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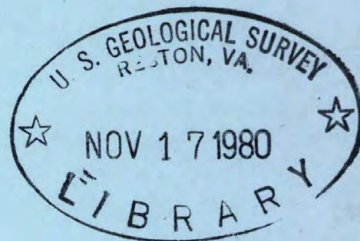
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MASSACHUSETTS
+ RHODE ISLAND

1979



Water Resources Data for Massachusetts and Rhode Island



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT MA-RI-79-1
WATER YEAR 1979
Prepared in cooperation with the States of
Massachusetts and Rhode Island and with
other agencies

CALENDAR FOR WATER YEAR 1979

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Water Resources Data for Massachusetts and Rhode Island

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WATER YEAR 1979

Prepared in cooperation with the States of
Massachusetts and Rhode Island and with
other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

CECIL D. ANDRUS, Secretary

GEOLOGICAL SURVEY

H. William Menard, Director

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Boston, MA 02114

PREFACE

This report was prepared by personnel of the New England District of the Water Resources Division of the U. S. Geological Survey under the supervision of J. A. Baker, District Chief, and J. E. Biesecker, Regional Hydrologist, Northeastern Region. It was done in cooperation with the States of Massachusetts and Rhode Island, and with other agencies.

This report is one of a series issued by State. The general direction for the series is by J. S. Cragwall, Jr., Chief Hydrologist, succeeded by Philip Cohen, and by Philip Cohen, Assistant Chief Hydrologist for Scientific Publications and Data Management, succeeded by R. J. Dingman.

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GAGING STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

Letters after station name designate type of data;
(d), discharge, (l), lake; (c) chemical; (b) biological; (t), water temperature

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WATER RESOURCES DATA FOR MASSACHUSETTS AND RHODE ISLAND, 1979

INTRODUCTION

Water-resources data for the 1979 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 102 gaging stations, monthend contents for 30 lakes and reservoirs, water quality for 26 gaging stations, and water levels for 108 observation wells. Also included are data for 19 low-flow and 20 crest-stage partial-record stations. Additional water data were collected at various sites, not part of the systematic data-collection program, and are published as miscellaneous measurements. Locations of gaging stations, partial-record stations, and observation wells are shown in figures 1, 2, and 3, respectively. A few pertinent stations (not included above) in bordering States are also included in this report. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Massachusetts and Rhode Island.

Records of discharge or stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "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 entitled, "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 entitled, "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 Branch of Distribution, U.S. Geological Survey, 1200 South Eads Street, Arlington, VA 22202.

For water years 1961 through 1974, streamflow data were released by the Geological 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-79-1." Water-data reports are for sale by the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, VA 22161.

COOPERATION

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

Massachusetts: State Water Resources Commission, R. E. Kendall and D. B. Standley, co-chairmen, C. F. Kennedy, director and chief engineer of Division of Water Resources, and T. C. McMahon, director of Division of Water Pollution Control; State Department of Public Works, J. J. Carroll, commissioner, F. W. Holden, research and materials engineer, and R. T. Tierney, chief engineer of Division of Highways; Metropolitan District Commission, J. F. Snedeker, commissioner, C. Y. Hitchcock, Jr., acting director of Water Division and chief water-supply engineer.

Rhode Island: State Department of Environmental Management, W. E. Wood, director; Division of Land Resources, P. M. Janaros, chief; Division of Water Resources, W. M. Stetson, chairman; city of Providence, Department of Public Works, C. Cesaro, director.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, in collecting records for 31 gaging stations published in this report.

Organizations supplying data are acknowledged in the station descriptions.

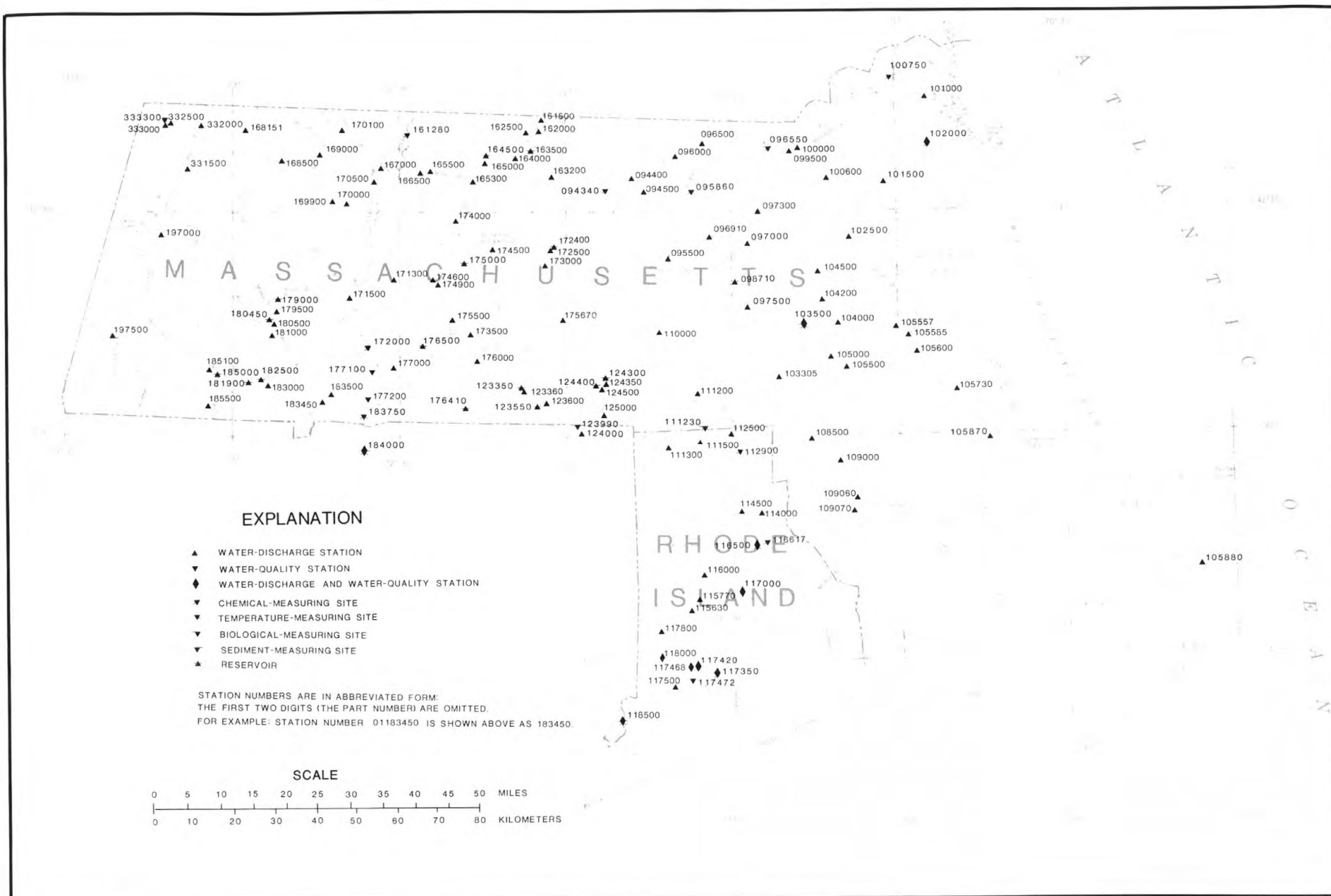


FIGURE 1. LOCATION OF GAGING STATIONS

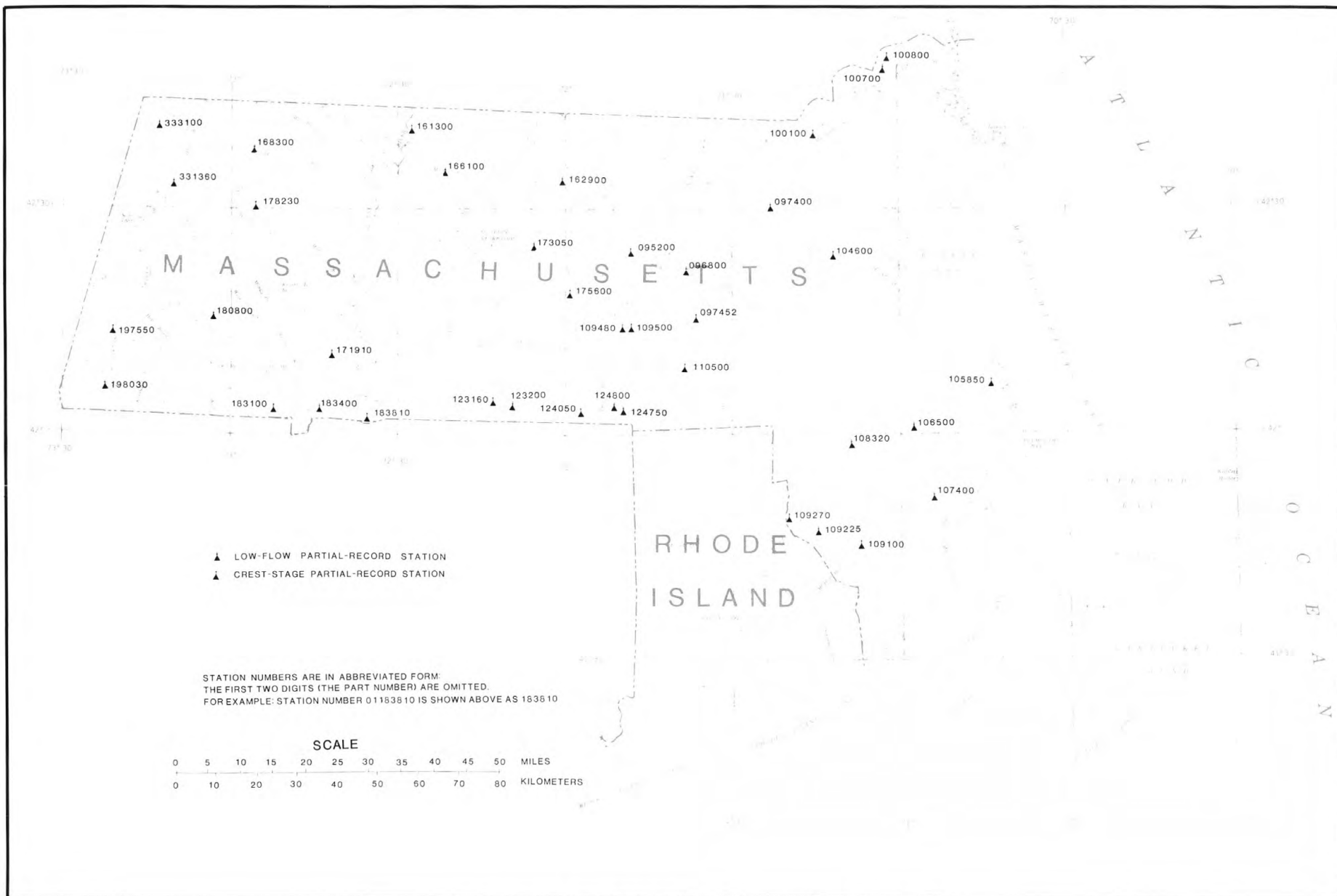


FIGURE 2. LOCATION OF PARTIAL-RECORD STATIONS

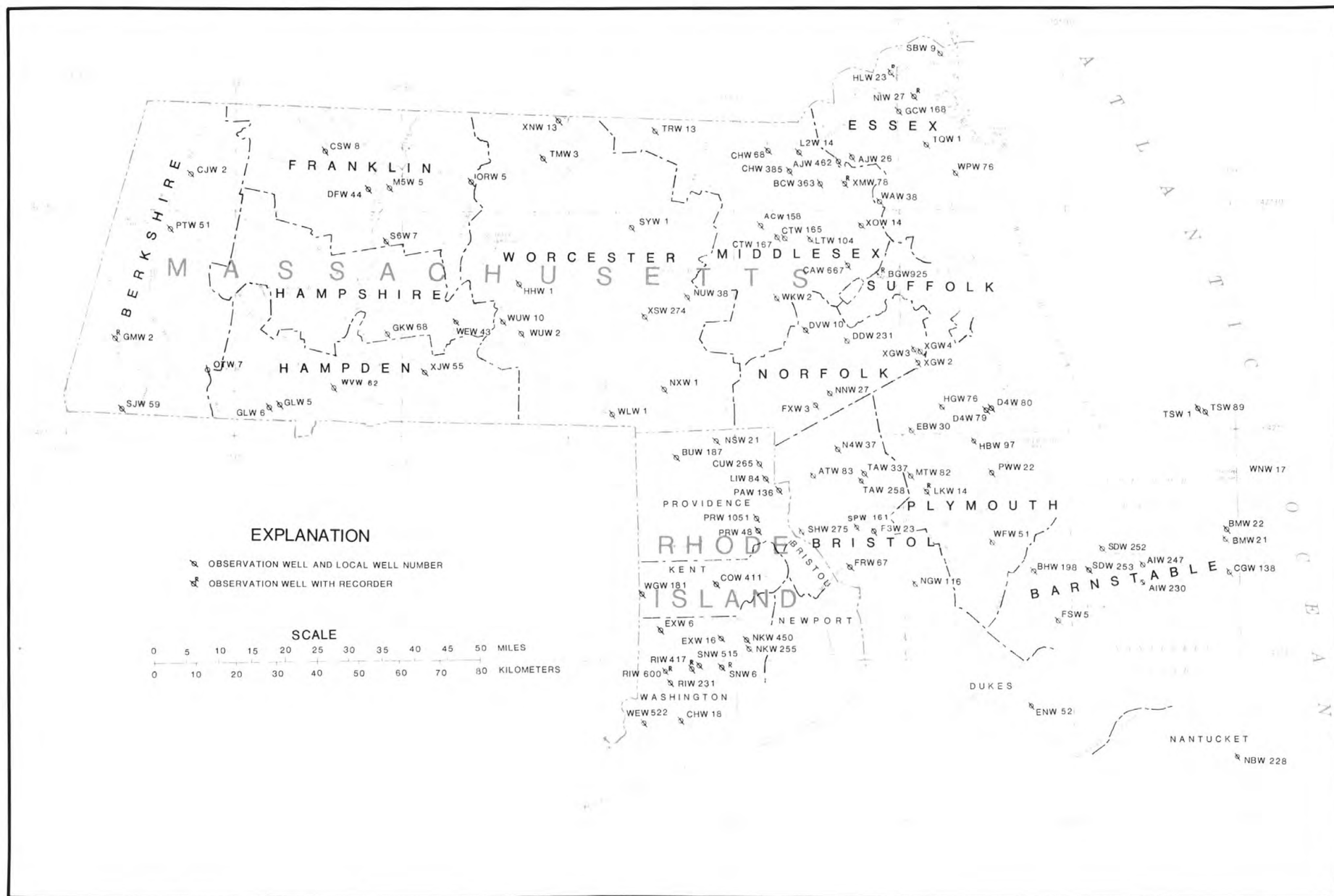


FIGURE 3. LOCATION OF OBSERVATION WELLS

HYDROLOGIC CONDITIONS

At the beginning of the water year, streamflow was deficient (in the lower quartile of record) except in western Massachusetts, where it was in the normal range.

Runoff was normal in October, deficient in November, deficient in December (except in Rhode Island and southeastern Massachusetts, where it was normal) excessive in January, normal in February (except in most of central Massachusetts, where it continued excessive), and excessive in March (except in Rhode Island and most of eastern Massachusetts, where it was normal). Cumulative runoff for October to March was excessive.

Heavy rainfall during the period January 21-25 caused severe flooding in parts of Rhode Island and central and eastern Massachusetts. Seven counties in Massachusetts were declared disaster areas by the Federal Government. Damage was estimated to exceed \$6 M in Rhode Island and \$30 M in Massachusetts. The maximum instantaneous discharge for period of record occurred at several gaging stations in Rhode Island and eastern Massachusetts, with recurrence intervals ranging from about 30 to more than 100 years.

The maximum monthly runoff (10.25 in) for any month for period of record occurred in January at index station, Branch River at Forestdale, RI (January 1940-), exceeding the previous maximum (9.15 in) which occurred in March 1972. Also, a new maximum daily discharge (3,620 ft³/s) for January and the second highest daily discharge for any month for period of record occurred at this station on January 25, exceeding the previous maximum daily for January (2,330 ft³/s) which occurred in January 1976 and being exceeded only by the maximum daily discharge for any month (3,700 ft³/s) which occurred in March 1968.

The maximum January runoff and the second highest January runoff for period of record occurred at index stations, Ware River at Intake Works, near Barre, MA (January 1928-) and West Branch Westfield River at Huntington, MA (September 1935-), respectively. Also, the second highest March runoff for period of record (exceeded only by that of March 1936) occurred at these stations.

Spring peak discharges were moderate and only the usual lowland flooding occurred.

During April to July, runoff was mostly in the normal range although it was excessive in May in western Massachusetts, excessive in May and June in Rhode Island and eastern Massachusetts, deficient in June in central Massachusetts, and excessive in July in central Massachusetts. Runoff was excessive in August except in northeastern and western Massachusetts, where it was normal, and excessive throughout Massachusetts and Rhode Island in September.

Cumulative runoff for April to September was in the normal range and runoff for the water year 1979 was excessive at all three index stations.

At the end of the water year, streamflow was excessive except in Rhode Island and southeastern Massachusetts, where it was in the high-normal range.

Figure 4 on page 6 for which records of three long-term gaging stations were used shows a comparison of the monthly and yearly mean discharge for the 1979 water year with the median discharge for the period 1941-70.

As the water year began, ground-water levels in Massachusetts and Rhode Island were in the normal range except in northeastern Massachusetts, where they were below normal. Levels declined generally during November and December and were in the below-normal range at the start of the 1979 calendar year.

Recharge to the water-table occurred several times during the winter months as a result of above-freezing temperatures and above-normal precipitation. Heavy rainfall during January 21-25 caused severe flooding in parts of Rhode Island and central and eastern Massachusetts. New high levels for January were set in 16 wells in Massachusetts and 11 wells in Rhode Island. Also, new all-time highs for period of record were set in 4 wells in Massachusetts and in 7 wells in Rhode Island. Ground-water levels remained above normal until the end of March.

The seasonal decline of water levels which began in April, continued through the growing season. However, ground-water levels remained generally above normal to the end of the water year.

DEFINITION OF TERMS

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

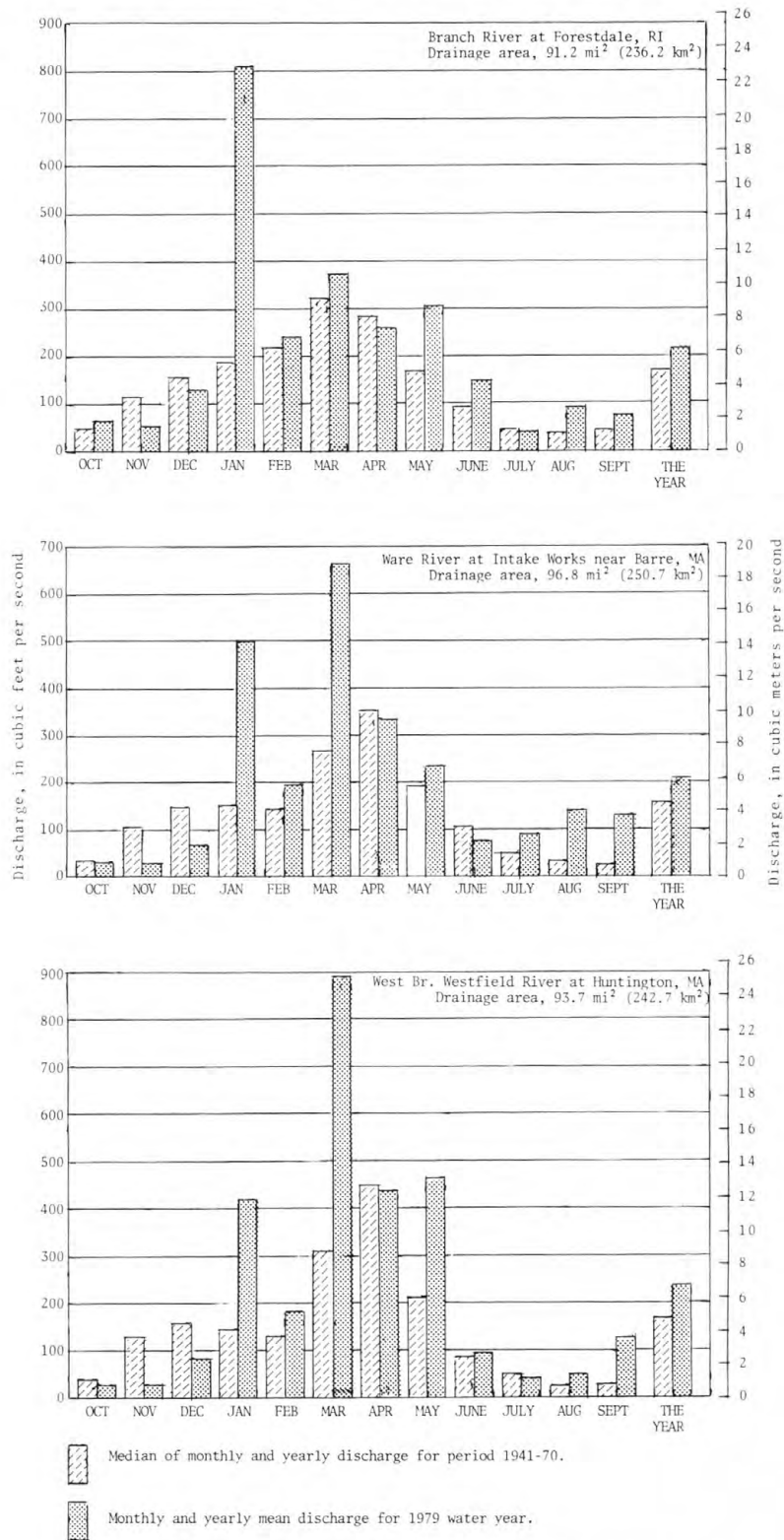


Figure 4.--Comparison of discharge at three long-term index gaging stations during 1979 water year with median discharge for period 1941-70.

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

National Geodetic Vertical Datum of 1929 (NGVD) is a geodetic datum 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 emersed 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.

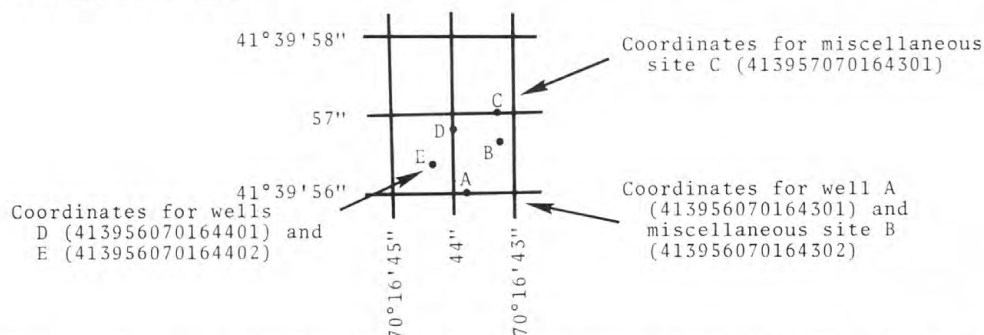


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude)

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 3.

SPECIAL NETWORKS AND PROGRAMS

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

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

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

EXPLANATION OF STAGE AND WATER-DISCHARGE RECORDS

Collection and Computation of Data

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

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

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

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

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

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

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

The type of gage currently in use; the datum of the present gage referred to National Geodetic Vertical Datum; and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." National Geodetic Vertical Datum is explained in "DEFINITION OF TERMS" on page 9.

Information pertaining to the accuracy of the discharge records and to conditions that affect the natural flow at the gaging station is given under "REMARKS."

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 maximum gage height did not occur on the same day as maximum discharge, it is given separately. Similarly, minimum is the instantaneous minimum unless otherwise qualified. For some stations, 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 daily discharges for the calendar and water years.

Footnotes to the table of daily discharges are introduced by the word "NOTE." Footnotes are used to indicate 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.

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 diel 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 111 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 (eom); water levels in wells not equipped with recording gages are reported for the end of each month.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

Thirty-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 for sale by U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202 (authorized agent of the Superintendent of Documents, Government Printing Office). Prices, effective July 1979, are subject to change. When ordering these publications, 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: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages. \$1.60.
- 1-D2 Guidelines for collection and field analysis of ground-water samples for selected unstable constituents by W.W. Wood: USGS-TWRI Book 1, Chapter D2 1976 24 pages. \$0.85
- 2-D1 Application of surface geophysics to ground-water investigations, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages. \$1.90.
- 2-E1 Application of borehole geophysics to water-resources investigations, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages. \$1.75.
- 3-A1 General field and office procedures for indirect discharge measurements, by M. A. Benson and Tate Dalrymple: USGS-TWRI Book 3, Chapter A1. 1967. 30 pages \$1.00.
- 3-A2 Measurement of peak discharge by the slope-area method, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages. \$0.35.
- 3-A3 Measurement of peak discharge at culverts by indirect methods, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages. \$0.40.
- 3-A4 Measurement of peak discharge at width contractions by indirect methods, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages. \$1.00.
- 3-A5 Measurement of peak discharge at dams by indirect methods, by Harry Hulsing: USGS--TWRI Book 3 Chapter A5. 1967. 29 pages. \$0.35.
- 3-A6 General procedure for gaging streams, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages. \$1.00.
- 3-A7 Stage measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS-TWRI Book 3, Chapter A7. 1968. 28 pages. \$1.40.
- 3-A8 Discharge measurements at gaging stations, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages. \$1.25.
- 3-A11 Measurement of discharge by moving-boat method, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages. \$1.20.
- 3-A12 Fluorometric procedures for dye tracing, by J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A12. 1968. 31 pages. \$0.35. Not currently available.
- 3-B1 Aquifer-test design, observation, and data analysis, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages. \$0.70.
- 3-B2 Introduction to ground-water hydraulics, a programed text for self-instruction, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages. \$2.50.
- 3-C1 Fluvial sediment concepts, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages. \$2.50.
- 3-C2 Field methods for measurement of fluvial sediment, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages. \$2.50.
- 3-C3 Computation of fluvial-sediment discharge, by George Porterfield: USGS-TWRI Book 3, Chapter C3 1972. 66 pages. \$2.10.
- 4-A1 Some statistical tools in hydrology, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages. \$1.60.
- 4-A2 Frequency curves, by H.C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages. \$1.20.
- 4-B1 Low-flow investigations, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages. \$0.65.
- 4-B2 Storage analyses for water supply, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages. \$0.75.
- 4-B3 Regional analyses of streamflow characteristics, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3 1973. 15 pages. \$0.65.
- 4-D1 Computation of rate and volume of stream depletion by wells, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages. \$1.10.
- 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: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages. \$10.00.
- 5-A2 Determination of minor elements in water by emission spectroscopy, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages. \$0.80.
- 5-A3 Methods for analysis of organic substances in water, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages. \$0.90.
- 5-A4 Methods for collection and analysis of aquatic biological and microbiological samples, edited by P. E. Greeson, T.A. Ehlke, G.A. Irwin, B.W. Lium, and K.V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages. \$9.25.
- 5-A5 Methods for determination of radioactive substances in water and fluvial sediments, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages. \$5.75.
- 5-C1 Laboratory theory and methods for sediment analysis, by H.P. Guy: USGS-TWRI Book 5, Chapter C1 1969. 58 pages. \$2.10.
- 7-C1 Finite difference model for aquifer simulation in two dimensions with results of numerical experiments, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages. \$2.30.
- 7-C2 Computer model of two-dimensional solute transport and dispersion in ground water by L. F. Konikow and J.D. Bredehoeft: USGS-TWRI Book 7, Chapter C2. 1978. 90 pages. \$2.75
- 8-A1 Methods of measuring water levels in deep wells, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages. \$1.30.
- 8-B2 Calibration and maintenance of vertical-axis type current meters, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages. \$1.10.

GAGING STATION RECORDS
NORTH ATLANTIC SLOPE BASINS
MERRIMACK RIVER BASIN

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01094340 WHITMAN RIVER NEAR WESTMINSTER, MA

LOCATION.--Lat 42°33'35", long 71°52'02", Worcester County, Hydrologic Unit 01070004, on upstream side of bridge on State Highway 2A, 1.3 mi (2.1 km) downstream from Crocker Pond, and 2.5 mi (4.0 km) northeast of Westminster, MA.

DRAINAGE AREA.--21.7 mi² (34.9 km²).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT 26...	1100	2.2	90	6.1	10.5	1	--	9.3	83	--
DEC 06...	1400	28	62	5.8	3.0	2	--	13.2	98	--
MAR 13...	1400	170	55	5.7	1.0	1	--	13.9	97	15
APR 12...	1230	42	63	5.3	6.5	--	1.0	12.2	99	16
MAY 09...	1330	35	65	5.3	20.0	--	1.0	8.9	97	28
JUN 06...	1500	32	62	5.1	20.0	--	1.0	8.7	95	6
JUL 17...	1130	43	68	5.8	23.0	--	2.0	8.1	93	16
AUG 14...	1215	28	75	5.7	19.0	--	1.0	8.9	95	18
SEP 12...	0900	10	85	5.9	16.5	--	1.0	9.1	92	15

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)
OCT 26...	8400	--	<1	K2	4.0	.9	16	0	13
DEC 06...	--	K2	<1	K2	--	--	--	--	--
MAR 13...	--	81	30	38	--	--	--	--	--
APR 12...	12000	K3	K1	<1	2.0	.6	7	0	6
MAY 09...	--	K2	<1	K1	--	--	--	--	--
JUN 06...	3500	31	K8	K3	3.1	1.1	5	0	4
JUL 17...	--	380	180	130	--	--	--	--	--
AUG 14...	14000	26	K11	K27	3.0	.6	9	0	7
SEP 12...	--	22	K10	87	--	--	--	--	--

K, NON-IDEAL COLONY COUNT.

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

MERRIMACK RIVER BASIN

01094340 WHITMAN RIVER NEAR WESTMINSTER, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)	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)
OCT 26...	20	7.9	12	7	56	5750	.03	.00	.03
DEC 06...	--	--	--	2	52	--	.05	.00	.05
MAR 13...	--	--	--	12	48	--	.14	.00	.14
APR 12...	56	--	--	4	52	26000	.08	.01	.09
MAY 09...	--	--	--	15	49	--	.00	.00	.00
JUN 06...	64	--	--	4	52	9280	.00	.01	.01
JUL 17...	--	--	--	7	35	--	.02	.00	.02
AUG 14...	29	--	--	7	67	17600	.03	.00	.03
SEP 12...	--	--	--	2	58	--	.02	.00	.02

DATE	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)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 26...	.00	.13	.13	.16	.00	0	--	.050	.000
DEC 06...	.07	.29	.36	.41	.02	--	0	2.80	.000
MAR 13...	.01	.32	.33	.47	.02	--	1	.000	.000
APR 12...	.00	.33	.33	.42	.01	0	0	1.93	.000
MAY 09...	.00	.31	.31	.31	.19	--	0	2.35	.000
JUN 06...	.00	.23	.23	.24	.01	0	0	1.36	.000
JUL 17...	.00	.29	.29	.31	.01	--	0	1.45	.000
AUG 14...	.03	.32	.35	.38	.01	2	0	4.95	.000
SEP 12...	.01	.35	.36	.38	.01	--	0	.000	.000

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WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COBALT, TOTAL RECOVERABLE (UG/L AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	SELENIUM, TOTAL RECOVERABLE (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
OCT 26...	1	6	<10	1	3	1300	37	280	<.5	0	10
APR 12...	0	5	10	1	1	310	35	40	.5	0	10

DATE	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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 26...	<.6	<.4	1.4	<.4	1.3	<.4	--	.00	.00	.0	.00
APR 12...	<.6	--	1.9	--	1.8	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 26...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 12...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

MERRIMACK RIVER BASIN

01094400 NORTH NASHUA RIVER AT FITCHBURG, MA

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

DRAINAGE AREA.--63.6 mi² (164.7 km²).

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

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

REMARKS.--Records good. 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.--7 years, 127 ft³/s (3.597 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,080 ft³/s (58.9 m³/s) Dec. 21, 1973, gage height, 6.22 ft (1.896 m) and Mar. 14, 1977, gage height 6.23 ft (1.899 m); minimum, 9.4 ft³/s (0.27 m³/s) July 31, 1977, Oct. 23, Nov. 25, 1978; minimum daily, 12 ft³/s (0.34 m³/s) Oct. 23, 1978.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1345	1270 36.0	5.11 1.558	Mar. 11	0945	964 27.3	4.63 1.411
Jan. 25	0800	958 27.1	4.62 1.408	Mar. 25	0900	725 20.5	4.23 1.289
Mar. 6	2230	*2060 58.3	6.20 1.890				

Minimum discharge, 9.4 ft³/s (0.27 m³/s) Oct. 23, Nov. 25; minimum daily, 12 ft³/s (0.34 m³/s) Oct. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	63	81	151	123	198	193	123	53	47	57
2	29	27	54	350	124	123	208	156	107	36	55	49
3	26	27	48	434	116	117	273	137	94	30	46	54
4	25	26	63	198	109	121	219	165	84	29	70	50
5	26	25	76	122	101	356	269	140	84	25	50	42
6	65	18	61	96	87	1390	235	118	95	20	40	64
7	41	22	54	98	85	1500	201	109	76	21	32	75
8	29	26	55	953	84	791	168	99	66	21	31	60
9	24	27	131	571	78	570	181	93	62	20	30	48
10	24	27	121	257	68	526	239	87	58	20	38	41
11	27	27	73	160	67	876	225	80	53	21	46	34
12	26	24	60	110	67	554	177	74	52	22	106	31
13	26	16	56	99	65	343	149	82	44	22	142	29
14	42	25	51	161	61	374	157	87	41	21	108	31
15	33	26	44	142	57	401	197	116	39	21	82	36
16	22	26	42	106	56	255	204	87	39	77	64	33
17	26	30	45	89	55	215	202	79	35	188	54	29
18	27	34	43	85	51	189	174	71	42	135	52	27
19	28	27	38	79	48	177	151	71	59	152	61	26
20	28	23	33	75	49	192	137	95	45	95	57	25
21	27	26	63	278	55	222	125	93	38	66	51	29
22	32	26	52	448	73	251	116	80	34	51	44	129
23	12	23	42	281	72	259	111	79	35	41	40	113
24	23	39	38	204	243	255	103	197	34	36	39	81
25	25	37	50	710	364	578	99	460	31	35	44	66
26	27	52	44	584	252	429	99	392	30	51	53	59
27	36	48	38	395	170	290	341	264	28	113	53	51
28	31	55	35	304	138	218	494	193	28	158	56	46
29	30	52	33	260	---	185	327	190	28	88	60	159
30	23	71	31	215	---	194	242	159	28	64	103	128
31	27	---	30	178	---	196	---	151	---	51	79	---
TOTAL	890	939	1667	8123	2946	12270	6021	4397	1612	1783	1873	1701
MEAN	28.7	31.3	53.8	262	105	396	201	142	53.7	57.5	60.4	56.7
MAX	65	71	131	953	364	1500	494	460	123	188	182	159
MIN	12	16	30	75	48	117	99	71	28	20	30	25
CAL YR 1978	TOTAL	36607	MEAN 100	MAX 1020	MIN 12							
WTR YR 1979	TOTAL	44222	MEAN 121	MAX 1500	MIN 12							

01094500 NORTH NASHUA RIVER NEAR LEOMINSTER, MA

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

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

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

Water-quality records: Water years 1955, 1958.

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

GAGE.--Water-stage recorder. Datum of gage is 270.04 ft (82,308 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, Apr. 24 to May 30, 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.--44 years, 193 ft³/s (5.466 m³/s).

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1615	a1970 55.8	5.97 1.820	Mar. 7	0045	*a3140 88.9	7.54 2.298
Jan. 25	0900	a2120 60.0	6.20 1.890	Mar. 11	1415	1200 34.0	4.64 1.414
Feb. 24	1415	1100 31.2	4.44 1.353				

a From rating curve extended above 780 ft³/s (22.1 m³/s).

Minimum, 38 ft³/s (1.08 m³/s) July 7, 14; minimum daily, 42 ft³/s (1.19 m³/s) July 7, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	53	104	173	246	240	299	330	265	104	76	93
2	49	52	89	504	206	247	294	270	222	65	94	79
3	58	52	79	642	187	235	381	235	191	55	76	89
4	53	51	114	314	174	241	372	300	170	49	109	83
5	70	48	130	203	163	532	383	235	156	47	79	75
6	169	46	105	156	145	1810	397	205	160	43	67	141
7	84	47	94	153	140	2500	347	185	148	42	61	131
8	59	56	95	1330	138	1090	293	165	131	43	58	99
9	55	53	230	789	127	754	276	155	121	43	54	79
10	54	53	200	378	118	683	356	145	113	44	95	73
11	55	51	126	247	117	1070	398	135	104	47	87	66
12	51	50	107	178	112	762	350	130	99	46	224	61
13	53	44	99	160	105	501	295	140	94	44	329	59
14	91	47	91	294	95	461	268	155	87	42	174	61
15	69	52	80	236	93	569	303	190	81	51	134	70
16	56	50	77	173	91	396	323	165	79	106	105	61
17	54	53	84	146	86	341	329	145	75	310	87	57
18	53	81	79	139	78	302	302	130	72	215	84	57
19	54	55	67	129	78	274	266	125	83	225	101	55
20	61	48	64	121	82	287	236	170	84	137	94	61
21	56	53	143	538	102	307	215	160	76	98	85	63
22	63	53	101	707	177	348	199	140	71	77	76	225
23	46	49	79	404	140	363	191	130	66	67	70	174
24	50	83	70	289	503	360	175	300	64	72	68	123
25	53	82	92	1300	697	485	170	700	61	70	90	101
26	53	72	87	866	422	579	170	600	59	93	101	88
27	80	76	72	609	291	435	550	430	57	204	96	77
28	61	87	66	472	254	341	750	370	54	269	109	71
29	54	83	62	430	---	289	560	340	54	135	102	209
30	50	126	60	357	---	283	420	320	54	102	154	178
31	52	---	58	290	---	298	---	297	---	83	125	---
TOTAL	1915	1806	3004	12727	5167	17383	9868	7497	3151	3028	3264	2859
MEAN	61.8	60.2	96.9	411	185	561	329	242	105	97.7	105	95.3
MAX	169	126	230	1330	697	2500	750	700	265	310	329	225
MIN	46	44	58	121	78	235	170	125	54	42	54	55
CAL YR 1978 TOTAL	63505		MEAN 174	MAX 1310	MIN 44							
WTR YR 1979 TOTAL	71669		MEAN 196	MAX 2500	MIN 42							

MERRIMACK RIVER BASIN

01095500 NASHUA RIVER AT CLINTON, MA
(Formerly published as South Branch Nashua River at Clinton)

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

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

PERIOD OF RECORD.--Discharge: July 1896 to current year. Prior to October 1978, published as South Branch Nashua River.
Water-quality records: Water year 1957.

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

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

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

AVERAGE DISCHARGE.--83 years, 188 ft³/s (5.324 m³/s), 23.71 in/yr (602 mm/yr), adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	Mean	Per square mile	Runoff in inches	Rainfall in inches
October.....	-5.27	-0.05	-0.06	3.32
November.....	8.26	.08	.09	2.34
December.....	79.5	.74	.85	3.86
Calendar year 1978.....	166	1.54	20.91	44.57
January.....	607	5.64	6.50	12.07
February.....	253	2.35	2.45	2.82
March.....	627	5.82	6.71	3.84
April.....	380	3.53	3.94	4.96
May.....	233	2.16	2.50	4.41
June.....	92.2	.86	0.96	1.31
July.....	67.3	.62	0.72	5.74
August.....	112	1.04	1.20	7.42
September.....	121	1.12	1.25	3.83
Water year 1979.....	215	2.00	27.10	55.92

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

01095860 NASHUA RIVER AT FORT DEVENS, MA

LOCATION.--Lat 42°33'10", long 71°37'11", Worcester County, Hydrologic Unit 01070004, 500 ft (152 m) downstream from bridge on Ayer Road, 0.6 mi (0.97 km) downstream from Trout Brook, and at Fort Devens, MA.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPE- CIFIC CON- DUCT- ANCE (MICHO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)
OCT										
11...	1500	235	6.4	12.5	5	--	6.1	57	--	50000
NOV										
28...	1100	255	6.6	1.5	8	--	10.9	78	--	--
MAR										
09...	1130	75	5.4	2.0	7	--	11.1	80	20	--
APR										
12...	1445	117	6.2	8.5	--	6.0	10.4	89	29	390000
MAY										
10...	0730	133	6.1	19.0	--	7.0	6.7	72	37	--
JUN										
07...	0730	167	5.9	19.0	--	6.0	5.0	53	16	400000
JUL										
17...	0800	260	6.3	22.0	--	4.0	3.0	34	14	--
AUG										
14...	0830	120	6.4	21.5	--	15	7.2	81	21	--
SEP										
12...	0900	190	6.4	18.0	--	5.0	5.3	56	17	--

DATE	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
OCT									
11...	65000	160	220	12	1.9	37	0	30	24
NOV									
28...	1900	K4	52	--	--	--	--	--	--
MAR									
09...	17000	150	77	--	--	--	--	--	--
APR									
12...	K170	K10	K10	4.9	1.1	14	0	11	14
MAY									
10...	4400	42	25	--	--	--	--	--	--
JUN									
07...	8800	840	22	8.2	1.9	21	0	17	42
JUL									
17...	910	260	73	--	--	--	--	--	--
AUG									
14...	9200	2800	330	5.6	1.3	18	0	15	11
SEP									
12...	8800	410	56	--	--	--	--	--	--

K, NON-IDEAL COLONY COUNT.

MERRIMACK RIVER BASIN

01095860 NASHUA RIVER AT FORT DEVENS, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)	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)
OCT 11...	30	27	17	134	140	186000	1.0	.07	1.1
NOV 28...	--	--	1	--	142	--	.88	.02	.90
MAR 09...	--	--	21	--	65	--	.19	.00	.19
APR 12...	--	--	8	--	80	74200	.27	.01	.28
MAY 10...	--	--	33	--	98	--	.34	.03	.37
JUN 07...	--	--	17	--	128	195000	.61	.07	.68
JUL 17...	--	--	0	--	175	--	1.2	.14	1.3
AUG 14...	--	--	25	--	118	161000	.42	.03	.45
SEP 12...	--	--	11	--	135	--	.63	.05	.68

DATE	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)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL REC'D. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 11...	1.2	1.0	2.2	3.3	.87	3	0	--	--
NOV 28...	2.2	.50	2.7	3.6	.60	--	0	2.42	.000
MAR 09...	.17	.55	.72	.91	.10	--	0	.510	.000
APR 12...	.32	.21	.53	.81	.08	0	0	1.93	.000
MAY 10...	.55	.65	1.2	1.6	.24	--	0	3.05	.000
JUN 07...	.07	1.3	1.4	2.1	.27	0	2	1.78	.000
JUL 17...	.75	.75	1.5	2.8	.50	--	0	10.2	.000
AUG 14...	.28	.55	.83	1.3	.27	1	0	--	--
SEP 12...	.34	1.6	1.9	2.6	.34	--	1	1.99	.000

01095860 NASHUA RIVER AT FORT DEVENS, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	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)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 11...	3	0	<10	5	8	1100	10	170	<.5	0	40
APR 12...	1	7	10	2	9	480	91	0	.5	0	30

DATE	GROSS ALPHA, DIS- SOLVED (UG/L U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L 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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 11...	<1.1	.7	4.4	.4	4.1	.5	.0	.00	.00	.0	.00
APR 12...	<.9	--	2.4	--	2.3	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 12...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

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

MERRIMACK RIVER BASIN

01096000 SQUANNACOOK RIVER NEAR WEST GROTON, MA

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

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

PERIOD OF RECORD.--Discharge: October 1949 to current year.

Water-quality records: Water year 1957.

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

REMARKS.--Records excellent except those for January and February, which are fair. Occasional regulation at low flow by mill upstream; regulation greater prior to 1961. Entire flow from 2.10 mi² (5.44 km²) upstream from outlet of Ashby Reservoir diverted for municipal supply of Fitchburg except during water years 1964, 1967-79. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years, 110 ft³/s (3.115 m³/s), 23.79 in/yr (604 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 7	1000	*2230 63.2	6.79 2.070	Apr. 28	1400	877 24.8	5.21 1.588
Mar. 11	1930	1010 28.6	5.43 1.655	May 26	0600	715 20.2	4.91 1.497

Minimum daily discharge, 13 ft³/s (0.37 m³/s) Oct. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	19	30	31	202	155	222	255	166	27	31	74
2	13	18	29	95	170	160	212	208	136	31	30	51
3	14	17	27	292	140	164	300	179	119	30	25	42
4	14	17	27	265	125	161	292	196	110	26	27	39
5	17	17	39	200	115	233	293	202	101	24	27	34
6	25	16	43	125	100	742	307	172	102	22	23	37
7	36	16	36	77	92	1990	252	146	93	21	21	75
8	30	16	32	197	86	1020	210	131	81	20	19	62
9	22	17	48	539	80	575	196	121	75	20	18	43
10	20	17	93	296	75	503	258	115	72	19	18	35
11	19	17	65	204	71	811	297	101	67	19	20	30
12	18	16	48	155	68	685	266	91	64	18	30	27
13	17	16	42	96	65	390	240	97	58	18	71	26
14	20	16	39	89	62	312	220	103	52	17	78	24
15	24	16	34	110	60	446	249	120	50	17	50	26
16	23	15	31	103	58	290	249	121	45	22	36	25
17	23	16	32	85	56	233	231	101	45	84	31	23
18	21	23	33	73	54	210	208	89	39	102	28	22
19	21	26	27	67	53	199	183	85	39	115	30	21
20	21	24	26	64	53	225	165	110	40	67	32	19
21	20	21	33	93	56	257	150	135	38	45	31	19
22	19	21	40	286	67	318	140	114	34	35	28	48
23	18	20	37	385	81	334	135	93	33	29	25	87
24	17	32	32	272	138	336	125	146	30	24	24	58
25	17	31	35	363	358	410	118	416	27	30	26	43
26	17	29	39	641	312	514	114	641	25	27	50	36
27	18	24	35	570	203	336	196	414	24	40	50	32
28	23	24	30	429	167	246	741	268	23	89	57	29
29	24	22	27	339	---	207	524	225	23	71	60	66
30	20	26	25	288	---	204	346	205	23	46	95	114
31	20	---	25	241	---	231	---	195	---	35	113	---
TOTAL	624	605	1139	7070	3167	12897	7429	5595	1834	1190	1206	1267
MEAN	20.1	20.2	36.7	228	113	416	248	180	61.1	38.4	38.9	42.2
MAX	36	32	93	641	358	1990	741	641	166	115	113	114
MIN	13	15	25	31	53	155	114	85	23	17	18	19
CFSM	.32	.32	.58	3.63	1.80	6.62	3.95	2.87	.97	.61	.62	.67
IN.	.37	.36	.67	4.19	1.88	7.64	4.40	3.31	1.09	.70	.71	.75
CAL YR 1978	TOTAL	39219	MEAN 107	MAX	972	MIN 13	CFSM 1.70	IN 23.23				
WTR YR 1979	TOTAL	44023	MEAN 121	MAX	1990	MIN 13	CFSM 1.93	IN 26.08				

01096500 NASHUA RIVER AT EAST PEPPERELL, MA

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

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

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

REVISED RECORDS.--WSP 801: Drainage area.

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

REMARKS.--Records good. Extremes and daily discharge include water released while diverting flow of South Branch Nashua River for use of Boston metropolitan district, water diverted into basin from Ware River basin since 1955 for municipal use of Fitchburg, and water diverted around station through plant of James River-Pepperell Co. (see table below for figures of diversion and released water). Flow regulated by powerplant immediately upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--44 years, 563 ft³/s (15.94 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 6,110 ft³/s (173 m³/s) Mar. 8, gage height, 10.56 ft (3.219 m); minimum daily, 37 ft³/s (1.05 m³/s) Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	218	237	96	1310	947	937	1440	913	69	353	497
2	87	190	240	349	1090	957	999	1200	795	69	348	340
3	90	157	165	1260	954	1010	1140	1070	701	107	263	302
4	90	142	233	1360	850	957	1320	1020	637	66	234	322
5	170	92	288	874	778	1170	1320	1060	555	100	226	328
6	220	129	307	510	687	2480	1430	975	507	128	257	304
7	263	155	304	461	672	4910	1290	868	610	129	287	301
8	186	119	241	1110	667	5930	1060	789	497	126	231	377
9	184	102	271	2240	658	5170	1060	736	396	261	147	372
10	189	102	291	2410	453	3570	1330	697	205	310	79	325
11	192	82	576	1480	307	3150	1500	662	212	252	81	248
12	187	76	395	918	346	3340	1400	596	291	220	80	203
13	184	103	317	726	379	2740	1240	519	324	170	453	203
14	187	109	314	668	377	1890	1260	532	315	143	679	201
15	139	119	311	888	374	1860	1250	571	313	139	477	200
16	143	146	252	758	373	1710	1210	638	295	133	407	159
17	219	151	179	628	372	1320	1160	653	232	127	365	146
18	220	116	163	599	338	1160	1090	639	209	207	361	147
19	223	83	164	434	250	1020	981	604	209	529	264	146
20	241	139	164	357	345	955	888	562	211	654	304	145
21	224	183	223	626	296	975	815	578	212	476	157	146
22	163	142	266	1610	287	1040	651	581	212	196	37	147
23	182	82	226	2080	357	1110	704	533	212	216	127	170
24	236	161	95	1660	756	1140	701	518	209	295	172	394
25	222	162	170	2410	2020	1250	533	827	211	278	182	374
26	197	79	511	3890	2210	1790	443	2110	211	289	225	342
27	182	178	377	4220	1420	1620	596	2220	213	257	250	285
28	171	225	269	3350	1040	1240	1790	1590	182	330	286	254
29	109	260	262	2390	---	1030	2510	1200	182	354	316	322
30	126	245	193	1970	---	954	1950	1050	124	357	415	295
31	171	---	95	1610	---	978	---	1000	---	356	641	---
TOTAL	5493	4247	8099	43942	19966	59373	34560	28038	10395	7343	8704	7995
MEAN	177	142	261	1417	713	1915	1152	904	347	237	281	267
MAX	263	260	576	4220	2210	5930	2510	2220	913	654	679	497
MIN	87	76	95	96	250	947	443	518	124	66	37	145
(†)	-15.9	-17.6	-17.6	-8.49	-7.27	-11.0	-59.4	-78.9	-8.15	-7.65	-7.24	-6.98
CAL YR 1978 TOTAL	210545		MEAN 577	MAX 3830	MIN 73							
WTR YR 1979 TOTAL	238155		MEAN 652	MAX 5930	MIN 37							

† Diversion and released water, in cubic feet per second; diversion into basin from Ware River for municipal supply of Fitchburg, and water released while diverting flow of South Branch Nashua River for use of Boston metropolitan district. Records of diversion furnished by city of Fitchburg, and records of released water furnished by Water Division of Metropolitan District Commission.

MERRIMACK RIVER BASIN

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

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

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January to September 1973.

WATER TEMPERATURES: January to September 1973.

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (LOW LEVEL) (MG/L)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)
OCT												
11...	1130	2130	137	6.3	13.0	1.0	8.5	80	13	--	5100	22000
NOV												
29...	1230	2030	125	6.4	1.5	3.0	12.5	89	--	--	--	2300
DEC												
20...	0930	2760	145	6.4	.5	2.0	12.4	86	--	--	--	--
JAN												
04...	1000	7760	142	6.5	2.5	3.0	13.1	96	--	--	--	--
FEB												
13...	0945	4220	119	6.3	.5	2.0	13.5	94	--	--	--	--
MAR												
09...	0300	40600	52	5.2	.5	15	14.2	98	--	16	--	8800
APR												
25...	0815	11700	67	6.0	11.5	2.0	10.7	98	--	11	16000	610
MAY												
17...	0900	7060	83	6.1	16.5	2.0	8.8	89	--	38	--	1700
JUN												
19...	1400	2180	108	7.3	24.0	2.0	9.0	106	--	17	7200	1200
JUL												
24...	0930	2330	109	6.8	27.0	1.0	8.6	107	--	43	--	36000
AUG												
21...	0930	2500	125	6.2	19.5	1.0	8.4	91	--	84	16000	46000
SEP												
19...	1200	2980	83	6.1	20.5	2.0	7.6	84	--	21	--	34000

DATE	COLI- FORM, FECAL, 0.45 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 TOTAL RECOV- ERABLE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)
OCT												
11...	700	66	25	9	6.9	7.9	1.3	1.3	16	2.0	23	0
NOV												
29...	200	220	19	7	--	5.8	--	1.1	15	1.5	--	--
DEC												
20...	170	120	23	8	--	7.0	--	1.3	16	1.6	--	--
JAN												
04...	820	390	24	9	--	7.3	--	1.3	16	1.6	--	--
FEB												
13...	280	90	20	9	--	6.2	--	1.1	14	1.6	--	--
MAR												
09...	630	450	10	9	--	2.9	--	.6	5.4	.8	--	--
APR												
25...	290	77	13	5	2.9	3.9	.7	.7	8.1	.7	8	0
MAY												
17...	360	78	16	4	--	4.9	--	.8	9.9	1.0	--	--
JUN												
19...	140	--	20	3	--	6.1	--	1.1	15	1.1	16	0
JUL												
24...	200	15	20	0	--	6.1	--	1.1	14	1.4	--	--
AUG												
21...	3600	46	21	8	5.6	6.5	1.0	1.1	15	1.4	--	--
SEP												
19...	4000	53	15	4	--	4.7	--	.9	9.2	1.1	--	--

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDEU (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)
OCT 11...	19	16	13	22	.1	3.1	75	75	6	83	80	6720
NOV 29...	12	--	12	22	.0	.6	73	65	3	--	76	--
DEC 20...	15	--	14	25	.1	6.1	78	80	--	--	--	--
JAN 04...	15	--	12	28	.1	6.2	90	82	--	--	--	--
FEB 13...	11	--	13	19	.1	6.4	75	68	--	--	--	--
MAR 09...	1	--	7.0	9.0	.1	4.7	40	32	41	--	96	--
APR 25...	7	13	7.6	11	.1	4.7	46	42	7	--	62	20200
MAY 17...	12	--	8.5	14	.1	4.6	47	51	16	--	60	--
JUN 19...	17	1.3	11	17	.1	4.6	73	67	11	--	84	5730
JUL 24...	20	6.2	9.7	19	.1	3.9	74	67	2	--	75	--
AUG 21...	13	16	21	18	.1	4.6	75	76	4	--	96	8210
SEP 19...	11	17	8.3	13	.1	4.8	66	50	7	--	64	--

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS- TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED TOTAL (MG/L AS P)
OCT 11...	.50	.04	.54	.42	.56	.98	--	--	1.5	.22	.17
NOV 29...	.32	.01	.33	.46	.41	.87	.21	.66	1.2	.19	.16
DEC 20...	--	--	.33	.57	.53	1.1	.14	.96	1.4	.18	.17
JAN 04...	--	--	.39	.44	.56	1.0	.17	.83	1.4	.16	.10
FEB 13...	--	--	.24	.38	.33	.71	.00	.99	.95	.14	.13
MAR 09...	.15	.01	.16	.08	.60	.68	.64	.04	.84	.15	.02
APR 25...	.12	.01	.13	.09	.49	.59	.12	.47	.73	.06	.05
MAY 17...	.24	.01	.25	.19	.35	.54	.00	.56	.79	.11	.08
JUN 19...	.29	.01	.30	.24	.64	.88	.00	1.1	1.2	.14	.07
JUL 24...	.35	.01	.36	.13	.46	.59	.22	.37	.95	.15	.10
AUG 21...	.41	.00	.41	.22	.69	.91	.02	.89	1.3	.17	.13
SEP 19...	.29	.01	.30	.22	.69	.91	.00	.97	1.2	.15	.13

MERRIMACK RIVER BASIN

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. * FINE THAN .062 MM
OCT 11...	3	5.0	--	--	1	--	--	--	72	414	100
NOV 29...	--	--	--	5.8	--	1	2.10	.000	13	71	100
DEC 20...	--	3.2	--	--	--	--	--	--	330	2460	77
JAN 04...	--	--	.7	5.5	--	--	--	--	11	230	100
FEB 13...	--	5.6	--	--	--	--	--	--	102	1160	100
MAR 09...	--	--	1.5	5.7	--	0	5.83	.000	85	9320	63
APR 25...	0	3.2	--	--	--	0	--	--	12	319	71
MAY 17...	--	4.7	--	--	--	3	2.69	.000	6	114	100
JUN 19...	0	4.9	1.1	4.5	--	1	25.2	3.36	17	100	75
JUL 24...	--	18	--	--	--	0	15.5	4.00	12	75	--
AUG 21...	1	--	--	--	--	1	9.49	1.34	8	54	--
SEP 19...	--	--	.4	4.7	--	0	5.83	.000	7	56	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CAUMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 11...	1	--	--	--	--	--	0	--	--	<10
NOV 29...	1	--	1	0	0	0	2	0	3	<10
JAN 04...	1	--	1	0	0	0	3	0	5	10
MAR 09...	1	--	1	200	0	200	8	1	7	30
APR 25...	1	--	--	--	--	--	6	--	--	20
JUN 19...	5	--	4	--	--	--	2	0	2	10
SEP 19...	2	0	2	--	--	--	0	0	0	20

DATE	CHRO- MIUM, SUS- PENDE RECOV- (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)
OCT 11...	--	--	1	--	--	10	--	--	250	--
NOV 29...	<8	2	2	0	2	7	2	5	340	220
JAN 04...	9	1	1	1	0	8	3	5	460	180
MAR 09...	29	1	1	0	1	7	6	1	1900	1800
APR 25...	--	--	--	--	--	5	--	--	330	--
JUN 19...	0	10	1	1	0	10	4	6	530	310
SEP 19...	10	10	0	0	0	7	0	7	390	--

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

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	
DATE												
OCT 11...		--	7	--	--	80	--	--	<.5	--	--	
NOV 29...		120	21	1	20	30	0	40	<.5	.0	<.5	
JAN 04...		280	31	0	36	90	0	90	<.5	.0	<.5	
MAR 09...		140	45	9	36	170	60	110	<.5	.0	<.5	
APR 25...		--	110	--	--	30	--	--	<.5	--	--	
JUN 19...		220	5	1	4	60	30	30	<.5	.0	<.5	
SEP 19...		170	5	3	2	50	20	30	<.5	<.0	<.5	
DATE	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)			
OCT 11...	0	--	--	--	--	--	0	--	--			
NOV 29...	0	0	0	0	0	0	20	0	20			
JAN 04...	0	0	0	0	0	0	30	20	10			
MAR 09...	0	0	0	0	0	0	20	10	10			
APR 25...	0	--	--	--	--	--	260	--	--			
JUN 19...	0	0	0	0	0	0	20	0	30			
SEP 19...	0	0	0	0	0	0	10	10	0			
DATE	AROCLOR TOT. IN BOT MAT 1254 PCB SERIES (UG/KG)	PCB, TOTAL (UG/L)	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	ALDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDE, TOTAL (UG/L)	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 11...	--	.0	--	.00	.00	--	.0	--	.00	--	.00	--
NOV 29...	88	ND	--	--	ND	ND	ND	ND	ND	ND	ND	ND
FEB 13...	--	ND	--	--	ND	--	ND	--	ND	--	ND	--
APR 25...	--	.0	--	.00	.00	--	.0	--	.00	--	.00	--
MAY 17...	--	ND	ND	--	ND	ND	ND	11	ND	ND	ND	ND
DATE	DDT, TOTAL (UG/L)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DI- AZINON, TOTAL (UG/L)	DI- AZINON, 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)	ENDRIN, TOTAL (UG/L)	ENDRIN, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	ETHION, TOTAL (UG/L)	ETHION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 11...	.00	--	--	--	.00	--	.00	.00	--	--	--	--
NOV 29...	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND
FEB 13...	ND	--	--	ND	--	ND	--	ND	--	ND	--	--
APR 25...	.00	--	--	--	.00	--	.00	.00	--	--	--	--
MAY 17...	ND	ND	ND	ND	ND	ND	--	ND	ND	ND	ND	ND

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.
ND, MATERIAL SPECIFICALLY ANALYZED FOR, BUT NOT DETECTED.

MERRIMACK RIVER BASIN

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MALA- THION, TOTAL (UG/L)	MALA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA- THION, TOTAL (UG/L)
OCT 11...	.00	--	.00	--	.00	--	--	--	--	--	--
NOV 29...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
FEB 13...	ND	--	ND	--	ND	--	ND	--	ND	--	ND
APR 25...	.00	--	.00	--	.00	--	--	--	--	--	--
MAY 17...	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

DATE	METHYL PARA- THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI- THION, TOTAL (UG/L)	METHYL TRI- THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	PARA- THION, TOTAL (UG/L)	PARA- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TRI- THION, TOTAL (UG/L)	TRI- THION, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
OCT 11...	--	--	--	.00	.00	--	--	--	--	0	--
NOV 29...	ND	ND	ND	--	--	ND	ND	ND	ND	ND	ND
FEB 13...	--	ND	--	--	--	ND	--	ND	--	ND	--
APR 25...	--	--	--	--	.00	--	--	--	--	0	--
MAY 17...	ND	ND	ND	--	--	ND	ND	ND	--	ND	ND

DATE	GROSS ALPHA, DIS- SOLVED (PCI/L AS U-NAT)	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 YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS YT-90)
OCT 11...	--	<.8	<.4	2.4	<.4	2.2	.4
APR 25...	<.3	<.5	--	1.6	--	1.6	--

ND, MATERIAL SPECIFICALLY ANALYZED FOR, BUT NOT DETECTED.
 < ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.

01096550 MERRIMACK RIVER ABOVE LOWELL, MA--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR NOVEMBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	NOV 29,78 1230	MAR 9,79 0800	JUN 19,79 1400	SEP 19,79 1200				
TOTAL CELLS/ML	1300	1600	22000	3600				
DIVERSITY: DIVISION	0.9	1.2	1.4	1.6				
..CLASS	0.9	1.2	1.4	1.6				
...ORDER	1.1	1.3	2.1	2.0				
...FAMILY	1.5	2.2	3.0	2.5				
....GENUS	0.0	2.3	3.6	3.4				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE								
....SCHROEDERIA	--	-	--	-	* 0	--	-	
...MIRACTINIACEAE								
....GOLENKINIA	--	-	--	-	350 2	--	-	
....MIRACTINIUM	--	-	--	-	2500 11	* 0		
...OOCYSTACEAE								
....ANKISTROUESMUS	--	-	--	-	300 1	320 9		
....CHODATELLA	--	-	--	-	--	* 0		
....DICTYUSPHAERIUM	--	-	--	-	2600 12	--	-	
....KIRCHNERIELLA	--	-	--	-	--	190 5		
...OOCYSTIS	--	-	--	-	--	130 4		
....SELENASTRUM	--	-	--	-	* 0	--	-	
....TETRAEDRUM	--	-	--	-	* 0	--	-	
...SCENEDESMACEAE								
....ACTINASTRUM	--	-	--	-	400 2	--	-	
....CRUCIGENIA	170 13		--	-	400 2	160 5		
....SCENEDESMUS	200# 15		110 7		1900 9	300 9		
....TETRASTRUM	--	-	--	-	1000 5	320 9		
...VOLVOCALES								
...CHLAMYDOMONADACEAE	14 1		--	-	--	--	-	
....CHLAMYDOMONAS	--	-	--	-	960 4	220 6		
...VOLVOCAEAE								
....GONIUM	--	-	--	-	1000 5	--	-	
....PANDORINA	--	-	--	-	500 2	--	-	
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	29 2		14 1		550 2	140 4		
....MELOSIRA	--	-	140 9		1600 7	350 10		
..PENNALES								
...DIATOMACEAE								
....DIATOMA	--	-	--	-	* 0	--	-	
...FRAGILARIACEAE								
....ASTERIONELLA	810# 62		14 1		200 1	64 2		
....FRAGILARIA	--	-	--	-	--	* 0		
....SYNEDRA	--	-	43 3		--	--	-	
...NAVICULACEAE								
....NAVICULA	58 4		14 1		* 0	--	-	
...NITZSCHIAEAE								
....NITZSCHIA	29 2		72 4		250 1	48 1		
...XANTHOPHYCEAE								
...METEKOCCOCCALES								
...CENTRITRACTACEAE								
....CENTRITRACTUS	--	-	--	-	--	* 0		
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
....AGMENELLUM	--	-	--	-	--	130 4		
....ANACYSTIS	--	-	--	-	5600# 25	1100# 30		
...HORMOGONALES								
...NOSTOCACEAE								
....NOSTOC	--	-	880# 54		--	--	-	
...OSCILLATORIACEAE								
....LYNGBYA	--	-	190 12		--	--	-	
...OSCILLATORIA	--	-	--	-	1800 8	--	-	
...RIVULARIACEAE								
....RAPHIDIOPSIS	--	-	110 7		--	--	-	
EUGLENOPHYTA (EUGLENIDS)								
..EUGLENOPHYCEAE								
...EUGLENALES								
...EUGLENACEAE								
....TRACHELUMONAS	--	-	29 2		--	48 1		

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MERRIMACK RIVER BASIN

01096910 BOULDER BROOK AT EAST BOLTON, MA

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

DRAINAGE AREA.--1.54 mi² (3.99 km²).

PERIOD OF RECORD.--Discharge: June 1971 to current year.

Specific conductance: June 1971 to September 1978.

Water temperatures: June 1971 to September 1978.

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

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

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

AVERAGE DISCHARGE.--8 years, 3.23 ft³/s (0.091 m³/s), 28.48 in/yr (723 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	0845	*208 5.89	3.69 1.125	May 25	1045	37 1.05	2.62 0.799
Feb. 24	1300	62 1.76	2.81 .856	Aug. 30	0900	32 .91	2.60 .792
Mar. 6	1915	44 1.25	2.68 .817				

Minimum discharge, 0.12 ft³/s (0.003 m³/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.12	.50	1.1	2.0	13	6.4	7.8	8.7	6.6	1.6	.40	5.7
2	.12	.43	.60	5.2	11	7.9	7.8	7.1	6.0	1.3	.55	4.6
3	.12	.33	.60	6.8	9.9	8.3	12	7.2	5.7	.79	.35	4.1
4	.14	.25	.85	2.8	8.9	9.0	11	9.2	5.6	.54	.74	3.4
5	.34	.25	1.5	2.1	7.8	16	13	7.4	5.7	.50	.56	3.0
6	2.4	.25	1.5	2.1	6.6	24	10	6.8	6.1	.49	.45	3.4
7	.89	.25	1.0	2.2	5.9	28	9.3	6.5	5.0	.43	.35	4.1
8	.38	.25	1.0	15	5.8	18	8.2	6.0	4.8	.34	.32	3.1
9	.38	.25	2.2	8.3	5.8	15	10	5.6	4.4	.33	.24	2.5
10	.31	.25	2.6	5.0	5.2	13	16	5.7	4.2	.25	.60	2.1
11	.25	.25	1.4	3.8	4.5	21	11	4.9	3.8	.24	1.5	2.0
12	.25	.25	1.2	3.1	3.9	15	9.8	4.5	4.3	.22	4.0	1.8
13	.25	.25	1.2	2.6	3.6	11	9.1	6.1	3.6	.22	10	1.6
14	.56	.25	1.2	7.3	2.8	11	9.4	6.9	3.1	.22	5.0	1.5
15	.78	.25	1.2	5.2	2.7	12	11	8.6	2.6	.49	3.5	1.5
16	.50	.25	1.2	3.9	2.6	8.7	9.3	6.4	2.3	.79	2.5	1.5
17	.43	.25	1.2	3.0	2.5	8.3	9.1	5.0	2.0	1.0	1.8	1.3
18	.34	.44	1.2	2.9	2.0	8.1	7.5	4.6	3.6	3.1	1.8	.83
19	.34	.46	.76	2.9	2.0	8.1	7.2	4.8	4.4	3.3	2.1	.83
20	.34	.34	.66	2.8	2.0	7.8	7.2	7.3	2.8	1.3	2.0	.83
21	.34	.31	1.7	17	2.5	7.5	6.9	7.1	2.2	.82	1.9	.77
22	.34	.31	1.4	15	5.4	7.3	6.4	5.5	2.2	.56	1.7	4.8
23	.34	.31	1.1	7.1	4.1	7.2	6.3	5.1	2.1	.40	1.2	3.1
24	.34	.56	.98	6.0	21	7.5	5.8	10	1.9	.36	1.1	1.9
25	.34	.83	1.4	91	20	11	5.8	20	1.9	.35	1.2	1.5
26	.34	.64	1.4	39	6.8	9.8	5.5	13	1.6	.30	1.8	1.4
27	.48	.49	1.1	29	5.8	7.9	16	9.2	1.6	2.5	1.5	1.3
28	.50	.42	.83	23	5.7	7.1	17	7.8	1.3	2.0	3.8	1.1
29	.50	.42	.77	18	---	6.9	11	7.9	.87	1.0	3.8	2.7
30	.50	.99	.72	15	---	7.6	9.8	8.9	.71	.80	16	2.1
31	.50	---	.76	14	---	8.0	---	8.0	---	.50	11	---
TOTAL	13.76	11.28	36.33	363.1	179.8	344.4	286.2	232.0	102.98	27.54	85.81	70.36
MEAN	.44	.38	1.17	11.7	6.42	11.1	9.54	7.48	3.43	.89	2.77	2.35
MAX	2.4	.99	2.6	91	21	28	17	20	6.6	3.3	16	5.7
MIN	.12	.25	.60	2.0	2.0	6.4	5.5	4.5	.71	.22	.29	.77
CFSM	.29	.25	.76	7.60	4.17	7.21	6.20	4.86	2.23	.58	1.80	1.53
IN.	.33	.27	.88	8.77	4.34	8.31	6.91	5.60	2.44	.66	2.07	1.70
CAL YR 1978 TOTAL	985.20	MEAN 2.70	MAX 28	MIN .12	CFSM 1.75	IN 23.78						
WTR YR 1979 TOTAL	1753.56	MEAN 4.80	MAX 91	MIN .12	CFSM 3.12	IN 42.33						

01097000 ASSABET RIVER AT MAYNARD, MA

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

DRAINAGE AREA.--116 mi² (300 km²).

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

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

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

REMARKS.--Records good. Occasional diurnal fluctuation at low flow by mills upstream; greater regulation prior to 1969. High flow affected by retarding reservoirs since 1962. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years, 183 ft³/s (5.183 m³/s), 21.42 in/yr (544 mm/yr).

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

Maximum discharge since at least 1886, that of Aug. 20, 1955.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,420 ft³/s (96.9 m³/s) Jan. 26, gage height, 8.11 ft (2.472 m); minimum daily, 17 ft³/s (0.48 m³/s) Nov. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	22	62	56	748	254	239	333	284	49	68	231
2	22	22	63	125	588	260	240	268	245	49	56	189
3	20	21	50	250	538	295	278	227	205	43	44	159
4	22	21	51	317	467	309	329	207	193	36	59	143
5	37	21	64	271	390	348	368	191	186	32	66	127
6	109	20	73	195	325	453	378	178	179	28	58	124
7	131	19	64	140	275	943	345	157	162	25	43	127
8	117	20	55	247	237	1090	294	140	136	25	34	135
9	71	20	77	499	212	836	282	142	117	24	27	129
10	46	20	112	516	185	657	368	124	104	23	33	111
11	37	20	119	329	170	671	430	116	91	21	58	96
12	33	19	100	227	155	734	396	110	87	22	113	88
13	30	18	74	181	140	595	333	116	74	23	253	81
14	42	19	63	225	130	523	297	141	69	21	343	78
15	57	18	56	284	120	455	290	177	57	25	303	89
16	55	17	51	269	110	392	292	192	49	44	213	78
17	44	18	51	217	100	334	282	181	44	94	138	69
18	36	28	51	177	95	304	258	157	41	119	98	65
19	34	30	41	150	90	305	236	134	68	189	83	60
20	35	29	45	142	85	281	223	138	68	146	74	56
21	32	26	57	225	85	258	215	156	57	109	67	55
22	30	26	76	800	90	248	201	158	47	78	59	93
23	28	24	76	991	110	243	186	138	41	55	51	146
24	25	30	62	764	167	232	175	184	34	42	46	150
25	24	38	70	1820	471	260	162	343	30	95	44	135
26	23	39	83	3240	571	310	153	535	29	95	52	111
27	29	31	82	2640	370	310	204	560	28	103	61	93
28	30	32	63	1940	291	269	366	447	26	99	88	83
29	28	29	54	1470	---	238	484	331	25	101	106	88
30	26	47	46	1140	---	229	428	268	29	87	154	120
31	25	---	41	915	---	236	---	282	---	76	233	---
TOTAL	1297	744	2032	20762	7315	12872	8732	6831	2805	1978	3125	3309
MEAN	41.8	24.8	65.5	670	261	415	291	220	93.5	63.8	101	110
MAX	131	47	119	3240	748	1090	484	560	284	189	343	231
MIN	19	17	41	56	85	229	153	110	25	21	27	55
CFSM	.36	.21	.57	5.78	2.25	3.58	2.51	1.90	.81	.55	.87	.95
IN.	.42	.24	.65	6.66	2.35	4.13	2.80	2.19	.90	.63	1.00	1.06
CAL YR 1978 TOTAL	64134		MEAN 176	MAX 1330	MIN 15	CFSM 1.52	IN 20.57					
WTR YR 1979 TOTAL	71802		MEAN 197	MAX 3240	MIN 17	CFSM 1.70	IN 23.03					

01097300 NASHOBA BROOK NEAR ACTON, MA

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

DRAINAGE AREA.--12.7 mi² (32.9 km²).

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

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

REMARKS.--Records good except those for periods of backwater from debris, Oct. 6 to Nov. 2, and doubtful gage-height record, Mar. 11 to Apr. 25, which are fair, and those for period of no gage-height record, Feb. 11 to Mar. 10, 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.--16 years, 21.2 ft³/s (0.600 m³/s).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	0345	145 4.11	4.11 1.253	Feb. 25	-	130 3.7	- -
Jan. 22	2315	194 5.49	4.39 1.338	Mar. 7	-	150 4.2	- -
Jan. 26	0200	ice jam	*5.73 1.747	Mar. 11	2315	101 2.86	3.71 1.131
Jan. 26	0430	*679 19.2	5.57 1.698	May 26	0815	94 2.66	3.62 1.103

Minimum discharge, 1.2 ft³/s (0.034 m³/s) Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	4.6	15	13	71	45	48	49	33	3.8	3.1	35
2	1.3	3.9	14	40	66	47	48	40	26	5.6	2.9	17
3	1.3	3.5	10	75	64	50	56	37	21	5.2	2.7	11
4	1.4	3.2	9.9	76	56	58	68	36	19	4.1	3.1	4.2
5	2.6	2.9	17	53	52	75	69	38	18	3.5	4.1	7.2
6	4.9	3.1	18	33	45	100	71	32	20	3.2	3.2	6.6
7	17	3.7	13	26	38	130	64	29	21	2.8	2.8	8.6
8	13	3.4	12	57	35	120	53	27	17	2.6	2.4	7.5
9	6.3	3.5	21	124	36	45	50	24	15	2.2	1.9	6.3
10	4.6	3.5	37	83	36	70	67	21	13	2.1	1.6	5.3
11	4.1	3.2	32	60	33	88	71	18	12	2.0	2.3	5.3
12	3.8	2.6	22	44	30	94	60	15	12	1.7	5.9	4.8
13	3.5	2.8	16	34	28	73	51	16	12	1.6	24	4.5
14	3.9	3.1	15	48	26	64	47	18	11	1.5	34	4.1
15	8.0	2.7	13	74	24	63	49	26	9.0	1.3	17	4.1
16	11	2.5	11	68	22	55	51	30	8.1	1.7	9.6	4.1
17	8.0	2.5	11	52	20	48	48	26	7.3	3.2	7.2	3.9
18	9.4	3.4	13	42	14	44	45	19	6.7	5.9	5.8	3.7
19	6.7	5.8	10	37	18	43	42	17	7.9	14	6.5	3.3
20	6.7	6.3	7.4	34	17	42	36	18	8.8	11	6.9	3.0
21	7.4	5.6	11	66	17	42	33	27	7.3	6.0	6.2	3.0
22	6.2	4.3	19	167	18	42	31	27	6.4	4.4	5.2	5.6
23	5.8	3.7	18	164	20	42	29	21	5.7	3.6	4.5	14
24	5.2	5.4	13	120	40	41	27	22	5.1	3.2	4.3	9.6
25	4.3	16	15	380	110	48	25	49	4.9	3.3	4.2	6.7
26	4.6	15	21	560	100	61	24	90	4.7	4.0	6.6	5.7
27	6.2	8.0	23	219	75	55	31	75	4.3	5.7	7.1	4.9
28	7.6	6.2	17	121	55	45	76	55	3.7	6.5	8.3	4.4
29	6.3	5.8	12	99	---	40	74	45	3.6	5.1	8.2	6.2
30	5.8	8.5	9.4	90	---	41	61	39	3.5	4.1	19	8.8
31	5.4	---	7.8	79	---	45	---	35	---	3.5	45	---
TOTAL	183.7	148.7	483.5	3138	1171	1856	1505	1021	347.0	128.4	265.6	223.4
MEAN	5.93	4.96	15.6	101	41.8	59.9	50.2	32.9	11.6	4.14	8.57	7.45
MAX	17	16	37	560	110	130	76	90	33	14	45	35
MIN	1.3	2.5	7.4	13	17	40	24	15	3.5	1.3	1.6	3.0
CAL YR 1978 TOTAL	10865.01			MEAN 29.8	MAX 400	MIN .09						
WTR YR 1979 TOTAL	10471.30			MEAN 28.7	MAX 560	MIN 1.3						

MERRIMACK RIVER BASIN

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01097500 SUDBURY RIVER AT FRAMINGHAM CENTER, MA

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

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

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

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

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

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

AVERAGE DISCHARGE.--104 years, 115 ft³/s (3.257 m³/s), 20.77 in/yr (528 mm/yr), adjusted to present drainage area.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, AND RAINFALL, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Month	Mean	Per square mile	Runoff in inches	Rainfall in inches
October.....	43.4	0.58	0.66	3.63
November.....	38.4	.51	.57	2.64
December.....	113	1.50	1.73	4.06
Calendar year 1978.....	137	1.82	24.68	41.05
January.....	596	7.93	9.14	12.70
February.....	213	2.83	2.95	2.99
March.....	309	4.11	4.75	2.89
April.....	236	3.14	3.50	3.96
May.....	178	2.37	2.73	4.96
June.....	53.6	.71	.80	1.50
July.....	46.6	.62	.71	5.00
August.....	116.	1.54	1.78	8.07
September.....	70.7	.94	1.05	2.84
Water year 1979.....	168	2.23	30.37	55.24

MERRIMACK RIVER BASIN

01098710 HAGER POND OUTLET AT MARLBOROUGH, MA

LOCATION.--Lat 42°21'06", long 71°29'11", Worcester County, Hydrologic Unit 01070005, on right bank at outlet of Hager Pond, 0.3 mi (0.5 km) southeast of Marlborough sewage treatment plant, and 3 mi (5 km) east of center of Marlborough.

DRAINAGE AREA.--1.79 mi² (4.64 km²).

PERIOD OF RECORD.--Discharge January 1977 to November 1979 (discontinued).

Water-quality records: January 1977 to November 1979 (discontinued). See Analyses of Samples collected at Miscellaneous Sites.

GAGE.--Water-stage recorder. Altitude of gage is 210 ft (64 m) from topographic map.

REMARKS.--Records fair except those for period of no gage-height record, June 16 to Aug. 1, 1977 which are poor. Flow affected by diversion from city of Marlborough sewage treatment plant. See tables below for figures of diversion. Flow can be regulated by Hager Pond.

EXTREMES.--Maximum and minimum discharges for water years 1977-80 are contained in the following table.

Wtr Yr	Date	Maximum Discharge		Gage height		Date	Minimum Discharge	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)		(ft ³ /s)	(m ³ /s)
†1977	Mar. 23, 1977	33	0.93	2.12	0.646	Sept. 5-10, 1977	1.5	0.042
1978	Jan. 26, 1978	a44	1.25	2.29	.698	Sept. 9-11, 1978	2.3	.065
1979	Jan. 25, 1979	133	3.77	2.75	.838	Oct. 10-12, 26, 27, 1978	2.3	.065
†1980	Nov. 3, 1980	27	.76	1.82	.555	Oct. 20, 21, 25-29, 1979	6.6	.19

† For period January to September 1977.

‡ For period October to November 1979.

a From rating curve extended above 19 ft³/s (0.54 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, JANUARY TO SEPTEMBER 1977
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.8	12	14	10	4.1	4.1	2.8	2.3
2	3.6	4.4	11	13	9.8	4.1	3.6	6.1	2.1
3	3.5	4.4	10	13	9.4	4.1	3.2	5.4	2.1
4	3.4	4.4	10	11	9.3	4.1	2.8	4.5	1.9
5	3.3	4.4	14	17	9.3	4.1	3.0	3.5	1.7
6	3.3	4.4	17	17	9.3	4.1	3.0	3.0	1.5
7	3.6	4.4	14	14	9.0	4.5	2.8	2.7	1.5
8	4.4	4.4	13	13	8.8	5.4	2.6	2.8	1.5
9	3.8	4.4	13	12	10	5.4	3.0	2.9	1.5
10	5.1	4.4	15	12	17	5.5	3.0	3.0	1.7
11	7.5	4.4	16	11	18	6.3	3.1	3.0	1.9
12	6.6	4.4	16	11	17	6.9	3.3	2.9	1.9
13	5.8	4.4	17	9.9	15	6.9	3.8	3.0	1.9
14	5.1	5.1	17	9.5	13	6.3	4.3	3.0	1.7
15	5.1	5.1	19	9.2	12	4.1	4.5	2.8	1.7
16	4.8	5.1	17	9.0	11	3.7	4.5	2.8	1.7
17	4.8	5.1	15	8.8	11	3.5	4.0	2.8	1.9
18	4.8	5.1	15	8.4	11	3.5	3.5	2.6	2.1
19	4.4	5.1	15	8.5	9.5	3.8	3.2	2.3	2.6
20	4.4	5.1	14	9.1	8.8	3.8	2.9	2.6	3.8
21	4.1	5.1	14	9.4	8.0	3.7	3.2	2.6	5.8
22	3.8	5.1	16	9.6	7.4	3.5	3.4	2.3	4.1
23	3.6	5.1	31	11	6.8	3.3	3.1	2.3	3.3
24	4.1	4.8	20	18	6.6	3.1	2.9	2.3	3.0
25	4.1	11	17	21	6.6	3.1	2.7	2.6	3.0
26	4.1	12	16	16	6.2	3.5	3.5	2.6	5.1
27	4.1	12	17	13	5.6	4.1	3.3	2.6	10
28	4.1	12	16	12	5.4	4.3	2.8	2.6	7.2
29	4.8	---	16	11	5.2	4.5	2.5	2.6	5.8
30	4.8	---	17	10	4.4	4.5	2.2	2.6	4.4
31	4.8	---	15	---	4.1	---	2.0	2.6	---
TOTAL	137.4	160.4	485	361.4	294.5	131.8	99.8	92.2	90.7
MEAN	4.43	5.73	15.6	12.0	9.50	4.39	3.22	2.97	3.02
MAX	7.5	12	31	21	18	6.9	4.5	6.1	10
MIN	3.3	4.4	10	8.4	4.1	3.1	2.0	2.3	1.5
(†)	4.00	4.32	7.22	5.52	4.75	3.09	2.52	2.64	2.86

† Diversion, in cubic feet per second, from city of Marlborough sewage treatment plant. Records furnished by Marlborough Department of Public Works.

01098710 HAGER POND OUTLET AT MARLBOROUGH, MA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1977 TO SEPTEMBER 1978
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	5.4	13	9.3	11	5.8	17	7.0	5.6	3.8	2.8	2.6
2	6.6	5.4	14	9.3	11	5.8	18	6.9	5.2	3.7	2.9	2.6
3	6.3	5.4	12	9.3	10	5.8	16	6.9	5.4	3.6	3.0	2.6
4	5.4	5.4	11	8.8	9.5	5.8	14	6.9	5.6	3.7	3.0	2.6
5	4.8	5.4	11	8.5	8.8	5.8	14	6.9	5.4	4.1	3.0	2.6
6	4.8	5.4	11	8.2	8.8	5.8	14	7.2	5.0	4.1	3.9	2.6
7	4.4	5.4	10	8.0	10	5.6	14	7.2	4.7	4.1	5.2	2.6
8	4.1	8.0	9.5	7.7	8.8	5.4	13	6.9	5.2	3.8	12	2.6
9	5.1	20	9.3	22	8.2	5.4	12	6.1	5.4	3.6	9.2	2.3
10	7.2	13	9.3	18	8.0	5.4	12	6.6	5.0	3.6	6.5	2.3
11	6.6	12	8.8	12	7.7	5.4	11	6.1	4.5	3.6	5.3	2.4
12	5.8	10	8.5	11	7.5	5.8	11	5.8	4.2	3.8	4.6	2.8
13	4.8	9.3	8.2	9.8	7.5	7.0	11	5.8	4.1	3.8	4.3	2.8
14	4.8	9.0	8.0	11	6.9	7.6	10	5.8	4.1	3.8	4.1	2.8
15	4.8	8.8	11	10	6.9	10	9.2	8.5	4.1	4.2	4.1	2.8
16	6.1	8.5	12	9.3	6.6	11	9.0	11	4.1	5.4	3.9	2.8
17	12	8.2	11	8.8	6.6	10	8.6	12	4.1	5.4	3.8	2.8
18	11	9.5	9.8	9.3	6.3	9.0	8.4	9.5	4.1	5.4	3.7	2.8
19	9.0	9.0	9.5	9.8	6.3	8.5	8.4	9.0	4.3	4.8	3.6	2.8
20	8.8	8.2	9.5	9.3	6.3	9.0	12	8.7	6.1	4.3	3.1	2.8
21	10	8.0	12	9.3	6.3	10	11	8.5	6.1	3.8	3.0	2.8
22	9.0	8.0	20	7.7	6.3	18	10	8.3	5.6	3.5	3.0	2.8
23	7.7	8.0	15	7.5	6.3	19	8.8	7.6	5.1	3.2	3.0	2.6
24	6.9	8.0	13	7.5	6.4	19	8.3	7.4	4.9	3.0	2.9	2.6
25	6.6	7.7	12	8.0	6.1	17	8.2	8.2	4.4	2.8	2.8	2.6
26	6.6	8.8	13	31	5.8	15	8.0	8.2	4.4	2.8	2.8	2.6
27	6.6	9.8	12	30	5.8	19	8.0	8.0	4.4	2.8	2.8	2.6
28	6.3	9.0	11	20	5.8	25	7.6	7.4	4.1	3.0	2.8	2.6
29	6.1	8.5	11	16	---	22	7.5	7.2	3.8	2.9	2.8	2.6
30	5.4	8.2	9.8	14	---	20	7.3	6.4	3.8	2.8	2.6	2.6
31	5.4	---	9.8	12	---	18	---	6.0	---	2.7	2.6	---
TOTAL	203.8	255.3	345.0	372.4	211.5	341.9	327.3	234.0	142.8	115.9	123.1	79.4
MEAN	6.57	8.51	11.1	12.0	7.55	11.0	10.9	7.55	4.76	3.74	3.97	2.65
MAX	12	20	20	31	11	25	18	12	6.1	5.4	12	2.8
MIN	4.1	5.4	8.0	7.5	5.8	5.4	7.3	5.8	3.8	2.7	2.6	2.3
(†)	4.10	4.55	5.40	5.26	3.85	5.52	5.31	3.89	3.22	2.75	2.94	2.82
CAL YR 1977 TOTAL	2657.3											
MEAN 7.28												
MAX 31												
MIN 1.5												
WTR YR 1978 TOTAL	2752.4											
MEAN 7.54												
MAX 31												
MIN 2.3												

† Diversion, in cubic feet per second, from city of Marlborough sewage treatment plant. Records furnished by Marlborough Department of Public Works.

