN 23, 1984	3.71	MAY 21	3.53	SEP 06	4.20		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	15.50	FEB 21, 1984	13.80	JUN 21, 1984	12.06	SEP 21, 1984	15.22
NOV 21	15.06	MAR 21	12.35	JUL 23	12.91		
DEC 21	12.64	APR 23	11.57	AUG 21	14.43		
JAN 23, 1984	13.67	MAY 21	13.07	SEP 04	15.31		

WORCESTER COUNTY--Continued

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	16.80	JAN 23, 1984	17.32	MAY 21, 1984	16.80	AUG 21, 1984	17.16
NOV 21	18.20	MAR 21	17.67	JUN 21	15.80	SEP 04	18.32
DEC 21	17.47	APR 23	16.96	JUL 23	15.95	21	17.88

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1983	11.95	FEB 21, 1984	2.69	JUN 21, 1984	5.03	SEP 21, 1984	11.23
NOV 21	10.17	MAR 21	1.80	JUL 23	6.65		
DEC 21	3.61	APR 23	1.87	AUG 21	9.38		
JAN 23, 1984	4.35	MAY 21	3.09	SEP 04	10.30		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	10.80	FEB 21, 1984	2.81	JUN 21, 1984	5.41	SEP 21, 1984	10.76
NOV 21	7.84	MAR 21	3.80	JUL 23	4.76		
DEC 21	3.38	APR 23	3.06	AUG 21	8.81		
JAN 23, 1984	5.07	MAY 21	3.84	SEP 06	9.94		

GROUND-WATER LEVELS IN MASSACHUSETTS

WORCESTER COUNTY--Continued

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.--Elevation 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, 24.70 ft below land-surface datum, Oct. 26, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1983	24.70	FEB 21, 1984	23.72	JUN 21, 1984	23.50	SEP 21, 1984	23.94
NOV 21	24.20	MAR 21	23.74	JUL 23	23.57		
DEC 21	23.64	APR 23	23.75	AUG 21	23.75		
JAN 23, 1984	24.50	MAY 21	23.44	SEP 04	23.89		

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.--Elevation of land-surface datum is 260 ft. Measuring point: Hole in top of concrete cover, 1.24 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.43 ft below land-surface datum, Apr. 23, 1983; lowest measured, 23.73 ft below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	22.65	FEB 01, 1984	20.94	APR 25, 1984	18.53	JUL 27, 1984	20.69
NOV 26	18.26	25	20.53	MAY 27	19.31	AUG 25	21.49
DEC 30	19.45	MAR 24	19.21	JUN 27	19.39	SEP 25	22.20

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	17.04	JAN 31, 1984	15.34	APR 25, 1984	14.66	AUG 25, 1984	16.33
NOV 26	13.33	FEB 25	14.59	JUN 27	15.44	SEP 25	16.66
DEC 30	14.19	MAR 24	14.11	JUL 27	15.80		

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	18.38	JAN 31, 1984	14.66	APR 25, 1984	11.59	JUL 26, 1984	14.18
NOV 26	17.57	FEB 26	13.59	MAY 27	13.07	AUG 25	15.62
DEC 30	14.56	MAR 24	12.25	JUN 27	13.18	SEP 25	16.82

GROUND-WATER LEVELS IN RHODE ISLAND

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.--Elevation of land-surface datum is 130 ft. Measuring point: Hole in wooden cover, 0.06 ft above land-surface datum.

PERIOD OF RECORD.--August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft below land-surface datum, Jan. 27, 1979; lowest measured, 17.20 ft below land-surface datum, Sept. 29, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	15.70	JAN 31, 1984	12.09	APR 25, 1984	11.45	JUL 26, 1984	13.77
NOV 26	10.71	FEB 26	10.47	MAY 27	12.43	AUG 25	15.13
DEC 30	11.10	MAR 24	9.87	JUN 27	12.64	SEP 25	15.70

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.--Elevation of land-surface datum is 60 ft. Measuring point: Inside lower lip of 8-in pipe, 3.32 ft above land-surface datum.

REMARKS.--Water level affected by Blackstone River floods.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft above land-surface datum, Jan. 28, 1976, revised; lowest measured, 7.30 ft below land-surface datum, Aug. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	5.88	JAN 31, 1984	5.15	APR 25, 1984	3.20	JUL 26, 1984	5.06
NOV 26	3.18	FEB 26	2.26	MAY 27	4.95	AUG 25	5.58
DEC 30	3.08	MAR 24	1.52	JUN 27	5.03	SEP 25	5.99

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 above National Geodetic Vertical Datum of 1929. Measuring point: Hole in concrete cover at top of tile casing, 1.84 ft below land-surface datum.

REMARKS.--Well used for domestic supply. Water levels affected by pumping.