MERRIMACK RIVER BASIN

01098710 HAGER POND OUTLET AT MARLBOROUGH, MA--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.0	4.1	5.1	16	8.6	8.2	9.0	9.9	4.5	4.3	5.6
2	2.6	3.3	3.8	8.0	14	9.0	8.6		9.5	4.5	4.2	5.2
3	2.6	3.3	3.6	13	13	10	11	7.8	8.6	4.5	4.2	4.9
4	2.6	3.3	3.6	11	12	11	11	7.4	8.2	4.2	5.5	4.8
5	2.6	3.3	4.1	8.8	12	13	12	7.0	8.2	4.2	5.5	4.7
6	5.8	3.0	4.1	8.0	11	17	12	6.6	8.2	4.2	5.5	4.7
7	6.3	3.0	3.8	7.5	9.9	20	11	6.6	8.2	4.2	5.5	6.2
8	4.4	3.3	3.8	15	9.5	18	14	6.6	8.2	4.2	5.2	5.3
9	3.3	3.3	5.1	16	9.5	16	14	5.9	7.8	3.6	4.8	5.0
10	2.6	3.3	7.7	11	9.5	14	18	14	7.4	3.1	5.2	4.7
11	2.3	3.3	5.8	10	9.0	17	14	12	7.0	3.1	6.2	4.4
12	3.0	3.8	5.1	9.3	8.2	17	11	7.8	7.0	3.1	13	4.4
13	3.3	5.8	4.1	8.7	7.8	15	10	7.4	6.6	3.3	24	4.4
14	3.6	4.4	3.8	15	7.4	12	9.9	7.4	6.2	3.3	17	4.4
15	4.1	3.6	3.8	14	7.0	9.0	9.9	7.0	5.9	3.5	12	4.8
16	3.8	3.6	3.6	11	7.0	9.0	9.9	7.0	5.5	6.0	9.5	4.3
17	3.6	3.3	3.8	10	6.6	9.0	9.9	6.8	5.2	7.5	7.8	4.2
18	3.0	3.8	3.8	9.9	6.2	9.9	9.5	6.6	4.8	6.3	7.4	4.2
19	2.8	3.8	3.8	9.2	5.4	9.9	9.0	6.6	4.8	5.2	7.0	4.2
20	2.8	3.6	3.8	8.8	5.2	9.9	8.6	7.0	4.8	4.7	7.0	3.9
21	2.6	3.6	4.4	18	5.2	9.9	8.2	7.8	4.5	4.5	6.6	3.6
22	2.6	3.3	5.1	26	5.2	9.9	8.2	7.8	4.5	4.3	5.9	5.9
23	2.8	3.3	5.1	16	5.2	9.9	7.4	7.8	4.5	4.1	5.2	7.0
24	2.8	3.3	5.1	13	11	8.6	7.4	9.0	4.2	3.8	5.0	5.5
25	2.6	3.3	6.1	79	19	9.5	7.4	21	4.2	4.0	4.8	4.8
26	2.3	3.3	6.6	45	14	11	7.4	21	4.5	4.2	5.6	4.5
27	3.0	3.3	6.1	28	10	10	15	16	4.5	6.0	6.5	4.5
28	3.6	3.0	4.4	23	8.6	9.5	17	13	4.2	5.4	7.5	4.2
29	3.3	3.0	4.4	20	---	7.4	13	12	4.5	5.0	7.4	5.9
30	3.3	3.8	4.1	18	---	6.6	10	12	4.5	4.7	7.0	7.4
31	3.0	---	4.1	17	---	8.2	---	11	---	4.5	6.4	---
TOTAL	99.6	104.3	140.6	512.3	264.9	354.8	322.5	293.1	186.1	137.7	228.7	147.6
MEAN	3.21	3.48	4.54	16.5	9.46	11.4	10.8	9.45	6.20	4.44	7.38	4.92
MAX	6.3	5.8	7.7	79	19	20	18	21	9.9	7.5	24	7.4
MIN	2.3	3.0	3.6	5.1	5.2	6.6	7.4	5.9	4.2	3.1	4.2	3.6
(†)	3.70	3.59	4.04	6.48	4.60	5.52	5.14	4.56	3.74	3.12	3.77	3.43

CAL YR 1978 TOTAL 2292.8 MEAN 6.28 MAX 31 MIN 2.3
 WTR YR 1979 TOTAL 2792.2 MEAN 7.65 MAX 79 MIN 2.3

† Diversion, in cubic feet per second, from city of Marlborough sewage treatment plant. Records furnished by Marlborough Department of Public Works.

DISCHARGE IN CUBIC FEET PER SECOND, OCTOBER TO NOVEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DAY	OCT	NOV
1	7.4	7.0	21	6.6	---
2	7.4	7.0	22	7.4	---
3	8.2	16	23	7.4	---
4	11	18	24	7.4	---
5	10	13	25	7.0	---
6	9.0	9.9	26	6.6	---
7	8.6	---	27	6.6	---
8	8.6	---	28	6.6	---
9	8.2	---	29	6.6	---
10	7.8	---	30	7.0	---
			31	7.0	---
11	8.6	---	TOTAL	248.7	---
12	9.0	---	MEAN	8.02	---
13	11	---	MAX	11	---
14	10	---	MIN	6.6	---
15	9.5	---	(†)	4.32	4.89
16	8.6	---			
17	7.8	---			
18	7.4	---			
19	7.4	---			
20	7.0	---			

† Diversion, in cubic feet per second, from city of Marlborough sewage treatment plant. Records furnished by Marlborough Department of Public Works.

01099500 CONCORD RIVER BELOW RIVER MEADOW BROOK AT LOWELL, MA

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

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

PERIOD OF RECORD.--Discharge: October 1936 to current year. October, November 1936 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1953, 1967-74.

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

REMARKS.--Records good. Daily discharge includes water released from 92.6 mi² (239.8 km²) in basins of Sudbury River and Lake Cochituate (see table below for figures of diversion). Prior to December 1961, water diverted upstream for use of city of Lowell. Low flow regulated by mills upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 625 ft³/s (17.70 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,410 ft³/s (153 m³/s) Jan. 28, gage height, 9.60 ft (2.926 m); minimum daily, 74 ft³/s (2.10 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	181	317	432	4270	1380	1060	1270	1220	191	320	659
2	77	177	332	576	3810	1400	1050	1240	1170	218	289	679
3	85	165	334	807	3610	1440	1100	1200	1100	217	254	682
4	93	153	354	886	3260	1490	1140	1190	1040	204	248	654
5	116	147	380	912	2890	1600	1210	1120	976	188	284	616
6	204	159	396	902	2450	1740	1250	1070	943	176	300	608
7	268	164	391	856	2400	1960	1250	1030	892	163	290	599
8	288	168	384	1100	2070	2120	1240	991	848	154	266	577
9	284	173	448	1240	1800	2240	1230	957	802	144	225	565
10	251	169	544	1310	1650	2240	1290	914	758	137	201	556
11	206	164	584	1360	1550	2270	1320	875	709	129	211	527
12	180	153	580	1270	1450	2230	1340	842	675	122	319	500
13	174	158	551	1180	1300	2180	1340	840	636	118	565	477
14	180	168	517	1340	1150	2110	1320	844	595	114	708	464
15	208	158	480	1400	1050	1970	1300	881	563	136	797	443
16	230	154	446	1400	950	1840	1280	893	516	163	841	423
17	221	156	423	1320	890	1720	1260	880	464	277	837	404
18	213	183	380	1220	810	1590	1230	849	460	381	797	384
19	199	198	300	1150	710	1490	1200	811	601	509	750	351
20	189	207	337	1080	640	1400	1160	834	548	536	692	328
21	189	205	387	1310	587	1330	1130	831	484	525	640	310
22	186	197	427	1760	600	1270	1090	793	418	487	589	366
23	178	188	438	1900	643	1230	1040	758	355	425	540	412
24	166	231	426	2140	848	1180	997	781	300	358	497	442
25	167	249	466	3420	1250	1170	956	953	259	296	463	452
26	166	248	531	4420	1310	1170	923	1150	238	278	436	435
27	172	240	537	5030	1360	1160	980	1280	220	318	421	388
28	179	232	472	5340	1360	1140	1130	1370	198	353	450	337
29	174	231	460	5250	---	1120	1180	1380	184	379	478	325
30	180	275	432	4940	---	1100	1250	1330	176	374	571	338
31	187	---	404	4630	---	1080	---	1280	---	354	631	---
TOTAL	5684	5651	13458	61881	46668	49360	35246	31437	18348	8424	14910	14301
MEAN	183	188	434	1996	1667	1592	1175	1014	612	272	481	477
MAX	288	275	584	5340	4270	2270	1340	1380	1220	536	841	682
MIN	74	147	300	432	587	1080	923	758	176	114	201	310
(+)	-41.5	-46.5	-129	-636	-330	-307	-306	-262	-127	-46.1	-126	-141

CAL YR 1978 TOTAL 268098 MEAN 735 MAX 3230 MIN 73
WTR YR 1979 TOTAL 305368 MEAN 837 MAX 5340 MIN 74

† Diversion in cubic feet per second, into basin while diverting flow from 92.6 mi² in basins of Sudbury River and Lake Cochituate for use of Boston metropolitan district; records furnished by Water Division of Metropolitan District Commission.

MERRIMACK RIVER BASIN

01100000 MERRIMACK RIVER BELOW CONCORD RIVER, AT LOWELL, MA

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

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

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

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

Water temperatures: January 1966 to September 1967.

Sediment records: April 1967 to September 1972.

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

REMARKS.--Records excellent. Daily discharge includes water released from 210 mi² (544 km²) in basins of Sudbury and South Branch Nashua Rivers and Lake Cochituate (see table below for figures of diversion). Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnepesaukee, Winnisquam, and other lakes and reservoirs upstream. An observation of water temperature was made Mar. 2.

AVERAGE DISCHARGE.--56 years, 7,483 ft³/s (211.9 m³/s).

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

Maximum discharge since 1735, that of Mar. 20, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 43,300 ft³/s (1,230 m³/s) Mar. 9, gage height, 51.22 ft (15.612 m); minimum daily, 758 ft³/s (21.5 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	821	1990	2070	1640	12700	9110	20900	26300	23100	1120	2520	3680
2	1370	2040	1900	2710	11300	8790	21300	21000	20000	1460	2520	3580
3	1300	1990	947	4210	10000	8840	23300	17700	16400	2610	2230	3420
4	1290	1710	2550	10200	9410	8560	24900	15400	14000	3380	2440	3620
5	1300	1630	2530	12900	8460	9270	23700	15900	12100	3400	2220	3590
6	1470	2080	2780	9840	7560	14800	23300	16300	11000	2760	2250	4240
7	1310	2050	2830	7730	7270	29900	22000	13900	10200	2370	2040	4360
8	1370	1870	2620	9750	6840	39900	19500	12200	9770	1950	1700	4340
9	1950	1870	2460	11800	6480	41800	17800	10500	8930	1830	1730	5080
10	1850	1940	2700	11900	6490	37200	16900	9470	7920	1610	1540	4450
11	1770	1540	4120	10300	6090	34500	16600	9400	7600	1550	1170	4930
12	1740	1570	4230	8280	5320	32300	16300	9480	7400	1540	1220	3890
13	1680	1970	3810	7030	4960	29000	15600	8630	6280	1560	3190	3190
14	1360	1840	3540	6890	4720	26500	15700	7850	5190	1290	4510	3100
15	1690	1930	3240	6750	4640	25300	16200	7750	5070	758	4440	3100
16	1960	1820	2600	6570	4240	24400	16500	8240	4370	1040	4080	2990
17	2020	1720	2170	6030	4760	22500	16000	7560	3950	1600	3890	3020
18	1980	1530	2900	5600	4430	20000	15500	6880	3210	2080	3630	3120
19	2010	1420	2750	5510	3360	18600	14500	6380	3050	3400	2670	3300
20	2140	1860	2600	4870	3320	18000	13900	6080	2770	4010	3230	2920
21	1720	2140	2500	5850	3260	17700	13300	6500	2650	2960	2790	2690
22	1470	2430	2590	9090	3340	19100	12700	6300	2430	2880	2230	1930
23	2010	2410	2200	9860	3570	22500	12800	6120	2320	2910	2270	1420
24	1970	2340	2070	9540	4450	26400	12500	7130	1690	2450	2280	3110
25	1870	1850	2590	15100	8920	31300	12900	13400	2490	1840	2680	3330
26	1730	1880	2770	18700	9950	38400	13100	29100	2470	1650	2580	3240
27	1950	2360	2610	19600	9340	41100	14300	34100	1840	1970	2120	3030
28	1490	2250	2350	19200	8700	37500	23100	30200	1540	2470	2350	2860
29	1600	2050	2280	17500	---	31900	33000	26300	1630	2620	2830	2750
30	2220	2000	1840	16100	---	26700	32300	25400	1330	2730	3140	2960
31	2120	---	1780	14400	---	23300	---	25800	---	2710	3260	---
TOTAL	52531	58180	80927	307450	184380	775170	550400	447670	202700	68508	81800	101240
MEAN	1695	1939	2611	9918	6585	25010	18350	14440	6757	2210	2639	3375
MAX	2220	2430	4230	19600	12700	41800	33000	34100	23100	4010	4510	5080
MIN	821	1420	947	1640	3260	8560	12500	6080	1330	758	1170	1420
(†)	49.4	53.8	136	643	338	318	365	341	135	53.7	133	148

CAL YR 1978 TOTAL 2843646 MEAN 7791 MAX 46900 MIN 791
WTR YR 1979 TOTAL 2910956 MEAN 7975 MAX 41800 MIN 758

† Diversion, in cubic feet per second, into basin while diverting flow from 210 mi² in basins of Sudbury and South Branch Nashua Rivers and Lake Cochituate for use of Boston metropolitan district; records furnished by Water Division of Metropolitan District Commission.

01100600 SHAWSEEN RIVER NEAR WILMINGTON, MA

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

DRAINAGE AREA.--36.5 mi² (94.5 km²), revised.

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

Water-quality records: Water year 1973.

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

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

REMARKS.--Records good. Diversion upstream at times each year since 1973 for municipal supply of Burlington.

Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1965-79), 59.0 ft³/s (1.671 m³/s).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	1830	417 11.8	5.98 1.823	Feb. 25	1515	379 10.7	5.50 1.676
Jan. 22	1630	801 22.7	7.55 2.301	June 19	2315	357 10.1	5.37 1.637
Jan. 26	0600	*1660 47.0	a9.85 3.002				

a Mean of recorded surge. Maximum recorded surge, 10.00 ft (3.048 m). Stage in river, about 10.4 ft (3.17 m), based on outside gage readings at slightly lower stages.

Minimum discharge, 2.5 ft³/s (0.071 m³/s) July 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	9.1	40	31	134	92	72	95	58	22	16	57
2	11	8.6	41	56	119	104	72	74	45	26	8.3	52
3	12	8.3	31	111	97	153	73	61	43	20	8.0	43
4	9.8	8.3	27	205	85	173	108	57	36	16	9.3	36
5	19	7.7	40	170	75	190	121	58	28	11	8.3	33
6	30	7.7	45	105	68	223	142	55	32	9.3	6.6	32
7	38	7.7	43	56	52	264	120	47	32	7.2	4.8	37
8	30	7.9	35	98	40	273	96	41	26	6.0	4.1	40
9	16	8.5	41	364	36	200	83	37	21	4.4	3.5	39
10	11	8.5	58	278	33	151	119	34	20	2.9	3.2	33
11	9.9	7.6	73	172	28	172	155	31	17	2.6	8.0	27
12	9.3	7.7	80	110	22	217	114	29	21	3.4	35	21
13	9.9	7.7	51	59	16	158	89	34	28	3.4	107	18
14	14	7.7	37	120	13	123	76	42	26	3.1	205	16
15	31	8.2	30	264	10	109	73	42	19	3.8	171	16
16	32	7.4	27	208	9.6	99	73	47	15	26	103	17
17	18	7.5	27	132	9.3	87	72	45	12	55	64	16
18	14	13	30	86	6.8	76	68	32	20	69	46	14
19	12	20	30	63	6.4	71	63	26	238	85	39	13
20	17	14	23	47	6.6	66	57	39	322	105	36	12
21	17	12	30	81	9.3	64	51	72	188	81	25	11
22	13	12	45	664	21	63	48	97	91	52	20	24
23	12	14	49	608	26	62	45	78	58	35	15	41
24	11	20	39	364	59	60	39	67	45	27	11	67
25	10	40	39	896	318	64	30	97	36	21	9.3	65
26	10	39	63	1580	249	78	28	198	30	18	12	50
27	15	29	78	931	135	87	40	192	26	23	11	38
28	20	18	73	448	101	77	150	129	23	32	17	31
29	14	16	49	284	---	65	199	92	21	33	33	31
30	11	23	33	204	---	61	133	75	20	28	51	37
31	9.9	---	21	162	---	66	---	67	---	23	63	---
TOTAL	493.2	406.1	1328	8957	1785.0	3748	2609	2090	1597	854.1	1153.4	967
MEAN	15.9	13.5	42.8	289	63.8	121	87.0	67.4	53.2	27.6	37.2	32.2
MAX	38	40	80	1580	318	273	199	198	322	105	205	67
MIN	6.4	7.4	21	31	6.4	60	28	26	12	2.6	3.2	11
(†)	0	0	0	10.2	9.76	0.73	0.87	2.87	7.20	7.85	7.21	0
CAL YR 1978 TOTAL	22986.7		MEAN 63.0	MAX 800	MIN 1.6							
WTR YR 1979 TOTAL	25987.8		MEAN 71.2	MAX 1580	MIN 2.6							

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

MERRIMACK RIVER BASIN

01100750 MERRIMACK RIVER AT WEST NEWBURY, MA

LOCATION.--Lat 42°48'38", long 71°00'02", Essex County, Hydrologic Unit 01070002, at Bridge Street Bridge, 0.9 mi (1.4 km) northwest of West Newbury.

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1968 to September 1976 (no winter records in water year 1973, 1976).

pH: October 1968 to July 1976 (no winter records in water year 1973, 1976).

WATER TEMPERATURES: October 1968 to September 1976 (no winter records in water year 1973, 1976).

DISSOLVED OXYGEN: October 1968 to September 1976 (no winter records in water years 1973, 1976).

INSTRUMENTATION.--Water-quality monitor October 1968 to September 1976.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 1,000 micromhos Aug. 17, 18, 20, 1970, Sept. 7, Oct. 4, 6, 7, 1971, Aug. 19, 1973; minimum, 39 micromhos May 11, 1976, but may have been lower during period of missing record.

pH: Maximum recorded, 9.6 units May 22, 1976; minimum, 4.9 units Oct. 30, 1973.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 2, 1975; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum, 18.2 mg/L Apr. 9, 1971; minimum, 0 mg/L Aug. 30, 31, 1974.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	TURBIDITY (JTU)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DEMAND, CHEMICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MATERIAL (MG/KG)
OCT 11...	0830	188	6.5	13.5	2	--	10.4	99	35000
NOV 29...	0930	163	6.3	2.0	3	--	12.4	90	--
MAR 08...	1500	77	5.4	1.5	15	--	14.0	100	25
APR 25...	1130	83	6.0	13.5	--	2.0	10.3	98	12
MAY 16...	1600	103	6.2	19.0	--	2.0	8.8	94	35
JUN 19...	1000	117	6.3	23.0	--	15	9.8	113	23
JUL 24...	1330	150	7.3	27.0	--	3.0	9.8	121	42
AUG 21...	0700	147	6.6	19.5	--	2.0	7.3	79	19
SEP 19...	0900	132	6.8	20.5	--	2.0	8.8	97	25

DATE	COLIFORM, TOTAL, IMMEDIATE (COLS. PER 100 ML)	COLIFORM, FECALE, 0.45 UM-MF (COLS./100 ML)	STREPTOCOCCI, FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM, TOTAL RECOVERABLE (MG/L AS CA)	MAGNESIUM, TOTAL RECOVERABLE (MG/L AS MG)	BICARBONATE (MG/L AS HCO3)	CARBONATE (MG/L AS CO3)	ALKALINITY (MG/L AS CaCO3)	CARBON DIOXIDE, DIS-SOLVED (MG/L AS CO2)
OCT 11...	56000	570	1300	8.9	1.7	20	0	16	10
NOV 29...	15000	280	88	--	--	--	--	--	--
MAR 08...	30000	2100	930	--	--	--	--	--	--
APR 25...	1500	480	95	4.0	.9	12	0	10	19
MAY 16...	530	480	K11	--	--	--	--	--	--
JUN 19...	6700	3500	--	6.4	1.4	18	0	15	14
JUL 24...	17000	160	13	--	--	--	--	--	--
AUG 21...	6300	530	48	6.5	1.4	17	0	14	6.8
SEP 19...	7000	500	41	--	--	--	--	--	--

K, NON-IDEAL COLONY COUNT.

01100750 MERRIMACK RIVER AT WEST NEWBURY, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)	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)
OCT 11...	19	31	7	112	113	18600	.79	.05	.84
NOV 29...	--	--	7	--	99	--	.57	.02	.59
MAR 08...	--	--	68	--	96	--	.16	.00	.16
APR 25...	--	--	4	--	66	8580	.17	.01	.18
MAY 16...	--	--	14	--	75	--	.30	.02	.32
JUN 19...	--	--	33	--	103	21000	.39	.02	.41
JUL 24...	--	--	6	--	106	--	.38	.02	.40
AUG 21...	--	--	6	--	109	15500	.61	.02	.63
SEP 19...	--	--	7	--	95	--	.50	.03	.53

DATE	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)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 11...	.36	.94	1.3	2.1	.26	3	--	--	--
NOV 29...	.55	.55	1.1	1.7	.21	--	0	7.37	.330
MAR 08...	.15	.79	.94	1.1	.25	--	0	7.79	.000
APR 25...	.15	.09	.24	.42	.08	0	0	.370	.000
MAY 16...	.23	.36	.59	.91	.08	--	18	3.87	.000
JUN 19...	.19	.70	.89	1.3	.28	0	2	32.6	6.54
JUL 24...	.03	.81	.84	1.2	.28	--	1	40.1	6.47
AUG 21...	.19	.74	.93	1.6	.22	0	0	13.8	2.43
SEP 19...	.19	.91	1.1	1.6	.26	--	1	23.4	3.04

MERRIMACK RIVER BASIN

01100750 MERRIMACK RIVER AT WEST NEWBURY, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	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)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 11...	1	1	10	1	18	200	13	70	<.5	0	20
APR 25...	1	0	20	--	6	270	6	30	<.5	0	70

DATE	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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 11...	<1.1	<.4	3.0	<.4	2.8	<.4	.0	.00	.00	.0	.00
APR 25...	<.7	--	1.8	--	1.6	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 11...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 25...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

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

01101000 PARKER RIVER AT BYFIELD, MA

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

DRAINAGE AREA.--21.6 mi² (55.9 km²).

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

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

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

AVERAGE DISCHARGE.--34 years, 36.4 ft³/s (1.031 m³/s), 22.88 in/yr (581 mm/yr).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 361 ft³/s (10.2 m³/s) Jan. 26, gage height, 4.84 ft (1.475 m); minimum daily, 0.56 ft³/s (0.016 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	5.1	9.4	21	197	90	50	54	56	9.0	2.1	6.9
2	.94	5.0	9.7	29	172	92	52	51	51	8.6	4.2	6.6
3	1.1	4.8	9.4	46	140	96	57	48	46	7.7	4.0	6.5
4	1.1	4.6	10	62	115	106	60	48	42	6.7	3.9	6.0
5	1.3	4.5	11	49	99	124	69	46	39	6.0	3.6	5.5
6	2.7	4.5	12	41	84	146	73	44	37	5.5	3.3	6.9
7	2.7	4.5	12	38	72	171	73	42	35	4.9	2.8	7.2
8	2.3	4.7	12	56	66	185	69	39	32	4.2	2.9	7.7
9	2.0	4.5	16	67	61	180	69	38	30	3.6	2.6	7.6
10	1.9	4.3	19	76	60	171	76	35	28	3.0	3.4	7.1
11	2.1	4.2	19	68	56	172	78	33	24	2.8	4.3	6.5
12	2.3	4.2	19	59	54	162	76	31	23	2.7	9.1	5.6
13	2.5	4.2	18	52	48	146	71	30	22	2.6	16	5.2
14	4.1	4.4	17	58	40	136	68	31	20	2.4	22	4.8
15	6.5	4.3	16	60	37	125	66	34	19	2.1	27	4.5
16	8.4	4.2	15	57	32	111	64	35	20	1.9	26	4.1
17	11	4.2	15	53	29	100	62	33	19	2.0	23	3.8
18	13	5.0	15	47	28	91	59	32	21	3.1	21	3.5
19	5.3	4.9	13	46	24	84	56	30	25	4.7	20	3.3
20	6.4	5.1	11	45	23	79	53	30	28	5.4	18	2.9
21	6.9	5.6	13	63	23	75	50	30	29	5.1	17	2.8
22	6.6	5.5	13	98	27	72	47	29	27	4.4	15	4.1
23	6.1	5.2	12	131	28	68	45	27	24	3.8	14	4.9
24	5.9	7.2	11	136	44	65	41	30	21	3.2	12	6.0
25	5.5	7.8	21	207	105	64	38	40	19	2.9	11	6.2
26	5.7	8.0	25	334	117	63	36	55	16	2.8	9.9	5.9
27	6.8	7.9	29	347	102	60	39	67	14	2.9	8.7	5.5
28	6.2	7.7	29	324	93	57	46	71	12	2.9	7.7	5.1
29	6.1	7.4	27	297	---	53	52	69	11	2.8	7.2	7.3
30	5.7	9.1	22	266	---	52	55	66	9.3	2.4	7.2	8.3
31	5.6	---	20	218	---	51	---	62	---	2.3	7.2	---
TOTAL	145.30	162.6	500.5	3451	1976	3247	1750	1310	799.3	124.4	336.1	168.3
MEAN	4.69	5.42	16.1	111	70.6	105	58.3	42.3	26.6	4.01	10.8	5.61
MAX	13	9.1	29	347	197	185	78	71	56	9.0	27	8.3
MIN	.56	4.2	9.4	21	23	51	36	27	9.3	1.9	2.1	2.8
CFSM	.22	.25	.75	5.14	3.27	4.86	2.70	1.96	1.23	.19	.50	.26
IN.	.25	.28	.86	5.94	3.40	5.59	3.01	2.26	1.38	.21	.58	.29
CAL YR 1978 TOTAL	13920.49		MEAN 38.1	MAX 253	MIN .34	CFSM 1.76	IN 23.97					
WTR YR 1979 TOTAL	13970.50		MEAN 38.3	MAX 347	MIN .56	CFSM 1.77	IN 24.06					

01101500 IPSWICH RIVER AT SOUTH MIDDLETON, MA

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

DRAINAGE AREA.--43.4 mi² (112.4 km²).

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

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

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

REMARKS.--Records 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.--41 years, 61.9 ft³/s (1.753 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 839 ft³/s (23.8 m³/s) Jan. 26, gage height, 7.12 ft (2.170 m); minimum, 0.27 ft³/s (0.008 m³/s) Nov. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	2.5	2.0	21	263	114	93	99	85	15	4.2	13
2	.63	3.6	10	62	219	121	94	91	78	15	3.9	12
3	.63	2.3	2.3	92	185	131	107	82	71	13	3.6	12
4	1.0	1.4	12	81	157	145	112	81	64	12	3.0	12
5	1.0	2.5	1.8	68	138	179	125	75	59	11	2.7	11
6	4.8	1.8	.75	61	122	217	128	67	55	9.7	2.7	14
7	6.6	.88	.52	58	108	255	122	60	50	8.3	2.3	14
8	4.5	1.2	3.6	107	96	263	115	53	45	7.4	2.3	11
9	3.3	.34	20	142	90	234	119	55	41	6.2	2.0	8.7
10	2.7	.63	19	122	86	211	135	60	39	5.5	2.3	7.4
11	2.5	.88	14	108	79	227	126	54	36	4.8	1.8	6.6
12	2.5	.34	12	92	71	205	118	47	36	4.2	10	6.2
13	2.0	.88	9.2	82	65	175	112	44	33	3.9	30	5.5
14	5.1	2.0	7.8	107	56	166	108	50	30	3.6	24	5.1
15	7.0	1.4	5.8	105	50	155	106	75	27	3.3	21	5.5
16	5.8	.43	4.2	95	45	134	101	65	23	3.3	22	4.8
17	5.1	.63	4.2	88	40	120	99	55	21	3.9	23	4.5
18	4.8	.34	4.5	84	36	110	95	50	21	5.5	22	3.9
19	4.5	.34	1.8	81	31	103	90	47	37	10	20	3.6
20	5.1	.88	.63	81	30	98	86	45	38	10	18	3.3
21	7.0	2.5	2.5	142	28	98	82	47	42	8.7	15	3.0
22	5.1	2.0	6.2	261	27	103	78	43	46	9.2	13	11
23	4.5	.34	5.1	208	30	100	75	40	44	8.7	11	15
24	3.6	2.0	4.2	229	100	97	71	70	37	7.4	10	11
25	4.2	.43	30	568	230	103	67	115	30	6.6	9.2	9.7
26	2.0	5.1	43	824	160	107	64	115	19	6.2	8.7	9.7
27	3.3	5.8	37	750	130	102	78	110	9.7	7.4	8.3	9.2
28	4.8	.34	30	662	115	97	109	105	17	7.0	7.8	8.7
29	5.1	2.5	25	549	---	93	100	102	15	5.8	8.3	12
30	4.5	6.2	20	429	---	94	102	97	13	4.8	13	14
31	3.0	---	17	313	---	94	---	93	---	4.8	17	---
TOTAL	117.41	52.48	356.10	6672	2787	4451	3017	2192	1161.7	232.2	342.1	267.4
MEAN	3.79	1.75	11.5	215	99.5	144	101	70.7	38.7	7.49	11.0	8.91
MAX	7.0	6.2	43	824	263	263	135	115	85	15	30	15
MIN	.63	.34	.52	21	27	93	64	40	9.7	3.3	1.8	3.0
CAL YR 1978	TOTAL	22523.06	MEAN 61.7	MAX 437	MIN .34							
WTR YR 1979	TOTAL	21648.39	MEAN 59.3	MAX 424	MIN .34							

01102000 IPSWICH RIVER NEAR IPSWICH, MA

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

DRAINAGE AREA.--124 mi² (321 km²).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records excellent. 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.--49 years, 188 ft³/s (5.324 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,110 ft³/s (59.8 m³/s) Jan. 27, gage height, 7.47 ft (2.277 m); minimum, 1.1 ft³/s (0.031 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	10	24	41	1100	366	246	318	245	26	9.1	30
2	1.3	10	26	48	920	351	247	302	225	24	8.3	29
3	1.3	8.9	24	88	800	363	264	281	207	25	7.7	26
4	1.3	8.6	24	107	650	394	280	272	190	22	7.3	22
5	2.8	8.6	31	105	500	449	318	256	175	19	7.1	20
6	7.9	8.6	35	110	420	544	355	240	163	17	6.6	22
7	11	8.1	32	107	350	698	372	223	151	15	5.5	34
8	12	8.7	28	138	296	845	371	208	140	14	5.0	45
9	11	8.5	35	162	265	883	364	193	129	13	4.2	43
10	10	7.7	52	178	240	832	382	179	121	11	4.6	35
11	8.6	7.8	59	196	215	808	392	166	113	9.4	6.9	26
12	7.9	7.1	46	205	180	788	395	154	106	8.6	15	21
13	7.3	6.8	28	196	160	745	380	145	100	8.2	33	19
14	9.3	6.8	26	218	140	682	354	137	93	8.7	46	17
15	13	6.5	28	227	123	615	333	136	86	8.2	51	15
16	14	6.2	28	225	110	556	312	135	76	7.9	51	14
17	14	6.4	26	214	97	505	301	134	63	8.1	45	13
18	13	8.3	25	195	85	452	289	133	53	9.5	39	12
19	13	7.9	21	172	73	409	275	131	49	13	37	11
20	14	7.6	22	154	66	373	262	126	50	15	35	9.7
21	14	7.9	25	201	61	347	248	121	56	17	34	9.2
22	13	7.8	30	416	61	326	234	117	43	16	30	19
23	14	7.6	30	595	72	305	221	115	49	14	26	28
24	14	13	27	762	107	290	210	121	52	13	22	38
25	13	20	48	1050	212	284	199	138	52	12	20	40
26	14	22	71	1630	323	278	188	176	47	11	18	35
27	13	17	77	2030	404	274	199	225	41	12	16	28
28	12	18	64	2060	398	270	232	267	31	12	15	24
29	11	16	51	1850	---	265	270	281	23	12	15	25
30	10	20	33	1590	---	259	308	279	25	12	20	28
31	11	---	27	1260	---	251	---	264	---	11	27	---
TOTAL	312.9	308.4	1107	16530	8428	14807	8801	5973	2954	424.6	667.3	737.9
MEAN	10.1	10.3	35.7	533	301	478	293	193	98.5	13.7	21.5	24.6
MAX	14	22	77	2060	1100	883	395	318	245	26	51	45
MIN	1.2	6.2	21	41	61	251	188	115	23	7.9	4.2	9.2
CAL YR 1978	TOTAL	65085.63	MEAN 178	MAX 1400	MIN .59							
WTR YR 1979	TOTAL	61051.10	MEAN 167	MAX 2060	MIN 1.2							

IPSWICH RIVER BASIN

01102000 IPSWICH RIVER NEAR IPSWICH, MA--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1976 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	CALCIUM TOTAL RECov- ERABLE (MG/L AS CA)
MAY 16...	1745	134	166	6.0	18.0	150	2.0	7.1	74	55	130000	11

DATE	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINIT (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, SUSP. TOTAL, RESIDUE AT 110 DEG. C (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLAT- ILE IN BOTTOM MA- TERIAL (MG/KG)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
MAY 16...	2.9	32	0	26	51	8.4	31	14	141	175000	.18	.10

DATE	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- ERABLE FM BOT- TOM MA- TERIAL (UG/G)	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)
MAY 16...	.76	.86	1.0	.04	1	0	20	20	1	1000	3	200

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)	OIL AND GREASE, TOTAL RECOV- ERABLE GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)
MAY 16...	<.5	0	10	0	2	.000	.000	1.0	.00	.00	.0

DATE	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
MAY 16...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0

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

01102500 ABERJONA RIVER AT WINCHESTER, MA

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

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

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

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

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

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

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

AVERAGE DISCHARGE.--40 years, 27.7 ft³/s (0.784 m³/s).

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

Maximum discharge since 1886, that of Jan. 25, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,330 ft³/s (37.7 m³/s) Jan. 25, gage height, 15.46 ft (4.712 m), from rating curve extended above 400 ft³/s (11 m³/s) on basis of slope-area measurement of peak flow; minimum, 0.62 ft³/s (0.018 m³/s) Oct. 1, Nov. 7, 14, 15, 16, 23.

REVISIONS.--The maximum discharge for water year 1955 has been revised to 686 ft³/s (19.4 m³/s) Aug. 19, 1955, gage height, 13.64 ft (4.157 m); revised daily discharges, in cubic feet per second, for the high-water period in August 1955, are given below. These figures supersede those published in WSP 1381, 1420, 1671, and 1721.

Aug. 19 418

Aug. 20 537

Month	Total	Mean	Max	Min
August 1955	2310.55	74.5	537	0.75
Wtr Yr 1955	13172.50	36.1	537	0.75
Cal Yr 1955	15614.20	42.8	537	0.75

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.1	14	12	75	58	34	31	29	21	4.9	12
2	3.6	1.2	8.2	28	55	69	39	28	21	16	4.7	8.0
3	1.1	.95	5.5	77	56	75	58	26	19	10	4.5	14
4	1.4	.74	15	40	48	70	40	36	19	7.3	4.5	8.8
5	8.0	.69	9.0	22	42	80	58	30	20	6.2	3.8	7.6
6	22	.69	8.8	17	36	86	49	28	26	5.5	3.7	80
7	9.0	.67	6.4	18	33	138	42	20	19	5.1	3.5	16
8	3.8	.86	6.7	188	32	123	36	19	16	4.9	4.3	10
9	2.1	.82	36	181	30	84	53	18	15	4.6	3.3	7.6
10	1.9	.76	32	87	26	75	71	18	14	4.4	17	6.2
11	1.7	.76	18	57	25	110	50	16	13	4.4	12	5.5
12	1.4	.87	11	46	24	90	38	15	24	4.8	81	4.5
13	1.3	1.0	8.8	43	23	67	35	21	18	4.9	89	3.7
14	19	.71	7.7	186	22	62	37	26	13	4.3	37	4.7
15	14	.72	6.4	122	21	58	40	37	11	9.7	18	7.9
16	5.6	.66	5.8	69	20	47	37	28	10	6.9	12	4.7
17	3.3	.86	8.1	48	19	43	36	21	9.7	7.3	8.6	4.2
18	2.3	3.3	6.7	39	18	40	33	18	23	26	8.8	4.1
19	2.3	1.2	5.3	32	17	39	30	16	71	31	13	3.9
20	7.2	.76	4.5	30	17	37	21	43	35	16	9.6	3.5
21	3.0	.77	29	302	17	35	19	34	22	8.5	7.6	4.2
22	2.2	.80	17	603	17	34	18	26	16	6.1	6.8	63
23	1.8	.68	11	233	17	32	18	23	13	5.5	6.1	30
24	1.2	23	7.4	116	97	31	16	71	12	5.1	5.7	14
25	1.0	11	76	830	156	51	15	126	13	5.2	6.2	8.9
26	1.5	6.2	53	951	78	44	15	86	4.3	8.8	6.3	7.0
27	8.4	4.4	25	362	58	36	71	39	4.6	32	12	5.8
28	3.2	4.7	15	180	54	31	117	32	6.6	13	29	5.2
29	1.7	3.7	11	130	---	28	44	30	6.6	7.8	19	26
30	1.1	22	8.8	101	---	37	35	37	6.4	6.2	21	17
31	1.1	---	7.7	86	---	35	---	38	---	5.4	23	---
TOTAL	138.6	96.59	484.8	5236	1133	1845	1205	1037	530.2	303.9	485.9	398.0
MEAN	4.47	3.22	15.6	169	40.5	59.5	40.2	33.5	17.7	9.80	15.7	13.3
MAX	22	23	76	951	156	138	117	126	71	32	89	80
MIN	1.0	.66	4.5	12	17	28	15	15	4.3	4.3	3.3	3.5
CAL YR 1978 TOTAL	9904.06		MEAN 27.1	MAX 441	MIN .62							
WTR YR 1979 TOTAL	12893.99		MEAN 35.3	MAX 951	MIN .66							

CHARLES RIVER BASIN

01103305 CHARLES RIVER NEAR MILLIS, MA

LOCATION.--Lat 42°07'59", long 71°21'46", Norfolk County, Hydrologic Unit 01090001, on left bank 150 ft (46 m) upstream from Myrtle St. Bridge, 500 ft (150 m) downstream from Mill River, and 2.5 mi (4.0 km) south of Millis.

DRAINAGE AREA.--85.9 mi² (222.5 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 123.95 ft (37.780 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. Flow affected by diversions to and from the basin for municipal supplies. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--5 years, 162 ft³/s (4.588 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft³/s (60.9 m³/s) Jan. 26, 1979, gage height, 8.21 ft (2.502 m); minimum, 12 ft³/s (0.34 m³/s) Aug. 19, 20, 25-27, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,150 ft³/s (60.9 m³/s) Jan. 26, gage height, 8.21 ft (2.502 m); minimum, 24 ft³/s (0.68 m³/s) July 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	36	78	97	427	363	192	317	263	43	39	87
2	32	35	80	158	336	363	197	263	232	50	37	76
3	32	32	71	320	322	374	240	224	201	49	42	66
4	32	32	72	340	290	389	272	214	177	47	129	64
5	35	32	109	250	263	411	290	209	167	43	146	59
6	51	32	121	200	240	461	287	197	170	39	123	58
7	71	32	108	180	214	606	263	181	162	36	96	66
8	68	35	92	300	203	660	232	167	147	33	75	72
9	59	35	119	450	192	574	224	157	136	31	61	64
10	46	32	190	430	177	476	287	146	126	28	54	57
11	44	31	190	340	169	470	301	136	111	26	54	50
12	38	30	161	285	155	467	279	130	110	25	129	44
13	34	28	128	243	147	416	244	133	107	26	263	39
14	35	26	125	460	136	371	222	144	98	27	308	38
15	63	26	111	510	130	341	226	162	90	41	268	41
16	68	29	97	465	130	310	226	167	84	108	209	44
17	60	29	90	352	121	285	218	155	76	120	162	43
18	50	37	88	288	110	266	211	138	73	118	130	40
19	46	48	72	231	106	249	196	124	71	104	110	36
20	47	48	73	208	104	238	177	129	65	87	96	34
21	46	44	84	457	111	226	169	136	61	73	86	33
22	44	41	108	1330	139	216	164	133	55	60	81	72
23	40	40	99	1220	159	203	155	123	47	51	74	117
24	36	42	85	943	218	196	146	218	43	45	67	121
25	32	53	111	1480	413	220	138	363	38	40	63	107
26	32	52	156	2060	431	251	133	498	35	38	61	89
27	37	45	148	1760	356	249	214	492	34	56	56	72
28	46	43	118	1220	356	226	379	408	34	74	79	61
29	45	43	108	865	---	209	402	341	34	64	103	66
30	40	58	89	656	---	197	371	296	34	55	100	82
31	37	---	84	525	---	188	---	294	---	47	98	---
TOTAL	1373	1126	3365	18623	6155	10471	7055	6795	3081	1684	3399	1898
MEAN	44.3	37.5	109	601	220	338	235	219	103	54.3	110	63.3
MAX	71	58	190	2060	431	660	402	498	263	120	308	121
MIN	27	26	71	97	104	188	133	123	34	25	37	33
CAL YR 1978	TOTAL	64137	MEAN 176	MAX 1160	MIN 17							
WTR YR 1979	TOTAL	65025	MEAN 178	MAX 2060	MIN 25							

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

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

DRAINAGE AREA.--184 mi² (477 km²).

WATER-DISCHARGE RECORDS

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

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

REMARKS.--Records excellent except those for July and August, which are fair. Flow affected by diversions to and from basin for municipal supplies.

AVERAGE DISCHARGE.--42 years, 303 ft³/s (8.581 m³/s).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) Jan. 28, gage height, 8.36 ft (2.548 m); minimum, 47 ft³/s (1.33 m³/s) July 13, 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	80	148	211	1900	764	439	670	655	96	91	169
2	53	77	167	283	1590	783	430	655	631	98	80	155
3	53	75	167	432	1410	793	466	623	589	101	80	143
4	58	75	175	487	1200	797	481	600	533	97	121	127
5	67	72	211	513	1010	815	528	550	471	95	140	120
6	96	69	246	498	843	844	551	509	424	86	165	140
7	114	69	250	498	858	942	557	471	381	76	180	117
8	121	69	231	657	703	993	551	434	356	70	155	121
9	117	72	262	703	621	1040	556	396	326	64	130	121
10	107	69	324	724	548	1070	578	356	291	59	121	114
11	93	69	355	776	518	1090	575	314	262	56	110	99
12	86	67	366	750	452	1030	582	285	251	53	250	89
13	77	67	344	735	385	979	576	281	236	49	390	80
14	93	65	307	883	343	948	564	282	223	48	410	77
15	110	62	270	826	300	890	548	308	207	54	420	77
16	128	67	239	832	278	820	526	319	180	91	410	72
17	132	93	219	834	281	766	510	321	163	145	340	72
18	125	99	203	775	242	711	490	314	153	165	350	69
19	110	96	215	681	224	662	469	295	144	165	340	67
20	107	103	196	690	211	620	447	301	134	155	290	62
21	103	107	203	923	211	577	420	308	122	140	240	60
22	99	99	207	1320	241	532	395	307	114	121	200	136
23	93	93	219	1400	282	499	370	295	101	97	170	179
24	83	99	211	1610	380	467	348	379	87	82	150	215
25	80	110	254	2410	535	473	329	514	79	73	135	219
26	75	114	290	2770	620	470	308	612	76	69	120	199
27	83	110	307	2940	687	479	386	668	72	179	115	167
28	86	107	290	2980	738	496	521	726	69	127	115	140
29	93	99	270	2790	---	499	591	755	66	128	140	140
30	89	128	239	2470	---	485	649	733	69	121	171	156
31	86	---	211	2170	---	460	---	696	---	105	185	---
TOTAL	2870	2581	7596	36571	17611	22794	14741	14277	7465	3065	6314	3702
MEAN	92.6	86.0	245	1180	629	735	491	461	249	98.9	204	123
MAX	132	128	366	2980	1900	1090	649	755	655	179	420	219
MIN	53	62	148	211	211	460	308	281	66	48	80	60
CAL YR 1978	TOTAL	132199	MEAN 362	MAX 1960	MIN 37							
WTR YR 1979	TOTAL	139587	MEAN 382	MAX 2980	MIN 48							

CHARLES RIVER BASIN

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: November 1974 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 448 micromhos Sept. 24, 1977; minimum recorded, 82 micromhos Feb. 11, 1976.

WATER TEMPERATURES: Maximum recorded, 30.5°C Aug. 2, 1975, July 21, 1977; minimum recorded, 0.0°C on many days during winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 265 micromhos Dec. 5; minimum recorded, 105 micromhos May 31.

WATER TEMPERATURES: Maximum recorded, 28.5°C Aug. 2, 3; minimum recorded, 0.0°C on several days during winter periods.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED CENT SATUR- ATION	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT										
12...	0800	93	225	6.7	10.5	3.0	11.2	100	53	350
NOV										
30...	1530	134	250	6.4	1.5	3.0	13.0	93	64	94
DEC										
20...	1300	189	215	6.1	.5	1.0	14.7	102	13	85
JAN										
04...	1500	494	180	6.2	1.0	1.0	13.9	98	680	K2400
FEB										
13...	1300	361	190	6.4	.5	2.0	13.4	93	110	96
MAR										
08...	1100	990	112	5.8	4.5	8.0	12.5	96	350	210
APR										
24...	1045	349	148	6.4	14.0	3.0	10.3	99	K7	K8
MAY										
16...	0900	317	152	6.4	18.0	2.0	8.4	88	49	30
JUN										
18...	1530	152	137	7.9	25.5	4.0	9.4	113	66	--
JUL										
25...	0930	75	190	7.0	27.0	3.0	7.2	89	43	32
AUG										
21...	1430	240	140	6.1	20.0	2.0	8.5	93	59	49
SEP										
18...	1515	77	190	7.4	21.0	3.0	9.3	103	35	33

K, NON-IDEAL COLONY COUNT.

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L C4C03)	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- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS C02)	SULFATE DIS- SOLVED (MG/L AS S04)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)
OCT										
12...	46	20	13	3.4	23	2.8	26	--	17	41
NOV										
30...	41	19	11	3.3	27	2.6	22	--	17	49
DEC										
20...	43	27	12	3.1	21	1.6	16	--	17	37
JAN										
04...	28	12	8.0	2.0	18	1.7	16	--	15	34
FEB										
13...	35	22	9.9	2.6	20	1.8	13	--	16	34
MAR										
08...	21	8	6.0	1.5	13	1.2	13	--	10	23
APR										
24...	32	17	9.1	2.3	18	1.6	15	--	12	31
MAY										
16...	34	11	9.8	2.4	17	1.8	23	--	9.2	29
JUN										
18...	34	13	9.8	2.4	19	1.3	21	--	8.8	30
JUL										
25...	41	15	12	2.7	21	2.4	26	5.1	14	35
AUG										
21...	31	15	9.3	2.0	12	1.6	16	25	17	24
SEP										
18...	39	15	11	2.7	20	2.2	24	1.9	10	35

DATE	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L SI02)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	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,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)
OCT										
12...	.1	2.7	129	119	.59	.03	.94	.97	.41	.56
NOV										
30...	.1	8.4	151	132	.98	.16	.46	.62	.24	.38
DEC										
20...	.1	9.7	125	111	.65	.18	.43	.61	.03	.58
JAN										
04...	.1	7.6	116	96	.57	.20	.39	.59	.03	.56
FEB										
13...	.0	9.2	123	101	.54	.23	.75	.98	.44	.54
MAR										
08...	.1	4.9	73	68	.27	.11	.89	1.0	.88	.12
APR										
24...	.1	2.8	101	86	.35	.02	.58	.60	.00	.68
MAY										
16...	.1	4.8	101	88	.50	.18	.55	.73	.00	.78
JUN										
18...	.1	3.5	104	88	.06	.11	.74	.85	.32	.53
JUL										
25...	.1	6.1	124	109	.29	.08	.91	.99	.01	.98
AUG										
21...	.1	9.0	107	85	.30	.01	.99	1.0	.04	.96
SEP										
18...	.1	4.2	245	101	.17	.05	.69	.74	.10	.64

CHARLES RIVER BASIN

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 12...	1.6	.26	.17	7.6	--	--	83	21	100
NOV 30...	1.6	.34	.29	--	--	7.3	7	2.5	100
DEC 20...	1.3	.14	.15	6.8	--	--	64	33	60
JAN 04...	1.2	.15	.13	--	.6	6.8	25	33	100
FEB 13...	1.5	.09	.08	6.1	--	--	20	19	100
MAR 08...	1.3	.06	.05	--	.4	4.8	--	--	--
APR 24...	.95	.15	.09	5.7	--	--	8	7.5	76
MAY 16...	1.2	.24	.18	10	--	--	10	8.6	100
JUN 18...	.91	.23	.10	9.7	2.1	9.7	9	3.7	100
JUL 25...	1.3	.45	.38	28	--	--	8	1.6	--
AUG 21...	1.3	.25	.20	--	--	--	8	5.2	--
SEP 18...	.91	.22	.13	--	.8	6.7	7	1.5	--

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDED TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDED RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDED RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDED RECOV- ERABLE (UG/L AS CR)
NOV 30...	0	--	0	100	0	100	4	3	1	<10	<8
JAN 04...	1	--	0	0	0	0	3	0	6	10	8
MAR 08...	1	--	1	200	0	200	16	11	5	10	8
JUN 18...	4	--	1	--	--	--	3	1	2	10	0
SEP 18...	2	0	2	--	--	--	0	0	0	10	0

DATE	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDED RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDED RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDED RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 30...	2	2	0	2	3	2	1	380	170	210	29
JAN 04...	2	1	0	1	4	0	4	320	170	150	37
MAR 08...	2	1	0	1	2	0	2	190	70	120	100
JUN 18...	10	1	1	0	7	3	4	800	290	510	6
SEP 18...	<10	0	0	0	4	1	3	510	--	280	6

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

01103500 CHARLES RIVER AT DOVER, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	LEAD, SUS- PENDE RECov- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECov- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECov- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECov- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECov- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	NICKEL, TOTAL RECov- ERABLE (UG/L AS NI)	NICKEL, SUS- PENDE RECov- ERABLE (UG/L AS NI)
NOV 30...	7	22	30	0	30	<.5	.0	<.5	--	--
JAN 04...	0	--	60	0	60	<.5	.0	<.5	--	--
MAR 08...	69	31	50	0	50	<.5	.0	<.5	--	--
JUN 18...	1	5	60	20	40	<.5	.0	<.5	--	--
SEP 18...	3	3	50	30	20	<.5	<.0	<.5	3	1

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

DATE	NICKEL, DIS- SOLVED (UG/L AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECov- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECov- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	ZINC, TOTAL RECov- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECov- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)
NOV 30...	--	0	0	0	0	0	0	20	10	10
JAN 04...	--	0	0	0	0	0	0	30	20	10
MAR 08...	--	0	0	0	0	0	0	10	0	10
JUN 18...	--	0	0	0	0	0	0	10	0	10
SEP 18...	2	0	0	0	0	0	0	0	0	0

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m ²)		Chlorophyll ^a (mg/m ²)	Chlorophyll ^b (mg/m ²)	Sampling method
		Dry weight	Ash weight			
Sept. 13 to Oct. 12	30	2.44	2.03	4.79	.760	Polyethylene strip

CHARLES RIVER BASIN

01103500 CHARLES RIVER AT DOVER, MA--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, NOVEMBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON								
DATE TIME	NOV 30.78 1530		MAR 8.79 1100		JUN 18.79 1530		SEP 18.79 1515	
TOTAL CELLS/ML	3800		520		68000		53000	
DIVERSITY: DIVISION	1.3		0.8		0.3		0.8	
...CLASS	1.3		0.8		0.3		0.8	
...ORDER	2.0		1.5		0.3		1.0	
...FAMILY	2.1		2.4		0.3		1.2	
...GENUS	0.0		0.0		0.5		1.8	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE								
...CHLOROCOCCALES								
...CHARACIACEAE	--	-	14	3	--	-	*	0
...SCHROEDERIA	--	-	--	-	--	-	--	-
...COELASTRACEAE	--	-	--	-	--	-	690	1
...COELASTRUM	--	-	--	-	--	-	--	-
...OOCYSTACEAE	66	2	--	-	600	1	*	0
...ANKISTRODESMUS	--	-	--	-	--	-	*	0
...CLOSTERIOPSIS	--	-	--	-	--	-	--	-
...DICTYOSPHAERIUM	--	-	--	-	--	-	1200	2
...KIRCHNERIELLA	--	-	--	-	--	-	*	0
...OOCYSTIS	22	1	--	-	--	-	*	0
...SELENASTRUM	110	3	--	-	--	-	--	-
...SCENEDESMACEAE	--	-	--	-	--	-	--	-
...CRUCIGENIA	--	-	--	-	--	-	290	1
...SCENEDESMUS	44	1	--	-	1200	2	1800	3
...TETRASTRUM	--	-	--	-	1200	2	--	-
...VOLVOCALES								
...CHLAMYDOMONADACEAE	460	12	58	11	--	-	--	-
...CHLAMYDOMONAS	--	-	--	-	*	0	--	-
...VOLVOCAEAE	--	-	--	-	--	-	--	-
...EUDORINA	--	-	--	-	--	-	920	2
CHRYSOPHYTA								
..BACILLARIOPHYCEAE								
..CENTRALES								
...COSCINODISCEAE								
...CYCLOTELLA	200	5	--	-	62000#	92	--	-
...MELOSIRA	400	10	86#	17	1800	3	1500	3
...STEPHANODISCUS	--	-	--	-	--	-	1000	2
..PENNALES								
...ACHNANTHACEAE								
...COCCONEIS	22	1	--	-	--	-	*	0
...EUNOTIACEAE								
...EUNOTIA	22	1	--	-	--	-	--	-
...FRAGILARIACEAE								
...ASTERIONELLA	--	-	100#	19	--	-	--	-
...FRAGILARIA	--	-	58	11	--	-	--	-
...SYNEDRA	22	1	43	8	--	-	--	-
...MERIDIIONACEAE								
...MERIDIION	--	-	120#	22	--	-	--	-
...NAVICULACEAE								
...NAVICULA	--	-	14	3	--	-	--	-
...NITZSCHIAEAE								
...NITZSCHIA	88	2	14	3	--	-	--	-
..XANTHOPHYCEAE								
...HETEROCOCCALES								
...CHLOROTHECIACEAE								
...OPHIUCYTUM	--	-	--	-	--	-	*	0
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
...CRYPTOMONADACEAE								
...CRYPTOMONAS	--	-	14	3	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
...CHROOCOCCACEAE								
...ANACYSTIS	260	7	--	-	--	-	36000#	68
...GUMPHOSPHAERIA	--	-	--	-	--	-	7200	14
...HORMOGONALES								
...NOSTOCACEAE								
...ANABAENA	--	-	--	-	--	-	1400	3
...APHANIZOMENON	--	-	--	-	--	-	*	0
...OSCILLATORIACEAE								
...OSCILLATORIA	2100#	55	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01103500 CHARLES RIVER AT DOVER, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	219	215	217	216	215	215	260	243	252	236	219	228
2	217	216	217	216	215	216	251	237	243	218	195	205
3	218	216	217	216	215	216	236	227	229	200	180	188
4	218	217	218	221	218	220	231	223	227	181	175	179
5	220	218	219	221	218	219	265	225	252	175	161	167
6	222	217	220	224	222	222	259	242	250	171	161	165
7	220	213	217	223	222	223	241	232	237	171	170	171
8	212	205	208	224	222	223	233	226	228	183	152	166
9	215	212	213	223	221	222	227	226	226	156	153	155
10	222	216	219	225	221	223	226	215	219	157	150	153
11	225	222	224	223	221	221	219	206	213	157	149	154
12	225	223	225	223	220	222	207	198	203	163	155	160
13	229	223	226	222	221	221	200	196	198	166	161	163
14	230	228	230	223	219	221	203	198	201	225	157	175
15	228	224	226	224	220	222	205	202	203	167	160	163
16	224	215	219	222	220	221	206	202	204	174	164	171
17	220	217	219	227	220	223	204	202	203	179	173	176
18	220	217	219	231	218	224	208	205	206	181	179	180
19	220	218	219	233	230	231	214	207	210	182	177	180
20	219	217	218	230	228	229	216	210	214	180	177	179
21	221	218	219	227	225	226	219	207	212	257	160	189
22	220	218	220	225	224	224	247	209	233	158	149	153
23	218	215	216	225	222	224	223	214	217	159	153	155
24	217	215	216	224	222	223	219	212	215	160	153	156
25	215	215	215	227	222	224	233	219	226	159	128	140
26	215	213	214	226	223	224	234	228	231	143	137	141
27	215	211	214	226	223	224	236	230	233	137	122	128
28	217	211	214	227	224	225	245	220	228	122	113	117
29	219	215	216	238	223	226	229	224	226	113	112	112
30	216	215	216	251	241	248	235	226	230	116	113	114
31	217	214	215	---	---	---	242	231	237	119	116	117
MONTH	230	205	214	251	215	223	265	196	223	257	112	161

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	123	119	120	139	133	135	144	143	144	138	137	138
2	127	123	125	137	134	135	144	143	143	138	135	136
3	133	127	131	144	135	139	143	139	141	137	135	136
4	140	133	136	141	137	139	142	139	141	138	135	136
5	145	140	143	135	127	130	141	136	139	140	138	139
6	152	146	149	126	120	123	137	136	136	142	140	141
7	160	149	155	118	113	115	137	135	136	147	142	145
8	169	160	165	113	111	112	136	135	135	149	146	147
9	175	165	170	112	110	111	135	133	134	151	147	149
10	179	165	174	110	109	110	135	132	133	154	150	152
11	183	175	180	112	110	111	136	134	135	158	152	154
12	187	182	185	112	108	110	137	135	136	155	152	153
13	192	187	189	115	110	113	140	138	139	156	152	155
14	195	190	192	118	115	116	140	137	139	157	154	155
15	196	193	194	120	118	120	138	137	138	157	154	155
16	197	194	195	123	118	120	138	138	138	155	153	154
17	198	195	196	126	122	125	140	138	139	154	153	154
18	199	197	198	130	126	128	140	139	140	155	153	154
19	198	197	197	133	130	132	141	140	141	155	154	154
20	204	196	199	135	133	134	143	141	142	154	148	152
21	206	200	203	137	135	136	145	143	144	150	148	149
22	202	190	197	137	135	136	147	145	146	151	148	150
23	191	177	182	139	137	138	149	147	148	151	149	150
24	175	163	172	141	138	140	151	149	150	148	139	144
25	161	158	160	142	140	141	154	151	153	138	132	136
26	158	143	151	144	141	143	156	154	155	133	125	131
27	145	139	140	147	144	146	155	145	152	124	116	119
28	146	138	141	150	146	147	144	140	141	115	111	113
29	---	---	---	150	149	150	141	138	140	112	110	111
30	---	---	---	149	143	147	138	135	137	111	106	109
31	---	---	---	145	144	145	---	---	---	108	105	106
MONTH	206	119	169	150	108	130	156	132	141	158	105	141

CHARLES RIVER BASIN

01103500 CHARLES RIVER AT DOVER, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	111	108	109	161	159	160	179	177	178	174	171	172
2	117	110	114	162	160	161	181	177	179	181	175	178
3	118	116	117	163	158	160	184	180	182	184	181	183
4	119	117	118	165	163	164	185	182	184	187	184	186
5	120	118	119	166	165	165	185	180	183	186	183	185
6	120	118	120	165	163	164	186	183	185	184	182	183
7	124	120	122	166	164	165	187	183	185	194	185	192
8	125	122	124	168	166	167	187	178	182	190	180	183
9	126	125	126	172	169	170	178	175	176	184	182	183
10	129	125	127	174	172	173	175	167	172	185	182	184
11	132	128	130	176	175	175	169	168	168	187	184	185
12	135	130	133	178	176	177	168	161	163	187	186	187
13	137	134	135	194	178	191	162	141	149	193	187	191
14	138	136	137	195	193	194	157	150	154	197	190	194
15	139	136	137	195	190	193	162	149	157	196	190	194
16	138	137	137	193	189	191	148	146	147	196	195	195
17	138	135	136	194	192	193	148	142	145	195	190	192
18	138	136	136	193	184	188	143	140	141	190	189	189
19	142	138	141	186	174	179	141	137	139	192	188	190
20	144	142	143	188	176	183	141	138	139	192	190	191
21	144	142	143	189	187	188	152	141	142	191	181	189
22	145	143	144	190	188	189	160	152	156	182	175	179
23	147	145	146	192	189	191	165	159	161	178	165	172
24	149	147	148	192	190	191	167	164	166	179	175	178
25	152	150	151	193	190	192	171	167	169	177	169	174
26	154	151	153	193	187	192	174	170	172	178	168	172
27	155	154	155	189	175	179	176	174	175	181	178	180
28	159	156	158	179	156	168	178	175	176	180	173	177
29	161	159	160	171	163	169	178	171	175	173	167	169
30	162	160	161	182	172	177	176	171	173	171	167	169
31	---	---	---	184	177	181	177	174	175	---	---	---
MONTH	162	108	136	195	156	178	187	137	166	197	165	183
YEAR	265	105	173									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

TEMPERATURE (DEG. C) OF WATER, OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	.5	.5	.5	1.5	1.5	1.5	8.5	8.5	8.5	18.5	17.0	17.5
2	.5	.5	.5	1.5	1.5	1.5	8.5	7.5	8.0	17.5	14.5	16.5
3	.5	.5	.5	2.0	2.0	2.0	7.5	7.5	7.5	17.0	16.0	17.0
4	.5	.5	.5	2.0	2.0	2.0	7.5	7.0	7.5	18.0	14.5	17.0
5	.5	.5	.5	2.5	2.0	2.0	7.5	7.0	7.0	18.0	15.0	17.0
6	.5	.5	.5	4.0	3.0	3.5	7.0	6.0	6.5	16.5	15.0	16.0
7	.5	.5	.5	4.5	4.0	4.0	6.5	5.5	6.0	18.0	15.5	17.0
8	.5	.5	.5	5.0	4.5	4.5	7.0	5.5	6.0	18.5	17.0	18.0
9	.5	.5	.5	6.0	4.5	5.0	7.0	5.5	6.0	20.5	17.5	19.5
10	.5	.5	.5	5.5	5.0	5.5	6.0	5.0	5.5	23.0	20.0	21.5
11	.5	.5	.5	5.0	4.5	5.0	7.5	5.0	6.0	22.5	18.0	21.0
12	.5	.5	.5	4.0	2.5	3.5	9.0	6.5	7.5	20.0	18.0	19.0
13	.5	.5	.5	3.0	2.0	2.5	9.5	8.0	9.0	19.5	18.0	19.0
14	.5	.5	.5	4.5	2.5	3.5	9.5	8.5	9.0	19.5	17.5	17.5
15	.5	.5	.5	5.0	3.5	4.5	8.5	8.0	8.0	18.5	17.0	17.5
16	.5	.5	.5	3.5	2.5	3.0	8.0	7.5	8.0	19.0	16.5	18.0
17	1.0	1.0	1.0	4.5	2.5	3.5	8.5	7.5	8.0	19.0	15.5	18.0
18	1.0	1.0	1.0	4.5	3.5	4.0	9.0	7.5	8.5	17.5	13.5	16.5
19	1.0	1.0	1.0	4.5	2.0	4.0	9.5	9.0	9.0	16.5	13.0	15.5
20	1.0	1.0	1.0	6.0	4.0	5.0	10.0	9.0	9.5	15.5	12.5	15.0
21	1.0	1.0	1.0	8.0	5.5	6.5	11.0	9.0	10.5	16.5	15.0	15.5
22	1.0	1.0	1.0	9.0	7.0	8.0	11.5	10.5	11.0	18.5	16.0	17.0
23	1.0	1.0	1.0	10.5	8.5	9.5	13.5	11.0	12.5	18.0	17.0	17.5
24	1.5	1.5	1.5	11.0	10.0	10.5	15.0	12.5	14.0	17.0	15.5	16.0
25	1.5	1.5	1.5	11.5	11.0	11.0	15.5	14.5	15.0	15.0	15.0	15.0
26	1.5	1.5	1.5	11.5	10.5	11.0	16.5	14.0	15.5	15.0	14.5	15.0
27	1.5	1.5	1.5	10.5	9.0	9.5	16.5	16.0	16.0	16.5	14.0	15.5
28	1.5	1.5	1.5	9.0	8.0	8.5	17.0	15.5	16.5	16.5	15.5	16.0
29	---	---	---	8.5	7.5	8.0	17.0	16.5	16.5	17.5	15.5	16.5
30	---	---	---	8.0	8.0	8.0	18.0	16.0	17.0	17.5	17.0	17.5
31	---	---	---	8.5	8.0	8.0	---	---	---	18.5	16.5	17.5
MONTH	1.5	.5	1.0	11.5	1.5	5.5	18.0	5.0	10.0	23.0	12.5	17.0
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	19.5	18.0	18.5	24.5	22.5	23.5	28.0	27.0	27.5	25.5	24.0	25.0
2	19.5	18.5	19.0	24.5	23.5	24.0	28.5	27.0	28.0	25.0	23.5	24.5
3	19.5	18.5	19.0	25.0	23.5	24.5	28.5	27.5	28.0	25.5	24.5	25.0
4	19.5	19.0	19.0	24.0	23.0	23.5	28.0	27.5	27.5	26.5	25.0	25.5
5	19.0	18.5	19.0	22.5	19.5	21.5	28.0	27.0	27.5	26.0	25.0	25.5
6	20.5	18.5	19.5	22.0	18.0	21.0	28.0	27.0	27.5	25.5	24.5	25.5
7	20.5	19.5	20.0	22.0	20.0	21.0	27.0	25.5	26.0	25.0	24.0	24.5
8	21.0	20.5	20.5	23.0	20.5	21.5	26.0	25.0	25.5	24.5	23.0	24.0
9	21.5	20.0	21.0	24.0	21.5	22.5	25.5	24.5	25.0	23.0	22.0	22.5
10	23.0	21.0	22.0	24.5	22.0	23.0	25.0	24.0	24.5	22.0	21.0	21.5
11	24.0	22.0	23.0	25.0	22.5	24.0	24.0	22.5	23.5	21.5	20.5	21.0
12	23.5	21.5	22.5	25.5	23.0	24.5	22.5	19.5	21.0	21.0	19.5	20.5
13	21.5	19.5	21.0	27.0	24.0	25.5	19.5	18.0	18.5	21.0	20.0	20.5
14	21.5	18.0	20.5	27.5	25.0	26.5	18.5	18.0	18.5	21.5	20.0	21.0
15	22.5	20.0	21.5	26.0	24.5	26.0	19.0	18.5	18.5	22.0	21.0	21.5
16	24.0	22.0	23.0	26.5	25.0	25.5	18.5	18.0	18.5	21.5	20.0	21.0
17	25.0	23.5	24.5	26.5	25.0	26.0	19.0	18.0	18.5	21.5	20.0	20.5
18	26.0	24.5	25.0	26.0	25.5	25.5	18.5	18.0	18.5	21.5	20.0	20.5
19	25.0	24.0	24.5	26.0	25.0	25.5	18.0	17.5	18.0	20.5	19.5	20.5
20	24.5	21.5	23.5	26.5	25.0	26.0	18.5	17.5	18.0	18.5	17.5	18.0
21	24.0	20.0	23.0	27.0	26.0	26.5	19.0	18.0	18.5	18.0	17.0	17.5
22	24.0	21.0	23.0	27.5	26.0	27.0	21.5	19.5	20.5	17.5	17.0	17.5
23	24.5	23.0	23.5	28.0	26.5	27.0	21.5	21.0	21.5	17.0	16.0	16.5
24	23.5	22.5	23.0	28.0	27.0	27.5	22.5	21.5	22.0	16.5	15.5	16.0
25	22.5	20.5	22.0	27.0	27.0	27.5	23.5	22.0	23.0	16.0	15.0	15.5
26	22.5	20.5	21.5	28.0	26.5	27.0	25.0	23.0	24.0	16.5	15.0	15.5
27	23.0	19.0	21.0	27.0	26.5	27.0	25.0	24.0	24.5	16.5	15.5	16.0
28	23.0	20.5	22.0	26.5	26.0	26.5	25.5	24.5	25.0	16.5	16.0	16.0
29	23.5	21.0	22.5	27.5	26.5	27.0	25.5	25.0	25.5	17.0	16.5	17.0
30	23.5	21.5	22.5	27.5	26.5	27.0	26.0	25.0	25.5	17.0	17.0	17.0
31	---	---	---	28.0	26.5	27.0	26.0	25.0	25.5	---	---	---
MONTH	26.0	18.0	21.5	28.0	18.0	25.0	28.5	17.5	23.0	26.5	15.0	20.5
YEAR	28.5	.0	13.0									

CHARLES RIVER BASIN

01104000 MOTHER BROOK AT DEDHAM, MA

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

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

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

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

REMARKS.--Records good except those for periods of no gage-height record, Nov. 30 to Jan. 15, Sept. 3-30, which are poor. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--48 years, 80.2 ft³/s (2.271 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 776 ft³/s (22.0 m³/s) Jan. 28, gage height, 86.37 ft (26.326 m); minimum, 0.26 ft³/s (0.007 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	.88	2.0	10	573	155	99	157	133	9.4	8.3	9.7
2	1.3	.88	1.5	30	491	162	88	146	159	9.3	6.7	4.5
3	2.2	.88	1.0	50	423	154	112	126	144	9.9	7.7	2.5
4	2.0	.88	4.0	30	349	139	105	117	121	9.5	14	2.0
5	4.0	.76	5.0	15	262	143	119	97	93	9.6	17	12
6	12	.76	3.5	10	173	162	125	74	83	8.8	24	10
7	7.8	.76	2.0	30	179	207	132	58	93	7.9	25	3.0
8	4.7	.76	1.0	100	142	231	120	43	74	7.1	23	1.2
9	2.9	.76	8.0	150	102	235	122	31	55	5.7	18	2.0
10	.99	.76	10	150	77	242	145	16	36	4.6	15	2.5
11	.76	.66	10	120	57	266	131	8.4	21	4.8	14	10
12	3.7	.66	8.0	100	35	263	127	6.1	15	5.0	45	8.0
13	2.9	.66	6.0	150	23	225	119	4.1	9.1	5.1	103	4.0
14	5.2	.88	5.0	220	17	204	113	14	5.2	5.2	102	2.5
15	5.0	1.7	4.0	205	9.4	198	110	49	3.5	6.2	96	2.1
16	1.8	2.7	3.0	163	6.0	162	100	47	2.7	7.4	80	2.0
17	1.3	3.1	3.0	153	6.5	138	91	38	2.3	11	69	2.0
18	1.6	5.0	2.0	144	3.2	117	78	29	2.4	18	84	2.5
19	8.1	2.9	2.0	156	1.0	122	67	21	1.9	23	66	6.0
20	10	1.8	2.0	105	.56	220	59	19	2.1	20	40	15
21	6.1	1.7	3.0	236	.35	215	49	15	1.7	17	18	5.0
22	3.5	1.1	5.0	455	.91	193	40	17	1.6	14	7.0	1.5
23	4.5	.76	4.0	416	3.9	169	35	13	1.9	12	2.3	1.0
24	2.2	1.4	3.0	426	21	146	28	37	1.4	9.7	1.3	5.0
25	1.1	.88	15	627	68	141	25	81	1.3	8.8	1.2	25
26	1.1	.88	12	761	104	145	53	131	1.2	8.8	.97	10
27	1.8	.88	9.0	769	125	141	89	138	1.1	51	1.2	4.0
28	.99	1.1	7.0	775	142	133	135	138	1.3	17	1.2	2.5
29	.99	1.1	6.0	763	---	128	120	156	3.1	12	1.2	2.0
30	.99	3.0	5.0	721	---	127	148	159	3.9	11	12	2.5
31	.88	---	5.0	648	---	113	---	143	---	9.8	19	---
TOTAL	104.20	40.94	157.0	8688	3394.82	5396	2884	2130.6	1074.7	358.6	923.07	162.0
MEAN	3.36	1.36	5.06	280	121	174	96.1	68.7	35.8	11.6	29.8	5.40
MAX	12	5.0	15	775	573	266	148	159	159	51	103	25
MIN	.76	.66	1.0	10	.35	113	25	4.1	1.1	4.6	.97	1.0
CAL YR 1978	TOTAL	33054.52	MEAN	90.6	MAX	615	MIN	.34				
WTR YR 1979	TOTAL	25313.93	MEAN	69.4	MAX	775	MIN	.35				

01104200 CHARLES RIVER AT WELLESLEY, MA

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

DRAINAGE AREA.--211 mi² (546 km²).

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

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

REMARKS.--Records good except those for period of no gage-height record, Dec. 4 to Jan. 15, 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 (0.3 m) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--20 years, 277 ft³/s (7.845 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,310 ft³/s (65.4 m³/s) Jan. 28, gage height, 6.11 ft (1.862 m); minimum, 6.7 ft³/s (0.19 m³/s) Aug. 29; minimum daily, 11 ft³/s (0.31 m³/s) June 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	103	154	240	1730	678	391	565	499	49	94	194
2	47	94	165	270	1450	743	394	569	482	92	83	191
3	49	94	175	400	1310	782	434	564	500	87	83	183
4	49	89	190	470	1190	791	439	558	492	87	135	97
5	53	86	220	470	987	824	470	518	456	87	145	97
6	104	49	230	450	693	845	479	492	346	85	165	169
7	128	41	240	480	768	938	475	466	317	73	176	183
8	131	70	250	600	705	966	482	439	324	70	158	158
9	135	80	280	660	581	969	507	405	314	70	135	158
10	125	88	310	700	461	992	533	376	299	70	122	89
11	73	86	330	660	424	1010	517	331	278	60	118	78
12	67	80	340	600	439	991	517	309	272	53	229	112
13	89	80	330	640	394	953	519	306	260	53	342	118
14	118	45	310	660	345	916	514	203	247	51	357	115
15	145	28	280	830	328	866	511	253	230	56	387	112
16	141	53	250	809	312	814	499	288	208	75	397	106
17	148	86	230	783	270	764	485	304	185	103	314	97
18	97	112	210	725	281	705	470	311	171	148	319	53
19	91	112	190	579	273	483	451	310	110	172	328	19
20	115	112	210	628	256	417	429	320	124	155	301	65
21	122	118	230	977	256	439	409	324	143	138	266	83
22	118	118	220	1360	262	419	391	318	136	118	233	206
23	112	115	210	1260	289	403	361	313	123	100	198	206
24	105	122	210	1270	376	391	344	417	107	89	183	155
25	106	125	290	1880	485	397	240	400	98	78	162	183
26	94	124	320	2180	525	384	229	485	90	70	151	206
27	112	131	310	2220	573	384	344	563	48	209	138	206
28	112	138	290	2250	624	403	459	614	11	162	141	187
29	109	125	270	2230	---	417	517	652	36	131	91	187
30	112	151	250	2120	---	425	563	657	53	122	100	191
31	109	---	230	1960	---	408	---	639	---	109	187	---
TOTAL	3184	2857	7724	31561	16591	20922	13373	13269	6959	3062	6238	4204
MEAN	103	95.2	249	1018	593	675	446	428	232	98.8	201	140
MAX	148	151	340	2250	1730	1010	563	657	500	209	397	206
MIN	47	28	154	240	256	384	229	203	11	51	83	19

CAL YR 1978 TOTAL 107704.4 MEAN 295 MAX 1400 MIN 9.4
WTR YR 1979 TOTAL 129949.0 MEAN 356 MAX 2250 MIN 11

01104500 CHARLES RIVER AT WALTHAM, MA

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

DRAINAGE AREA.--227 mi² (588 km²), excludes 23.6 mi² (61.1 km²) 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 (6.102 m) National Geodetic Vertical Datum of 1929. Prior to July 10, 1904, at dam 700 ft (200 m) upstream and July 10, 1904, to Oct. 2, 1909, at dam 0.7 mi (1.1 km) downstream at different datums; discharge computed from flow over dam and through wheels and gates of Boston Manufacturing Co. and Waltham Bleachery, respectively.

REMARKS.--Records good except those for periods of backwater from debris, Oct. 1 to Dec. 7, Jan. 25 to Feb. 2, and no gage-height record, June 2 to July 1, 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.--48 years (water years 1932-79), 298 ft³/s (8.439 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,480 ft³/s (98.6 m³/s) Jan. 25, gage height, 6.48 ft (1.975 m); minimum, 9.3 ft³/s (0.26 m³/s) Nov. 15; minimum daily, 19 ft³/s (0.54 m³/s) Nov. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	149	183	256	1870	769	485	716	597	110	114	197
2	63	138	185	292	1880	835	480	643	510	116	103	194
3	37	130	198	520	1440	886	547	619	530	107	99	194
4	55	125	233	514	1290	905	526	614	520	102	150	152
5	59	121	257	509	1090	944	586	574	500	102	150	93
6	128	104	254	487	823	997	597	537	380	98	170	161
7	140	39	264	512	835	1150	574	500	350	92	163	190
8	131	75	263	792	793	1170	569	465	360	84	175	168
9	137	107	323	824	666	1130	602	436	350	80	153	159
10	137	114	365	718	564	1120	654	404	330	75	160	134
11	104	114	355	664	500	1180	637	372	310	70	153	76
12	56	104	361	629	500	1120	602	338	300	66	276	110
13	84	102	363	682	460	1090	597	342	280	65	388	122
14	149	94	343	1030	399	1060	591	286	270	63	392	126
15	177	19	311	873	381	990	591	257	250	65	409	126
16	157	37	285	794	355	924	574	306	220	78	421	115
17	156	94	266	746	310	867	547	318	200	111	383	109
18	141	149	217	701	318	811	526	330	180	160	329	96
19	89	149	195	589	294	677	510	324	130	192	353	45
20	126	143	242	596	279	475	490	350	140	168	323	57
21	136	151	277	1200	286	521	470	343	160	157	288	90
22	138	157	250	1710	302	505	446	336	150	141	252	228
23	143	151	238	1500	326	485	417	332	130	118	218	222
24	128	168	238	1360	465	465	399	447	120	104	192	198
25	133	165	356	2910	625	485	207	551	110	92	177	176
26	125	154	361	2940	631	480	165	569	98	90	164	213
27	160	162	339	2680	660	465	399	635	75	201	151	214
28	157	180	289	2530	711	470	597	667	45	204	146	204
29	149	195	307	2430	---	485	637	701	56	154	144	215
30	149	198	292	2280	---	505	660	709	90	141	89	206
31	151	---	267	2100	---	500	---	690	---	128	173	---
TOTAL	3760	3788	8677	36368	18753	24466	15682	14716	7741	3534	6880	4590
MEAN	121	126	280	1173	670	789	523	475	258	114	222	153
MAX	177	198	365	2940	1870	1180	660	716	597	204	421	228
MIN	37	19	183	256	279	465	165	257	45	63	89	45
CAL YR 1978	TOTAL	130407	MEAN 357	MAX 1720	MIN 19							
WTR YR 1979	TOTAL	148955	MEAN 408	MAX 2940	MIN 19							

01105000 NEPONSET RIVER AT NORWOOD, MA

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

DRAINAGE AREA.--35.2 mi² (91.2 km²).

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

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

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

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

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

AVERAGE DISCHARGE.--40 years, 53.9 ft³/s (1.526 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,490 ft³/s (42.2 m³/s) Aug. 19, 1955, gage height, 14.65 ft (4.465 m), from floodmarks; minimum daily, 1.4 ft³/s (0.040 m³/s) Oct. 20, 1963.

Maximum discharge since 1886, that of Aug. 19, 1955. Flood of July 24, 1938, reached a stage of 11.05 ft (3.368 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 837 ft³/s (23.7 m³/s) Jan. 26, gage height, 9.89 ft (3.014 m), at upstream side of railroad bridge; minimum daily, 4.9 ft³/s (0.14 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	41	35	199	166	73	116	84	19	10	31
2	17	22	34	69	161	167	77	105	65	18	7.7	27
3	14	21	32	152	148	167	99	103	65	17	25	25
4	12	21	41	130	132	163	107	103	53	14	78	19
5	16	21	53	91	108	163	114	91	52	14	78	31
6	35	21	47	73	87	177	108	80	53	10	49	38
7	38	18	41	67	83	244	97	69	52	12	31	33
8	35	19	36	169	81	249	85	60	42	12	21	33
9	18	19	72	205	76	216	97	56	39	9.1	16	23
10	20	18	97	144	70	185	122	51	37	7.4	16	17
11	18	19	83	116	67	194	113	46	30	7.0	20	14
12	17	21	51	96	60	177	99	43	37	6.2	87	13
13	19	21	45	104	46	151	86	49	31	5.9	124	14
14	35	21	37	234	55	148	85	51	26	4.9	101	15
15	45	20	32	182	43	125	89	62	22	6.6	68	13
16	37	19	30	133	42	118	85	65	16	8.4	46	15
17	29	20	30	108	41	111	77	62	19	8.4	35	13
18	26	24	31	94	37	101	73	55	16	10	29	11
19	21	23	25	80	34	93	69	41	15	10	31	9.8
20	21	25	21	76	32	84	65	42	16	8.3	28	8.1
21	20	25	33	344	34	84	57	57	16	7.2	23	9.5
22	21	25	36	600	45	82	56	56	15	7.3	20	52
23	18	25	30	389	51	70	52	47	13	6.0	18	63
24	16	29	29	280	99	80	47	47	14	5.5	17	50
25	17	31	83	688	185	94	45	126	11	6.4	16	38
26	23	32	94	690	190	97	44	167	9.5	8.4	16	32
27	29	25	69	483	176	88	143	175	18	35	15	24
28	27	27	46	365	172	78	237	135	5.7	89	39	21
29	29	29	36	297	---	66	202	111	5.8	29	33	36
30	25	42	32	249	---	70	151	91	9.1	16	41	36
31	23	---	31	212	---	68	---	86	---	22	39	---
TOTAL	733	706	1398	6955	2554	4076	2854	2448	887.1	440.0	1177.7	764.4
MEAN	23.6	23.5	45.1	224	91.2	131	95.1	79.0	29.6	14.2	38.0	25.5
MAX	45	42	97	690	199	249	237	175	84	89	124	63
MIN	12	18	21	35	32	66	44	41	5.7	4.9	7.7	8.1
CAL YR 1978 TOTAL	23879.0		MEAN 65.4	MAX 486	MIN 4.3							
WTR YR 1979 TOTAL	24993.2		MEAN 68.5	MAX 690	MIN 4.9							

NEPONSET RIVER BASIN

01105500 EAST BRANCH NEPONSET RIVER AT CANTON, MA

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

DRAINAGE AREA.--27.2 mi² (70.4 km²).

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

REVISED RECORDS.--WSP 1901: Drainage area.

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

REMARKS.--Records good. Flow regulated by Forge, Bolivar, Massapoag, and Reservoir Ponds, and other ponds upstream. Flow affected by diversion for municipal supply of Canton and Stoughton. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--27 years, 52.3 ft³/s (1.481 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 809 ft³/s (22.9 m³/s) Jan. 21, gage height, 4.97 ft (1.515 m); minimum daily, 8.9 ft³/s (0.25 m³/s) July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	19	56	57	163	130	53	96	81	28	15	43
2	15	18	41	85	146	131	53	85	69	28	12	35
3	14	17	39	179	136	130	83	66	63	22	32	32
4	12	19	53	128	117	125	81	74	60	18	125	23
5	15	23	69	98	101	124	74	69	62	17	74	31
6	42	24	56	87	101	125	61	63	66	15	36	61
7	37	22	46	86	94	213	56	57	57	11	27	62
8	29	22	46	208	91	214	52	53	48	12	21	36
9	23	22	84	214	90	175	64	50	41	13	18	27
10	19	19	121	151	77	140	97	47	27	12	19	19
11	16	18	85	125	69	152	78	43	23	12	27	14
12	15	19	68	104	54	140	67	36	30	12	75	17
13	15	17	62	94	42	123	63	46	26	12	128	15
14	31	17	64	243	37	119	61	54	15	11	89	17
15	45	19	67	175	32	113	68	68	14	12	65	26
16	32	28	62	125	32	101	64	56	17	22	52	21
17	23	29	62	113	28	95	61	48	16	18	46	18
18	19	43	59	107	27	89	59	43	16	16	42	16
19	17	41	52	100	36	82	56	42	16	18	43	14
20	20	29	46	94	44	83	51	46	16	16	41	12
21	19	26	65	332	48	69	51	48	14	14	38	13
22	16	26	64	414	59	69	48	43	14	12	34	88
23	16	26	52	203	49	62	47	50	13	11	31	78
24	15	33	46	181	94	59	44	118	13	9.9	27	46
25	21	41	109	466	140	71	41	142	15	9.6	26	33
26	23	33	106	349	131	74	42	132	15	8.9	24	30
27	31	26	75	240	165	64	113	103	11	32	23	28
28	28	33	63	204	137	57	182	87	12	87	31	27
29	22	34	57	178	---	54	129	74	14	42	41	39
30	20	48	54	166	---	55	102	92	14	23	54	43
31	19	---	52	168	---	53	---	101	---	18	60	---
TOTAL	679	791	1981	5474	2340	3291	2101	2132	898	592.4	1376	964
MEAN	21.9	26.4	63.9	177	83.6	106	70.0	68.8	29.9	19.1	44.4	32.1
MAX	45	48	121	466	165	214	182	142	81	87	128	88
MIN	10	17	39	57	27	53	41	36	11	8.9	12	12
CAL YR 1978	TOTAL	21621.4	MEAN 59.2	MAX 641	MIN 6.0							
WTR YR 1979	TOTAL	22619.4	MEAN 62.0	MAX 466	MIN 8.9							

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LOCATION.--Lat 42°15'28", long 71°00'33", Norfolk County, Hydrologic Unit 01090001, on left bank 20 ft (6 m) upstream from Hancock Street Bridge at Quincy and 1.1 mi (1.8 km) upstream from mouth.

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

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

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

AVERAGE DISCHARGE.--7 years, 5.97 ft³/s (0.169 m³/s), 21.17 in/yr (538 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 291 ft³/s (8.24 m³/s) May 13, 1975, gage height, 4.72 ft (1.439 m); minimum, 0.11 ft³/s (0.003 m³/s) June 21, 1973; minimum daily, 0.19 ft³/s (0.005 m³/s) Aug. 20-22, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 120 ft³/s (3.4 m³/s) and maximum (*):

Date	Time	Discharge		Gage height		Date	Time	Discharge		Gage height	
		(ft ³ /s)	(m ³ /s)	(ft)	(m)			(ft ³ /s)	(m ³ /s)	(ft)	(m)
Oct. 6	0715	124	3.51	3.67	1.119	May 30	1130	126	3.57	3.68	1.122
Jan. 21	1300	*274	7.76	4.65	1.417	July 27	0330	175	4.96	4.07	1.241
Jan. 25	0445	184	5.21	4.10	1.250						

Minimum discharge, 0.52 ft³/s (0.015 m³/s) Sept. 15; minimum daily, 0.63 ft³/s (0.018 m³/s) July 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	1.2	1.5	2.4	9.7	11	4.3	5.9	7.7	4.5	1.6	2.2
2	.81	1.2	1.3	13	8.3	12	6.5	5.3	6.5	1.3	1.5	1.9
3	.64	1.4	1.2	16	7.0	11	6.9	5.1	5.9	1.1	11	1.9
4	1.4	1.8	4.6	9.0	6.8	11	5.2	7.0	5.5	1.0	7.2	1.5
5	1.0	2.1	2.6	7.2	6.3	11	6.8	4.9	6.3	.92	6.2	1.4
6	13	2.6	2.0	6.5	5.8	11	5.5	4.7	5.5	.71	6.0	6.0
7	1.1	3.1	1.8	7.5	5.4	32	4.7	4.5	4.5	.75	6.4	1.9
8	.87	4.2	3.7	31	5.3	26	4.5	4.3	4.1	.69	6.3	1.5
9	.78	4.4	13	17	4.9	18	10	4.1	4.0	.63	5.6	1.3
10	.71	4.5	4.6	12	4.5	15	9.2	3.8	3.5	.78	7.0	1.3
11	.71	4.8	2.9	9.2	4.2	16	7.5	3.5	3.1	1.0	7.4	1.1
12	.71	6.0	2.4	7.2	3.8	13	6.3	3.1	5.9	1.0	25	.95
13	.71	6.7	2.1	21	3.7	11	5.9	5.3	3.0	1.0	22	.88
14	8.1	7.7	2.0	39	3.3	11	6.3	5.5	2.7	1.0	10	1.9
15	1.1	9.4	1.8	16	3.3	8.8	5.7	5.1	2.5	2.0	8.5	1.3
16	.80	12	1.7	12	3.0	8.0	5.3	4.5	2.4	1.1	7.6	.94
17	.78	13	2.1	9.7	3.0	7.3	5.1	4.1	2.3	1.0	6.9	.87
18	.71	5.6	2.0	8.4	2.7	6.5	4.9	4.1	3.0	2.8	7.1	.77
19	1.2	.96	1.9	7.1	2.7	6.3	4.5	4.0	2.3	.82	6.8	.78
20	1.6	.92	1.7	6.3	2.7	6.2	4.3	14	2.0	.77	6.4	.67
21	.94	2.1	6.0	110	3.1	7.1	4.1	5.3	1.8	.71	5.9	6.3
22	.94	1.6	1.9	51	3.3	5.8	4.1	4.3	1.8	.71	5.5	11
23	.97	1.2	1.6	27	3.1	5.4	3.8	5.9	1.7	.68	4.9	1.9
24	1.3	7.3	1.5	19	14	4.9	3.3	15	1.7	.64	4.7	1.3
25	1.1	1.2	13	123	12	6.7	3.6	19	1.5	.71	4.2	1.3
26	1.2	1.2	4.0	43	16	5.3	3.8	13	1.4	1.6	3.7	1.2
27	4.7	1.2	3.3	25	13	4.5	19	9.7	1.4	28	5.3	1.0
28	.94	4.5	2.8	22	12	4.3	10	8.4	1.3	6.2	6.0	.94
29	.94	1.4	2.6	19	---	4.5	7.9	7.5	1.3	2.8	4.7	5.9
30	1.1	6.0	2.3	16	---	5.9	6.8	17	1.2	2.3	5.0	2.2
31	1.1	---	2.1	11	---	4.0	---	9.7	---	1.8	2.9	---
TOTAL	54.16	121.28	98.0	723.5	172.9	310.5	185.8	217.6	97.8	71.02	219.3	64.10
MEAN	1.75	4.04	3.16	23.3	6.18	10.0	6.19	7.02	3.26	2.29	7.07	2.14
MAX	13	13	13	123	16	32	19	19	7.7	28	25	11
MIN	.64	.92	1.2	2.4	2.7	4.0	3.3	3.1	1.2	.63	1.5	.67
CFSM	.46	1.06	.83	6.08	1.61	2.61	1.62	1.83	.85	.60	1.85	.56
IN.	.53	1.18	.95	7.03	1.68	3.02	1.80	2.11	.95	.69	2.13	.62
CAL YR 1978	TOTAL	2096.67	MEAN	5.74	MAX	125	MIN	.58	CFSM	1.50	IN	20

WEYMOUTH FORE RIVER BASIN

01105585 TOWN BROOK AT QUINCY, MA

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

DRAINAGE AREA.--4.25 mi² (11.01 km²).

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

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

REMARKS.--Records good. Diurnal fluctuation caused by plant upstream. Flow regulated by Old Quincy Reservoir 2.2 mi (3.5 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--7 years, 8.95 ft³/s (0.253 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 481 ft³/s (13.6 m³/s) May 13, 1975, gage height, 7.40 ft (2.256 m), from rating curve extended above 160 ft³/s (4.5 m³/s); minimum daily, 0.68 ft³/s (0.019 m³/s) Aug. 2, 1975.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 260 ft³/s (7.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Oct. 6	0800	a343 9.71	6.16 1.878	July 27	0415	a385 10.9	6.52 1.987
Jan. 21	1300	a427 12.1	6.93 2.112	Aug. 3	1600	a*447 12.7	7.11 2.167
Jan. 25	0900	a409 11.6	6.76 2.060				

a From rating curve extended above 160 ft³/s (4.5 m³/s).

Minimum daily discharge, 0.74 ft³/s (0.021 m³/s) Oct. 9, 11-13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	1.4	2.1	4.5	27	12	10	3.1	4.0	11	1.4	9.2
2	1.1	1.5	1.8	27	26	14	13	2.8	3.5	3.3	1.3	10
3	.82	1.5	1.6	31	25	10	11	2.4	3.3	3.0	34	11
4	2.4	1.5	10	14	26	8.9	5.9	4.6	3.7	2.9	17	2.0
5	1.4	1.6	5.2	12	24	14	10	2.3	5.7	3.1	3.1	2.4
6	33	1.6	2.3	12	22	15	6.5	2.2	3.8	3.0	2.3	14
7	1.4	1.5	1.8	17	21	60	5.5	2.1	3.2	3.0	1.9	10
8	1.0	1.5	5.2	62	21	47	5.9	1.8	2.9	3.0	1.8	7.0
9	.74	1.6	25	20	13	36	20	1.8	2.7	3.3	1.9	.95
10	.80	1.5	7.7	16	3.6	35	9.0	1.8	2.5	3.2	3.9	.96
11	.74	1.5	3.4	15	3.0	39	5.5	1.5	2.8	3.1	4.3	.91
12	.74	1.8	2.6	14	3.0	30	4.8	1.3	7.6	3.0	40	.86
13	.74	1.9	3.2	48	3.0	28	4.3	3.2	2.6	2.4	35	.85
14	20	2.3	2.6	64	2.6	30	5.2	4.6	2.6	1.0	21	3.0
15	1.6	2.4	2.3	20	2.6	26	4.3	5.2	2.7	2.8	19	1.2
16	1.0	2.6	2.3	17	2.6	19	3.6	6.2	3.1	1.6	13	.84
17	.80	3.2	3.0	16	2.6	12	3.6	6.2	2.7	1.1	3.4	.80
18	1.0	9.0	2.1	15	2.4	11	3.4	6.4	5.3	5.5	4.3	.82
19	1.8	1.5	1.9	14	2.3	11	3.3	6.1	3.2	1.1	3.8	.81
20	1.5	1.2	2.6	14	2.6	11	3.0	30	2.7	.90	3.3	.82
21	.91	2.6	14	154	3.9	10	2.8	7.4	2.7	.80	1.9	14
22	.91	1.8	3.8	40	3.7	9.7	2.7	4.4	2.7	.82	1.4	32
23	1.0	1.5	3.6	27	3.0	9.5	2.7	6.6	2.7	.87	1.3	4.7
24	.91	12	3.6	33	24	9.2	2.4	22	2.6	.93	1.2	1.4
25	1.1	2.3	28	182	15	13	2.4	31	2.9	.82	1.3	1.1
26	1.6	1.4	5.2	51	39	9.4	2.6	9.0	3.0	2.4	1.2	1.1
27	6.8	1.4	4.5	42	22	8.9	32	12	3.0	41	6.4	.98
28	1.2	6.5	3.8	39	16	8.7	6.9	19	3.0	5.7	7.9	.95
29	1.2	2.4	3.5	35	---	9.3	3.9	11	3.2	1.8	4.4	14
30	1.2	9.4	3.4	31	---	12	3.5	12	3.0	1.7	5.4	4.2
31	1.2	---	3.5	31	---	9.2	---	4.8	---	1.4	1.5	---
TOTAL	92.61	83.9	165.6	1117.5	361.9	577.8	199.7	234.8	99.4	119.54	254.6	156.85
MEAN	2.99	2.80	5.34	36.0	12.9	18.6	6.66	7.57	3.31	3.86	8.21	5.23
MAX	33	12	28	182	39	60	32	31	7.6	41	40	32
MIN	.74	1.2	1.6	4.5	2.3	8.7	2.4	1.3	2.5	.80	1.2	.80
CAL YR 1978	TOTAL	2889.99	MEAN	7.92	MAX	210	MIN	.74				
WTR YR 1979	TOTAL	3464.20	MEAN	9.49	MAX	182	MIN	.74				

01105600 OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA

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

DRAINAGE AREA.--4.29 mi² (11.11 km²).

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

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

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

AVERAGE DISCHARGE.--13 years, 9.49 ft³/s (0.269 m³/s), 30.04 in/yr (763 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 22	0200	159 4.50	4.13 1.259	Feb. 27	0100	95 2.69	3.70 1.128
Jan. 25	1530	*175 4.96	4.22 1.286				

Minimum discharge, 0.37 ft³/s (0.010 m³/s) Oct. 1-3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	1.7	9.2	6.5	13	25	8.0	8.3	7.4	5.4	.56	1.8
2	.37	1.6	6.5	17	12	22	8.7	7.1	6.1	2.6	.50	1.5
3	.40	1.5	5.5	53	10	21	18	6.3	5.4	1.7	1.4	1.3
4	.90	1.5	9.8	28	8.9	18	16	7.8	5.3	1.2	15	1.3
5	.63	1.4	13	16	8.6	18	15	6.9	7.1	1.1	10	1.1
6	7.4	1.4	9.8	11	8.0	16	13	5.7	6.8	.96	4.0	3.6
7	4.1	1.4	6.8	9.7	7.4	40	11	5.3	5.2	.90	2.2	4.0
8	2.3	1.4	6.2	52	6.8	59	8.7	4.8	4.3	.84	1.7	2.4
9	1.5	1.4	18	52	6.0	31	13	4.5	3.8	.77	1.3	1.6
10	1.2	1.5	27	22	5.0	22	22	4.3	3.4	.74	1.2	1.2
11	.94	1.4	17	15	4.8	23	16	3.8	3.1	.68	1.9	1.0
12	.81	1.3	11	10	4.5	21	11	3.5	4.3	.74	16	.86
13	.81	1.3	8.3	15	4.3	17	9.2	3.6	3.1	.71	24	.80
14	5.2	1.3	8.0	69	3.9	16	8.9	6.0	2.5	.66	12	1.0
15	5.6	1.1	7.4	33	3.7	16	10	9.7	2.2	.69	5.4	2.2
16	3.6	1.2	6.5	18	3.5	13	9.1	7.6	1.8	.73	3.4	1.3
17	2.4	1.2	7.1	12	3.4	12	8.2	5.3	1.6	.70	2.6	.99
18	1.8	6.2	7.7	10	3.2	12	7.7	4.5	1.8	1.3	2.2	.87
19	1.6	4.8	6.0	8.9	3.0	10	6.6	4.5	2.4	2.1	2.7	.80
20	2.6	3.3	4.8	8.6	3.3	9.8	5.9	19	1.7	1.6	2.5	.70
21	1.9	3.0	10	77	5.5	10	5.6	16	1.5	1.2	2.1	1.2
22	1.7	3.3	9.8	87	5.0	10	5.5	9.0	1.3	.98	1.8	20
23	1.5	3.2	7.1	22	4.5	9.6	5.4	8.7	1.3	.83	1.4	15
24	1.4	9.8	6.2	15	13	8.9	5.0	36	1.1	.73	1.3	6.9
25	1.4	10	18	121	28	11	4.9	45	1.0	.65	1.1	4.0
26	1.4	6.5	17	67	51	11	4.5	35	.96	.57	1.1	3.1
27	3.9	4.1	11	30	78	9.6	19	19	.96	2.3	1.0	2.5
28	2.6	6.8	8.6	22	36	8.6	28	13	.94	1.0	3.3	2.0
29	2.2	6.0	6.8	17	---	7.1	16	11	.89	.91	3.6	4.8
30	1.9	10	5.7	15	---	7.8	10	9.5	.87	.73	3.7	4.5
31	1.7	---	5.2	14	---	7.5	---	9.1	---	.64	3.0	---
TOTAL	66.13	100.6	301.0	953.7	344.3	522.9	329.9	339.8	90.12	36.66	133.96	94.32
MEAN	2.13	3.35	9.71	30.8	12.3	16.9	11.0	11.0	3.00	1.18	4.32	3.14
MAX	7.4	10	27	121	78	59	28	45	7.4	5.4	24	20
MIN	.37	1.1	4.8	6.5	3.0	7.1	4.5	3.5	.87	.57	.50	.70
CFSM	.50	.78	2.26	7.18	2.87	3.94	2.56	2.56	.70	.28	1.01	.73
IN.	.57	.87	2.61	8.27	2.98	4.53	2.86	2.95	.78	.32	1.16	.82

CAL YR 1978 TOTAL 3202.96 MEAN 8.78 MAX 188 MIN .37 CFSM 2.05 IN 27.77
WTR YR 1979 TOTAL 3313.39 MEAN 9.08 MAX 121 MIN .37 CFSM 2.12 IN 28.72

01105730 INDIAN HEAD RIVER AT HANOVER, MA

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

DRAINAGE AREA.--30.3 mi² (78.5 km²).

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

Water-quality records: Water years 1970-71.

Chemical analyses: November 1969 to September 1971.

Water temperatures: November 1969 to September 1971.

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

REMARKS.--Records excellent except those for periods of no gage-height record, Dec. 2 to Jan. 3, Jan. 26, which are fair. 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.--13 years, 64.0 ft³/s (1.812 m³/s) 28.68 in/yr (728 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Mar. 18, 1968, gage height, 7.13 ft (2.173 m); minimum, 0.18 ft³/s (0.005 m³/s) July 13, 14, 1971; minimum daily, 0.23 ft³/s (0.007 m³/s) July 14, 1971.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	0245	386 10.9	4.35 1.326	Jan. 25 or 26	-	*686 19.4	a5.38 1.640
Jan. 14	1745	393 11.1	4.38 1.335	Feb. 27	0445	535 15.2	4.90 1.494
Jan. 22	1115	599 17.0	5.11 1.558	May 24	1230	318 9.01	4.05 1.234

a From peak-stage indicator.

Minimum discharge, 1.1 ft³/s (0.031 m³/s) Sept. 5; minimum daily, 3.7 ft³/s (0.10 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	19	68	62	129	185	56	78	85	32	11	15
2	4.9	20	52	85	103	160	58	65	69	37	7.0	13
3	3.7	15	45	260	94	152	112	58	60	24	18	14
4	3.9	14	70	215	82	136	109	69	58	16	168	14
5	6.2	15	84	131	74	126	106	64	79	13	128	13
6	24	13	65	93	61	119	96	53	80	10	62	31
7	34	13	53	79	55	190	79	48	61	11	36	42
8	22	13	50	240	56	293	68	45	49	10	26	25
9	15	13	130	346	57	230	86	43	44	9.2	18	21
10	13	12	170	203	52	176	156	39	40	8.9	12	18
11	10	11	120	135	47	166	123	37	35	8.4	16	15
12	9.4	11	78	96	43	157	93	35	35	8.2	70	12
13	9.1	11	66	96	40	131	77	36	33	8.0	142	11
14	17	12	62	344	36	119	74	50	30	8.9	96	12
15	38	11	57	293	35	128	87	78	28	8.8	59	25
16	29	11	52	171	34	106	79	71	24	7.3	43	18
17	20	11	55	122	32	96	71	54	23	7.0	38	11
18	16	27	60	102	28	89	66	45	21	6.8	31	11
19	15	38	50	90	28	82	60	43	24	23	32	12
20	19	27	40	85	29	79	56	103	22	24	30	6.4
21	16	23	74	242	31	77	52	111	20	15	26	7.8
22	13	24	72	556	43	74	49	75	18	13	24	75
23	14	25	58	311	47	69	47	74	16	15	21	91
24	14	43	50	180	92	66	45	297	14	8.2	16	55
25	14	65	110	499	187	74	43	283	14	7.1	9.5	37
26	12	45	100	600	313	86	42	244	16	6.6	18	30
27	21	33	82	373	497	69	94	180	12	7.1	12	26
28	24	56	60	254	290	60	182	133	8.5	9.5	17	23
29	23	56	50	196	---	57	134	116	9.7	8.9	30	23
30	21	65	46	163	---	55	99	103	12	7.4	24	27
31	19	---	42	144	---	56	---	111	---	7.2	27	---
TOTAL	505.9	752	2171	6766	2620	3663	2499	2841	1040.2	386.5	1267.5	734.2
MEAN	16.3	25.1	70.0	218	93.6	118	83.3	91.6	34.7	12.5	40.9	24.5
MAX	38	65	170	600	497	293	182	297	85	37	168	91
MIN	3.7	11	40	62	28	55	42	35	8.5	6.6	7.0	6.4
CFSM	.54	.83	2.31	7.20	3.09	3.89	2.75	3.02	1.15	.41	1.35	.81
IN.	.62	.92	2.67	8.31	3.22	4.50	3.07	3.49	1.28	.47	1.56	.90

CAL YR 1978 TOTAL 22931.5 MEAN 62.8 MAX 746 MIN 3.7 CFSM 2.07 IN 28.15
WTR YR 1979 TOTAL 25246.3 MEAN 69.2 MAX 600 MIN 3.7 CFSM 2.28 IN 30.99

01105870 JONES RIVER AT KINGSTON, MA

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

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

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

Water-quality records: Water years 1970-71.

Chemical analyses: November 1969 to September 1971.

Water temperatures: November 1969 to September 1971.

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

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

AVERAGE DISCHARGE.--13 years, 32.0 ft³/s (0.906 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 205 ft³/s (5.81 m³/s) Aug. 4, gage height, 4.03 ft (1.228 m); maximum gage height, 4.72 ft (1.439 m) Jan. 25, backwater from tide; minimum daily discharge, 10 ft³/s (0.28 m³/s) Oct. 4, Nov. 14-17, July 23-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	14	39	13	65	93	41	32	46	29	14	26
2	17	13	32	23	58	77	38	26	39	36	12	25
3	15	13	29	66	55	68	46	26	32	28	14	22
4	10	12	29	66	47	61	51	28	29	23	148	22
5	11	12	34	53	46	58	51	32	38	19	169	22
6	22	13	34	42	38	61	51	32	41	15	106	31
7	25	13	32	38	36	73	46	28	38	15	60	49
8	25	12	28	61	36	91	41	26	29	15	42	51
9	21	11	47	88	44	91	39	28	25	14	32	39
10	17	11	75	79	41	81	56	28	22	13	32	32
11	15	11	66	61	39	73	58	25	21	13	31	28
12	15	12	51	46	32	72	49	22	19	13	49	25
13	12	11	42	42	34	65	39	32	19	12	81	22
14	12	10	32	99	31	55	34	68	18	11	73	18
15	18	10	25	100	23	53	38	68	18	11	56	17
16	18	10	25	79	26	46	38	63	15	11	41	13
17	18	10	25	61	25	41	32	47	15	11	34	14
18	18	15	21	51	21	39	29	36	28	11	28	13
19	19	18	26	47	25	31	26	28	61	12	26	12
20	19	18	17	47	23	31	22	36	42	12	26	12
21	19	18	15	79	25	31	19	44	29	11	26	12
22	18	23	17	140	32	31	18	39	25	11	25	42
23	15	26	18	118	39	31	18	34	21	10	22	53
24	13	29	17	93	51	31	17	106	18	10	19	38
25	14	32	23	145	93	31	15	131	15	10	19	32
26	14	29	28	176	120	38	14	131	13	11	19	29
27	23	25	26	138	162	42	28	102	12	47	19	23
28	26	31	19	116	121	39	65	81	12	42	22	19
29	21	34	18	97	---	38	53	72	13	32	26	19
30	18	39	14	84	---	36	39	63	13	26	29	19
31	15	---	13	77	---	39	---	55	---	19	29	---
TOTAL	540	535	917	2425	1388	1647	1111	1569	766	553	1329	779
MEAN	17.4	17.8	29.6	78.2	49.6	53.1	37.0	50.6	25.5	17.8	42.9	26.0
MAX	26	39	75	176	162	93	65	131	61	47	169	53
MIN	10	10	13	13	21	31	14	22	12	10	12	12
CAL YR 1978	TOTAL	12105.0	MEAN	33.2	MAX	184	MIN	6.7				
WTR YR 1979	TOTAL	13559.0	MEAN	37.1	MAX	176	MIN	10				

HERRING RIVER BASIN

01105880 HERRING RIVER AT NORTH HARWICH, MA

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

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

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

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

REMARKS.--Records good. 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.--13 years, 10.5 ft³/s (0.297 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 59 ft³/s (1.67 m³/s) Sept. 3, 1972, gage height, 4.43 ft (1.350 m), from rating curve extended above 23 ft³/s (0.65 m³/s) and Aug. 7, 1978, gage height, 3.56 ft (1.085 m), from rating curve extended above 18 ft³/s (0.51 m³/s); maximum gage height, 4.88 ft (1.487 m) June 6, 1967; minimum discharge, 0.43 ft³/s (0.012 m³/s) Sept. 11, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 40 ft³/s (1.13 m³/s) May 26, July 12, from rating curve extended above 18 ft³/s (0.51 m³/s); maximum gage height, 3.23 ft (0.985 m) May 26; minimum discharge not determined; minimum daily, 2.3 ft³/s (0.065 m³/s) Nov. 10-17, Dec. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	9.2	9.8	6.7	16	13	15	17	21	12	10	8.6
2	3.6	8.9	5.5	9.2	15	14	15	16	19	14	10	8.3
3	3.6	8.6	2.3	11	14	15	17	15	19	15	9.8	8.3
4	3.8	8.3	3.0	10	13	15	17	16	19	14	9.2	7.5
5	4.0	8.0	4.2	9.5	13	15	17	16	20	16	9.2	6.2
6	4.8	8.0	4.4	9.2	12	20	16	15	20	16	9.2	7.5
7	5.5	7.8	6.5	9.1	11	26	16	15	20	13	8.9	8.0
8	5.5	7.8	11	10	12	27	15	15	19	9.5	8.3	8.0
9	6.2	4.7	13	10	12	26	16	15	18	7.0	8.3	8.0
10	5.7	2.3	15	9.6	11	25	18	15	17	12	8.3	7.8
11	6.5	2.3	13	8.9	11	24	17	15	17	17	8.3	7.5
12	6.2	2.3	13	8.1	11	23	16	14	17	25	10	7.5
13	6.2	2.3	12	8.4	11	22	16	16	16	14	12	7.5
14	7.2	2.3	12	8.4	11	20	15	18	19	11	11	8.9
15	8.6	2.3	11	4.4	10	20	15	20	17	4.2	8.0	7.2
16	8.3	2.3	11	4.5	11	18	15	23	16	4.8	4.3	4.6
17	8.0	2.3	10	4.7	11	17	15	22	16	5.3	8.0	4.6
18	7.8	3.4	10	6.1	10	16	15	22	15	5.5	8.3	5.5
19	7.8	4.0	9.5	6.0	10	16	15	22	15	5.7	10	5.3
20	7.8	4.0	9.2	6.0	10	16	14	22	14	6.2	8.9	6.2
21	13	4.0	9.2	10	11	15	14	21	14	6.7	7.2	7.5
22	15	3.8	7.2	9.8	12	14	14	19	14	7.2	7.5	8.0
23	14	6.7	3.8	9.8	8.6	14	14	19	14	7.2	7.5	8.0
24	13	9.8	3.6	9.8	6.7	14	13	25	14	7.5	7.5	6.7
25	12	10	3.8	16	11	10	13	25	13	7.8	8.3	7.0
26	11	9.5	3.8	21	14	16	13	28	12	8.3	7.8	6.7
27	11	8.9	3.8	20	15	16	14	24	12	10	5.5	4.1
28	11	8.9	3.8	19	14	15	16	21	12	9.8	7.8	2.9
29	10	8.9	3.8	18	---	16	16	20	12	9.8	10	6.5
30	9.8	9.5	3.6	17	---	15	17	22	12	10	9.5	6.7
31	9.5	---	3.6	16	---	15	---	22	---	10	9.5	---
TOTAL	250.0	181.1	235.4	326.2	327.3	554	459	595	483	321.5	268.1	207.1
MEAN	8.06	6.04	7.59	10.5	11.7	17.9	15.3	19.2	16.1	10.4	8.65	6.90
MAX	15	10	15	21	16	27	18	28	21	25	12	8.9
MIN	3.6	2.3	2.3	4.4	6.7	13	13	14	12	4.2	4.3	2.9
CAL YR 1978	TOTAL	4816.5	MEAN	13.2	MAX	31	MIN	2.3				
WTR YR 1979	TOTAL	4207.7	MEAN	11.5	MAX	28	MIN	2.3				

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01108500 WADING RIVER AT WEST MANSFIELD, MA

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

DRAINAGE AREA. -- 19.2 mi² (49.7 km²).

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

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

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

REMARKS.--Records good except those for February and those for periods of no gage-height record, Oct. 16 to Nov. 16, Apr. 4 to May 14, which are fair. 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, -- 26 years, 33.0 ft³/s (0.935 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 374 ft³/s (10.6 m³/s) Jan. 26, gage height, 5.87 ft (1.789 m); minimum daily, 2.2 ft³/s (0.062 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	6.3	23	44	127	95	45	72	52	10	5.5	19
2	2.9	6.0	20	57	113	92	46	66	46	12	4.5	18
3	2.7	5.8	19	98	103	90	57	58	41	11	9.4	17
4	2.7	5.7	24	96	95	86	66	60	39	9.0	35	15
5	3.3	5.6	33	85	78	83	70	60	41	7.7	42	12
6	5.3	5.4	33	81	68	82	64	56	42	7.1	38	19
7	5.3	5.2	30	82	61	113	58	50	41	6.3	32	29
8	4.7	5.1	29	123	59	117	55	46	38	5.8	26	26
9	4.1	5.0	41	160	56	108	56	43	37	5.0	20	21
10	3.7	4.9	58	145	50	105	64	40	37	4.5	16	17
11	3.6	4.8	56	125	45	106	60	37	33	4.0	15	15
12	3.3	4.7	47	100	40	97	56	34	31	3.9	25	12
13	3.1	4.5	42	100	38	86	54	36	28	3.9	42	9.5
14	9.6	4.2	40	150	36	83	52	41	25	3.3	47	9.7
15	13	3.9	37	160	34	79	58	45	23	5.3	40	13
16	12	3.7	35	140	32	75	56	45	22	14	32	12
17	11	3.8	34	120	30	69	54	41	19	14	27	10
18	9.4	8.4	36	105	28	65	53	37	18	13	22	8.7
19	8.5	8.3	33	93	26	61	56	36	18	14	20	7.3
20	9.7	7.0	27	89	25	60	52	37	16	14	19	5.9
21	9.2	6.5	31	160	27	57	46	35	14	11	16	6.2
22	8.5	6.2	34	252	30	54	43	31	13	8.8	14	30
23	8.0	5.8	33	229	35	51	40	31	12	9.0	12	38
24	7.6	7.8	31	221	49	48	37	53	11	8.3	11	36
25	7.2	9.7	48	322	79	55	34	72	10	6.9	11	31
26	6.8	9.3	60	361	102	58	33	76	8.9	5.5	10	28
27	8.0	8.5	54	320	123	52	50	71	8.1	11	9.5	24
28	8.0	13	45	265	105	48	96	65	7.7	10	13	21
29	7.7	14	40	214	---	48	86	60	7.3	8.8	16	22
30	7.2	21	38	179	---	47	78	59	6.9	7.7	17	25
31	6.7	---	41	151	---	45	---	59	---	6.2	19	---
TOTAL	205.0	210.1	1152	4827	1694	2315	1675	1552	745.9	261.0	665.9	557.3
MEAN	6.61	7.00	37.2	156	60.5	74.7	55.8	50.1	24.9	8.42	21.5	18.6
MAX	13	21	60	361	127	117	96	76	52	14	47	38
MIN	2.2	3.7	19	44	25	45	33	31	6.9	3.3	4.5	5.9
CAL YR 1978	TOTAL	14229.9	MEAN	39.0	MAX	275	MIN	1.0				
WTR YR 1979	TOTAL	15860.2	MEAN	43.5	MAX	361	MIN	2.2				

01109060 THREEMILE RIVER AT NORTH DIGHTON, MA

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

DRAINAGE AREA.--83.8 mi² (217.0 km²).

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

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

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

AVERAGE DISCHARGE.--13 years, 179 ft³/s (5.069 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,490 ft³/s (70.5 m³/s) Mar. 19, 1968, gage height, 8.30 ft (2.530 m); minimum, 5.3 ft³/s (0.15 m³/s) Aug. 27, 1974.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 9	1830	773 21.9	5.13 1.564	Feb. 28	1400	821 23.3	5.24 1.597
Jan. 15	1500	843 23.9	5.29 1.612	Mar. 8	1800	790 22.4	5.17 1.576
Jan. 23	1330	1310 37.1	6.27 1.911	May 25	1530	760 21.5	5.10 1.554
Jan. 26	1800	*1730 49.0	7.04 2.146				

Minimum discharge, 21 ft³/s (0.59 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	40	95	148	562	644	191	391	322	53	37	90
2	22	37	92	208	459	557	194	342	293	60	35	81
3	22	36	84	384	381	511	233	298	262	56	37	73
4	22	35	92	507	379	473	266	282	238	49	290	68
5	22	35	114	447	344	434	291	270	232	45	526	63
6	56	35	117	367	281	409	303	254	230	41	352	78
7	59	35	114	333	257	525	283	230	214	39	217	106
8	49	35	106	455	240	747	258	206	195	37	171	126
9	43	34	156	696	204	713	248	190	178	35	135	126
10	40	32	222	719	212	586	275	177	165	34	114	111
11	36	31	235	561	223	536	292	161	152	34	115	100
12	33	31	203	467	190	510	272	151	150	34	173	90
13	30	30	164	438	165	460	244	161	148	32	232	85
14	42	30	146	613	150	415	229	193	135	30	282	82
15	72	30	131	754	142	398	233	220	122	33	287	88
16	68	28	120	673	135	367	241	221	101	42	238	90
17	62	26	115	522	129	333	242	207	85	43	191	88
18	51	47	117	451	119	309	234	186	80	46	158	81
19	47	62	107	364	114	288	222	170	74	47	140	77
20	50	56	112	360	115	268	216	166	66	44	129	72
21	51	52	122	536	119	253	202	166	65	43	119	72
22	48	50	144	1000	146	242	185	164	58	42	106	160
23	45	48	150	1260	162	231	174	177	49	39	94	205
24	42	51	140	953	231	218	163	522	45	36	85	230
25	37	58	166	1180	345	218	156	706	41	36	77	191
26	35	53	198	1650	576	230	148	706	38	35	73	160
27	45	48	232	1560	767	235	250	605	37	51	68	142
28	49	60	200	1180	776	225	436	485	41	49	72	129
29	47	72	177	953	---	208	520	404	41	50	65	122
30	44	88	162	777	---	198	456	355	40	44	72	119
31	42	---	152	649	---	192	---	322	---	40	100	---
TOTAL	1332	1305	4485	21165	7923	11933	7657	9088	3897	1299	4790	3305
MEAN	43.0	43.5	145	683	283	385	255	293	130	41.9	155	110
MAX	72	88	235	1650	776	747	520	706	322	60	526	230
MIN	21	26	84	148	114	192	148	151	37	30	35	63
CAL YR 1978	TOTAL	67880	MEAN 186	MAX 1530	MIN 21							
WTR YR 1979	TOTAL	78179	MEAN 214	MAX 1650	MIN 21							

TAUNTON RIVER BASIN

01109070 SEGREGANSET RIVER NEAR DIGHTON, MA

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

DRAINAGE AREA.--10.6 mi² (27.5 km²).

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

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

REMARKS.--Records good except those for period of no gage-height record, Dec. 26 to Mar. 12, which are poor. Occasional regulation by ponds upstream. Diversion for Dighton Water District. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--13 years, 23.3 ft³/s (0.660 m³/s), 29.85 in/yr (758 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 867 ft³/s (24.6 m³/s) Mar. 18, 1968, gage height, 7.51 ft (2.289 m); no flow Aug. 13-22, 1966, Oct. 2, 3, 1968, Sept. 5, 6, 1969, Aug. 14-30, 1974.

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	-	254 7.19	a4.51 1.375	Feb. 27	-	360 10.2	b5.10 1.554
Jan. 9	-	250 7.08	a4.49 1.369	Mar. 8	-	182 5.15	b4.07 1.241
Jan. 14	-	300 8.5	-	Apr. 28	0845	181 5.13	4.06 1.237
Jan. 22	-	399 11.3	b5.30 1.615	May 24	1930	349 9.88	5.05 1.539
Jan. 26	-	*514 14.6	b5.84 1.780				

a From floodmark.

b From peak-stage indicator.

Minimum discharge not determined; minimum daily, 0.40 ft³/s (0.011 m³/s) Oct. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	5.3	27	28	41	60	14	41	26	2.4	.72	9.1
2	.70	4.8	22	50	34	50	14	32	21	3.0	.59	6.4
3	.40	4.8	16	190	29	44	18	25	18	2.1	.48	5.1
4	.43	4.6	22	150	26	39	36	27	18	1.7	19	4.4
5	.84	7.8	34	70	23	35	33	28	29	1.3	33	3.6
6	4.5	11	32	40	20	32	36	23	27	1.2	16	4.8
7	12	5.3	23	30	18	76	28	19	22	1.1	8.1	8.7
8	7.0	4.4	18	120	18	150	22	17	15	.96	6.6	7.5
9	4.2	4.2	54	220	17	100	25	15	13	.96	6.1	5.3
10	2.7	3.8	117	100	16	70	52	13	11	.96	5.1	4.2
11	2.3	3.6	74	54	15	55	49	11	9.7	.80	5.8	3.6
12	2.1	3.6	44	35	14	51	32	10	11	.80	27	2.7
13	2.1	3.6	30	35	13	43	24	16	11	.72	52	2.5
14	4.2	3.4	28	180	12	38	23	47	8.4	.59	42	2.4
15	14	3.6	25	85	11	43	32	56	6.9	.65	25	2.4
16	12	3.6	22	55	10	38	39	47	5.8	.65	14	2.8
17	8.1	3.6	22	47	9.8	32	27	32	5.1	.65	9.1	2.7
18	5.8	9.1	22	39	9.8	28	24	22	4.2	.65	6.9	2.5
19	5.1	14	19	33	9.8	24	18	18	3.6	1.9	6.4	2.1
20	5.8	10	16	30	11	23	16	17	2.7	2.1	6.6	1.9
21	5.8	7.8	22	90	13	21	17	17	2.4	1.4	6.1	1.9
22	5.3	7.7	28	350	17	20	16	16	1.9	1.1	5.1	32
23	4.6	6.1	25	150	25	18	14	24	1.6	.80	4.4	46
24	4.6	7.8	20	100	35	15	14	294	1.2	.65	3.8	28
25	4.6	10	37	260	66	15	12	305	1.1	.53	3.2	16
26	4.4	8.7	34	400	160	20	12	199	1.0	.43	2.8	10
27	10	6.4	28	180	300	20	56	104	.96	.65	2.5	8.1
28	12	11	22	115	130	18	166	60	.88	.72	2.5	6.6
29	9.4	14	19	70	---	16	98	47	.88	.80	3.8	6.1
30	6.9	24	17	60	---	15	54	37	.80	.72	5.3	6.1
31	5.8	---	16	48	---	15	---	32	---	.72	11	---
TOTAL	168.97	217.6	935	3414	1103.4	1224	1021	1651	281.12	33.71	340.99	245.5
MEAN	5.45	7.25	30.2	110	39.4	39.5	34.0	53.3	9.37	1.09	11.0	8.18
MAX	14	24	117	400	300	150	166	305	29	3.0	52	46
MIN	.40	3.4	16	28	9.8	15	12	10	.80	.43	.48	1.9
CFSM	.51	.68	2.85	10.4	3.72	3.73	3.21	5.03	.88	.10	1.04	.77
IN.	.59	.76	3.28	11.98	3.87	4.30	3.58	5.79	.99	.12	1.20	.86

CAL YR 1978	TOTAL	8542.24	MEAN	23.5	MAX	407	MIN	.14	CFSM	2.22	IN	30.12
WTR YR 1979	TOTAL	10636.29	MEAN	29.1	MAX	400	MIN	.40	CFSM	2.75	IN	37.32

01110000 QUINSIGAMOND RIVER AT NORTH GRAFTON, MA

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

DRAINAGE AREA.--25.5 mi² (66.0 km²).

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

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

REMARKS.--Records good. Some regulation by Lake Quinsigamond 2.3 mi (3.7 km) upstream and by ponds above station. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 41.4 ft³/s (1.172 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 652 ft³/s (18.5 m³/s) Jan. 26, gage height, 4.59 ft (1.399 m); minimum daily, 0.55 ft³/s (0.016 m³/s) Feb. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	4.8	15	23	191	20	51	64	77	14	20	42
2	1.3	4.6	14	39	155	41	50	54	68	15	18	36
3	1.1	4.0	13	66	135	77	59	48	60	14	18	32
4	.98	4.0	17	58	117	78	62	53	55	11	23	29
5	2.6	4.2	20	53	100	86	68	49	52	9.5	18	25
6	22	3.9	19	48	69	132	68	45	52	7.8	15	26
7	28	3.7	17	45	87	247	69	42	46	6.6	12	33
8	23	4.0	17	123	77	201	59	40	41	6.2	9.3	29
9	19	3.8	28	146	56	138	61	38	38	5.6	7.4	25
10	16	3.4	37	120	3.9	100	79	36	36	4.6	8.6	23
11	13	3.3	32	95	2.9	133	77	33	33	4.3	19	23
12	11	3.3	28	77	2.9	154	71	31	36	4.7	43	23
13	9.8	2.7	25	67	2.0	103	63	33	32	4.7	86	23
14	14	2.3	24	93	1.7	87	61	38	28	3.9	82	24
15	18	3.1	21	86	1.5	89	64	43	25	4.3	69	33
16	13	2.4	20	72	1.5	76	64	45	23	12	56	32
17	12	2.3	20	64	1.3	69	62	40	20	101	45	30
18	9.7	7.6	20	59	1.2	66	59	36	28	85	38	29
19	8.6	7.2	15	53	.94	62	56	33	49	69	36	30
20	10	5.9	13	47	.65	59	52	35	40	54	32	28
21	8.8	5.8	20	112	.55	56	49	36	33	42	29	28
22	7.9	6.1	21	199	1.0	54	46	34	28	34	25	41
23	7.3	5.8	20	161	1.8	51	43	33	24	27	21	47
24	6.9	8.8	18	136	2.9	49	40	53	21	23	19	44
25	4.6	11	25	460	6.7	61	38	86	17	19	19	41
26	4.2	7.7	25	622	12	67	37	119	14	16	34	39
27	9.0	7.0	22	531	16	65	50	106	12	39	32	37
28	7.6	8.6	20	426	18	55	82	87	11	39	52	35
29	6.7	8.2	17	344	---	50	95	78	10	34	52	42
30	5.7	15	16	280	---	51	78	81	10	29	52	46
31	4.9	---	15	227	---	51	---	87	---	24	50	---
TOTAL	307.42	164.5	634	4932	1066.44	2628	1813	1636	1019	763.2	1040.3	975
MEAN	9.92	5.48	20.5	159	38.1	84.8	60.4	52.8	34.0	24.6	33.6	32.5
MAX	28	15	37	622	191	247	95	119	77	101	86	47
MIN	.74	2.3	13	23	.55	20	37	31	10	3.9	7.4	23
CAL YR 1978	TOTAL	13659.54	MEAN	37.4	MAX	244	MIN	.72				
WTR YR 1979	TOTAL	16978.86	MEAN	46.5	MAX	622	MIN	.55				

01111200 WEST RIVER BELOW WEST HILL DAM, NEAR UXBRIDGE, MA

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

DRAINAGE AREA.--27.9 mi² (72.3 km²).

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

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

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

AVERAGE DISCHARGE.--17 years, 46.2 ft³/s (1.308 m³/s), 22.49 in/yr (571 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 435 ft³/s (12.3 m³/s) Feb. 1, 1979, gage height, 3.69 ft (1.125 m); maximum gage height, about 3.99 ft (1.216 m) Jan. 31, 1978, ice jam; no flow for part of Aug. 17, 1967, caused by unusual regulation; minimum daily discharge, 1.1 ft³/s (0.031 m³/s) Sept. 12, 1963, Aug. 12, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 435 ft³/s (12.3 m³/s) Feb. 1, gage height, 3.69 ft (1.125 m); minimum, 4.8 ft³/s (0.14 m³/s) Oct. 1, July 14, 15; minimum daily, 4.9 ft³/s (0.14 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	9.7	26	32	409	120	64	157	82	9.6	18	30
2	6.2	9.4	24	58	404	94	54	114	66	11	16	25
3	6.5	9.4	22	112	385	96	77	83	57	10	14	23
4	6.5	8.7	22	152	364	111	82	73	51	9.1	14	22
5	6.7	8.4	34	134	362	128	94	71	48	8.1	14	21
6	12	8.1	36	103	349	71	97	65	46	7.4	15	21
7	24	8.1	32	84	318	5.8	87	58	44	7.0	14	25
8	18	7.8	31	117	279	148	77	52	37	6.8	12	23
9	12	7.8	38	208	236	299	71	48	34	6.1	11	17
10	10	7.5	62	217	118	273	83	45	31	5.9	9.8	14
11	9.4	7.0	69	174	68	250	103	40	28	5.9	13	13
12	8.7	7.0	58	123	57	221	101	36	26	5.7	34	13
13	7.8	7.3	49	97	52	184	88	37	26	5.6	88	16
14	9.4	7.0	42	141	47	154	78	41	23	4.9	134	17
15	17	6.7	37	189	41	132	77	51	21	12	127	19
16	17	6.7	33	166	39	113	77	55	19	56	94	19
17	14	6.7	30	128	36	97	77	51	17	95	67	16
18	12	14	29	103	32	86	72	43	16	179	48	14
19	11	17	26	92	29	80	66	39	22	158	39	14
20	11	14	25	78	28	75	60	38	21	106	37	15
21	11	12	28	48	29	71	56	42	16	65	32	19
22	11	12	39	14	41	66	50	43	14	41	28	28
23	11	11	37	191	46	65	50	39	12	28	26	30
24	10	11	33	194	29	65	45	63	11	22	20	21
25	9.4	14	36	17	10	71	44	111	10	20	18	16
26	9.4	15	48	20	107	83	43	169	9.6	17	17	14
27	11	13	45	157	195	86	49	184	9.2	24	18	12
28	14	13	38	298	194	80	71	162	9.0	33	25	10
29	14	13	32	355	---	71	84	126	8.6	33	33	14
30	11	19	27	388	---	65	150	103	8.0	28	37	18
31	10	---	26	402	---	64	---	96	---	22	38	---
TOTAL	346.0	311.3	1114	4592	4304	3524.8	2227	2335	822.4	1042.1	1110.8	559
MEAN	11.2	10.4	35.9	148	154	114	74.2	75.3	27.4	33.6	35.8	18.6
MAX	24	19	69	402	409	299	150	184	82	179	134	30
MIN	5.0	6.7	22	14	10	5.8	43	36	8.0	4.9	9.8	10
(†)	1.3	1.7	2.0	268.9	24.9	4.4	31.5	5.5	1.1	2.0	2.6	2.0
MEAN†	11.3	10.5	36.0	248	52.9	106	84.7	65.6	25.7	34.0	36.1	18.4
CFSM†	.41	.38	1.29	8.89	1.90	3.80	3.04	2.35	.92	1.22	1.29	.66
IN.†	.47	.42	1.49	10.24	1.97	4.38	3.39	2.71	1.03	1.40	1.49	.74

CAL YR 1978	TOTAL	18370.8	MEAN	50.3	MAX	390	MIN	3.9	MEAN†	50.3	CFSM†	1.80	IN†	24.47
WTR YR 1979	TOTAL	22288.4	MEAN	61.1	MAX	409	MIN	4.9	MEAN†	61.1	CFSM†	2.19	IN†	29.73

† Monthend contents, in millions of cubic feet, in West Hill Reservoir, records furnished by Corps of Engineers.

† Adjusted for change in contents in West Hill Reservoir.

01111230 BLACKSTONE RIVER AT MILLVILLE, MA

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

DRAINAGE AREA.--277 mi² (717 km²).

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1969 to current year.

pH: July 1969 to current year.

WATER TEMPERATURES: July 1969 to current year.

DISSOLVED OXYGEN: July 1969 to current year.

INSTRUMENTATION.--Water-quality monitor since July 1969.

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. No winter record in water years 1973, 1977-1979.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 1,000 micromhos May 30, June 3, 5, 1975; minimum recorded, 49 micromhos June 30, 1973.

pH: Maximum recorded, 9.3 units Sept. 10, 1976; minimum recorded, 4.3 units Sept. 6, 1973.

WATER TEMPERATURES: Maximum recorded, 29.0°C July 29, 1970, July 21, 1977, July 23, 1978; minimum recorded, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 14.9 mg/L Feb. 25, 1971; minimum recorded, 0.0 mg/L July 12, 15-20, 26-30, Aug. 2, 3, 1971.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 599 micromhos Nov. 30; minimum recorded, 103 micromhos May 25.

pH: Maximum recorded, 7.5 units Aug. 9; minimum recorded, 5.8 units on several days during October and July.

WATER TEMPERATURES: Maximum recorded, 28.0°C Aug. 2; minimum recorded, 1.0°C Nov. 27, 28.

DISSOLVED OXYGEN: Maximum recorded, 13.3 mg/L Nov. 29; minimum recorded, 3.0 mg/L Oct. 6.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (NTU)	COLOR (PLAT- INUM- COBALT UNITS)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)
NOV										
06...	1400	280	252	6.2	11.0	3.0	40	9.5	86	15000
DEC										
13...	0845	431	280	6.3	1.5	--	30	13.1	93	6700
JAN										
03...	0930	1370	210	6.2	4.5	20	--	12.3	95	--
FEB										
15...	0845	--	250	6.3	.5	3.0	--	14.3	99	--
MAR										
07...	0915	2830	153	6.3	4.5	15	30	11.7	90	5600
APR										
04...	1315	720	197	6.7	7.0	4.0	--	11.8	97	--
24...	0800	405	230	6.5	12.5	2.0	--	8.9	83	--
MAY										
02...	0900	860	173	6.8	14.5	2.0	--	8.9	87	--
15...	1215	--	215	6.2	17.5	4.0	--	6.4	66	--
JUN										
07...	1230	572	195	6.8	19.5	4.0	20	7.8	84	37 130000
18...	1200	246	255	6.5	24.5	5.0	--	6.6	78	--
JUL										
10...	0915	285	320	6.6	21.5	2.0	--	9.2	103	--
25...	1400	200	270	6.8	26.5	4.0	--	9.1	112	--
AUG										
09...	0900	240	300	6.4	22.0	3.0	--	7.2	82	--
22...	0700	570	247	6.3	20.0	4.0	--	7.5	82	--
SEP										
18...	0815	280	248	6.3	18.5	5.0	20	7.5	79	17 --

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 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)
NOV 06...	--	K140	K140	K30	37	--	12	1.8	26	3.3
DEC 13...	--	--	--	--	35	16	11	1.9	32	2.8
JAN 03...	5.0	K1900	K1400	K2700	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--
MAR 07...	3.0	K26000	7600	8400	21	7	6.5	1.1	20	1.9
APR 04...	--	--	--	--	--	--	--	--	--	--
24...	--	--	600	25	36	17	11	2.0	26	2.6
MAY 02...	2.0	1600	480	44	--	--	--	--	--	--
15...	--	--	3700	1200	35	24	11	1.8	24	3.0
JUN 07...	--	--	--	--	34	23	11	1.7	20	2.3
18...	--	--	K220	--	44	36	14	2.2	30	3.0
JUL 10...	2.0	5200	61	42	--	--	--	--	--	--
25...	--	--	270	18	49	20	16	2.3	32	3.5
AUG 09...	--	--	--	--	--	--	--	--	--	--
22...	--	--	100	78	43	25	14	2.0	21	3.2
SEP 18...	1.0	15000	130	58	41	24	13	2.1	29	3.4

DATE	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDE (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)
NOV 06...	12	--	26	40	--	--	--	--	0	158
DEC 13...	19	--	20	52	--	--	--	--	0	162
JAN 03...	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--
MAR 07...	14	--	11	30	--	--	--	--	15	99
APR 04...	--	--	--	--	--	--	--	--	--	--
24...	19	--	17	43	.1	4.8	134	118	--	--
MAY 02...	--	--	--	--	--	--	--	--	--	--
15...	11	--	16	39	.1	5.3	122	107	--	--
JUN 07...	11	--	16	35	--	--	--	--	11	128
18...	8	--	18	47	.2	5.8	164	126	--	--
JUL 10...	--	--	--	--	--	--	--	--	--	--
25...	29	10	19	50	.1	6.3	158	147	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--
22...	18	18	19	43	.1	6.5	148	120	--	--
SEP 18...	17	--	17	43	.2	4.6	158	130	7	166

K, NON-IDEAL COLONY COUNT.

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)
NOV										
06...	1.8	.03	1.8	.61	.49	1.1	--	--	2.9	.16
DEC										
13...	.70	.01	.71	1.1	.80	1.9	--	--	2.6	.27
JAN										
03...	.62	.01	.63	.60	1.8	2.4	--	--	3.0	.56
FEB										
15...	.54	.03	.57	1.7	.70	2.4	--	--	3.0	.28
MAR										
07...	.34	.02	.36	.42	.68	1.1	--	--	1.5	.23
APR										
04...	.52	.02	.54	.98	.62	1.6	--	--	2.1	.23
24...	--	--	.58	.89	.41	1.3	.30	1.0	1.9	.29
MAY										
02...	.42	.02	.44	.53	.31	.84	--	--	1.3	.19
15...	--	--	1.1	.82	.58	1.4	.10	1.3	2.5	.28
JUN										
07...	.94	.05	.99	.28	.63	.91	--	--	1.9	.25
18...	--	--	2.0	.08	.68	.76	.00	.76	2.8	.25
JUL										
10...	3.7	.08	3.8	.07	.78	.85	--	--	4.7	.32
25...	--	--	2.2	.00	.95	.95	.12	.83	3.2	.35
AUG										
09...	2.6	.00	2.6	.03	.95	.98	--	--	3.6	.43
22...	--	--	2.1	.01	.93	.94	.74	.20	3.0	.33
SEP										
18...	1.6	.00	1.6	.04	.77	.81	.26	.55	2.4	.31

DATE	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC SUS- PENDED TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV										
06...	--	0	6.0	--	--	0	--	--	--	--
DEC										
13...	--	--	7.1	--	--	--	0	--	--	--
JAN										
03...	--	--	--	--	--	--	--	--	--	--
FEB										
15...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	--	--	6.4	--	--	--	1	--	--	--
APR										
04...	--	--	--	--	--	--	--	--	--	--
24...	.15	--	4.9	--	--	--	--	8	8.7	100
MAY										
02...	--	--	--	--	--	--	--	--	--	--
15...	.14	--	5.0	--	--	--	--	14	--	100
JUN										
07...	--	2	5.3	--	--	--	2	--	--	--
18...	.08	--	6.2	.9	4.8	--	--	5	3.3	100
JUL										
10...	--	--	--	--	--	--	--	--	--	--
25...	.19	--	11	--	--	--	--	9	4.9	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
22...	.06	--	--	--	--	--	--	79	122	--
SEP										
18...	.17	4	6.1	.4	5.6	--	0	8	6.0	--

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC SUS- PENDE TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)
NOV 06...	--	11000	1	--	--	3	0	--	--	240	0
MAR 07...	90	1600	2	--	--	0	0	--	--	20	0
JUN 18...	--	--	6	--	2	--	0	0	20	--	--
SEP 18...	--	--	4	0	4	0	0	0	20	--	--

DATE	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE 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 CH)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CH)	CHRO- MIUM, DIS- SOLVED (UG/L AS CH)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CH)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
NOV 06...	<10	160	--	--	--	80	<10	--	--	450	2
MAR 07...	0	60	--	--	--	<10	20	--	--	10	0
JUN 18...	--	--	3	0	5	--	10	0	10	--	1
SEP 18...	--	--	3	2	1	<10	20	10	<10	20	0

DATE	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)
NOV 06...	--	--	<10	38	--	--	640	800	--	--	44000
MAR 07...	--	--	<10	--	--	--	30	1800	--	--	2700
JUN 18...	1	0	--	28	14	14	--	1200	870	330	--
SEP 18...	0	0	<10	24	10	14	30	920	--	180	5000

DATE	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE 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 TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)
NOV 06...	25	--	--	260	0	110	--	--	2300	<.5	--
MAR 07...	51	--	--	40	0	160	--	--	40	<.5	--
JUN 18...	18	12	6	--	--	150	10	140	--	<.5	.0
SEP 18...	14	11	3	40	--	60	10	50	60	<.5	<.0

DATE	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS MO)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, SUS- PENDE RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G AS SE)
NOV 06...	--	.91	--	<10	93	200	0	--	--	1
MAR 07...	--	.02	0	0	1	<10	0	--	--	0
JUN 18...	<.5	--	--	--	--	--	0	0	0	--
SEP 18...	<.5	.00	--	--	--	--	0	0	0	0

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

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
NOV 06...	--	--	--	<10	100	70	200	--	--	2000
MAR 07...	0	--	--	<10	80	10	50	--	--	50
JUN 18...	0	0	0	--	--	--	60	0	70	--
SEP 18...	0	0	0	--	--	--	70	40	30	80

DATE	PCB, TOTAL (UG/L)	PCB, 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)
NOV 06...	.0	50	.00	.00	.0	.0	2	.00	1.3	.00
SEP 18...	.1	25	.00	.00	.0	.0	5	.00	2.0	.00

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)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 06...	.0	.00	.5	.01	3.0	.00	.00	.0	.00	.0
SEP 18...	2.0	.00	1.4	.00	4.1	.00	.00	.0	.00	.3

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE, TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 06...	.00	.0	.00	.0	--	.0	--	.00	0	0
SEP 18...	.00	.0	.00	.0	.00	.0	.00	.00	0	0

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

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PERIPHYTON

Dates of exposure	Length of exposure (days)	Biomass (g/m ²)		Chlorophyll a (mg/m ²)	Chlorophyll b (mg/m ²)	Sampling method
		Dry weight	Ash weight			
April 24 to May. 15	22	13.0	10.6	21.3	8.54	Polyethylene strip
May 15 to June 18	35	-	--	3.15	.970	"

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, JUNE TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	JUN 18,79 1200	SEP 18,79 0815
TOTAL CELLS/ML	1600	5600
DIVERSITY: DIVISION	1.4	0.9
..CLASS	1.4	0.9
...ORDER	2.1	1.7
....FAMILY	2.8	2.1
.....GENUS	3.3	2.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....MICRACTINIACEAE				
.....GOLENKINIA	26	2	--	-
....GOLENKINIOPSIS	--	-	120	2
....MICRACTINIUM	250#	16	--	-
...OOCYSTACEAE				
....ANKISTRODESMUS	91	6	*	0
....CLOSTERIOPSIS	--	-	*	0
....DICTYOSPHAERIUM	100	7	--	-
....KIRCHNERIELLA	78	5	*	0
...OOCYSTIS	--	-	55	1
....SELENASTRUM	--	-	41	1
...SCENEDESMACEAE				
....SCENEDESMUS	180	11	360	6
....TETRASTRUM	--	-	55	1
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	310#	20	69	1
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
....COSCINODISCACEAE				
....CYCLOTELLA	26	2	--	-
....MELOSIRA	--	-	82	1
..PENNALES				
...ACHNANTHACEAE				
....ACHNANTHES	13	1	*	0
...FRAGILARIACEAE				
....FRAGILARIA	--	-	55	1
...NAVICULACEAE				
....FRUSTULIA	--	-	*	0
....NAVICULA	--	-	55	1
....PINNULARIA	--	-	*	0
...NITZSCHACEAE				
....NITZSCHIA	270#	17	96	2
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
....CHROOCOCCACEAE				
.....ANACYSTIS	160	10	1200#	21
...HORMOGONALES				
...NOSTOCACEAE				
....APHANIZOMENON	--	-	3100#	56
...OSCILLATORIA				
....OSCILLATORIA	--	-	160	3
EUGLENOPHYTA (EUGLENIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
....EUGLENACEAE				
.....EUGLENA	26	2	--	-
....PHACUS	26	2	--	-
....TRACHELOMONAS	26	2	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			
1	352	309	335	242	234	238	542	423	478
2	334	324	330	291	252	262	437	349	381
3	339	302	323	309	286	293	362	334	349
4	346	297	333	310	295	302	335	277	306
5	352	291	318	305	282	292	529	279	392
6	343	291	327	290	253	275	524	349	425
7	298	187	205	296	264	282	363	305	330
8	216	187	199	289	271	279	307	303	304
9	228	200	214	347	290	309	---	---	---
10	237	229	233	352	336	343	---	---	---
11	253	238	243	341	289	322	---	---	---
12	273	255	265	338	296	325	---	---	---
13	317	305	310	340	289	324	---	---	---
14	324	245	263	346	287	323	---	---	---
15	287	237	265	360	295	323	---	---	---
16	244	204	217	362	350	355	---	---	---
17	238	201	220	348	313	338	---	---	---
18	257	197	235	340	244	295	---	---	---
19	270	230	254	250	242	247	---	---	---
20	327	274	275	284	248	269	---	---	---
21	366	332	349	285	241	260	---	---	---
22	333	251	282	271	237	258	---	---	---
23	296	252	273	292	260	276	---	---	---
24	305	277	294	298	245	275	---	---	---
25	317	296	308	347	272	312	---	---	---
26	364	315	325	411	349	386	---	---	---
27	369	307	335	368	304	331	---	---	---
28	360	320	350	304	282	289	---	---	---
29	347	257	308	342	250	302	---	---	---
30	274	248	257	599	337	427	---	---	---
31	287	229	240	---	---	---	---	---	---
MONTH	369	187	280	599	234	304	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		MARCH			APRIL			MAY	
1	---	---	---	214	212	213	158	146	153
2	---	---	---	203	196	197	185	151	175
3	---	---	---	212	192	201	197	184	191
4	---	---	---	197	87	191	210	189	198
5	---	---	---	203	186	194	197	185	190
6	---	---	---	195	180	186	195	185	192
7	---	---	---	198	189	194	199	189	196
8	---	---	---	202	197	199	209	198	203
9	---	---	---	201	191	197	217	206	211
10	---	---	---	214	199	207	218	213	215
11	---	---	---	200	190	197	229	219	223
12	---	---	---	206	195	201	232	224	228
13	---	---	---	208	198	201	230	224	227
14	---	---	---	210	198	203	230	210	218
15	---	---	---	---	---	---	218	213	214
16	---	---	---	---	---	---	216	200	206
17	---	---	---	---	---	---	219	205	214
18	---	---	---	---	---	---	224	219	222
19	---	---	---	---	---	---	229	198	217
20	---	---	---	---	---	---	214	199	207
21	---	---	---	---	---	---	217	206	213
22	---	---	---	---	---	---	219	212	215
23	---	---	---	---	---	---	232	216	226
24	---	---	---	241	230	237	224	171	199
25	---	---	---	248	230	240	173	103	140
26	---	---	---	241	216	237	140	129	135
27	---	---	---	224	195	210	146	140	144
28	200	197	198	208	127	153	152	146	150
29	206	198	201	159	143	151	160	152	156
30	211	204	207	156	150	154	174	160	165
31	212	207	210	---	---	---	175	160	165
MONTH	---	---	---	---	---	---	232	103	194

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	170	166	168	324	296	306	276	256	264	244	232	238
2	182	171	176	341	326	332	299	277	284	257	245	254
3	186	182	184	328	266	286	304	279	296	259	255	257
4	---	---	---	275	264	268	311	244	272	259	254	257
5	---	---	---	291	253	271	320	277	306	279	244	268
6	---	---	---	318	295	311	272	240	249	282	250	263
7	---	---	---	318	312	315	263	241	253	266	216	228
8	---	---	---	332	320	327	288	264	275	244	218	226
9	---	---	---	334	313	323	313	289	297	248	244	246
10	---	---	---	338	315	330	325	314	321	266	250	259
11	---	---	---	344	339	342	---	---	---	269	252	262
12	235	218	222	---	---	---	---	---	---	291	251	267
13	248	230	239	330	329	330	---	---	---	295	287	290
14	243	232	238	333	326	330	---	---	---	296	288	292
15	251	243	248	337	292	323	---	---	---	301	284	291
16	263	252	261	292	259	278	---	---	---	291	239	273
17	266	248	261	311	172	239	---	---	---	254	234	243
18	267	249	255	206	176	198	---	---	---	256	247	252
19	310	246	275	210	196	202	---	---	---	275	254	263
20	246	231	237	215	198	203	---	---	---	295	275	282
21	271	238	259	241	217	232	---	---	---	297	289	292
22	284	269	278	258	241	249	268	247	260	286	247	265
23	293	277	286	267	258	262	272	268	270	299	194	236
24	295	289	292	270	265	267	289	271	280	216	194	207
25	295	292	293	285	268	284	302	289	295	233	216	227
26	310	274	292	314	286	300	369	293	322	261	233	246
27	300	286	290	308	254	295	282	216	232	280	261	275
28	319	300	306	---	---	---	290	206	231	287	277	282
29	342	315	331	---	---	---	215	196	203	289	255	280
30	332	274	307	---	---	---	254	217	241	311	215	263
31	---	---	---	256	254	255	254	228	240	---	---	---
MONTH	---	---	---	344	172	284	---	---	---	311	194	259
YEAR	599	103	260									

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN
1	6.2	5.9	6.0	6.4	6.2	6.3	6.7	6.5	6.6
2	6.1	5.8	5.9	6.4	6.2	6.3	6.6	6.5	6.5
3	5.9	5.8	5.8	6.4	6.2	6.3	6.7	6.5	6.6
4	5.9	5.8	5.9	6.4	6.1	6.2	6.7	6.6	6.6
5	6.1	5.9	6.0	6.4	6.2	6.3	6.7	6.6	6.6
6	6.1	5.9	5.9	6.3	6.0	6.1	6.6	6.5	6.5
7	6.1	6.0	6.0	6.3	6.0	6.1	6.6	6.5	6.6
8	6.1	6.0	6.1	6.1	6.0	6.0	6.6	6.5	6.5
9	6.4	6.1	6.2	6.2	6.0	6.1	---	---	---
10	6.4	6.2	6.3	6.3	6.1	6.2	---	---	---
11	6.3	6.2	6.2	6.1	6.0	6.1	---	---	---
12	6.2	6.0	6.1	6.1	6.0	6.1	---	---	---
13	6.3	5.9	6.2	6.3	6.1	6.2	---	---	---
14	6.1	6.0	6.0	6.1	6.0	6.1	---	---	---
15	6.3	6.0	6.2	6.2	6.1	6.1	---	---	---
16	6.3	6.1	6.2	6.1	6.1	6.1	---	---	---
17	6.4	6.1	6.2	6.2	6.1	6.2	---	---	---
18	6.4	6.2	6.3	6.4	6.1	6.2	---	---	---
19	6.2	6.2	6.2	6.2	6.1	6.1	---	---	---
20	6.3	6.1	6.1	6.3	6.1	6.3	---	---	---
21	6.4	6.3	6.3	6.3	6.2	6.2	---	---	---
22	6.5	6.3	6.4	6.4	6.3	6.4	---	---	---
23	6.3	6.1	6.2	6.5	6.4	6.5	---	---	---
24	6.3	6.0	6.1	6.5	6.4	6.4	---	---	---
25	6.4	6.2	6.3	6.6	6.5	6.6	---	---	---
26	6.3	6.0	6.2	6.7	6.5	6.6	---	---	---
27	6.2	5.9	6.0	6.7	6.5	6.7	---	---	---
28	6.3	6.1	6.2	6.8	6.7	6.7	---	---	---
29	6.2	6.0	6.1	6.9	6.7	6.8	---	---	---
30	6.2	6.0	6.1	6.7	6.6	6.7	---	---	---
31	6.4	6.1	6.3	---	---	---	---	---	---
MONTH	6.5	5.8	6.1	6.9	6.0	6.3	---	---	---

BLACKSTONE RIVER BASIN

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MARCH			APRIL			MAY			
1	---	---	---	10.0	9.5	9.5	17.5	15.5	16.5
2	---	---	---	8.0	7.0	7.0	16.5	14.5	15.5
3	---	---	---	8.0	7.0	7.5	16.0	14.0	15.0
4	---	---	---	8.0	6.5	7.0	17.0	14.5	15.5
5	---	---	---	7.5	7.0	7.0	17.0	15.0	16.0
6	---	---	---	7.5	6.0	7.0	16.5	14.5	15.5
7	---	---	---	6.5	5.5	6.0	18.0	15.0	16.5
8	---	---	---	7.5	4.5	6.0	19.5	16.0	17.5
9	---	---	---	7.0	5.5	6.0	21.5	17.5	19.5
10	---	---	---	7.0	6.5	6.5	23.0	20.0	21.5
11	---	---	---	9.0	5.5	7.0	22.5	20.0	21.5
12	---	---	---	10.0	7.0	8.5	19.5	18.5	19.0
13	---	---	---	9.5	7.5	8.5	19.0	18.5	18.5
14	---	---	---	---	---	---	18.5	17.5	18.0
15	---	---	---	---	---	---	18.0	17.5	17.5
16	---	---	---	---	---	---	19.0	17.0	18.0
17	---	---	---	---	---	---	18.5	17.0	18.0
18	---	---	---	---	---	---	18.0	17.0	17.5
19	---	---	---	---	---	---	17.0	16.0	16.5
20	---	---	---	---	---	---	16.0	15.5	15.5
21	---	---	---	---	---	---	17.5	15.5	16.0
22	---	---	---	---	---	---	19.5	16.5	18.0
23	---	---	---	---	---	---	19.5	17.5	18.0
24	---	---	---	15.0	12.5	14.0	17.0	15.5	16.0
25	---	---	---	16.0	14.5	15.0	15.5	14.5	15.0
26	---	---	---	16.0	15.0	16.0	15.5	14.5	15.0
27	---	---	---	15.5	15.0	15.0	16.5	14.5	15.5
28	8.5	8.0	8.5	17.5	14.5	16.0	16.0	15.5	16.0
29	8.0	7.0	7.5	17.0	16.0	16.5	18.0	15.5	16.5
30	8.5	8.0	8.0	17.5	15.5	16.5	17.0	16.0	16.5
31	10.0	8.0	9.0	---	---	---	18.5	15.5	17.0
MONTH	---	---	---	---	---	---	23.0	14.0	17.0

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	20.0	18.5	19.0	23.0	21.0	22.0	27.0	25.5	26.5	23.5	21.5	22.5
2	20.0	18.0	19.0	23.5	22.0	22.5	28.0	26.0	27.0	22.5	21.5	22.0
3	19.0	18.0	18.5	24.5	21.5	23.0	27.5	26.5	27.0	23.5	22.5	23.0
4	---	---	---	23.5	21.0	22.0	26.5	25.5	26.0	24.0	23.0	23.5
5	---	---	---	21.0	19.0	20.0	27.5	25.5	26.5	24.0	23.0	23.5
6	---	---	---	19.5	18.0	19.0	26.5	25.5	26.0	24.0	22.0	23.0
7	---	---	---	20.5	17.5	19.0	25.5	23.5	24.5	23.5	22.0	23.0
8	---	---	---	22.0	18.5	20.5	24.5	23.5	24.0	22.5	19.5	21.5
9	---	---	---	23.5	20.5	22.0	24.5	22.5	23.5	21.0	18.5	20.0
10	---	---	---	24.0	22.0	23.0	23.0	22.0	22.5	20.5	19.0	20.0
11	---	---	---	23.5	22.0	22.5	---	---	---	21.0	19.5	20.0
12	21.5	20.5	21.0	---	---	---	---	---	---	20.0	18.0	19.0
13	20.0	19.0	19.0	24.5	24.5	24.5	---	---	---	20.0	18.0	19.0
14	20.5	17.5	19.5	27.0	24.5	25.5	---	---	---	20.5	19.0	20.0
15	22.0	19.0	21.0	26.5	25.0	26.0	---	---	---	21.5	20.0	20.5
16	24.0	21.0	23.0	25.0	24.0	24.5	---	---	---	20.0	19.0	19.5
17	25.0	22.5	23.5	24.5	24.5	24.5	---	---	---	20.0	18.0	19.0
18	25.0	23.0	24.0	24.5	23.5	24.0	---	---	---	20.5	18.5	19.5
19	23.5	22.0	22.5	24.5	22.5	23.5	---	---	---	20.5	19.0	19.5
20	23.0	20.5	22.0	25.0	23.5	24.5	---	---	---	18.5	16.5	17.0
21	22.5	20.5	21.5	25.0	24.0	24.5	---	---	---	16.0	15.5	15.5
22	22.0	20.0	21.0	25.5	24.0	25.0	22.0	20.0	21.5	17.0	16.0	16.5
23	23.0	21.0	22.0	26.5	24.0	25.5	21.5	20.5	21.0	17.0	16.0	16.5
24	22.0	20.5	21.0	26.0	25.0	25.5	22.0	20.5	21.0	16.0	15.0	15.5
25	21.0	19.0	20.0	27.0	25.0	25.0	23.0	21.5	22.0	15.5	15.0	15.0
26	21.0	18.0	19.5	26.5	25.5	26.0	24.0	22.0	23.0	19.5	15.0	16.0
27	21.5	18.5	20.0	26.5	25.5	25.5	24.0	22.5	23.5	17.0	14.5	16.0
28	21.5	19.0	20.5	---	---	---	24.0	23.0	23.5	17.0	15.5	16.5
29	22.0	20.0	21.0	---	---	---	24.0	23.5	23.5	18.5	17.0	17.5
30	22.0	20.5	21.0	---	---	---	24.5	23.0	24.0	18.5	17.0	17.5
31	---	---	---	27.0	26.0	26.5	24.5	23.0	23.5	---	---	---
MONTH	---	---	---	27.0	17.5	23.5	---	---	---	24.0	14.5	19.5
YEAR	28.0	1.0	16.0									

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER		
1	7.9	5.3	6.4	10.7	7.7	8.9	11.5	10.6	11.1
2	7.7	4.9	6.1	9.8	7.3	8.1	11.8	11.0	11.3
3	6.8	4.0	5.5	9.9	6.9	8.1	12.2	11.1	11.7
4	7.3	4.7	5.9	9.5	7.1	8.0	11.8	10.1	11.1
5	7.9	4.7	6.0	8.8	6.3	7.3	10.9	10.4	10.6
6	5.0	3.0	4.0	9.5	6.0	7.4	11.4	10.6	10.9
7	7.3	5.1	6.6	9.1	5.5	7.0	11.6	10.7	11.1
8	8.8	7.2	8.0	6.7	5.6	6.0	10.7	10.4	10.5
9	9.8	7.9	8.7	8.0	5.3	6.1	---	---	---
10	9.6	7.5	8.5	7.6	5.2	6.1	---	---	---
11	8.7	6.8	7.7	7.0	4.0	5.3	---	---	---
12	7.1	5.5	6.3	6.7	4.2	5.3	---	---	---
13	7.4	4.9	6.3	8.5	5.2	6.6	---	---	---
14	5.4	4.0	4.7	6.8	4.7	5.8	---	---	---
15	6.5	5.1	5.9	7.8	4.7	6.1	---	---	---
16	7.7	6.4	7.0	6.8	5.3	5.8	---	---	---
17	8.7	7.1	7.8	8.1	5.4	7.5	---	---	---
18	9.0	7.0	7.7	7.8	5.5	6.4	---	---	---
19	8.0	5.9	6.9	8.8	7.3	7.8	---	---	---
20	8.2	5.2	6.3	9.3	8.0	8.5	---	---	---
21	7.8	6.0	6.7	8.7	8.4	8.5	---	---	---
22	8.9	6.8	7.8	10.4	8.8	9.4	---	---	---
23	7.9	5.8	7.1	10.8	8.9	9.6	---	---	---
24	8.0	5.0	6.3	9.9	8.8	9.2	---	---	---
25	8.4	5.9	7.0	10.3	9.4	9.8	---	---	---
26	6.7	5.1	5.8	11.8	9.9	11.2	---	---	---
27	8.0	4.7	6.1	12.4	11.4	11.9	---	---	---
28	8.4	5.9	6.9	12.7	11.7	12.1	---	---	---
29	9.3	5.8	7.4	13.3	11.3	12.3	---	---	---
30	9.9	8.2	8.9	12.1	10.5	11.2	---	---	---
31	10.7	7.7	9.1	---	---	---	---	---	---
MONTH	10.7	3.0	6.8	13.3	4.0	8.1	---	---	---

01111230 BLACKSTONE RIVER AT MILLVILLE, MA--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

	DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN		
			MARCH			APRIL			MAY			
	1	---	---	---	9.1	7.7	8.3	8.9	7.2	8.3		
	2	---	---	---	11.2	10.2	10.4	9.3	7.5	8.6		
	3	---	---	---	11.3	10.3	10.7	9.1	8.3	8.6		
	4	---	---	---	11.8	10.3	11.2	8.8	7.8	8.3		
	5	---	---	---	11.5	10.8	11.1	8.7	7.4	7.9		
	6	---	---	---	12.0	10.9	11.3	8.8	7.6	8.0		
	7	---	---	---	11.9	11.0	11.5	8.9	7.1	8.0		
	8	---	---	---	12.2	11.0	11.6	8.4	6.9	7.5		
	9	---	---	---	11.4	10.9	11.1	7.9	6.1	6.9		
	10	---	---	---	11.6	10.7	11.2	7.2	5.3	6.0		
	11	---	---	---	11.4	10.1	10.8	7.9	4.6	6.0		
	12	---	---	---	10.9	9.9	10.4	7.8	6.0	6.7		
	13	---	---	---	10.7	9.8	10.3	7.4	6.0	6.7		
	14	---	---	---	---	---	---	6.6	6.2	6.4		
	15	---	---	---	---	---	---	7.3	6.3	6.7		
	16	---	---	---	---	---	---	8.0	6.4	7.1		
	17	---	---	---	---	---	---	8.5	6.6	7.3		
	18	---	---	---	---	---	---	7.7	6.4	7.1		
	19	---	---	---	---	---	---	7.6	5.9	6.7		
	20	---	---	---	---	---	---	7.2	5.7	6.8		
	21	---	---	---	---	---	---	7.9	5.9	7.1		
	22	---	---	---	---	---	---	7.2	5.7	6.3		
	23	---	---	---	---	---	---	6.5	5.2	6.0		
	24	---	---	---	10.5	8.2	9.2	7.8	6.0	6.9		
	25	---	---	---	10.4	8.0	9.0	10.1	6.6	8.6		
	26	---	---	---	10.9	7.8	9.1	9.7	9.0	9.3		
	27	---	---	---	9.0	7.8	8.7	10.0	9.1	9.5		
	28	12.1	10.8	11.3	8.5	7.4	7.9	9.6	9.2	9.3		
	29	11.1	8.5	10.2	8.6	7.3	7.9	9.7	8.6	9.3		
	30	10.9	8.6	10.0	8.7	8.0	8.4	9.1	8.5	8.9		
	31	10.6	7.9	9.7	---	---	---	9.4	8.4	8.8		
	MONTH	---	---	---	---	---	---	10.1	4.6	7.6		
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
			JUNE			JULY			AUGUST			SEPTEMBER
1	8.8	7.5	8.3	7.7	4.6	5.9	9.0	5.9	7.3	8.4	6.0	7.4
2	8.1	7.3	7.6	6.7	3.8	5.2	9.2	5.6	7.3	8.4	6.8	7.6
3	7.8	7.2	7.5	8.4	3.6	6.0	8.7	5.5	7.0	8.0	7.0	7.4
4	---	---	---	6.5	4.4	5.5	7.4	5.7	6.5	8.5	6.8	7.6
5	---	---	---	7.6	4.2	5.7	8.2	5.5	6.8	8.4	6.8	7.6
6	---	---	---	7.2	4.4	5.7	8.4	5.7	7.0	7.2	6.2	6.6
7	---	---	---	7.7	4.5	6.0	9.5	6.1	7.7	7.4	6.5	6.9
8	---	---	---	8.3	4.2	5.9	10.0	6.6	8.3	8.5	7.3	7.8
9	---	---	---	7.9	3.5	5.6	10.4	6.8	8.5	9.0	7.8	8.3
10	---	---	---	7.3	3.7	5.6	8.5	6.8	7.4	9.3	7.5	8.7
11	---	---	---	5.8	3.5	4.4	---	---	---	8.9	6.8	7.9
12	8.2	6.7	7.5	---	---	---	---	---	---	9.2	7.5	8.2
13	8.2	6.3	6.8	5.5	5.3	5.4	---	---	---	8.9	6.6	7.7
14	8.8	6.3	7.5	9.5	5.2	7.0	---	---	---	8.2	6.7	7.3
15	8.4	5.3	7.0	7.4	4.6	5.8	---	---	---	7.8	6.6	7.1
16	7.9	4.9	6.3	6.7	4.3	5.3	---	---	---	8.6	6.5	7.5
17	7.8	4.8	6.2	6.2	4.3	5.1	---	---	---	9.3	7.6	8.3
18	8.5	5.0	6.8	6.9	4.2	6.1	---	---	---	9.6	7.4	8.5
19	7.1	5.0	5.8	7.5	6.5	7.0	---	---	---	9.4	7.6	8.4
20	8.0	4.9	6.4	7.7	6.3	6.9	---	---	---	9.8	7.4	8.5
21	8.3	5.6	6.8	7.9	6.3	7.0	---	---	---	8.8	7.4	8.2
22	8.1	5.4	6.5	8.5	6.5	7.4	9.1	7.5	8.4	8.5	7.9	8.2
23	7.7	4.7	6.2	9.5	6.3	7.8	8.8	6.8	8.1	9.2	7.5	8.4
24	8.3	4.7	6.4	9.1	6.1	7.6	9.0	7.0	7.9	10.2	8.8	9.4
25	9.2	5.3	7.4	9.6	6.4	7.9	8.9	6.8	7.7	10.4	9.0	9.7
26	9.6	5.7	7.5	8.9	5.6	7.2	7.6	6.0	7.0	10.1	7.7	9.7
27	9.1	5.9	7.4	8.1	5.7	6.6	8.3	5.8	6.9	10.0	6.8	8.5
28	8.6	4.9	6.8	---	---	---	7.3	6.2	6.8	10.0	8.2	9.0
29	8.5	4.8	6.6	---	---	---	7.5	6.0	6.7	8.7	7.9	8.3
30	9.2	4.3	6.5	---	---	---	7.5	6.1	6.7	7.8	6.7	7.3
31	---	---	---	8.8	7.1	8.2	7.8	6.0	6.9	---	---	---
MONTH	---	---	---	9.6	3.5	6.3	---	---	---	10.4	6.0	8.1
YEAR	13.3	3.0	7.8									

01111300 NIPMUC RIVER NEAR HARRISVILLE, RI

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

DRAINAGE AREA.--16.0 mi² (41.4 km²).

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

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

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

AVERAGE DISCHARGE.--15 years, 30.4 ft³/s (0.861 m³/s), 25.80 in/yr (655 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 8	1645	344	9.74	5.68	1.731	Jan. 25	1015	a*1840	52.1	8.53	2.600
Jan. 14	-	290	8.2	ice jam		May 25	1745	302	8.55	5.47	1.667
Jan. 21	2140	938	26.6	7.27	2.216						

a From rating curve extended above 530 ft³/s (15 m³/s).

Minimum discharge, 2.0 ft³/s (0.057 m³/s) Aug. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	9.0	32	40	74	62	36	53	68	7.0	3.3	9.0
2	11	8.5	23	102	62	56	36	46	55	7.0	2.8	8.0
3	8.3	8.0	20	205	54	58	57	41	45	7.0	3.7	6.1
4	6.7	8.0	29	114	49	73	55	47	42	5.2	11	6.1
5	9.0	8.0	57	88	45	110	53	44	42	5.1	7.0	5.2
6	27	9.0	40	74	43	166	47	38	50	4.4	4.8	6.1
7	29	12	29	63	42	234	40	32	39	4.1	3.3	9.6
8	15	7.5	24	237	43	137	36	30	32	3.3	3.0	8.5
9	10	7.0	67	178	41	92	42	28	28	3.3	2.5	6.6
10	8.9	7.0	100	116	39	79	72	26	26	3.3	2.2	5.2
11	8.5	6.6	51	88	36	136	61	23	22	2.8	3.7	4.0
12	8.0	4.4	36	72	33	98	48	21	19	2.8	49	3.0
13	8.0	8.0	32	65	30	73	42	22	18	2.5	78	2.8
14	13	6.6	30	230	28	67	38	24	18	2.5	42	2.8
15	24	6.6	26	156	27	69	42	37	17	2.6	22	4.4
16	16	6.1	24	100	26	55	44	32	13	3.7	15	3.7
17	12	5.3	25	74	24	48	44	25	11	3.9	11	3.3
18	10	15	24	65	22	44	39	24	11	4.8	9.0	3.3
19	9.5	23	19	59	19	43	33	24	11	4.8	9.6	2.5
20	9.6	15	18	55	17	43	29	24	11	3.7	9.6	2.2
21	10	12	25	350	18	43	27	24	11	3.0	8.0	2.2
22	9.0	11	33	538	23	41	27	21	11	3.0	6.6	25
23	8.5	10	28	293	24	40	26	23	9.0	2.8	5.6	27
24	8.5	12	22	186	45	38	25	90	9.0	2.2	5.2	13
25	8.0	19	36	937	100	61	25	194	8.2	2.8	5.2	9.0
26	8.0	15	41	306	80	56	24	168	7.0	2.5	9.6	8.0
27	16	13	30	200	76	44	90	88	7.0	9.0	7.0	6.6
28	17	12	24	153	70	39	163	66	7.0	6.6	30	5.6
29	13	12	22	125	---	37	91	61	7.0	5.6	20	6.1
30	11	31	21	102	---	37	68	86	7.0	4.8	18	7.5
31	9.6	---	21	85	---	36	---	122	---	3.7	12	---
TOTAL	365.9	327.6	1009	5456	1190	2215	1460	1584	661.2	129.8	419.7	212.4
MFAN	11.8	10.9	32.5	176	42.5	71.5	48.7	51.1	22.0	4.19	13.5	7.08
MAX	29	31	100	937	100	234	163	194	68	9.0	78	27
MIN	3.8	4.4	18	40	17	36	24	21	7.0	2.2	2.2	2.2
CFSM	.74	.68	2.03	11.0	2.66	4.47	3.04	3.19	1.38	.26	.84	.44
IN.	.85	.76	2.35	12.68	2.77	5.15	3.39	3.68	1.54	.30	.98	.49

CAL YR 1978 TOTAL 13419.4 MEAN 36.8 MAX 386 MIN 1.5 CFSM 2.30 IN 31.20
WTR YR 1979 TOTAL 15030.6 MEAN 41.2 MAX 937 MIN 2.2 CFSM 2.58 IN 34.94

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI

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

DRAINAGE AREA.--91.2 mi² (236.2 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 2101: Drainage area.

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

REMARKS.--Records excellent. Prior to 1957, flow regulated by mills and reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 171 ft³/s (4.843 m³/s), 25.46 in/yr (647 mm/yr).

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

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

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

Date	Time	Discharge (ft ³ /s)	Gage height (ft)	Date	Time	Discharge (ft ³ /s)	Gage height (ft)
Jan. 9	0230	1300	36.8	Jan. 25	1715	*5470	11.80
Jan. 14	1545	1030	29.2	Mar. 7	1630	1140	5.61
Jan. 22	0415	2840	80.4	May 26	0145	1370	6.13

Minimum daily discharge, 19 ft³/s (0.54 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	50	124	130	439	349	182	339	524	63	32	67
2	27	48	105	258	362	318	182	277	398	60	30	56
3	31	45	96	721	336	318	288	244	321	49	59	72
4	29	45	110	570	297	352	327	234	260	44	130	118
5	34	44	171	381	280	422	312	227	258	38	96	80
6	54	43	142	294	252	618	288	212	305	37	60	92
7	92	43	101	263	239	1040	229	196	260	37	45	105
8	72	45	86	775	242	849	196	184	222	35	36	75
9	71	41	153	1090	237	588	217	182	193	34	33	59
10	82	38	336	649	227	464	343	174	171	35	35	54
11	67	39	239	446	214	562	309	163	153	31	48	51
12	69	38	161	303	196	539	280	137	142	32	187	48
13	71	35	135	263	171	401	255	146	118	33	429	47
14	80	40	123	844	159	368	210	163	105	29	258	56
15	110	35	115	721	153	375	217	203	97	35	135	58
16	90	35	107	475	150	330	203	217	92	40	97	54
17	72	35	93	359	144	309	193	184	84	36	80	49
18	62	63	84	303	125	297	222	163	78	41	72	48
19	58	83	75	252	107	286	210	157	73	46	75	43
20	62	72	68	234	95	280	193	159	73	35	75	40
21	62	60	95	929	99	271	165	157	68	31	68	40
22	76	54	130	2250	133	260	142	150	64	29	59	130
23	87	50	116	1090	137	229	130	135	60	26	53	187
24	89	58	101	741	214	200	125	408	56	27	51	146
25	79	69	148	3620	471	269	116	875	51	40	51	117
26	54	69	189	2650	453	297	116	1170	49	44	63	105
27	72	71	157	1450	422	234	312	725	48	72	68	85
28	79	80	128	1030	422	207	750	442	45	63	132	63
29	68	75	115	822	---	196	595	405	43	49	140	67
30	59	107	102	676	---	187	450	450	44	39	111	75
31	53	---	101	535	---	182	---	684	---	35	89	---
TOTAL	2030	1610	4010	25124	6776	11597	7757	9562	4456	1245	2897	2287
MEAN	65.5	53.7	129	810	242	374	259	308	149	40.2	93.5	76.2
MAX	110	107	336	3620	471	1040	750	1170	524	72	429	187
MIN	19	35	68	130	95	182	116	135	43	26	30	40
CFSM	.72	.59	1.41	8.88	2.65	4.10	2.84	3.38	1.63	.44	1.03	.84
IN.	.83	.66	1.64	10.25	2.76	4.73	3.16	3.90	1.82	.51	1.18	.93
CAL YR 1978	TOTAL	72767	MEAN	199	MAX	2040	MIN	19	CFSM	2.18	IN	29.68
WTR YR 1979	TOTAL	79351	MEAN	217	MAX	3620	MIN	19	CFSM	2.38	IN	32.37

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1954, 1968, 1979.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
NOV										
07...	0845	43	80	5.8	10.5	--	30	11.0	98	15
DEC										
13...	1315	133	82	5.6	2.0	--	40	13.7	99	--
JAN										
03...	1115	783	70	5.5	2.5	4.0	--	15.1	111	--
FEB										
15...	1000	151	65	7.5	.5	1.0	--	15.2	105	--
MAR										
07...	1230	1120	49	5.1	4.0	2.0	20	13.2	101	--
APR										
04...	1200	327	67	6.0	8.0	2.0	--	12.1	102	--
MAY										
02...	1030	277	52	6.6	15.5	2.0	--	9.6	96	--
JUN										
07...	1330	252	58	6.8	20.0	1.0	30	9.2	100	29
JUL										
10...	1100	36	88	6.9	24.0	1.0	--	8.8	103	--
AUG										
09...	1200	33	105	6.9	25.5	2.0	--	8.2	99	--
SEP										
18...	1030	48	82	6.6	20.0	1.0	30	9.2	100	22

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 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)
NOV										
07...	120000	--	5300	5200	170	17	--	5.0	1.0	9.0
DEC										
13...	49000	--	--	--	--	13	4	3.7	1.0	9.0
JAN										
03...	--	1.0	1800	430	260	--	--	--	--	--
FEB										
15...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	24000	1.0	1800	160	140	9	4	2.7	.6	5.5
APR										
04...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	1.0	300	56	K22	--	--	--	--	--
JUN										
07...	17000	--	--	--	--	11	6	3.1	.7	6.3
JUL										
10...	--	1.0	4200	200	84	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
SEP										
18...	6900	1.0	5500	350	85	15	9	4.5	.9	8.0

K, NON-IDEAL COLONY COUNT.