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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	11.03	JAN 31, 1984	7.28	APR 25, 1984	5.76	JUL 26, 1984	8.64
NOV 26	8.09	FEB 26	5.27	MAY 27	7.50	AUG 25	9.58
DEC 30	6.21	MAR 24	4.67	JUN 27	7.74	SEP 25	10.34

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.--Elevation of land-surface datum is 86 ft. Measuring point: Top of casing, 3.15 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft below land-surface datum, Apr. 23, 1983; lowest measured, 7.28 ft below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	5.93	JAN 31, 1984	4.29	APR 25, 1984	2.31	JUL 27, 1984	3.22
NOV 26	4.67	FEB 26	3.58	MAY 27	3.38	AUG 25	4.44
DEC 30	3.60	MAR 24	2.96	JUN 27	2.76	SEP 25	5.03

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, above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	4.66	FEB 01, 1984	3.89	APR 25, 1984	3.06	JUL 27, 1984	3.76
NOV 26	3.68	26	3.44	MAY 27	3.68	AUG 25	4.14
DEC 30	3.41	MAR 24	3.04	JUN 27	3.37	SEP 25	4.36

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	0.10	JAN 31, 1984	0.46	APR 25, 1984	0.06	JUL 27, 1984	0.49
NOV 26	0.07	FEB 26	0.23	MAY 27	0.17	AUG 25	0.69
DEC 30	0.25	MAR 24	0.11	JUN 27	0.26	SEP 25	0.86

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.--Elevation of land-surface datum is 26 ft. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.09 ft below land-surface datum, Apr. 23, 1983; lowest measured, 21.63 ft below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	19.42	JAN 31, 1984	16.23	APR 25, 1984	13.45	JUL 26, 1984	14.96
NOV 26	17.02	FEB 25	14.50	MAY 27	15.27	AUG 25	17.64
DEC 30	14.58	MAR 26	13.43	JUN 27	14.20	SEP 25	18.35

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	6.74	JAN 31, 1984	4.75	MAR 24, 1984	3.90	JUL 27, 1984	5.19
NOV 26	3.78	FEB 01	4.79	APR 25	3.81	AUG 25	6.14
DEC 01	4.40	25	4.26	MAY 27	4.91	SEP 25	6.53
30	3.79	MAR 05	4.33	JUN 27	4.44		

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 above 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	8.39	FEB 01, 1984	9.24	APR 25, 1984	8.15	JUL 27, 1984	9.69
NOV 26	7.49	25	8.79	MAY 27	9.05	AUG 25	10.70
DEC 30	8.72	MAR 26	8.31	JUN 28	8.63	SEP 25	11.50

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 Barberville.

Owner: State Department of Environmental Management.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in, depth 40 ft, cased to 38 ft, screened 38 to 40 ft.

DATUM.--Land-surface datum is 146.40 ft, above 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 1983 TO SEPTEMBER 1984
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1983	15.81	JAN 10, 1984	12.19	MAR 25, 1984	11.74	JUN 20, 1984	11.55
22	a15.98	31	12.75	31	11.78	25	11.76
25	15.88	FEB 01	a12.78	APR 05	11.58	27	a11.87
NOV 26	a14.71	05	12.58	10	11.11	30	12.18
30	14.10	10	12.53	15	11.14	JUL 05	12.33
DEC 01	a14.00	15	12.55	20	11.07	10	12.48
05	13.76	20	12.46	25	11.19	15	12.71
10	13.44	25	12.48	30	11.39	20	12.73
15	13.14	29	12.36	MAY 05	11.32	25	12.85
20	12.86	MAR 05	12.26	27	a12.41	27	a12.97
25	12.53	10	12.25	31	12.10	AUG 05	13.31
30	a12.15	15	12.04	JUN 05	12.23	25	14.11
31	12.10	20	11.85	10	11.20	SEP 25	15.03
JAN 05, 1984	12.05	24	a11.76	15	11.35	30	15.15

WTR YR 1984 MAX 11.04 APR 17 MIN 15.99 OCT 21, 22

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	9.86	FEB 01, 1984	7.59	APR 25, 1984	6.25	JUL 27, 1984	7.47
NOV 26	5.64	25	7.28	MAY 27	7.24	AUG 25	8.55
DEC 30	6.46	MAR 26	6.11	JUN 28	6.48	SEP 25	9.22

GROUND-WATER LEVELS IN RHODE ISLAND

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.--Elevation 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, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	DRY	FEB 01, 1984	11.56	APR 25, 1984	10.18	JUL 26, 1984	11.82
NOV 26	12.15	25	10.84	MAY 27	11.30	AUG 25	12.97
DEC 30	10.58	MAR 26	9.98	JUN 28	10.48	SEP 25	14.00

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.--Elevation 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 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	25.04	JAN 31, 1984	22.83	APR 25, 1984	20.53	JUL 27, 1984	20.82
NOV 26	25.49	FEB 25	22.54	MAY 27	21.22	AUG 25	22.33
DEC 30	23.38	MAR 24	21.62	JUN 27	19.64	SEP 25	23.62