BLACKSTONE RIVER BASIN

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
NOV 07...	1.5	9	--	8.0	15	0	68	.24	.01	.25
DEC 13...	1.1	9	--	9.6	15	0	68	.29	.01	.30
JAN 03...	--	--	--	--	--	--	--	.21	.00	.21
FEB 15...	--	--	--	--	--	--	--	.30	.00	.30
MAR 07...	.5	5	--	7.2	8.3	9	44	.14	.00	.14
APR 04...	--	--	--	--	--	--	--	.25	.01	.26
MAY 02...	--	--	--	--	--	--	--	.14	.00	.14
JUN 07...	.7	5	--	7.3	9.7	6	56	.18	.00	.18
JUL 10...	--	--	--	--	--	--	--	.20	.01	.21
AUG 09...	--	--	--	--	--	--	--	.22	.01	.23
SEP 18...	1.2	6	2.9	8.0	12	10	66	.26	.01	.27

DATE	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)	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
NOV 07...	.09	.21	.30	.55	.02	0	4.6	0	--
DEC 13...	.23	.40	.63	.93	.05	--	7.0	--	0
JAN 03...	.07	.20	.27	.48	.03	--	--	--	--
FEB 15...	.09	.15	.24	.54	.00	--	--	--	--
MAR 07...	.06	.16	.22	.36	.02	--	5.4	--	1
APR 04...	.07	.29	.36	.62	.02	--	--	--	--
MAY 02...	.09	.18	.27	.41	.03	--	--	--	--
JUN 07...	.08	.32	.40	.58	.03	1	4.9	--	0
JUL 10...	.22	.52	.74	.95	.03	--	--	--	--
AUG 09...	.24	.65	.89	1.1	.04	--	--	--	--
SEP 18...	.31	.65	.96	1.2	.04	4	6.0	--	0

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
NOV 07...	--	6900	1	1	0	70	0	<10	20	--
MAR 07...	90	2000	0	0	0	20	0	0	20	--
SEP 18...	--	--	1	0	--	--	--	--	--	1

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

01111500 BRANCH RIVER AT FORESTDALE, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CU)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 07...	20	20	50	1	<10	22	180	460	11000	31
MAR 07...	<10	10	10	0	<10	--	<10	210	2500	12
SEP 18...	<10	10	<10	--	<10	11	20	1000	7900	4
DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, TOTAL RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	
NOV 07...	70	0	140	220	<.5	.06	--	<10	26	
MAR 07...	20	0	110	50	<.5	.04	1	0	3	
SEP 18...	30	--	120	150	<.5	.00	--	--	--	
DATE	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
NOV 07...	50	0	1	--	<10	60	30	90	400	
MAR 07...	<10	0	0	0	<10	90	10	70	20	
SEP 18...	--	2	0	--	--	--	--	40	30	
DATE	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PCB, 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)
NOV 07...	.0	590	.00	.00	.0	.0	49	.00	48	.00
SEP 18...	.0	3	.00	.00	.0	.0	0	.00	.6	.00
DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (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)	ENDURIN, TOTAL (UG/L)	ENDURIN, TOTAL (UG/KG)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 07...	.0	.00	.9	.00	.0	.00	.00	.0	.00	.0
SEP 18...	.6	.00	.4	.00	.5	.00	.00	.0	.00	.0
DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/L)	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 07...	.00	.0	.00	.0	--	.0	--	.00	0	0
SEP 18...	.00	.0	.00	.0	.00	.0	.00	.00	0	0

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

BLACKSTONE RIVER BASIN

01112500 BLACKSTONE RIVER AT WOONSOCKET, RI

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

DRAINAGE AREA.--416 mi² (1,077 km²).

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

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

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

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

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

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

AVERAGE DISCHARGE.--50 years, 759 ft³/s (21.49 m³/s).

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,900 ft³/s (450 m³/s) Jan. 25, gage height, 15.09 ft (4.599 m), from floodmark in gage house; minimum daily, 146 ft³/s (4.13 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	275	518	518	2570	1620	876	1680	1660	294	243	471
2	181	261	429	1120	2070	1530	881	1390	1370	476	221	404
3	174	247	379	2370	1810	1580	1170	1190	1160	393	369	390
4	170	242	412	2160	1630	1670	1330	1200	1020	357	554	428
5	207	232	668	1500	1510	1860	1310	1150	993	319	442	437
6	328	219	607	1180	1440	2360	1290	1020	1090	291	311	488
7	600	232	495	1040	1470	4100	1160	920	966	239	251	633
8	375	235	419	2540	1400	3710	1020	849	836	208	210	473
9	304	230	664	4150	1300	2860	1070	810	761	200	192	381
10	299	213	1250	2660	1200	2320	1570	772	689	190	186	336
11	276	195	992	1940	1100	2580	1530	720	617	180	334	310
12	254	192	755	1460	1000	2700	1320	652	621	170	787	286
13	247	185	627	1330	950	2040	1150	689	561	160	1770	274
14	299	179	570	2770	900	1780	1030	736	504	151	1530	295
15	468	183	517	2680	850	1670	1090	887	468	202	1020	372
16	360	183	476	1910	820	1450	1060	908	437	285	775	340
17	327	182	454	1490	780	1310	1050	792	417	745	609	304
18	275	292	452	1290	720	1220	1050	704	411	952	487	298
19	231	346	394	1160	660	1130	967	665	514	739	460	274
20	276	279	383	1030	620	1080	888	678	429	552	431	250
21	297	256	479	2960	561	1040	820	706	408	416	392	255
22	256	250	653	7600	696	963	747	681	401	326	352	591
23	260	232	546	4110	721	957	701	655	393	274	320	768
24	248	268	471	2930	980	906	684	1360	377	250	299	557
25	241	323	623	10100	2440	1150	647	2540	358	242	293	456
26	221	291	747	12500	2240	1300	637	3590	339	235	397	402
27	274	264	664	6660	1860	1140	1190	2560	321	462	358	356
28	325	288	555	4770	1740	995	2710	1920	304	467	659	307
29	278	297	471	3930	---	920	2400	1680	296	372	641	362
30	267	411	411	3390	---	890	1960	1620	284	309	627	497
31	270	---	394	2930	---	868	---	1990	---	271	590	---
TOTAL	8734	7482	17475	98178	36038	51739	35308	37714	19005	10727	16110	11995
MEAN	282	249	564	3167	1287	1669	1177	1217	634	346	520	400
MAX	600	411	1250	12500	2570	4100	2710	3590	1660	952	1770	768
MIN	146	179	379	518	561	868	637	652	284	151	186	250
CAL YR 1978 TOTAL	312820			MEAN 857	MAX 7950	MIN 103						
WTR YR 1979 TOTAL	350505			MEAN 960	MAX 12500	MIN 146						

BLACKSTONE RIVER BASIN

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01112900 BLACKSTONE RIVER AT MANVILLE, RI

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

PERIOD OF RECORD.--November 1978 to September 1979.

WATER QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
NOV										
07...	1300	237	265	6.3	10.5	3.0	35	9.8	87	12
DEC										
14...	0815	601	230	6.4	2.0	--	40	13.2	95	--
JAN										
03...	1415	2620	170	6.3	4.0	15	--	13.2	101	--
FEB										
15...	1145	870	190	6.2	1.5	3.0	--	15.2	108	--
MAR										
07...	1400	4540	116	5.9	4.5	10	30	12.9	99	--
APR										
04...	1100	1390	160	6.5	8.0	4.0	--	12.0	101	--
MAY										
02...	1200	1420	144	7.0	15.0	4.0	--	9.2	91	--
JUN										
04...	0830	883	157	7.1	20.0	3.0	20	8.7	95	30
JUL										
10...	1215	210	275	7.3	23.5	2.0	--	9.8	114	--
AUG										
09...	1300	230	270	6.8	24.5	3.0	--	8.3	98	--
SEP										
18...	1300	311	250	6.1	19.5	3.0	20	9.0	97	25

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CaCO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CaCO3)	CALCIUM DIS- SOLVED (MG/L AS Ca)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
NOV										
07...	14000	--	190	K10	24	38	--	12	1.9	27
DEC										
14...	150000	--	--	--	--	32	8	10	1.8	27
JAN										
03...	--	4.0	1900	K1500	1400	--	--	--	--	--
FEB										
15...	--	--	--	--	--	--	--	--	--	--
MAR										
07...	--	4.0	K20000	K3100	4800	17	5	5.5	.9	15
APR										
04...	--	--	--	--	--	--	--	--	--	--
MAY										
02...	--	2.0	270	1300	K18	--	--	--	--	--
JUN										
08...	5900	--	--	--	--	29	12	9.2	1.4	15
JUL										
10...	--	3.0	2000	350	72	--	--	--	--	--
AUG										
09...	--	--	--	--	--	--	--	--	--	--
SEP										
18...	26000	1.0	4000	140	29	40	23	13	1.8	26

K, NON-IDEAL COLONY COUNT.

BLACKSTONE RIVER BASIN

01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER-QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
NOV 07...	3.5	16	--	23	43	2	165	1.8	.06	1.9
DEC 14...	2.7	24	--	18	43	0	140	.58	.02	.60
JAN 03...	--	--	--	--	--	--	--	.55	.01	.56
FEB 15...	--	--	--	--	--	--	--	.46	.00	.46
MAR 07...	1.6	12	--	--	17	24	122	.32	.01	.33
APR 04...	--	--	--	--	--	--	--	.48	.02	.50
MAY 02...	--	--	--	--	--	--	--	.43	.02	.45
JUN 08...	1.9	17	--	14	29	11	108	.73	.03	.76
JUL 10...	--	--	--	--	--	--	--	2.8	.04	2.8
AUG 09...	--	--	--	--	--	--	--	1.2	.01	1.2
SEP 18...	3.3	17	26	19	41	6	152	1.4	.01	1.4

DATE	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)	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
NOV 07...	.71	.69	1.4	3.3	.39	1	7.2	0	--
DEC 14...	.87	.63	1.5	2.1	.22	--	8.1	--	1
JAN 03...	.40	1.1	1.5	2.1	.64	--	--	--	--
FEB 15...	.03	1.5	1.5	2.0	.23	--	--	--	--
MAR 07...	.32	.51	.83	1.2	.19	--	5.4	--	1
APR 04...	.63	.37	1.0	1.5	.20	--	--	--	--
MAY 02...	.29	.27	.56	1.0	.17	--	--	--	--
JUN 08...	.16	.51	.67	1.4	.19	0	5.0	--	0
JUL 10...	.07	.79	.86	3.7	.31	--	--	--	--
AUG 09...	.13	.97	1.1	2.3	.37	--	--	--	--
SEP 18...	.13	.72	.85	2.3	.28	3	5.2	--	0

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
NOV 07...	--	1700	2	0	0	40	0	<10	140	--
MAR 07...	50	--	1	--	0	--	0	0	40	--
SEP 18...	--	--	2	0	--	--	--	--	--	2

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

BLACKSTONE RIVER BASIN

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01112900 BLACKSTONE RIVER AT MANVILLE, RI--Continued

WATER-QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	CADMIUM REC'D. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS CR)	CHRO- MIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS CO)	COBALT, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS CU)	COPPER, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS FE)	IRON, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS PB)
NOV 07...	<10	20	20	3	<10	38	30	800	3800	30
MAR 07...	--	20	--	0	--	--	--	1500	--	45
SEP 18...	<10	10	20	--	10	16	40	720	5700	11

DATE	LEAD, REC'D. FM BOT- TOM MA- TERIAL (UG/G AS Pb)	LITHIUM TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS LI)	MANGA- NESE, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS MN)	MANGA- NESE, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS HG)	MERCURY TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS MO)	MOLYB- DENUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS NI)
NOV 07...	70	0	100	60	<.5	.06	--	<10	65
MAR 07...	--	0	150	--	<.5	--	1	--	2
SEP 18...	60	--	100	80	<.5	.00	--	--	--

DATE	NICKEL, REC'D. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS SE)	SELE- NIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS AG)	SILVER, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS SR)	STRON- TIUM, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/L AS ZN)	ZINC, TOTAL REC'D. FM BOT- TOM MA- TERIAL (UG/G AS ZN)
NOV 07...	<10	0	0	--	<10	100	20	130	2000
MAR 07...	--	0	--	0	--	80	--	140	--
SEP 18...	--	0	0	--	--	--	--	70	130

DATE	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PCB, 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 IN BOT- TOM MA- TERIAL (UG/L)
SEP 18...	.2	45	.00	.00	.0	.0	10	.00	5.1	.00

DATE	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (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 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)
SEP 18...	5.1	.00	.4	.00	5.9	.00	.00	.0	.00	.00	.1

DATE	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/KG)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	LINDANE TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	METH- OXY- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	MIREX, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PER- THANE TOTAL IN BOT- TOM MA- TERIAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
SEP 18...	.00	.0	.00	.0	.00	.0	.00	.00	0	0

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

MOSHASSUCK RIVER BASIN

01114000 MOSHASSUCK RIVER AT PROVIDENCE, RI

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

DRAINAGE AREA.--23.1 mi² (59.8 km²).

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

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

REMARKS.--Records good except those for period of no gage-height record, Dec. 5 to Jan. 23, which are poor. Occasional regulation at low flow. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--16 years, 41.6 ft³/s (1.178 m³/s), 24.46 in/yr (621 mm/yr).

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 21	--	*1480 41.9	5.59 1.704	Aug. 4	0400	719 20.4	4.34 1.323
Jan. 25	0645	987 28.0	4.84 1.475	Sept. 6	1315	729 20.6	4.36 1.329

Note.--Peak discharges above base probably occurred on Jan. 2, 8, 14, but did not exceed those for Jan. 21, 25.

Minimum discharge, 8.7 ft³/s (0.25 m³/s) Nov. 12-16, July 22, minimum daily, 8.7 ft³/s (0.25 m³/s) Nov. 12-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	11	21	50	69	84	40	68	65	45	13	33
2	29	11	17	120	57	76	55	58	55	24	12	32
3	25	11	16	300	56	70	81	56	50	19	67	34
4	31	9.1	37	130	53	65	62	68	53	16	203	32
5	30	9.1	31	65	50	61	63	54	63	15	38	32
6	53	9.1	24	60	42	82	51	48	58	15	22	103
7	28	9.5	20	55	42	217	45	45	47	14	17	43
8	23	9.9	35	320	41	113	40	45	40	12	50	32
9	23	10	70	200	41	84	64	45	39	12	20	29
10	22	9.9	140	120	36	74	74	42	34	12	24	29
11	22	9.9	50	80	35	85	54	42	32	11	32	28
12	22	8.7	35	70	33	73	48	37	48	11	95	27
13	22	8.7	30	150	33	61	45	73	33	11	143	27
14	61	8.7	25	400	33	64	60	68	32	11	54	37
15	29	8.7	22	150	32	62	60	68	29	33	36	40
16	22	9.5	20	90	31	53	53	54	26	18	31	29
17	19	11	24	70	29	52	52	45	23	15	27	26
18	18	49	21	60	26	49	48	39	30	13	27	26
19	18	16	19	50	26	48	45	39	26	12	27	26
20	21	12	30	60	26	48	42	45	23	9.9	27	23
21	15	11	60	800	34	45	41	41	21	10	27	70
22	12	10	40	285	41	45	39	37	19	9.5	27	135
23	12	9.1	30	110	35	42	38	123	18	9.9	27	48
24	13	13	25	102	139	42	38	229	17	9.9	28	35
25	11	12	130	695	110	68	38	241	16	14	28	31
26	11	10	70	286	224	56	42	126	15	16	28	29
27	27	9.9	40	160	143	48	241	81	14	95	28	29
28	14	26	30	114	94	43	162	65	13	30	26	27
29	11	16	27	95	---	40	92	63	12	16	32	32
30	11	40	25	78	---	40	87	110	12	14	43	40
31	11	---	23	72	---	40	---	106	---	13	38	---
TOTAL	697	398.8	1187	5397	1611	2030	1900	2261	963	566.2	1297	1164
MEAN	22.5	13.3	38.3	174	57.5	65.5	63.3	72.9	32.1	18.3	41.8	38.8
MAX	61	49	140	800	224	217	241	241	65	95	203	135
MIN	11	8.7	16	50	26	40	38	37	12	9.5	12	23
CFSM	.97	.58	1.66	7.53	2.49	2.84	2.74	3.16	1.39	.79	1.81	1.68
IN.	1.12	.64	1.91	8.69	2.59	3.27	3.06	3.64	1.55	.91	2.09	1.87

CAL YR 1978 TOTAL 16558.5 MEAN 45.4 MAX 500 MIN 8.7 CFMS 1.97 IN 26.66
WTR YR 1979 TOTAL 19472.0 MEAN 53.3 MAX 800 MIN 8.7 CFMS 2.31 IN 31.36

WOONASQUATUCKET RIVER BASIN

101

01114500 WOONASQUATUCKET RIVER AT CENTERDALE, RI

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

DRAINAGE AREA.--38.3 mi² (99.2 km²).

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

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

REMARKS.--Records good. No gage-height record Jan. 25. Some regulation by reservoirs upstream; regulation greater prior to 1956. Discharge figures prior to 1966 included leakage around station through bypass canal; leakage negligible subsequently. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years, 72.5 ft³/s (2.053 m³/s).

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

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft³/s (37 m³/s) Jan. 25; minimum daily, 4.9 ft³/s (0.14 m³/s) July 31.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	21	30	33	216	158	80	109	178	35	5.2	57
2	31	21	27	58	186	151	84	101	161	28	5.9	96
3	18	20	24	135	166	147	107	98	137	25	20	98
4	19	21	38	67	152	143	94	105	128	19	50	94
5	19	21	37	51	142	140	95	97	132	18	35	93
6	22	21	31	47	133	150	91	94	131	17	27	108
7	19	21	28	48	130	235	84	92	117	16	22	96
8	19	21	28	185	130	182	82	89	112	15	19	70
9	18	21	65	127	126	158	95	87	111	16	18	38
10	17	21	67	98	123	152	108	86	107	16	20	33
11	17	21	40	98	120	164	92	84	102	16	25	31
12	17	21	33	93	116	145	87	82	101	16	60	29
13	17	20	31	110	114	129	85	98	75	16	100	29
14	27	20	29	315	110	130	92	98	72	16	80	37
15	35	20	28	222	108	126	95	103	70	21	50	36
16	31	20	27	171	106	119	89	93	68	16	35	32
17	23	20	29	146	104	117	88	86	67	15	30	29
18	21	32	28	135	102	115	85	85	66	15	30	28
19	21	26	26	117	100	111	83	83	64	15	32	26
20	22	22	26	109	90	109	81	84	44	15	31	25
21	21	22	40	545	64	107	80	81	38	14	29	42
22	21	22	35	643	69	102	79	78	36	9.5	27	80
23	20	22	30	472	65	85	78	98	28	8.7	27	51
24	20	23	28	366	123	83	76	187	25	7.9	27	39
25	19	24	58	1160	163	107	76	249	24	7.6	29	35
26	19	22	44	1080	195	95	75	190	23	6.5	31	33
27	25	21	35	715	189	86	175	191	23	18	35	31
28	23	27	30	475	164	82	167	187	23	11	39	30
29	21	25	29	359	---	81	122	168	23	7.2	49	34
30	20	35	29	291	---	81	124	194	25	5.2	43	35
31	20	---	28	249	---	81	---	204	---	4.9	34	---
TOTAL	685	674	1058	8720	3606	3871	2849	3681	2311	466.5	1065.1	1495
MEAN	22.1	22.5	34.1	281	129	125	95.0	119	77.0	15.0	34.4	49.8
MAX	43	35	67	1160	216	235	175	249	178	35	100	108
MIN	17	20	24	33	64	81	75	78	23	4.9	5.2	25
CAL YR 1978	TOTAL	29856.0	MEAN 81.8	MAX 776	MIN 13							
WTR YR 1979	TOTAL	30481.6	MEAN 83.5	MAX 1160	MIN 4.9							

PAWTUXET RIVER BASIN

01115630 NOOSENECK RIVER AT NOOSENECK, RI

LOCATION.--Lat 41°37'36", long 71°37'59", Kent County, Hydrologic Unit 01090004, on right bank at upstream side of bridge on State Highway 3 at Nooseneck and 5.5 mi (8.8 km) southwest of Washington.

DRAINAGE AREA.--8.23 mi² (21.32 km²).

PERIOD OF RECORD.--Discharge: Occasional low-flow measurements, water years 1961-63. November 1963 to current year.

Water-quality records: Water year 1963.

GAGE.--Water-stage recorder. Altitude of gage is 265 ft (81 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years (water years 1965-79), 19.3 ft³/s (0.547 m³/s), 31.85 in/yr (809 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 587 ft³/s (16.6 m³/s) Aug. 4, 1979, gage height, 7.41 ft (2.259 m); minimum, 0.81 ft³/s (0.023 m³/s) Sept. 8, 9, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 130 ft³/s (3.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	0245	141 3.99	4.28 1.305	Feb. 26	1600	169 4.79	4.50 1.372
Jan. 8	1345	199 5.64	4.72 1.439	Mar. 7	0930	140 3.96	4.27 1.301
Jan. 21	1615	410 11.6	6.18 1.884	May 24	0530	259 7.33	5.16 1.573
Jan. 25	0745	377 10.7	5.95 1.814	Aug. 4	0845	*587 16.6	7.41 2.259

Minimum discharge, 2.4 ft³/s (0.068 m³/s) Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	6.6	15	18	54	49	21	30	36	13	2.9	16
2	6.7	6.2	12	46	48	44	21	27	33	12	2.7	15
3	5.1	6.1	11	100	44	40	31	26	30	11	2.5	14
4	4.6	5.9	16	46	40	39	27	29	31	9.5	243	14
5	5.9	5.9	19	36	37	36	27	26	36	9.2	70	13
6	7.0	5.4	16	32	34	39	25	24	31	8.5	48	16
7	6.4	5.1	13	31	31	101	22	23	27	7.6	40	22
8	5.6	5.1	13	124	29	64	21	22	25	7.0	40	17
9	4.7	5.1	30	81	27	50	22	21	23	6.6	33	14
10	4.3	4.6	41	54	25	44	30	20	21	6.1	28	14
11	4.3	4.6	23	45	23	42	25	19	20	6.1	28	13
12	4.3	4.5	20	42	22	41	22	18	21	6.0	43	11
13	3.9	4.3	18	42	20	37	20	28	18	5.5	59	11
14	6.9	4.3	18	103	19	36	22	33	18	5.2	43	11
15	9.2	4.1	16	64	18	37	27	40	16	4.9	34	16
16	7.0	4.1	16	48	17	33	25	30	15	5.2	30	13
17	6.4	4.1	16	42	16	32	23	26	14	5.2	26	11
18	5.6	19	16	39	15	30	22	23	13	4.6	24	10
19	5.6	14	14	38	14	29	20	23	17	4.4	28	9.7
20	5.6	9.9	13	39	15	28	18	24	13	4.1	26	10
21	5.6	9.1	20	183	17	27	18	24	12	3.9	23	53
22	5.6	8.4	20	126	23	26	17	21	12	3.8	22	34
23	6.3	8.1	17	76	23	25	17	27	11	3.2	21	23
24	7.0	10	16	65	48	24	17	153	11	3.1	20	19
25	7.1	10	23	245	62	27	16	120	10	3.2	18	17
26	7.2	8.8	25	116	103	27	16	83	9.6	3.0	18	15
27	17	7.7	19	97	82	24	62	58	9.5	4.3	17	15
28	11	9.3	15	83	56	22	64	50	8.8	4.0	17	15
29	8.5	10	14	76	---	22	39	46	8.4	3.5	17	15
30	7.8	19	14	66	---	22	34	42	8.4	3.1	19	16
31	7.4	---	13	60	---	21	---	40	---	2.9	17	---
TOTAL	204.6	229.3	552	2263	962	1118	771	1176	558.7	179.7	1060.1	492.7
MEAN	6.60	7.64	17.8	73.0	34.4	36.1	25.7	37.9	18.6	5.80	34.2	16.4
MAX	17	19	41	245	103	101	64	153	36	13	243	53
MIN	3.9	4.1	11	18	14	21	16	18	8.4	2.9	2.5	9.7
CFSM	.80	.93	2.16	8.87	4.18	4.39	3.12	4.61	2.26	.71	4.16	1.99
IN.	.92	1.04	2.49	10.23	4.35	5.05	3.48	5.31	2.53	.81	4.79	2.23

CAL YR 1978 TOTAL 8030.9 MEAN 22.0 MAX 300 MIN 3.7 CFSM 2.67 IN 36.30
WTR YR 1979 TOTAL 9567.1 MEAN 26.2 MAX 245 MIN 2.5 CFSM 3.18 IN 43.24

01115770 CARR RIVER NEAR NOOSENECK, RI

LOCATION.--Lat 41°38'35", long 71°36'30", Kent County, Hydrologic Unit 01090004, on left bank at upstream side of bridge on Burnt Sawmill Road, 1.5 mi (2.4 km) northeast of Nooseneck, and 4 mi (6 km) southwest of Washington.

DRAINAGE AREA.--6.73 mi² (17.43 km²).

PERIOD OF RECORD.--Discharge: 1961-63 (occasional low-flow measurements), November 1963 to December 1979 (discontinued).

Water-quality records: Water year 1963.

GAGE.--Water-stage recorder. Altitude of gage is 250 ft (76 m), from topographic map. Prior to Nov. 27, 1963, reference point at site 75 ft (23 m) upstream at datum 9 ft (2.7 m) higher.

REMARKS.--Records good. Flow regulated by Carr Pond and other ponds upstream. Prior to May 1972, diversion from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--15 years (water years 1965-79), 12.5 ft³/s (0.354 m³/s), 25.22 in/yr (641 mm/yr), adjusted for diversion prior to May 1972.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 408 ft³/s (11.6 m³/s) Aug. 4, 1979, gage height, 6.76 ft (2.060 m), from rating curve extended above 160 ft³/s (4.5 m³/s); minimum, 0.30 ft³/s (0.008 m³/s) Aug. 25, 26, 1968; minimum daily, 0.36 ft³/s (0.010 m³/s) Aug. 18, Sept. 12, 1965.

EXTREMES FOR PERIOD OCTOBER 1978 TO DECEMBER 1979.--Peak discharges above base of 65 ft³/s (1.8 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1730	80 2.27	4.96 1.512	May 24	1130	101 2.86	5.23 1.594
Jan. 21	2115	191 5.41	5.86 1.786	May 29	0515	71 2.01	4.81 1.466
Jan. 25	1300	192 5.44	5.87 1.789	Aug. 4	1430	a*408 11.6	6.76 2.060
Feb. 26	1915	95 2.69	5.17 1.576	Nov. 4	0400	b*37 1.05	4.11 1.253

a From rating curve extended above 160 ft³/s (4.5 m³/s); maximum for 1979 water year.

b Maximum for period Oct. 1 to Dec. 3, 1979, no peak above base of 65 ft³/s (1.8 m³/s).

Water year 1979: Minimum discharge, 2.4 ft³/s (0.068 m³/s) Oct.1-5; minimum daily, 2.4 ft³/s (0.068 m³/s) Oct. 1-5.

Period October to December 1979: Minimum discharge, 7.9 ft³/s (0.22 m³/s) Oct. 1; minimum daily, 8.1 ft³/s (0.23 m³/s) Oct. 1, Nov. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	4.7	11	11	36	41	16	25	33	5.7	4.9	8.1
2	2.4	4.2	9.2	25	31	36	16	21	29	6.2	4.9	7.7
3	2.4	4.1	8.0	55	29	33	22	19	27	6.7	4.9	7.2
4	2.4	3.6	8.3	43	27	30	22	20	26	6.7	191	7.2
5	2.4	3.6	11	32	26	28	22	19	30	6.7	81	11
6	3.9	3.6	11	26	22	29	20	18	26	6.7	36	10
7	4.8	3.6	9.0	25	20	56	18	16	24	6.7	24	11
8	4.8	3.6	8.0	58	20	52	16	15	19	6.7	21	10
9	4.5	3.6	15	61	21	43	18	14	19	6.5	18	7.9
10	3.9	3.3	29	46	20	36	22	13	19	6.5	14	7.0
11	3.9	3.3	23	37	18	33	21	12	16	6.2	15	6.2
12	3.9	3.2	16	31	17	31	18	11	17	6.2	22	5.7
13	3.9	3.0	13	31	16	29	16	16	18	5.9	34	5.7
14	3.6	3.0	12	58	15	28	17	22	17	5.7	32	5.7
15	4.5	3.0	10	52	14	29	20	28	15	5.7	25	7.0
16	4.5	3.0	9.6	42	14	26	20	25	14	5.7	20	7.0
17	4.5	3.0	9.7	35	14	25	19	20	12	5.7	16	6.2
18	4.2	9.2	10	33	13	23	17	18	12	5.7	13	5.9
19	3.6	14	9.0	30	12	24	15	16	16	5.7	15	5.7
20	3.6	9.9	8.4	27	12	27	14	17	18	5.4	15	5.4
21	3.6	7.7	11	84	14	34	13	17	12	5.4	14	5.4
22	3.6	6.5	13	106	19	27	12	16	9.1	5.4	14	22
23	3.5	5.6	12	58	17	21	12	18	8.6	5.4	13	26
24	3.3	5.1	10	48	30	18	11	83	8.6	5.1	13	17
25	3.1	5.4	15	141	49	17	11	85	8.1	4.6	12	13
26	2.8	5.5	20	89	68	16	10	68	8.1	5.7	12	11
27	6.6	5.5	17	66	71	14	33	49	7.7	7.0	12	9.6
28	9.3	5.5	13	56	51	13	47	41	7.2	5.9	11	8.6
29	8.4	5.5	11	49	---	12	37	60	7.4	5.4	9.6	8.6
30	6.7	8.7	9.3	45	---	13	31	39	7.0	5.1	9.4	7.9
31	5.5	---	9.3	41	---	15	---	36	---	4.9	8.8	---
TOTAL	130.5	153.5	380.8	1541	716	859	586	877	490.8	182.9	735.5	276.7
MEAN	4.21	5.12	12.3	49.7	25.6	27.7	19.5	28.3	16.4	5.90	23.7	9.22
MAX	9.3	14	29	141	71	56	47	85	33	7.0	191	26
MIN	2.4	3.0	8.0	11	12	12	10	11	7.0	4.6	4.9	5.4
CFSM	.63	.76	1.83	7.39	3.80	4.12	2.90	4.21	2.44	.88	3.52	1.37
IN.	.72	.85	2.10	8.52	3.96	4.75	3.24	4.85	2.71	1.01	4.06	1.53

CAL YR 1978 TOTAL 5496.0 MEAN 15.1 MAX 202 MIN 2.2 CFSM 2.24 IN 30.37
WTR YR 1979 TOTAL 6929.7 MEAN 19.0 MAX 191 MIN 2.4 CFSM 2.82 IN 38.30

PAWTUXET RIVER BASIN

01115770 CARR RIVER NEAR NOOSENECK, RI--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, OCTOBER TO DECEMBER 1980
MEAN VALUES

DAY	OCT	NOV	DEC
1	8.1	8.6	12
2	9.6	8.1	12
3	12	21	11
4	18	37	---
5	18	30	---
6	16	24	---
7	14	20	---
8	13	17	---
9	11	16	---
10	13	15	---
11	17	17	---
12	18	27	---
13	19	28	---
14	17	26	---
15	15	24	---
16	13	20	---
17	12	19	---
18	11	17	---
19	10	16	---
20	10	15	---
21	9.8	15	---
22	9.4	14	---
23	9.1	14	---
24	9.8	13	---
25	11	13	---
26	10	13	---
27	9.4	17	---
28	8.8	17	---
29	8.8	16	---
30	9.1	14	---
31	8.8	---	---
TOTAL	378.7	551.7	---
MEAN	12.2	18.4	---
MAX	19	37	---
MIN	8.1	8.1	---
CFSM	1.81	2.73	---
IN.	2.09	3.05	---

01116000 SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI

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

DRAINAGE AREA.--63.8 mi² (165.2 km²).

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

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

REMARKS.--Records good. Flow regulated by Flat River Reservoir 2 mi (3 km) upstream (see table below), usable capacity, 250,000,000 ft³ (7,080,000 m³), and smaller reservoirs. Prior to May 1972, diversion from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 136 ft³/s (3.682 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,860 ft³/s (52.7 m³/s) Mar. 18, 1968, gage height, 5.13 ft (1.564 m); minimum daily, 2.8 ft³/s (0.079 m³/s) Aug. 27, 1944.

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

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,730 ft³/s (49.0 m³/s) Jan. 25, gage height, 4.95 ft (1.509 m); minimum daily, 44 ft³/s (1.25 m³/s) Nov. 10-12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	103	70	84	580	539	121	366	349	76	56	75
2	51	87	106	103	560	524	95	340	304	77	56	75
3	50	82	58	163	510	510	98	255	272	74	56	77
4	50	84	75	216	471	453	98	155	259	72	281	131
5	51	82	87	226	357	295	95	138	264	71	539	216
6	53	79	56	221	353	290	92	112	259	70	476	349
7	55	47	68	226	402	255	90	124	182	68	313	131
8	52	45	89	286	216	255	90	124	109	66	170	68
9	50	45	106	505	190	505	95	124	131	72	148	56
10	49	44	138	476	190	425	98	124	145	78	134	54
11	49	44	128	486	178	216	95	124	145	74	138	54
12	49	44	141	430	155	211	95	124	148	68	207	54
13	49	45	174	388	152	402	90	138	141	64	281	92
14	54	47	170	281	152	402	115	182	131	60	211	246
15	54	47	167	344	152	211	128	207	121	58	207	186
16	54	54	159	471	103	190	182	216	115	56	182	68
17	52	103	95	430	98	190	198	163	109	55	159	62
18	52	112	89	421	98	182	211	155	106	55	141	60
19	52	60	84	411	98	155	211	152	103	54	141	60
20	82	54	148	402	95	155	167	155	100	54	138	60
21	112	52	121	495	103	155	100	159	98	54	131	62
22	112	50	115	681	178	152	100	155	95	54	124	106
23	98	50	100	740	182	90	100	167	90	54	216	87
24	52	54	49	570	202	73	100	505	86	54	174	75
25	64	52	60	1180	216	84	103	707	83	54	82	70
26	118	50	66	1500	259	92	121	718	80	54	80	68
27	170	50	84	992	264	92	163	575	78	62	75	66
28	109	54	82	729	416	92	190	453	76	58	73	68
29	54	52	82	595	---	268	313	393	75	56	75	72
30	54	62	82	520	---	322	402	357	74	56	75	74
31	100	---	82	590	---	308	---	370	---	54	75	---
TOTAL	2102	1834	3131	15162	6930	8093	4156	8037	4328	1932	5214	2922
MEAN	67.8	61.1	101	489	248	261	139	259	144	62.3	168	97.4
MAX	170	112	174	1500	580	539	402	718	349	78	539	349
MIN	49	44	49	84	95	73	90	112	74	54	56	54
(†)	92.0	128.5	174.0	206.5	182.0	144.0	229.5	253.5	243.0	191.0	250.0	223.0
CAL YR 1978 TOTAL	51871											
WTR YR 1979 TOTAL	63841											
MEAN 142												
MAX 175												
MIN 13												
MIN 44												

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

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI

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

DRAINAGE AREA.--200 mi² (518 km²).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good. Flow regulated by powerplants and by Scituate Reservoir 13 mi (21 km) upstream, Flat River Reservoir, and other reservoirs, combined usable capacity, about 6,000,000,000 ft³ (170,000,000 m³). Diversion from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, Warwick, West Warwick, and Coventry. See table below for figures of diversion and monthend contents in Scituate Reservoir and five smaller reservoirs, and see table with station 01116000 for monthend contents in Flat River Reservoir.

AVERAGE DISCHARGE.--39 years (water years 1941-79), 345 ft³/s (9.770 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft³/s (113 m³/s) Jan. 26, 1979, gage height, 13.26 ft (4.042 m); minimum daily, 22 ft³/s (0.62 m³/s) Sept. 4, 1944.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,000 ft³/s (113 m³/s) Jan. 26, gage height, 13.26 ft (4.042 m); minimum daily, 88 ft³/s (2.49 m³/s) July 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	165	175	215	1470	1030	394	769	1240	196	154	242
2	109	151	185	477	1310	1040	253	697	1070	128	122	186
3	105	134	155	976	1200	1100	443	616	812	143	125	206
4	109	133	169	630	1110	856	360	591	795	173	1410	282
5	125	132	218	530	914	736	474	527	804	168	801	377
6	151	180	168	444	975	920	443	373	684	130	781	682
7	122	171	146	435	1020	1310	429	438	606	106	538	356
8	105	130	171	1110	862	1180	324	416	389	99	373	267
9	97	116	377	1080	805	1230	267	403	378	88	282	171
10	105	115	447	926	758	1270	481	381	335	160	271	189
11	102	113	289	836	563	912	447	340	327	273	286	218
12	105	111	264	752	516	880	373	309	377	186	403	221
13	100	103	301	801	665	1100	316	348	336	147	694	189
14	149	112	301	1210	657	1120	356	470	309	141	550	327
15	143	111	289	844	638	963	373	597	295	153	434	352
16	112	104	282	868	609	773	356	558	270	136	386	182
17	112	127	242	815	583	720	461	470	243	148	340	147
18	112	303	195	789	410	524	470	369	254	143	293	148
19	112	165	171	752	300	409	461	340	228	145	286	147
20	129	115	256	730	429	521	416	348	222	147	260	138
21	179	117	309	1610	445	515	286	332	212	145	275	140
22	179	116	264	2000	498	509	260	324	208	137	253	479
23	168	110	232	1350	484	477	249	432	200	125	320	271
24	137	138	165	1110	690	407	242	1370	184	153	348	212
25	112	127	324	2540	844	394	228	1760	173	151	242	198
26	153	114	253	3650	972	320	246	2160	208	152	221	186
27	277	102	221	3420	1240	420	720	1880	253	203	215	174
28	219	127	195	2490	942	373	921	1460	196	183	242	171
29	134	119	201	1940	---	425	995	1230	159	154	208	216
30	97	208	192	1580	---	577	1160	1040	198	163	218	232
31	133	---	180	1460	---	561	---	1180	---	195	249	---
TOTAL	4114	4069	7337	38370	21909	23572	13204	22528	11965	4771	11580	7310
MEAN	133	136	237	1238	782	760	440	727	399	154	374	244
MAX	277	303	447	3650	1470	1310	1160	2160	1240	273	1410	682
MIN	97	102	146	215	300	320	228	309	159	88	122	138
(†)	4009	3846	4008	5533	5332	5275	5457	5569	5288	4867	4669	4409
(‡)	101	92.5	89.8	91.1	95.0	88.6	88.7	97.4	115	127	104	101

CAL YR 1978 TOTAL 149692 MEAN 410 MAX 2590 MIN 84
WTR YR 1979 TOTAL 170729 MEAN 468 MAX 3650 MIN 88

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

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

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1969 to current year.

WATER TEMPERATURES: November 1961 to current year.

INSTRUMENTATION.--Water-quality monitor; prior to June 1969, water temperature recorder.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 668 micromhos Jan. 10, 1977; minimum recorded, 60 micromhos Jan. 25, 1979.

WATER TEMPERATURES: Maximum recorded, 30.0°C July 1, 1964, Aug. 14, 1973; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 466 micromhos Nov. 5; minimum recorded, 60 micromhos Jan. 25.

WATER TEMPERATURES: Maximum recorded, 28.5°C July 30; minimum recorded, 0.0°C Dec. 28, 29.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)
NOV 09...	0800	107	240	6.3	10.5	4.0	60	8.7	78	21	28000
DEC 14...	1315	316	225	6.1	3.0	--	50	12.4	92	--	8500
JAN 10...	1115	895	115	6.1	2.0	3.0	--	13.8	100	--	--
FEH 15...	1400	641	141	6.2	1.0	1.0	--	13.2	93	--	--
MAR 14...	1130	1110	93	5.3	4.5	2.0	25	12.9	99	--	47000
APR 04...	1000	275	165	6.3	7.5	3.0	--	12.4	103	--	--
MAY 03...	0945	527	143	6.8	15.0	3.0	--	9.4	93	--	--
JUN 16...	0900	511	146	6.1	16.5	3.0	60	8.6	87	40	8100
JUL 06...	1330	638	130	7.0	19.0	3.0	30	9.1	97	30	8000
AUG 11...	0945	264	230	6.8	21.5	2.0	--	9.4	105	--	--
SEP 07...	1415	336	158	7.3	25.0	3.0	--	7.4	88	--	--
SEP 19...	0945	146	290	7.1	19.0	3.0	60	6.4	68	27	14000

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, UM-MF (COLS./ 100 ML)	STREP- TOCOCOCCI 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)	BICAR- BONATE (MG/L AS HCO3)
NOV											
09...	--	1100	K8	18	36	--	9.8	2.7	28	4.8	--
DEC											
14...	--	--	--	--	43	22	10	4.3	20	5.0	--
JAN											
10...	2.0	19000	280	2000	--	--	--	--	--	--	--
FEB											
15...	--	--	--	--	--	--	--	--	--	--	--
MAR											
14...	2.0	29000	17	K8	16	9	4.6	1.1	12	1.4	--
APR											
04...	--	--	--	--	--	--	--	--	--	--	--
MAY											
03...	3.0	2200	150	13	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	13
JUN											
06...	--	--	--	--	22	13	6.3	1.6	14	2.2	--
JUL											
11...	3.0	990	130	88	--	--	--	--	--	--	--
AUG											
07...	--	--	--	--	--	--	--	--	--	--	--
SEP											
19...	3.0	K25000	190	24	51	35	13	4.5	31	4.3	--

DATE	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)	SOLIDS, VOLATILE IN BOTTOM MA- TERIAL (MG/KG)	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)
NOV											
09...	--	20	--	22	45	2	163	--	.73	.02	.75
DEC											
14...	--	21	--	22	34	3	137	--	.37	.02	.39
JAN											
10...	--	--	--	--	--	--	--	--	.34	.01	.35
FEB											
15...	--	--	--	--	--	--	--	--	.34	.00	.34
MAR											
14...	--	7	--	11	17	0	72	--	.25	.00	.25
APR											
04...	--	--	--	--	--	--	--	--	.44	.01	.45
MAY											
03...	--	--	--	--	--	--	--	--	.24	.01	.25
16...	0	11	17	17	27	--	106	5680	--	--	.35
JUN											
06...	--	9	--	15	23	5	89	--	.28	.01	.29
JUL											
11...	--	--	--	--	--	--	--	--	.60	.08	.68
AUG											
07...	--	--	--	--	--	--	--	--	.28	.05	.33
SEP											
19...	--	16	2.5	37	46	33	193	--	.70	.09	.79

K, NON-IDEAL COLONY COUNT.

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	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)	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
NOV 09...	1.1	.60	1.7	2.5	.39	2	7.4	0	--	--	--
DEC 14...	1.1	1.2	2.3	2.7	.68	--	7.7	--	1	--	--
JAN 10...	.32	.26	.58	.93	.18	--	--	--	--	--	--
FEB 15...	.48	.38	.86	1.2	.12	--	--	--	--	--	--
MAR 14...	.23	.18	.41	.66	.05	--	4.6	--	1	--	--
APR 04...	.55	.38	.93	1.4	.34	--	--	--	--	--	--
MAY 03...	.30	.43	.73	.98	.16	--	--	--	--	--	--
16...	.50	.44	.94	1.3	.17	0	--	--	4	2.50	.000
JUN 06...	.29	.56	.85	1.1	.18	2	5.9	--	0	--	--
JUL 11...	.40	.59	.99	1.7	.52	--	--	--	--	--	--
AUG 07...	.34	.64	.98	1.3	.20	--	--	--	--	--	--
SEP 19...	1.2	1.0	2.2	3.0	.81	15	4.8	--	0	--	--

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
NOV 09...	--	2500	1	0	0	40	0	<10	50	--
MAR 14...	0	2900	0	0	0	20	0	0	30	--
MAY 16...	--	--	0	--	--	--	--	--	--	1
SEP 19...	--	--	1	0	--	--	--	--	--	1

DATE	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 09...	<10	20	20	0	<10	23	90	860	7000	18
MAR 14...	<10	10	10	0	<10	--	30	180	5500	14
MAY 16...	--	20	<10	--	--	19	--	840	--	8
SEP 19...	<10	10	<10	--	<10	16	10	800	4600	5

< 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 1978 TO SEPTEMBER 1979

	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)		
NOV 09...	290	0	210	140	<.5	.31	--	<10	28		
MAR 14...	50	0	90	110	<.5	.07	0	0	2		
MAY 16...	--	--	190	--	<.5	--	--	--	--		
SEP 19...	10	--	230	90	<.5	.00	--	--	--		
	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)		
NOV 09...	<10	0	0	--	<10	100	10	50	40		
MAR 14...	20	0	0	0	<10	80	10	60	60		
MAY 16...	--	0	--	--	--	--	--	30	--		
SEP 19...	--	0	0	--	--	--	--	30	30		
	PCB, TOTAL IN BOT- TOM MA- TERIAL (UG/L)	PCB, 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)	
NOV 09...	2.8	68	.00	.00	.0	.0	5	.00	2.8	.00	
MAY 16...	.2	--	.00	.00	--	.0	--	.00	--	.00	
SEP 19...	1.9	14	.00	.00	1.0	.0	5	.00	16	.00	
	DDE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL IN BOT- TOM MA- TERIAL (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 (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)
NOV 09...	1.2	.00	2.1	.00	.0	.00	.00	.0	.00	.00	.0
MAY 16...	--	.00	--	.00	--	.00	.00	--	.00	--	--
SEP 19...	2.4	.00	.0	.00	.1	.00	.00	.0	.00	.00	.5
	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATERIAL (UG/L)	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)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOX- APHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	
NOV 09...	.00	.0	.00	.0	--	.0	--	.00	0	0	
MAY 16...	.00	--	.00	--	--	--	--	.00	0	--	
SEP 19...	.00	.0	.00	.0	.00	.0	.00	.00	0	0	

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

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C) • WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	301	222	264	274	225	248	301	268	291	227	197	218
2	314	250	272	263	242	251	284	262	272	201	113	167
3	361	315	341	246	238	242	295	277	289	136	103	117
4	347	305	323	249	239	243	298	127	236	150	137	145
5	317	296	305	466	246	285	251	148	223	160	147	154
6	315	210	254	320	269	289	284	249	273	205	159	176
7	258	224	243	321	254	291	302	284	294	212	176	188
8	253	237	247	276	252	266	302	282	290	175	95	124
9	251	229	238	288	264	278	329	268	303	127	108	120
10	260	227	242	290	275	282	298	237	260	114	109	112
11	266	250	256	311	283	299	238	211	231	123	116	120
12	256	236	243	327	309	319	225	197	218	131	120	127
13	256	240	245	346	324	332	---	---	---	133	102	123
14	237	193	216	378	343	360	---	---	---	125	88	99
15	281	193	233	375	360	369	---	---	---	143	120	135
16	322	285	310	356	340	347	---	---	---	125	106	119
17	322	287	314	336	303	321	---	---	---	123	108	116
18	322	296	310	328	142	249	---	---	---	132	111	124
19	322	317	320	310	253	279	---	---	---	134	115	126
20	314	300	306	264	251	257	---	---	---	130	114	123
21	355	290	314	267	251	259	---	---	---	289	94	165
22	395	317	366	274	265	268	---	---	---	119	89	106
23	312	298	304	281	273	278	---	---	---	105	101	102
24	335	279	299	281	252	272	---	---	---	119	95	113
25	275	265	269	301	270	283	---	---	---	103	60	74
26	264	216	233	298	285	291	---	---	---	69	64	66
27	311	211	274	303	297	301	---	---	---	74	65	69
28	279	209	241	404	299	333	226	217	223	78	73	76
29	230	204	215	414	368	389	227	206	220	85	78	81
30	257	227	242	365	300	330	217	199	211	116	85	89
31	247	232	239	---	---	---	226	215	220	91	80	87
MONTH	395	193	273	466	142	294	---	---	---	289	60	121

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	97	87	93	113	104	108	170	144	155	134	117	128
2	107	93	98	113	103	108	200	170	185	145	125	137
3	106	95	100	106	101	103	205	176	197	156	137	146
4	111	96	104	112	107	111	190	176	184	149	136	143
5	113	94	109	119	110	115	185	154	162	167	139	153
6	105	95	101	110	106	108	181	145	158	178	145	162
7	108	97	103	111	96	102	182	140	154	193	159	183
8	133	102	117	106	104	105	167	137	151	178	156	165
9	129	124	126	109	103	106	213	170	188	181	154	167
10	134	126	130	102	97	98	215	165	180	200	166	183
11	142	133	138	128	102	116	170	138	151	220	196	204
12	155	141	147	130	108	120	167	141	151	223	210	216
13	141	129	134	108	103	105	214	170	193	228	215	221
14	130	127	129	109	100	103	232	216	225	222	181	208
15	134	129	131	119	110	114	227	214	218	178	140	159
16	139	134	137	132	120	125	236	222	229	164	141	153
17	142	136	138	144	131	139	220	170	183	168	150	159
18	155	142	147	188	142	162	168	154	160	193	152	166
19	175	156	164	191	168	186	171	151	159	204	193	198
20	177	154	169	159	138	149	185	161	169	202	192	197
21	170	139	147	163	134	147	209	186	199	201	189	196
22	175	163	168	167	139	152	220	209	213	188	182	184
23	163	140	148	173	142	157	276	221	248	185	138	174
24	160	120	142	168	137	151	277	246	266	130	93	104
25	144	119	130	180	140	155	262	246	254	105	78	88
26	305	107	175	227	183	212	270	262	266	85	83	84
27	127	105	117	220	161	173	265	144	211	91	81	86
28	126	108	116	173	141	154	143	126	134	93	88	91
29	---	---	---	228	172	187	126	113	122	100	89	95
30	---	---	---	229	156	172	113	103	106	109	95	101
31	---	---	---	163	148	155	---	---	---	102	96	98
MONTH	305	87	131	229	96	135	277	103	186	228	78	153

PAWTUXET RIVER BASIN

01116500 PAWTUXET RIVER AT CRANSTON, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	100	74	96	198	185	193	269	220	245	286	264	275
2	115	98	107	217	199	208	279	221	251	266	248	260
3	131	108	122	222	193	212	300	276	286	310	254	274
4	131	112	126	201	188	195	286	123	168	322	246	304
5	128	107	119	211	200	208	150	129	141	243	201	221
6	135	124	130	227	207	215	150	143	146	203	149	181
7	142	130	136	241	224	231	158	140	149	200	148	172
8	165	138	154	241	221	231	172	157	165	208	197	201
9	202	160	177	247	223	235	199	173	183	220	208	215
10	216	195	204	248	171	221	226	201	219	253	219	233
11	218	208	214	237	172	215	241	228	234	284	255	274
12	211	179	187	207	186	195	236	200	213	277	262	270
13	194	173	183	221	202	212	209	141	173	262	219	244
14	211	196	201	251	207	231	151	141	146	294	214	246
15	222	212	217	276	237	257	162	153	157	294	197	252
16	230	219	224	307	277	293	172	155	165	227	207	220
17	238	223	231	332	304	317	186	172	178	241	228	236
18	244	235	238	318	297	304	208	187	198	259	241	251
19	267	240	252	310	287	298	226	208	215	294	258	278
20	279	255	270	321	289	301	242	227	236	304	293	297
21	267	256	261	342	297	318	244	232	238	322	304	314
22	261	223	248	346	311	329	241	235	238	317	278	292
23	223	214	217	331	317	322	261	227	238	290	255	270
24	259	225	250	---	---	---	263	219	235	257	248	253
25	255	234	246	---	---	---	230	223	226	255	246	251
26	234	222	229	---	---	---	229	223	225	251	235	249
27	221	191	206	---	---	---	276	233	260	252	237	245
28	196	187	190	---	---	---	281	263	272	280	242	264
29	215	197	203	---	---	---	262	246	257	311	276	297
30	198	189	193	330	278	312	294	250	264	366	318	348
31	---	---	---	340	228	296	293	262	277	---	---	---
MONTH	279	74	194	346	171	254	300	123	213	366	146	256
YEAR	466	60	203									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	3.0	2.0	2.5	3.0	2.5	3.0	10.5	10.0	10.5	17.0	15.0	16.0
2	2.0	1.0	1.5	3.5	3.0	3.5	10.0	9.0	9.5	17.0	15.0	16.0
3	1.5	1.0	1.5	4.0	3.0	3.5	9.0	9.0	9.0	16.5	15.0	16.0
4	2.0	1.0	1.5	4.5	3.5	4.0	9.0	8.0	8.5	16.5	15.0	16.0
5	1.5	1.0	1.0	7.0	4.5	5.5	8.0	7.5	8.0	17.0	15.0	16.0
6	1.0	1.0	1.0	6.5	6.0	6.0	9.0	7.0	8.0	16.0	15.0	15.5
7	1.0	1.0	1.0	6.5	5.5	6.0	7.5	6.5	7.0	16.5	15.0	16.0
8	1.5	1.0	1.0	5.5	5.0	5.0	8.5	5.5	7.0	18.0	15.5	16.5
9	1.5	1.0	1.0	6.0	4.5	5.5	7.5	7.0	7.5	20.5	17.0	18.5
10	1.0	1.0	1.0	5.5	5.0	5.5	8.0	6.5	7.0	22.0	19.0	20.5
11	1.0	1.0	1.0	6.0	5.0	5.5	9.5	6.5	8.0	22.0	20.0	21.0
12	1.0	1.0	1.0	5.0	3.0	3.5	10.5	7.5	9.0	21.0	19.0	19.5
13	1.0	.5	.5	4.0	2.0	3.0	11.0	9.0	10.0	19.0	17.5	18.5
14	1.0	.5	.5	5.5	4.0	5.0	10.0	8.5	9.5	18.0	17.5	17.5
15	1.0	.5	1.0	5.5	3.5	4.5	8.5	8.0	8.0	18.0	17.0	17.5
16	1.0	.5	.5	4.0	2.5	3.0	8.5	8.0	8.5	19.0	17.0	18.0
17	1.0	.5	.5	4.5	3.0	4.0	9.5	8.0	8.5	18.5	17.5	18.0
18	1.0	.5	.5	5.0	4.0	4.5	10.0	8.5	9.5	18.5	17.0	17.5
19	1.0	.5	.5	6.0	4.5	5.5	10.0	9.0	9.5	17.5	16.5	17.5
20	2.0	.5	1.0	7.0	5.0	6.0	11.5	9.0	10.0	17.0	16.5	16.5
21	2.0	.5	1.0	7.5	6.5	7.0	13.0	10.0	11.5	17.5	16.0	17.0
22	2.5	1.0	1.5	8.5	6.0	7.5	13.0	11.0	12.0	19.0	17.0	18.0
23	2.0	1.0	1.5	9.5	7.5	8.5	15.5	11.5	13.5	18.5	17.0	17.5
24	2.5	2.0	2.0	9.5	7.5	8.5	16.0	13.0	14.5	17.0	15.5	16.0
25	3.0	2.0	2.5	9.5	8.5	9.0	16.0	14.0	15.0	17.0	16.0	16.5
26	2.5	1.0	2.0	11.5	9.0	10.0	16.5	14.5	15.5	18.0	17.0	17.5
27	2.0	1.5	1.5	10.0	8.0	8.5	15.5	15.0	15.5	18.0	16.5	17.0
28	3.5	1.5	2.5	8.5	6.0	7.5	15.0	14.5	14.5	17.5	17.0	17.0
29	---	---	---	8.5	7.5	7.5	14.5	13.5	14.0	18.5	16.5	17.5
30	---	---	---	9.5	8.0	9.0	16.0	14.0	15.0	18.5	17.5	18.0
31	---	---	---	10.5	9.0	10.0	---	---	---	19.5	17.5	18.5
MONTH	3.5	.5	1.0	11.5	2.0	6.0	16.5	5.5	10.5	22.0	15.0	17.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	20.0	18.5	19.5	24.0	22.0	22.5	27.0	25.5	26.0	24.0	22.5	23.0
2	20.0	18.5	19.5	24.0	21.5	22.5	28.0	25.5	26.5	23.5	21.5	22.5
3	19.5	18.5	19.0	25.0	21.5	23.0	27.0	26.0	26.5	23.5	22.5	23.0
4	19.0	18.5	19.0	23.0	21.5	22.5	26.0	24.5	24.5	24.5	22.5	23.5
5	19.5	18.0	18.5	22.5	20.0	21.0	26.0	24.0	25.0	24.5	23.0	23.5
6	21.0	18.5	19.5	22.0	19.0	20.5	26.5	25.5	26.0	24.0	23.5	24.0
7	21.5	19.5	20.5	23.5	19.0	21.0	25.5	24.5	25.0	24.0	23.0	23.5
8	21.0	20.0	20.0	24.0	19.0	21.5	25.0	23.5	24.0	23.5	22.0	22.5
9	21.5	19.0	20.0	25.0	20.0	22.0	25.0	23.0	24.0	22.5	19.5	21.0
10	22.5	20.0	21.5	24.0	20.5	22.5	24.0	23.0	23.5	21.5	19.0	20.5
11	23.5	21.5	22.0	24.5	22.5	23.5	23.5	22.0	22.5	22.0	19.5	20.5
12	22.5	20.5	21.5	25.0	23.0	24.0	21.5	18.5	20.0	21.5	19.0	20.0
13	21.0	19.0	20.0	26.5	23.5	25.0	18.5	17.5	18.0	21.5	19.0	20.0
14	21.0	18.5	20.0	27.5	24.5	26.0	19.5	18.5	19.0	21.5	20.0	21.0
15	22.0	19.5	20.5	26.0	25.5	25.5	19.5	18.5	19.0	22.5	21.0	22.0
16	23.5	21.0	22.5	27.5	24.5	25.5	20.0	18.0	19.0	22.0	20.0	21.0
17	24.5	22.0	23.0	27.0	25.5	26.0	20.0	18.5	19.5	22.0	19.0	20.5
18	25.0	23.0	24.0	26.5	25.0	25.5	19.5	18.5	19.0	21.5	19.5	20.5
19	24.0	22.0	23.0	27.0	24.5	25.5	18.5	18.0	18.5	21.5	18.5	20.0
20	24.0	21.0	22.5	26.5	24.5	25.0	19.5	18.0	18.5	19.5	17.5	18.5
21	23.5	20.5	22.0	26.0	24.0	25.0	20.5	18.5	19.5	18.0	16.5	17.5
22	23.0	20.5	22.0	26.0	24.0	25.0	22.0	19.5	20.5	18.0	17.5	18.0
23	24.0	21.0	22.0	26.0	24.0	24.5	21.5	20.5	21.0	18.0	16.5	17.0
24	23.5	21.0	22.0	---	---	---	22.0	21.0	21.5	18.0	15.5	16.5
25	22.5	20.5	21.0	---	---	---	23.0	21.5	22.0	17.5	15.5	16.5
26	23.0	19.5	21.0	---	---	---	24.0	22.0	23.0	18.5	16.0	17.0
27	22.5	20.0	21.5	---	---	---	24.0	22.0	23.0	18.0	16.5	17.0
28	23.0	20.5	21.0	---	---	---	24.0	23.0	23.5	18.0	16.5	17.0
29	23.5	20.0	21.5	---	---	---	24.0	23.0	23.5	18.5	17.5	18.0
30	23.5	21.0	22.5	28.5	26.5	27.5	24.5	23.0	23.5	18.5	18.0	18.0
31	---	---	---	28.0	25.5	26.5	24.5	23.0	23.5	---	---	---
MONTH	25.0	18.0	21.0	28.5	19.0	24.0	28.0	17.5	22.0	24.5	15.5	20.0
YEAR	28.5	.0	13.0									

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI

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

PERIOD OF RECORD.--November 1978 to September 1979.

WATER-QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	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)
NOV 08...	1000	--	310	6.1	11.5	5.0	60	7.4	68	33
DEC 15...	1145	384	270	6.6	3.0	--	70	11.8	88	--
JAN 10...	1445	1044	152	6.1	2.5	2.0	--	13.0	95	--
FEB 16...	1200	678	176	5.8	.5	1.0	--	14.6	101	--
MAR 14...	1330	1290	118	5.7	4.5	2.0	25	13.0	100	--
APR 05...	0915	310	162	6.2	7.0	3.0	--	12.6	104	--
MAY 03...	1115	618	170	6.8	15.0	3.0	--	8.8	87	--
JUN 08...	1330	459	188	6.5	20.0	4.0	30	7.3	80	36
JUL 11...	1045	330	220	6.8	22.0	1.0	--	10.0	113	--
AUG 08...	1300	--	175	7.1	25.0	2.0	--	6.1	73	--
SEP 19...	1230	215	320	7.2	19.0	2.0	40	4.5	48	46

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 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)
NOV 08...	110000	--	K15000	K43	100	38	--	11	2.6	35
DEC 15...	330000	--	--	--	--	45	20	12	3.7	26
JAN 10...	--	3.0	43000	67	150	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAR 14...	67000	3.0	37000	K4	K8	19	5	5.5	1.2	15
APR 05...	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	4.0	2300	79	25	--	--	--	--	--
JUN 08...	47000	--	--	--	--	31	13	9.2	2.0	19
JUL 11...	--	9.0	9500	270	120	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--
SEP 19...	14000	14	79000	E800	K1600	52	26	14	4.1	36

K, NON-IDEAL COLONY COUNT.

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER-QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)
NOV 08...	5.2	26	--	33	46	7	177	.71	.04	.75
DEC 15...	5.4	25	--	32	41	9	170	.42	.02	.44
JAN 10...	--	--	--	--	--	--	--	.45	.01	.46
FEB 16...	--	--	--	--	--	--	--	.41	.01	.42
MAR 14...	1.6	14	--	14	20	5	79	.29	.01	.30
APR 05...	--	--	--	--	--	--	--	.43	.01	.44
MAY 03...	--	--	--	--	--	--	--	.30	.01	.31
JUN 08...	2.5	18	--	21	31	9	117	.40	.02	.42
JUL 11...	--	--	--	--	--	--	--	.59	.07	.66
AUG 08...	--	--	--	--	--	--	--	.33	.05	.38
SEP 19...	4.5	26	3.2	40	45	18	221	.68	.09	.77

DATE	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)	PHENOLS (UG/L)	CARBON, ORGANIC TOTAL (MG/L AS C)	OIL AND GREASE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)
NOV 08...	1.2	1.3	2.5	3.3	.59	16	11	0	--
DEC 15...	1.2	1.5	2.7	3.1	.75	--	10	--	1
JAN 10...	.68	.42	1.1	1.6	.20	--	--	--	--
FEB 16...	.60	.60	1.2	1.6	.15	--	--	--	--
MAR 14...	.42	.30	.72	1.0	.11	--	5.5	--	1
APR 05...	.57	.43	1.0	1.4	.32	--	--	--	--
MAY 03...	.50	.32	.82	1.1	.21	--	--	--	--
JUN 08...	.66	.74	1.4	1.8	.28	55	7.1	--	0
JUL 11...	.81	.79	1.6	2.3	.55	--	--	--	--
AUG 08...	.48	.72	1.2	1.6	.25	--	--	--	--
SEP 19...	1.5	1.8	3.3	4.1	.89	1	14	--	0

DATE	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC IN BOT- TOM MA- TERIAL (UG/G AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)
NOV 08...	--	6100	1	1	0	180	0	<10	70	--
MAR 14...	80	3000	0	0	0	40	0	2	30	--
SEP 19...	--	--	1	0	--	--	--	--	--	1

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

PAWTUXET RIVER BASIN

01116617 PAWTUXET RIVER AT PAWTUXET, RI--Continued

WATER-QUALITY DATA, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	CADMIUM RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, TOTAL RECOV- FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT- TOM MA- TERIAL (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)
NOV 08...	<10	20	90	0	<10	38	450	880	15000	14
MAR 14...	<10	10	30	0	<10	--	80	280	5800	8
SEP 19...	<10	10	20	--	<10	16	30	820	4200	5
DATE	LEAD, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	
NOV 08...	210	0	180	230	<.5	.03	--	<10	40	
MAR 14...	90	0	110	100	<.5	.07	0	0	3	
SEP 19...	20	--	260	50	<.5	.00	--	--	--	
DATE	NICKEL, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	SELE- NIUM, TOTAL RECOV- FM BOT- TOM MA- TERIAL (UG/G)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT- TOM MA- TERIAL (UG/G AS ZN)	
NOV 08...	50	0	0	--	<10	100	40	100	1000	
MAR 14...	20	0	0	0	<10	70	10	60	140	
SEP 19...	--	0	0	--	--	--	--	40	100	
DATE	PCB, TOTAL (UG/L)	PCB, 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)
NOV 08...	4.3	5400	.00	.00	.0	.0	0	.00	160	.00
SEP 19...	1.6	28	.00	.00	.0	.0	67	.00	1.4	.00
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)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 08...	.0	.00	19	.00	.0	.00	.00	.0	.00	.0
SEP 19...	1.3	.00	.6	.00	.4	.00	.00	.0	.00	.5
DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATERIAL (UG/L)	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)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)
NOV 08...	.00	.0	.00	.0	--	.0	--	.00	0	0
SEP 19...	.00	.0	.00	.0	.00	.0	.00	.00	0	0

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

01117000 HUNT RIVER NEAR EAST GREENWICH, RI

LOCATION.--Lat 41°38'28", long 71°26'45", Washington County, Hydrologic Unit 01090004, on right bank 45 ft (14 m) upstream from Old Forge Dam in North Kingstown, 1.5 mi (2.4 km) south of East Greenwich, and 2.5 mi (4.0 km) upstream from mouth.
DRAINAGE AREA.--23.0 mi² (59.6 km²).

WATER-DISCHARGE RECORDS

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

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

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

REMARKS.--Records good above 50 ft³/s (1.4 m³/s), fair below. Flow affected by diversions for supply of East Greenwich, North Kingstown, Warwick, and Quonset Point (formerly U.S. Naval establishments).

AVERAGE DISCHARGE.--39 years 45.0 ft³/s (1.274 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 899 ft³/s (25.5 m³/s) Jan. 26, 1978, gage height, 3.59 ft (1.094 m), from rating curve extended above 440 ft³/s (12 m³/s); maximum gage height, 6.78 ft (2.067 m)

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

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	0630	260 7.36	2.24 0.683	Feb. 26	1930	432 12.2	2.68 0.816
Jan. 8	1730	368 10.4	2.53 .771	Mar. 7	1100	283 8.01	2.29 .698
Jan. 14	0930	360 10.2	2.51 .765	Apr. 28	0130	236 6.68	2.15 .655
Jan. 21	2000	*804 22.8	3.42 1.042	May 24	0900	522 14.8	2.88 .878
Jan. 25	1430	532 15.1	2.90 .884	Aug. 4	1400	536 15.2	2.91 .887

Minimum discharge, 6.5 ft³/s (0.18 m³/s) Oct. 1, 2, 3, 4, July 24, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	12	41	42	130	170	58	91	117	42	8.5	21
2	7.2	11	30	81	119	147	60	79	102	40	8.5	20
3	6.9	12	25	233	111	129	94	72	94	33	8.5	20
4	8.3	11	36	154	107	119	83	82	99	28	280	19
5	16	12	48	96	102	114	83	79	121	25	172	17
6	32	12	39	74	90	115	74	69	106	23	64	43
7	26	10	30	70	86	242	64	63	92	23	38	62
8	19	9.9	27	244	82	211	58	61	81	22	33	40
9	14	9.6	66	264	77	158	69	59	77	20	28	28
10	11	9.5	112	160	73	133	98	56	72	20	24	24
11	10	10	73	114	69	127	81	51	67	18	28	20
12	9.3	11	50	89	66	120	66	49	73	16	68	19
13	9.3	9.4	41	96	63	108	59	83	65	17	111	17
14	17	9.5	38	310	60	105	70	126	57	17	85	17
15	24	9.5	33	216	57	111	97	147	52	21	54	23
16	16	10	32	141	54	98	83	110	49	23	40	20
17	14	10	34	110	52	92	74	82	45	19	33	17
18	12	39	33	100	50	88	66	70	47	14	30	16
19	11	36	29	85	49	81	60	66	51	16	40	14
20	11	23	27	95	48	76	57	74	43	14	35	16
21	10	18	48	380	49	73	56	72	42	14	30	16
22	11	16	48	503	54	70	54	63	38	13	36	79
23	10	15	38	250	60	68	52	83	36	11	33	76
24	8.9	26	33	170	146	65	49	432	35	8.5	28	49
25	8.0	27	106	414	210	78	49	339	30	9.6	27	35
26	8.7	21	97	369	303	79	49	253	28	9.6	27	30
27	28	18	65	252	330	68	145	172	28	16	24	27
28	26	24	48	200	214	62	206	139	26	14	23	24
29	19	24	40	173	---	59	138	129	25	12	26	23
30	15	49	36	154	---	59	117	120	26	9.6	27	24
31	13	---	35	140	---	59	---	141	---	13	23	---
TOTAL	441.1	514.4	1438	5779	2911	3284	2369	3512	1824	581.3	1492.5	856
MEAN	14.2	17.1	46.4	186	104	106	79.0	113	60.8	18.8	48.1	28.5
MAX	32	49	112	503	330	242	206	432	121	42	280	79
MIN	6.9	9.4	25	42	48	59	49	49	25	8.5	8.5	14

CAL YR 1978 TOTAL 20760.9 MEAN 56.9 MAX 672 MIN 6.0
WTR YR 1979 TOTAL 25002.3 MEAN 68.5 MAX 503 MIN 6.9

POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, RI--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1963, July 1977 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: July 1977 to current year.

WATER TEMPERATURES: July 1977 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 278 micromhos Jan. 14, 1978; minimum recorded, 35 micromhos Jan. 26, 1979.

WATER TEMPERATURES: Maximum recorded, 28.5°C July 17, 1979; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 189 micromhos Nov. 6; minimum recorded, 35 micromhos Jan. 26.

WATER TEMPERATURES: Maximum recorded, 28.5°C July 17; minimum, 0.0°C on many days during winter period.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	135	131	132	137	133	135	126	121	123	108	105	107
2	136	133	134	138	130	134	123	116	119	109	99	107
3	134	123	127	140	132	137	124	121	123	100	92	96
4	127	124	126	142	137	140	128	118	121	92	81	86
5	125	120	122	143	139	142	140	129	136	84	81	83
6	122	109	116	189	138	142	135	128	132	87	84	86
7	112	103	108	153	147	150	131	127	129	91	86	88
8	109	104	106	155	152	154	128	123	125	90	66	73
9	111	108	110	159	153	156	128	120	125	70	66	68
10	112	109	111	158	155	157	119	111	113	72	67	70
11	116	112	114	160	157	159	113	105	108	79	71	75
12	127	114	117	162	160	161	106	102	104	84	79	82
13	120	117	118	162	157	161	105	94	103	84	80	84
14	123	106	116	158	149	152	109	101	106	79	46	55
15	109	97	105	163	157	161	111	108	109	58	43	48
16	111	107	109	164	162	163	113	109	111	75	58	64
17	139	91	101	164	150	161	116	112	113	75	66	70
18	107	103	106	158	131	150	122	116	119	78	72	76
19	110	108	109	154	150	152	123	121	122	84	72	78
20	111	108	110	154	146	150	124	123	124	74	73	73
21	119	112	116	153	146	150	123	108	119	73	69	72
22	123	120	121	149	145	148	125	122	123	75	69	72
23	125	122	124	148	146	147	122	115	120	78	42	62
24	129	125	128	148	108	122	120	115	118	78	52	72
25	130	123	127	129	112	120	116	98	105	87	78	83
26	128	111	126	148	129	138	109	103	106	86	35	78
27	126	100	116	150	143	147	102	97	101	82	38	46
28	129	126	127	144	117	126	104	102	103	51	42	46
29	133	129	132	133	126	130	108	104	106	61	50	54
30	136	131	134	134	124	128	109	107	108	89	61	77
31	135	132	134	---	---	---	109	98	108	90	82	86
MONTH	139	91	119	189	108	146	140	94	116	109	35	75

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SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	84	74	79	69	63	66	112	111	111	98	93	95
2	114	70	73	70	68	69	116	112	114	102	96	99
3	74	72	73	74	70	71	111	106	108	103	101	103
4	77	75	76	78	74	75	107	106	106	103	101	102
5	79	77	78	---	---	---	106	103	104	103	101	101
6	82	77	81	---	---	---	107	104	105	104	102	104
7	92	82	88	---	---	---	107	103	105	105	103	104
8	97	89	90	---	---	---	111	105	107	106	104	105
9	92	89	90	---	---	---	109	106	108	113	105	109
10	92	89	90	---	---	---	106	101	103	117	111	114
11	92	89	90	---	---	---	102	101	101	129	116	124
12	92	89	90	---	---	---	108	102	104	132	127	130
13	98	96	96	---	---	---	111	108	110	125	108	120
14	96	95	95	---	---	---	111	105	109	106	93	98
15	96	95	95	---	---	---	104	99	101	92	85	87
16	95	94	94	---	---	---	100	98	99	91	85	87
17	96	94	95	---	---	---	102	98	99	97	90	93
18	99	95	96	---	---	---	107	102	105	104	96	99
19	98	92	95	---	---	---	109	107	107	97	94	95
20	130	92	115	---	---	---	110	108	109	96	95	96
21	112	103	108	110	107	109	113	110	111	98	94	95
22	---	---	---	110	106	108	114	111	112	104	98	101
23	132	112	115	111	110	111	114	110	112	105	86	101
24	112	72	97	113	110	111	117	114	115	82	44	55
25	70	59	63	110	108	108	117	115	116	49	45	47
26	63	49	57	108	106	107	118	116	117	59	49	54
27	47	43	44	110	109	110	118	89	106	74	59	66
28	67	45	52	111	105	108	89	77	81	82	74	77
29	---	---	---	110	107	108	85	77	80	96	83	90
30	---	---	---	110	108	109	93	84	89	103	93	98
31	---	---	---	111	110	110	---	---	---	92	85	87
MONTH	132	43	86	---	---	---	118	77	105	132	44	95
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	93	84	87	138	135	137	---	---	---	---	---	---
2	95	91	92	139	129	134	---	---	---	---	---	---
3	115	95	104	130	122	126	---	---	---	---	---	---
4	117	110	113	129	123	126	---	---	---	---	---	---
5	110	102	105	128	122	125	---	---	---	---	---	---
6	108	103	104	121	115	117	---	---	---	---	---	---
7	109	105	107	115	113	114	---	---	---	---	---	---
8	116	106	110	118	115	116	---	---	---	---	---	---
9	116	111	114	118	115	117	---	---	---	---	---	---
10	110	106	108	123	118	121	129	123	78	---	---	---
11	135	106	108	127	121	123	136	129	133	---	---	---
12	106	99	101	133	127	131	136	128	133	---	---	---
13	103	99	101	132	127	131	128	116	122	---	---	---
14	112	102	108	130	126	128	119	112	115	---	---	---
15	117	112	115	131	129	130	112	102	107	---	---	---
16	116	114	115	132	115	124	105	101	103	---	---	---
17	119	114	117	131	126	129	107	102	105	---	---	---
18	121	117	120	---	---	---	112	102	108	---	---	---
19	118	115	116	---	---	---	113	112	112	---	---	---
20	120	116	118	---	---	---	123	113	119	---	---	---
21	124	118	121	---	---	---	124	117	121	---	---	---
22	126	123	124	---	---	---	124	119	122	---	---	---
23	127	124	125	---	---	---	---	---	---	129	102	112
24	126	123	124	---	---	---	---	---	---	110	92	99
25	128	124	126	---	---	---	---	---	---	113	100	104
26	127	124	126	---	---	---	---	---	---	105	97	101
27	128	124	126	---	---	---	---	---	---	99	95	97
28	129	126	127	---	---	---	---	---	---	100	96	98
29	130	127	128	---	---	---	118	112	114	127	100	117
30	136	130	133	---	---	---	124	119	122	147	126	138
31	---	---	---	---	---	---	125	119	121	---	---	---
MONTH	136	84	114	---	---	---	---	---	---	---	---	---
YEAR	189	35	108									

POTOWOMUT RIVER BASIN

01117000 HUNT RIVER NEAR EAST GREENWICH, RI--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

PAWCATUCK RIVER BASIN

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI

LOCATION.--Lat 41°28'56", long 71°33'06", Washington County, Hydrologic Unit 01090005, on right bank at West Kingston, at downstream side of bridge on State Highway 138, 1.5 mi (2.4 km) west of Kingston, and 3.1 mi (5.0 km) upstream from Worden Pond.

DRAINAGE AREA.--9.99 mi² (25.87 km²).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--7 years (water years 1959, 1974-79), 21.6 ft³/s (0.612 m³/s).

EXTREMES FOR PERIOD OF RECORD (SINCE 1973).--Maximum discharge, 208 ft³/s (5.89 m³/s) Jan. 27, 1978; gage height, 7.54 ft (2.298 m); minimum, 2.7 ft³/s (0.076 m³/s) July 28, 29, 1976.
Instantaneous maximum and minimum discharges not available prior to Sept. 14, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 163 ft³/s (4.62 m³/s) Jan. 22, gage height, 7.17 ft (2.185 m); minimum, 4.8 ft³/s (0.14 m³/s) Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	6.4	13	18	56	76	26	40	44	17	8.9	8.0
2	5.1	6.3	14	21	52	61	26	35	41	18	7.6	7.6
3	5.1	6.3	13	38	48	54	28	32	38	18	6.8	7.2
4	5.1	6.1	13	56	46	48	31	31	37	18	15	7.0
5	5.9	6.3	14	51	43	43	32	30	38	17	21	6.3
6	7.4	5.3	15	41	41	41	32	29	39	16	22	8.2
7	8.4	5.5	15	35	38	54	31	27	39	15	20	13
8	7.8	5.5	14	41	37	77	29	25	36	15	20	15
9	7.4	5.3	16	67	36	73	28	24	34	14	17	15
10	6.6	5.1	22	68	35	61	29	24	32	12	15	14
11	6.3	5.1	25	54	33	54	31	23	30	12	14	12
12	5.5	5.1	25	44	32	50	31	22	29	11	12	9.5
13	5.7	5.1	22	39	31	46	29	23	28	11	15	4.0
14	6.3	5.1	19	55	29	43	28	30	27	10	18	7.0
15	7.2	5.1	17	74	28	43	30	40	25	10	20	7.2
16	7.6	5.1	16	68	27	42	33	44	24	9.8	18	7.0
17	8.0	5.1	16	55	26	40	33	42	23	9.9	16	6.6
18	7.0	7.0	16	47	25	38	31	38	24	9.8	15	6.1
19	6.6	8.2	15	41	24	36	29	34	31	9.7	13	5.7
20	6.6	8.2	14	38	24	34	27	33	25	9.2	13	5.3
21	6.4	8.2	14	58	24	33	25	32	23	9.0	12	5.0
22	6.4	8.0	15	147	26	32	24	30	22	8.3	13	12
23	6.1	7.6	16	127	28	31	23	30	21	8.2	13	17
24	6.1	8.2	16	90	33	30	22	56	20	7.6	13	19
25	5.9	8.9	20	97	54	30	21	102	19	7.3	13	18
26	5.7	9.1	30	120	76	30	21	100	18	6.8	12	15
27	6.4	9.3	33	106	107	30	26	81	18	11	11	13
28	6.6	9.3	30	89	98	29	41	66	17	11	9.5	11
29	6.6	9.3	25	77	---	28	49	58	17	11	9.1	9.8
30	6.6	11	22	67	---	27	46	52	16	11	8.4	9.3
31	6.6	---	19	60	---	27	---	47	---	10	8.4	---
TOTAL	200.3	206.1	574	1989	1157	1341	892	1280	835	363.6	429.7	304.8
MEAN	6.46	6.87	18.5	64.2	41.3	43.3	29.7	41.3	27.8	11.7	13.9	10.2
MAX	8.4	11	33	147	107	77	49	102	44	18	22	19
MIN	5.1	5.1	13	18	24	27	21	22	16	6.8	6.8	5.0
CAL YR 1978	TOTAL	9247.1	MEAN	25.3	MAX	201	MIN	5.1				
WTR YR 1979	TOTAL	9572.5	MEAN	26.2	MAX	147	MIN	5.0				

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1973 to current year.

WATER TEMPERATURES: October 1973 to current year.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

WATER TEMPERATURES: Maximum recorded, 30.0°C Aug. 2, 1975; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 180 micromhos June. 11; minimum, 37 micromhos Jan. 22, 23.

WATER TEMPERATURES: Maximum, 29.0°C July 30; minimum, 0.5°C on several days during February.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	111	107	108	118	113	115	99	97	98	96	93	94
2	112	107	109	119	114	116	101	97	99	96	83	90
3	109	107	108	119	114	116	100	97	99	84	80	83
4	111	108	109	117	114	115	103	101	102	81	79	80
5	111	107	109	117	113	115	101	99	100	80	78	79
6	109	106	108	118	114	116	100	98	99	79	78	79
7	106	104	105	118	115	116	101	99	100	79	78	79
8	106	103	105	115	113	114	102	101	101	79	73	75
9	108	104	106	117	113	114	102	93	97	73	70	72
10	112	106	109	117	113	114	95	93	94	71	69	70
11	114	110	111	115	113	114	94	92	93	69	67	68
12	114	111	112	114	111	113	95	92	94	70	67	69
13	115	111	113	114	111	113	98	94	96	71	65	69
14	117	113	115	116	112	114	99	96	97	67	62	65
15	113	103	111	115	113	114	100	96	98	61	53	56
16	110	107	108	114	111	112	101	98	99	53	51	52
17	110	108	109	115	111	112	102	99	100	53	51	52
18	112	109	110	124	111	118	101	98	99	55	52	54
19	115	111	113	111	108	110	101	98	99	58	55	56
20	115	111	113	110	107	108	102	100	101	61	56	59
21	117	111	114	108	106	107	102	99	101	63	51	57
22	118	113	115	107	106	106	102	98	99	53	37	44
23	118	114	116	107	106	106	102	98	100	41	37	39
24	116	111	113	108	107	107	102	99	101	43	40	41
25	117	111	114	106	104	105	100	89	93	43	41	43
26	120	114	118	104	102	103	94	91	93	44	42	43
27	122	115	120	103	101	102	92	90	91	45	42	43
28	120	114	117	105	102	103	91	89	90	47	44	45
29	120	114	116	103	101	102	92	88	90	50	45	48
30	117	113	115	103	99	101	95	90	92	56	50	54
31	119	114	116	---	---	---	95	93	94	61	56	58
MONTH	122	103	112	124	99	111	103	88	97	96	37	62

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY												
1	60	58	59	55	53	54	91	88	89	83	79	81
2	62	58	60	56	53	54	90	89	89	83	80	82
3	64	60	61	60	55	57	88	86	87	84	81	83
4	64	61	62	61	57	59	86	85	85	85	83	84
5	65	62	63	69	61	64	87	85	86	85	84	84
6	67	64	65	72	70	71	87	85	86	85	84	85
7	67	65	66	72	70	71	88	86	87	87	85	86
8	67	65	66	71	69	70	91	86	89	88	86	87
9	68	65	66	72	68	70	89	87	88	89	87	89
10	68	66	68	73	69	71	88	86	87	90	89	89
11	70	68	69	74	72	73	90	85	87	90	89	89
12	72	70	71	75	71	73	91	86	88	89	89	89
13	74	71	72	76	72	74	90	87	89	90	86	89
14	75	72	74	78	76	77	89	87	88	85	82	84
15	77	74	75	77	74	76	87	85	86	83	81	82
16	77	75	76	77	74	75	86	85	85	82	80	81
17	80	76	78	80	74	76	89	85	87	81	79	80
18	81	78	80	80	75	77	90	86	88	81	80	81
19	82	80	81	84	77	80	89	85	87	81	80	80
20	86	82	83	84	78	81	92	86	89	81	80	81
21	87	82	84	85	80	82	94	88	90	82	81	81
22	84	81	82	87	80	83	92	89	90	83	81	82
23	83	80	82	87	81	84	95	90	92	83	75	81
24	83	77	80	86	82	84	92	84	89	75	71	74
25	78	74	77	86	84	85	86	83	85	72	68	71
26	74	65	68	87	83	84	84	79	83	69	65	67
27	65	54	60	86	83	84	80	74	77	68	64	66
28	56	52	53	88	83	85	85	73	78	65	65	65
29	---	---	---	88	85	87	82	79	81	69	65	67
30	---	---	---	91	87	89	81	79	80	69	66	67
31	---	---	---	91	88	89	---	---	---	71	67	69
MONTH	87	52	71	91	53	75	95	73	86	90	64	80
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE												
1	72	68	70	94	90	92	105	103	104	101	100	101
2	72	69	71	92	89	91	105	104	105	102	100	101
3	74	71	72	94	90	92	106	105	105	103	102	102
4	75	72	74	92	90	91	106	77	88	103	102	103
5	73	71	72	93	90	91	94	92	93	103	103	103
6	74	70	71	94	92	93	94	93	94	105	95	101
7	73	70	71	96	94	95	95	93	94	98	97	97
8	75	72	73	96	94	95	95	90	92	97	94	95
9	78	75	76	96	93	94	96	94	95	95	93	94
10	78	76	77	96	93	94	98	94	96	97	94	95
11	180	78	79	98	95	96	99	97	98	98	97	97
12	80	77	79	98	96	97	96	90	92	99	97	98
13	80	77	79	99	97	98	91	87	89	100	98	99
14	81	77	79	99	97	98	91	90	91	102	100	101
15	83	79	81	99	99	99	90	89	90	102	101	101
16	84	81	82	100	99	99	92	89	90	102	101	101
17	86	82	84	99	99	99	91	90	91	103	101	102
18	86	84	85	101	99	100	92	91	91	104	102	103
19	87	82	84	101	100	101	93	91	92	104	103	104
20	86	82	84	102	100	101	94	93	94	104	102	103
21	85	81	83	102	101	102	96	92	94	106	103	105
22	85	82	83	103	102	103	94	92	93	105	95	99
23	87	84	86	104	102	103	94	94	94	97	95	96
24	88	85	86	105	103	104	96	94	95	96	94	95
25	88	85	87	106	105	105	98	97	98	96	94	95
26	90	86	88	106	104	106	99	98	99	97	95	96
27	92	88	90	106	101	103	100	99	100	97	95	96
28	93	90	91	103	102	102	101	99	100	98	95	97
29	93	90	92	104	102	102	101	100	101	100	99	99
30	95	92	94	103	102	102	101	100	100	100	98	99
31	---	---	---	103	102	103	100	100	100	---	---	---
MONTH	180	68	81	106	89	98	106	77	95	106	93	99
YEAR	180	37	89									

01117350 CHIPUXET RIVER AT WEST KINGSTON, RI--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°28'36", long 71°36'19", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of Heaton Orchard Bridge on State Highway 2 in South Kingstown, 1.2 mi (1.9 km) upstream from Chickasheen Brook, 1.8 mi (2.9 km) south of Usquepaug, and 2.6 mi (4.2 km) west of West Kingston.

DRAINAGE AREA.--36.1 mi² (93.5 km²).

WATER-DISCHARGE RECORDS

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

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

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

AVERAGE DISCHARGE.--5 years (water years 1959, 1976-79), 82.5 ft³/s (2.336 m³/s), 31.03 in/yr (788 mm/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1974).--Maximum discharge, 658 ft³/s (18.6 m³/s) Jan. 27, 1978, gage height, 8.21 ft (2.502 m); minimum, 3.9 ft³/s (0.11 m³/s) Sept. 10, 1977.
Instantaneous maximum and minimum discharges not available prior to Dec. 5, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 548 ft³/s (15.5 m³/s) Jan. 22, gage height, 7.65 ft (2.332 m); minimum, 14 ft³/s (0.40 m³/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	21	56	60	225	246	85	131	181	56	29	40
2	14	20	42	88	207	206	83	114	161	59	28	37
3	14	19	35	201	189	184	108	101	147	56	28	36
4	14	19	44	251	183	169	120	102	145	49	66	37
5	19	19	66	198	171	159	116	105	169	48	117	34
6	27	18	59	152	155	154	109	94	173	45	121	40
7	33	18	45	133	144	253	95	88	152	42	65	57
8	28	18	40	199	140	316	84	82	131	40	55	52
9	23	17	70	339	135	270	85	79	119	39	47	44
10	21	17	119	301	135	221	108	77	111	37	42	39
11	20	17	120	230	130	197	111	73	103	37	44	36
12	19	17	88	185	120	187	96	69	98	36	64	33
13	18	16	66	177	116	170	85	90	97	34	93	32
14	20	16	61	278	109	160	85	149	86	33	110	31
15	30	16	55	325	107	163	112	200	80	34	86	35
16	28	16	51	277	104	158	117	190	76	36	62	34
17	23	16	53	227	96	145	106	150	72	37	52	32
18	21	34	55	199	90	136	93	122	72	35	47	30
19	22	45	46	180	93	129	86	109	100	35	51	29
20	21	33	42	168	88	124	81	107	83	34	52	28
21	19	28	61	284	86	120	77	111	70	32	48	27
22	18	25	76	530	108	115	74	102	65	33	48	70
23	18	23	62	468	106	110	72	97	61	32	46	97
24	18	30	51	328	130	105	69	303	59	29	44	75
25	17	39	91	400	238	107	68	440	55	30	43	55
26	17	31	120	491	295	116	67	411	52	29	42	48
27	26	26	110	429	380	110	99	330	51	47	39	43
28	32	30	77	345	328	99	198	266	49	39	39	40
29	28	32	61	295	---	92	205	237	48	35	42	38
30	24	53	54	264	---	90	160	217	47	33	45	40
31	22	---	53	242	---	87	---	199	---	30	44	---
TOTAL	668	729	2029	8244	4408	4898	3054	4945	2913	1191	1739	1269
MEAN	21.5	24.3	65.5	266	157	158	102	160	97.1	38.4	56.1	42.3
MAX	33	53	120	530	380	316	205	440	181	59	121	97
MIN	14	16	35	60	86	87	67	69	47	29	28	27
CFSM	.60	.67	1.81	7.37	4.35	4.38	2.83	4.43	2.69	1.06	1.55	1.17
IN.	.69	.75	2.09	8.49	4.54	5.05	3.15	5.10	3.00	1.23	1.79	1.31

CAL YR 1978 TOTAL 33046 MEAN 90.5 MAX 636 MIN 14 CFMS 2.51 IN 34.05
WTR YR 1979 TOTAL 36087 MEAN 98.9 MAX 530 MIN 14 CFMS 2.74 IN 37.19

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: December 1974 to current year.

WATER TEMPERATURES: December 1974 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

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

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

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 83 micromhos July 26; minimum recorded, 21 micromhos Jan. 22.

WATER TEMPERATURES: Maximum recorded, 25.5°C Aug. 2,4; minimum recorded, 0.0°C on several days during February.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	69	68	68	62	58	60	59	53	56	60	57	59
2	69	67	68	62	58	61	63	57	60	57	50	54
3	71	68	69	62	60	61	64	60	63	49	39	43
4	71	68	69	63	61	62	61	55	58	43	38	41
5	67	65	66	63	60	62	57	41	54	47	43	45
6	65	61	63	64	62	63	59	41	56	47	44	46
7	61	58	59	65	63	64	61	57	59	49	46	47
8	62	59	60	71	66	69	62	58	59	46	37	42
9	66	61	63	71	68	70	61	52	58	38	34	35
10	66	64	66	72	68	70	52	46	49	41	34	38
11	67	65	66	71	69	70	51	46	49	44	40	42
12	68	67	67	72	70	71	54	50	52	46	44	46
13	69	66	67	71	68	70	56	53	54	47	43	45
14	69	67	68	71	69	70	58	44	55	42	34	38
15	66	59	62	70	68	69	60	56	58	37	32	34
16	63	57	60	70	68	70	60	56	59	40	37	38
17	63	59	61	71	69	70	61	57	59	42	40	42
18	64	61	63	69	60	66	60	45	58	43	40	42
19	64	60	61	60	56	58	63	59	61	46	43	44
20	64	60	62	66	59	61	65	62	64	47	45	46
21	67	62	65	69	66	68	65	59	61	44	29	27
22	68	65	66	68	66	67	60	53	57	28	21	27
23	66	64	65	67	67	67	61	56	59	29	24	27
24	68	65	67	67	64	65	62	61	61	35	29	32
25	68	66	67	64	57	61	62	52	55	34	29	32
26	68	66	67	64	60	62	52	45	48	31	30	30
27	67	61	64	65	64	64	56	50	53	33	26	31
28	60	56	58	66	64	65	59	56	57	36	33	34
29	61	57	59	65	58	61	62	58	60	37	34	36
30	62	59	61	61	54	57	63	60	62	38	36	37
31	62	59	61	---	---	---	63	61	62	38	35	37
MONTH	71	56	64	72	54	65	65	41	57	60	21	39

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	39	36	37	32	28	30	63	60	61	50	48	49
2	40	36	38	36	33	35	63	61	62	52	50	51
3	40	38	40	38	36	37	62	42	58	53	52	52
4	43	39	41	41	38	40	57	55	55	52	51	51
5	44	41	43	44	41	42	56	55	55	53	51	51
6	47	42	45	45	44	45	58	54	56	54	53	53
7	48	46	48	44	34	38	59	57	58	54	53	54
8	48	45	47	37	35	36	60	57	59	55	54	55
9	47	45	46	41	38	39	61	59	60	57	55	56
10	49	47	48	44	40	42	59	53	55	60	57	58
11	51	49	50	46	44	45	57	53	55	60	59	59
12	51	50	51	46	43	45	59	57	58	61	60	60
13	51	46	50	47	44	46	60	58	59	60	52	56
14	52	49	51	50	48	49	60	58	59	51	42	46
15	52	51	51	50	47	49	57	52	54	43	41	42
16	52	51	51	51	48	49	53	51	52	45	41	43
17	54	51	52	54	50	52	55	53	54	48	44	46
18	55	51	53	54	52	53	57	54	55	50	48	49
19	54	52	53	56	53	54	57	56	56	50	49	50
20	53	50	52	57	55	56	58	57	57	49	47	49
21	55	52	53	58	43	56	59	57	58	49	47	48
22	54	47	50	60	43	58	60	58	59	51	49	50
23	51	50	50	62	59	60	60	59	59	52	47	51
24	50	37	45	63	60	62	61	60	60	45	26	33
25	36	30	31	61	59	60	62	61	61	30	27	28
26	31	23	28	60	58	59	62	61	62	33	30	31
27	24	22	23	61	58	60	61	50	57	36	33	35
28	26	22	24	62	58	60	49	43	45	38	26	37
29	---	---	---	62	60	61	46	44	45	41	38	39
30	---	---	---	63	60	61	48	45	47	43	41	42
31	---	---	---	62	60	61	---	---	---	45	42	43
MONTH	55	22	45	63	28	50	63	42	56	61	26	47
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE				JULY			AUGUST			SEPTEMBER		
1	48	44	46	65	62	64	79	76	77	63	61	62
2	49	47	48	62	61	61	78	76	77	63	62	63
3	48	48	48	62	57	60	79	77	78	63	61	62
4	49	47	48	61	60	60	79	56	68	64	61	62
5	47	44	45	62	61	61	56	50	53	66	63	64
6	47	45	46	63	62	62	56	52	53	66	59	64
7	51	47	49	64	62	63	56	55	55	58	54	56
8	52	51	52	66	63	65	59	56	58	59	56	57
9	54	52	53	66	65	66	60	58	59	59	58	59
10	55	53	54	67	66	66	62	60	61	61	58	59
11	57	55	56	68	66	67	61	59	60	65	59	61
12	57	56	56	69	67	68	59	50	54	67	50	60
13	57	55	56	71	68	69	50	35	46	62	53	58
14	58	56	57	71	70	70	43	40	41	61	54	56
15	60	58	59	71	70	70	46	42	44	54	48	51
16	62	60	61	71	69	70	51	35	47	---	---	---
17	61	60	61	73	70	71	53	51	52	---	---	---
18	63	61	62	74	73	73	55	53	55	---	---	---
19	62	57	60	74	73	74	56	53	55	---	---	---
20	60	57	58	78	74	75	53	52	53	---	---	---
21	62	59	60	78	76	77	54	53	54	---	---	---
22	62	61	62	77	76	76	55	53	54	---	---	---
23	64	62	63	78	76	77	56	54	55	---	---	---
24	65	63	64	81	79	80	58	55	56	---	---	---
25	65	64	64	81	79	80	58	57	58	---	---	---
26	66	65	65	83	80	82	61	58	59	64	55	57
27	67	65	66	82	76	79	61	60	60	60	57	58
28	66	65	66	77	75	75	61	60	61	61	58	60
29	66	64	65	77	73	75	61	59	60	63	61	62
30	66	65	65	77	74	76	59	57	58	63	61	62
31	---	---	---	78	76	77	61	58	59	---	---	---
MONTH	67	44	57	83	57	71	79	35	57	---	---	---
YEAR	83	21	56									

PAWCATUCK RIVER BASIN

01117420 USQUEPAUG RIVER NEAR USQUEPAUG, RI--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

PAWCATUCK RIVER BASIN

01117468 BEAVER RIVER NEAR USQUEPAUG, RI

LOCATION.--Lat 41°29'33", long 71°37'43", Washington County, Hydrologic Unit 01090005, on right bank 10 ft (3 m) downstream from Beaver River Bridge on State Highway 138 in Richmond, 1.2 mi (1.9 km) southwest of Usquepaug, 3.3 mi (5.3 km) north of Kenyon, and 3.6 mi (5.8 km) upstream from mouth.
 DRAINAGE AREA.--8.87 mi² (23.0 km²).
 PERIOD OF RECORD.--December 1974 to current year.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is 107.68 ft (32.821 m) National Geodetic Vertical Datum of 1929.
 REMARKS.--Records good. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 275 ft³/s (7.79 m³/s) Jan. 21, 1979, gage height, 3.29 ft (1.003 m) from rating curve extended above 29 ft³/s (0.82 m³/s); maximum gage-height, 3.36 ft (1.024 m) Jan. 27, 1978; minimum discharge, 2.1 ft³/s (0.059 m³/s) Sept. 6-12, 1975 (see below for revision of figure published last year).

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 70 ft³/s (1.98 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 3	1000	a93	2.63	2.44	0.744	Feb. 26	2315	a123	3.48	2.63	.802
Jan. 8	1945	a136	3.85	2.70	.823	Mar. 7	1245	a116	3.29	2.59	.789
Jan. 14	1300	a113	3.20	2.57	.783	Apr. 28	2300	a76	2.15	2.32	.707
Jan. 21	2245	a*275	7.79	3.29	1.003	May 25	1315	a163	4.62	2.84	.866
Jan. 25	1430	a207	5.86	3.03	.924						

a From rating curve extended above 29 ft³/s (0.82 m³/s).

Minimum discharge, 4.1 ft³/s (0.12 m³/s) Oct. 1-4.

REVISIONS.--Revised minimum discharge and revised daily discharges for water year 1978 are given below. These figures supersede those published in the report for 1978.

EXTREMES FOR 1978 WATER YEAR.--Minimum discharge, 4.1 ft³/s (0.12 m³/s) Sept. 30, 1978 (previously published figure was also shown as minimum for period of record).

DISCHARGE, IN CUBIC FEET PER SECOND, JULY TO SEPTEMBER 1978
MEAN VALUES

DAY	JUL	AUG	SEP
1	12	7.6	7.1
2	12	14	7.8
3	11	13	6.9
4	24	12	6.1
5	26	14	5.7
6	20	11	5.4
7	14	22	5.2
8	13	27	5.1
9	12	18	5.0
10	11	11	4.9
11	11	9.2	4.8
12	9.6	13	5.9
13	8.9	20	8.9
14	8.0	14	7.5
15	11	9.6	6.5
16	14	8.5	6.2
17	14	8.2	5.8
18	12	7.8	5.7
19	11	7.5	8.0
20	9.2	7.1	8.2
21	8.7	7.1	6.8
22	8.5	6.9	6.5
23	8.2	6.6	6.3
24	7.6	6.5	5.5
25	7.5	6.5	5.1
26	7.3	6.6	4.8
27	7.3	6.3	4.5
28	7.1	6.6	4.4
29	7.1	6.9	4.2
30	7.5	6.6	4.2
31	7.5	6.5	---
TOTAL	348.0	327.6	179.0
MEAN	11.2	10.6	5.97
MAX	26	27	8.9
MIN	7.1	6.3	4.2
CFSM	1.26	1.20	.67
IN.	1.46	1.37	.75

WTR YR 1978 TOTAL 10537.4 MEAN 28.9 MAX 183 MIN 4.2 CFSM 3.26 IN 44.19

01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	4.7	11	16	61	54	26	36	53	20	6.8	7.8
2	4.1	4.6	8.2	30	53	49	26	33	50	18	6.6	7.3
3	4.1	4.4	7.6	74	52	46	37	32	46	19	6.5	7.5
4	4.2	4.4	9.6	55	48	42	34	34	50	17	35	7.5
5	5.0	4.3	15	43	44	42	33	34	55	15	39	6.9
6	6.9	4.3	11	34	39	42	30	32	50	14	21	8.2
7	6.9	4.3	8.7	33	36	99	27	30	43	13	11	12
8	5.8	4.3	8.5	86	35	87	26	30	40	12	13	8.7
9	5.3	4.3	20	99	34	68	27	29	38	12	8.9	7.5
10	5.0	4.3	33	69	31	58	34	27	36	11	8.2	7.1
11	4.9	4.3	24	59	30	55	30	26	34	11	8.9	6.6
12	4.8	4.3	18	51	28	53	27	25	34	10	17	6.3
13	4.7	4.2	16	48	27	48	26	37	33	9.6	31	6.2
14	5.3	4.2	16	99	25	46	29	52	30	9.2	23	6.3
15	6.6	4.2	15	84	24	49	37	58	28	9.2	16	7.1
16	6.1	4.2	14	64	24	44	33	45	27	9.2	12	6.9
17	5.2	4.2	15	53	23	40	30	37	26	9.2	10	6.6
18	4.8	7.6	15	50	20	39	27	33	25	8.7	8.9	6.3
19	4.6	8.7	14	44	20	36	26	32	35	8.5	11	6.1
20	4.5	7.1	12	42	20	35	26	33	30	8.2	11	6.1
21	4.5	6.1	18	103	21	33	25	33	26	8.0	11	6.2
22	4.4	5.7	20	157	27	33	24	30	24	8.0	11	23
23	4.3	5.4	16	94	25	31	23	36	22	7.8	11	23
24	4.3	6.9	14	81	43	29	21	132	20	7.6	11	14
25	4.3	7.5	27	168	68	32	21	128	19	7.5	11	9.2
26	4.2	6.6	29	139	83	32	21	103	18	7.3	11	8.2
27	6.2	5.9	21	111	102	29	49	83	17	12	11	7.8
28	6.6	6.6	18	93	69	27	63	72	16	8.7	11	7.8
29	5.7	6.9	17	80	---	27	46	67	15	7.8	10	7.6
30	5.1	12	16	69	---	27	39	61	14	7.3	8.5	7.6
31	4.8	---	14	66	---	27	---	56	---	6.9	8.5	---
TOTAL	157.3	166.5	501.6	2294	1112	1359	923	1496	954	332.7	419.8	259.4
MEAN	5.07	5.55	16.2	74.0	39.7	43.8	30.8	48.3	31.8	10.7	13.5	8.65
MAX	6.9	12	33	168	102	99	63	132	55	20	39	23
MIN	4.1	4.2	7.6	16	20	27	21	25	14	6.9	6.5	6.1
CFSM	.57	.63	1.83	8.34	4.48	4.94	3.47	5.45	3.59	1.21	1.52	.98
IN.	.66	.70	2.10	9.62	4.66	5.70	3.87	6.27	4.00	1.40	1.76	1.09
CAL YR 1978	TOTAL	8672.0	MEAN	23.8	MAX	183	MIN	4.1	CFSM	2.68	IN	36.37
WTR YR 1979	TOTAL	9975.3	MEAN	27.3	MAX	168	MIN	4.1	CFSM	3.08	IN	41.83

01117468 BEAVER RIVER NEAR USQUEPAUG, RI--Continued

TEMPERATURE (DEG. C) OF WATER, JUNE TO AUGUST 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST		
1	---	---	---	17.0	15.5	16.0	20.5	17.5	19.0
2	---	---	---	18.5	16.0	17.0	20.5	17.5	19.0
3	---	---	---	19.0	15.5	17.0	20.5	18.5	19.5
4	---	---	---	16.5	14.5	15.5	22.0	19.0	21.0
5	---	---	---	15.5	13.0	14.5	24.0	22.0	22.5
6	---	---	---	15.5	12.0	14.0	23.0	20.5	22.0
7	---	---	---	16.0	12.5	14.5	20.5	17.5	19.0
8	---	---	---	17.0	12.5	15.0	20.5	17.5	19.0
9	---	---	---	18.0	13.5	15.5	20.0	17.0	18.5
10	---	---	---	17.0	14.5	16.0	18.0	16.0	16.5
11	---	---	---	18.0	15.5	16.5	17.0	16.0	16.5
12	---	---	---	17.5	15.0	16.5	16.0	15.0	15.5
13	---	---	---	19.5	15.5	17.0	16.5	14.5	15.5
14	---	---	---	19.5	16.0	17.5	16.5	14.5	15.5
15	---	---	---	18.5	17.0	17.5	16.0	14.5	15.0
16	---	---	---	19.0	17.0	17.5	16.0	13.5	15.0
17	---	---	---	19.0	17.0	18.0	15.5	13.0	14.0
18	---	---	---	18.0	16.5	17.0	14.0	12.5	13.5
19	17.5	15.0	16.0	19.0	16.0	17.0	15.0	13.5	14.0
20	16.5	13.5	15.0	18.5	16.0	17.0	16.0	14.5	15.0
21	16.0	12.5	14.5	18.0	15.5	16.5	16.5	14.0	15.0
22	15.5	12.5	14.0	19.0	16.0	17.0	17.0	14.5	15.5
23	17.0	14.5	15.5	18.5	16.0	17.0	16.5	15.0	16.0
24	16.5	14.0	15.0	19.5	16.5	18.0	17.5	15.0	16.5
25	15.5	13.0	14.0	20.0	17.0	18.5	18.5	17.0	17.5
26	15.0	11.5	13.5	20.5	17.5	18.5	19.0	17.0	17.5
27	15.5	11.0	13.5	20.0	18.0	19.0	18.0	16.0	17.0
28	15.5	12.0	14.0	21.0	18.0	19.5	19.0	17.0	18.0
29	16.0	13.0	14.5	20.5	18.0	19.0	19.0	17.5	18.0
30	16.0	14.0	15.0	21.0	17.5	19.0	20.0	18.5	19.0
31	---	---	---	19.5	16.5	18.0	20.0	17.5	18.5
MONTH	---	---	---	21.0	12.0	17.0	24.0	12.5	17.0
PERIOD	24.0	11.0	16.5						

PAWCATUCK RIVER BASIN

01117472 BEAVER RIVER AT KENYON, RI

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1975 to November 1978 (discontinued).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1975 to November 1978 (discontinued).

WATER TEMPERATURES: October 1975 to November 1978 (discontinued).

INSTRUMENTATION.--Water-quality monitor since October 1975.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 111 micromhos Feb. 11, 1977, but may have been higher during periods of missing record; minimum, 24 micromhos Mar. 16, 1978.

WATER TEMPERATURES: Maximum, 23.0°C July 21, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR OCTOBER - NOVEMBER 1978.--

SPECIFIC CONDUCTANCE: Maximum, 82 micromhos Nov. 18; minimum, 61 micromhos Oct. 28.

WATER TEMPERATURES: Maximum, 15.5°C Oct. 2; minimum, 5.0°C Nov. 22, 23.

FOR PERIOD OCTOBER TO NOVEMBER 1978

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C)

TEMPERATURE (DEG. C) OF WATER

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			OCTOBER			NOVEMBER			
1	70	68	69	69	68	68	14.0	11.5	13.0	9.5	7.0	8.0
2	71	70	70	70	66	67	15.5	13.5	14.5	9.0	6.0	7.5
3	71	69	69	68	66	67	13.5	12.5	13.0	9.0	6.5	7.5
4	69	68	69	68	67	67	13.5	12.0	12.5	9.0	6.5	8.0
5	73	69	71	68	67	68	14.5	13.0	13.5	10.0	8.5	9.0
6	75	66	70	72	67	69	14.5	14.0	14.0	12.0	9.0	9.0
7	67	64	65	73	72	72	14.5	13.0	13.5	12.0	9.5	11.0
8	68	64	66	73	73	73	13.0	9.0	11.5	11.0	10.0	10.5
9	72	68	70	73	71	72	10.5	8.5	9.5	10.0	8.5	9.5
10	72	70	71	73	71	72	11.0	7.5	9.5	9.5	7.5	8.5
11	72	71	72	73	72	73	12.5	10.0	11.0	10.5	8.0	9.5
12	71	70	71	73	69	72	13.0	10.5	11.5	9.5	7.0	8.5
13	72	70	71	71	67	70	14.5	11.5	13.0	7.0	5.5	6.0
14	75	71	72	73	69	71	15.0	13.5	14.0	9.5	6.0	8.0
15	77	64	69	73	73	73	14.5	11.0	13.0	10.5	9.5	10.0
16	66	62	64	73	72	73	10.5	8.5	9.5	9.5	7.5	9.0
17	72	66	69	72	70	71	9.5	7.0	8.0	8.5	6.0	7.0
18	72	70	71	82	70	75	8.5	6.0	7.5	13.5	9.0	11.5
19	71	70	71	70	64	66	11.0	8.0	9.0	11.5	8.0	9.5
20	71	69	70	73	67	70	11.5	9.5	10.5	8.0	6.0	7.0
21	70	67	69	74	72	73	11.0	8.0	9.5	6.0	5.5	6.0
22	70	68	69	72	70	71	12.0	8.5	10.0	6.0	5.0	5.5
23	71	69	70	70	68	70	13.5	10.5	12.0	5.5	5.0	5.0
24	70	69	70	---	---	---	12.5	9.0	10.5	---	---	---
25	70	68	69	---	---	---	10.0	7.5	9.0	---	---	---
26	71	69	70	---	---	---	13.0	10.0	12.0	---	---	---
27	75	68	72	---	---	---	13.5	11.0	13.0	---	---	---
28	67	61	62	---	---	---	11.0	8.5	10.0	---	---	---
29	69	63	66	---	---	---	10.5	8.0	9.0	---	---	---
30	70	69	69	---	---	---	8.5	7.0	8.0	---	---	---
31	70	68	69	---	---	---	9.0	6.0	7.5	---	---	---
MONTH	77	61	69	---	---	---	15.5	6.0	11.0	---	---	---

LOCATION.--Lat 41°26'42", long 71°40'53", Washington County, Hydrologic Unit 01090005, on right bank at downstream side of bridge on Alton-Carolina road, 0.8 mi (1.3 km) northeast of Wood River Junction, 1.5 mi (2.4 km) southwest of Carolina, and 2.9 mi (4.7 km) upstream from Wood River.

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.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 43.86 ft (13.369 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,700 ft³/s (48.1 m³/s) Mar. 19, 1968, gage height, 7.80 ft (2.377 m); minimum, 7.4 ft³/s (0.21 m³/s) Oct. 10, 1947; minimum daily, 15 ft³/s (0.42 m³/s) Oct. 11, 1947.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft³/s (34.3 m³/s) Jan. 26, gage height, 6.28 ft (1.914 m); minimum, 54 ft³/s (1.53 m³/s) Oct. 3, 4.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	66	143	201	550	774	249	353	462	151	80	104
2	55	64	137	246	496	654	246	317	416	158	77	100
3	54	62	121	406	452	554	276	292	380	155	75	98
4	55	61	133	481	427	484	291	290	368	146	132	97
5	63	62	158	477	401	440	301	285	383	141	190	95
6	79	61	166	423	363	418	292	273	383	135	208	104
7	86	60	153	378	344	560	275	259	369	129	193	121
8	79	60	139	469	326	692	258	247	343	124	168	125
9	71	60	178	620	317	699	256	237	318	117	143	116
10	66	59	238	678	307	627	279	230	296	113	125	106
11	63	58	253	607	290	548	286	220	278	122	124	99
12	62	58	236	508	275	488	280	215	269	134	159	93
13	59	57	211	446	266	448	263	239	256	125	205	89
14	66	56	191	573	254	425	264	307	244	119	226	87
15	74	56	178	678	245	409	295	382	232	116	215	89
16	74	56	170	656	242	389	307	404	218	117	184	89
17	70	57	170	583	231	374	298	382	210	115	153	86
18	66	88	167	501	220	357	286	345	203	112	135	84
19	65	104	152	449	217	339	269	316	230	107	135	80
20	64	101	146	408	215	328	255	309	238	104	133	77
21	62	89	171	571	223	318	245	305	223	102	130	76
22	61	81	188	968	259	308	236	296	200	98	125	153
23	60	76	189	1100	270	298	228	291	188	96	120	190
24	59	94	176	1030	331	289	220	486	176	91	117	185
25	58	105	222	1090	489	289	213	779	167	88	113	170
26	58	99	259	1190	637	286	208	937	159	85	110	150
27	73	89	265	1170	827	282	264	907	152	117	106	130
28	78	100	227	1060	846	272	343	800	148	107	106	115
29	78	105	220	915	---	261	395	688	144	96	106	100
30	73	133	195	770	---	256	390	592	140	88	108	100
31	68	---	189	650	---	252	---	521	---	83	106	---
TOTAL	2055	2277	5741	20302	10320	13118	8268	12504	7793	3591	4307	3308
MEAN	66.3	75.9	185	655	369	423	276	403	260	116	139	110
MAX	86	133	265	1190	846	774	395	937	462	158	226	190
MIN	54	56	121	201	215	252	208	215	140	83	75	76
CF5M	6.66	7.76	1.85	6.55	3.69	4.23	2.76	4.03	2.60	1.16	1.39	1.10
IN\$.	7.6	8.5	2.14	7.55	3.84	4.88	3.08	4.65	2.90	1.34	1.60	1.22

CAL YR 1978	TOTAL	82517	MEAN 226	MAX 1230	MIN 54	CFSM 2.26	IN 30.70
WTR YR 1979	TOTAL	93584	MEAN 256	MAX 1190	MIN 54	CFSM 2.56	IN 34.81

PAWCATUCK RIVER BASIN

01117800 WOOD RIVER NEAR ARCADIA, RI

LOCATION.--Lat 41°34'26", long 71°43'16", Washington County, Hydrologic Unit 01090005, on left bank at upstream side of bridge on Ten Rod Road, 1.8 mi (2.9 km) northwest of Arcadia, and 4.5 mi (7.2 km) north of Hope Valley.

DRAINAGE AREA.--35.2 mi² (91.2 km²).

PERIOD OF RECORD.--Discharge: January 1964 to current year.

Water-quality records: Water years 1967-74.

GAGE.--Water-stage recorder. Altitude of gage is 130 ft (40 m), from topographic map.

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

AVERAGE DISCHARGE.--15 years, 78.2 ft³/s (2.215 m³/s), 30.17 in/yr (766 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 896 ft³/s (25.4 m³/s) Mar. 18, 1968, gage height, 8.64 ft (2.633 m); minimum, about 5.8 ft³/s (0.16 m³/s) about Sept. 8, 9, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 250 ft³/s (7.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	0915	342 9.69	5.77 1.759	Feb. 26	2045	425 12.0	6.29 1.917
Jan. 9	0600	455 12.9	6.47 1.972	Mar. 7	1515	330 9.35	5.69 1.734
Jan. 14	1230	335 9.49	5.72 1.743	Apr. 28	0345	272 7.70	5.28 1.609
Jan. 21	2145	*740 21.0	7.90 2.408	May 25	1700	418 11.8	6.25 1.905
Jan. 25	1130	738 20.9	7.89 2.405	Aug. 4	1030	648 18.4	7.49 2.283

Minimum discharge, 17 ft³/s (0.48 m³/s) Oct. 1, Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	34	63	66	234	241	94	156	152	50	19	52
2	26	31	59	127	192	205	93	134	142	49	18	48
3	25	28	53	318	197	181	115	120	130	46	18	47
4	23	27	61	283	183	163	116	125	133	41	441	45
5	27	26	74	214	169	154	118	121	142	38	286	41
6	31	25	73	164	153	164	112	114	131	37	137	53
7	33	23	67	141	144	296	104	108	119	35	96	76
8	29	23	61	323	138	314	96	98	109	34	86	61
9	26	23	101	442	132	251	100	90	103	32	72	50
10	24	23	149	330	125	209	117	84	102	30	62	43
11	23	22	138	244	121	191	111	80	92	29	66	38
12	22	22	115	199	115	176	104	76	88	29	109	35
13	21	22	97	175	112	158	96	105	82	28	145	33
14	30	22	86	310	106	146	100	140	76	27	131	34
15	47	21	77	315	102	153	115	165	72	26	110	48
16	39	20	71	255	100	145	112	150	68	26	92	44
17	34	20	70	211	94	133	108	125	64	25	76	39
18	30	61	70	184	90	126	102	105	62	25	69	36
19	28	63	65	169	89	121	94	92	68	24	77	33
20	27	53	59	146	86	118	88	96	62	22	73	31
21	25	46	73	385	87	114	85	96	57	22	66	30
22	24	41	80	697	97	110	82	92	54	21	60	123
23	28	37	78	502	100	108	80	99	52	20	56	124
24	26	41	72	351	157	104	76	329	46	20	53	106
25	23	54	87	648	233	116	74	386	45	20	52	89
26	22	47	94	600	323	117	74	386	45	20	51	75
27	52	38	86	490	385	108	180	294	44	22	50	63
28	56	38	73	408	306	102	271	227	42	22	50	55
29	47	39	71	346	---	99	235	195	40	21	53	51
30	42	59	62	298	---	97	190	173	39	20	55	51
31	37	---	60	261	---	95	---	173	---	19	62	---
TOTAL	946	1029	2445	9602	4370	4815	3442	4734	2461	880	2791	1654
MEAN	30.5	34.3	78.9	310	156	155	115	153	82.0	28.4	90.0	55.1
MAX	56	63	149	697	385	314	271	386	152	50	441	124
MIN	19	20	53	66	86	95	74	76	39	19	18	30
CFSM	.87	.97	2.24	8.81	4.43	4.40	3.27	4.35	2.33	.81	2.56	1.57
IN.	1.00	1.09	2.58	10.15	4.62	5.09	3.64	5.00	2.60	.43	2.95	1.75

CAL YR 1978	TOTAL	32815	MEAN	89.9	MAX 826	MIN 15	CFSM 2.55	IN 34.68
WTR YR 1979	TOTAL	39169	MEAN	107	MAX 697	MIN 18	CFSM 3.04	IN 41.39

01118000 WOOD RIVER AT HOPE VALLEY, RI

LOCATION.--Lat 41°29'53", long 71°43'01", Washington County, Hydrologic Unit 01090005, on right bank 0.2 mi (0.3 km) downstream from highway bridge at Hope Valley and 6.6 mi (10.6 km) upstream from mouth.
DRAINAGE AREA.--72.4 mi² (187.5 km²).

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 61.11 ft (18.626 m) National Geodetic Vertical Datum of 1929. August to December 1909, nonrecording gage at site 1,000 ft (300 m) upstream at different datum.

REMARKS.--Records good. 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.--38 years, 155 ft³/s (4.390 m³/s), 29.07 in/yr (738 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,720 ft³/s (48.7 m³/s) Mar. 18, 1968, gage height, 8.26 ft (2.518 m); minimum, 4.4 ft³/s (0.12 m³/s) Oct. 18, 1941; minimum daily, 10 ft³/s (0.28 m³/s) Oct. 13, 1941.

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

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

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 3	1300	785	22.2	5.34	1.628	Feb. 27	0430	1020	28.9	6.20	1.890
Jan. 9	0300	1020	28.9	6.20	1.890	Mar. 7	2230	785	22.2	5.34	1.628
Jan. 14	2200	806	22.8	5.42	1.652	Apr. 28	0730	624	17.7	4.70	1.433
Jan. 22	0730	*1560	44.2	7.99	2.435	May 24	1630	1160	32.9	6.66	2.030
Jan. 25	2330	1530	43.3	7.90	2.408	Aug. 5	0200	1050	29.7	6.29	1.917

Minimum discharge, 37 ft³/s (1.05 m³/s) Aug. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	59	150	148	479	531	191	328	378	112	40	101
2	55	54	124	273	410	445	191	278	343	114	39	87
3	61	51	106	723	397	391	252	245	316	106	38	90
4	57	49	132	640	378	365	258	254	330	94	447	92
5	62	48	185	469	349	344	251	249	374	89	833	82
6	73	46	172	375	301	362	236	226	342	84	380	94
7	74	47	143	330	307	689	212	209	298	80	212	153
8	65	45	132	696	295	704	192	197	267	76	185	126
9	58	44	236	933	283	553	201	189	251	71	149	94
10	53	43	404	686	267	453	248	181	239	67	118	79
11	51	42	331	507	253	411	237	169	221	65	126	71
12	50	41	257	396	237	382	211	160	219	64	212	65
13	48	40	217	389	235	342	193	222	199	62	350	62
14	57	40	193	701	217	326	202	305	181	59	341	61
15	106	40	173	710	210	340	257	378	170	57	249	79
16	95	40	158	552	205	312	246	328	160	58	189	79
17	76	40	160	454	196	285	228	264	149	57	151	69
18	64	112	154	407	188	271	209	229	147	54	130	64
19	58	173	131	336	185	258	192	211	153	53	147	59
20	55	118	127	337	173	251	180	218	141	50	149	55
21	52	91	171	816	175	242	170	218	126	48	130	53
22	50	78	195	1450	215	234	164	205	120	46	120	214
23	49	71	169	1080	217	226	159	246	118	45	108	325
24	51	85	151	767	360	218	152	1050	108	43	101	221
25	46	101	220	1250	585	241	148	1060	99	43	99	167
26	44	93	246	1420	727	251	147	972	97	43	97	137
27	74	76	203	1110	939	228	340	755	94	50	97	112
28	106	80	163	849	671	210	600	599	92	50	103	97
29	87	85	152	707	---	201	496	501	90	46	105	89
30	72	131	135	606	---	198	392	442	90	43	106	92
31	64	---	132	532	---	195	---	416	---	41	114	---
TOTAL	1963	2063	5622	20649	9454	10459	7155	11304	5912	1970	5665	3169
MEAN	63.3	68.8	181	666	338	337	239	365	197	63.5	183	106
MAX	106	173	404	1450	939	704	600	1060	378	114	833	325
MIN	44	40	106	148	173	195	147	160	90	41	38	53
CFSM	.87	.95	2.50	9.20	4.67	4.66	3.30	5.04	2.72	.88	2.53	1.46
IN.	1.01	1.06	2.89	10.61	4.86	5.37	3.68	5.81	3.04	1.01	2.91	1.63

CAL YR 1978 TOTAL 65692 MFAN 180 MAX 1500 MIN 37 CFSM 2.49 IN 33.75
WTR YR 1979 TOTAL 85385 MEAN 234 MAX 1450 MIN 38 CFSM 3.23 IN 43.87

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 malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 159 micromhos Aug. 4, 1979; minimum recorded, 21 micromhos Jan. 23, 1979.

WATER TEMPERATURES: Maximum recorded, 26.0°C July 28, 30, Aug. 2, 3, 1979; minimum recorded, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 159 micromhos Aug. 4; minimum recorded, 21 micromhos Jan. 23.

WATER TEMPERATURES: Maximum recorded, 26.0°C July 28, 30, Aug. 2,3; minimum recorded, 0.0°C Feb. 27, 28.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	60	58	59	72	70	71	58	49	56	66	63	64
2	64	60	62	72	69	70	---	---	---	68	55	62
3	62	59	60	72	70	71	---	---	---	55	46	51
4	60	57	59	72	69	71	---	---	---	45	43	44
5	68	58	63	73	71	72	---	---	---	48	44	46
6	77	58	65	74	72	73	---	---	---	53	48	49
7	67	61	63	76	73	74	---	---	---	72	48	51
8	64	63	64	75	74	74	---	---	---	65	41	47
9	66	64	65	75	73	74	---	---	---	45	39	42
10	70	64	67	75	74	74	---	---	---	42	39	40
11	76	69	71	74	73	74	---	---	---	45	41	43
12	76	68	70	74	73	73	---	---	---	47	44	46
13	73	68	70	75	73	73	---	---	---	53	44	47
14	74	64	70	77	73	74	---	---	---	49	41	43
15	85	64	70	75	73	74	---	---	---	41	38	39
16	64	62	63	75	74	74	---	---	---	40	37	39
17	64	62	63	77	71	74	---	---	---	42	39	41
18	66	64	65	102	61	75	---	---	---	46	40	43
19	69	66	68	62	59	60	---	---	---	57	43	46
20	71	68	70	65	62	63	---	---	---	44	43	43
21	71	69	70	67	65	65	---	---	---	78	42	53
22	72	70	71	65	64	64	---	---	---	41	27	33
23	73	70	72	64	62	63	---	---	---	29	21	29
24	72	70	71	82	60	67	---	---	---	31	28	29
25	73	70	72	62	60	60	---	---	---	32	28	31
26	77	72	73	60	58	59	---	---	---	---	---	---
27	91	69	77	60	58	59	---	---	---	29	27	28
28	68	64	66	82	62	72	70	61	63	30	28	29
29	68	65	66	65	58	62	65	62	64	32	30	31
30	71	68	70	82	56	60	65	63	64	32	31	32
31	72	69	70	---	---	---	65	64	64	33	31	32
MONTH	91	57	67	102	56	69	---	---	---	78	21	42

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	34	32	33	48	45	46	69	67	68	58	55	56
2	38	34	35	50	47	48	68	63	67	60	56	58
3	37	35	36	51	49	50	75	62	65	60	58	59
4	39	37	38	51	51	51	62	61	62	63	58	60
5	42	39	41	53	51	52	63	61	62	61	58	60
6	56	41	46	58	50	53	63	60	62	61	59	59
7	45	43	44	53	47	49	63	62	62	61	59	60
8	57	45	49	47	46	47	65	62	63	63	60	61
9	49	48	48	50	47	48	74	63	66	64	61	63
10	51	49	50	51	50	50	65	60	62	66	63	65
11	52	51	52	53	51	52	62	59	61	66	65	65
12	53	53	53	54	53	53	64	61	62	65	62	64
13	54	53	54	55	54	54	64	62	63	83	61	66
14	56	55	56	58	55	56	75	61	65	68	55	59
15	57	56	57	58	56	57	62	60	61	58	52	54
16	58	57	57	58	57	58	60	60	60	57	54	55
17	60	58	59	60	57	59	61	59	60	58	55	56
18	61	60	61	64	59	61	63	60	61	58	56	57
19	62	61	61	64	60	62	64	61	62	58	57	57
20	73	62	64	66	62	64	65	62	64	60	57	58
21	100	62	68	65	64	64	65	63	64	58	56	57
22	85	64	67	67	64	65	66	64	65	60	58	59
23	65	63	64	67	64	66	68	65	66	77	52	60
24	82	54	63	67	65	66	69	66	68	50	38	43
25	55	48	51	70	61	65	69	67	68	38	35	36
26	54	46	49	66	63	65	70	67	69	39	36	37
27	47	41	43	66	64	65	86	58	68	42	37	40
28	45	42	44	66	64	65	57	52	53	43	42	42
29	---	---	---	66	65	66	53	51	52	46	42	44
30	---	---	---	66	65	66	56	52	53	47	45	46
31	---	---	---	68	66	67	---	---	---	49	46	47
MONTH	100	32	52	70	45	58	86	51	63	83	35	55
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	52	47	50	82	71	76	80	79	79	65	63	64
2	53	49	51	71	69	70	82	78	80	66	63	64
3	52	51	52	71	68	70	82	79	80	75	64	68
4	54	51	52	71	68	69	159	49	75	67	64	65
5	53	48	50	71	69	69	48	44	46	67	64	66
6	54	50	51	70	68	69	53	49	51	72	44	61
7	55	52	54	71	67	69	56	53	54	60	48	52
8	55	54	54	72	68	70	82	52	61	63	60	62
9	57	55	56	74	68	71	58	57	57	65	63	64
10	58	56	57	74	70	72	72	57	59	65	63	64
11	59	57	58	76	70	73	75	60	64	67	64	65
12	62	58	60	75	71	73	73	52	60	66	64	65
13	61	58	59	76	71	74	60	48	51	67	64	65
14	62	59	61	76	71	73	50	47	49	67	61	65
15	63	61	62	79	72	75	53	50	52	77	56	69
16	64	62	63	79	77	78	55	52	54	65	63	64
17	64	62	63	79	75	77	56	54	55	66	63	64
18	81	63	65	80	76	77	60	54	56	66	64	65
19	83	64	68	79	75	77	62	54	57	74	63	65
20	65	63	64	79	75	77	55	53	54	66	62	63
21	66	64	65	80	76	77	60	55	56	65	61	64
22	66	64	65	81	77	78	61	57	58	66	33	43
23	68	65	67	80	76	78	60	58	59	44	32	37
24	69	67	68	81	77	78	62	60	61	52	45	49
25	70	68	69	82	77	79	64	61	63	51	50	50
26	69	67	68	80	77	78	64	62	63	54	51	52
27	69	66	68	105	78	90	64	63	63	56	53	54
28	70	67	68	85	79	82	77	64	69	57	55	56
29	71	68	69	82	77	79	82	63	69	59	56	58
30	77	68	71	84	78	81	66	64	64	72	58	62
31	---	---	---	81	79	80	68	64	65	---	---	---
MONTH	83	47	61	105	67	75	159	44	61	77	32	60
YEAR	159	21	60									

PAWCATUCK RIVER BASIN

01118000 WOOD RIVER AT HOPE VALLEY, RI--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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

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

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI

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

DRAINAGE AREA.--295 mi² (764 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 1051: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.76 ft (0.536 m) below National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Diurnal fluctuation at low flow prior to 1962 by mills upstream; regulation much greater prior to 1958. Diversion upstream for municipal supply of Westerly. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--38 years (water years 1942-79), 575 ft³/s (16.28 m³/s), 26.47 in/yr (672 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,470 ft³/s (127 m³/s) Mar. 18, 1968, gage height, 10.49 ft (3.197 m); maximum gage height, 12.16 ft (3.706 m) Aug. 31, 1954, backwater from tide; minimum daily discharge, 25 ft³/s (0.71 m³/s) Aug. 17, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1936 reached a discharge of 3,150 ft³/s (89.2 m³/s), by computation of flow over dam 1.5 mi (2.4 km) upstream. Maximum discharge since 1886 occurred in November 1927 and was possibly more than twice that in March 1936. Maximum stage since at least 1635, 15.0 ft (4.57 m) Sept. 21, 1938, due to hurricane tidal wave.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,010 ft³/s (114 m³/s) Jan. 25, gage height, 9.51 ft (2.899 m); minimum daily, 155 ft³/s (4.39 m³/s) Oct. 22-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	178	407	550	1930	2330	700	1180	1450	289	182	283
2	167	178	388	805	1710	2050	685	1020	1280	304	178	273
3	167	178	359	1670	1500	1820	783	888	1130	294	178	268
4	171	174	371	1770	1390	1620	873	865	1090	278	244	268
5	171	174	466	1630	1280	1450	880	858	1180	268	501	263
6	186	174	487	1430	1050	1390	858	805	1170	254	775	278
7	199	174	459	1250	1100	2030	783	738	1070	244	564	331
8	191	174	407	1710	1010	2370	730	693	948	235	376	336
9	178	174	536	2350	933	2240	715	655	850	225	325	315
10	174	171	948	2210	805	2030	790	641	768	216	289	294
11	171	174	933	1970	790	1840	813	606	708	212	299	273
12	167	178	783	1690	760	1650	768	578	655	203	359	268
13	163	178	670	1510	730	1480	730	641	620	203	529	263
14	163	171	585	1930	648	1320	723	933	585	199	634	259
15	191	174	536	2130	634	1330	865	1230	529	199	571	268
16	191	174	501	1980	627	1250	903	1260	487	195	452	273
17	182	178	480	1800	599	1160	865	1160	459	191	365	278
18	174	221	459	1610	592	1090	813	1010	426	191	309	268
19	171	299	407	1300	564	1030	753	895	459	186	309	263
20	163	299	382	1320	557	970	708	850	445	182	315	249
21	159	268	480	2270	571	925	670	850	420	182	304	244
22	155	254	564	3620	700	880	648	805	388	178	331	473
23	155	249	543	3280	738	843	620	805	359	174	299	700
24	155	263	480	3060	1100	813	606	2160	342	174	283	685
25	155	299	641	3680	1760	813	585	2840	325	171	273	543
26	159	289	813	3770	2270	835	571	2940	309	167	273	432
27	171	278	775	3570	2820	805	805	2730	299	203	268	365
28	191	283	648	3290	2620	775	1370	2410	294	216	268	331
29	199	299	543	2890	---	738	1450	2140	289	199	273	309
30	191	348	543	2470	---	715	1350	1860	278	186	278	309
31	178	---	508	2180	---	708	---	1650	---	186	283	---
TOTAL	5375	6625	17102	66695	31788	41300	24413	38696	19612	6604	10887	9962
MEAN	173	221	552	2151	1135	1332	814	1248	654	213	351	332
MAX	199	348	948	3770	2820	2370	1450	2940	1450	304	775	700
MIN	155	171	359	550	557	708	571	578	278	167	178	244
CFSM	.59	.75	1.87	7.29	3.85	4.52	2.76	4.23	2.22	.72	1.19	1.13
IN.	.68	.84	2.16	8.41	4.01	5.21	3.08	4.88	2.47	.83	1.37	1.26
CAL YR 1978 TOTAL	241952		MEAN 663	MAX 3860	MIN 141	CFSM 2.25	IN 30.51					
WTR YR 1979 TOTAL	279059		MEAN 765	MAX 3770	MIN 155	CFSM 2.59	IN 35.19					

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: June 1978 to current year.

WATER TEMPERATURES: June 1978 to current year.

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

REMARKS.--Interruptions in the record were due to instrument malfunction.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 145 micromhos November 15, 1978; minimum, 36 micromhos May 24, 1979.

WATER TEMPERATURES: Maximum, 28.0°C July 30, 1979; minimum, 0.0°C on many days during the winter period.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 145 micromhos November 15; minimum, 36 micromhos May 24.

WATER TEMPERATURES: Maximum, 28.0°C July 30; minimum, 0.0°C on many days during the winter period.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHUS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE, WATER (DEG C)	COLOR (PLAT- INUM COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN SATUR- ATION (PER- CENT)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)
OCT												
19...	1300	159	122	6.5	16.0	11.0	50	2.0	11.2	101	--	--
24...	0905	155	105	--	--	10.5	--	--	--	--	--	--
NOV												
08...	1500	178	106	6.2	9.0	10.0	55	6.0	10.3	91	14	33000
14...	1055	171	126	6.2	15.0	8.0	55	1.0	11.3	95	--	--
29...	1250	299	92	--	--	2.5	--	--	--	--	--	--
DEC												
13...	1320	641	80	6.4	9.0	1.0	100	1.0	14.1	99	--	--
14...	1030	730	78	6.1	5.5	2.0	85	--	12.7	92	--	96000
JAN												
10...	0830	2240	64	5.7	-5.5	1.0	--	2.0	12.4	87	--	--
10...	1420	2190	76	6.7	-1.0	.5	45	1.0	13.1	91	--	--
FEB												
15...	1100	627	85	6.0	<-5.0	.0	30	1.0	13.6	93	--	--
16...	0800	693	87	5.6	-11.0	.5	--	1.0	15.2	105	--	--
MAR												
09...	1105	2240	58	6.0	11.0	6.0	50	1.0	11.4	92	--	--
14...	0900	1460	58	5.8	10.0	4.0	40	1.0	12.7	97	--	3600
30...	0845	715	75	--	--	8.0	--	--	--	--	--	--
APR												
04...	0830	873	72	6.1	8.0	8.0	--	1.0	12.0	101	--	--
11...	1330	805	80	6.6	13.0	8.0	40	2.0	11.8	99	--	--
MAY												
03...	0815	933	67	6.6	17.0	15.0	--	1.0	9.0	89	--	--
08...	1045	685	72	6.4	20.5	16.0	50	1.0	8.9	90	--	--
23...	0805	768	70	--	--	16.5	--	--	--	--	--	--
JUN												
06...	0815	1340	59	6.3	20.0	17.2	50	1.0	8.8	90	36	12000
13...	1235	613	72	6.4	20.5	19.5	5	2.0	8.6	92	--	--
JUL												
11...	0800	212	83	6.2	24.5	19.5	--	1.0	9.7	105	--	--
18...	1220	191	80	6.1	25.5	25.0	40	1.0	9.4	112	--	--
19...	1005	186	92	--	--	24.5	--	--	--	--	--	--
AUG												
08...	0930	376	88	6.5	28.5	23.0	120	2.0	7.4	85	--	--
29...	0740	268	--	--	--	22.0	--	--	--	--	--	--
SEP												
19...	1015	263	94	6.9	23.5	20.0	--	1.0	8.0	87	20	--

< 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 1978 TO SEPTEMBER 1979

DATE	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, NO2+NO3 DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH4)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN+NH4 + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN+AM- MONIA + ORGANIC DIS. TOTAL (MG/L AS N)
OCT 19...	--	80	--	--	.37	--	.01	--	.50	.51	.04	.47
NOV 08...	0	83	.65	.01	.66	--	.06	--	.24	.30	--	--
14...	--	88	--	--	.73	--	.05	--	.46	.51	.16	.35
DEC 13...	--	69	--	--	.20	--	.04	--	.32	.36	.00	.42
14...	0	72	.21	.01	.22	--	.04	--	.23	.27	--	--
JAN 10...	--	--	.16	.00	.16	--	.01	--	.01	.02	--	--
10...	--	60	--	--	.15	--	.01	--	.16	.17	.01	.16
FEB 15...	--	68	--	--	.43	--	.02	--	.31	.33	.02	.31
16...	--	--	.49	.02	.51	--	.01	--	.19	.20	--	--
MAR 09...	--	51	--	--	.17	--	.01	--	.27	.28	.06	.22
14...	4	46	.24	.00	.24	--	.01	--	.11	.12	--	--
APR 04...	--	--	.31	.00	.31	--	.04	--	.21	.25	--	--
11...	--	57	--	--	.29	--	.04	--	.30	.34	.12	.22
MAY 03...	--	--	.15	.01	.16	--	.05	.06	.30	.35	--	--
08...	--	60	--	--	.22	--	.05	.06	.53	.58	.08	.50
JUN 06...	58	62	.20	.01	.21	--	.05	.06	.41	.46	--	--
13...	--	66	--	--	.28	--	.07	.08	.42	.49	.02	.47
JUL 11...	--	--	.58	.01	.59	--	.01	.01	.21	.22	--	--
18...	--	75	--	--	.50	--	.03	.04	.43	.46	.18	.28
AUG 08...	--	100	.16	.01	.17	--	.10	.12	.56	.66	.00	.68
SEP 19...	--	77	--	--	.58	.69	.05	.06	.56	.61	.14	.47

DATE	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO3)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS PO4)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	ALUM- INUM, TOTAL RECOV- ERABLE (UG/L AS AL)	ALUM- INUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	ARSENIC TOTAL IN BOT- TOM MA- TERIAL (UG/G AS AS)
OCT 19...	--	.88	3.9	.04	--	.04	--	--	--	--	--	--
NOV 08...	--	.96	4.3	.06	--	--	.04	--	1600	0	--	0
14...	--	1.2	5.5	.08	--	.07	--	--	--	--	--	--
DEC 13...	--	.56	2.5	.04	--	.03	--	--	--	1	1	--
14...	--	.49	2.2	.03	--	--	.02	--	--	--	--	--
JAN 10...	--	.18	.80	.03	--	--	.01	--	--	--	--	--
10...	--	.32	1.4	.03	--	.01	--	--	--	--	--	--
FEB 15...	--	.76	3.4	.02	--	.01	--	--	--	--	--	--
16...	--	.71	3.1	.03	--	--	.09	--	--	--	--	--
MAR 09...	--	.45	2.0	.02	--	.02	--	--	--	2	1	--
14...	--	.36	1.6	.01	--	--	.00	40	1300	1	--	0
APR 04...	--	.56	2.5	.03	--	--	.01	--	--	--	--	--
11...	--	.63	2.8	.02	--	.03	--	--	--	--	--	--
MAY 03...	--	.51	2.3	.05	.15	--	.02	--	--	--	--	--
08...	--	.80	3.5	.02	.06	.02	--	--	--	2	1	--
JUN 06...	--	.67	3.0	.04	.12	--	.00	--	--	--	--	--
13...	--	.77	3.4	.05	.15	.03	--	--	--	--	--	--
JUL 11...	--	.81	3.6	.03	.09	--	.02	--	--	--	--	--
18...	--	.96	4.3	.04	.12	.03	--	--	--	--	--	--
AUG 08...	--	.83	3.7	.07	.21	.06	.05	--	--	1	1	--
SEP 19...	1.2	1.2	5.3	.06	.18	.05	--	--	--	--	--	--

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	BARIUM, FM BOT- TOM MA- TERIAL (UG/G AS BA)	BERYL- LIUM, TOTAL RECOV- ERABLE (UG/L AS BE)	BERYL- LIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	BORON, TOTAL RECOV- ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CADMIUM FM BOT- TOM MA- TERIAL (UG/G AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	0	--	--	0	0	<10	40	--	--	--	<10	30
14...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 13...	0	0	0	--	--	--	--	2	0	2	--	<10
14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	0	0	0	--	--	--	--	0	0	1	--	20
14...	0	--	--	20	0	0	20	--	--	--	<10	10
APR 04...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	0	0	0	--	--	--	--	1	0	1	--	20
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 11...	--	--	--	--	--	--	--	--	--	--	--	--
18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	20	0	20	--	--	--	--	2	0	2	--	20
SEP 19...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	CHRO- MIUM, SUS- PENDE RECOV. (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	CHRO- MIUM, RECOV. FM BOT- TOM MA- TERIAL (UG/G)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COBALT, FM BOT- TOM MA- TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	COPPER, FM BOT- TOM MA- TERIAL (UG/G AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)
OCT 19...	--	--	--	--	--	--	--	--	--	4	--	--
NOV 08...	--	--	<10	0	--	--	<10	8	--	--	20	330
14...	--	--	--	--	--	--	--	--	--	3	--	--
DEC 13...	<9	1	--	0	0	0	--	2	0	2	--	480
JAN 10...	--	--	--	--	--	--	--	--	--	3	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	2	--	--
MAR 09...	20	0	--	1	0	3	--	3	0	3	--	230
14...	--	--	10	0	--	--	<10	--	--	--	<10	130
APR 11...	--	--	--	--	--	--	--	--	--	2	--	--
MAY 08...	10	10	--	0	0	0	--	4	1	3	--	530
JUN 13...	--	--	--	--	--	--	--	--	--	3	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	7	--	--
AUG 08...	10	10	--	1	1	0	--	8	2	6	--	900
SEP 19...	--	--	--	--	--	--	--	--	--	2	--	--

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

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	IRON, RECov. FM BOT- TOM MA- TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	LEAD, RECov. FM BOT- TOM MA- TERIAL (UG/G AS PB)	LITHIUM TOTAL RECOV- ERABLE (UG/L AS LI)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, SUS- PENDE RECOV- ERABLE (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MANGA- NESE, RECov. FM BOT- TOM MA- TERIAL (UG/G)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	--	--	3100	34	--	--	480	0	10	--	--	280
14...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 13...	230	250	--	4	0	4	--	--	50	0	50	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	60	170	--	6	2	4	--	--	50	0	50	--
14...	--	--	1900	14	--	--	<10	0	40	--	--	70
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	230	300	--	5	0	5	--	--	40	0	40	--
JUN 13...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	320	580	--	10	7	3	--	--	110	10	100	--
SEP 19...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	MERCURY RECov. FM BOT- TOM MA- TERIAL (UG/G AS HG)	MOLYB- DENUM, TOTAL RECOV- ERABLE (UG/L AS MO)	MOLYB- DENUM, RECov. FM BOT- TOM MA- TERIAL (UG/G)	NICKEL, TOTAL RECOV- ERABLE (UG/L AS NI)	NICKEL, RECov. FM BOT- TOM MA- TERIAL (UG/G AS NI)	SELE- NIUM, TOTAL (UG/L AS SE)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SELE- NIUM, TOTAL IN BOT- TOM MA- TERIAL (UG/G)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	<.5	--	--	.51	--	<10	14	<10	0	--	--	0
14...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 13...	<.5	.0	<.5	--	--	--	--	--	0	0	0	--
14...	--	--	--	--	--	--	--	--	--	--	--	--
JAN 10...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 15...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.5	.0	<.5	--	--	--	--	--	0	0	0	--
14...	<.5	--	--	.00	1	0	1	<10	0	--	--	0
APR 11...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	<.5	.0	<.5	--	--	--	--	--	0	0	0	--
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	<.5	.0	<.5	--	--	--	--	--	0	0	0	--
SEP 19...	--	--	--	--	--	--	--	--	--	--	--	--

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

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	OXYGEN DEMAND, BIO- CHEM- ICAL, 5 DAY (MG/L)	COLI- FORM, TOTAL, IMMUNO- LOGICAL, PER (100 ML)	COLI- FORM, FECAL, 0.45 IMMUNO- (COLS./ 100 ML)	COLI- FORM, FECAL, 0.7 IMMUNO- (COLS./ 100 ML)	STREP- TOCOCCI FECAL, KF AGAR (COLS./ 100 ML)	HARD- NESS, NONCAR- BONATE (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)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO
OCT												
19...	--	5900	--	27	33	19	3	5.1	1.5	14	59	1.4
24...	--	--	--	--	--	--	--	--	--	--	--	--
NOV												
04...	--	78	39	--	120	19	--	5.2	1.5	12	55	1.2
14...	--	5700	--	64	120	22	7	6.1	1.6	15	58	1.4
29...	--	--	--	--	--	--	--	--	--	--	--	--
DEC												
13...	--	3400	--	160	120	16	5	3.6	1.7	12	60	1.3
14...	--	--	--	--	--	13	3	3.3	1.1	8.8	58	1.1
JAN												
10...	--	4900	42	--	310	--	--	--	--	--	--	--
10...	1.0	920	--	35	120	15	7	3.0	1.9	7.4	49	.8
FEB												
15...	--	220	--	44	89	15	8	3.9	1.2	9.1	55	1.0
16...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	420	--	45	112	10	5	2.6	.8	6.1	56	.8
14...	1.0	1.0	88	--	12	11	6	3.0	.9	6.6	55	.9
30...	--	--	--	--	--	--	--	--	--	--	--	--
APR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	10000	--	420	200	13	5	3.4	1.1	8.7	57	1.1
MAY												
03...	1.0	240	73	--	25	--	--	--	--	--	--	--
04...	--	6600	--	220	88	13	7	3.4	1.0	8.0	56	1.0
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
06...	--	--	--	--	--	12	5	3.2	.9	6.3	52	.8
13...	--	10000	--	160	120	14	0	3.7	1.2	10	59	1.2
JUL												
11...	2.0	130	80	--	120	--	--	--	--	--	--	--
14...	--	16000	--	320	220	19	7	5.1	1.4	9.9	52	1.0
19...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
08...	--	22000	--	110	170	14	3	4.0	1.0	12	63	1.4
29...	--	--	--	--	--	--	--	--	--	--	--	--
SEP												
19...	1.0	1800	--	58	115	17	5	4.5	1.4	12	67	1.3
DATE	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)
OCT												
19...	--	1.7	16	--	14	15	.1	7.9	81	69	.11	34.8
NOV												
08...	--	1.6	13	--	13	14	--	--	--	--	--	--
14...	--	1.6	15	--	15	15	.2	8.5	81	72	.11	37.4
DEC												
13...	--	1.2	11	--	11	11	.1	8.5	71	56	.10	123
14...	--	1.0	10	--	11	11	--	--	--	--	--	--
JAN												
10...	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	1.0	8	--	8.7	9.0	.1	5.9	52	42	.07	307
FEB												
15...	--	1.0	7	--	11	13	.1	8.6	60	52	.08	102
16...	--	--	--	--	--	--	--	--	--	--	--	--
MAR												
09...	--	.6	5	--	9.9	8.3	.1	5.6	46	37	.06	278
14...	--	.6	5	--	8.9	9.1	--	--	--	--	--	--
APR												
04...	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	.9	8	--	9.8	12	.1	5.0	55	46	.07	120
MAY												
03...	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	.9	6	--	9.4	11	.1	3.4	60	41	.08	111
JUN												
06...	--	.9	7	--	8.4	9.6	--	--	--	--	--	--
13...	--	.9	15	--	9.5	12	.1	6.0	65	52	.09	108
JUL												
11...	--	--	--	--	--	--	--	--	--	--	--	--
18...	11	.8	12	19	11	14	.1	5.6	73	55	.10	37.6
AUG												
08...	13	.9	11	6.8	14	11	.1	7.5	82	58	.11	83.2
SEP												
19...	13	1.1	12	2.9	12	12	.2	--	68	54	.09	48.3

K, NON-IDEAL COLONY COUNT.

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)	SILVER, FM BOT- TOM MA- TERIAL (UG/G AS AG)	STRON- TIUM, TOTAL RECOV- ERABLE (UG/L AS SR)	STRON- TIUM, FM BOT- TOM MA- TERIAL (UG/G)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	ZINC, FM BOT- TOM MA- TERIAL (UG/G AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)
OCT 19...	--	--	--	--	--	--	--	--	10	--	5.8	--
NOV 08...	--	--	--	<10	90	20	50	--	--	30	--	--
DEC 14...	--	--	--	--	--	--	--	--	0	--	6.2	--
DEC 13...	0	0	0	--	--	--	10	10	0	--	13	13
DEC 14...	--	--	--	--	--	--	--	--	--	--	8.7	--
JAN 10...	--	--	--	--	--	--	--	--	10	--	8.5	--
FEB 15...	--	--	--	--	--	--	--	--	30	--	4.6	--
MAR 09...	0	0	0	--	--	--	20	0	20	--	7.7	7.2
MAR 14...	0	--	--	<10	70	10	50	--	--	10	5.9	--
APR 11...	--	--	--	--	--	--	--	--	10	--	5.3	--
MAY 08...	0	0	0	--	--	--	20	10	10	--	7.7	7.4
JUN 06...	--	--	--	--	--	--	--	--	--	--	7.4	--
JUN 13...	--	--	--	--	--	--	--	--	5	--	7.9	--
JUL 18...	--	--	--	--	--	--	--	--	7	--	5.0	--
AUG 08...	0	0	0	--	--	--	20	0	20	--	11	11
SEP 19...	--	--	--	--	--	--	--	--	20	--	4.7	--

DATE	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	PHENOLS (UG/L)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	PCB, TOTAL (UG/L)	PCB, IN BOT- TOM MA- TERIAL (UG/KG)	ALDRIN, TOTAL (UG/L)	ALDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	CHLOR- DANE, TOTAL (UG/L)	CHLOR- DANE, IN BOT- TOM MA- TERIAL (UG/KG)	DDD, TOTAL (UG/L)	DDD, IN BOT- TOM MA- TERIAL (UG/KG)
OCT 19...	--	--	.00	--	--	--	--	--	--	--	--	--
NOV 08...	--	0	.00	0	.0	0	.00	.0	.0	0	.00	.0
DEC 13...	.6	--	.00	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	0	--	--	--	--	--	--	--	--
MAR 09...	.5	--	.00	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	1	--	--	--	--	--	--	--	--
MAY 08...	.3	--	.00	--	--	--	--	--	--	--	--	--
JUN 06...	--	0	--	0	--	--	--	--	--	--	--	--
AUG 08...	.5	--	.00	--	--	--	--	--	--	--	--	--
SEP 19...	--	--	--	--	.0	0	.00	.0	.0	0	.00	5.4

DATE	DDE, TOTAL (UG/L)	DDE, IN BOT- TOM MA- TERIAL (UG/KG)	DDT, TOTAL (UG/L)	DDT, IN BOT- TOM MA- TERIAL (UG/KG)	DI- ELDRIN TOTAL (UG/L)	DI- ELDRIN, IN BOT- TOM MA- TERIAL (UG/KG)	ENDO- SULFAN, TOTAL (UG/L)	ENDRI- N, TOTAL (UG/L)	ENDRI- N, IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR, IN BOT- TOM MA- TERIAL (UG/KG)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
OCT 19...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 08...	.00	.0	.00	.0	.00	.0	.00	.00	.0	.00	.0	.00
DEC 13...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 19...	.00	.7	.00	.3	.00	.0	.00	.00	.0	.00	.0	.00

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

01118500 PAWCTAUCK RIVER AT WESTERLY, RI--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	HEPTA- CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL (UG/L)	LINDANE IN BOT- TOM MA- TERIAL (UG/KG)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/L)	METH- OXY- CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)
NOV 08...	.0	.00	.0	--	.0	--	.00
DEC 13...	--	--	--	--	--	--	--
MAR 09...	--	--	--	--	--	--	--
MAY 08...	--	--	--	--	--	--	--
JUL 18...	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--
SEP 19...	.0	.00	.0	.00	.0	.00	.00

DATE	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	TOXA- PHENE, TOTAL IN BOT- TOM MA- TERIAL (UG/KG)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
NOV 08...	.00	0	0	--	--	--
DEC 13...	--	--	--	360	.000	.000
MAR 09...	--	--	--	140	.000	.000
MAY 08...	--	--	--	1100	.000	.000
JUL 18...	--	--	--	930	--	--
AUG 08...	--	--	--	--	1.29	.000
SEP 19...	.00	0	0	17000	--	--

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDE (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDE (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 19...	1300	154	3	1.3	100	APR 04...	0830	873	--	--	--
24...	0905	155	--	--	--	11...	1330	805	8	17	100
NOV 08...	1500	174	--	--	--	MAY 03...	0815	933	--	--	--
14...	1055	171	5	2.3	100	08...	1045	685	14	26	75
24...	1250	299	--	--	--	23...	0905	768	--	--	--
DEC 13...	1320	641	52	90	11	JUN 06...	0815	1340	--	--	--
14...	1030	730	--	--	--	13...	1235	613	24	40	56
JAN 10...	0830	2240	--	--	--	JUL 11...	0800	212	--	--	--
10...	1420	2190	8	47	100	18...	1220	191	5	2.6	50
FEB 15...	1100	627	4	6.8	100	19...	1005	186	--	--	--
16...	0800	693	--	--	--	AUG 08...	0930	376	6	6.1	93
MAR 09...	1105	2240	13	79	96	29...	0740	268	--	--	--
14...	0900	1460	--	--	--	SEP 19...	1015	263	2	1.4	100
30...	0845	715	--	--	--						

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PERIPHYTON

(sampling method - Polyethylene strip)

Dates of Exposure	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQ M)	PERI- PHYTON BIOMASS ASH WEIGHT (G/SQ M)	CHLOR-A PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M ²)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M ²)
September 13 to October 19	37	1.10	.551	7.43	4.55

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, DECEMBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON

DATE TIME	DEC 13,78 1320	MAR 9,79 1105	MAY 8,79 1045	JUL 18,79 1220	SEP 19,79 1015	
TOTAL CELLS/ML	360	140	1100	930	17000	
DIVERSITY: DIVISION	1.3	1.0	1.3	1.3	1.0	
..CLASS	1.3	1.0	1.3	1.3	1.0	
...ORDER	1.3	1.0	2.1	2.0	1.2	
...FAMILY	2.5	1.7	2.6	3.0	1.5	
....GENUS	3.3	1.7	0.0	3.2	2.0	
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE						
...CHLOROCOCCALES						
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	43	4
....DICTYOSPHAERIUM	--	-	--	-	58	5
....KIRCHNERIELLA	--	-	--	-	28	3
....OOCYSTIS	--	-	--	-	28	3
....SELENASTRUM	--	-	--	-	--	-
....THEUBARIA	--	-	--	-	--	-
...SCENEDESMACEAE						
....ACTINASTRUM	14	4	--	-	14	1
....CRUCIGENIA	55#	15	--	-	--	-
...SCENEDESMUS	55#	15	--	-	350#	31
..TETRASPORALES					110	12
...PALMELLACEAE					860	5
...GLOEOCYSTIS	--	-	--	-	--	-
...SPHAEROCYSTIS	--	-	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE	--	-	--	-	72	6
....CHLAMYDOMONAS	--	-	58#	40	--	-
...VOLVOCAEAE					110	12
...PANDORINA	--	-	--	-	170#	18
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
...COSCINODISCACEAE						
....CYCLOTELLA	--	-	--	-	14	1
....MELOSIRA	--	-	--	-	--	-
..PENNALES						
...ACHNANTHACEAF						
....ACHNANTHES	28	8	14	10	14	1
....COCCONEIS	14	4	--	-	--	-
...CYMBELLACEAE						
....CYMBELLA	--	-	--	-	--	-
...EUNOTIACEAE					14	1
....EUNOTIA	42	12	--	-	14	1
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	43	4
...SYNEDRA	--	-	14	10	230#	21
...GOMPHONEMACEAE						
....GOMPHONEMA	42	12	--	-	--	-
...MERIDIONACEAE					14	1
....MERIDION	--	-	58#	40	--	-
...NAVICULACEAE						
....NAVICULA	55#	15	--	-	14	1
...PINNULARIA	14	4	--	-	--	-
...NITZSCHIAEAE						
....NITZSCHIA	14	4	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
...CRYPTOMONADACEAE						
....CRYPTOMONAS	28	8	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
...CHROOCOCCACEAE						
....ANACYSTIS	--	-	--	-	100	9
...HORMOGONALES						
...OSCILLATORIACEAE						
....OSCILLATORIA	--	-	--	-	--	-
EUGLENOPHYTA (EUGLENOIDS)						
..EUGLENOPHYCEAE					170#	18
...EUGLENALES						
...EUGLENACEAE						
....TRACHELOMONAS	--	-	--	-	14	1
PYRRHOPHYTA (FIRE ALGAE)						
..DINOPHYCEAE						
...PERIDINIALES						
...PERIDINIAEAE						
....PERIDINIUM	--	-	--	-	--	-
					86	1

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

° - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), NOVEMBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN
NOVEMBER			
1	---	---	---
2	---	---	---
3	---	---	---
4	---	---	---
5	---	---	---
6	---	---	---
7	---	---	---
8	---	---	---
9	---	---	---
10	---	---	---
11	---	---	---
12	---	---	---
13	---	---	---
14	127	125	126
15	145	128	135
16	142	137	139
17	141	132	139
18	136	118	128
19	143	138	141
20	139	125	130
21	130	124	128
22	125	122	123
23	129	125	128
24	128	121	123
25	125	123	124
26	---	---	---
27	---	---	---
28	---	---	---
29	---	---	---
30	---	---	---
31	---	---	---
MONTH	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	---	---	---	---	---	---	84	82	83	69	62	66
2	62	59	61	---	---	---	83	81	83	71	56	68
3	65	58	62	---	---	---	82	72	77	72	69	71
4	65	62	63	---	---	---	81	73	78	71	69	70
5	70	63	65	---	---	---	81	78	80	73	66	69
6	84	73	76	---	---	---	81	78	79	73	69	71
7	74	55	65	---	---	---	82	80	81	74	70	72
8	72	62	68	---	---	---	83	80	82	76	70	73
9	76	54	65	59	57	58	83	80	82	77	74	75
10	88	66	76	56	52	54	80	74	76	78	76	77
11	85	66	74	56	52	54	82	75	79	81	77	78
12	80	70	75	58	55	57	83	78	81	80	78	79
13	84	70	76	63	59	61	83	80	82	80	73	77
14	91	66	79	64	62	63	83	80	82	72	60	64
15	85	55	71	65	64	64	81	69	73	61	55	58
16	90	54	77	69	64	66	73	70	72	61	55	58
17	98	84	93	72	69	70	76	72	74	68	61	64
18	97	77	90	73	69	70	77	73	76	69	66	67
19	87	77	82	73	69	72	80	76	78	70	68	69
20	96	75	85	75	73	74	82	78	80	69	64	67
21	97	81	88	75	73	74	83	79	81	67	54	65
22	96	74	83	78	74	76	82	81	81	71	65	67
23	92	78	87	80	76	78	83	79	81	70	64	69
24	---	---	---	79	76	78	84	80	82	64	36	44
25	---	---	---	79	76	78	86	83	84	50	37	43
26	---	---	---	77	74	75	87	84	86	47	42	45
27	---	---	---	81	76	79	86	73	82	41	40	41
28	---	---	---	81	79	80	69	61	63	42	40	41
29	---	---	---	81	80	80	60	58	58	46	42	44
30	---	---	---	84	81	82	65	57	61	49	46	47
31	---	---	---	86	82	84	---	---	---	52	49	50
MONTH	---	---	---	---	---	---	87	57	78	81	36	63

PAWCATUCK RIVER BASIN

01118500 PAWCATUCK RIVER AT WESTERLY, RI--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), NOVEMBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	56	52	54	78	77	77	108	104	106	100	97	98
2	59	55	57	77	75	76	113	107	109	100	95	98
3	59	58	59	76	74	75	118	114	117	95	89	92
4	59	57	59	76	74	75	120	116	116	89	86	88
5	58	55	57	74	72	73	124	79	104	85	82	83
6	60	57	58	74	73	73	76	55	60	87	81	83
7	63	59	61	74	72	73	86	60	73	104	88	96
8	65	63	64	74	73	73	92	79	85	104	98	101
9	67	65	66	74	72	73	80	78	79	99	96	98
10	69	67	68	74	72	73	86	79	82	98	91	95
11	71	69	70	76	72	73	94	86	88	90	87	89
12	71	70	70	82	75	76	102	93	98	89	86	87
13	75	68	72	84	79	81	102	87	96	97	89	93
14	74	72	74	84	80	82	83	63	68	104	97	101
15	76	73	74	86	83	84	72	66	69	106	103	104
16	77	75	76	86	84	85	73	71	72	109	105	107
17	78	76	77	84	81	82	74	70	71	107	98	102
18	78	76	77	82	79	80	75	72	73	97	94	95
19	83	76	78	86	82	83	82	75	78	98	94	96
20	83	82	82	91	86	88	82	79	80	98	93	95
21	83	80	81	94	91	92	79	77	78	105	97	100
22	80	78	79	98	94	96	83	79	81	127	97	107
23	81	78	80	98	96	97	86	83	85	120	88	109
24	82	80	81	97	92	94	89	87	88	105	83	92
25	80	78	79	94	91	93	99	89	90	86	78	82
26	80	77	78	92	89	91	94	90	91	79	77	78
27	78	76	78	103	89	97	94	90	92	82	78	80
28	79	76	78	142	104	123	90	86	87	86	82	84
29	79	77	78	142	130	137	92	86	89	91	86	89
30	79	78	78	129	116	122	95	92	93	93	91	92
31	---	---	---	115	107	110	98	95	96	---	---	---
MONTH	83	52	71	142	72	87	124	55	87	127	77	94
PERIOD	145	36	81									

TEMPERATURE (DEG. C) OF WATER, NOVEMBER 1978 TO SEPTEMBER 1979

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

TEMPERATURE (DEG. C) OF WATER, NOVEMBER 1978 TO SEPTEMBER 1979--Continued

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

THAMES RIVER BASIN

01123360 QUINEBAUG RIVER BELOW EAST BRIMFIELD DAM, AT FISKDALE, MA

LOCATION.--Lat 42°06'31", long 72°07'27", Worcester County, Hydrologic Unit 01100001, on right bank at Fiskdale, 750 ft (230 m) downstream from East Brimfield Dam, and 2.4 mi (3.9 km) upstream from Cedar Pond outlet.

DRAINAGE AREA.--67.5 mi² (174.8 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 613.51 ft (186.998 m) Corps of Engineers datum.

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

AVERAGE DISCHARGE.--7 years, 140 ft³/s (3.965 m³/s), 28.17 in/yr (716 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft³/s (29.5 m³/s) Jan. 30, 1976, gage height, 6.42 ft (1.957 m); maximum gage height, 6.52 ft (1.987 m) Mar. 17, 1977; minimum daily discharge, 5.0 ft³/s (0.14 m³/s) Aug. 17, 1974.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge since at least 1886, 15,400 ft³/s (436 m³/s) Aug. 19, 1955, by slope-area measurement. Flood of Mar. 18, 1936, reached a discharge of 2,390 ft³/s (67.7 m³/s) and flood in September 1938, 7,000 ft³/s (198 m³/s), both by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 913 ft³/s (25.9 m³/s) Jan. 28, gage height, 6.26 ft (1.908 m); minimum daily, 15 ft³/s (0.42 m³/s) July 13-15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	35	66	70	809	232	165	322	190	24	32	172
2	108	31	71	174	842	184	164	260	172	27	30	172
3	118	28	69	371	789	177	181	219	152	31	29	146
4	119	28	67	442	477	179	197	208	136	30	28	115
5	109	26	80	391	288	221	221	202	125	27	27	91
6	114	25	90	299	184	234	221	191	123	24	27	87
7	108	25	90	237	184	230	206	177	118	23	27	119
8	96	25	81	338	174	582	188	164	109	21	27	133
9	83	26	95	511	156	743	181	152	102	20	27	122
10	73	26	133	601	131	825	204	142	95	18	26	105
11	67	26	145	586	140	817	237	133	88	17	24	92
12	57	25	139	474	134	805	241	123	78	16	25	81
13	46	24	118	301	125	781	223	119	69	15	35	74
14	46	24	103	296	115	754	206	123	63	15	82	70
15	54	25	90	319	106	713	204	143	58	15	114	76
16	54	25	80	304	103	560	204	156	54	16	109	76
17	49	26	76	260	92	348	206	151	51	20	84	76
18	41	37	67	219	87	273	202	134	49	22	66	73
19	34	45	63	160	76	237	188	121	46	24	57	67
20	37	46	61	170	68	217	174	114	42	25	49	61
21	37	44	66	104	65	204	160	114	38	25	44	57
22	36	43	71	193	76	200	149	113	35	22	38	72
23	32	42	63	458	92	193	142	109	34	19	33	98
24	30	43	66	324	143	184	134	137	30	18	28	115
25	29	49	79	19	131	191	127	193	27	23	33	118
26	28	51	82	65	256	199	123	251	26	28	60	108
27	41	47	80	423	514	199	186	268	23	29	88	93
28	46	46	64	789	451	184	365	239	22	33	123	83
29	49	46	63	883	---	174	436	210	22	38	131	82
30	46	52	61	867	---	170	405	195	21	39	140	89
31	40	---	56	842	---	167	---	200	---	37	162	---
TOTAL	1902	1041	2535	11490	6808	11177	6240	5383	2198	741	1805	2923
MEAN	61.4	34.7	81.8	371	243	361	208	174	73.3	23.9	58.2	97.4
MAX	119	52	145	883	842	825	436	322	190	39	162	172
MIN	28	24	56	19	65	167	123	109	21	15	24	57
MEAN†	62.0	35.3	81.8	463	154	352	215	169	67.5	23.9	62.5	95.5
CFSM†	.92	.52	1.21	6.86	2.28	5.21	3.19	2.50	1.00	.35	.93	1.41
IN.†	1.06	.58	1.40	7.90	2.37	6.01	3.56	2.88	1.12	.41	1.07	1.58
CAL YR 1978 TOTAL	42758		MEAN 117	MAX 751	MIN 13	MEAN† 117	CFSM† 1.73	IN† 23.51				
WTR YR 1979 TOTAL	54243		MEAN 149	MAX 883	MIN 15	MEAN† 149	CFSM† 2.21	IN† 29.94				

† Adjusted for change in contents in East Brimfield Lake.

01123600 QUINEBAUG RIVER BELOW WESTVILLE DAM, NEAR SOUTHBRIDGE, MA

LOCATION.--Lat 42°04'58", long 72°03'27", Worcester County, Hydrologic Unit 01100001, on right bank 200 ft (60 m) downstream from Westville Dam, 1.0 mi (1.6 km) upstream from McKinstry Brook, and 1.3 mi (2.1 km) west of Southbridge.

DRAINAGE AREA.--99.1 mi² (256.7 km²).

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

REVISED RECORDS.--WDR MA-RI-75-1: 1963-64 (monthly runoff).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 511.33 ft (155.853 m) Corps of Engineers datum.

REMARKS.--Records good. 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.--17 years, 168 ft³/s (4.758 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,710 ft³/s (48.4 m³/s) Jan. 31, 1979, gage height, 6.72 ft (2.048 m); minimum daily, 7.3 ft³/s (0.21 m³/s) Nov. 21, 28, 1964, July 30, 1965.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,710 ft³/s (48.4 m³/s) Jan. 31, gage height, 6.72 ft (2.048 m); minimum daily, 26 ft³/s (0.74 m³/s) July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	49	77	116	1330	292	209	502	260	36	48	214
2	111	43	79	280	967	239	186	339	224	38	42	214
3	119	40	79	407	943	239	238	286	196	40	41	185
4	111	38	81	452	650	246	264	288	175	40	41	154
5	108	36	104	461	345	307	319	276	161	38	41	127
6	150	34	111	393	254	266	291	254	176	36	40	131
7	135	33	107	313	238	254	270	233	157	38	36	161
8	111	33	99	405	225	878	240	214	142	39	36	171
9	94	33	132	446	201	1100	240	202	132	33	36	157
10	80	33	187	792	173	994	289	187	121	30	36	137
11	73	33	188	823	168	1010	302	172	112	30	41	125
12	64	33	174	695	148	1020	301	160	104	28	76	110
13	53	33	150	437	152	963	283	154	90	28	123	97
14	59	32	130	474	123	871	266	165	81	26	129	91
15	72	31	112	449	130	891	265	197	76	27	152	106
16	65	32	99	394	128	687	267	204	71	31	150	106
17	60	32	94	339	115	435	271	194	67	33	123	104
18	52	46	82	299	94	345	262	172	63	35	97	99
19	46	51	77	219	97	304	240	157	62	37	89	94
20	48	52	73	231	90	282	221	156	56	39	77	85
21	48	52	87	156	89	256	201	153	50	39	68	79
22	47	52	94	322	106	259	188	142	48	37	59	121
23	44	49	94	755	120	250	179	141	46	35	50	143
24	41	52	93	521	209	238	170	192	44	32	46	159
25	40	58	98	32	111	258	160	318	41	30	53	173
26	38	59	101	157	292	271	157	364	39	37	121	168
27	50	54	99	659	609	259	245	347	37	69	123	161
28	55	53	80	1060	721	239	416	311	34	60	148	139
29	58	52	76	1200	---	224	537	277	34	59	148	141
30	62	67	74	1320	---	218	565	259	33	58	148	143
31	51	---	69	1430	---	211	---	311	---	53	209	---
TOTAL	2225	1295	3200	16037	8828	14306	8042	7327	2932	1191	2627	4095
MEAN	71.8	43.2	103	517	315	461	268	236	97.7	38.4	84.7	137
MAX	150	67	188	1430	1330	1100	565	502	260	69	209	214
MIN	38	31	69	32	89	211	157	141	33	26	36	79

CAL YR 1978 TOTAL 61817 MEAN 169 MAX 1110 MIN 15
WTR YR 1979 TOTAL 72105 MEAN 198 MAX 1430 MIN 26

THAMES RIVER BASIN

01123990 QUINEBAUG RIVER NEAR DUDLEY, MA

LOCATION.--Lat 42°01'40", long 71°57'22", Worcester County, Hydrologic Unit 01100001, on right bank, 50 ft (15 m) upstream from bridge on State Highway 131, 0.2 mi (0.3 km) upstream from Massachusetts-Connecticut State line, 0.4 mi (0.6 km) upstream from gaging station at Quinebaug, CT, and 2.0 mi (3.2 km) southwest of Dudley, MA.

DRAINAGE AREA.--156 mi² (404 km²), at gage at Quinebaug, CT.

PERIOD OF RECORD.--October 1968 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Water years 1969 to current year.

pH: October 1968 to current year.

WATER TEMPERATURES: October 1968 to current year.

DISSOLVED OXYGEN: October 1968 to current year.

INSTRUMENTATION.--Water-quality monitor since October 1968.

REMARKS.--Prior to October 1971, published as "at Quinebaug, Conn." No winter records in water years 1973-79.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 393 micromhos Sept. 24, 1970; minimum recorded, 52 micromhos Mar. 7, 1979.

pH: Maximum recorded, 9.0 units July 13, 16, 1971; minimum recorded, 4.4 units Oct. 26, 1978.

WATER TEMPERATURES: Maximum recorded, 34.0°C Aug. 2, 1975; minimum, 0.0°C on many days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 19.6 mg/L Feb. 12, 1972; minimum recorded, 0.4 mg/L Aug. 28, 1970, Aug. 3, 1974.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 214 micromhos Dec. 2; minimum recorded, 52 micromhos Mar. 7; but maximum and minimum may have been higher or lower during periods of no record.

pH: Maximum recorded, 8.7 units July 14; minimum recorded, 4.4 units Oct. 26; but maximum and minimum may have been higher or lower during periods of no record.