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, above 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 1983 TO SEPTEMBER 1984
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1983	7.80	JAN 05, 1984	5.94	APR 10, 1984	5.33	JUL 05, 1984	6.38
10	7.83	10	6.12	15	5.54	10	6.35
15	7.73	15	6.25	20	5.58	15	6.56
20	7.72	20	6.40	25	5.71	20	6.42
22	a7.76	31	6.40	30	5.87	25	6.58
25	7.49	FEB 05	5.98	MAY 05	5.93	26	a6.66
31	7.68	10	6.11	10	6.05	31	6.69
NOV 05	7.65	15	6.10	15	6.14	AUG 05	6.79
10	7.55	20	6.06	20	6.26	10	6.89
15	7.51	25	6.03	25	6.36	15	6.96
20	7.02	29	5.83	27	a6.47	20	7.06
26	a6.08	MAR 05	5.87	31	5.38	25	7.20
30	6.08	10	5.95	JUN 05	5.00	31	7.26
DEC 05	6.10	15	5.54	10	5.43	SEP 05	7.30
10	6.07	20	5.61	15	5.69	10	7.38
15	5.89	25	5.73	20	5.73	15	7.38
20	5.97	26	a5.76	25	5.96	20	7.45
30	5.71	31	5.71	28	a6.14	25	7.55
31	5.75	APR 05	5.26	30	6.18	30	7.57

WTR YR 1984 MAX 4.87 JUN 3 MIN 7.83 OCT 10

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, above 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 1983 TO SEPTEMBER 1984
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1983	34.65	DEC 31, 1983	32.73	APR 15, 1984	32.54	JUL 05, 1984	33.10
10	34.71	JAN 05, 1984	32.75	20	32.55	10	33.19
15	34.71	10	32.88	24	a32.60	15	33.29
20	34.74	15	32.97	25	32.61	20	33.38
22	a34.75	20	33.07	30	32.74	25	33.43
25	34.65	31	33.19	MAY 05	32.82	27	a33.49
31	34.66	FEB 05	33.12	10	32.91	31	33.60
NOV 05	34.71	10	33.05	15	32.98	AUG 05	33.69
10	34.74	15	33.05	20	33.06	10	33.77
15	34.57	20	33.03	25	33.16	15	33.83
20	34.27	25	33.04	27	a33.23	20	33.90
26	a33.97	29	32.98	31	33.14	25	33.97
30	33.45	MAR 05	32.90	JUN 05	32.57	31	34.05
DEC 05	33.19	10	32.87	10	32.40	SEP 05	34.13
10	33.05	24	a32.63	15	32.52	10	34.21
15	32.96	25	32.62	20	32.68	15	34.28
20	32.91	31	32.67	25	32.83	20	34.33
25	32.82	APR 05	32.62	27	a32.89	25	34.42
30	a32.74	10	32.54	30	32.95	30	34.47

WTR YR 1984 MAX 32.40 JUN 10 MIN 34.75 OCT 22

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 above 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 1983 TO SEPTEMBER 1984
HIGH FOR DAY

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1983	13.53	DEC 31, 1983	10.28	APR 20, 1984	9.34	JUL 15, 1984	10.51
10	13.65	JAN 05, 1984	10.31	25	9.55	20	10.46
15	13.75	10	10.56	30	9.72	25	10.57
20	13.82	15	10.72	MAY 05	9.88	26	a10.63
22	a13.87	20	10.93	10	10.10	31	10.72
25	13.72	25	10.82	15	10.31	AUG 05	10.84
31	13.80	31	11.00	20	9.90	10	10.87
NOV 05	13.87	FEB 25	10.21	25	10.67	15	11.19
10	13.87	29	9.89	27	a10.80	20	11.35
15	13.45	MAR 05	9.78	31	9.78	25	11.60
20	13.10	10	9.85	JUN 05	8.78	31	11.80
26	a12.06	15	9.49	10	8.89	SEP 05	12.00
30	11.70	20	9.47	15	9.27	10	12.15
DEC 05	11.48	25	9.52	20	9.52	15	12.31
10	11.20	26	a9.52	25	9.79	20	12.38
15	11.07	31	9.55	28	a9.89	25	12.60
20	10.59	APR 05	9.24	30	9.96	30	12.72
25	10.38	10	9.13	JUL 05	10.22		
30	a10.29	15	9.28	10	10.27		

WTR YR 1984 MAX 8.78 JUN 4, 5 MIN 13.93 NOV 9, 10

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 above 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, 1980-84.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	DRY	JAN 31, 1984	26.19	APR 25, 1984	25.13	JUL 26, 1984	26.74
NOV 26	27.90	FEB 25	25.89	MAY 27	26.51	AUG 25	27.79
DEC 30	25.28	MAR 26	25.17	JUN 28	25.70	SEP 25	28.95

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.--Elevation of land-surface datum is 45 ft. Measuring point: Southwest corner of stone casing, 0.91 ft above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft below land-surface datum, Apr. 23, 1983; lowest measured, 14.61 ft below land-surface datum, Sept. 24, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1983	13.36	JAN 31, 1984	11.12	APR 25, 1984	10.38	JUL 26, 1984	11.24
NOV 26	10.75	FEB 25	10.84	MAY 27	11.69	AUG 25	12.58
DEC 30	10.64	MAR 26	10.40	JUN 27	10.82	SEP 25	13.16

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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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