WATER TEMPERATURES: Maximum recorded, 31.5°C July 14, Aug. 5, but may have been higher during periods of no record; minimum, 0.0°C Nov. 26, 27 and probably on many days during winter period.

DISSOLVED OXYGEN: Maximum recorded, 14.2 mg/L Mar. 8, 9; minimum recorded, 4.7 mg/L July 15; but maximum and minimum may have been higher or lower during periods of no record.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			
1	178	160	168	137	128	131	212	100	188
2	157	144	158	156	132	150	214	203	210
3	145	123	134	154	134	147	212	194	197
4	123	106	117	152	139	146	---	---	---
5	115	103	106	154	142	148	---	---	---
6	---	---	---	149	134	141	---	---	---
7	---	---	---	152	135	139	---	---	---
8	---	---	---	147	142	145	---	---	---
9	---	---	---	159	140	146	---	---	---
10	---	---	---	150	143	147	---	---	---
11	---	---	---	153	148	150	---	---	---
12	190	133	164	153	146	149	---	---	---
13	141	134	137	164	150	154	---	---	---
14	143	135	140	165	141	146	---	---	---
15	144	131	138	152	143	147	---	---	---
16	160	145	151	184	142	152	---	---	---
17	161	149	154	187	157	177	---	---	---
18	156	150	153	174	138	152	---	---	---
19	154	147	151	141	136	138	---	---	---
20	149	129	139	140	136	138	---	---	---
21	145	130	138	140	138	139	---	---	---
22	150	143	147	149	138	143	---	---	---
23	158	139	144	154	146	149	---	---	---
24	---	---	---	156	147	149	---	---	---
25	---	---	---	163	140	157	---	---	---
26	---	---	---	157	150	153	---	---	---
27	140	121	125	155	149	151	---	---	---
28	127	116	122	158	154	156	---	---	---
29	128	121	125	157	153	155	---	---	---
30	133	120	127	176	140	166	---	---	---
31	157	119	133	---	---	---	---	---	---
MONTH	---	---	---	187	128	149	---	---	---

THAMES RIVER BASIN

01123990 QUINEBAUG RIVER NEAR DUDLEY, MA--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			
1	7.1	6.8	6.9	7.0	6.8	6.9	8.3	8.0	8.2
2	7.2	6.8	7.0	7.0	6.7	6.9	8.3	7.8	8.1
3	7.1	6.9	7.0	7.1	6.7	6.8	8.5	8.2	8.4
4	7.0	6.9	6.9	7.1	6.8	6.9	8.3	7.2	7.9
5	6.9	6.4	6.7	7.3	6.9	7.0	---	---	---
6	---	---	---	7.4	6.9	7.0	---	---	---
7	---	---	---	7.2	6.8	6.9	---	---	---
8	---	---	---	7.0	6.8	6.9	---	---	---
9	---	---	---	7.3	6.9	7.0	---	---	---
10	---	---	---	7.3	7.0	7.1	---	---	---
11	---	---	---	7.3	7.0	7.1	---	---	---
12	6.8	6.2	6.4	7.5	7.0	7.2	---	---	---
13	6.7	6.3	6.5	7.7	7.3	7.5	---	---	---
14	6.4	6.3	6.3	7.6	7.2	7.4	---	---	---
15	6.5	6.2	6.4	7.6	7.2	7.3	---	---	---
16	6.6	6.4	6.6	7.5	6.8	7.2	---	---	---
17	6.8	6.6	6.7	7.3	6.8	7.0	---	---	---
18	6.8	6.7	6.7	7.3	6.9	7.1	---	---	---
19	6.7	6.5	6.7	7.4	6.9	7.1	---	---	---
20	6.8	6.5	6.6	7.6	7.2	7.4	---	---	---
21	6.8	6.6	6.7	7.6	7.3	7.4	---	---	---
22	6.9	6.7	6.8	7.7	7.5	7.6	---	---	---
23	6.9	6.6	6.7	7.9	7.0	7.7	---	---	---
24	6.8	6.5	6.6	7.9	7.8	7.8	---	---	---
25	6.6	4.5	6.3	8.1	7.9	8.0	---	---	---
26	5.6	4.4	5.1	8.4	8.1	8.3	---	---	---
27	7.0	4.5	6.8	8.4	8.2	8.3	---	---	---
28	7.0	6.6	6.8	8.4	8.3	8.3	---	---	---
29	7.2	6.8	6.9	8.3	8.2	8.3	---	---	---
30	7.3	6.9	7.1	8.3	8.1	8.2	---	---	---
31	7.1	6.9	7.0	---	---	---	---	---	---
MONTH	7.3	4.4	6.7	8.4	6.7	7.4	---	---	---
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MARCH			APRIL			MAY			
1	---	---	---	6.8	6.7	6.8	6.7	6.6	6.7
2	6.6	4.8	5.4	6.8	6.7	6.7	6.8	6.6	6.7
3	5.7	5.2	5.4	6.8	6.7	6.7	6.8	6.6	6.7
4	6.0	5.5	5.8	6.9	6.7	6.8	6.8	6.6	6.7
5	6.2	5.9	6.1	6.8	6.7	6.7	6.8	6.6	6.7
6	6.5	6.2	6.3	6.9	6.7	6.8	6.8	6.6	6.7
7	6.6	6.4	6.5	6.8	6.7	6.8	6.8	6.6	6.7
8	6.9	6.5	6.6	6.9	6.7	6.8	6.8	6.6	6.7
9	6.5	6.4	6.4	6.8	6.7	6.7	6.8	6.6	6.7
10	---	---	---	6.9	6.7	6.8	6.8	6.5	6.6
11	---	---	---	6.9	6.7	6.8	6.8	6.5	6.7
12	---	---	---	6.9	6.7	6.8	6.7	6.6	6.7
13	---	---	---	6.9	6.6	6.7	6.7	6.6	6.7
14	---	---	---	6.8	6.6	6.7	6.7	6.7	6.7
15	---	---	---	6.8	6.6	6.7	6.7	6.7	6.7
16	---	---	---	6.8	6.6	6.7	6.8	6.6	6.7
17	---	---	---	6.9	6.6	6.7	6.8	6.7	6.7
18	---	---	---	6.9	6.6	6.7	6.9	6.7	6.8
19	---	---	---	6.9	6.6	6.7	6.9	6.8	6.8
20	6.7	6.6	6.6	6.9	6.6	6.7	6.9	6.8	6.8
21	6.6	6.5	6.6	7.0	6.6	6.8	6.9	6.8	6.8
22	6.6	6.5	6.5	7.0	6.6	6.8	6.9	6.7	6.8
23	6.7	6.5	6.6	7.0	6.7	6.8	6.8	6.7	6.8
24	6.7	6.5	6.6	6.9	6.7	6.8	6.8	6.7	6.8
25	6.7	6.6	6.6	6.9	6.7	6.8	6.8	6.7	6.8
26	6.7	6.6	6.6	6.9	6.6	6.7	6.8	6.7	6.8
27	6.7	6.6	6.6	6.7	6.6	6.6	6.8	6.7	6.8
28	6.7	6.6	6.6	6.7	6.6	6.6	6.8	6.7	6.7
29	6.7	6.6	6.6	6.7	6.6	6.6	6.8	6.7	6.7
30	6.6	6.6	6.6	6.7	6.6	6.6	6.7	6.7	6.7
31	6.9	6.7	6.8	---	---	---	6.8	6.7	6.7
MONTH	---	---	---	7.0	6.6	6.7	6.9	6.5	6.7

01123990 QUINEBAUG RIVER NEAR DUDLEY, MA--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	6.9	6.7	6.8	---	---	---	7.1	6.6	6.8	6.6	6.5	6.6
2	6.9	6.7	6.8	---	---	---	7.0	6.6	6.7	6.7	6.5	6.6
3	6.9	6.7	6.8	---	---	---	7.0	6.6	6.7	6.7	6.5	6.6
4	6.9	6.7	6.8	7.3	6.8	7.1	7.0	6.6	6.7	6.7	6.5	6.6
5	6.9	6.7	6.8	7.4	6.8	7.0	7.2	6.7	6.9	6.7	6.5	6.5
6	6.9	6.7	6.8	7.3	6.8	7.0	7.2	6.7	6.9	6.6	6.5	6.5
7	6.9	6.7	6.8	7.3	6.8	7.0	7.1	6.7	6.9	6.7	6.5	6.6
8	6.9	6.7	6.8	7.4	6.8	7.1	7.4	6.7	6.9	6.7	6.6	6.6
9	6.9	6.8	6.8	7.5	6.8	7.1	7.3	6.6	6.8	6.8	6.6	6.7
10	7.0	6.8	6.9	7.6	6.8	7.1	7.1	6.5	6.6	6.8	6.6	6.7
11	---	---	---	7.4	6.7	7.0	6.6	6.5	6.5	6.8	6.6	6.7
12	---	---	---	7.1	6.7	6.8	6.6	6.5	6.5	6.8	6.6	6.7
13	---	---	---	8.2	6.7	7.2	6.6	6.5	6.6	6.8	6.6	6.7
14	---	---	---	8.7	6.8	7.4	6.6	6.5	6.5	6.7	6.5	6.6
15	---	---	---	7.6	6.7	7.0	6.7	6.5	6.6	6.7	6.5	6.6
16	---	---	---	7.3	6.7	6.9	6.8	6.5	6.6	6.8	6.6	6.6
17	---	---	---	7.2	6.6	6.8	6.8	6.5	6.6	6.8	6.6	6.7
18	---	---	---	6.9	6.6	6.7	6.7	6.5	6.5	---	---	---
19	---	---	---	6.9	6.5	6.7	6.7	6.5	6.6	---	---	---
20	---	---	---	7.5	6.5	6.8	6.8	6.5	6.6	---	---	---
21	---	---	---	8.3	6.7	7.2	6.8	6.4	6.5	6.7	6.5	6.6
22	---	---	---	8.2	6.6	7.2	6.8	6.4	6.6	6.7	6.5	6.6
23	---	---	---	8.2	6.7	7.2	7.0	6.4	6.6	6.8	6.6	6.7
24	---	---	---	7.1	6.6	6.8	7.1	6.5	6.7	6.8	6.7	6.7
25	---	---	---	6.8	6.5	6.6	7.0	6.5	6.7	6.8	6.6	6.7
26	---	---	---	6.7	6.5	6.6	6.7	6.6	6.6	6.8	6.6	6.7
27	---	---	---	6.7	6.5	6.5	6.8	6.6	6.7	6.8	6.6	6.7
28	---	---	---	6.9	6.5	6.7	6.7	6.5	6.6	6.8	6.6	6.7
29	---	---	---	7.1	6.7	6.8	6.7	6.6	6.6	6.7	6.6	6.6
30	---	---	---	7.1	6.7	6.8	6.7	6.5	6.6	6.7	6.5	6.6
31	---	---	---	7.0	6.7	6.8	6.7	6.5	6.6	---	---	---
MONTH	---	---	---	8.7	6.5	6.9	7.4	6.4	6.7	6.8	6.5	6.6
YEAR	8.7	4.4	6.8									

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN
1	17.0	15.0	16.0	12.5	8.0	10.0	5.0	2.0	3.0
2	18.0	15.5	16.5	13.0	7.0	10.0	5.5	2.0	3.5
3	16.5	15.0	15.5	13.5	7.5	10.0	2.5	.5	1.5
4	16.0	15.0	15.5	11.0	8.0	9.5	---	---	---
5	16.5	15.5	16.0	12.0	8.5	10.0	---	---	---
6	---	---	---	12.5	8.5	10.5	---	---	---
7	---	---	---	12.5	10.0	11.5	---	---	---
8	---	---	---	11.0	10.5	11.0	---	---	---
9	---	---	---	13.0	9.5	11.0	---	---	---
10	---	---	---	13.0	9.0	10.5	---	---	---
11	---	---	---	13.0	10.0	11.5	---	---	---
12	17.5	13.5	14.5	10.5	8.0	9.5	---	---	---
13	18.0	14.0	15.5	10.0	7.0	8.0	---	---	---
14	17.5	15.5	16.5	11.0	8.0	9.5	---	---	---
15	15.5	11.5	13.5	11.5	9.0	10.0	---	---	---
16	12.5	9.5	10.5	11.0	8.0	9.5	---	---	---
17	12.0	8.5	10.0	9.0	7.0	8.0	---	---	---
18	12.0	8.5	10.0	12.0	9.0	10.5	---	---	---
19	13.0	10.0	11.5	10.5	8.5	9.0	---	---	---
20	12.5	10.5	11.5	8.0	6.5	7.0	---	---	---
21	13.0	10.0	11.0	6.5	5.5	6.0	---	---	---
22	13.5	10.0	11.5	5.5	4.5	5.0	---	---	---
23	14.5	11.0	12.5	5.5	3.5	4.5	---	---	---
24	13.5	10.0	11.0	4.5	3.5	4.0	---	---	---
25	15.0	9.0	12.0	4.0	2.0	3.5	---	---	---
26	20.5	12.5	14.0	1.5	.0	1.0	---	---	---
27	14.5	11.5	13.0	.5	.0	.0	---	---	---
28	13.0	10.5	11.5	2.0	.5	1.5	---	---	---
29	12.0	9.5	10.5	3.5	1.0	2.0	---	---	---
30	11.0	8.5	9.5	4.5	2.5	3.0	---	---	---
31	12.5	8.0	10.0	---	---	---	---	---	---
MONTH	20.5	8.0	13.0	13.5	.0	7.5	---	---	---

01123990 QUINEBAUG RIVER NEAR DUDLEY, MA--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			
1	9.4	8.8	9.2	10.2	8.3	9.0	11.1	10.4	10.8
2	9.2	8.6	9.0	10.6	8.2	9.2	11.2	10.2	10.7
3	9.3	8.9	9.1	11.6	8.4	9.6	10.9	10.5	10.7
4	9.7	9.4	9.6	11.5	9.7	10.5	11.3	10.8	10.9
5	10.0	9.5	9.6	11.4	10.1	10.6	---	---	---
6	---	---	---	11.2	9.8	10.3	---	---	---
7	---	---	---	10.7	10.0	10.3	---	---	---
8	---	---	---	10.4	10.1	10.2	---	---	---
9	---	---	---	11.3	10.1	10.5	---	---	---
10	---	---	---	11.4	10.1	10.6	---	---	---
11	---	---	---	11.1	10.2	10.5	---	---	---
12	10.6	8.1	9.6	10.7	10.1	10.4	---	---	---
13	9.2	8.1	8.6	11.3	10.3	10.7	---	---	---
14	8.8	8.4	8.5	11.3	10.5	10.8	---	---	---
15	8.7	8.2	8.5	11.2	10.1	10.6	---	---	---
16	8.9	8.5	8.7	11.8	10.0	10.8	---	---	---
17	9.0	8.4	8.8	12.3	10.9	11.6	---	---	---
18	9.0	8.5	8.7	12.5	10.1	11.6	---	---	---
19	8.8	8.1	8.5	11.0	9.8	10.3	---	---	---
20	10.9	7.9	9.0	11.0	9.8	10.2	---	---	---
21	10.8	8.0	9.7	10.2	9.9	10.1	---	---	---
22	10.5	8.9	9.4	10.3	10.1	10.2	---	---	---
23	9.9	8.7	9.1	10.6	10.2	10.3	---	---	---
24	9.4	8.8	9.0	10.5	10.3	10.4	---	---	---
25	9.4	8.2	8.9	10.9	10.3	10.5	---	---	---
26	8.7	8.0	8.4	10.9	10.2	10.5	---	---	---
27	9.4	8.0	8.9	10.6	10.2	10.4	---	---	---
28	9.8	8.1	8.7	10.9	10.5	10.7	---	---	---
29	9.7	7.9	8.6	11.5	10.5	11.0	---	---	---
30	9.5	7.9	8.4	11.6	10.9	11.1	---	---	---
31	10.4	8.0	9.0	---	---	---	---	---	---
MONTH	10.9	7.9	8.9	12.5	8.2	10.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
MARCH			APRIL			MAY			
1	---	---	---	11.0	10.4	10.7	10.0	9.2	9.5
2	12.4	12.3	12.6	11.3	10.7	11.1	10.4	9.4	9.8
3	12.6	12.1	12.4	12.7	11.0	11.8	10.3	9.4	9.9
4	12.6	12.1	12.4	12.8	11.9	12.3	10.0	9.2	9.6
5	12.8	12.2	12.5	12.5	11.9	12.2	10.1	9.1	9.5
6	13.6	12.6	13.0	12.5	12.0	12.2	10.0	9.1	9.6
7	14.1	12.9	13.3	12.9	12.2	12.6	10.0	8.5	9.4
8	14.2	13.8	13.9	13.2	11.7	12.5	9.5	8.2	8.9
9	14.2	13.8	13.9	12.6	11.9	12.3	9.1	7.6	8.5
10	---	---	---	12.8	11.8	12.3	8.4	6.7	7.7
11	---	---	---	12.6	11.3	11.9	8.1	7.0	7.4
12	---	---	---	12.0	10.5	11.3	8.1	7.1	7.6
13	---	---	---	11.9	10.6	11.1	8.1	7.6	7.9
14	---	---	---	11.7	10.9	11.3	8.5	7.9	8.3
15	---	---	---	12.2	11.3	11.7	8.9	8.4	8.7
16	---	---	---	12.1	11.4	11.7	9.1	8.4	8.7
17	---	---	---	12.1	11.1	11.6	9.3	8.4	8.8
18	---	---	---	12.1	10.9	11.5	9.3	8.4	8.8
19	---	---	---	11.9	10.7	11.4	9.4	8.7	9.0
20	12.6	12.2	12.4	11.8	10.3	11.1	9.6	8.9	9.2
21	12.7	11.6	12.3	11.4	9.8	10.7	9.7	8.5	9.2
22	12.4	11.3	11.9	11.2	9.9	10.5	9.3	8.2	8.8
23	12.0	10.8	11.4	11.0	9.1	10.2	9.1	8.2	8.7
24	11.5	10.4	10.9	10.5	9.0	9.8	9.3	8.7	9.0
25	10.9	10.4	10.6	10.5	9.1	9.7	9.8	9.2	9.4
26	11.3	10.5	10.9	10.2	8.7	9.5	9.5	8.9	9.3
27	12.1	11.0	11.5	9.8	8.8	9.4	9.6	8.9	9.3
28	12.4	11.2	11.9	10.1	9.3	9.6	9.4	9.0	9.2
29	12.1	11.4	11.7	9.9	9.3	9.5	9.4	8.6	9.1
30	11.7	11.4	11.5	9.8	9.2	9.5	9.2	8.7	9.0
31	11.6	10.3	11.0	---	---	---	9.7	8.8	9.3
MONTH	---	---	---	13.2	8.7	11.1	10.4	6.7	8.9

01124000 QUINEBAUG RIVER AT QUINEBAUG, CT

LOCATION.--Lat 42°01'20", long 71°57'22", Windham County, Hydrologic Unit 01100001, on right bank at Quinebaug, 500 ft (152 m) upstream from bridge on State Highway 197, 0.2 mi (0.3 km) downstream from Massachusetts-Connecticut State line, 7.8 mi (12.6 km) upstream from French River, and at mile 46 (74 km).

DRAINAGE AREA.--156 mi² (404 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 341.52 ft (104.095 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by East Brimfield and Westville Lakes (see p. 169), and by smaller reservoirs upstream. 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).

AVERAGE DISCHARGE (adjusted for storage).--48 years, 270 ft³/s (7.646 m³/s), 23.52 in/yr (597 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,300 ft³/s (1,400 m³/s) Aug. 19, 1955, gage height, 18.96 ft (5.779 m), from floodmarks, from rating curve extended above 5,100 ft³/s (144 m³/s) on basis of slope-area measurement of peak flow; minimum, about 1 ft³/s (about 0.03 m³/s) Sept. 9, 1943, July 12, 1949, Sept. 17, 18, 1950, July 9, 1951, Sept. 4 and Oct. 29, 1956; minimum gage height, 1.74 ft (0.530 m) Aug. 20, 1940; minimum daily discharge, about 1 ft³/s (about 0.03 m³/s) Sept. 4, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,740 ft³/s (77.6 m³/s) Jan. 26, gage height, 6.37 ft (1.942 m); minimum, 2.1 ft³/s (0.059 m³/s) July 13, gage height, 1.76 ft (0.536 m).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	130	74	166	325	1550	584	343	660	425	52	52	242
2	170	69	155	820	1190	405	352	516	361	52	46	230
3	175	65	145	1190	1120	420	348	452	316	52	43	205
4	164	63	174	898	766	441	441	463	281	48	46	180
5	175	61	220	732	454	570	559	420	285	46	43	141
6	222	60	202	565	380	1060	474	375	339	44	41	188
7	200	59	188	588	335	1540	420	343	281	44	37	227
8	170	58	177	1950	300	1520	380	321	245	46	37	217
9	140	54	325	1550	280	1660	425	298	224	39	35	191
10	123	58	395	1250	250	1380	521	273	206	32	46	162
11	110	56	348	1070	235	1690	516	257	184	34	60	141
12	96	54	303	913	220	1630	480	238	170	31	152	122
13	82	54	265	705	208	1380	436	249	145	4.0	265	105
14	90	54	238	949	200	1220	425	307	128	18	217	105
15	104	54	210	752	190	1160	431	361	114	34	217	135
16	96	54	191	617	180	1070	447	334	105	37	195	116
17	87	56	195	526	175	787	436	294	97	43	155	108
18	78	103	195	469	170	570	400	265	92	41	120	100
19	70	97	294	463	164	495	366	242	90	41	100	92
20	70	92	261	425	162	452	334	245	83	41	87	83
21	70	90	206	949	159	425	307	238	75	39	77	78
22	68	88	202	1050	170	400	294	220	60	35	70	166
23	66	83	188	1120	195	395	277	245	60	32	65	184
24	63	100	174	820	495	380	261	395	58	31	62	184
25	61	116	213	2180	623	390	249	629	54	29	70	195
26	54	104	206	1060	480	500	257	660	52	43	180	184
27	73	92	188	1260	738	463	692	565	46	114	190	170
28	80	97	277	1600	876	415	876	495	44	78	220	145
29	85	92	253	1670	---	380	891	447	43	75	220	166
30	90	152	174	1690	---	366	862	452	43	66	220	166
31	80	---	131	1700	---	352	---	543	---	58	265	---
TOTAL	3346	2317	6859	31856	12269	24504	13500	11802	4706	1379.0	3633	4728
MEAN	108	77.2	221	1028	434	790	450	381	157	44.5	117	158
MAX	222	152	395	2180	1550	1690	891	660	425	114	265	242
MIN	54	54	131	325	159	352	249	220	43	4.0	35	78
(†)	+0.6	+0.7	0	+122	-116	-14.2	+14.1	-11.5	-6.8	+0.1	+4.9	-2.3
MEAN†	109	77.9	221	1150	322	776	464	370	150	44.6	122	156
CFSM†	0.70	0.50	1.42	7.37	2.06	4.97	2.97	2.37	0.36	0.29	0.78	1.00
IN.†	0.81	0.56	1.64	8.50	2.14	5.73	3.31	2.73	1.07	0.33	0.90	1.12

CAL YR 1978 TOTAL 97148.0 MEAN 266 MAX 1680 MIN 18 MEAN† 266 CFSM† 1.71 IN† 23.13
WTR YR 1979 TOTAL 120899.0 MEAN 331 MAX 2180 MIN 4.0 MEAN† 331 CFSM† 2.12 IN† 28.84

† Change in contents, equivalent in cubic feet per second, in East Brimfield and Westville Lakes; furnished by Corps of Engineers.

‡ Adjusted for change in contents.

THAMES RIVER BASIN

01124350 FRENCH RIVER BELOW HODGES VILLAGE DAM, AT HODGES VILLAGE, MA

LOCATION.--Lat 42°07'06", long 71°52'54", Worcester County, Hydrologic Unit 01100001, on right bank at Hodges Village, 240 ft (73 m) downstream from Hodges Village Dam, 0.8 mi (1.3 km) west of Oxford, and 1.2 mi (1.9 km) upstream from Little River.

DRAINAGE AREA.--31.0 mi² (80.3 km²).

PERIOD OF RECORD.--Discharge: March 1962 to current year.
Water-quality records: Water year 1962.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 466.98 ft (142.336 m) Corps of Engineers datum.

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

AVERAGE DISCHARGE.--17 years, 54.6 ft³/s (1.546 m³/s), 23.92 in/yr (608 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 628 ft³/s (17.8 m³/s) Jan. 28, 1978, gage height, 3.47 ft (1.058 m); no flow for part of July 17, 1968 (caused by unusual regulation); minimum daily discharge, 2.0 ft³/s (0.057 m³/s) Aug. 7, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 521 ft³/s (14.8 m³/s) Mar. 8, gage height, 3.26 ft (0.994 m); minimum, 2.7 ft³/s (0.076 m³/s) Oct. 4, 5, July 14-16; minimum daily, 2.7 ft³/s (0.076 m³/s) July 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	7.4	23	38	312	304	74	175	100	11	8.0	77
2	3.0	7.4	21	99	305	153	70	175	82	11	7.7	65
3	3.0	7.1	18	49	297	109	74	170	65	10	6.7	56
4	2.9	7.1	18	104	288	103	77	159	54	7.7	8.0	40
5	2.9	6.9	34	285	318	111	84	150	47	6.7	8.3	33
6	15	6.4	38	294	323	134	120	140	50	6.0	6.7	43
7	35	6.4	30	203	310	139	120	122	51	5.5	5.7	69
8	15	6.4	26	58	295	354	113	100	42	4.9	5.3	102
9	7.7	6.4	39	136	264	455	100	78	35	4.3	5.1	84
10	6.7	6.4	77	316	230	412	97	65	30	4.1	5.1	29
11	6.4	6.4	70	361	157	22	111	56	28	3.9	7.7	16
12	6.2	6.4	51	313	79	220	113	48	26	3.9	29	14
13	5.1	6.4	41	215	49	410	112	45	23	3.5	89	13
14	6.2	6.4	35	37	40	426	104	46	21	2.7	102	11
15	14	6.2	32	205	35	395	97	58	20	2.7	63	14
16	14	6.0	30	175	33	336	97	69	18	3.5	42	16
17	9.6	6.0	26	99	28	250	97	70	17	60	29	14
18	7.7	9.3	31	73	27	145	97	61	16	45	21	13
19	7.4	13	34	58	26	92	91	52	15	25	20	9.6
20	13	12	23	56	21	77	81	48	14	16	19	8.6
21	7.7	10	26	30	22	74	72	47	14	12	18	7.7
22	6.2	9.6	34	83	34	70	63	43	13	9.6	16	16
23	6.2	9.0	31	233	37	67	59	38	13	8.3	13	36
24	6.2	9.3	27	131	65	66	53	62	13	7.4	12	32
25	6.0	13	29	25	67	81	50	92	12	6.7	13	24
26	6.0	13	35	29	105	124	46	129	11	6.7	18	19
27	9.0	11	35	130	84	134	68	138	11	27	26	17
28	12	11	33	232	262	115	144	138	11	33	55	14
29	8.3	10	24	247	---	89	166	138	10	18	77	16
30	7.7	15	21	250	---	81	173	126	9.3	13	81	26
31	7.4	---	20	290	---	77	---	112	---	10	80	---
TOTAL	266.5	256.9	1012	4854	4118	5625	2823	2950	871.3	389.1	897.3	934.9
MEAN	8.60	8.56	32.6	157	147	181	94.1	95.2	29.0	12.6	28.9	31.2
MAX	35	15	77	361	323	455	173	175	100	60	102	102
MIN	2.9	6.0	18	25	21	22	46	38	9.3	2.7	5.1	7.7
MEAN†	8.41	8.64	32.6	233	76.8	169	107	84.5	26.3	12.6	29.3	30.9
CFSM†	.27	.28	1.05	7.52	2.48	5.45	3.45	2.73	.85	.41	.95	1.00
IN.†	.31	.31	1.21	8.67	2.58	6.28	3.87	3.14	.95	.47	1.09	1.11
CAL YR 1978 TOTAL	19998.0			MEAN 54.8	MAX 498	MIN 2.9	MEAN†	54.8	CFSM†	1.77	IN†	23.99
WTR YR 1979 TOTAL	24998.0			MEAN 68.5	MAX 455	MIN 2.7	MEAN†	68.5	CFSM†	2.21	IN†	29.99

† Adjusted for change in contents in Hodges Village Reservoir.

01124500 LITTLE RIVER NEAR OXFORD, MA

LOCATION.--Lat 42°06'57", long 71°53'26", Worcester County, Hydrologic Unit 01100001, on left bank 0.6 mi (1.0 km) upstream from mouth, 1.1 mi (1.8 km) downstream from Buffumville Dam, and 1.5 mi (2.4 km) west of Oxford.

DRAINAGE AREA.--27.7 mi² (71.7 km²).

PERIOD OF RECORD.--Discharge: July 1939 to current year. Prior to October 1977, published as "at Buffumville." Water-quality records: Water year 1973.

REVISED RECORDS.--WSP 1201: 1940, 1948.

GAGE.--Water-stage recorder. Datum of gage is 457.00 ft (139.294 m) National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers).

REMARKS.--Records good except those for period of no gage-height record July 2 to Aug. 7, which are fair. Flow regulated by Buffumville Lake since 1958 (Reservoirs in Thames River basin) and by other reservoirs upstream. Prior to 1958, flow regulated by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--40 years, 48.1 ft³/s (1.362 m³/s), 23.58 in/yr (599 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,340 ft³/s (236 m³/s) Aug. 19, 1955, gage height, 15.53 ft (4.734 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of computation of peak flow over dam; minimum, 0.1 ft³/s (0.003 m³/s) Sept. 25, 26, 1957. Maximum discharge since construction of Buffumville Dam in 1958, 429 ft³/s (12.1 m³/s) Apr. 7, 1959, gage height, 5.04 ft (1.536 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 322 ft³/s (9.12 m³/s) Jan. 31, gage height, 4.63 ft (1.411 m); minimum, 3.6 ft³/s (0.10 m³/s) July 14, 15, based on minimum-stage indicator.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	41	26	34	317	201	71	189	93	9.5	14	32
2	10	32	27	75	307	124	75	158	81	8.7	12	28
3	13	24	26	102	294	100	88	112	70	8.4	10	25
4	11	19	27	199	282	96	92	97	60	7.5	9.4	21
5	5.3	17	34	239	295	117	99	88	56	7.0	9.0	18
6	22	16	37	159	299	154	122	78	65	6.2	8.7	21
7	34	15	35	107	276	105	105	69	66	5.6	7.2	29
8	29	15	32	82	238	216	87	62	60	5.2	6.2	30
9	25	14	40	98	137	302	82	57	52	5.0	5.4	27
10	22	13	59	182	80	293	98	52	45	4.7	6.4	23
11	20	13	61	209	57	52	112	52	40	4.3	7.7	19
12	23	12	51	204	47	125	111	48	35	4.1	16	16
13	26	11	42	235	40	273	99	47	32	4.0	36	14
14	32	11	36	43	36	303	87	50	29	3.8	55	13
15	35	11	32	158	33	287	86	60	27	3.8	56	15
16	35	11	30	231	31	270	87	66	25	4.3	45	15
17	34	11	29	234	29	240	87	62	22	7.2	35	14
18	33	17	28	157	28	157	83	54	21	9.6	28	13
19	32	18	26	103	27	107	76	47	19	9.9	25	11
20	33	17	24	78	24	86	68	44	17	9.2	22	10
21	28	17	26	73	24	76	60	42	15	8.4	19	9.4
22	22	17	28	84	27	71	54	40	14	7.5	17	16
23	17	16	29	255	30	68	51	40	13	7.0	15	22
24	15	18	28	164	53	66	48	62	11	5.8	13	24
25	13	19	32	81	76	81	46	113	10	5.4	13	24
26	17	19	35	32	89	108	45	168	9.2	5.4	14	22
27	28	18	35	108	67	112	90	162	8.8	11	17	20
28	32	19	33	221	162	99	181	129	8.1	15	28	17
29	33	18	31	258	---	84	189	102	7.7	16	34	19
30	36	23	29	273	---	76	187	86	7.7	16	37	20
31	37	---	27	296	---	71	---	93	---	15	36	---
TOTAL	760.2	522	1035	4774	3405	4520	2766	2529	1019.5	240.5	657.0	587.4
MEAN	24.5	17.4	33.4	154	122	146	92.2	81.6	34.0	7.76	21.2	19.6
MAX	37	41	61	296	317	303	189	189	93	16	56	32
MIN	5.3	11	24	32	24	52	45	40	7.7	3.8	5.4	9.4
MEAN†	25.8	16.7	33.7	219	58.5	140	99.1	75.5	30.3	9.70	20.9	18.9
CFSM†	.93	.60	1.22	7.91	2.11	5.05	3.58	2.73	1.09	.35	.75	.68
IN.†	1.08	.67	1.40	9.10	2.20	5.82	3.99	3.14	1.22	.40	.87	.76
CAL YR 1978 TOTAL	20539.0			MEAN 56.3	MAX 320	MIN 4.2	MEAN† 56.2	CFSM† 2.03	IN† 27.57			
WTR YR 1979 TOTAL	22815.6			MEAN 62.5	MAX 317	MIN 3.8	MEAN† 62.6	CFSM† 2.26	IN† 30.67			

† Adjusted for change in contents in Buffumville Lake.

THAMES RIVER BASIN

01125000 FRENCH RIVER AT WEBSTER, MA

LOCATION.--Lat 42°03'03", long 71°53'08", Worcester County, Hydrologic Unit 01100001, on right bank in Dudley, 50 ft (15 m) upstream from Pleasant Street Bridge at Webster, and 1.1 mi (1.8 km) upstream from Potash Brook.

DRAINAGE AREA.--85.3 mi² (220.9 km²).

PERIOD OF RECORD.--Discharge: December 1948 to current year.
Water-quality records: Water years 1955, 1962.

REVISED RECORDS.--WSP 1721: 1959 (adjusted monthly and yearly figures only). WSP 2101: 1960.

GAGE.--Water-stage recorder. Datum of gage is 406.74 ft (123.974 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by mills, by Lake Chaubunagungamaug, estimated usable capacity, 207,000,000 ft³ (5,860,000 m³), by Buffumville Lake and Hodges Village Reservoir (Reservoirs in Thames River basin), and by smaller reservoirs upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years (water years 1950-79), 159 ft³/s (4.503 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft³/s (408 m³/s) Aug. 19, 1955, gage height, 26.05 ft (7.940 m), from floodmarks, from rating curve extended above 2,400 ft³/s (68 m³/s) on basis of computation of peak flow over dam; minimum daily, 2.2 ft³/s (0.062 m³/s) Aug. 15, 1965. Maximum discharge since construction of Buffumville Dam in 1958, 1,020 ft³/s (28.9 m³/s) Apr. 2, 1960, gage height, 7.56 ft (2.304 m); maximum gage height, 8.54 ft (2.603 m) Jan. 25, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 19, 1936, reached a discharge of 4,700 ft³/s (133 m³/s), by computation of flow over dam about 0.5 mi (0.8 km) upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,010 ft³/s (28.6 m³/s) Jan. 25, gage height, 8.54 ft (2.603 m); minimum daily, 24 ft³/s (0.68 m³/s) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	64	78	165	797	631	194	453	318	41	38	145
2	28	60	76	328	792	451	208	441	292	39	37	130
3	26	48	70	410	736	336	243	391	255	39	36	100
4	28	44	76	361	701	312	276	370	215	37	35	78
5	26	41	109	556	696	322	250	347	185	35	34	59
6	44	37	118	606	726	498	326	329	178	33	33	61
7	89	36	101	499	694	470	313	305	174	31	31	135
8	89	36	89	581	659	577	281	258	160	30	29	150
9	57	34	149	420	557	824	277	205	141	28	27	165
10	47	34	247	554	452	836	284	180	127	28	31	109
11	43	37	247	701	374	574	297	166	111	26	31	62
12	41	37	201	670	293	316	306	151	99	25	46	53
13	44	34	156	631	215	678	295	149	86	24	134	41
14	64	33	131	513	187	814	277	154	77	24	179	44
15	81	35	115	407	173	770	269	174	71	26	171	53
16	78	39	108	559	161	690	265	182	68	33	129	53
17	67	39	110	520	145	590	264	179	65	37	91	44
18	58	41	103	445	136	465	243	166	61	71	71	41
19	57	50	86	373	129	336	210	148	54	59	65	41
20	64	50	83	325	117	255	192	137	48	47	58	41
21	62	46	117	494	117	224	174	129	45	42	50	41
22	50	43	128	487	127	204	161	119	43	40	47	42
23	42	42	121	591	126	185	149	128	42	37	44	58
24	36	45	110	679	224	181	138	203	41	34	41	75
25	33	50	134	911	324	214	130	330	39	32	41	64
26	32	51	142	704	280	268	127	411	38	35	53	57
27	55	46	134	494	269	301	251	417	37	37	57	53
28	66	46	122	678	307	281	424	388	36	55	83	50
29	63	45	107	737	---	241	474	359	36	58	130	49
30	57	65	103	740	---	206	465	346	38	45	156	55
31	59	---	115	739	---	195	---	340	---	39	142	---
TOTAL	1616	1308	3786	16878	10514	13245	7763	8055	3180	1167	2150	2149
MEAN	52.1	43.6	122	544	376	427	259	260	106	37.6	69.4	71.6
MAX	89	65	247	911	797	836	474	453	318	71	179	165
MIN	26	33	70	165	117	181	127	119	36	24	27	41
CAL YR 1978	TOTAL	61125	MEAN 167	MAX 836	MIN 24							
WTR YR 1979	TOTAL	71811	MEAN 197	MAX 911	MIN 24							

RESERVOIRS IN THAMES RIVER BASIN

- 01123350 EAST BRIMFIELD LAKE.--Lat 42°06'32", long 72°07'35", Worcester County, Hydrologic Unit 01100001, on Quinebaug River, 0.7 mi (1.1 km) southwest of Fiskdale, MA, 1.2 mi (1.9 km) east of East Brimfield. DRAINAGE AREA, 67.5 mi² (174.8 km²). PERIOD OF RECORD, July 1960 to current year. Completed in 1960 by Corps of Engineers for storage of water for recreation, conservation, and flood control. Usable capacity, 1,400,000,000 ft³ (39,600,000 m³), including 83,000,000 ft³ (2,350,000 m³) storage in recreation and conservation pool. Records furnished by Corps of Engineers.
- 01123550 WESTVILLE LAKE.--Lat 42°04'55", long 72°03'28", Worcester County, Hydrologic Unit 01100001, on Quinebaug River, 1.3 mi (2.1 km) west of Southbridge, MA. DRAINAGE AREA, 99.1 mi² (256.7 km²). PERIOD OF RECORD, February 1962 to current year. Completed in 1962 by Corps of Engineers for storage of water for recreation and flood control. Usable capacity, 484,000,000 ft³ (13,700,000 m³), including 4,400,000 ft³ (125,000 m³) storage in recreation pool. Records furnished by Corps of Engineers.
- 01124300 HODGES VILLAGE RESERVOIR.--Lat 42°07'09", long 71°52'51", Worcester County, Hydrologic Unit 01100001, on French River at Hodges Village, MA. DRAINAGE AREA, 31.1 mi² (80.5 km²). PERIOD OF RECORD, Feb. 1960 to current year. Completed in 1960 by Corps of Engineers for storage of water for flood control. Usable capacity, 577,000,000 ft³ (16,300,000 m³). Records furnished by Corps of Engineers.
- 01124400 BUFFUMVILLE LAKE.--Lat 42°06'58", long 71°54'29", Worcester County, Hydrologic Unit 01100001, on Little River at Charlton, MA, 2.2 mi (3.5 km) west of Oxford. DRAINAGE AREA, 26.5 mi² (68.6 km²). PERIOD OF RECORD, September 1958 to current year. Completed in 1958 by Corps of Engineers for storage of water for recreation and flood control. Usable capacity, 555,000,000 ft³ (15,700,000 m³), including 61,000,000 ft³ (1,730,000 m³) storage in recreation pool. Records furnished by Corps of Engineers.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

	East Brimfield Lake	Westville Lake	Hodges Village Reservoir	Buffumville Lake
Sept. 30, 1978.....	102.7	4.9	1.0	62.7
Oct. 31.....	104.4	4.8	.5	66.2
Nov. 30.....	106.0	5.0	.7	64.5
Dec. 31.....	106.0	5.0	.6	65.3
Jan. 31, 1979.....	352.2	85.4	205.1	238.5
Feb. 28.....	135.7	21.0	35.0	85.8
Mar. 31.....	112.6	6.0	1.5	69.7
Apr. 30.....	131.2	23.9	36.0	87.7
May 31.....	117.6	6.8	7.5	71.4
June 30.....	102.7	4.2	.5	61.9
July 31.....	102.7	4.4	.5	67.1
Aug. 31.....	114.3	6.0	1.5	66.2
Sept. 30.....	109.3	5.1	.7	64.5

CONNECTICUT RIVER BASIN

01161280 CONNECTICUT RIVER NEAR NORTHFIELD, MA

LOCATION.--Lat 42°41'00", long 72°28'19", Franklin County, Hydrologic Unit 01080201, near center of span on upstream side of bridge on State Highway 10, 1.0 mi (1.6 km) downstream from Mallory Brook, 1.1 mi (1.8 km) southwest of Northfield Town Hall, and 2.6 mi (4.2 km) downstream from Pauchaug Brook.

DRAINAGE AREA.--7,025 mi² (18,205 km²).

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

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT 25...	1545	1260	118	7.1	9.5	2	--	11.3	99	--
DEC 06...	0830	2620	119	6.7	3.0	2	--	13.3	99	--
MAR 13...	1100	36000	72	6.2	.5	8	--	13.7	95	17
APR 12...	0900	18410	84	6.8	4.5	--	4.0	13.0	100	14
MAY 09...	1000	14000	82	6.5	13.0	--	1.0	10.6	100	20
JUN 06...	1000	10590	76	6.4	18.0	--	2.0	9.6	101	2
JUL 17...	1430	4690	121	7.1	26.0	--	2.0	8.0	97	8
AUG 14...	1545	1100	135	7.1	23.0	--	1.0	7.8	90	4
SEP 11...	1430	6000	118	6.9	21.5	--	1.0	8.5	95	9

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCOCCHI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HC03)	CAR- BONATE (MG/L AS C03)	ALKA- LINITY (MG/L AS CAC03)
OCT 25...	49000	--	31	K18	14	1.8	42	0	34
DEC 06...	--	5000	31	32	--	--	--	--	--
MAR 13...	--	4100	580	100	--	--	--	--	--
APR 12...	9500	6600	20	56	9.3	1.4	23	0	19
MAY 09...	--	6800	440	26	--	--	--	--	--
JUN 06...	24000	1800	220	36	9.1	1.7	22	0	18
JUL 17...	--	260	350	31	--	--	--	--	--
AUG 14...	7000	3200	400	K11	16	2.7	45	0	37
SEP 11...	--	5200	73	K13	--	--	--	--	--

K, NON-IDEAL COLONY COUNT.

01161280 CONNECTICUT RIVER NEAR NORTHFIELD, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, SUS- PENDED (MG/L)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)	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)
OCT 25...	5.3	9.6	9.0	2	82	25100	.19	.00	.19
DEC 06...	--	--	--	3	77	--	.36	.00	.36
MAR 13...	--	--	--	52	100	--	.33	.00	.33
APR 12...	5.8	--	--	16	77	9520	.26	.00	.26
MAY 09...	--	--	--	34	66	--	.28	.00	.28
JUN 06...	14	--	--	10	78	21600	.16	.01	.17
JUL 17...	--	--	--	7	92	--	.12	.00	.12
AUG 14...	5.7	--	--	3	97	5750	.19	.01	.20
SEP 11...	--	--	--	5	77	--	.09	.01	.10

DATE	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)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 25...	.04	.13	.17	.36	.12	0	--	7.12	.000
DEC 06...	.07	.14	.21	.57	.02	--	0	.360	.000
MAR 13...	.05	.30	.35	.68	.06	--	0	.470	.000
APR 12...	.00	.12	.12	.38	.01	0	0	.440	.000
MAY 09...	.02	.17	.19	.47	.03	--	0	1.22	.000
JUN 06...	.01	.15	.16	.33	.01	0	0	1.68	.000
JUL 17...	.01	.33	.34	.46	.01	--	0	7.62	.000
AUG 14...	.05	.26	.31	.51	.02	1	0	3.95	.000
SEP 11...	.01	.54	.55	.65	.02	--	0	4.29	.000

CONNECTICUT RIVER BASIN

01161280 CONNECTICUT RIVER NEAR NORTHFIELD, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	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)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 25...	0	12	<10	1	8	310	2	30	<.5	0	40
APR 12...	0	4	10	1	2	730	33	40	.5	0	0

DATE	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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 25...	<.8	<.4	2.1	<.4	2.0	<.4	.0	.00	.00	.0	.00
APR 12...	<.9	--	1.2	--	1.0	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 12...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

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

01161500 TARBELL BROOK NEAR WINCHENDON, MA

LOCATION.--Lat 42°42'45", long 72°05'09", Worcester County, Hydrologic Unit 01080202, on left bank 0.1 mi (0.2 km) downstream from Spud Brook, 0.3 mi (0.5 km) downstream from Massachusetts-New Hampshire State line, and 2.8 mi (4.5 km) northwest of Winchendon.

DRAINAGE AREA.--18.2 mi² (47.1 km²).

PERIOD OF RECORD.--Discharge: May 1916 to current year. Prior to October 1950, published as Sip Pond Brook near Winchendon.

Water-quality records: Water years 1965-66.

REVISED RECORDS.--WSP 781: 1934. WSP 871: Drainage area. WSP 1051: 1928(M), 1933-34. WSP 1301: 1917(M).

GAGE.--Water-stage recorder. Concrete control since Sept. 24, 1965. Datum of gage is 872.82 ft (266.036 m) National Geodetic Vertical Datum of 1929. May 29 to June 29, 1916, nonrecording gage; June 30 to Dec. 12, 1916, water-stage recorder; and Dec. 13, 1916, to June 26, 1917, nonrecording gage, all at site 450 ft (150 m) downstream at same datum.

REMARKS.--Records good except those for winter period, which are fair. Some regulation by Pearly and Sip Ponds and Damon Reservoirs 1 mi (1.6 km) upstream. Prior to 1967, greater regulation by these reservoirs and by small mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years, 29.5 ft³/s (0.835 m³/s), 22.01 in/yr (559 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,630 ft³/s (74.5 m³/s) Sept. 21, 1938, gage height, 13.72 ft (4.182 m), from rating curve extended above 1,200 ft³/s (34 m³/s) on basis of critical-depth study at control section; minimum, 0.1 ft³/s (0.003 m³/s) Aug. 25, 1924.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft³/s (4.2 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 7	1600	473 13.4	10.21 3.112	Apr. 28	2100	169 4.79	8.36 2.548
Mar. 26	0130	244 6.91	9.04 2.755				

Minimum discharge, 1.5 ft³/s (0.042 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	2.1	3.2	11	52	28	94	98	107	5.3	4.3	7.8
2	1.7	2.1	3.1	30	51	30	94	76	81	4.8	4.9	7.7
3	1.7	2.0	3.0	70	41	32	107	59	62	4.6	5.0	9.0
4	1.8	2.0	4.1	83	34	32	109	59	48	4.3	4.7	15
5	2.3	2.0	4.9	64	31	40	106	56	39	4.1	4.4	13
6	4.2	2.0	5.0	47	27	114	106	48	37	3.9	7.3	18
7	3.0	2.0	5.0	38	25	420	97	41	31	3.9	11	28
8	2.4	2.2	5.5	67	23	381	82	35	25	4.1	8.8	22
9	2.2	2.1	11	93	21	273	70	31	22	4.1	7.5	16
10	2.1	2.1	13	80	19	210	71	28	19	3.9	7.0	13
11	2.1	2.1	11	62	18	239	67	24	16	3.7	6.3	11
12	2.1	2.1	10	47	17	256	65	21	15	3.7	8.1	8.3
13	2.1	2.1	9.1	37	16	188	66	20	13	3.7	10	7.0
14	2.7	2.1	8.3	36	15	140	70	21	12	3.5	8.1	6.5
15	2.9	2.1	7.7	30	15	135	77	22	10	3.3	6.7	7.5
16	2.5	2.1	7.0	26	14	110	80	20	9.0	5.5	5.7	6.4
17	2.3	2.2	7.5	22	14	85	82	18	7.6	7.0	4.7	5.4
18	2.2	2.9	7.1	21	13	71	80	14	7.3	5.5	4.9	4.7
19	2.2	2.7	6.5	19	13	67	74	14	6.4	5.3	5.5	4.5
20	2.6	2.5	6.1	19	12	66	66	14	5.5	4.3	5.4	4.3
21	2.4	2.4	8.1	30	12	71	58	14	4.8	4.0	4.8	4.5
22	2.3	2.4	7.6	47	11	92	53	13	4.6	3.8	4.5	15
23	2.3	2.4	7.0	53	11	118	49	12	4.6	3.7	4.4	27
24	2.1	2.9	6.8	52	16	142	47	28	4.6	3.6	4.5	29
25	2.1	3.0	8.6	74	22	201	43	78	4.3	3.6	8.2	26
26	2.2	3.0	8.4	99	27	232	40	131	4.3	4.5	9.2	21
27	3.2	2.8	7.5	92	29	180	65	112	4.3	7.4	7.2	17
28	2.7	2.8	7.0	79	28	136	149	89	4.3	5.3	8.2	13
29	2.5	2.7	6.6	70	---	106	157	93	4.6	4.7	7.9	19
30	2.3	3.3	6.4	63	---	93	127	119	4.6	4.3	9.2	23
31	2.2	---	6.3	56	---	92	---	131	---	4.3	7.6	---
TOTAL	73.1	71.2	218.4	1617	627	4380	2451	1539	617.8	137.7	206.0	409.6
MEAN	2.36	2.37	7.05	52.2	22.4	141	81.7	49.6	20.6	4.44	6.65	13.7
MAX	4.2	3.3	13	99	52	420	157	131	107	7.4	11	29
MIN	1.7	2.0	3.0	11	11	28	40	12	4.3	3.3	4.3	4.3
CFSM	.13	.13	.39	2.87	1.23	7.75	4.49	2.73	1.13	.24	.37	.75
IN.	.15	.15	.45	3.30	1.28	8.95	5.01	3.15	1.26	.28	.42	.84

CAL YR 1978	TOTAL	8508.6	MEAN 23.3	MAX 150	MIN 1.7	CFSM 1.28	IN 17.39
WTR YR 1979	TOTAL	12347.8	MEAN 33.8	MAX 420	MIN 1.7	CFSM 1.86	IN 25.24

CONNECTICUT RIVER BASIN

01162000 MILLERS RIVER NEAR WINCHENDON, MA

LOCATION.--Lat 42°41'03", long 72°05'02", Worcester County, Hydrologic Unit 01080202, on right bank 10 ft (3 m) downstream from Nolan Bridge, 0.3 mi (0.5 km) downstream from Tarbell Brook, 2 mi (3 km) west of Winchendon, and at mile 32.8 (52.8 km).

DRAINAGE AREA.--83.0 mi² (215.0 km²).

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

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

REVISED RECORDS.--WSP 451: 1916. WSP 871: Drainage area. WSP 1051: 1919, 1920-21(M), 1922-24, 1928(M), 1933-34.

GAGE.--Water-stage recorder. Concrete control since Oct. 6, 1933. Datum of gage is 826.66 ft (251.966 m) National Geodetic Vertical Datum of 1929. Prior to July 27, 1916, nonrecording gage at bridge at same datum.

REMARKS.--Records good except those for January to April, which are poor. No gage-height record, Mar. 9-18. Flow regulated by Lake Monomonac 6 mi (10 km) upstream and other reservoirs and, prior to 1957, by powerplant. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years, 143 ft³/s (4.050 m³/s), 23.40 in/yr (594 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,500 ft³/s (241 m³/s) Sept. 22, 1938, gage height, 21.55 ft (6.568 m), from floodmarks, from rating curve extended above 2,000 ft³/s (57 m³/s) on basis of computation of peak flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 690 ft³/s (20 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 26	-	690 20	ice jam	Mar. 12	-	1100 31	a*15.0 4.57
Mar. 8	-	*2100 59	ice jam	Mar. 26	-	940 27	ice jam

a Backwater from Birch Hill Reservoir; gage height estimated, exceeded maximum stage recorder will register.

Minimum daily discharge, 11 ft³/s (0.31 m³/s) Nov. 23, 26, 27, 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	24	13	39	230	150	410	410	378	18	40	186
2	76	28	14	280	220	145	420	330	300	21	88	136
3	72	26	13	450	200	145	470	270	233	22	78	146
4	73	24	17	390	170	150	450	280	185	19	80	133
5	80	23	22	280	150	230	450	260	163	16	64	109
6	114	21	24	210	140	700	430	230	178	15	57	151
7	104	19	22	180	125	1600	400	205	144	14	57	257
8	84	19	17	450	110	1900	350	190	122	13	47	192
9	76	19	31	480	100	1100	320	171	112	13	43	137
10	72	17	40	370	92	800	320	155	104	13	44	81
11	70	16	48	280	86	900	310	139	96	13	32	52
12	71	15	42	230	80	1000	315	125	87	13	36	41
13	70	14	36	180	76	780	320	125	80	13	71	36
14	84	14	31	170	72	620	330	132	75	12	63	32
15	82	13	26	150	68	580	350	139	71	13	56	37
16	46	12	57	130	66	500	360	118	46	51	73	35
17	57	12	66	105	64	430	360	105	28	234	78	45
18	63	13	59	96	62	380	335	97	23	155	68	42
19	64	12	53	90	59	350	310	94	72	124	48	37
20	66	12	55	90	56	330	280	98	69	93	40	31
21	61	12	49	150	54	360	250	99	46	86	31	33
22	54	12	31	320	52	410	230	90	34	71	25	173
23	47	11	25	300	50	460	210	86	27	46	22	242
24	28	13	22	280	80	520	195	195	22	26	20	241
25	21	13	23	540	165	710	180	390	19	21	44	183
26	18	11	24	640	170	870	170	460	18	18	101	131
27	27	11	21	540	160	760	350	400	17	52	86	110
28	37	12	19	400	150	580	580	350	15	120	113	96
29	31	11	18	320	---	460	590	350	15	60	107	220
30	26	13	18	290	---	420	500	400	15	38	180	261
31	23	---	17	260	---	410	---	463	---	34	264	---
TOTAL	1836	472	953	8690	3107	18750	10545	6956	2794	1457	2156	3606
MEAN	59.2	15.7	30.7	280	111	605	352	224	93.1	47.0	69.5	120
MAX	114	28	66	640	230	1900	590	463	378	234	264	261
MIN	18	11	13	39	50	145	170	86	15	12	20	31
CFSM	.71	.19	.37	3.37	1.34	7.29	4.24	2.70	1.12	.57	.84	1.45
IN.	.82	.21	.43	3.89	1.39	8.40	4.73	3.12	1.25	.65	.97	1.62
CAL YR 1978 TOTAL	41709.1		MEAN 114	MAX 650	MIN 6.8	CFSM 1.37	IN 18.69					
WTR YR 1979 TOTAL	61322.0		MEAN 168	MAX 1900	MIN 11	CFSM 2.02	IN 27.48					

CONNECTICUT RIVER BASIN

175

01162500 PRIEST BROOK NEAR WINCHENDON, MA

LOCATION.--Lat 42°40'57", long 72°06'56", Worcester County, Hydrologic Unit 01080202, on right bank 100 ft (30 m) downstream from highway bridge, 3 mi (4.8 km) upstream from mouth, and 3.5 mi (5.6 km) west of Winchendon.

DRAINAGE AREA.--19.4 mi² (50.2 km²).

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

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

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

REMARKS.--Records good except those for winter period, which are poor. 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.--63 years, 32.7 ft³/s (0.926 m³/s), 22.89 in/yr (581 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft³/s (85.0 m³/s) Sept. 21, 1938, gage height, 9.90 ft (3.018 m), from rating curve extended above 620 ft³/s (18 m³/s) on basis of contracted-opening measurements at gage heights 8.4 ft (2.56 m) and 9.90 ft (3.018 m); minimum, 0.08 ft³/s (0.002 m³/s) several times in September 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 190 ft³/s (5.4 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 7	0930	*500 14	a6.47 1.972	Mar. 25	2115	251 7.11	4.47 1.362

a Ice jam.

Minimum discharge, 0.40 ft³/s (0.011 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	6.0	7.3	16	48	31	107	106	109	6.0	1.6	13
2	1.1	6.0	6.0	42	41	33	101	86	96	6.0	1.4	8.3
3	1.1	5.7	5.4	80	37	35	113	67	79	4.3	1.2	9.4
4	.99	5.4	6.3	89	32	37	107	60	43	3.0	3.0	14
5	1.8	4.8	7.7	70	29	46	105	46	29	2.3	2.8	13
6	6.6	3.4	7.0	54	26	230	106	26	34	2.1	1.1	15
7	6.6	3.0	6.3	45	24	450	96	24	23	1.8	.80	37
8	4.1	3.6	6.6	55	23	380	83	25	24	1.7	.71	19
9	2.6	3.6	15	100	21	310	75	24	22	1.6	.47	14
10	2.3	3.4	21	88	19	270	66	24	19	1.4	.71	13
11	2.1	3.2	17	65	17	290	62	25	14	1.2	.89	8.9
12	2.0	3.0	15	49	16	260	64	27	12	1.1	2.3	6.8
13	2.0	2.8	14	40	15	240	58	22	11	1.1	8.4	6.1
14	3.2	2.8	12	31	14	185	72	20	9.2	.99	7.0	5.9
15	4.8	2.8	10	30	13	166	80	20	8.4	.89	3.9	6.8
16	4.3	2.8	9.6	30	13	135	85	17	7.7	1.8	4.6	6.2
17	3.9	2.8	17	21	13	105	89	15	6.6	6.0	3.4	5.2
18	2.5	4.6	12	24	13	91	86	14	7.3	6.3	2.6	4.7
19	2.6	4.6	12	20	12	79	76	14	6.0	6.6	2.8	4.0
20	3.4	3.9	7.3	20	12	75	66	14	5.4	3.9	3.2	3.9
21	3.4	3.6	9.6	25	12	82	58	14	4.8	2.6	2.8	4.8
22	3.2	3.6	8.8	40	12	114	51	13	4.1	2.0	2.3	27
23	3.9	3.6	8.4	60	12	138	42	12	3.9	1.7	2.3	41
24	3.2	4.8	10	80	18	160	26	32	3.9	1.4	3.6	39
25	3.0	4.6	11	120	37	227	35	106	3.6	1.4	9.2	34
26	3.0	4.1	15	140	34	230	42	157	3.2	1.7	14	25
27	5.7	3.9	11	120	32	168	64	138	3.0	9.6	8.4	19
28	5.7	4.8	8.4	90	31	132	157	110	3.0	6.0	14	14
29	13	5.4	8.4	74	---	106	163	110	2.8	3.6	13	21
30	7.7	7.0	9.2	64	---	97	131	140	3.0	2.6	25	26
31	6.6	---	12	55	---	111	---	135	---	2.0	22	---
TOTAL	117.28	123.6	326.3	1837	626	5013	2466	1643	600.9	94.68	169.48	465.0
MEAN	3.78	4.12	10.5	59.3	22.4	162	82.2	53.0	20.0	3.05	5.47	15.5
MAX	13	7.0	21	140	48	450	163	157	109	9.6	25	41
MIN	.89	2.8	5.4	16	12	31	26	12	2.8	.89	.47	3.9
CFSM	.20	.21	.54	3.06	1.16	8.35	4.24	2.73	1.03	.16	.28	.80
IN.	.22	.24	.63	3.52	1.20	9.61	4.73	3.15	1.15	.18	.32	.89
CAL YR 1978	TOTAL	9047.64	MEAN	24.8	MAX	170	MIN	.40	CFSM	1.28	IN	17.35
WTR YR 1979	TOTAL	13482.24	MEAN	36.9	MAX	450	MIN	.47	CFSM	1.90	IN	25.85

CONNECTICUT RIVER BASIN

01163200 OTTER RIVER AT OTTER RIVER, MA

LOCATION.--Lat 42°35'18", long 72°02'29", Worcester County, Hydrologic Unit 01080202, on right bank at upstream side of Turner Street Bridge, 0.2 mi (0.3 km) upstream from Bailey Brook, 0.8 mi (1.3 km) southeast of Otter River, and 2 mi (3 km) northwest of Gardner.

DRAINAGE AREA.--34.2 mi² (88.6 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 900 ft (274 m), from topographic map.

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

AVERAGE DISCHARGE.--14 years (water years 1966-79), 61.2 ft³/s (1.733 m³/s), 24.30 in/yr (617 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 948 ft³/s (26.8 m³/s) Mar. 7, 1979, gage height, 5.02 ft (1.530 m); minimum, 2.2 ft³/s (0.062 m³/s) Aug. 13, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 948 ft³/s (26.8 m³/s) Mar. 7, gage height, 5.02 ft (1.530 m); minimum, 6.8 ft³/s (0.19 m³/s) Oct. 3, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	15	25	36	128	102	107	151	90	14	27	59
2	7.4	14	25	123	135	93	110	117	75	14	39	47
3	7.3	18	25	228	97	82	127	97	63	13	35	39
4	7.6	14	28	226	75	78	125	100	52	12	30	34
5	9.6	12	35	161	68	144	125	97	48	12	24	30
6	19	11	34	112	62	466	128	84	66	11	19	36
7	23	11	33	77	53	883	119	73	59	10	17	77
8	20	13	32	210	50	664	103	65	51	10	16	82
9	18	13	52	334	47	460	95	57	45	9.5	14	66
10	15	12	76	270	45	338	103	48	40	9.2	14	48
11	15	11	65	184	44	378	110	46	36	9.0	20	34
12	16	11	53	137	40	354	112	43	30	8.7	32	24
13	16	9.9	42	87	37	278	112	42	26	8.7	69	19
14	20	9.2	35	84	34	206	108	44	25	8.5	83	15
15	28	9.9	31	90	32	213	112	53	24	8.1	71	25
16	24	9.2	28	73	30	189	114	51	21	10	51	22
17	22	9.5	27	60	28	149	118	47	19	60	38	19
18	20	16	25	51	26	128	111	44	17	78	30	17
19	19	16	22	48	25	114	98	42	17	95	31	16
20	20	15	19	46	25	108	88	43	16	89	30	15
21	16	15	28	80	27	112	79	44	15	72	27	15
22	18	15	33	174	40	121	71	42	15	44	25	62
23	16	15	26	159	47	130	66	39	14	27	22	106
24	17	17	19	143	98	134	61	74	13	21	19	100
25	16	22	20	200	168	164	51	141	12	19	19	75
26	16	21	22	259	146	195	54	207	12	20	26	54
27	25	21	21	249	125	175	122	184	12	55	26	41
28	25	21	20	221	111	141	257	138	12	60	27	34
29	22	21	19	193	---	117	251	112	12	58	30	65
30	19	22	18	170	---	106	198	100	12	44	57	100
31	16	---	17	144	---	106	---	103	---	32	68	---
TOTAL	542.5	439.7	955	4629	1843	6928	3435	2528	949	941.7	1036	1379
MEAN	17.5	14.7	30.8	149	65.8	223	115	81.5	31.6	30.4	33.4	46.0
MAX	28	22	76	334	168	883	257	207	90	95	83	106
MIN	7.3	9.2	17	36	25	78	51	39	12	8.1	14	15
CFSM	.51	.43	.90	4.36	1.92	6.52	3.36	2.38	.92	.89	.98	1.35
IN.	.59	.48	1.04	5.03	2.00	7.54	3.74	2.75	1.03	1.02	1.13	1.50
CAL YR 1978 TOTAL	18860.2		MEAN 51.7	MAX 400	MIN 6.2	CFSM 1.51	IN 20.51					
WTR YR 1979 TOTAL	25605.9		MEAN 70.2	MAX 883	MIN 7.3	CFSM 2.05	IN 27.85					

01164000 MILLERS RIVER AT SOUTH ROYALSTON, MA

LOCATION.--Lat 42°37'47", long 72°09'03", Worcester County, Hydrologic Unit 01080202, on right bank 500 ft (150 m) downstream from bridge in South Royalston, 0.4 mi (0.6 km) downstream from Beaver Brook, 1.7 mi (2.7 km) downstream from Birch Hill Dam, and at mile 25.5 (41.0 km).

DRAINAGE AREA.--187 mi² (484 km²).

PERIOD OF RECORD.--Discharge: July 1939 to current year.
Water-quality records: Water years 1957, 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 792.00 ft (241.402 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).

REMARKS.--Records good except those for winter period, which are poor. Flow regulated by Lake Monomonic 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.--40 years, 321 ft³/s (9.091 m³/s), 23.31 in/yr (592 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,400 ft³/s (125 m³/s) Apr. 13, 1940, gage height, 8.40 ft (2.560 m); maximum gage height, 9.42 ft (2.871 m) Jan. 24, 1959 (ice jam); minimum daily discharge, 9.3 ft³/s (0.26 m³/s) Aug. 4, 1956. Maximum discharge since construction of Birch Hill Reservoir in 1941, 2,830 ft³/s (80.1 m³/s) June 25, 26, 1944, gage height, 7.57 ft (2.307 m).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Sept. 21 or 22, 1938, reached a stage of 15.9 ft (4.85 m), from floodmarks, discharge not determined.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,280 ft³/s (64.6 m³/s) Mar. 16, gage height, 7.45 ft (2.271 m); (2.429 m); Feb. 15 (ice jam); minimum daily discharge, 40 ft³/s (1.13 m³/s) Nov. 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	64	68	126	660	360	851	1120	785	72	99	363
2	77	66	65	465	500	350	793	896	652	79	157	285
3	86	68	60	910	430	340	864	721	542	76	164	266
4	85	66	68	1050	360	400	879	663	439	68	159	278
5	102	60	102	940	330	540	864	632	357	61	139	247
6	150	57	102	740	310	700	944	555	383	57	119	254
7	183	54	96	550	290	512	987	478	357	55	109	448
8	143	54	93	760	270	657	837	423	308	53	97	438
9	122	55	153	1160	260	1250	721	387	282	55	88	346
10	111	53	240	1170	240	1390	687	356	260	54	92	256
11	103	52	229	1080	220	804	681	329	232	51	107	176
12	100	50	195	990	210	1560	700	307	205	49	120	134
13	99	47	156	833	200	1940	705	297	184	49	224	111
14	112	46	130	537	190	2110	706	301	168	48	232	99
15	145	44	108	551	180	2180	748	322	154	47	180	110
16	126	43	115	640	170	2230	778	306	134	63	184	112
17	84	40	138	550	160	2190	804	274	104	298	243	106
18	106	49	140	400	155	2160	777	250	90	318	166	104
19	98	55	200	300	150	2130	706	240	109	312	145	95
20	115	52	125	300	145	2050	643	241	137	265	131	86
21	110	50	126	330	140	2010	581	247	108	232	116	82
22	98	48	120	500	135	1930	530	233	91	184	99	280
23	93	48	98	700	130	1740	489	217	80	133	88	493
24	80	51	82	620	240	1530	451	362	74	94	80	495
25	64	62	72	560	500	1430	420	760	68	80	85	430
26	59	59	78	1080	450	1500	415	1080	64	75	206	335
27	75	53	86	1240	420	1580	640	1100	62	156	191	268
28	102	52	95	1160	380	1440	1220	942	60	211	221	222
29	98	51	100	1180	---	1140	1420	785	58	174	220	342
30	87	58	80	1040	---	930	1330	781	58	145	308	511
31	71	---	63	810	---	863	---	866	---	121	404	---
TOTAL	3132	1607	3583	23272	7825	41946	23171	16471	6605	3735	4973	7772
MEAN	101	53.6	116	751	279	1353	772	531	220	120	160	259
MAX	183	68	240	1240	660	2230	1420	1120	785	318	404	511
MIN	48	40	60	126	130	340	415	217	58	47	80	82
MEAN†	101	53.5	116	756	276	1357	780	524	214	121	162	260
CFSM†	.54	.29	.62	4.04	1.48	7.26	4.17	2.80	1.14	.65	.87	1.39
IN.†	.62	.32	.71	4.66	1.54	8.37	4.65	3.23	1.28	.74	1.00	1.55
CAL YR 1978 TOTAL	100523			MEAN 275	MAX 1300	MIN 28	MEAN † 275	CFSM† 1.47	IN+ 19.99			
WTR YR 1979 TOTAL	144092			MEAN 395	MAX 2230	MIN 40	MEAN † 395	CFSM† 2.11	IN+ 28.68			

† Adjusted for change in contents in Birch Hill Reservoir.

CONNECTICUT RIVER BASIN

01165000 EAST BRANCH TULLY RIVER NEAR ATHOL, MA

LOCATION.--Lat 42°38'32", long 72°13'34", Worcester County, Hydrologic Unit 01080202, on right bank 300 ft (90 m) downstream from Tully Dam, 1.3 mi (2.1 km) downstream from Lawrence Brook, 3.5 mi (5.6 km) north of Athol, and 4.9 mi (7.9 km) upstream from mouth.

DRAINAGE AREA.--50.4 mi² (130.5 km²).

PERIOD OF RECORD.--Discharge: October 1915 to current year. October 1915 to May 1916 monthly discharge only, published in WSP 1301.
Water-quality records: Water years 1965-66.

REVISED RECORDS.--WSP 451: 1916. WSP 891: Drainage area. WSP 1051: 1916(M), 1928. WSP 1301: 1917-35(M), 1937(M).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 613.71 ft (187.059 m) Corps of Engineers datum. Prior to Oct. 26, 1948, nonrecording gage at site 0.2 mi (0.3 km) upstream at datum 14.40 ft (4.389 m) higher.

REMARKS.--Records 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.--64 years, 81.3 ft³/s (2.302 m³/s), 21.91 in/yr (557 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,140 ft³/s (146 m³/s) Sept. 21, 1938, gage height, 8.60 ft (2.621 m), from floodmarks, site and datum then in use, from rating curve extended above 1,500 ft³/s (42 m³/s) on basis of contracted-opening measurement and computation of peak flow over dam; minimum, 0.01 ft³/s (<0.001 m³/s) Nov. 6-11, 1961; minimum daily, 0.01 ft³/s (<0.001 m³/s) Nov. 7-10, 1961. Maximum discharge since construction of Tully Reservoir in 1948, 828 ft³/s (23.4 m³/s) Apr. 21, 1960, gage height, 5.38 ft (1.640 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 791 ft³/s (22.4 m³/s) Mar. 22, gage height, 4.92 ft (1.500 m); minimum, 1.9 ft³/s (0.054 m³/s) Aug. 2; minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 13.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	5.5	100	9.7	247	179	232	352	195	5.5	4.5	60
2	5.9	5.2	166	50	127	172	185	374	135	5.5	5.5	86
3	4.8	5.2	157	179	74	169	132	361	135	5.2	7.7	85
4	4.1	5.0	94	356	75	166	109	348	135	5.2	7.7	84
5	3.2	4.8	47	299	76	160	111	330	135	5.2	7.7	34
6	3.5	4.8	8.2	213	76	76	111	232	104	5.2	7.7	8.2
7	3.8	4.9	8.2	182	75	9.7	277	172	88	5.2	7.2	8.2
8	3.8	5.2	8.2	151	75	220	317	111	89	5.2	6.4	30
9	4.1	5.2	8.2	185	74	447	343	86	89	5.2	5.5	40
10	3.9	5.2	47	235	74	401	330	54	57	5.2	5.5	40
11	3.8	5.2	70	243	74	148	268	40	42	5.2	5.9	40
12	4.9	5.2	69	235	74	281	189	40	42	5.2	5.2	40
13	4.8	5.2	46	214	41	397	185	41	42	5.2	2.4	40
14	4.8	5.2	35	13	29	477	189	41	29	5.2	5.1	28
15	4.8	5.0	18	109	36	505	235	41	22	5.2	8.2	11
16	4.8	4.8	8.2	163	35	552	256	73	22	5.2	8.1	11
17	4.4	4.8	8.2	97	35	566	256	86	22	5.3	35	11
18	6.0	4.8	8.2	56	35	582	243	85	22	4.8	10	11
19	6.9	4.8	26	38	35	620	235	84	22	4.8	10	11
20	5.9	4.8	35	38	34	659	172	84	22	4.8	10	11
21	5.9	4.8	35	40	33	657	140	53	22	4.8	10	10
22	5.8	4.9	35	41	34	706	135	39	22	4.8	10	7.6
23	5.9	5.2	35	124	33	753	70	39	16	4.8	10	5.9
24	5.9	5.2	34	135	34	698	38	39	13	4.8	8.8	57
25	5.9	5.2	18	74	35	656	72	97	13	4.4	8.7	84
26	5.9	4.9	9.7	192	37	633	116	209	13	4.4	8.7	83
27	5.9	4.8	9.7	185	65	585	135	330	12	4.4	8.9	58
28	5.2	4.8	9.7	290	129	330	232	411	12	4.4	9.2	7.2
29	5.2	4.8	9.7	303	---	228	277	429	8.3	4.4	9.2	7.2
30	5.2	4.8	9.7	281	---	239	277	420	5.8	4.4	9.2	7.2
31	5.2	---	9.7	260	---	232	---	361	---	4.4	9.7	---
TOTAL	156.0	150.2	1182.6	4990.7	1801	12503.7	5867	5462	1586.1	153.5	460.3	1016.5
MEAN	5.03	5.01	38.1	161	64.3	403	196	176	52.9	4.95	14.8	33.9
MAX	6.9	5.5	166	356	247	753	343	429	195	5.5	82	86
MIN	3.2	4.8	8.2	9.7	29	9.7	38	39	5.8	4.4	2.4	5.9
MEAN†	8.43	7.44	26.4	168	64.6	410	218	155	49.5	9.62	16.8	32.4
CFSM†	.17	.15	.52	3.33	1.28	8.13	4.33	3.08	.98	.19	.33	.64
IN.†	.19	.16	.60	3.85	1.34	9.39	4.83	3.55	1.10	.22	.38	.72
CAL YR 1978 TOTAL	22655.0											
WTR YR 1979 TOTAL		35329.6										
MEAN 62.1												
MAX 405												
MIN 3.2												
MEAN† 62.3												
MEAN† 97.8												
CFSM† 1.24												
CFSM† 1.94												
IN† 16.77												
IN† 26.34												

† Adjusted for change in contents in Tully Reservoir.

LOCATION.--Lat 42°34'13", long 72°16'22", Worcester County, Hydrologic Unit 01080202, on right bank 300 ft (90 m) downstream from bridge on Daniel Shays Highway, 600 ft (200 m) downstream from Lake Rohunta, and 2.8 mi (4.5 km) southwest of Athol.

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

REMARKS.--Records good. Flow regulated by Lake Rohunta. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 685 ft³/s (19.4 m³/s) Mar. 7, 1979, gage height, 7.04 ft (2.146 m), from rating curve extended above 220 ft³/s (6.2 m³/s); minimum daily, 0.17 ft³/s (0.005 m³/s) June 3, 4, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 685 ft³/s (19.4 m³/s) Mar. 7, gage height, 7.04 ft (2.146 m) from rating curve extended above 220 ft³/s (6.2 m³/s); minimum daily, 0.66 ft³/s (0.019 m³/s) Feb. 12, 13.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	8.2	12	18	86	56	62	134	67	7.1	8.9	21
2	5.3	8.2	11	42	73	53	64	108	60	7.1	8.9	17
3	8.1	52	11	100	63	52	72	90	53	5.8	7.6	16
4	9.9	52	12	127	57	51	76	82	45	5.2	6.9	15
5	12	24	14	101	53	58	76	74	20	5.4	5.8	13
6	15	15	14	76	49	190	78	70	.75	5.8	4.5	45
7	17	11	14	62	45	632	70	64	3.2	5.6	4.0	44
8	17	10	14	95	44	493	64	59	6.4	5.2	3.2	37
9	17	9.9	23	159	40	322	60	53	8.7	4.7	2.3	32
10	16	8.7	37	150	10	240	64	49	12	4.1	2.2	25
11	15	8.5	39	109	1.0	240	68	47	12	3.4	2.4	17
12	13	7.1	36	76	.66	246	68	43	12	2.7	4.5	15
13	12	7.7	30	61	.66	194	68	42	11	2.4	11	14
14	12	8.2	25	61	7.7	151	66	40	11	2.7	13	18
15	13	5.7	21	57	21	130	66	42	10	2.4	12	27
16	12	5.9	19	53	19	95	68	39	9.5	2.3	10	33
17	11	6.2	19	47	16	79	72	34	9.2	5.2	9.2	33
18	11	9.6	18	44	2.2	77	70	28	7.9	7.9	8.4	27
19	11	8.2	16	40	7.7	74	66	23	8.1	11	8.9	18
20	10	7.9	14	36	15	69	58	22	7.9	10	9.5	14
21	10	8.2	18	51	16	68	54	21	7.4	9.8	8.4	12
22	9.9	8.2	19	71	18	68	50	18	7.4	8.7	7.4	18
23	9.3	8.5	19	84	19	40	47	20	5.4	7.4	6.9	19
24	8.5	11	17	83	38	28	45	33	4.7	6.4	6.2	18
25	9.0	10	21	112	64	49	43	66	3.8	5.8	8.9	19
26	8.5	9.6	20	174	83	61	43	107	4.5	6.4	25	18
27	9.0	9.9	17	189	76	65	74	104	5.0	14	29	17
28	9.6	11	15	164	63	62	167	84	4.7	16	26	16
29	9.3	10	14	139	---	61	200	71	4.7	15	24	22
30	9.3	11	13	119	---	61	174	66	4.3	13	23	27
31	9.3	---	13	102	---	62	---	68	---	11	22	---
TOTAL	342.0	371.4	585	2802	987.92	4127	2253	1801	426.55	219.5	330.0	667
MEAN	11.0	12.4	18.9	90.4	35.3	133	75.1	58.1	14.2	7.08	10.6	22.2
MAX	17	52	39	189	86	632	200	134	67	16	29	45
MIN	3.0	5.7	11	18	.66	28	43	18	.75	2.3	2.2	12
CAL YR 1978	TOTAL	11353.61	MEAN	31.1	MAX	206	MIN	.41				
WTR YR 1979	TOTAL	14912.37	MEAN	40.9	MAX	632	MIN	.66				

CONNECTICUT RIVER BASIN

01165500 MOSS BROOK AT WENDELL DEPOT, MA

LOCATION.--Lat 42°36'10", long 72°21'36", Franklin County, Hydrologic Unit 01080202, on left bank 0.2 mi (0.3 km) upstream from mouth, 0.2 mi (0.3 km) north of Wendell Depot, and 2.5 mi (4.0 km) west of Orange.

DRAINAGE AREA.--12.3 mi² (31.9 km²).

PERIOD OF RECORD.--Discharge: June to October 1909, April to August 1910, June 1916 to current year. Published as "at Wendell" 1909-10.

Water-quality records: Water year 1966.

REVISED RECORDS.--WSP 821: 1936(M). WSP 891: Drainage area. WSP 1051: 1917, 1919-24, 1929(M). WSP 1231: 1917-21(M), 1922, 1923(M), 1924-26, 1927-28(M), 1929, 1930-35(M), 1939(M), 1941(M), 1944(M), 1949(M).

GAGE.--Water-stage recorder. Crest-stage gage since July 11, 1958. Datum of gage is 508.9 ft (155.11 m)

National Geodetic Vertical Datum of 1929. Prior to April 1910, nonrecording gage at site 1,200 ft (350 m)

downstream at different datum. April to August 1910, nonrecording gage and sharp-crested weir at site 300 ft

(90 m) downstream at different datum. June 1916 to Dec. 8, 1965, nonrecording gage at present site and datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Feb. 25 to Mar. 19, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--63 years (water years 1917-79), 20.1 ft³/s (0.569 m³/s), 22.19 in/yr (564 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,540 ft³/s (43.6 m³/s) Mar. 19, 1936, gage height, 6.30 ft

(1.920 m), from floodmarks, from rating curve extended above 400 ft³/s (11 m³/s) on basis of slope-area

measurements at gage heights 5.62 ft (1.713 m) and 6.30 ft (1.920 m); minimum, 0.2 ft³/s (0.006 m³/s) Sept. 4,

5, 1929.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 160 ft³/s (4.5 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Mar. 7	-	*220 6.2	- -	May. 25	1915	175 4.96	3.28 1.000
Apr. 28	0230	191 5.41	3.35 1.021				

Minimum discharge, 0.74 ft³/s (0.021 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.5	3.8	7.2	30	22	38	58	33	16	2.9	13
2	1.1	1.5	3.3	38	28	21	41	44	26	21	2.8	7.7
3	.92	1.4	2.9	64	25	20	62	37	22	13	2.7	12
4	.87	1.3	3.3	68	23	19	54	40	19	7.2	5.7	18
5	1.9	1.3	4.8	52	21	23	55	39	17	4.8	3.7	12
6	7.4	1.3	4.7	45	19	110	57	32	17	3.7	2.6	17
7	5.2	1.3	3.9	30	18	200	46	27	16	3.0	2.0	34
8	2.8	1.8	3.9	60	17	150	37	25	13	2.4	1.7	24
9	1.9	2.0	12	80	16	120	33	22	12	2.1	1.4	14
10	1.6	1.9	16	60	15	110	34	20	12	1.9	1.7	9.4
11	1.4	1.6	12	45	14	130	35	18	11	1.8	6.1	7.3
12	1.2	1.3	8.7	28	13	114	37	16	11	1.6	9.5	5.8
13	1.1	1.2	6.7	20	12	88	41	18	10	1.5	24	4.9
14	2.2	1.3	5.5	17	11	67	42	19	8.5	1.4	19	4.5
15	4.2	1.3	4.8	17	10	55	46	20	7.3	1.3	12	5.7
16	2.7	1.2	4.8	16	9.6	47	46	18	6.4	2.3	8.1	5.5
17	1.8	1.2	3.9	14	9.4	40	46	16	6.0	21	5.5	4.7
18	1.6	2.8	4.7	13	9.2	36	39	14	5.2	18	4.2	4.1
19	1.4	3.2	4.5	12	9.0	32	33	13	5.0	14	6.4	5.8
20	1.9	2.5	3.3	13	9.0	34	29	14	4.1	8.3	12	3.5
21	1.9	2.1	6.6	25	9.5	41	26	15	3.5	5.3	10	3.0
22	1.6	2.0	7.5	34	10	55	24	14	3.0	3.9	6.5	24
23	1.5	1.8	6.0	33	11	65	23	13	2.9	3.1	4.6	35
24	1.3	2.4	4.6	40	23	73	21	36	2.6	2.6	4.1	21
25	1.2	4.0	4.5	54	35	97	20	137	2.4	2.4	4.4	14
26	1.2	4.4	4.5	80	30	81	19	113	2.3	2.6	8.8	11
27	3.2	2.7	4.5	99	26	56	73	60	2.0	14	7.5	11
28	3.1	2.1	4.0	78	23	41	161	42	1.9	13	7.0	9.5
29	2.2	2.0	3.5	62	---	34	133	69	1.8	7.4	8.8	17
30	1.8	2.8	3.0	47	---	32	88	64	1.8	5.0	19	22
31	1.7	---	3.0	38	---	34	---	45	---	3.5	21	---
TOTAL	65.19	59.2	169.2	1289.2	485.7	2047	1439	1118	285.7	209.1	235.7	380.4
MEAN	2.10	1.97	5.46	41.6	17.3	66.0	48.0	36.1	9.52	6.75	7.60	12.7
MAX	7.4	4.4	16	99	35	200	161	137	33	21	24	35
MIN	.87	1.2	2.9	7.2	9.0	19	19	13	1.8	1.3	1.4	3.0
CFSM	.17	.16	.44	3.38	1.41	5.37	3.90	2.94	.77	.55	.62	1.03
IN.	.20	.18	.51	3.90	1.47	6.19	4.35	3.38	.86	.63	.71	1.15

CAL YR 1978	TOTAL	5393.44	MEAN 14.8	MAX 140	MIN .44	CFSM 1.20	IN 16.31
WTR YR 1979	TOTAL	7783.39	MEAN 21.3	MAX 200	MIN .87	CFSM 1.73	IN 23.54

01166500 MILLERS RIVER AT ERVING, MA

LOCATION.--Lat 42°35'51", long 72°26'19", Franklin County, Hydrologic Unit 01080202, on right bank 5 ft (23 m) downstream from bridge at Farley, 0.6 mi (1.0 km) upstream from Mormon Hollow Brook, 2.4 mi (3.9 km) downstream from Erving, and 5.5 mi (8.8 km) upstream from mouth.

DRAINAGE AREA.--375 mi² (971 km²).

PERIOD OF RECORD.--Discharge: August 1914 to current year.
Water-quality records: Water years 1953, 1965-66.

REVISED RECORDS.--WSP 641: 1920(M). WSP 756: Drainage area. WSP 781: 1928(M), 1933(M). WSP 1301: 1915(M).

GAGE.--Water-stage recorder. Altitude of gage is 380 ft (116 m), from topographic map. Prior to June 30, 1915, nonrecording gage, June 30, 1915, to Sept. 20, 1938, water-stage recorder, and Sept. 21 to Dec. 31, 1938, nonrecording gage, at site 2.2 mi (3.5 km) upstream at different datum. Jan. 1 to Mar. 29, 1939, nonrecording gage, and Mar. 30, 1939, to Sept. 12, 1941, water-stage recorder, at site 0.4 mi (0.6 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by powerplants, Lake Monomonic and other reservoirs; high flow regulated by Birch Hill Reservoir 22 mi (35 km) upstream and Tully Reservoir (Reservoirs in Connecticut River basin); greater regulation by powerplants prior to 1966. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years, 627 ft³/s (17.76 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 29,000 (821 m³/s) Sept. 22, 1938, gage height, 13.37 ft (4.075 m), from floodmarks, site and datum then in use, mean of two slope-area measurements; practically no flow at times during 1915 and 1916 because of regulation; minimum daily, 8 ft³/s (0.23 m³/s) Sept. 6, 1926.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,200 ft³/s (200 m³/s) Mar. 7 (may have been affected by release of water stored behind ice jam upstream), gage height, 7.93 ft (2.417 m), ice jam; minimum daily, 51 ft³/s (1.44 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	121	121	310	1440	760	1500	2200	1540	269	190	412
2	72	111	203	920	1170	750	1500	1890	1170	217	167	476
3	99	111	261	1950	920	740	1450	1550	983	175	241	513
4	109	158	278	1860	792	700	1500	1530	855	142	333	492
5	136	133	245	1700	718	1000	1600	1440	742	141	229	457
6	221	147	221	1300	592	3500	1700	1280	709	129	187	495
7	257	103	196	1190	560	6000	1800	1010	652	105	155	752
8	218	114	177	1890	520	2850	1900	908	580	102	144	682
9	196	107	287	2250	490	3100	1900	780	544	121	128	565
10	167	103	474	2070	470	3320	1600	713	514	117	123	470
11	144	79	486	1800	440	3380	1500	627	437	120	168	357
12	158	68	527	1410	410	2990	1370	575	405	95	202	285
13	136	133	456	1250	390	3260	1360	586	374	81	386	248
14	141	95	321	889	380	3610	1360	592	340	59	416	241
15	203	103	312	724	370	3670	1440	615	301	76	355	250
16	229	91	238	875	340	3550	1580	591	270	211	345	237
17	139	86	260	780	330	3510	1580	558	233	446	341	233
18	141	74	264	652	310	3360	1500	531	213	445	304	211
19	141	91	252	539	300	3330	1340	502	205	373	244	181
20	150	150	360	606	290	3310	1220	502	240	280	242	181
21	150	101	300	910	280	3310	1050	508	214	298	210	178
22	150	99	250	1410	280	3370	960	447	204	262	178	451
23	161	52	230	1450	280	3280	893	417	166	228	157	735
24	141	64	220	1410	500	2980	773	767	161	140	145	692
25	121	116	210	1620	1000	2940	723	1870	156	120	153	669
26	107	116	200	2040	900	2850	743	2120	140	110	267	589
27	99	203	220	2360	800	2760	1560	1970	132	250	356	503
28	152	164	240	2260	770	2500	2920	1900	132	330	330	406
29	152	150	250	2220	---	1780	3040	1970	127	290	358	540
30	177	118	200	2050	---	1620	2650	1830	130	250	483	731
31	123	---	220	1690	---	1500	---	1770	---	220	571	---
TOTAL	4641	3361	8479	44385	16042	85580	46012	34549	12869	6202	8108	13232
MEAN	150	112	274	1432	573	2761	1534	1114	429	200	262	441
MAX	257	203	527	2360	1440	6000	3040	2200	1540	446	571	752
MIN	51	52	121	310	280	700	723	417	127	59	123	178

CAL YR 1978 TOTAL 198048 MEAN 543 MAX 2730 MIN 47
WTR YR 1979 TOTAL 283460 MEAN 777 MAX 6000 MIN 51

CONNECTICUT RIVER BASIN

01167000 CONNECTICUT RIVER AT TURNERS FALLS, MA

LOCATION.--Lat 42°36'40", long 72°33'20", Franklin County, Hydrologic Unit 01080201, at dam of Western Massachusetts Electric Co. at Turners Falls, 0.2 mi (0.3 km) upstream from Fall River, and at mile 122.2 (196.6 km).

DRAINAGE AREA.--7,163 mi² (18,552 km²).

PERIOD OF RECORD.--Discharge: January 1915 to current year.
Water-quality records: Water years 1973-74.

REVISED RECORDS.--WSP 741: 1932. WSP 891: Drainage area.

REMARKS.--Discharge computed by adding flow over and through dam, flow for factories through canal that diverts around dam, and flow through power stations 1 and 2 of Western Massachusetts Electric Co. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 35,500,000,000 ft³ (1,010,000,000 m³).

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

AVERAGE DISCHARGE.--64 years, 11,880 ft³/s (336.4 m³/s).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	5980	1630	2590	10400	7910	35400	27600	27600	1480	2180	3490
2	1940	7360	1660	10800	8740	6680	42700	23900	23800	6930	3080	1550
3	2730	6960	1660	35700	7850	9630	45600	21500	20700	6690	3460	2190
4	2310	1530	5010	24600	5730	6800	46900	20300	15900	3200	2120	5730
5	2770	564	4580	22400	7840	9200	39900	19900	12600	7900	1920	6250
6	2580	5890	3630	16400	8950	28500	33800	19000	11900	3410	2970	13400
7	2190	6220	3760	16200	6790	51900	27700	17100	13500	2230	2350	6240
8	2610	3500	5840	17400	6740	58500	22200	14400	10600	1920	3350	8220
9	3120	2160	7160	18100	6270	57500	22100	13700	10600	6520	2400	5050
10	4400	1520	1760	13000	6640	56500	21700	11700	10100	4070	1680	4730
11	3540	1650	5960	10600	2350	52600	20900	10600	7510	2860	1700	3730
12	4700	1050	6210	11700	8060	50000	19700	10200	10800	4220	1880	4650
13	4260	6910	4330	8760	6680	41900	17600	11000	11300	4160	4240	5930
14	4150	3920	5260	4350	5580	37700	21400	10300	12400	1790	3010	7280
15	3370	3380	4380	7680	6960	43500	21000	10700	10500	1690	3370	4420
16	7290	2870	1360	7160	7590	41000	22200	10700	10100	3430	3420	1520
17	8260	5200	1730	9450	3200	30300	21800	10000	2750	4460	2970	4090
18	6120	4530	5950	6330	2570	28700	25400	6540	7550	3070	2130	4280
19	4950	1290	2310	7270	3340	27100	28000	5190	10000	1770	1700	4020
20	3940	4530	2860	2990	5640	24500	24700	5800	5890	4000	4230	3150
21	1760	5260	1990	6350	4030	26000	25200	7210	4560	1910	3950	4090
22	560	6290	2120	7790	6270	30100	22200	7590	4270	3050	2750	2950
23	4850	1520	1380	4090	7790	40600	24900	7640	832	3220	2760	980
24	3310	5840	1390	9320	7700	49400	27700	13800	623	1960	3680	4610
25	2720	2110	1030	11200	4920	65600	28700	35400	6800	2290	1550	3470
26	4020	855	4980	10200	7510	78500	29100	53700	4220	3010	1270	4250
27	5420	6870	3080	11500	8050	68600	33600	45700	3520	2040	4490	4300
28	7870	4040	3810	9260	7640	53300	48700	29200	3370	1610	3650	3600
29	3300	2970	4170	10100	---	46100	52300	30300	3880	1310	4440	3150
30	7220	1680	2210	8450	---	36100	46800	29200	1810	3680	3960	1390
31	6780	---	1730	4100	---	31800	---	24600	---	1910	3630	---
TOTAL	123332	114449	104930	360840	181830	1196520	899900	569470	279985	101790	90690	132710
MEAN	3978	3815	3385	11640	6494	38600	30000	18370	9333	3284	2925	4424
MAX	4260	7360	7160	35700	10400	78500	52300	53700	27600	7900	4490	13400
MIN	292	564	1030	2590	2350	6680	17600	5190	623	1310	1270	980
CAL YR 1978	TOTAL	3992228	MEAN	10940	MAX	50500	MIN	200				
WTR YR 1979	TOTAL	4156446	MEAN	11390	MAX	78500	MIN	292				

LOCATION.--Lat 42°40'57", long 72°58'37", Franklin County, Hydrologic Unit 01080203, on left bank 400 ft (120 m) downstream from Fife Brook, 600 ft (180 m) downstream from Fife Brook Dam, 1.2 mi (1.9 km) northeast of Hoosac Tunnel, and 4 mi (6 km) west of Rowe.

REMARKS.--Records excellent. Flow regulated by Somerset and Harriman Reservoirs (Reservoirs in Connecticut River basin) and by several powerplants upstream. Several observations of water temperature and specific conductance were made during the year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,400 ft³/s (464 m³/s) Aug. 10, 1976, gage height, 14.79 ft (4.508 m), from rating curve extended above 2,800 ft³/s (79 m³/s); minimum daily, 42 ft³/s (1.19 m³/s) Feb. 17, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 13,100 ft³/s (371 m³/s) May 25, gage height, 13.50 ft (4.115 m); minimum daily, 78 ft³/s (2.21 m³/s) June 16, 24, 28.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	962	578	472	991	730	2020	527	944	317	218	145
2	488	938	86	2160	922	998	2700	231	987	508	311	108
3	456	899	125	1660	669	995	2320	163	745	171	388	102
4	511	923	544	1260	231	845	1480	744	695	107	180	685
5	526	278	682	1120	625	1200	1220	983	952	235	173	476
6	460	594	815	974	446	2250	823	810	888	373	254	1460
7	393	620	708	979	428	2940	495	689	789	108	226	1730
8	353	562	658	1130	417	2210	333	965	540	103	314	1120
9	480	593	1150	1040	488	2130	597	819	166	380	370	482
10	568	379	893	1090	451	2080	284	868	83	123	453	544
11	497	87	1020	1330	312	2370	434	829	738	284	323	559
12	469	106	864	1300	742	2240	618	919	1010	366	250	669
13	520	547	949	1260	803	1970	651	893	962	167	401	596
14	599	403	918	1250	667	1890	263	700	452	161	353	614
15	781	421	953	1300	669	2090	341	951	395	284	348	336
16	684	427	916	1300	176	1790	355	871	78	345	333	161
17	779	640	465	1290	107	1820	563	552	107	787	342	594
18	571	653	637	1290	301	1740	582	435	711	469	324	661
19	546	340	954	1240	349	1250	679	152	688	320	170	562
20	632	579	935	1220	512	1150	702	223	202	497	594	575
21	472	675	784	1300	474	1180	557	619	165	204	490	652
22	86	588	430	1300	469	1450	691	593	80	220	611	1040
23	659	255	89	1260	677	2030	1110	702	299	356	591	108
24	646	550	205	1200	957	2570	1240	1710	78	205	567	746
25	863	272	212	1220	974	4550	1110	7480	104	213	470	888
26	677	124	508	1010	344	3070	805	7080	124	240	451	714
27	877	668	736	951	367	2090	2140	2280	117	254	604	774
28	958	579	761	982	906	1230	2830	1940	78	102	534	728
29	904	483	627	956	---	1340	2690	1680	393	94	196	768
30	956	617	214	971	---	1490	1630	1210	110	486	514	459
31	952	---	86	920	---	1550	---	974	---	138	482	---
TOTAL	18503	15762	19502	36935	15474	57238	32263	39592	13680	8617	11855	19056
MEAN	597	525	629	1191	553	1846	1075	1277	456	278	362	635
MAX	958	962	1150	2160	991	4550	2830	7480	1010	787	611	1730
MIN	86	87	86	472	107	730	263	152	78	94	170	102
CAL YR 1978	TOTAL	252011	MEAN	690	MAX	2870	MIN	86				
WTR YR 1979	TOTAL	288477	MEAN	790	MAX	7480	MIN	78				

CONNECTICUT RIVER BASIN

01168500 DEERFIELD RIVER AT CHARLEMONT, MA

LOCATION.--Lat 42°37'33", long 72°51'20", Franklin County, Hydrologic Unit 01080203, on left bank 0.8 mi (1.3 km) east of Charlemont, 2.5 mi (4.0 km) downstream from Chickley River, and at mile 24.5 (39.4 km).

DRAINAGE AREA.--362 mi² (938 km²).

PERIOD OF RECORD.--Discharge: June 1913 to current year.

Water-quality records: Water years 1954-55, 1958, 1967-69.

REVISED RECORDS.--WSP 781: 1915(M). WSP 1301: 1918(M).

GAGE.--Water-stage recorder. Datum of gage is 517.36 ft (157.691 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for period of no gage-height record, May 11 to June 7, which are fair. Flow regulated 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.--66 years, 901 ft³/s (25.52 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,300 ft³/s (1,590 m³/s) Sept. 21, 1938, gage height, 20.17 ft (6.148 m), from floodmarks, from rating curve extended above 31,000 ft³/s (880 m³/s) on basis of slope-area and contracted-opening measurements at gage heights 17.75 ft (5.410 m) and 20.17 ft (6.148 m); minimum daily, 5 ft³/s (0.14 m³/s) June 17, 1921.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 18,000 ft³/s (510 m³/s) May 25, gage height, 11.2 ft (3.41 m), from graph based on gage readings; minimum daily, 118 ft³/s (3.34 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	118	1000	636	557	1100	933	3540	1130	1500	347	257	197
2	520	948	232	4350	1100	1160	4130	728	1400	809	347	138
3	482	929	173	3570	800	1190	3580	565	1100	280	425	205
4	508	917	574	1730	450	1080	2560	1020	1000	201	229	637
5	569	427	666	1430	660	1610	2360	1340	1050	237	128	558
6	575	569	902	1190	600	4860	1850	1120	1100	442	363	2010
7	450	686	780	1160	540	6510	1130	938	960	168	253	2140
8	340	633	751	2120	480	3570	886	1200	732	154	342	1230
9	530	612	1520	1610	500	3020	1190	1210	434	425	391	762
10	622	540	1210	1380	470	2910	878	1030	230	190	486	473
11	524	190	1120	1500	350	3860	860	820	660	317	347	667
12	518	149	974	1420	800	3130	1110	1100	1150	408	284	667
13	530	580	1060	1430	720	2600	1270	1150	1120	217	637	605
14	581	482	1030	1390	680	2440	943	1050	732	194	425	750
15	851	411	1020	1480	720	2700	900	980	518	257	408	425
16	745	466	959	1420	300	2350	1150	1050	197	449	391	229
17	871	614	631	1390	200	2240	1330	780	172	928	374	551
18	606	743	634	1360	320	2170	1330	700	666	666	332	679
19	582	431	1080	1360	400	1670	1290	350	902	474	237	676
20	654	701	1050	1330	470	1530	1370	430	298	544	651	627
21	553	688	1020	1430	580	1680	1310	620	245	284	558	656
22	187	599	566	1640	595	2240	1370	580	147	262	586	1370
23	533	429	236	1470	645	3250	1820	820	363	455	644	438
24	682	503	309	1410	1150	4230	1920	2900	138	284	593	688
25	900	467	337	1760	1330	9460	1740	12300	161	280	518	977
26	703	194	515	1150	848	5180	1380	10000	172	385	455	793
27	1150	602	815	1100	468	3120	3120	3200	168	461	637	804
28	1050	646	821	1100	1140	1960	4070	2400	131	201	572	793
29	986	589	852	980	---	2000	4150	2150	443	165	347	920
30	989	658	272	1050	---	2180	2500	1900	249	518	498	526
31	961	---	250	1050	---	2670	---	1800	---	201	579	---
TOTAL	19870	17403	22995	47317	18416	89503	57037	57361	18138	11253	13294	22191
MEAN	641	580	742	1526	658	2887	1901	1850	605	363	429	740
MAX	1150	1000	1520	4350	1330	9460	4150	12300	1500	928	651	2140
MIN	118	149	173	557	200	933	860	350	131	154	128	138

CAL YR 1978 TOTAL 334934 MEAN 918 MAX 5740 MIN 118
WTR YR 1979 TOTAL 394778 MEAN 1082 MAX 12300 MIN 118

LOCATION.--Lat 42°38'18", long 72°43'32", Franklin County, Hydrologic Unit 01080203, on right bank in Shattuckville, 1.2 mi (1.9 km) south of Griswoldville, and 1.3 mi (2.1 km) upstream from mouth.

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.

GAGE.--Water-stage recorder. Datum of gage is 458.36 ft (139.708 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are 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.--40 years, 184 ft³/s (5.211 m³/s), 28.27 in/yr (718 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft³/s (374 m³/s) Oct. 15, 1955, gage height, 10.37 ft (3.161 m), from rating curve extended above 5,700 ft³/s (160 m³/s) on basis of computation of flow over dam at gage height 9.62 ft (2.932 m); minimum daily, 5.1 ft³/s (0.14 m³/s) Oct. 3, 1948.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,200 ft³/s (62 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 2	2215	2830	80.1	6.37	1.942	Apr. 27	2130	2240	63.4	5.94	1.811
Mar. 6	1945	4820	137	7.53	2.295	May 25	1830	*7190	204	8.61	2.624
Mar. 25	0515	5670	161	7.95	2.423						

Minimum discharge, 16 ft³/s (0.45 m³/s) Oct. 1, Nov. 11; minimum daily, 17 ft³/s (0.48 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	38	41	63	135	152	1060	422	299	229	40	29
2	19	36	38	1200	115	149	964	327	253	250	41	26
3	19	38	30	1010	115	141	1100	278	221	142	38	61
4	19	34	39	302	120	141	770	369	184	88	33	57
5	34	31	69	184	110	347	894	287	193	66	29	39
6	71	30	62	158	98	2480	669	234	184	55	27	571
7	60	32	51	152	97	2440	498	196	149	49	25	339
8	39	44	54	827	105	1160	410	192	138	45	23	126
9	32	44	221	451	100	758	387	172	132	38	22	80
10	29	37	172	269	89	821	358	153	127	38	24	62
11	27	33	94	194	87	1140	354	138	129	35	30	52
12	26	31	74	172	85	610	414	127	175	33	52	44
13	26	30	80	210	84	451	451	184	127	33	156	42
14	37	30	70	175	81	434	459	181	107	30	73	42
15	75	29	47	150	81	414	426	148	94	30	52	69
16	47	28	55	130	75	330	561	124	83	115	42	52
17	37	29	58	115	70	302	502	108	74	317	35	42
18	39	78	48	110	69	281	506	107	86	163	33	38
19	38	65	45	100	66	275	493	105	109	132	58	37
20	37	48	50	110	68	323	480	131	72	75	54	35
21	33	42	64	190	69	467	493	139	62	61	43	37
22	30	40	72	350	71	764	502	109	57	68	37	255
23	29	37	60	206	71	1130	543	112	53	53	32	136
24	27	44	51	162	170	1360	552	1670	50	44	30	80
25	25	54	51	250	300	3800	493	4380	47	44	32	62
26	34	36	48	206	237	1540	472	1960	42	75	38	55
27	140	33	45	180	184	802	1560	739	40	180	31	48
28	76	38	43	184	158	552	1170	520	39	89	29	44
29	54	42	41	173	---	493	1190	524	302	62	66	54
30	45	43	40	155	---	561	576	476	117	51	56	53
31	41	---	43	144	---	710	---	410	---	44	37	---
TOTAL	1262	1174	1956	8282	3110	25328	19307	15022	3745	2734	1318	2667
MEAN	40.7	39.1	63.1	267	111	817	644	485	125	88.2	42.5	88.9
MAX	140	78	221	1200	300	3800	1560	4380	302	317	156	571
MIN	17	28	30	63	66	141	354	105	39	30	22	26
CFSM	.46	.44	.71	3.02	1.26	9.24	7.29	5.49	1.41	1.00	.48	1.01
IN.	.53	.49	.82	3.49	1.31	10.66	8.12	6.32	1.58	1.15	.55	1.12
CAL YR 1978	TOTAL	61159	MEAN 168	MAX	2490	MIN 14	CFSM 1.90	IN 25.74				
WTR YR 1979	TOTAL	85905	MEAN 235	MAX	4380	MIN 17	CFSM 2.66	IN 36.15				

01169900 SOUTH RIVER NEAR CONWAY, MA

LOCATION.--Lat 42°32'31", long 72°41'39", Franklin County, Hydrologic Unit 01080203, on left bank at upstream side of Reeds Bridge just off Bardwell Road, 2.2 mi (3.5 km) north of Conway, and 2.6 mi (4.2 km) upstream from mouth.

DRAINAGE AREA.--24.0 mi² (62.2 km²).

RECORDS AVAILABLE.--Discharge: June 1966 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1968-70(P), 1971(M), 1972(P).

GAGE.--Water-stage recorder. Altitude of gage is 460 ft (140 m), from topographic map. Prior to Oct. 7, 1970, at downstream side of bridge at same site and datum.

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

AVERAGE DISCHARGE.--13 years, 55.3 ft³/s (1.566 m³/s), 31.29 in/yr (795 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,510 ft³/s (71.1 m³/s) Jan. 9, 1978, gage height, 7.80 ft (2.377 m), from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement at gage height 7.77 ft (2.368 m); maximum gage height, 8.26 ft (2.518 m) Jan. 27, 1976 (ice jam); minimum discharge, 3.0 ft³/s (0.085 m³/s) Aug. 21, 22, Sept. 2, 3, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 660 ft³/s (19 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1500	ice jam	*6.89 2.100	May 25	1615	*1460 41.3	6.46 1.969
Mar. 7	-	700 20	-				

Minimum discharge, 5.6 ft³/s (0.16 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	8.0	19	32	52	52	146	103	89	51	9.1	11
2	6.9	8.0	13	170	48	47	165	86	76	31	17	9.1
3	6.6	7.6	13	200	45	43	161	79	67	20	13	20
4	6.6	7.6	19	80	40	40	123	91	59	17	22	13
5	11	7.6	37	56	36	100	142	72	65	15	11	11
6	34	7.6	17	50	34	500	129	66	70	14	9.5	106
7	16	7.6	16	52	32	370	103	62	53	13	8.3	46
8	10	11	17	250	32	250	88	58	48	12	7.2	22
9	8.8	11	67	120	30	192	83	54	45	11	6.9	17
10	8.4	8.8	38	70	29	216	89	51	45	10	13	15
11	8.0	8.4	25	56	24	318	108	47	43	11	17	13
12	8.0	8.0	19	52	27	172	117	50	55	11	37	12
13	8.0	8.0	16	50	26	136	108	65	41	9.5	58	11
14	9.3	8.0	14	64	25	155	93	66	38	8.7	22	11
15	12	7.6	13	55	24	135	105	59	35	13	18	14
16	9.7	7.6	15	45	24	103	142	48	31	21	14	11
17	8.4	8.0	22	39	23	93	112	43	29	18	12	9.9
18	8.4	24	15	34	22	91	96	40	26	21	11	9.5
19	8.4	15	13	31	22	99	86	43	25	22	20	9.5
20	11	11	12	35	22	119	79	54	22	14	15	9.1
21	9.7	9.3	33	80	23	174	75	50	21	12	13	10
22	8.4	8.8	24	140	24	210	70	40	20	11	12	51
23	8.0	8.8	17	95	26	249	70	40	20	9.9	9.9	25
24	8.0	13	15	64	100	259	66	389	18	9.1	9.5	16
25	7.6	18	40	200	200	498	63	865	17	9.5	13	14
26	8.0	21	22	130	120	250	65	385	17	10	14	13
27	13	17	18	100	80	165	430	174	15	28	11	13
28	11	16	16	82	60	131	350	157	14	20	10	13
29	9.3	13	14	70	---	121	185	215	14	13	11	14
30	8.4	23	12	65	---	125	123	140	15	11	19	15
31	8.0	---	13	58	---	140	---	114	---	9.5	16	---
TOTAL	304.8	338.3	644	2625	1254	5553	3772	3806	1133	486.2	479.4	564.1
MEAN	9.83	11.3	20.8	84.7	44.8	179	126	123	37.8	15.7	15.5	18.8
MAX	34	24	67	250	200	500	430	865	89	51	58	106
MIN	5.9	7.6	12	31	22	40	63	40	14	8.7	6.9	9.1
CFSM	.41	.47	.87	3.53	1.87	7.46	5.25	5.13	1.58	.65	.65	.78
IN.	.47	.52	1.00	4.07	1.94	8.61	5.85	5.90	1.76	.75	.74	.87

CAL YR 1978 TOTAL 16734.3 MEAN 45.8 MAX 950 MIN 5.9 CFSM 1.91 IN 25.94
WTR YR 1979 TOTAL 20959.8 MEAN 57.4 MAX 865 MIN 5.9 CFSM 2.39 IN 32.49

01170000 DEERFIELD RIVER NEAR WEST DEERFIELD, MA

LOCATION.--Lat 42°32'09", long 72°39'14", Franklin County, Hydrologic Unit 01080203, on right bank 0.4 mi (0.6 km) downstream from South River, 1.2 mi (1.9 km) west of West Deerfield, 2.5 mi (4.0 km) west of Deerfield, and 9.2 mi (14.8 km) upstream from mouth.

DRAINAGE AREA.--558 mi² (1,445 km²).

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

Water-quality records: Water years 1953, 1967-69.

Chemical analyses: October 1968 to April 1970.

Water temperatures: October 1968 to April 1970.

GAGE.--Water-stage recorder. Altitude of gage is 155 ft (47 m), from topographic map. Prior to Dec. 16, 1905, nonrecording gage at site 1.5 mi (2.4 km) downstream at different datum.

REMARKS.--Records excellent except those for February, which are fair. Flow regulated since 1913 by Somerset Reservoir, since 1924 by Harriman Reservoir (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.--39 years (water years 1941-79), 1,293 ft³/s (36.62 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,500 ft³/s (1,370 m³/s) Dec. 31, 1948, gage height, 15.3 ft (4.703 m); minimum daily, 28 ft³/s (0.79 m³/s) July 29, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 27,600 ft³/s (782 m³/s) May 25, gage height, 11.23 ft (3.423 m); minimum daily, 173 ft³/s (4.90 m³/s) June 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	1120	720	675	1420	800	4830	2040	2100	805	332	307
2	420	1040	475	5970	1360	1200	5850	1520	1900	1020	420	208
3	592	1070	251	5880	1230	1150	5350	1040	1590	579	484	535
4	565	905	496	2320	660	1100	3920	1570	1440	377	395	600
5	574	658	709	2050	860	1800	3940	1980	1450	301	217	1000
6	841	547	1130	1670	880	8680	3130	1710	1620	552	368	2500
7	489	688	883	1470	700	11300	1940	1290	1410	364	342	3000
8	489	759	811	3390	620	5840	1660	1480	975	216	444	1700
9	466	620	1980	2510	620	4570	1870	1650	886	439	341	1200
10	649	639	1680	1810	620	4390	1670	1380	562	400	572	500
11	620	326	1320	1840	450	6200	1500	1220	921	250	391	580
12	565	272	1110	2070	950	4440	1770	1420	1620	480	652	801
13	547	443	1150	1930	950	3440	2100	1450	1460	300	989	741
14	718	601	1130	1730	850	3310	2000	1490	1140	250	639	868
15	841	530	1110	1780	900	3560	1760	1350	625	300	448	531
16	982	466	1060	1680	500	3050	2210	1340	528	700	447	412
17	905	547	764	1590	200	2740	2010	991	304	1500	407	634
18	639	852	731	1580	330	2680	2140	928	694	760	502	711
19	678	688	1150	1910	450	2320	2030	575	1140	840	379	866
20	668	698	1200	2110	520	2290	2130	677	475	650	651	689
21	630	718	1240	2190	740	2630	2160	980	449	380	676	709
22	301	714	820	2530	660	3640	2140	830	271	420	699	1900
23	473	572	340	1930	700	5010	2420	1150	456	520	720	1050
24	831	527	300	1800	1300	6500	2820	4590	286	370	561	414
25	810	596	350	2440	1400	14900	2650	17700	263	350	651	1100
26	821	374	614	1890	1000	8220	2090	16300	267	456	515	969
27	1210	424	895	1640	600	4700	4630	4980	253	901	776	868
28	1330	785	970	1650	1100	3030	6470	3640	173	470	669	925
29	1130	702	1000	1610	---	2960	6320	3530	731	256	596	1040
30	1070	679	380	1470	---	3030	3890	3140	487	631	572	680
31	883	---	350	1440	---	3790	---	2750	---	308	582	---
TOTAL	21918	19560	27119	66555	22570	133270	89400	86691	26476	16145	16437	28038
MEAN	707	652	875	2147	806	4299	2980	2796	883	521	530	935
MAX	1330	1120	1980	5970	1420	14900	6470	17700	2100	1500	989	3000
MIN	181	272	251	675	200	800	1500	575	173	216	217	208
CAL YR 1978	TOTAL	455104	MEAN	1247	MAX	11000	MIN	181				
WTR YR 1979	TOTAL	554179	MEAN	1518	MAX	17700	MIN	173				

CONNECTICUT RIVER BASIN

01170100 GREEN RIVER NEAR COLRAIN, MA

LOCATION.--Lat 42°42'12", long 72°40'16", Franklin County, Hydrologic Unit 01080203, on right bank 0.5 mi (0.8 km) upstream from bridge on West Leyden Road and 2.5 mi (4.0 km) northeast of Colrain.

DRAINAGE AREA.--41.4 mi² (107.2 km²).

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

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

GAGE.--Water-stage recorder. Altitude of gage is 435 ft (133 m), from topographic map.

REMARKS.--Records good except those for winter period and periods of no gage-height record, Oct. 15 to Nov. 12, Mar. 4-28, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--12 years, 98.5 ft³/s (2.790 m³/s), 32.31 in/yr (821 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,560 ft³/s (129 m³/s) Dec. 21, 1973, gage height, 8.2 ft (2.50 m), from floodmarks, from rating curve extended above 890 ft³/s (25 m³/s) on basis of slope area measurement of peak flow and conveyance-slope study; maximum gage height, 8.87 ft (2.704 m) Jan. 27, 1976, ice jam; minimum discharge, 1.9 ft³/s (0.054 m³/s) Aug. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 800 ft³/s (23 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2400	921 26.1	4.76 1.451	Apr. 27	2200	850 24.1	4.65 1.417
Mar. 6	-	1700 48	- -	May 25	1700	a*2530 71.6	6.62 2.018
Mar. 25	-	2000 57	- -				

a From rating curve extended as explained above.

Minimum discharge, 6.0 ft³/s (0.17 m³/s) Aug. 8-10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	18	20	48	60	70	461	211	147	142	15	12
2	8.1	17	14	445	54	68	451	175	125	127	15	10
3	8.1	18	16	480	54	66	489	158	113	64	15	31
4	8.6	16	20	156	56	66	376	194	100	40	12	24
5	16	15	30	93	52	155	400	150	98	31	11	15
6	32	14	28	78	46	1000	314	128	88	25	9.2	173
7	27	15	23	93	46	1000	247	114	72	25	7.7	131
8	19	20	23	315	49	540	216	103	68	23	6.8	49
9	15	20	86	220	47	340	208	94	65	21	6.0	30
10	13	17	69	150	41	370	193	83	64	18	6.0	24
11	13	15	44	110	40	520	190	73	61	17	12	21
12	12	14	34	82	40	270	210	68	80	16	23	17
13	12	14	38	100	39	200	221	96	60	15	73	15
14	14	14	33	82	38	190	228	95	50	14	30	15
15	35	14	22	70	37	185	214	76	45	14	21	28
16	22	13	26	61	35	150	254	64	41	33	16	19
17	18	14	27	54	33	140	243	56	38	95	12	16
18	18	31	22	52	32	130	246	52	95	49	12	14
19	18	28	21	47	31	125	241	53	88	41	24	15
20	17	22	23	50	32	140	240	60	50	27	23	12
21	15	20	30	90	32	210	247	66	40	25	18	17
22	14	18	34	160	33	340	250	54	35	24	14	119
23	13	17	28	100	33	520	270	52	32	19	11	54
24	12	20	24	76	82	620	310	646	29	15	11	34
25	12	22	24	110	145	1300	240	1470	26	17	12	26
26	16	17	23	95	110	720	230	579	24	29	14	23
27	66	15	21	82	86	360	677	324	24	64	11	20
28	35	17	20	80	74	290	516	249	68	32	13	19
29	25	20	19	76	---	254	444	252	125	23	41	22
30	21	20	19	68	---	293	267	216	47	18	26	22
31	19	---	20	65	---	368	---	184	---	17	18	---
TOTAL	581.0	535	885	3788	1457	11000	9093	6195	1998	1120	538.7	1031
MEAN	18.7	17.8	28.5	122	52.0	355	303	200	66.6	36.1	17.4	34.4
MAX	66	31	86	480	145	1300	677	1470	147	142	73	173
MIN	7.2	13	16	47	31	66	190	52	24	14	6.0	10
CFSM	.45	.43	.69	2.95	1.26	8.58	7.32	4.83	1.61	.87	.42	.83
IN.	.52	.48	.80	3.40	1.31	9.88	8.17	5.57	1.80	1.01	.48	.93
CAL YR 1978 TOTAL	28797.1			78.9		1050		7.2		1.91		25.88
WTR YR 1979 TOTAL	38221.7			105		1470		6.0		2.54		34.34

01170500 CONNECTICUT RIVER AT MONTAGUE CITY, MA

LOCATION.--Lat 42°34'48", long 72°34'30", Franklin County, Hydrologic Unit 01080201, on left bank 75 ft (23 m) downstream from railroad bridge at Montague City, 1,000 ft (300 m) downstream from Deerfield River, and at mile 119.0 (191.5 km).

DRAINAGE AREA.--7,865 mi² (20,370 km²).

PERIOD OF RECORD.--March 1904 to current year. Prior to October 1929, published as "at Sunderland." Records published for both sites October 1929 to September 1932.

REVISED RECORDS.--WSP 471: 1904-17. WSP 741: 1930-32. WSP 781: 1928(M). WSP 891: Drainage area. WSP 1051: 1905, 1909-10, 1912-14, 1920, 1922-23, 1925-26, 1928, drainage area at Sunderland. WSP 1301: 1905(M), 1914-19(M), 1930-31(M).

GAGE.--Water-stage recorder. Datum of gage is 99.87 ft (30.440 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1917, nonrecording gage; Oct. 1, 1917, to Oct. 8, 1921, water-stage recorder used for low stages, nonrecording gage otherwise; and Oct. 9, 1921, to Sept. 30, 1932, water-stage recorder; all at site 9 mi (14 km) downstream at datum 1.00 ft (0.305 m) lower. Since Oct. 1, 1929, water-stage recorder at present site and datum.

REMARKS.--Records excellent. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore and Comerford Reservoirs (Reservoirs in Connecticut River basin), and other reservoirs, combined usable capacity, about 43,400,000,000 ft³ (1,230,000,000 m³). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--75 years, 13,780 ft³/s (390.2 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 236,000 ft³/s (6,680 m³/s) Mar. 19, 1936, gage height, 49.2 ft (15.00 m), from floodmarks; minimum daily, 215 ft³/s (6.09 m³/s) Aug. 31, Sept. 1, 1958.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 94,600 ft³/s (2,680 m³/s) Mar. 26, gage height, 30.94 ft (9.431 m); minimum daily, 1,060 ft³/s (30.0 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	7160	2790	2820	12600	10400	43800	36300	33800	2600	2680	4480
2	2230	8740	2380	15000	10500	8660	50200	29600	29000	8110	3770	2340
3	3580	8460	2250	41000	9850	11700	54200	26100	25100	7660	4270	2820
4	3160	2920	6030	33400	7180	8850	52900	24400	20600	4590	3090	6690
5	3870	1490	6020	26700	8450	12100	47600	24400	16000	7510	2410	7340
6	3800	6550	5190	14000	10800	33800	42100	22900	14900	5100	3670	15900
7	2910	7490	5380	14600	8400	74100	34800	20500	15900	2710	3080	12100
8	3270	4910	6720	21800	8100	73500	28300	17800	12700	2190	4020	11100
9	3840	3240	9440	22600	7700	67500	27200	17300	12300	7470	3440	7330
10	5240	2130	4430	16800	8000	62800	26100	14200	11800	5700	2750	6000
11	4580	2210	7640	13400	3600	62200	25400	12400	8680	3010	2460	4890
12	5540	1660	7820	15400	9300	58900	25700	13000	12900	5000	2660	5730
13	5330	7510	6220	11700	8700	51500	21600	13200	13100	4880	5950	6810
14	5150	5010	7060	8000	7600	53300	26500	12500	15000	2230	4670	8340
15	4820	4270	6030	9200	9000	49700	26300	12700	11900	1930	4640	5800
16	8560	3730	2780	4700	9300	46600	28200	12600	11700	4560	4030	2580
17	9660	6070	3000	4700	5800	36600	27000	11500	4140	6280	3770	4560
18	7020	6020	6930	4000	3500	33900	30900	7930	8180	4590	2640	5460
19	6280	2240	4200	10000	5500	32600	33200	6680	12100	3110	2430	5710
20	5010	5790	4370	4500	7600	30700	30800	5970	7890	5350	5100	4630
21	2750	6520	3560	4700	6000	32200	31200	8540	5490	2970	4900	5440
22	1270	7570	3250	11000	8740	36800	29000	8670	5030	3590	4180	5650
23	5490	3000	2290	12000	9410	47700	30900	9100	1440	4500	4030	3020
24	4620	6610	1990	12000	11100	57900	35200	17700	1150	3040	4610	5510
25	3910	3310	1870	15000	9150	77900	35500	53300	7240	2900	2580	5160
26	5100	1910	6050	14000	10000	92400	34500	75000	5300	3780	2230	5680
27	7040	7390	4210	15100	9940	82900	41300	58400	4180	3740	5730	5830
28	9920	5960	4900	12400	10000	65200	57900	39400	3880	2570	4890	5110
29	4860	4210	5340	12900	---	55400	62000	37700	4840	2090	5400	4500
30	8570	2550	3100	11400	---	45000	55100	35100	2630	4860	5710	2730
31	8190	---	2260	10800	---	39500	---	35200	---	2820	4910	---
TOTAL	156630	146630	145540	453620	235820	1452310	1095400	720490	338870	131440	120700	179240
MEAN	5053	4888	4695	14630	8422	46850	36510	23240	11300	4240	3894	5975
MAX	9920	8740	9440	41000	12600	92400	62000	75000	33800	8110	5950	15900
MIN	1060	1490	1870	2820	3500	8660	21600	5970	1150	1930	2230	2340
CAL YR 1978 TOTAL	4819311			MEAN 13200		MAX 56700	MIN 526					
WTR YR 1979 TOTAL	5176690			MEAN 14180		MAX 92400	MIN 1060					

CONNECTICUT RIVER BASIN

01171300 FORT RIVER NEAR AMHERST, MA

LOCATION.--Lat 42°21'30", long 72°30'23", Hampshire County, Hydrologic Unit 01080201, on left bank 400 ft (120 m) downstream from Southeast Street Bridge, 600 ft (180 m) downstream from Hop Brook, and 1.3 mi (2.1 km) south-east of Amherst.

DRAINAGE AREA.--36.4 mi² (94.3 km²), excludes 5.15 mi² (13.34 km²) drained by Nurse and Dean Brooks, flow of which is diverted from basin.

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

Water-quality records: Water years 1971, 1973.

REVISED RECORDS.--WDR MA-RI-75-1: Drainage area.

GAGE.--Water-stage recorder. Altitude of gage is 147 ft (45 m), from topographic map. Prior to May 10, 1974, at site 400 ft (120 m) upstream at same datum.

REMARKS.--Records 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.--13 years, 64.9 ft³/s (1.838 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,820 ft³/s (79.9 m³/s) Dec. 21, 1973, gage height, 9.88 ft (3.011 m), former site, from rating curve extended above 690 ft³/s (19.5 m³/s); maximum gage height, 9.94 ft (3.030 m) Mar. 6, 1979; minimum discharge, 1.9 ft³/s (0.054 m³/s) Sept. 3, 1966.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods in March 1936 and September 1938 reached discharges of 2,360 ft³/s (66.8 m³/s) and 1,640 ft³/s (46.4 m³/s), respectively, by computation of flow over dam 1.2 mi (1.9 km) downstream.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 500 ft³/s (14 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1900	b77 19.2	5.15 1.570	Mar. 11	1315	605 17.1	4.87 1.484
Jan. 25	-	550 16	ice jam	Apr. 28	0145	669 18.9	5.12 1.561
Mar. 6	2015	a*2590 73.3	9.94 3.030				

a From rating curve extended above 810 ft³/s (23 m³/s).

Minimum discharge, 4.3 ft³/s (0.12 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	9.0	23	78	90	78	78	109	60	38	12	20
2	5.9	8.6	16	240	80	72	80	88	45	35	86	19
3	5.5	8.2	12	355	60	70	118	75	39	19	30	25
4	5.5	7.8	13	160	58	80	94	89	37	14	17	20
5	9.2	7.5	18	62	53	150	107	78	35	13	13	17
6	24	7.2	20	49	45	1470	95	64	43	12	11	35
7	21	7.0	17	47	40	1320	76	58	33	12	10	68
8	11	10	19	427	38	380	64	53	28	11	9.7	31
9	7.7	9.0	83	362	36	233	76	50	26	9.8	9.3	20
10	7.7	8.2	82	180	34	205	128	47	27	9.2	18	16
11	6.7	7.9	47	90	32	492	125	41	25	8.7	34	14
12	6.7	7.5	24	65	30	263	97	37	30	9.2	80	12
13	7.2	6.8	22	55	28	165	77	44	26	8.2	120	13
14	7.7	6.4	20	70	26	154	76	49	23	8.2	90	14
15	11	6.1	18	58	24	138	85	51	21	19	45	22
16	9.2	6.0	13	51	22	106	98	42	19	49	30	17
17	7.5	6.0	18	46	21	95	102	35	17	33	22	13
18	6.9	14	16	41	20	89	81	31	17	34	20	13
19	7.2	15	12	37	19	82	66	31	18	31	30	11
20	11	11	10	35	18	80	58	32	15	18	35	12
21	9.6	9.6	33	95	22	81	54	34	14	14	25	13
22	8.0	8.7	35	200	30	83	51	28	13	12	20	135
23	7.2	7.8	22	150	35	83	49	27	13	11	18	102
24	7.3	16	17	130	150	84	46	123	12	11	16	63
25	7.4	21	21	400	210	98	44	287	12	11	18	37
26	7.1	13	22	330	140	95	44	235	11	13	21	30
27	15	8.7	20	250	100	76	249	121	11	30	19	25
28	14	8.4	16	170	86	63	486	76	11	20	21	24
29	12	8.0	13	140	---	63	233	89	10	14	19	122
30	10	20	10	120	---	64	147	78	10	12	25	94
31	9.2	---	11	100	---	65	---	78	---	10	26	---
TOTAL	290.1	290.4	723	4593	1547	6577	3184	2280	701	549.3	950.0	1057
MEAN	9.36	9.68	23.3	148	55.3	212	106	73.5	23.4	17.7	30.6	35.2
MAX	24	21	83	427	210	1470	486	287	60	49	120	135
MIN	4.7	6.0	10	35	18	63	44	27	10	8.2	9.3	11

CAL YR 1978 TOTAL 17774.0 MEAN 48.7 MAX 500 MIN 3.7
WTR YR 1979 TOTAL 22741.8 MEAN 62.3 MAX 1470 MIN 4.7

01171500 MILL RIVER AT NORTHAMPTON, MA

LOCATION.--Lat 42°19'05", long 72°39'21", Hampshire County, Hydrologic Unit 01080201, on right bank at Northampton 3.5 mi (5.6 km) upstream from mouth.

DRAINAGE AREA.--54.0 mi² (139.9 km²).

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

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

REVISED RECORDS.--WSP 921: 1940. WSP 1231: 1940-42(M), 1944-45(M), 1948(M), 1949.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 140 ft (43 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, Sept. 13-30, 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.--41 years, 97.0 ft³/s (2.747 m³/s), 24.39 in/yr (620 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,300 ft³/s (178 m³/s) Aug. 19, 1955, gage height, 11.78 ft (3.591 m), from rating curve extended above 3,700 ft³/s (100 m³/s) on basis of computation of peak flow over dam; minimum, 2.2 ft³/s (0.062 m³/s) Oct. 1, 1950; minimum daily, 4.2 ft³/s (0.12 m³/s) Aug. 21, 23, 24, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	1130	ice jam	*7.78 2.371	Mar. 25	0515	1400 39.6	5.18 1.579
Mar. 7	-	1300 37	ice jam	May 25	1945	*2240 63.4	6.53 1.990

Minimum discharge, 8.5 ft³/s (0.24 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	35	36	52	110	110	205	214	221	61	41	42
2	9.7	14	27	277	105	111	215	178	178	67	53	31
3	9.6	13	23	411	100	111	313	158	154	39	33	37
4	11	12	25	140	97	112	206	194	139	29	31	46
5	15	11	34	107	85	200	260	152	134	26	24	33
6	42	11	31	101	81	800	205	129	203	24	21	109
7	51	11	27	103	77	1000	166	118	144	22	19	191
8	28	14	29	570	74	624	145	109	106	20	17	67
9	18	15	113	292	69	452	163	101	93	19	16	45
10	15	13	88	164	66	438	208	90	90	18	30	36
11	15	13	46	125	63	690	220	81	86	18	37	31
12	15	12	37	110	59	378	217	73	109	17	166	27
13	14	12	34	100	56	284	196	113	80	16	91	25
14	15	12	31	125	55	272	201	123	69	14	50	23
15	21	15	24	110	53	263	234	117	60	37	37	50
16	18	33	25	90	51	205	270	90	53	69	30	33
17	16	13	30	76	49	181	228	73	49	86	26	26
18	15	27	23	68	48	177	180	67	47	71	45	24
19	15	26	23	60	47	179	153	68	44	105	86	22
20	17	19	23	58	46	202	137	80	40	48	48	20
21	17	16	50	150	53	260	124	85	36	35	36	19
22	15	15	50	300	59	318	117	70	34	29	30	170
23	16	15	36	190	62	368	112	67	32	26	27	110
24	15	26	29	130	250	478	103	444	30	24	30	70
25	14	37	75	450	400	877	97	1460	29	35	34	50
26	15	24	33	300	250	429	101	816	27	56	31	40
27	20	23	30	230	150	281	757	345	26	133	43	35
28	21	20	29	190	110	217	599	304	24	57	31	30
29	17	20	25	165	---	195	473	718	24	37	43	150
30	18	37	23	140	---	187	278	405	26	31	75	110
31	39	---	26	125	---	192	---	332	---	26	67	---
TOTAL	576.2	564	1135	5509	2725	10597	6883	7374	2391	1315	1348	1702
MEAN	18.6	18.8	36.6	178	97.3	342	229	238	79.7	42.4	43.5	56.7
MAX	51	37	113	570	400	1000	757	1460	221	133	166	191
MIN	8.9	11	23	52	46	110	97	67	24	14	16	19
CFSM	.34	.35	.68	3.30	1.80	6.33	4.24	4.41	1.48	.79	.81	1.05
IN.	.40	.39	.78	3.80	1.88	7.30	4.74	5.08	1.65	.91	.93	1.17
CAL YR 1978 TOTAL	32705.2			MEAN 89.6	MAX 1800	MIN 8.9	CFSM 1.66	IN 22.53				
WTR YR 1979 TOTAL	42119.2			MEAN 115	MAX 1460	MIN 8.9	CFSM 2.13	IN 29.01				

CONNECTICUT RIVER BASIN

01172000 CONNECTICUT RIVER AT HOLYOKE, MA

LOCATION.--Lat 42°12'50", long 72°36'10", Hampden County, Hydrologic Unit 01080201, at dam of Holyoke Water Power Co. in Holyoke, MA.

DRAINAGE AREA.--8,309 mi² (21,520 km²).

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

REMARKS.--Discharges furnished by local power company.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	TUR- BID- ITY (JTU)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	OXYGEN DEMAND, CHEM- ICAL (HIGH LEVEL) (MG/L)
OCT 25...	1300	1500	114	6.9	12.5	2	--	10.6	99	--
DEC 05...	1530	3100	114	6.7	3.0	3	--	12.8	95	--
MAR 15...	1130	7000	72	5.9	.5	7	--	14.5	101	26
APR 11...	1100	7000	77	6.8	4.0	--	3.0	13.1	100	15
MAY 08...	1530	7000	78	6.2	14.0	--	2.0	10.4	100	36
JUN 05...	1600	6300	74	6.0	18.5	--	2.0	9.6	102	2
JUL 18...	1030	2000	110	6.7	25.0	--	3.0	6.0	72	4
AUG 15...	1300	5600	120	7.3	20.5	--	2.0	7.9	87	7
SEP 11...	1130	2300	112	7.2	21.0	--	1.0	9.1	101	11

DATE	C.O.D. TOTAL IN BOTTOM MA- TERIAL (MG/KG)	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.45 UM-MF (COLS./ 100 ML)	STREP- TOCUCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)
OCT 25...	5500	--	1100	420	11	1.7	34	0	28
DEC 05...	--	4900	470	650	--	--	--	--	--
MAR 15...	--	3600	260	180	--	--	--	--	--
APR 11...	19000	740	100	41	7.2	1.2	23	0	19
MAY 08...	--	1900	73	14	--	--	--	--	--
JUN 05...	15000	1500	280	25	8.9	1.7	20	0	16
JUL 18...	--	8500	2100	250	--	--	--	--	--
AUG 15...	15000	3100	790	27	12	1.6	39	0	32
SEP 11...	--	2300	650	26	--	--	--	--	--

01172000 CONNECTICUT RIVER AT HOLYOKE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO ₂)	SULFATE DIS- SOLVED (MG/L AS SO ₄)	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)	SOLIDS, VOLA- TILE IN BOTTOM MA- TERIAL (MG/KG)	NITRO- GEN, NITRATE TOTAL (MG/L AS N)	NITRO- GEN, NITRITE TOTAL (MG/L AS N)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)
OCT 25...	6.8	11	9.7	2	77	5090	.29	.01	.30
DEC 05...	--	--	--	3	72	--	.39	.01	.40
MAR 15...	--	--	--	23	89	--	.30	.00	.30
APR 11...	5.8	--	--	10	72	15600	.26	.00	.26
MAY 08...	--	--	--	33	66	--	.24	.00	.24
JUN 05...	32	--	--	9	65	16500	.17	.01	.18
JUL 18...	--	--	--	7	88	--	.31	.00	.31
AUG 15...	3.1	--	--	5	98	18500	.27	.01	.28
SEP 11...	--	--	--	2	76	--	.17	.01	.18

DATE	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)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 25...	.08	.32	.40	.70	.12	1	--	16.8	.000
DEC 05...	.16	.18	.34	.74	.05	--	0	2.06	.000
MAR 15...	.05	.23	.28	.58	.04	--	0	.000	.000
APR 11...	.02	.11	.13	.39	.02	0	0	.580	.000
MAY 08...	.01	.28	.29	.53	.02	--	0	2.38	.000
JUN 05...	.04	.30	.34	.52	.02	0	1	1.96	.000
JUL 18...	.03	.29	.32	.63	.03	--	0	3.55	.000
AUG 15...	.06	.27	.33	.61	.03	0	0	1.55	.000
SEP 11...	.03	.74	.77	.95	.04	--	0	8.75	.000

CONNECTICUT RIVER BASIN

01172000 CONNECTICUT RIVER AT HOLYOKE, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	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)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 25...	0	1	10	1	6	270	12	40	<.5	0	10
APR 11...	0	5	10	0	5	590	75	30	.5	0	10

DATE	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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 25...	<.6	<.4	2.1	<.4	1.9	<.4	.0	.00	.00	.0	.00
APR 11...	<.8	--	1.1	--	1.1	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 11...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

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

01172500 WARE RIVER NEAR BARRE, MA

LOCATION.--Lat 42°25'35", long 72°01'30", Worcester County, Hydrologic Unit 01080204, on left bank 700 ft (200 m) downstream from Barre Falls Reservoir, 1.6 mi (2.6 km) upstream from Burnshirt River, 4 mi (6 km) east of Barre, and at mile 35.3 (55.6 km).

DRAINAGE AREA.--55.0 mi² (142.4 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 745 ft (227 m), from topographic map.

REMARKS.--Records good. Prior to August 1955, slight regulation at low flow at times by Long Pond. Flow regulated by Barre Falls Reservoir (Reservoirs in Connecticut River basin) since 1958. Diversion at times since 1955 from 6.5 mi² (16.8 km²) above station for municipal supply of Fitchburg. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--33 years, 92.2 ft³/s (2.611 m³/s), 22.77 in/yr (578 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft³/s (53.5 m³/s) Oct. 16, 1955, gage height, 6.31 ft (1.923 m); minimum, 0.5 ft³/s (0.014 m³/s) Sept. 11, 12, 1963; minimum daily, 0.5 ft³/s (0.014 m³/s) Sept. 11, 1963. Maximum discharge since construction of Barre Falls Reservoir in 1958, 1,230 ft³/s (34.8 m³/s) Mar. 14, 1979, gage height, 5.62 ft (1.713 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft³/s (34.8 m³/s) Mar. 14, gage height, 5.62 ft (1.713 m); minimum, 3.2 ft³/s (0.091 m³/s) Oct. 4; minimum daily, 3.4 ft³/s (0.096 m³/s) Oct. 2, 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	17	25	26	226	176	181	358	109	9.3	38	101
2	3.4	13	35	64	195	155	177	237	92	11	37	82
3	3.4	11	21	270	153	126	201	169	79	10	33	75
4	3.5	12	16	414	142	127	209	171	70	8.7	53	90
5	4.7	11	17	374	139	190	227	169	64	7.5	47	79
6	15	10	29	234	115	207	225	148	71	6.9	35	94
7	28	10	41	156	96	15	205	130	66	6.3	27	106
8	23	11	50	328	93	376	180	115	55	5.9	20	90
9	17	11	50	587	78	931	168	105	49	5.4	17	70
10	13	10	59	589	66	952	194	97	45	5.1	19	56
11	10	10	78	369	60	202	219	87	40	4.8	47	47
12	9.2	9.5	88	236	58	699	212	77	35	4.7	95	39
13	8.7	9.1	100	166	56	1090	194	75	30	4.6	194	34
14	14	9.1	102	165	54	1140	179	80	26	4.7	222	32
15	28	8.8	83	194	53	926	184	95	23	6.5	170	39
16	27	8.6	59	171	49	461	193	101	21	18	114	38
17	22	8.4	31	126	34	246	201	87	20	141	79	33
18	18	13	24	119	38	217	190	74	18	161	62	29
19	15	15	24	100	36	202	171	69	17	174	64	27
20	15	15	24	90	36	182	153	69	16	137	65	24
21	15	14	25	111	35	174	141	72	14	80	56	23
22	14	13	25	205	47	174	130	67	12	51	46	96
23	13	12	26	290	57	182	123	61	11	36	38	162
24	12	15	26	218	64	185	115	105	10	24	34	137
25	10	21	26	98	78	199	109	194	9.4	39	54	94
26	9.5	19	26	472	206	272	105	280	8.5	50	201	71
27	20	15	26	693	359	323	101	246	8.0	171	197	56
28	24	14	26	667	298	316	160	184	7.4	188	166	47
29	21	15	26	616	---	252	380	155	7.3	121	135	65
30	18	17	26	414	---	179	433	139	7.1	74	119	93
31	21	---	26	255	---	177	---	128	---	50	119	---
TOTAL	459.2	377.5	1240	8827	2931	11053	5660	4144	1040.7	1621.4	2603	2029
MEAN	14.8	12.6	40.0	285	105	357	189	134	34.7	52.3	84.0	67.6
MAX	28	21	102	693	359	1140	433	358	109	188	222	162
MIN	3.4	8.4	16	26	35	15	101	61	7.1	4.6	17	23
MEAN†	15.0	13.3	49.3	277	117	344	206	117	33.9	52.6	84.4	67.5
CFSM†	.27	.24	.90	5.04	2.13	6.25	3.75	2.13	.62	.96	1.53	1.23
IN.†	.31	.27	1.03	5.81	2.21	7.21	4.18	2.45	.69	1.10	1.77	1.37
CAL YR 1978 TOTAL	32123.6		MEAN	88.0	MAX	504	MIN	3.4	MEAN†	88.8	CFSM†	1.61
WTR YR 1979 TOTAL	41985.8		MEAN	115	MAX	1140	MIN	3.4	MEAN†	115	CFSM†	2.09
											IN†	21.93
											IN†	28.41

† Adjusted for change in contents in Barre Falls Reservoir.

CONNECTICUT RIVER BASIN

01173000 WARE RIVER AT INTAKE WORKS, NEAR BARRE, MA

LOCATION.--Lat 42°23'26", long 72°03'39", Worcester County, Hydrologic Unit 01080204, on right bank above diversion dam at Ware River intake works, 2.7 mi (4.3 km) downstream from Burnshirt River, 3 mi (5 km) southeast of Barre, and at mile 29.1 (46.8 km).

DRAINAGE AREA.--96.8 mi² (250.7 km²).

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

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

GAGE.--Venturi meters and water-stage recorder. Datum of gage is 5.65 ft (1.722 m) below National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1936, water-stage recorder at site 0.2 mi (0.3 km) downstream at datum 631.91 ft (192.606 m) NGVD.

REMARKS.--Records good. Figures of discharge include diversion as needed for Boston metropolitan district during period Oct. 15 to June 14 of each year and at other times for emergency flood-control purposes as authorized by Corps of Engineers, U.S. Army; diversion began in March 1931. Flow regulated by Barre Falls Reservoir 4.3 mi (6.9 km) upstream (Reservoirs in Connecticut River basin) since 1958. Diversion at times since 1955 from 6.5 mi² (16.8 km²) upstream for municipal supply of Fitchburg. Several observations of water temperature were made during the year.

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

AVERAGE DISCHARGE.--51 years, 166 ft³/s (4.701 m³/s), 23.29 in/yr (592 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft³/s (396 m³/s) Sept. 21, 1938, gage height, 664.28 ft (202.473 m), by computation of flow over dam; minimum daily, 1.1 ft³/s (0.031 m³/s) Sept. 19, 1965, caused by unusual regulation. Maximum daily discharge since construction of Barre Falls Reservoir in 1958, 1,570 ft³/s (44.5 m³/s) Mar. 6, 14, 1979.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,570 ft³/s (44.5 m³/s) Mar. 6, 14; minimum daily, 11 ft³/s (0.31 m³/s) Oct. 1-4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	76	28	89	382	288	309	538	194	31	73	162
2	11	39	26	352	330	260	333	390	170	32	77	145
3	11	30	25	536	267	235	369	308	154	28	70	137
4	11	28	23	598	245	224	351	316	142	25	88	144
5	15	27	45	559	218	439	422	291	141	22	79	141
6	45	25	60	361	166	1570	365	257	144	21	60	180
7	52	25	63	281	167	1370	341	230	144	19	47	218
8	43	25	77	883	161	970	297	210	135	18	38	167
9	34	25	135	1020	179	1520	270	196	113	19	68	143
10	28	25	143	881	132	1020	337	181	102	19	54	129
11	24	24	133	522	123	854	363	169	90	49	79	97
12	22	23	134	364	119	1200	355	150	80	19	173	84
13	21	22	134	267	118	1500	319	143	72	17	314	89
14	35	22	132	307	116	1570	336	165	64	17	298	78
15	51	21	117	318	115	1230	345	195	60	18	196	82
16	69	21	102	267	116	669	351	175	53	83	142	81
17	42	22	69	188	107	399	365	145	50	191	123	75
18	35	30	49	177	98	392	322	140	47	287	102	60
19	32	33	50	148	84	378	293	131	45	290	111	48
20	33	32	51	149	77	334	279	125	40	190	119	50
21	30	31	63	282	79	324	241	125	36	125	111	66
22	30	29	63	443	102	327	218	115	33	115	74	268
23	28	28	59	500	117	341	219	116	31	63	62	267
24	26	35	55	382	243	356	195	255	30	55	58	204
25	23	41	57	644	298	417	186	430	28	71	195	154
26	25	35	58	889	361	489	189	473	26	103	360	141
27	51	31	54	1070	489	467	385	378	24	297	284	126
28	54	31	52	987	403	475	472	283	23	246	234	100
29	46	30	49	910	---	341	660	260	23	159	216	141
30	50	29	51	626	---	310	639	281	24	136	227	178
31	111	---	52	456	---	307	---	203	---	90	200	---
TOTAL	1099	895	2209	15456	5412	20576	10126	7374	2318	2855	4332	3955
MEAN	35.5	29.8	71.3	499	193	664	338	238	77.3	92.1	140	132
MAX	111	76	143	1070	489	1570	660	538	194	297	360	268
MIN	11	21	23	89	77	224	186	115	23	17	38	48
MEAN†	35.6	30.5	80.5	491	206	651	355	221	76.5	92.4	140	132
CFSM†	.37	.32	.83	5.07	2.13	6.73	3.67	2.28	.79	.95	1.45	1.36
IN.†	.42	.35	.96	5.85	2.21	7.76	4.09	2.64	.88	1.10	1.67	1.52

CAL YR 1978	TOTAL	57695.4	MEAN	158	MAX	777	MIN	8.4	MEAN†	159	CFSM†	1.64	IN†	22.29
WTR YR 1979	TOTAL	76607.0	MEAN	210	MAX	1570	MIN	11	MEAN†	210	CFSM†	2.17	IN†	29.45

† Adjusted for change in contents in Barre Falls Reservoir.

01173500 WARE RIVER AT GIBBS CROSSING, MA

LOCATION.--Lat 42°14'07", long 72°16'45", Hampshire County, Hydrologic Unit 01080204, on right bank 0.5 mi (0.8 km) upstream from Gibbs Crossing, 1.8 mi (2.9 km) upstream from Beaver Brook, 2.5 mi (4.0 km) southwest of Ware, and 8.8 mi (14.2 km) upstream from mouth.

DRAINAGE AREA.--199 mi² (515 km²).

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

REVISED RECORDS.--WSP 661: Drainage area. WSP 1031: 1944. WSP 1301: 1914(M).

GAGE.--Water-stage recorder. Datum of gage is 379.79 ft (115.760 m) National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1930, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good except those for winter period, which are poor. Diversion at times: since March 1931 from 97 mi² (251 km²) for supply of Boston metropolitan district (see table below for figures of diversion) and since 1955 from 6.5 mi² (16.8 km²) for municipal supply of Fitchburg. Regulation by Barre Falls Reservoir (Reservoirs in Connecticut River basin) since 1958. Flow regulated by mills upstream prior to 1967. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--67 years, 290 ft³/s (8.213 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,700 ft³/s (643 m³/s) Sept. 21, 1938, gage height, 18.2 ft (5.55 m), from floodmarks, from rating curve extended above 4,600 ft³/s (130 m³/s) on basis of contracted-opening measurement at gage height 12.83 ft (3.911 m) and slope-area measurement at gage height 18.2 ft (5.55 m); minimum, 5.0 ft³/s (0.14 m³/s) Oct. 26, 1914; minimum daily, 6.0 ft³/s (0.17 m³/s) Oct. 4, 1914. Maximum discharge since construction of Barre Falls Reservoir in 1958, 5,050 ft³/s (143 m³/s) Mar. 6, 1979, gage height, 7.94 ft (2.420 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,050 ft³/s (143 m³/s) Mar. 6, gage height, 7.94 ft (2.420 m); minimum, 34 ft³/s (0.96 m³/s) Oct. 1; minimum daily, 37 ft³/s (1.05 m³/s) Oct. 1, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	117	120	170	502	330	423	1120	371	94	152	625
2	43	120	107	750	470	340	441	913	341	85	233	430
3	40	80	107	1190	430	330	528	295	295	76	173	369
4	37	62	120	590	390	320	542	742	268	70	182	376
5	40	56	180	450	350	620	535	695	260	63	184	325
6	58	55	154	380	310	2780	535	588	272	58	130	462
7	85	53	136	370	290	2550	509	522	268	54	97	823
8	66	53	147	1650	290	1090	435	465	246	51	81	568
9	58	55	295	1400	280	1050	418	429	210	48	70	398
10	55	55	412	800	260	1200	661	372	175	47	102	324
11	53	56	100	650	250	1700	833	338	151	46	251	273
12	51	55	280	520	240	1300	775	289	139	51	401	219
13	49	56	279	440	230	1150	703	279	126	50	775	194
14	53	55	260	500	220	1050	620	289	118	43	672	194
15	69	53	245	500	210	1050	496	360	118	42	491	210
16	75	53	205	400	200	820	509	366	102	53	345	191
17	88	53	180	340	190	660	550	311	95	586	253	172
18	71	60	155	310	175	580	502	260	90	473	210	158
19	60	66	135	290	160	520	447	255	85	674	215	136
20	62	66	120	280	150	490	423	250	81	444	232	117
21	62	66	150	490	150	480	394	245	78	276	221	128
22	60	66	150	900	190	500	377	230	75	200	183	587
23	62	64	140	750	250	510	377	224	71	138	136	827
24	64	80	130	630	450	520	360	422	68	98	119	595
25	58	99	160	1800	900	580	343	754	65	87	167	431
26	56	96	150	1500	560	620	338	1010	63	158	1450	339
27	71	83	115	913	380	460	999	880	59	602	921	294
28	93	83	100	791	340	418	1580	666	57	538	821	251
29	96	71	93	710	---	400	1140	553	56	376	549	338
30	85	101	88	612	---	394	1150	478	55	245	729	419
31	78	---	85	528	---	406	---	376	---	191	1120	---
TOTAL	1935	2088	5298	21604	8817	25218	17943	15407	4458	6017	11665	10773
MEAN	62.4	69.6	171	697	315	813	598	497	149	194	376	359
MAX	96	120	412	1800	900	2780	1580	1120	371	674	1450	827
MIN	37	53	85	170	150	320	338	224	55	42	70	117
(†)	0	0	0	359	71.1	4.14	129	12.8	0	0	0	0
CAL YR 1978 TOTAL	93416		MEAN 256	MAX 2280	MIN 37							
WTR YR 1979 TOTAL	131223		MEAN 360	MAX 2780	MIN 37							

† Diversion, in cubic feet per second, from 97 mi² for supply of Boston metropolitan district; records furnished by Metropolitan District Commission.

01174000 HOP BROOK NEAR NEW SALEM, MA

LOCATION.--Lat 42°28'42", long 72°20'05", Franklin County, Hydrologic Unit 01080204, on right bank 1.5 mi (2.4 km) upstream from mouth and 1.5 mi (2.4 km) south of New Salem.

DRAINAGE AREA.--3.39 mi² (8.78 km²).

PERIOD OF RECORD.--Discharge: October 1947 to current year. Monthly discharge only October 1947, published in WSP 1301.

Water-quality records: Water year 1961.

Chemical analyses: December 1971 to September 1973.

Water temperatures: December 1971 to September 1973.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 725 ft (221 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, June 30 to Aug. 1, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--32 years, 6.16 ft³/s (0.174 m³/s), 24.68 in/yr (627 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 289 ft³/s (8.18 m³/s) Oct. 24, 1959, gage height, 3.17 ft (0.966 m), from rating curve extended above 130 ft³/s (3.7 m³/s); maximum gage height, 3.21 ft (0.978 m) Feb. 2, 1973 (ice jam); minimum discharge, 0.004 ft³/s (<0.001 m³/s) Aug. 3, 9, 10, 1955.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 100 ft³/s (2.8 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	0715	105 3.0	ice jam	Apr. 27	1230	152 4.30	2.53 0.771
Mar. 6	0915	*260 7.4	a*3.14 0.957				

a Ice jam.

Minimum discharge, 0.19 ft³/s (0.005 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.94	2.0	15	8.6	8.6	9.8	19	7.2	11	.92	1.6
2	.63	.94	1.5	35	7.9	8.4	13	15	6.0	5.0	3.6	1.1
3	.39	.94	1.2	25	6.8	7.6	16	14	5.4	2.5	1.4	1.9
4	.39	.80	2.6	13	6.0	8.0	11	18	5.0	1.6	.91	1.7
5	.99	.89	3.3	8.0	5.1	35	16	13	5.0	1.4	.61	1.2
6	4.7	.71	2.0	7.0	4.7	175	12	11	5.8	1.2	.42	1.4
7	1.6	.75	1.8	8.0	4.4	100	10	9.8	4.1	1.1	.33	7.6
8	.99	1.5	2.9	60	4.4	45	8.8	9.1	3.6	.86	.25	2.7
9	.75	1.3	14	20	3.8	33	11	8.1	3.7	.70	.23	1.8
10	.71	1.1	5.9	14	3.6	47	15	7.2	3.4	.60	.83	1.5
11	.71	.99	3.3	11	3.3	62	15	6.4	2.9	.54	1.5	1.2
12	.71	.71	2.5	9.0	3.0	28	13	5.8	3.1	.46	5.8	1.1
13	.71	.55	2.3	8.0	2.8	23	11	7.8	2.5	.42	11	.90
14	1.6	.59	2.1	10	2.7	27	12	8.1	2.3	.35	2.6	1.2
15	2.1	.71	1.9	7.0	2.5	20	13	6.9	2.0	.40	1.7	2.5
16	1.3	.59	1.8	5.7	2.3	16	16	5.6	1.8	1.0	1.2	1.4
17	1.0	1.0	2.5	4.9	2.2	14	13	4.6	1.6	3.0	.84	2.3
18	.89	2.5	2.0	4.6	2.2	12	11	4.3	1.5	1.7	1.0	1.0
19	.94	1.4	1.5	4.3	2.1	12	8.8	4.3	1.6	1.8	2.1	1.0
20	1.7	.92	1.4	4.0	2.1	12	7.5	4.6	1.5	1.0	2.4	.81
21	1.2	.89	3.9	34	2.6	14	7.2	4.3	1.0	.70	1.3	2.1
22	.99	.87	2.7	37	4.5	14	6.7	3.7	.95	.50	1.9	20
23	.89	1.0	1.9	17	5.5	14	6.0	4.5	.90	.43	.81	5.2
24	.84	2.5	1.6	11	20	13	7.5	26	.84	.38	.81	2.7
25	.80	2.3	1.9	55	30	16	6.9	36	.84	.37	2.7	2.2
26	.94	1.3	1.8	27	17	12	6.4	17	.70	1.4	3.4	2.1
27	2.9	.89	1.7	16	12	10	91	11	.66	4.5	2.0	1.8
28	1.8	1.0	1.6	14	9.2	9.1	47	9.5	.64	1.5	1.3	1.8
29	1.3	.98	1.5	12	---	8.8	34	14	.59	1.0	3.3	15
30	.99	2.6	1.4	10	---	8.8	23	14	1.0	.74	3.7	4.3
31	.94	---	1.5	9.1	---	9.1	---	9.8	---	.58	2.5	---
TOTAL	36.70	34.16	80.0	515.6	181.3	822.4	478.6	332.4	78.12	48.73	63.36	105.71
MEAN	1.18	1.14	2.58	16.6	6.48	26.5	16.0	10.7	2.60	1.57	2.04	3.52
MAX	4.7	2.6	14	60	30	175	91	36	7.2	11	11	20
MIN	.30	.55	1.2	4.0	2.1	7.6	6.0	3.7	.59	.35	.23	.81
CFSM	.35	.34	.76	4.90	1.91	7.82	4.72	3.16	.77	.46	.60	1.04
IN.	.40	.37	.88	5.66	1.99	9.02	5.25	3.65	.86	.53	.70	1.16

CAL YR 1978 TOTAL 1788.65 MEAN 4.90 MAX 60 MIN .11 CFSM 1.45 IN 19.62
WTR YR 1979 TOTAL 2777.08 MEAN 7.61 MAX 175 MIN .23 CFSM 2.25 IN 30.47

01174500 EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA

LOCATION.--Lat 42°23'36", long 72°14'21", Worcester County, Hydrologic Unit 01080204, on left bank 100 ft (30 m) above spillway of regulating dam and 4.6 mi (7.4 km) northwest of Hardwick.

DRAINAGE AREA.--43.7 mi² (113.2 km²).

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

Water-quality records: Water year 1957.

GAGE.--Water-stage recorder. Concrete spillway since Mar. 12, 1940. Datum of gage is 504.70 ft (153.833 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of backwater from Quabbin Reservoir, Mar. 15 to June 19, which are fair. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--42 years, 69.0 ft³/s (1.954 m³/s), 21.44 in/yr (545 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,780 ft³/s (192 m³/s) Sept. 21, 1938, average of slope-area and contracted-opening measurements; maximum gage height since construction of concrete spillway in 1940, 22.49 ft (6.855 m) June 25, 1944; no flow at times during several years.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 350 ft³/s (9.9 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)		Date	Time	Discharge (ft ³ /s) (m ³ /s)		Gage height (ft) (m)	
Jan. 3	1000	483	13.7	20.42	6.224	Mar. 7	0200	a*2180	61.7	22.38	6.821
Jan. 8	2000	636	18.0	20.64	6.291	Mar. 11	1700	629	17.8	20.63	6.288
Jan. 25	2200	531	15.0	20.49	6.245	Apr. 28	0600	689	19.5	20.78	6.334

a From rating curve extended above 600 ft³/s (17 m³/s) on basis of computation of flow over dam at gage height 22.49 ft (6.855 m).

Minimum discharge, 4.9 ft³/s (0.14 m³/s) July 10, 11-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	16	22	30	125	98	95	181	78	12	23	61
2	7.2	14	22	169	106	95	99	146	66	12	35	43
3	6.5	13	21	442	93	93	124	128	58	12	30	39
4	6.8	13	24	266	82	90	128	135	51	10	23	40
5	9.2	12	29	144	76	144	127	129	51	8.7	18	36
6	19	11	32	97	65	953	129	107	57	7.4	14	50
7	26	11	30	86	59	1710	116	93	55	6.9	11	127
8	24	12	29	418	61	712	99	82	48	6.2	8.7	103
9	20	12	61	467	56	413	98	77	42	6.2	7.9	67
10	17	11	110	239	53	314	121	73	39	5.6	10	45
11	16	11	84	143	48	540	133	64	35	5.1	17	34
12	15	11	58	96	44	444	144	57	32	4.9	26	28
13	13	9.5	45	84	42	266	137	55	29	4.9	48	23
14	15	8.8	39	109	39	218	127	63	25	4.9	50	20
15	18	9.2	33	105	36	231	129	72	22	4.9	40	23
16	17	9.2	28	85	34	180	136	66	22	5.2	30	22
17	15	9.0	29	72	33	148	149	57	20	11	23	20
18	13	12	28	64	30	127	139	50	18	17	20	18
19	12	13	23	54	29	114	116	48	17	25	20	17
20	15	12	21	51	28	109	101	46	15	23	20	14
21	14	12	30	114	29	107	89	49	12	19	18	16
22	13	12	34	249	34	112	83	49	11	16	16	106
23	13	12	31	228	40	113	77	44	11	14	14	167
24	12	16	27	172	101	116	72	82	11	12	12	115
25	10	19	36	372	250	134	70	219	10	10	35	76
26	11	18	31	471	239	151	68	281	9.1	14	172	55
27	21	17	26	336	159	130	233	180	7.7	64	124	42
28	22	18	23	255	115	109	631	122	7.6	64	77	34
29	21	17	20	207	---	95	405	94	7.7	46	52	66
30	19	22	19	174	---	86	257	84	8.0	33	68	110
31	17	---	19	148	---	84	---	87	---	25	86	---
TOTAL	463.9	392.7	1064	5947	2106	8236	4432	3020	875.1	509.9	1148.6	1617
MEAN	15.0	13.1	34.3	192	75.2	266	148	97.4	29.2	16.4	37.1	53.9
MAX	26	22	110	471	250	1710	631	281	78	64	172	167
MIN	6.2	8.8	19	30	28	84	68	44	7.6	4.9	7.9	14
CFSM	.34	.30	.79	4.39	1.72	6.09	3.39	2.23	.67	.38	.85	1.23
IN.	.39	.33	.91	5.06	1.79	7.01	3.77	2.57	.74	.43	.98	1.38
CAL YR 1978	TOTAL	22399.2	MEAN	61.4	MAX	640	MIN	3.9	CFSM	1.41	IN	19.07
WTR YR 1979	TOTAL	29812.2	MEAN	81.7	MAX	1710	MIN	4.9	CFSM	1.87	IN	25.38

CONNECTICUT RIVER BASIN

01174600 CADWELL CREEK NEAR PELHAM, MA

LOCATION.--Lat 42°21'16", long 72°23'18", Hampshire County, Hydrologic Unit 01080204, on left bank 0.8 mi (1.3 km) east of Knights Corner, 2 mi (3 km) upstream from mouth, 2.7 mi (4.3 km) south of Pelham, and 5 mi (8 km) north of Belchertown.

DRAINAGE AREA.--0.63 mi² (1.63 km²).

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Altitude of gage is 860 ft (262 m), 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.--18 years, 1.15 ft³/s (0.033 m³/s), 24.79 in/yr (630 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46 ft³/s (1.30 m³/s) Mar. 6, 1979, gage height, 5.26 ft (1.603 m), from rating curve extended above 21 ft³/s (0.59 m³/s); no flow at times.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 18 ft³/s (0.51 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2230	19 0.54	4.58 1.396	Mar. 6	0945	a*46 1.30	5.26 1.603
Jan. 8	0630	23 .65	4.70 1.433	Apr. 27	1300	35 .99	5.02 1.530
Jan. 25	0530	20 .57	4.61 1.405				

a From rating curve extended above 21 ft³/s (0.59 m³/s).

No flow July 14, Aug. 8, 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.11	.34	4.2	1.1	1.0	1.2	2.0	.97	1.7	.09	.36
2	.03	.10	.26	14	1.0	.94	1.5	1.5	.75	.39	.39	.25
3	.02	.10	.21	7.9	.90	.94	2.1	1.3	.63	.19	.10	.39
4	.03	.09	.63	2.3	.81	1.3	1.4	1.9	.54	.11	.06	.23
5	.07	.09	.72	1.4	.69	8.8	2.2	1.3	.51	.08	.03	.16
6	.73	.09	.45	.81	.61	34	1.5	1.1	.51	.07	.01	1.7
7	.18	.10	.38	1.2	.66	15	1.1	.97	.38	.06	.01	1.2
8	.11	.20	.72	16	.51	5.1	.94	.84	.32	.04	.00	.53
9	.08	.13	3.3	4.2	.47	3.3	1.3	.78	.32	.03	.00	.32
10	.07	.12	1.6	2.0	.44	4.2	2.6	.69	.29	.02	.68	.23
11	.07	.11	.90	1.3	.40	12	2.3	.61	.25	.02	.44	.16
12	.06	.10	.61	.81	.37	3.3	1.7	.56	.29	.01	1.8	.12
13	.06	.10	.49	.72	.34	2.1	1.3	.78	.21	.01	2.2	.10
14	.19	.11	.43	1.5	.32	2.4	1.4	.81	.16	.00	.60	.15
15	.14	.10	.38	1.0	.30	1.7	1.5	.78	.14	.02	.36	.35
16	.10	.10	.36	.75	.28	1.4	2.1	.61	.12	.10	.22	.15
17	.08	.14	.58	.61	.27	1.2	1.7	.49	.09	.34	.14	.11
18	.07	.39	.47	.58	.26	1.0	1.3	.47	.08	.18	.18	.08
19	.12	.20	.32	.54	.25	.97	1.0	.47	.10	.15	.39	.10
20	.19	.15	.26	.49	.25	.94	.87	.49	.06	.07	.70	.08
21	.11	.14	.75	6.0	.25	.94	.81	.51	.04	.03	.31	.37
22	.10	.13	.54	5.5	.42	.97	.78	.39	.03	.02	.20	4.9
23	.09	.13	.41	2.6	.45	1.0	.72	.63	.03	.01	.15	1.6
24	.08	.57	.34	1.7	1.9	1.1	.63	3.9	.03	.01	.13	.77
25	.08	.38	.39	13	5.0	1.7	.63	8.3	.03	.01	.24	.53
26	.19	.22	.36	5.0	2.3	1.4	.63	3.6	.02	.22	.33	.41
27	.65	.14	.36	2.8	1.3	1.0	21	1.9	.01	.41	.26	.31
28	.22	.16	.32	2.1	1.1	.90	11	1.3	.01	.12	.27	.27
29	.15	.16	.29	1.8	---	.90	5.0	1.5	.01	.07	.23	1.8
30	.13	.51	.29	1.5	---	.90	2.8	1.7	.24	.04	.74	.98
31	.13	---	.32	1.3	---	.90	---	1.6	---	.03	.78	---
TOTAL	4.36	5.17	17.78	105.61	22.95	113.30	75.01	43.78	7.17	4.56	12.04	18.71
MEAN	.14	.17	.57	3.41	.82	3.65	2.50	1.41	.24	.15	.39	.62
MAX	.73	.57	3.3	16	5.0	34	21	8.3	.97	1.7	2.2	4.9
MIN	.02	.09	.21	.49	.25	.90	.63	.39	.01	.00	.00	.08
CF SM	.22	.27	.91	5.41	1.30	5.79	3.97	2.24	.38	.24	.62	.98
IN.	.26	.30	1.05	6.23	1.35	6.68	4.42	2.58	.42	.27	.71	1.10
CAL YR 1978	TOTAL 316.60	MEAN .87	MAX 13	MIN .00	CF SM 1.38	IN 18.66						
WTR YR 1979	TOTAL 430.44	MEAN 1.18	MAX 34	MIN .00	CF SM 1.87	IN 25.38						

01174900 CADWELL CREEK NEAR BELCHERTOWN, MA

LOCATION.--Lat 42°20'08", long 72°22'12", Hampshire County, Hydrologic Unit 01080204, on left bank 200 ft (60 m) upstream from mouth, 2 mi (3 km) southeast of Knights Corner, and 4.5 mi (7.2 km) north of Belchertown.

DRAINAGE AREA.--2.81 mi² (7.28 km²).

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

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Altitude of gage is 540 ft (165 m), from topographic map.

REMARKS.--Records good except those for February, which are poor. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--18 years, 4.82 ft³/s (0.137 m³/s), 23.29 in/yr (592 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 271 ft³/s (7.67 m³/s) Mar. 6, 1979, gage height, 7.42 ft (2.262 m), from rating curve extended above 92 ft³/s (2.6 m³/s); minimum, 0.07 ft³/s (0.002 m³/s) several times in water years 1964, 1965, and 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 75 ft³/s (2.1 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	0930	77 2.18	6.50 1.981	Mar. 6	1100	a*271 7.67	7.42 2.262
Jan. 25	0630	77 2.18	6.50 1.981	Apr. 27	1300	134 3.79	6.86 2.091

a From rating curve extended above 92 ft³/s (2.6 m³/s).

Minimum discharge, 0.14 ft³/s (0.004 m³/s) Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.17	.72	1.9	15	5.2	4.9	5.7	9.4	4.9	9.1	.52	1.1
2	.24	.65	1.5	45	4.3	4.9	6.2	7.5	3.9	2.7	2.0	.81
3	.22	.61	1.1	26	4.0	4.8	8.6	6.6	3.4	1.5	.81	1.1
4	.24	.60	2.5	8.7	3.8	5.9	6.2	9.2	3.1	.94	.49	1.0
5	.52	.60	3.1	5.2	3.1	2.9	8.6	6.5	2.9	.78	.37	.68
6	3.9	.58	2.2	4.5	2.8	181	6.4	5.5	3.0	.68	.26	4.5
7	1.5	.59	1.8	5.1	2.7	72	5.2	4.9	2.4	.63	.21	3.9
8	.84	1.0	3.1	55	2.6	27	4.5	4.5	2.1	.49	.18	1.7
9	.61	.87	14	19	2.3	10	5.9	4.1	2.1	.40	.17	1.1
10	.54	.73	7.1	8.4	2.2	15	10	3.8	1.9	.33	2.6	.88
11	.51	.67	3.5	5.9	2.0	41	9.6	3.3	1.6	.31	2.5	.68
12	.47	.63	2.9	4.7	1.8	20	7.5	3.2	1.7	.31	6.5	.54
13	.47	.58	2.6	4.2	1.7	11	5.9	3.9	1.4	.28	8.6	.48
14	1.0	.58	2.3	8.7	1.6	10	6.2	4.0	1.3	.23	2.7	.53
15	1.2	.57	2.0	5.6	1.5	9.9	6.5	3.9	1.1	.26	1.7	1.4
16	.77	.55	1.9	4.0	1.4	8.7	8.3	3.2	1.0	.58	1.2	.72
17	.63	.61	2.7	3.4	1.5	7.7	7.5	2.7	.87	1.6	.84	.55
18	.56	2.0	2.1	3.3	1.5	6.5	5.8	2.6	.84	.97	.87	.45
19	.58	1.3	1.7	2.8	1.5	5.2	4.9	2.6	.81	1.0	1.7	.48
20	1.1	.94	1.5	2.6	1.5	4.8	4.4	2.6	.66	.58	2.1	.41
21	.79	.83	3.7	27	1.7	4.8	4.0	2.8	.55	.40	1.3	.96
22	.67	.80	3.2	26	2.8	5.0	3.9	2.3	.49	.31	.97	16
23	.61	.76	2.3	12	3.5	5.4	3.7	2.8	.47	.28	.71	5.1
24	.56	2.2	1.9	7.9	17	5.6	3.4	15	.42	.24	.68	2.6
25	.51	2.2	2.1	50	19	7.9	3.3	31	.40	.24	.94	1.9
26	.78	1.2	2.0	22	8.4	6.4	3.3	15	.33	.81	1.2	1.6
27	3.0	.92	1.9	13	6.0	5.2	78	8.1	.31	2.4	.81	1.3
28	1.5	1.0	1.7	11	5.1	4.5	44	5.8	.29	.84	.97	1.1
29	1.0	.97	1.6	9.4	---	4.5	23	5.9	.28	.58	.74	4.8
30	.86	2.5	1.5	7.6	---	4.6	14	8.4	.94	.42	1.2	3.2
31	.77	---	1.6	6.5	---	4.6	---	7.9	---	.33	1.9	---
TOTAL	27.12	28.76	45.0	429.5	112.5	543.8	314.5	199.0	45.46	30.52	47.74	61.57
MEAN	.87	.96	2.74	13.9	4.02	17.5	10.5	6.42	1.52	.98	1.54	2.05
MAX	3.9	2.5	14	55	19	181	78	31	4.9	9.1	8.6	16
MIN	.17	.55	1.1	2.6	1.4	4.5	3.3	2.3	.28	.23	.17	.41
CFSM	.31	.34	.98	4.95	1.43	6.23	3.74	2.29	.54	.35	.55	.73
IN.	.36	.38	1.12	5.68	1.49	7.20	4.16	2.63	.60	.40	.63	.81

CAL YR 1978 TOTAL 1488.05 MEAN 4.08 MAX 69 MIN .12 CFSM 1.45 IN 19.69
WTR YR 1979 TOTAL 1925.47 MEAN 5.28 MAX 181 MIN .17 CFSM 1.88 IN 25.48

CONNECTICUT RIVER BASIN

01175500 SWIFT RIVER AT WEST WARE, MA

LOCATION.--Lat 42°16'04", long 72°19'59", Hampshire County, Hydrologic Unit 01080204, on left bank at West Ware, 1.4 mi (2.3 km) downstream from Quabbin Reservoir, 3.5 mi (5.6 km) east of Belchertown, and 8.0 mi (12.9 km) upstream from mouth.

DRAINAGE AREA.--188 mi² (487 km²), includes 1.6 mi² (4.1 km²) drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 mi² (482 km²).

PERIOD OF RECORD.--Discharge: July 1910 to September 1912 (twice-daily gage heights and corresponding discharge), October 1912 to current year.
Water-quality records: Water years 1952-54.

REVISED RECORDS.--WSP 401: Drainage area. WSP 451: 1916. WSP 871: 1919. WSP 1031: 1944 (changes in reservoir contents and adjusted figures only). WSP 1301: 1925(M).

GAUGE.--Water-stage recorder. Datum of gage is 365.18 ft (111.307 m) National Geodetic Vertical Datum of 1929. Prior to Aug. 25, 1912, nonrecording gage at site 400 ft (100 m) upstream at same datum.

REMARKS.--Records good. Flow regulated since August 1939 by Quabbin Reservoir (Reservoirs in Connecticut River basin). Diversion from Ware River to Quabbin Reservoir since 1940, from Quabbin Reservoir to Wachusett Reservoir since 1941, from Quabbin Reservoir to Chicopee Valley aqueduct since 1950, and at times during 1966, 1967, and 1977 from Quabbin Reservoir to city of Worcester (see table below for figures of diversion). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--27 years (water years 1913-39) prior to completion of Quabbin Reservoir, 314 ft³/s (8.892 m³/s), 22.68 in/yr (576 mm/yr); 40 years (water years 1940-79) affected by storage and diversions, 93.1 ft³/s (2.637 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,590 ft³/s (215 m³/s) Mar. 19, 1936, gage height, 15.00 ft (4.572 m); minimum daily, 9.1 ft³/s (0.26 m³/s) Dec. 15, 1968. Maximum discharge since construction of Quabbin Reservoir in 1939, 1,870 ft³/s (53.0 m³/s) Apr. 30, 1956, gage height, 8.37 ft (2.551 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,100 ft³/s (31.2 m³/s) Apr. 29, gage height, 7.04 ft (2.146 m) from rating curve extended above 390 ft³/s (11.0 m³/s); minimum daily, 40 ft³/s (1.13 m³/s) Dec. 7, 16, 20, 24, 31, July 21-23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	97	42	41	45	42	43	394	938	477	43	94	95
2	97	42	41	48	42	43	413	814	437	41	92	94
3	96	42	41	45	42	43	440	730	400	41	93	95
4	97	42	41	41	42	43	461	666	388	41	95	95
5	97	42	41	42	42	46	495	592	380	41	92	116
6	100	42	41	41	42	86	490	505	374	41	93	120
7	97	42	40	42	42	63	448	438	350	41	92	120
8	98	42	41	41	42	54	396	378	299	41	92	117
9	98	41	44	41	42	50	432	326	299	41	92	120
10	97	41	42	43	42	53	418	293	283	41	91	120
11	97	41	41	43	42	59	405	266	262	41	103	120
12	96	41	41	42	42	89	331	218	262	41	98	120
13	96	41	41	42	42	120	307	192	225	41	96	120
14	98	41	41	42	42	125	314	184	205	41	94	121
15	98	41	41	42	42	155	341	171	183	41	93	118
16	97	41	40	42	42	205	387	152	173	41	93	120
17	59	41	41	42	42	242	418	142	167	44	93	121
18	43	42	41	42	42	248	440	124	134	42	93	121
19	42	41	41	42	42	249	438	117	98	41	93	121
20	42	41	40	42	42	305	425	119	61	41	93	121
21	42	41	42	54	42	315	408	83	48	40	93	122
22	42	41	41	49	42	281	392	57	43	40	93	122
23	42	41	41	44	41	266	391	69	42	40	93	121
24	42	42	40	44	59	258	371	145	42	76	94	120
25	42	41	42	76	50	267	333	285	41	91	96	98
26	42	41	41	52	43	269	289	361	42	80	94	97
27	43	41	41	50	42	295	528	344	41	80	95	97
28	42	41	41	49	44	310	918	352	41	84	95	97
29	42	41	41	47	---	327	1070	380	41	92	95	97
30	42	42	41	46	---	361	1060	466	42	91	96	97
31	42	---	40	45	---	367	---	488	---	92	96	---
TOTAL	2205	1241	1272	1406	1203	5637	13953	10397	5880	1632	2905	3363
MEAN	71.1	41.4	41.0	45.4	43.0	182	465	335	196	52.6	93.7	112
MAX	100	42	44	76	59	367	1070	938	477	92	103	122
MIN	42	41	40	41	41	43	289	57	41	40	81	94
(†)	+532	+301	+308	-327	+23.3	-250	+88.6	+298	+233	+511	+510	+212
CAL YR 1978 TOTAL	39863											
WTR YR 1979 TOTAL	51094											
MEAN 109												
MAX 378												
MIN 39												
MEAN 140												
MAX 1070												
MIN 40												

† Diversions, in cubic feet per second, from Ware River to Quabbin Reservoir, and from Quabbin Reservoir to Wachusett Reservoir and Chicopee Valley aqueduct.

01175670 SEVENMILE RIVER NEAR SPENCER, MA

LOCATION.--Lat 42°15'54", long 72°00'19", Worcester County, Hydrologic Unit 01080204, on right bank 40 ft (12 m) upstream from bridge on Cooney Road and 1.5 mi (2.4 km) north of Spencer.

DRAINAGE AREA.--8.58 mi² (22.22 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 640 ft (195 m), from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Occasional regulation by ponds upstream since 1971. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--19 years, 14.1 ft³/s (0.399 m³/s), 22.32 in/yr (567 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 412 ft³/s (11.7 m³/s) Mar. 18, 1968, gage height, 5.19 ft (1.582 m); maximum gage height, 5.41 ft (1.649 m) Mar. 7, 1963 (ice jam); minimum discharge, 0.11 ft³/s (0.003 m³/s) July 21, 1976.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 60 ft³/s (1.7 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	1200	82 2.32	3.71 1.131	Mar. 6	1845	273 7.73	4.74 1.445
Jan. 8	1115	209 5.92	4.47 1.362	Mar. 11	1245	90 2.55	3.75 1.143
Jan. 22	0100	93 2.6	ice jam	Aug. 30	1730	69 1.95	3.56 1.085
Jan. 25	1300	*374 10.6	5.08 1.548				

Minimum discharge, 0.15 ft³/s (0.004 m³/s) June 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	2.4	5.3	14	26	21	21	28	14	1.2	4.5	34
2	.51	2.3	4.6	42	27	24	22	24	12	1.2	5.2	25
3	.41	2.3	4.3	50	21	21	29	22	10	.85	6.0	22
4	.31	2.4	5.1	53	18	24	31	26	9.1	.71	6.0	22
5	.34	2.4	7.6	51	16	59	32	24	8.8	.67	5.4	18
6	3.5	2.1	6.5	43	17	171	29	21	10	.43	4.7	20
7	3.6	2.1	5.8	24	16	174	27	18	8.6	.49	3.7	23
8	2.7	3.9	5.9	142	14	92	24	17	7.4	.57	2.8	18
9	3.1	2.6	12	107	13	62	25	16	7.2	.45	1.9	15
10	3.5	1.5	15	64	11	51	32	15	6.4	.26	2.7	11
11	2.5	2.3	12	45	10	79	31	13	5.2	.24	7.4	9.6
12	1.6	2.6	8.7	36	9.6	64	29	12	4.8	.25	20	8.8
13	1.3	2.4	7.1	28	9.2	45	25	13	4.0	.25	44	8.0
14	2.4	2.3	6.5	40	8.7	39	25	14	3.7	.35	30	8.0
15	3.4	2.4	6.1	36	8.3	36	26	17	3.4	.55	21	9.6
16	3.5	2.3	5.6	28	7.9	30	28	16	3.2	4.8	15	9.1
17	3.2	2.4	5.6	23	7.6	26	29	14	3.1	37	11	7.0
18	2.8	3.1	5.4	21	7.3	23	25	11	3.0	24	9.1	6.4
19	2.9	3.0	5.0	20	7.0	22	23	10	3.0	34	10	6.0
20	3.0	2.8	4.5	19	7.0	21	21	10	2.5	20	8.8	5.2
21	2.8	3.0	6.8	41	7.5	20	19	9.8	2.1	12	8.0	5.5
22	2.5	3.0	7.3	73	9.0	20	18	8.8	1.9	8.4	6.8	18
23	2.4	3.0	5.8	46	12	20	17	9.3	1.8	5.9	5.7	20
24	2.2	3.4	5.3	33	30	20	17	18	1.7	4.8	5.7	15
25	2.2	3.7	6.2	244	50	33	16	27	1.5	3.2	8.8	11
26	2.3	3.6	6.6	149	40	31	16	30	1.2	4.1	17	9.1
27	3.3	3.4	5.9	90	27	25	36	23	.79	12	11	8.0
28	3.4	3.3	5.5	65	23	22	53	19	.60	8.2	35	7.6
29	3.1	3.3	5.4	50	---	21	42	19	.88	6.6	23	14
30	2.8	5.0	5.5	40	---	21	34	17	.91	5.5	54	15
31	2.7	---	5.2	33	---	21	---	17	---	4.9	52	---
TOTAL	74.84	84.3	204.1	1750	460.1	1338	802	538.9	142.78	203.87	446.2	408.9
MEAN	2.41	2.81	6.58	56.5	16.4	43.2	26.7	17.4	4.76	6.58	14.4	13.6
MAX	3.6	5.0	15	244	50	174	53	30	14	37	54	34
MIN	.31	1.5	4.3	14	7.0	20	16	8.8	.60	.24	1.9	5.2
CFSM	.28	.33	.77	6.59	1.91	5.04	3.11	2.03	.56	.77	1.68	1.59
IN.	.32	.37	.88	7.59	1.99	5.80	3.48	2.34	.62	.88	1.93	1.77
CAL YR 1978 TOTAL	4505.04		MEAN 12.3	MAX 120	MIN .21	CFSM 1.43	IN 19.53					
WTR YR 1979 TOTAL	6453.99		MEAN 17.7	MAX 244	MIN .24	CFSM 2.06	IN 27.98					

CONNECTICUT RIVER BASIN

01176000 QUABOAG RIVER AT WEST BRIMFIELD, MA

LOCATION.--Lat 42°10'56", long 72°15'51", Hampden County, Hydrologic Unit 01080204, on right bank 10 ft (3 m) upstream from abandoned highway bridge site at West Brimfield, 0.9 mi (1.4 km) upstream from Blodgett Mill Brook, 3.5 mi (5.6 km) northeast of Palmer, and 9.9 mi (15.9 km) upstream from mouth.

DRAINAGE AREA.--151 mi² (391 km²).

PERIOD OF RECORD.--Discharge: August 1909 to August 1912 (twice-daily gage heights and corresponding discharges), September 1912 to current year.

Water-quality records: Water years 1953, 1967, 1969-70, 1972-74.

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

GAGE.--Water-stage recorder. Altitude of gage is 390 ft (119 m), from topographic map. Prior to Aug. 19, 1912, nonrecording gage, and Aug. 19, 1912, to Oct. 31, 1955, water-stage recorder, at several sites 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good except those for winter period and period of no gage-height record, Oct. 1-24, 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.--67 years (water years 1913-79), 243 ft³/s (6.882 m³/s), 21.85 in/yr (555 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,800 ft³/s (362 m³/s) Aug. 19, 1955, gage height, 15.36 ft (4.682 m), from floodmarks, present site and datum, from rating curve extended above 2,700 ft³/s (76 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 6.6 ft³/s (0.19 m³/s) Sept. 28, 29, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 840 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 8	1430	1110 31.4	5.73 1.747	Feb. 24	1230	975 27.6	5.49 1.673
Jan. 25	1030	1760 49.8	6.73 2.051	Mar. 8	0130	*1770 50.1	6.74 2.054

Minimum discharge, 19 ft³/s (0.54 m³/s) about Oct. 1-3, based on minimum-stage indicator.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	66	90	165	925	621	387	594	347	64	95	392
2	21	64	87	350	740	586	390	545	320	55	93	392
3	21	62	84	538	620	547	426	513	282	50	98	377
4	22	61	96	530	540	520	448	504	248	46	127	352
5	25	58	116	620	440	618	479	463	236	44	118	331
6	68	56	120	597	300	1050	468	436	231	41	99	380
7	82	55	117	472	350	1710	434	407	201	40	87	422
8	74	54	118	914	300	1750	440	378	182	42	76	377
9	68	46	173	965	250	1640	468	347	162	40	71	340
10	64	45	211	1010	220	1490	512	318	149	37	68	308
11	60	45	200	939	200	1580	521	298	135	36	74	272
12	57	43	210	852	180	1370	509	271	114	36	130	244
13	55	41	185	714	165	1270	500	257	106	34	241	224
14	58	41	172	758	155	1160	492	254	102	34	245	208
15	80	37	165	647	145	997	482	279	95	36	248	200
16	78	36	150	642	135	900	491	267	83	48	248	187
17	74	37	138	611	130	809	483	255	71	67	236	169
18	70	46	75	540	125	715	462	243	68	144	223	146
19	65	42	95	379	120	645	440	234	65	189	215	136
20	68	44	100	470	120	586	419	226	60	186	198	125
21	64	46	115	592	130	540	400	212	58	175	184	120
22	62	47	130	776	150	500	375	195	55	158	164	175
23	60	47	115	764	200	473	347	194	53	148	154	198
24	63	52	105	770	564	455	328	271	52	136	140	189
25	61	52	115	1450	813	466	319	391	52	123	146	180
26	62	43	120	1590	764	454	304	421	50	133	178	172
27	74	83	100	1620	692	438	503	400	49	216	178	164
28	74	73	70	1550	664	440	632	383	49	155	227	157
29	72	64	100	1390	---	430	644	381	52	133	224	209
30	71	82	96	1170	---	416	638	380	47	119	311	215
31	70	---	95	1070	---	403	---	388	---	111	367	---
TOTAL	1864	1568	3863	25455	10137	25579	13741	10705	3774	2876	5263	7361
MEAN	60.1	52.3	125	821	362	825	458	345	126	92.8	170	245
MAX	82	83	211	1620	925	1750	644	594	347	216	367	422
MIN	21	36	70	165	120	403	304	194	47	34	68	120
CFSM	.40	.35	.83	5.44	2.40	5.46	3.03	2.29	.83	.62	1.13	1.62
INF.	.46	.39	.95	6.27	2.50	6.30	3.39	2.64	.93	.71	1.30	1.81
CAL YR 1978	TOTAL	85862	MEAN	235	MAX	1290	MIN	20	CFSM	1.56	IN	21.15
WTR YR 1979	TOTAL	112186	MEAN	307	MAX	1750	MIN	21	CFSM	2.03	IN	27.64

01177000 CHICOPEE RIVER AT INDIAN ORCHARD, MA

LOCATION.--Lat 42°09'38", long 72°30'52", Hampden County, Hydrologic Unit 01080204, on left bank 1,000 ft (300 m) downstream from West Street Bridge at Indian Orchard, 1.1 mi (1.8 km) upstream from Fuller Brook, and 7.2 mi (11.6 km) upstream from mouth.

DRAINAGE AREA.--688 mi² (1,782 km²).

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

Water-quality records: Water years 1953, 1957.

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

GAGE.--Water-stage recorder. Altitude of gage is 125 ft (38 m), from topographic map. Prior to Nov. 1, 1938, water-stage recorder at site 1.8 mi (2.9 km) downstream at different datum.

REMARKS.--Records good except those for period of no gage-height record, Mar. 6-16, which are fair. Diversion since 1941 from 186 mi² (482 km²) in Swift River basin and at times since 1931 from 97 mi² (251 km²) in Ware River basin for Boston metropolitan district; since 1950, for Chicopee; since 1952, for South Hadley; and, at times during 1966, 1967, and 1977, for Worcester; diversions at times since 1955 from 6.5 mi² (16.8 km²) in Ware River basin for Fitchburg. Diversion from Ludlow Reservoir for Springfield and, prior to 1952, for Chicopee. See table below for figures of diversion. Flow regulated by powerplants upstream, by Quabbin Reservoir 21 mi (34 km) upstream on Swift River since 1939, by Barre Falls Reservoir on Ware River since 1958, by Conant Brook Reservoir since 1966 (Reservoirs in Connecticut River basin), and by smaller reservoirs. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--51 years, 904 ft³/s (25.60 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 45,200 ft³/s (1,280 m³/s) Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 ft³/s (0.45 m³/s) several times in 1929-31.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,500 ft³/s (297 m³/s) Mar. 7; minimum daily, 165 ft³/s (4.67 m³/s) Oct. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	197	353	382	510	1910	1480	1530	3420	1660	519	550	1570
2	263	377	342	1390	1560	1500	1590	2960	1510	372	552	1290
3	213	400	357	2630	1470	1380	1840	2570	1380	340	546	1050
4	235	224	342	1810	1340	1400	1980	2470	1270	306	647	1040
5	238	252	560	1450	1220	1730	2030	2340	1220	274	586	1080
6	461	286	500	1210	1100	5000	2010	2060	1180	267	557	1090
7	382	210	429	1050	929	9300	1850	1840	1140	265	470	1640
8	357	211	433	2910	983	5600	1710	1680	985	226	361	1500
9	387	262	616	3890	905	4900	1700	1530	920	255	377	1210
10	354	248	1050	2430	838	4500	2230	1400	905	249	570	990
11	324	214	792	1910	838	5000	2340	1230	790	278	501	930
12	330	194	728	1530	726	4400	2130	1180	797	238	810	808
13	212	247	630	1450	772	3700	1960	1170	697	200	1510	760
14	228	192	604	1720	558	3100	1870	1100	607	195	1360	713
15	386	279	623	1750	597	2700	1850	1070	613	245	1330	813
16	451	207	480	1460	662	2500	1860	1160	563	304	946	684
17	389	249	547	1240	703	2180	1960	1010	515	485	841	687
18	286	177	418	1170	567	2020	1870	933	515	726	710	660
19	290	191	311	990	523	1880	1750	858	455	1040	731	603
20	308	254	328	894	530	1750	1660	893	357	867	795	566
21	307	287	472	1290	468	1670	1580	859	310	638	772	542
22	165	245	489	3010	546	1600	1500	747	331	603	626	950
23	345	222	477	2450	809	1540	1460	742	252	397	623	1450
24	316	290	275	1970	1710	1510	1400	1130	314	423	598	1260
25	274	244	450	4990	3610	1600	1280	1850	352	422	548	914
26	275	275	579	5050	2510	1720	1250	2410	290	440	1370	876
27	311	306	436	3830	1700	1570	2480	2160	283	1400	1810	778
28	310	331	349	3340	1500	1510	4890	1840	194	1110	1440	727
29	295	311	224	2940	---	1490	4030	1720	268	875	1310	917
30	357	354	375	2550	---	1470	3680	1750	216	743	1190	1040
31	232	---	344	2220	---	1510	---	2000	---	562	1930	---
TOTAL	9478	7892	14942	67034	31624	83210	61270	50102	20889	15264	26967	29138
MEAN	306	263	482	2162	1129	2684	2042	1616	696	492	870	971
MAX	461	400	1050	5050	3610	9300	4890	3420	1660	1400	1930	1640
MIN	165	177	224	510	468	1380	1250	742	194	195	361	542
(†)	531	301	307	31.2	93.6	163	216	309	2.31	509	509	211
CAL YR 1978 TOTAL	309622			848	5530	154						
WTR YR 1979 TOTAL	417810			1145	9300	165						

† Diversions, in cubic feet per second, from Ware and Swift River basins for supply of Boston metropolitan district, Chicopee, and South Hadley, and from Ludlow Reservoir for Springfield; records furnished by Water Division of Metropolitan District Commission and city of Springfield.

CONNECTICUT RIVER BASIN

01177100 CHICOPEE RIVER AT CHICOPEE FALLS, MA

LOCATION.--Lat 42°09'37", long 72°34'52", Hampden County, multiple-parameter monitor on right bank on stone pier at Chicopee Falls dam, 300 ft (90 m) upstream from bridge on State Highway 33, and 4.0 mi (6.4 km) upstream from mouth.

DRAINAGE AREA.--711 mi² (1,841 km²).

PERIOD OF RECORD.--Water years 1973 to current year (seasonal records only since October 1975).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: February 1973, August 1973 to current year.

pH: February 1973, August 1973 to current year.

WATER TEMPERATURES: February 1973, August 1973 to current year.

DISSOLVED OXYGEN: February 1973, August 1973 to July 1976, May 1978 to current year.

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

REMARKS.--Interruptions in the record were due to malfunctions of the instrument. Daily records are considered good except those for February 1973 to November 1977, which are considered fair.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 533 micromhos May 29, 1975; minimum recorded, 30 micromhos Aug. 2, 1976.

pH: Maximum recorded, 9.1 units Nov. 16, 1973; minimum recorded, 4.1 units May 29, 1976.

WATER TEMPERATURES: Maximum recorded, 33.0°C July 7, 1975, Aug. 12, 13, 1976; minimum recorded, 0.0°C on several days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 15.2 mg/L Feb. 3, 1973; minimum recorded, 0.0 mg/L on many days in past years.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum recorded, 168 micromhos July 13; minimum, 55 micromhos Apr. 30.

pH: Maximum recorded, 7.7 units Apr. 6, 7; minimum recorded, 4.5 units Sept. 17.

WATER TEMPERATURES: Maximum recorded, 27.0°C July 25, 26, Aug. 4, 5; minimum recorded, 5.0°C Apr. 11.

DISSOLVED OXYGEN: Maximum recorded, 13.0 mg/L Apr. 4; minimum recorded, 5.3 mg/L July 1.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), APRIL TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN
			APRIL			
1	---	---	---	61	56	59
2	---	---	---	61	57	59
3	70	69	69	65	59	62
4	73	68	69	66	62	64
5	74	68	70	66	63	64
6	69	67	68	68	63	66
7	69	66	67	70	66	68
8	70	67	68	74	68	70
9	111	68	82	76	71	73
10	78	69	71	77	72	75
11	70	67	69	82	75	78
12	69	66	68	82	76	79
13	70	67	68	86	80	83
14	74	68	71	93	78	84
15	73	70	71	88	82	85
16	73	69	71	85	81	82
17	71	68	70	87	81	83
18	76	68	72	88	82	85
19	76	73	75	89	84	87
20	84	73	75	94	86	89
21	77	73	75	96	84	90
22	77	73	76	94	85	89
23	90	73	78	97	82	90
24	80	75	76	103	92	96
25	83	74	77	98	81	91
26	101	76	81	81	67	75
27	125	70	91	69	65	67
28	65	57	60	68	63	66
29	63	56	59	71	63	66
30	60	55	58	85	65	71
31	---	---	---	71	66	67
MONTH	125	55	72	103	56	76

01177100 CHICOPEE RIVER AT CHICOPEE FALLS, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), APRIL TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	72	67	69	126	111	118	104	81	94	66	62	64
2	73	68	70	120	108	115	104	84	93	66	62	64
3	75	70	73	133	108	117	104	92	97	71	64	67
4	77	71	73	133	111	117	102	95	98	70	64	67
5	79	72	75	134	111	118	102	95	98	72	65	68
6	78	72	74	128	111	119	102	93	98	75	66	70
7	79	72	75	136	111	119	103	94	97	70	64	68
8	79	75	78	134	114	123	112	96	103	68	62	65
9	82	76	79	140	114	122	114	95	103	69	62	64
10	83	78	81	129	112	118	115	95	102	70	60	64
11	85	76	81	128	109	115	112	83	92	67	61	64
12	84	75	80	127	108	115	92	81	86	71	62	65
13	94	73	81	168	111	119	84	70	77	73	64	67
14	88	77	82	143	112	123	70	65	68	95	67	81
15	90	78	84	132	62	112	66	59	62	100	86	91
16	91	83	88	127	83	107	71	60	63	94	86	89
17	98	84	90	133	112	123	70	61	65	93	85	89
18	99	88	93	121	114	117	73	60	65	101	85	91
19	108	87	94	114	101	108	77	65	70	111	81	91
20	105	90	95	101	89	96	78	65	69	105	80	93
21	108	92	99	108	91	98	74	64	69	109	86	96
22	114	94	102	97	88	94	73	64	69	125	90	102
23	114	100	105	101	91	95	102	64	85	91	84	88
24	119	103	108	111	90	97	119	89	98	88	81	84
25	114	104	109	114	90	98	129	89	103	83	77	80
26	127	110	117	121	88	101	113	87	96	92	77	82
27	127	112	116	92	84	89	87	67	77	85	75	79
28	125	109	114	92	88	90	71	65	67	100	78	84
29	136	111	119	93	87	90	76	65	68	103	82	91
30	135	112	120	93	88	90	72	67	70	88	83	85
31	---	---	---	96	85	91	69	64	66	---	---	---
MONTH	136	67	91	168	62	108	129	59	83	125	60	78
PERIOD	168	55	85									

PH (UNITS), APRIL TO SEPTEMBER 1979

DAY	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	6.2	6.1	6.1
2	---	---	---	6.3	6.1	6.1
3	6.5	6.4	6.4	6.2	6.1	6.1
4	6.9	6.3	6.5	6.2	6.0	6.1
5	7.2	6.7	7.0	6.2	6.0	6.1
6	7.7	6.6	7.5	6.7	6.0	6.5
7	7.7	7.6	7.6	6.5	6.1	6.3
8	7.6	6.6	7.3	6.6	6.1	6.3
9	7.5	6.4	6.7	6.2	6.0	6.1
10	7.4	6.2	6.8	6.2	6.0	6.1
11	7.1	6.3	6.6	6.2	6.0	6.1
12	7.1	5.6	6.6	6.0	5.9	6.0
13	7.4	5.7	6.4	6.0	5.9	5.9
14	6.8	5.7	6.2	5.9	5.9	5.9
15	6.7	5.9	6.3	6.9	5.9	6.2
16	6.1	5.9	6.0	6.8	5.9	6.1
17	6.4	5.8	5.9	7.2	5.9	6.6
18	7.0	5.8	6.3	---	---	---
19	7.2	6.5	6.8	---	---	---
20	7.3	6.4	6.8	---	---	---
21	7.3	5.9	6.6	---	---	---
22	7.4	5.9	6.5	---	---	---
23	7.3	5.8	6.4	---	---	---
24	7.2	5.8	6.2	---	---	---
25	6.7	5.8	6.4	---	---	---
26	7.1	6.3	6.7	---	---	---
27	6.7	6.6	6.7	---	---	---
28	7.0	6.4	6.5	---	---	---
29	6.5	6.3	6.4	---	---	---
30	6.4	6.2	6.3	---	---	---
31	---	---	---	---	---	---
MONTH	7.7	5.6	6.6	---	---	---

CONNECTICUT RIVER BASIN

01177100 CHICOPEE RIVER AT CHICOPEE FALLS, MA--Continued

PH (UNITS), APRIL TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	5.3	4.9	5.1	5.9	5.6	5.7	6.1	5.4	5.8
2	6.7	5.8	5.9	5.3	4.8	5.0	5.8	5.4	5.6	6.1	5.4	5.8
3	6.0	5.7	5.8	5.2	4.9	5.0	5.8	5.5	5.7	6.1	6.0	6.0
4	5.9	5.7	5.8	6.2	4.9	5.2	5.8	5.6	5.7	6.2	6.0	6.1
5	5.7	5.6	5.7	7.2	5.1	6.5	5.9	5.5	5.7	6.1	5.8	6.0
6	6.0	5.8	5.9	---	---	---	5.9	5.4	5.7	6.1	5.8	5.9
7	6.0	5.8	5.9	---	---	---	6.0	5.6	5.7	6.1	5.7	6.0
8	6.0	5.8	5.9	---	---	---	5.9	5.7	5.8	6.1	5.9	6.0
9	5.9	5.8	5.8	---	---	---	6.8	5.7	6.1	6.0	5.3	5.8
10	6.0	5.8	5.9	---	---	---	6.6	6.3	6.4	6.0	5.4	5.8
11	5.9	5.7	5.8	---	---	---	6.5	6.3	6.3	5.9	5.7	5.8
12	7.1	5.7	6.1	---	---	---	6.4	6.1	6.3	6.8	5.1	5.5
13	---	---	---	7.2	6.6	6.9	---	---	---	6.5	5.0	5.6
14	---	---	---	7.3	6.2	6.6	---	---	---	5.4	5.1	5.3
15	6.7	6.1	6.3	7.1	5.5	6.2	---	---	---	5.5	5.2	5.3
16	7.1	6.1	6.5	5.8	5.2	5.4	---	---	---	6.8	4.6	5.3
17	7.3	6.0	6.5	6.1	5.4	5.7	---	---	---	6.8	4.5	5.1
18	6.7	5.9	6.3	5.7	5.3	5.5	6.6	6.2	6.3	7.0	4.5	5.4
19	6.9	5.8	6.4	7.2	5.3	6.5	7.0	6.2	6.4	6.4	4.5	5.6
20	7.1	5.9	6.3	7.2	5.3	6.2	6.8	6.3	6.6	---	---	---
21	7.1	5.9	6.2	7.3	5.5	5.9	7.1	5.9	6.3	---	---	---
22	6.1	5.7	5.9	6.7	5.3	5.6	7.0	6.0	6.4	---	---	---
23	5.9	5.6	5.7	6.2	5.1	5.5	6.5	6.0	6.2	---	---	---
24	5.8	5.5	5.7	6.1	5.3	5.6	6.4	6.2	6.3	---	---	---
25	6.0	5.6	5.8	6.3	5.3	5.6	6.5	6.1	6.3	---	---	---
26	7.0	5.5	5.9	6.4	5.3	5.6	6.5	6.1	6.2	6.8	5.8	6.1
27	7.2	5.5	5.8	5.6	5.5	5.6	6.1	5.5	5.7	7.1	5.8	6.5
28	5.8	5.3	5.5	5.8	5.7	5.7	6.1	5.4	5.7	7.2	5.8	6.5
29	5.7	5.2	5.4	5.9	5.6	5.7	6.1	6.0	6.0	6.9	6.2	6.5
30	5.5	5.2	5.3	5.9	5.6	5.7	6.1	6.0	6.0	6.4	6.2	6.3
31	---	---	---	5.9	5.6	5.7	6.1	5.4	5.9	---	---	---
MONTH	7.3	5.2	5.9	---	---	---	7.1	5.4	6.0	7.2	4.5	5.8
PERIOD	7.7	4.5	6.1									

TEMPERATURE (DEG. C) OF WATER, APRIL TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN
	APRIL			MAY		
1	---	---	---	14.5	13.0	14.0
2	---	---	---	14.5	13.5	14.0
3	6.5	6.5	6.5	14.0	13.0	13.5
4	6.5	6.0	6.0	14.5	13.0	13.5
5	6.0	6.0	6.0	14.5	13.5	14.0
6	6.5	6.0	6.0	14.5	13.5	14.0
7	6.0	5.5	5.5	15.0	13.5	14.0
8	6.5	5.5	5.5	15.5	14.0	15.0
9	6.0	5.5	5.5	16.5	15.0	16.0
10	6.0	5.5	5.5	18.0	16.5	17.5
11	6.5	5.0	6.0	19.5	18.0	18.5
12	7.0	6.0	6.5	18.5	18.0	18.5
13	7.5	6.5	7.0	18.0	17.0	17.5
14	7.5	7.0	7.5	17.0	16.5	17.0
15	7.5	7.0	7.0	17.0	16.5	16.5
16	7.0	6.5	6.5	17.5	16.5	17.0
17	7.0	6.5	7.0	17.5	16.5	17.0
18	8.0	7.0	7.5	17.5	16.5	17.0
19	8.5	7.5	8.0	17.5	16.0	16.5
20	8.5	8.0	8.0	17.0	16.0	16.5
21	9.0	8.0	8.5	17.5	16.0	16.5
22	9.0	8.5	8.5	18.0	16.0	17.0
23	10.0	8.5	9.0	17.0	16.5	16.5
24	10.0	9.0	9.5	16.5	16.0	16.0
25	10.0	10.0	10.0	16.0	15.0	15.5
26	13.0	10.0	12.0	15.5	15.0	15.0
27	13.5	13.0	13.5	16.0	15.5	15.5
28	13.5	13.0	13.0	16.0	15.5	16.0
29	14.0	13.0	13.5	16.5	16.0	16.0
30	14.0	13.0	13.5	17.0	15.5	16.5
31	---	---	---	17.0	16.0	16.5
MONTH	14.0	5.0	8.0	19.5	13.0	16.0

01177100 CHICOPEE RIVER AT CHICOPEE FALLS, MA--Continued

TEMPERATURE (DEG. C) OF WATER, APRIL TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JUNE	MEAN	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	18.0	16.5	17.0	23.0	21.5	22.0	26.5	24.5	25.5	22.5	21.5	22.0
2	18.5	17.5	18.0	22.5	21.5	22.0	26.5	24.0	25.5	22.0	21.5	21.5
3	18.5	18.0	18.0	23.5	21.5	22.5	26.5	25.0	26.0	22.0	21.5	21.5
4	18.5	18.0	18.5	23.0	21.0	22.0	27.0	25.0	26.0	23.0	21.5	22.0
5	19.5	18.0	18.5	22.0	20.5	21.0	27.0	25.0	26.0	23.0	22.0	22.5
6	20.0	18.5	19.0	21.0	19.5	20.5	26.5	25.0	26.0	22.5	21.5	22.0
7	20.0	19.0	19.5	22.0	20.0	21.0	26.0	24.0	25.0	22.5	21.5	22.0
8	20.0	19.0	19.5	22.5	20.5	21.5	25.5	23.5	24.5	22.0	21.0	21.5
9	20.0	19.5	19.5	23.5	21.5	22.5	26.0	23.5	24.5	21.5	20.0	21.0
10	21.0	19.5	20.0	23.5	22.0	23.0	25.5	23.0	24.0	21.5	19.5	20.5
11	21.0	19.5	20.5	23.5	22.0	23.5	23.5	22.5	23.0	20.5	19.5	20.0
12	21.0	19.0	20.0	24.0	23.0	23.5	22.5	20.5	21.5	20.5	19.0	19.5
13	20.5	18.5	19.5	25.5	23.5	24.0	20.5	19.5	20.0	20.0	18.5	19.0
14	21.0	18.0	19.5	26.5	24.0	25.5	19.5	18.5	19.0	19.5	18.5	19.0
15	21.0	18.5	19.5	26.5	23.5	25.5	18.5	18.0	18.5	19.5	18.0	18.5
16	22.0	19.0	20.5	26.0	24.0	24.5	19.0	18.0	18.5	19.0	17.5	18.5
17	23.0	20.0	21.0	26.0	24.5	25.0	20.0	18.0	19.0	19.5	17.5	18.0
18	23.0	21.0	22.0	25.0	24.5	25.0	19.0	18.0	18.5	19.5	17.5	18.0
19	23.0	20.5	22.0	25.5	23.5	24.5	19.0	18.0	18.5	19.0	17.5	18.0
20	23.5	21.5	22.5	25.0	23.5	24.0	19.5	18.0	18.5	17.5	16.0	17.0
21	23.5	21.5	23.0	25.5	23.5	24.5	20.0	18.5	19.0	17.0	15.5	16.0
22	23.0	21.0	22.5	25.5	23.5	24.5	21.0	19.0	20.0	16.5	16.0	16.0
23	23.0	22.0	22.0	26.5	24.0	25.0	21.0	20.0	20.5	16.0	15.0	15.5
24	22.5	20.5	21.5	26.5	24.5	25.5	21.0	20.0	20.5	15.5	14.5	15.0
25	22.0	20.0	21.0	27.0	25.0	26.0	22.0	20.5	21.5	15.5	14.5	15.0
26	22.0	20.5	21.5	27.0	25.0	26.0	22.0	21.0	21.5	16.0	14.5	15.0
27	22.5	21.5	22.0	25.5	24.5	25.0	21.5	21.0	21.5	16.0	14.5	15.0
28	22.5	21.0	22.0	25.0	24.0	24.5	22.0	21.0	21.5	16.0	14.5	15.0
29	23.0	22.0	22.5	25.5	24.0	24.5	22.5	21.5	22.0	16.0	15.0	15.5
30	23.0	21.5	22.0	26.5	24.5	25.0	22.5	22.0	22.0	16.0	15.5	15.5
31	---	---	---	26.5	24.5	25.5	23.0	22.0	22.5	---	---	---
MONTH	23.5	16.5	20.5	27.0	19.5	24.0	27.0	18.0	22.0	23.0	14.5	18.5
PERIOD	27.0	5.0	18.5									

DISSOLVED OXYGEN (DO), MG/L, APRIL TO SEPTEMBER 1979

DAY	MAX	MIN APRIL	MEAN	MAX	MIN MAY	MEAN
1	---	---	---	10.3	9.8	10.0
2	---	---	---	10.3	9.1	9.8
3	12.8	11.7	12.2	10.3	9.7	10.0
4	13.0	11.5	12.4	10.1	9.6	9.9
5	12.0	11.3	11.7	10.2	9.6	9.9
6	11.9	11.1	11.6	10.2	9.6	9.8
7	12.6	11.0	11.8	10.1	9.4	9.8
8	12.3	11.3	11.7	9.8	8.2	9.2
9	12.2	10.7	11.5	8.6	7.9	8.3
10	12.6	11.6	12.1	8.3	7.7	8.0
11	12.5	11.0	12.0	8.2	7.5	7.8
12	12.0	11.0	11.6	8.0	7.3	7.6
13	11.9	11.1	11.5	7.9	7.4	7.6
14	12.0	11.1	11.5	8.2	7.5	7.8
15	12.1	11.6	11.9	8.3	7.7	8.0
16	12.6	11.9	12.2	8.3	7.6	8.0
17	12.6	11.8	12.3	8.4	7.8	8.1
18	12.3	11.4	12.0	8.5	7.9	8.1
19	12.0	11.3	11.7	8.4	7.8	8.1
20	11.8	10.9	11.4	8.4	7.8	8.0
21	11.6	10.8	11.1	8.5	7.7	8.1
22	11.6	10.5	11.1	8.6	7.8	8.2
23	11.0	10.3	10.8	8.3	7.8	8.1
24	10.7	10.2	10.5	8.1	7.5	7.9
25	10.7	9.8	10.4	9.2	7.8	8.4
26	10.1	9.3	9.9	9.7	8.8	9.4
27	10.3	9.2	9.5	9.8	9.0	9.5
28	11.1	10.3	10.7	9.7	9.1	9.3
29	10.8	10.2	10.6	9.6	8.8	9.2
30	10.6	10.1	10.3	9.2	8.7	9.0
31	---	---	---	9.1	8.3	8.8
MONTH	13.0	9.2	11.4	10.3	7.3	8.7

01179500 WESTFIELD RIVER AT KNIGHTVILLE, MA

LOCATION.--Lat 42°17'16", long 72°51'53", Hampshire County, Hydrologic Unit 01080206, on left bank at Knightville, 0.2 mi (0.3 km) downstream from Knightville Dam, 0.2 mi (0.3 km) upstream from Sykes Brook, 2.4 mi (3.9 km) upstream from Middle Branch, 3.5 mi (5.6 km) north of Huntington, and at mile 29.7 (47.8 km).

DRAINAGE AREA.--162 mi² (420 km²).

PERIOD OF RECORD.--Discharge: August 1909 to current year.
Water-quality records: Water year 1953.

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

GAGE.--Water-stage recorder. Concrete control since Dec. 20, 1940. Datum of gage is 461.25 ft (140.589 m) National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 11, 1936, nonrecording gage at site 0.5 mi (0.8 km) upstream at different datum. Jan. 11, 1935, to May 20, 1940, water-stage recorder at site 700 ft (200 m) upstream at datum 10.57 ft (3.222 m) higher. May 21 to Dec. 19, 1940, nonrecording gage at site 700 ft (200 m) upstream at datum 18.75 ft (5.715 m) higher.

REMARKS.--Records excellent. Flow regulated by Knightville Reservoir since 1941 (Reservoirs in Connecticut River basin). Several observations of water temperatures and specific conductance were made during the year.

AVERAGE DISCHARGE.--70 years, 328 ft³/s (9.289 m³/s), 27.50 in/yr (698 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,900 ft³/s (1,070 m³/s) Sept. 21, 1938, gage height, 29.58 ft (9.016 m), from floodmarks, site and datum then in use, from rating curve extended above 3,800 ft³/s (110 m³/s) on basis of slope-area measurements at gage heights 24.07 ft (7.337 m) and 29.58 ft (9.016 m); minimum, 0.1 ft³/s (0.003 m³/s) Apr. 3, 1965; minimum daily, 1.1 ft³/s (0.031 m³/s) Apr. 2, 1965. Maximum discharge since construction of Knightville Reservoir in 1941, 6,660 ft³/s (189 m³/s) Mar. 21, 1945, gage height, 7.45 ft (2.271 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,420 ft³/s (96.9 m³/s) Mar. 12, gage height, 6.06 ft (1.847 m); minimum, 10 ft³/s (0.28 m³/s) Jan. 22; minimum daily, 31 ft³/s (0.88 m³/s) Oct. 1, Aug. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	69	102	162	375	382	1160	1230	2030	123	61	124
2	32	64	93	524	285	331	1310	761	745	168	73	88
3	34	60	69	1300	240	293	1330	514	465	136	69	219
4	35	59	84	1520	240	298	1290	610	403	92	59	214
5	50	57	213	1620	245	312	1130	559	354	75	49	126
6	137	57	164	975	215	519	1160	453	399	66	42	406
7	165	58	131	424	190	1010	779	401	324	61	37	1410
8	94	68	127	1130	195	2700	962	358	282	56	34	1060
9	70	88	505	1670	199	3130	1030	325	260	51	31	279
10	68	75	508	482	190	3180	931	293	245	48	34	204
11	67	67	260	612	170	3150	821	262	219	45	74	163
12	63	63	140	504	165	2820	763	234	306	43	122	133
13	61	59	151	226	170	1790	816	291	242	41	419	117
14	63	57	160	445	170	1210	954	449	182	38	214	109
15	116	56	150	368	169	934	854	422	172	48	137	193
16	106	56	125	249	176	592	1020	313	167	90	103	149
17	81	55	112	250	178	624	1070	270	157	172	76	115
18	70	132	115	250	174	722	861	237	95	214	66	102
19	64	167	85	230	167	576	774	234	58	226	117	95
20	73	111	59	210	163	641	711	248	46	132	152	101
21	81	91	108	146	157	759	683	270	48	91	106	90
22	66	83	139	629	152	1300	680	238	49	83	84	416
23	59	77	147	1010	149	1870	663	205	349	96	67	466
24	54	88	146	448	156	2070	687	777	100	76	59	258
25	51	134	140	297	197	1400	621	574	81	113	65	190
26	53	81	105	1370	1090	2040	576	1360	72	84	92	139
27	172	36	110	1760	751	2910	1050	2080	66	390	86	98
28	162	77	108	640	411	2640	1770	2320	63	183	71	175
29	107	98	92	512	---	1870	2040	1640	102	112	62	283
30	86	101	94	400	---	1170	1150	2940	90	84	353	259
31	74	---	168	376	---	1050	---	2930	---	68	206	---
TOTAL	2445	2344	4710	20739	7139	44293	29646	23798	8171	3305	3220	7781
MEAN	78.9	78.1	152	669	255	1429	988	768	272	107	104	259
MAX	172	167	508	1760	1090	3180	2040	2940	2030	390	419	1410
MIN	31	36	59	146	149	293	576	205	46	38	31	88
MEAN†	78.9	78.1	158	669	258	1456	975	831	184	106	104	259
CFSM†	.49	.48	.98	4.13	1.59	8.99	6.02	5.13	1.14	.65	.64	1.60
IN.†	.56	.54	1.13	4.76	1.66	10.36	6.71	5.92	1.29	.76	.74	1.79

CAL YR 1978	TOTAL	113717	MEAN	312	MAX	2920	MIN	29	MEAN†	311	CFSM†	1.92	IN†	26.09
WTR YR 1979	TOTAL	157591	MEAN	432	MAX	3180	MIN	31	MEAN†	432	CFSM†	2.67	IN†	36.19

† Adjusted for change in contents in Knightville Reservoir.

01180500 MIDDLE BRANCH WESTFIELD RIVER AT GOSS HEIGHTS, MA

LOCATION.--Lat 42°15'31", long 72°52'23", Hampshire County, Hydrologic Unit 01080206, on right bank at upstream side of highway bridge at Goss Heights, 0.3 mi (0.5 km) upstream from mouth, 0.7 mi (1.1 km) downstream from Littleville Dam, and 1.7 mi (2.7 km) north of Huntington.

DRAINAGE AREA.--52.6 mi² (136.2 km²).

PERIOD OF RECORD.--July 1910 to current year.

REVISED RECORDS.--WSP 415: 1910-13. WSP 781: 1933(M), drainage area.

GAGE.--Water-stage recorder. Datum of gage is 399.30 ft (121.707 m) National Geodetic Vertical Datum of 1929. Prior to June 25, 1930, datum was 2.00 ft (0.610 m) higher, and June 25, 1930, to Sept. 30, 1964, datum was 1.00 ft (0.305 m) higher. Prior to Sept. 8, 1912, nonrecording gage at same site.

REMARKS.--Records good. 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.--69 years, 105 ft³/s (2.974 m³/s), 27.11 in/yr (689 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,900 ft³/s (564 m³/s) Sept. 21, 1938, gage height, 11.61 ft (3.539 m), present datum, from rating curve extended above 3,200 ft³/s (91 m³/s) on basis of mean of two contracted-opening measurements of peak flow; maximum gage height, 14.87 ft (4.532 m), present datum, Mar. 12, 1936, (ice jam); practically no flow Sept. 3, 22, Oct. 20, 1910, July 30, 1912, Oct. 26, 27, 1914. Maximum discharge since construction of Littleville Dam in 1965, 1,470 ft³/s (41.6 m³/s) Mar. 17, 1977, gage height, 5.72 ft (1.743 m).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,390 ft³/s (39.4 m³/s) Mar. 9, gage height, 5.46 ft (1.664 m); minimum, 2.6 ft³/s (0.074 m³/s) Sept. 26-28; minimum daily, 2.6 ft³/s (0.074 m³/s) Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	21	27	36	115	127	519	438	640	17	19	53
2	6.3	18	25	361	100	109	286	241	315	23	19	39
3	6.0	16	23	719	96	102	308	182	170	22	17	39
4	6.3	15	23	701	92	101	297	195	120	18	15	59
5	8.6	14	41	364	90	114	184	186	101	16	13	49
6	18	14	52	154	88	317	342	154	105	13	11	46
7	29	14	47	109	86	167	598	128	98	12	9.2	402
8	25	16	43	482	92	640	364	117	79	11	8.5	458
9	19	18	125	619	78	1180	214	107	75	10	7.5	191
10	16	18	204	314	74	1310	188	102	65	9.5	7.5	92
11	14	17	125	177	69	1210	182	102	60	8.5	11	60
12	12	16	79	110	66	1050	204	102	68	8.1	21	45
13	12	15	66	94	63	657	238	102	65	7.9	58	38
14	12	14	58	107	61	329	251	124	56	7.5	55	32
15	15	14	44	109	59	329	278	142	49	7.0	41	37
16	18	13	39	90	57	254	345	115	44	32	30	40
17	17	14	41	77	56	209	357	101	39	57	23	34
18	16	22	36	70	55	184	306	101	35	73	20	30
19	15	37	28	66	54	169	254	102	31	116	26	29
20	15	37	26	62	53	188	216	102	25	89	31	25
21	16	32	35	73	54	221	191	102	21	55	28	24
22	16	28	47	193	56	374	175	102	20	38	24	93
23	16	25	50	364	63	497	167	102	20	33	21	158
24	15	25	43	164	61	550	158	165	18	25	18	106
25	13	31	49	59	52	332	144	110	17	21	18	72
26	13	29	43	326	233	512	136	380	15	24	21	41
27	22	23	38	679	326	863	270	570	14	54	24	2.6
28	36	23	35	611	191	883	364	650	14	49	24	51
29	34	23	32	289	---	799	550	530	14	37	24	93
30	29	27	31	177	---	515	632	1040	13	28	62	106
31	23	---	31	140	---	474	---	1120	---	22	77	---
TOTAL	518.9	629	1586	7896	2530	14766	8718	7814	2407	943.5	783.7	2544.6
MEAN	16.7	21.0	51.2	255	90.4	476	291	252	80.2	30.4	25.3	84.8
MAX	36	37	204	719	326	1310	632	1120	640	116	77	458
MIN	5.7	13	23	36	52	101	136	101	13	7.0	7.5	2.6
MEAN†	17.2	21.5	51.2	257	94.1	495	290	265	42.2	30.9	27.7	86.3
CFSM†	.33	.41	.97	4.89	1.79	9.41	5.51	5.04	.80	.59	.53	1.64
IN.†	.38	.46	1.12	5.63	1.86	10.85	6.15	5.80	.90	.68	.61	1.83
CAL YR 1978 TOTAL	35317.3			96.8		934		96.5		1.83		24.91
WTR YR 1979 TOTAL	51136.7			140		1310		140		2.66		36.26

† Adjusted for change in contents in Littleville Lake.

CONNECTICUT RIVER BASIN

01181000 WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA

LOCATION.--Lat 42°14'14", long 72°53'46", Hampshire County, Hydrologic Unit 01080206, on left bank at Huntington, 0.4 mi (0.6 km) downstream from Roaring Brook, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--93.7 mi² (242.7 km²).

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

GAGE.--Water-stage recorder. Datum of gage is 388.60 ft (118.445 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for winter period, which are fair. 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.--44 years, 191 ft³/s (5.409 m³/s), 27.68 in/yr (703 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,100 ft³/s (739 m³/s) Aug. 19, 1955, gage height, 15.27 ft (4.654 m), from rating curve extended above 9,500 ft³/s (270 m³/s) on basis of slope-area measurement of peak flow; minimum, 3.3 ft³/s (0.093 m³/s) Aug. 9, 1955, Nov. 27, 1957.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,700 ft³/s (76 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2230	4140 117	6.00 1.829	Mar. 25	0330	5520 156	6.94 2.115
Mar. 6	2245	*6770 192	7.69 2.344	May 25	1545	5680 161	7.04 2.146

Minimum discharge, 6.7 ft³/s (0.19 m³/s) Nov. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	26	37	60	131	216	584	378	331	32	36	62
2	17	25	34	1450	109	209	503	317	277	39	41	42
3	17	24	27	1470	128	198	552	282	235	35	29	68
4	17	23	37	398	142	191	424	373	205	28	24	72
5	22	22	111	243	139	521	480	304	181	25	23	46
6	45	22	68	184	128	3450	414	256	178	23	21	710
7	46	22	54	171	126	3430	331	228	147	22	19	480
8	29	26	64	1620	135	1340	291	205	131	21	19	190
9	24	30	317	711	130	785	304	191	118	20	18	110
10	22	27	264	354	125	808	326	171	111	19	19	78
11	21	25	131	224	120	1580	340	147	105	18	30	60
12	27	24	92	150	115	719	388	128	162	18	73	49
13	21	23	96	150	110	480	398	171	114	17	205	44
14	24	22	86	224	105	596	430	291	90	17	86	40
15	34	22	76	232	100	584	486	248	75	20	54	80
16	30	23	68	162	94	409	609	184	65	42	41	56
17	25	23	70	118	88	354	571	147	56	72	34	45
18	23	52	60	128	84	326	435	136	49	131	32	40
19	22	58	54	102	80	340	363	153	44	153	75	38
20	25	39	50	134	76	388	317	162	38	61	64	37
21	28	33	70	290	78	571	291	153	34	39	45	36
22	25	30	80	600	80	852	269	126	31	46	35	328
23	23	29	83	373	80	1100	256	118	30	42	30	229
24	22	32	74	248	200	1240	239	1160	29	31	28	121
25	22	50	82	1230	1000	3280	224	3720	28	27	31	86
26	22	25	77	649	690	1170	235	1570	27	28	47	71
27	50	25	70	388	430	642	864	683	25	84	46	61
28	51	30	65	313	286	463	785	527	25	47	40	54
29	34	34	60	243	---	441	946	824	23	34	35	253
30	30	34	57	195	---	480	491	584	23	35	142	199
31	27	---	55	162	---	527	---	446	---	34	136	---
TOTAL	842	880	2569	12976	5109	27690	13146	14383	2987	1260	1558	3785
MEAN	27.2	29.3	82.9	419	182	893	438	464	99.6	40.6	50.3	126
MAX	51	58	317	1620	1000	3450	946	3720	331	153	205	710
MIN	17	22	27	60	76	191	224	118	23	17	18	36
CFSM	.29	.31	.89	4.47	1.94	9.53	4.67	4.95	1.06	.43	.54	1.35
IN.	.33	.35	1.02	5.15	2.03	10.99	5.22	5.71	1.19	.50	.62	1.50
CAL YR 1978	TOTAL	63623	MEAN 174	MAX 3480	MIN 14	CFSM 1.86	IN 25.26					
WTR YR 1979	TOTAL	87185	MEAN 239	MAX 3720	MIN 17	CFSM 2.55	IN 34.61					

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

LOCATION.--Lat 42°07'34", long 72°53'37", Hampden County, Hydrologic Unit 01080206, at Cobble Mountain Dam, 7.5 mi (12.1 km) west of Westfield, and at mile 13.0 (20.9 km).

DRAINAGE AREA.--45.8 mi² (118.6 km²).

PERIOD OF RECORD.--Discharge: July 1905 to current year. Published as Westfield Little River near Blandford 1905-11, as Westfield Little River near Westfield 1912-35, and as Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield 1936-76.
Water-quality records: Water year 1957.

REVISED RECORDS.--WSP 501: Drainage area.

GAGE.--Venturi meters at outlet tunnel at powerhouse 2.4 mi (3.9 km) downstream. Prior to Mar. 1, 1910, non-recording gage at site 0.2 mi (0.3 km) upstream, and Mar. 1, 1910, to Sept. 30, 1935, water-stage recorder at diversion dam 2.8 mi (4.5 km) downstream.

REMARKS.--Discharge computed on basis of flow through venturi meters and flow over reservoir spillway or through bypass tunnel. Flow regulated by Borden Brook Reservoir since 1910 and Cobble Mountain Reservoir since August 1951 (Reservoirs in Connecticut River basin).

COOPERATION.--Records furnished by Springfield Board of Water Commissioners.

AVERAGE DISCHARGE.--69 years (water years 1911-79), 90.1 ft³/s (2.552 m³/s), 26.72 in/yr (679 mm/yr), adjusted for storage.

MONTHLY DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

Month	Meant	Per square mile†	Runoff in inches†
October	5.89	0.13	0.15
November	1.91	.04	.05
December	30.0	.66	.76
Calendar year 1978	80.0	1.75	23.70
January	219	4.78	5.51
February	51.3	1.12	1.17
March	384	8.38	9.67
April	207	4.52	5.04
May	211	4.61	5.31
June	25.9	.57	.63
July	14.3	.31	.36
August	24.3	.53	.61
September	46.6	1.02	1.14
Water year 1979	102	2.23	30.38

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

01183450 GREAT BROOK NEAR WESTFIELD, MA

LOCATION.--Lat 42°05'18", long 72°43'24", Hampden County, Hydrologic Unit 01080206, on left bank 50 ft (15 m) downstream from bridge on Shaker Rd., 0.4 mi (0.6 km) downstream from Kellog Brook, 1.4 mi (2.3 km) upstream from mouth, and 2.5 mi (4.0 km) southeast of center of Westfield.

DRAINAGE AREA.--29.2 mi² (75.6 km²).

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

GAGE.--Water-stage recorder. Altitude of gage is 135 ft (41.1 m), from topographic map.

REMARKS.--Records good except those for winter period, which are poor. Flow affected by diversion upstream for municipal supply of West Springfield. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--6 years (water years 1974-79), 39.1 ft³/s (1.107 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 941 ft³/s (26.6 m³/s) Mar. 6, 1979, gage height, 6.13 ft (1.868 m), from rating curve extended above 270 ft³/s (7.6 m³/s); maximum gage height, 6.82 ft (2.079 m) Jan. 25, 1979, ice jam; minimum discharge, 4.0 ft³/s (0.11 m³/s) Aug. 16, 17, 1974.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 240 ft³/s (6.8 m³/s) and maximums (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 25	1215	ice jam	*6.82 2.079	Apr. 28	0100	243 6.88	3.79 1.155
Mar. 6	2000	a*941 26.6	6.13 1.868				

a From rating curve extended above 270 ft³/s (7.6 m³/s).

Minimum discharge, 5.5 ft³/s (0.16 m³/s) July 13, 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	10	17	24	35	56	49	49	46	15	12	10
2	12	10	15	82	34	59	50	49	39	15	18	9.7
3	12	10	14	120	32	62	59	47	36	13	9.2	9.2
4	12	10	13	70	30	65	61	47	33	11	8.7	9.2
5	12	10	14	45	29	82	59	46	33	11	7.7	8.2
6	19	10	15	40	28	579	59	41	31	11	7.2	13
7	17	10	14	40	27	466	52	40	29	10	7.2	21
8	15	11	13	130	26	126	48	38	27	9.2	7.2	15
9	13	11	22	90	26	91	54	37	27	9.2	6.3	13
10	12	11	28	62	25	93	81	34	26	9.2	7.7	11
11	12	11	22	47	25	134	75	31	24	7.7	9.7	11
12	12	11	18	40	24	113	59	29	28	8.2	29	10
13	12	10	15	35	23	74	51	33	24	7.2	37	9.5
14	12	10	15	60	23	68	54	34	23	6.8	22	9.2
15	12	10	14	53	22	68	62	34	21	17	15	13
16	12	9.5	13	40	21	61	65	33	21	19	13	11
17	12	9.8	13	30	20	59	63	30	18	18	11	9.5
18	12	13	13	30	19	55	55	29	17	15	10	8.6
19	12	14	12	28	18	53	48	29	17	13	16	9.2
20	13	13	14	24	17	52	43	29	15	12	15	8.0
21	12	11	16	60	18	52	41	29	15	12	13	7.5
22	11	11	20	90	19	52	38	28	14	11	12	19
23	11	11	13	60	21	52	38	28	14	11	11	16
24	10	13	14	45	50	52	34	63	13	11	11	13
25	9.8	13	15	120	100	62	32	105	13	11	11	10
26	9.8	13	16	100	60	64	33	119	11	13	11	9.2
27	11	11	13	75	38	55	126	72	11	17	12	8.7
28	11	11	12	60	38	49	180	51	11	13	13	8.2
29	11	11	11	50	---	49	80	46	11	10	13	17
30	10	16	11	42	---	49	54	57	10	9.7	13	14
31	10	---	13	37	---	49	---	59	---	9.2	12	---
TOTAL	373.6	335.3	468	1829	848	3001	1803	1396	658	365.4	400.9	340.9
MEAN	12.1	11.2	15.1	59.0	30.3	96.8	60.1	45.0	21.9	11.8	12.9	11.4
MAX	19	16	28	130	100	579	180	119	46	19	37	21
MIN	9.8	9.5	11	24	17	49	32	28	10	6.8	6.3	7.5
CAL YR 1978	TOTAL	12891.9	MEAN	35.3	MAX	302	MIN	9.5				
WTR YR 1979	TOTAL	11819.1	MEAN	32.4	MAX	579	MIN	6.3				

01183500 WESTFIELD RIVER NEAR WESTFIELD, MA

LOCATION.--Lat 42°06'24", long 72°41'58", Hampden County, Hydrologic Unit 01080206, on left bank 0.7 mi (1.1 km) downstream from Great Brook, 3 mi (5 km) east of Westfield, and 8.1 mi (13.0 km) upstream from mouth.

DRAINAGE AREA.--497 mi² (1,287 km²).

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

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

GAGE.--Water-stage recorder. Datum of gage is 98.25 ft (29.947 m) National Geodetic Vertical Datum of 1929. Prior to Nov. 3, 1933, on right bank at same datum.

REMARKS.--Records excellent. 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. See table below for figures of diversion. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--65 years, 922 ft³/s (26.11 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 70,300 ft³/s (1,990 m³/s) Aug. 19, 1955, gage height, 34.2 ft (10.42 m), from floodmarks, from rating curve extended above 18,000 ft³/s (510 m³/s) on basis of computations of flow over dam at gage heights 27.20 ft (8.291 m), 29.40 ft (8.961 m), and 34.2 ft (10.42 m); minimum, 9 ft³/s (0.25 m³/s) Oct. 2, 1921; minimum daily, 40 ft³/s (1.13 m³/s) Dec. 28, 29, 1914.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 11,500 ft³/s (326 m³/s) Mar. 6, gage height, 13.12 ft (3.999 m); minimum, 109 ft³/s (3.09 m³/s) Aug. 10; minimum daily, 139 ft³/s (3.94 m³/s) Oct. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	224	311	441	992	1180	2610	2930	4540	287	298	457
2	153	209	282	2030	892	1030	2910	2170	2430	373	371	352
3	153	190	241	4230	776	954	2930	1480	1360	387	444	291
4	139	184	235	3320	750	959	3210	1580	1260	307	308	578
5	176	195	395	3020	731	1250	2600	1470	1130	259	212	553
6	288	171	431	2140	727	6240	2590	1220	1130	217	268	1220
7	396	201	361	968	676	8160	2040	1120	1050	223	193	2990
8	332	187	368	3720	638	5560	1880	1010	912	198	168	2520
9	212	238	812	3950	627	5820	2260	1160	737	205	161	894
10	215	224	1250	1690	631	5560	2120	1060	681	176	163	769
11	218	204	779	1310	636	7170	1950	833	776	180	142	525
12	360	209	483	1240	807	5450	1820	698	837	180	378	443
13	235	201	448	743	812	3550	1860	735	838	332	918	502
14	193	179	442	992	657	2700	2010	1170	717	229	672	556
15	209	174	385	1080	774	2660	2120	1190	587	208	458	441
16	479	187	358	809	686	1730	2460	921	499	385	352	438
17	382	187	343	691	616	1640	2650	756	454	661	301	370
18	227	235	304	570	550	1460	2250	778	658	611	264	330
19	218	367	306	648	443	1580	1880	808	372	872	321	352
20	215	346	253	557	447	1590	1640	714	315	562	414	315
21	238	292	332	1060	461	1830	1480	824	282	398	384	309
22	206	247	402	1900	517	2720	1400	706	263	310	373	921
23	195	212	396	2350	492	3670	1350	625	337	309	347	1210
24	190	257	371	1480	1200	4130	1360	1740	469	279	248	762
25	179	292	391	4860	1760	6160	1390	6240	268	283	264	551
26	169	301	386	3350	1900	3840	1360	5280	268	325	277	449
27	201	389	315	3970	2340	4800	3500	3980	247	603	289	355
28	404	288	380	2390	1360	4560	4320	4150	229	520	369	342
29	298	238	318	1850	---	3790	4200	4130	230	369	267	662
30	269	308	287	1370	---	2650	3490	5580	279	304	634	814
31	227	---	307	1130	---	2330	---	5750	---	256	799	---
TOTAL	7529	7136	12672	59859	23898	106723	69640	62808	24155	10808	11057	21271
MEAN	243	238	409	1931	854	3443	2321	2026	805	349	357	709
MAX	479	389	1250	4860	2340	8160	4320	6240	4540	872	918	2990
MIN	139	171	235	441	443	954	1350	625	229	176	142	291
(†)	58.5	53.7	52.0	55.8	59.0	56.9	58.5	62.9	68.7	71.7	61.1	59.0

CAL YR 1978 TOTAL 330128 MEAN 904 MAX 7010 MIN 139
WTR YR 1979 TOTAL 417556 MEAN 1144 MAX 8160 MIN 139

† Diversion, in cubic feet per second, from Little River for municipal supply of Springfield; records furnished by city of Springfield.

CONNECTICUT RIVER BASIN

01183750 CONNECTICUT RIVER AT AGAWAM, MA

LOCATION.--Lat 42°02'57", long 72°36'35", Hampden County, multiple-parameter monitor on right bank at Agawam, MA, 1.4 mi (2.3 km) upstream from Massachusetts-Connecticut State line, and 4.5 mi (7.2 km) upstream from gaging station at Thompsonville, CT.

DRAINAGE AREA.--9,661 mi² (25,022 km²) at gage at Thompsonville, CT.

PERIOD OF RECORD.--Water years 1969 to current year. Prior to October 1971, published as "01184000 Connecticut River at Thompsonville, CT."

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1969 to November 1977, July to September 1979.

pH: January 1969 to August 1976, July to September 1979.

WATER TEMPERATURES: January 1969 to November 1977, July to September 1979.

DISSOLVED OXYGEN: January 1969 to November 1977, July to September 1979.

INSTRUMENTATION.--Water-quality monitor since January 1969.

REMARKS.--Figures of daily discharge for gaging station at Thompsonville, CT. (station 01184000) are used for this site. Continuous recorder not in operation November 1977 to June 1979.

EXTREMES FOR PERIOD OF DAILY RECORDS.--

SPECIFIC CONDUCTANCE: Maximum, 268 micromhos Feb. 3, 1973; minimum, 49 micromhos Apr. 23, 1969.

pH: Maximum, 9.7 units Aug. 9, 1970; minimum, 5.6 units June 1, 21, 1976.

WATER TEMPERATURES: Maximum, 31.5°C Aug. 16, 1970; minimum, 0.0°C on several days during winter periods.

DISSOLVED OXYGEN: Maximum, 15.9 mg/L Feb. 17, 1971; minimum, 1.0 mg/L Aug. 20, 1971.

EXTREMES FOR PERIOD JULY TO SEPTEMBER 1979.--

SPECIFIC CONDUCTANCE: Maximum recorded, 155 micromhos Aug. 26; minimum recorded, 87 micromhos Sept. 9.

pH: Maximum recorded, 8.0 units Aug. 23; minimum recorded, 5.9 units July 21.

WATER TEMPERATURES: Maximum recorded, 30.5°C Aug. 5; minimum recorded, 16.0°C Sept. 23-27.

DISSOLVED OXYGEN: Maximum recorded, 13.0 mg/L July 25; minimum recorded, 4.3 mg/L Aug. 3.

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

		SPE- CIFIC CON- DUCT-			TUR-	TUR-	OXYGEN,	OXYGEN,	OXYGEN,	C.O.D.	COLI-	COLI-	
		ANCE	PH	TEMPER-	BID-	BID-	DIS-	DIS-	DEMAND,	TOTAL	FORM,	FORM,	
		(MICRO-	(UNITS)	ATURE	ITY	ITY	SOLVED	SOLVED	(HIGH	IN	TOTAL	FECAL,	
DATE	TIME	MHOS)		(DEG C)	(JTU)	(NTU)	(MG/L)	SATUR-	LEVEL)	MA-	(COLS.	UM-MF	
								ATION)	(MG/L)	TERIAL	PER	(COLS./	
										(MG/KG)	100 ML)	100 ML)	
OCT													
25...	0930	142	7.1	12.5	8	--	10.7	100	--	7500	--	600	
DEC													
05...	1300	134	6.8	4.5	3	--	12.5	96	--	--	1200	2100	
MAR													
15...	1445	63	5.8	2.0	5	--	13.7	99	13	--	2700	780	
APR													
11...	0830	69	6.6	5.0	--	2.0	12.7	99	18	12000	1100	380	
MAY													
08...	1130	84	5.8	16.0	--	20	9.5	95	20	--	15000	1700	
JUN													
05...	1145	78	6.1	19.0	--	2.0	9.1	97	1	81000	1500	2300	
JUL													
18...	1330	117	6.7	25.5	--	1.0	6.4	79	11	--	38000	5800	
AUG													
15...	0900	130	6.8	20.5	--	2.0	9.1	100	6	45000	8500	1500	
SEP													
11...	0900	115	7.0	22.5	--	1.0	9.5	109	9	--	20000	1900	
		STREP- TOCOC FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM TOTAL RECOV- ERABLE (MG/L AS CA)	MAGNE- SIUM, TOTAL RECOV- ERABLE (MG/L AS MG)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	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)	SOLIDS, VOLAT- ILE IN BOTTOM MA- TERIAL (MG/KG)
OCT													
25...	63	14	2.4	44	0	36	5.6	13	12	44	145	5600	
DEC													
05...	1200	--	--	--	--	--	--	--	--	2	107	--	
MAR													
15...	110	--	--	--	--	--	--	--	--	19	66	--	
APR													
11...	230	5.0	1.2	14	0	11	5.6	--	--	6	58	9600	
MAY													
08...	240	--	--	--	--	--	--	--	--	113	161	--	
JUN													
05...	160	8.4	1.7	27	0	22	34	--	--	14	80	49100	
JUL													
18...	550	--	--	--	--	--	--	--	--	4	105	--	
AUG													
15...	62	11	1.8	35	0	29	8.9	--	--	3	106	15600	
SEP													
11...	240	--	--	--	--	--	--	--	--	4	84	--	

01183750 CONNECTICUT RIVER AT AGAWAM, MA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	NITRO- GEN, NITRATE (MG/L AS N)	NITRO- GEN, NITRITE (MG/L AS N)	NITRO- GEN, NO2+NO3 (MG/L AS N)	NITRO- GEN, AMMONIA (MG/L AS N)	NITRO- GEN, ORGANIC (MG/L AS N)	NITRO- GEN,AM- MONIA - ORGANIC (MG/L AS N)	NITRO- GEN, (MG/L AS N)	PHOS- PHORUS, (MG/L AS P)	PHENOLS (UG/L)	OIL AND GREASE, TOTAL RECOV. GRAVI- METRIC (MG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 25...	.27	.01	.28	.11	.60	.71	.99	.22	1	--	33.4	.000
DEC 05...	.46	.01	.47	.25	.37	.62	1.1	.09	--	0	2.48	.000
MAR 15...	.26	.00	.26	.05	.27	.32	.58	.03	--	0	.000	.000
APR 11...	.28	.00	.28	.07	.08	.15	.43	.02	0	0	.390	.000
MAY 08...	.30	.01	.31	.08	.36	.44	.75	.08	--	0	3.06	.000
JUN 05...	.20	.01	.21	.04	.19	.23	.44	.03	0	2	1.68	.000
JUL 18...	.30	.01	.31	.05	.42	.47	.78	.06	--	0	11.6	.000
AUG 15...	.31	.01	.32	.07	.46	.53	.85	.07	0	0	.780	.000
SEP 11...	.20	.01	.21	.10	.19	.29	.50	.06	--	0	6.77	.000

DATE	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)	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)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)
OCT 25...	0	4	20	2	19	1800	40	90	<.5	0	40
APR 11...	0	6	10	1	2	330	44	40	.5	0	10

DATE	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)	PCB, TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)
OCT 25...	1.0	2.7	2.3	2.1	2.2	2.1	.0	.00	.00	.0	.00
APR 11...	<.7	--	1.4	--	1.3	--	.0	.00	.00	.0	.00

DATE	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)	LINDANE TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)
OCT 25...	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	0
APR 11...	.00	.00	.00	.00	.00	.00	.00	.00	--	.00	0

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

CONNECTICUT RIVER BASIN

01183750 CONNECTICUT RIVER AT AGAWAM, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), JULY TO SEPTEMBER 1979

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	134	128	131	122	114	119
2	---	---	---	143	118	130	130	116	124
3	---	---	---	135	119	128	132	123	128
4	---	---	---	142	133	138	139	124	131
5	---	---	---	140	132	135	129	122	127
6	---	---	---	141	136	138	134	117	125
7	---	---	---	143	137	140	116	107	111
8	---	---	---	145	138	141	109	100	106
9	---	---	---	152	141	145	105	87	96
10	---	---	---	147	144	146	110	105	107
11	---	---	---	---	---	---	125	109	117
12	---	---	---	---	---	---	127	117	122
13	---	---	---	---	---	---	121	113	118
14	---	---	---	---	---	---	121	112	118
15	---	---	---	130	127	128	121	114	118
16	---	---	---	---	---	---	131	114	123
17	---	---	---	---	---	---	136	125	130
18	---	---	---	---	---	---	134	121	127
19	---	---	---	---	---	---	135	121	128
20	125	120	124	---	---	---	135	128	132
21	133	120	123	---	---	---	140	124	134
22	133	123	129	---	---	---	141	114	128
23	134	129	132	137	130	132	113	103	107
24	134	123	126	145	133	140	115	105	110
25	143	134	137	144	136	139	121	104	113
26	140	126	136	155	141	145	128	112	118
27	144	124	133	144	129	138	118	106	113
28	134	124	130	133	126	130	132	119	127
29	135	125	130	135	130	133	135	112	122
30	135	128	131	133	124	131	116	105	109
31	134	128	131	135	121	129	---	---	---
MONTH	---	---	---	---	---	---	141	87	120
PERIOD	155	87	127						

PH (UNITS), JULY TO SEPTEMBER 1979

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	7.6	6.3	6.7	7.0	6.5	6.7
2	---	---	---	6.5	6.2	6.4	6.9	6.5	6.7
3	---	---	---	6.7	6.1	6.4	7.0	6.4	6.6
4	---	---	---	6.7	6.3	6.4	7.1	6.5	6.7
5	---	---	---	6.9	6.3	6.5	7.1	6.7	6.8
6	---	---	---	7.9	6.4	6.9	6.9	6.7	6.8
7	---	---	---	7.7	6.5	6.9	6.9	6.7	6.8
8	---	---	---	7.6	6.6	7.0	7.0	6.8	6.9
9	---	---	---	7.5	6.5	6.9	6.8	6.6	6.8
10	---	---	---	6.7	6.6	6.6	7.0	6.7	6.8
11	---	---	---	---	---	---	7.3	6.6	6.8
12	---	---	---	---	---	---	7.1	6.6	6.8
13	---	---	---	---	---	---	7.2	6.6	6.9
14	---	---	---	---	---	---	7.0	6.7	6.9
15	---	---	---	6.8	6.6	6.7	7.0	6.7	6.8
16	---	---	---	---	---	---	6.7	6.5	6.6
17	---	---	---	---	---	---	7.0	6.4	6.7
18	---	---	---	---	---	---	7.3	6.5	6.9
19	---	---	---	---	---	---	7.2	6.7	6.9
20	6.2	6.0	6.1	---	---	---	6.9	6.6	6.8
21	6.3	5.9	6.1	---	---	---	6.6	6.4	6.5
22	6.5	6.0	6.2	---	---	---	6.5	6.3	6.4
23	6.8	6.0	6.3	8.0	7.1	7.6	6.7	6.3	6.5
24	7.0	6.0	6.4	7.3	6.7	7.1	6.5	6.2	6.4
25	7.5	6.2	6.6	7.3	6.6	6.9	6.5	6.2	6.3
26	6.9	6.2	6.4	8.0	6.6	7.0	6.6	6.1	6.3
27	6.5	6.1	6.2	7.0	6.6	6.8	6.5	6.2	6.4
28	6.6	6.1	6.3	7.5	6.6	6.9	6.5	6.2	6.4
29	6.6	6.1	6.3	7.1	6.7	6.8	6.4	6.2	6.3
30	7.1	6.2	6.4	7.1	6.5	6.8	6.3	6.1	6.2
31	7.4	6.3	6.6	7.1	6.7	6.8	---	---	---
MONTH	---	---	---	---	---	---	7.3	6.1	6.7
PERIOD	8.0	5.9	6.6						

01183750 CONNECTICUT RIVER AT AGAWAM, MA--Continued

TEMPERATURE (DEG. C) OF WATER, JULY TO SEPTEMBER 1979

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	29.5	27.0	28.0	25.5	23.0	24.0
2	---	---	---	29.0	27.5	28.0	25.0	22.5	24.0
3	---	---	---	29.5	27.0	28.0	25.5	23.5	24.5
4	---	---	---	29.5	27.5	28.5	26.0	23.5	25.0
5	---	---	---	30.5	27.5	28.5	25.0	24.0	24.5
6	---	---	---	30.0	27.5	28.5	24.5	23.5	24.0
7	---	---	---	29.0	26.5	27.5	23.5	22.5	23.0
8	---	---	---	28.0	26.0	27.0	23.5	22.0	23.0
9	---	---	---	28.0	25.5	26.5	22.5	20.5	21.5
10	---	---	---	26.0	25.0	25.5	22.5	20.5	21.5
11	---	---	---	---	---	---	22.5	20.5	21.0
12	---	---	---	---	---	---	22.5	19.5	21.0
13	---	---	---	---	---	---	22.5	19.5	21.0
14	---	---	---	---	---	---	21.5	20.5	21.0
15	---	---	---	21.0	20.0	20.5	22.0	20.5	21.0
16	---	---	---	---	---	---	22.5	20.0	21.0
17	---	---	---	---	---	---	22.5	19.0	20.5
18	---	---	---	---	---	---	22.5	20.0	21.0
19	---	---	---	---	---	---	22.0	19.5	20.5
20	27.0	25.5	26.5	---	---	---	20.5	18.0	19.0
21	26.5	24.5	25.5	---	---	---	18.5	17.5	18.0
22	27.5	24.5	26.0	---	---	---	18.5	17.5	18.0
23	28.5	25.5	27.0	23.5	23.0	23.5	18.0	16.0	17.0
24	28.0	26.0	27.0	23.5	22.5	23.0	18.5	16.0	17.0
25	29.0	26.0	27.5	25.0	22.5	23.5	17.5	16.0	16.5
26	28.5	27.0	27.5	26.0	23.0	24.5	18.5	16.0	17.5
27	29.0	26.5	27.5	24.5	23.0	24.0	18.5	16.0	17.5
28	29.0	26.5	27.5	25.5	23.5	24.5	18.5	17.0	17.5
29	29.0	26.5	27.5	25.5	24.0	24.5	18.5	18.0	18.0
30	29.5	26.5	28.0	26.0	24.0	25.0	17.5	17.0	17.5
31	29.0	27.0	28.0	26.0	24.0	25.0	---	---	---
MONTH	---	---	---	---	---	---	26.0	16.0	20.5
PERIOD	30.5	16.0	23.5						

DISSOLVED OXYGEN (DO), MG/L, JULY TO SEPTEMBER 1979

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	11.4	6.8	8.8	9.4	6.4	7.5
2	---	---	---	8.6	5.6	7.0	9.3	6.2	7.6
3	---	---	---	9.2	4.3	6.7	9.8	5.6	7.4
4	---	---	---	9.5	5.1	7.0	9.7	5.5	7.5
5	---	---	---	10.5	5.2	7.9	8.9	6.8	7.7
6	---	---	---	11.7	6.9	9.2	7.3	6.5	6.9
7	---	---	---	11.6	7.1	9.4	8.0	6.6	7.6
8	---	---	---	11.6	7.7	9.5	8.5	7.2	8.1
9	---	---	---	11.7	7.0	9.4	8.8	7.4	8.2
10	---	---	---	8.5	7.4	7.9	9.6	7.6	8.5
11	---	---	---	---	---	---	10.3	7.5	8.7
12	---	---	---	---	---	---	10.6	7.7	9.2
13	---	---	---	---	---	---	10.7	8.0	9.3
14	---	---	---	---	---	---	8.9	8.0	8.5
15	---	---	---	9.9	8.0	9.1	9.2	7.4	8.4
16	---	---	---	---	---	---	10.0	7.7	8.8
17	---	---	---	---	---	---	10.8	7.1	8.8
18	---	---	---	---	---	---	10.9	7.4	9.1
19	---	---	---	---	---	---	10.4	7.9	9.2
20	8.7	6.5	8.0	---	---	---	10.5	8.3	9.3
21	9.7	5.9	7.7	---	---	---	9.1	7.8	8.4
22	11.0	6.1	8.7	---	---	---	8.5	6.9	7.8
23	11.8	6.7	9.0	10.9	9.3	10.2	9.9	7.6	8.9
24	11.4	6.9	9.0	10.3	7.6	9.0	10.2	7.8	9.2
25	13.0	7.6	9.7	10.0	6.5	8.1	9.9	8.1	8.8
26	11.2	7.4	8.9	11.3	6.1	8.7	10.2	7.3	8.5
27	9.2	5.5	7.2	8.9	7.0	7.7	9.8	7.6	8.6
28	10.1	5.5	7.4	9.7	6.7	8.0	9.9	7.5	8.5
29	10.8	5.9	8.1	8.7	6.9	7.7	9.0	7.0	8.0
30	11.6	6.1	8.5	8.7	5.9	7.0	8.2	7.3	7.8
31	11.0	6.6	8.7	9.0	6.3	7.4	---	---	---
MONTH	---	---	---	---	---	---	10.9	5.5	8.4
PERIOD	13.0	4.3	8.4						

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT
(National stream-quality accounting network and radiochemical station)

LOCATION.--Lat 41°59'14", long 72°36'21", Hartford County, Hydrologic Unit 01080205, on right bank just upstream from Enfield Dam, 1 mi (2 km) downstream from Thompsonville, 3 mi (5 km) downstream from Massachusetts-Connecticut State line, and at mile 68.2 (kilometer 109.7).

DRAINAGE AREA.--9,661 mi² (25,022 km²).

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 741: 1932. WSP 891: Drainage area. WDR CY-77-1: 1976.

GAGE.--Water-stage recorders on river and on canal of Connecticut Light and Power Co. Datum of gage is 38.48 ft (11.729 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Discharge includes water diverted around station by canal of Connecticut Light and Power Co. Flow regulated by power plants, by diversion from Chicopee River basin (see table below), 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 (3.03 billion cu m). Records of chemical analyses and water temperatures for the current year for station 01183750 (Connecticut River at Agawam, Mass.), 4.5 mi (7.2 km) upstream, are published on page 220 of this report.

AVERAGE DISCHARGE.--51 years, 16,420 ft³/s (465.0 m³/s), unadjusted.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 282,000 ft³/s (7,990 m³/s) Mar. 20, 1936, gage height, 16.6 ft (5.06 m), from floodmarks; minimum daily, 968 ft³/s (27.4 m³/s) Oct. 20, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 112,000 ft³/s (3,170 m³/s) Mar. 27, gage height, 6.84 ft (2.085 m); minimum daily, 2,620 ft³/s (74.2 m³/s) Oct. 1.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2620	7460	4210	4490	15500	12400	52000	62900	48400	4310	5170	7530
2	2800	8200	3820	9630	14600	11300	57500	45200	41000	6690	7210	6480
3	3140	9070	3440	37800	12800	11300	66500	37600	34600	10200	6660	4910
4	4200	7060	4880	44500	11500	11700	67500	34100	30300	9080	6450	6820
5	4130	3890	6960	34400	9260	11500	64700	33100	24000	5630	4900	9320
6	5120	4010	6940	26500	13000	29400	57500	31500	22600	8160	5380	14000
7	4840	7320	6400	21700	12000	81100	50400	29800	19800	6000	4970	21400
8	4130	7780	6500	28500	11500	104000	40600	26000	20300	4080	5240	18300
9	4370	5040	9490	35000	11000	95400	36100	24100	17100	5660	5250	13600
10	4970	3860	10800	26900	10600	86900	36100	22500	16000	7880	4770	8960
11	5820	3160	7390	19000	10300	87700	36100	18900	13700	5830	4790	8080
12	5330	3220	8930	14600	9880	85000	35900	17500	13900	5060	5330	7180
13	6320	3790	8860	15500	9560	73000	31400	17900	17300	6210	8100	7830
14	5360	7760	7300	14300	9320	61400	32300	18000	18200	5080	9980	9690
15	5630	5650	7690	12200	8960	60600	35600	17900	17000	4420	8260	9660
16	6860	4930	6200	12900	9310	61800	35900	15700	14800	8090	6520	6730
17	10200	5050	4420	12300	9400	52600	36600	16600	11100	7470	6250	5700
18	8130	6710	5720	13100	6380	45500	37700	13300	8090	9070	5400	6570
19	7320	5730	7200	14600	4920	42200	39900	11200	12500	8100	4850	7430
20	6790	4710	5550	14300	5890	40200	40400	8240	12600	6570	6170	7050
21	4930	6620	5440	10900	7370	39400	38200	10700	8080	6640	7340	6700
22	3620	7270	5380	17100	6860	43600	37000	11900	7330	4950	6790	8370
23	3530	7240	4440	19300	8550	53400	36100	12100	5470	5570	6240	10000
24	5590	5190	3780	18100	14100	66500	39800	16900	3940	5640	5990	7420
25	5140	6340	3790	27200	19600	81200	42800	48500	4500	4890	5330	8100
26	4840	4130	4730	29700	15800	104000	42000	85600	8730	4460	4780	7480
27	6380	4840	6490	26600	14700	107000	50200	85000	6340	7210	6780	8120
28	9030	7870	6360	23000	12700	94000	72700	63700	6030	6640	8860	7480
29	7450	5890	5750	19900	---	76400	80100	52000	5530	5060	7530	7530
30	7640	5500	5590	17900	---	64600	78500	51400	5930	5280	8710	7790
31	8750	---	4230	15200	---	53400	---	50700	---	6360	9540	---
TOTAL	174980	175290	188680	637320	305360	1848500	1408100	990540	475170	196690	199540	266230
MEAN	5645	5843	6086	20560	10910	59630	46940	31950	15840	6345	6437	8874
MAX	10200	9070	10800	44500	19600	107000	80100	85600	48400	10200	9980	21400
MIN	2620	3160	3440	4490	4920	11300	31400	8240	3940	4080	4770	4910
(†)	511	281	288	11.8	72.4	142	196	289	207	487	488	190
CAL YR 1978 TOTAL	5687910			MEAN 15580	MAX 64700	MIN 1510						
WTR YR 1979 TOTAL	6866400			MEAN 18810	MAX 107000	MIN 2620						

† Diversion, in cubic feet per second, from Chicopee River basin to Wachusett Reservoir.

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956, 1966 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to current year.

WATER TEMPERATURES: October 1955 to September 1956, October 1973 to current year.

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

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum, 206 micromhos Jan. 22, 1979; minimum, 46 micromhos Apr. 2, 1977.

WATER TEMPERATURES: Maximum, 36.5°C Aug. 30, 1977; minimum, 0.0°C on many days during winter periods.

EXTREMES FOR CURRENT YEAR.--

SPECIFIC CONDUCTANCE: Maximum, 206 micromhos Jan. 22; minimum, 54 micromhos May 29.

WATER TEMPERATURES: Maximum, 29.5°C Aug. 6; minimum, 0.0°C Feb. 18.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE, AIR (DEG C)	TEMPER- ATURE (DEG C)	COLOR (PLAT- INUM- COBALT UNITS)	TUR- BID- ITY (NTU)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED SATUR- ATION	COLI- FORM, TOTAL, IMMED. (COLS. PER 100 ML)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)
OCT												
18...	0945	8200	142	6.8	2.5	10.5	20	2.0	9.8	88	38000	3700
NOV												
16...	1330	4400	138	6.7	9.0	9.0	30	3.0	10.2	88	52000	1300
DEC												
15...	0945	6660	123	7.2	.0	1.0	20	2.0	12.9	91	50000	3100
JAN												
12...	0940	13000	102	7.3	<-5.0	.5	5	4.0	9.0	62	17000	4000
FEB												
16...	0945	10300	125	6.6	<-5.0	.0	10	1.0	12.6	86	4000	680
MAR												
12...	1040	85900	62	6.8	.0	.5	20	2.0	14.8	103	5800	2700
APR												
16...	1020	35000	84	6.9	6.5	5.0	10	3.0	12.4	97	16000	2100
MAY												
16...	1000	17800	94	7.0	19.0	17.0	10	3.0	9.2	95	10000	2900
JUN												
15...	0940	17200	101	7.1	25.0	19.5	5	2.0	9.2	100	86000	80000
JUL												
20...	1010	5380	104	6.6	33.5	26.0	10	3.0	6.5	79	55000	2000
AUG												
04...	1100	3950	138	7.5	25.0	24.5	6	3.0	8.0	94	20000	920
SEP												
18...	0945	5130	116	7.4	24.0	20.5	8	4.0	9.2	101	32000	5100

DATE	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML)	HARD- NESS (MG/L AS CAC03)	HARD- NESS, NONCAR- BONATE (MG/L AS CA)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)	SODIUM PERCENT	SODIUM AD- SORP- TION RATIO	SODIUM+ POTAS- SIUM, DIS- SOLVED (MG/L AS NA)	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	ALKA- LITY (MG/L AS CAC03)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)
OCT												
18...	47	43	7	14	1.9	8.0	28	.5	--	1.8	36	--
NOV												
16...	92	37	7	12	1.8	8.3	31	.6	--	1.8	30	--
DEC												
15...	440	32	10	10	1.8	8.6	35	.7	--	1.5	22	--
JAN												
12...	800	29	13	8.9	1.7	6.8	32	.5	--	1.2	16	--
FEB												
16...	230	38	15	12	2.0	8.8	32	.6	--	1.4	23	--
MAR												
12...	640	21	11	6.1	.4	5.9	37	.6	--	.8	10	--
APR												
16...	250	26	9	8.1	1.4	4.8	28	.4	--	.9	17	--
MAY												
16...	220	33	10	11	1.4	5.6	26	.4	--	1.0	23	--
JUN												
15...	320	33	11	11	1.4	6.1	28	.5	--	1.1	22	--
JUL												
20...	17	38	4	12	1.9	8.4	32	.6	9.8	1.4	34	17
AUG												
04...	K16	43	13	14	2.0	11	35	.7	13	1.5	30	1.9
SEP												
18...	29	40	14	13	1.8	9.0	32	.6	10	1.4	26	2.0

< ACTUAL VALUE IS KNOWN TO BE LESS THAN THE VALUE SHOWN.
K, NON-IDEAL COLONY COUNT.

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	SULFATE DIS- SOLVED (MG/L AS SO ₄)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)	SILICA, DIS- SOLVED (MG/L AS SiO ₂)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L)	SOLIDS, DIS- SOLVED (TONS PER AC-FT)	SOLIDS, DIS- SOLVED (TONS PER DAY)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO- GEN, NO ₂ +NO ₃ TOTAL (MG/L AS N)	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N)
OCT 18...	12	12	.1	2.9	84	74	.11	1860	92	.20	--	.04
NOV 16...	12	11	.0	3.5	75	68	.10	891	83	.34	--	.13
DEC 15...	12	12	.1	6.0	77	65	.10	1390	77	.35	--	.17
JAN 12...	10	11	.1	5.8	63	55	.09	2210	75	.41	--	.08
FEB 16...	13	13	.1	6.9	78	71	.11	2170	85	.47	--	.22
MAR 12...	7.8	6.9	.1	5.1	47	40	.06	10900	80	.28	--	.06
APR 16...	8.1	8.2	.0	5.2	55	47	.07	5200	59	.27	--	.04
MAY 16...	9.2	10	.1	5.2	58	58	.08	2790	75	.41	--	.08
JUN 15...	10	8.6	.1	4.8	65	56	.09	3020	67	.22	--	.11
JUL 20...	11	13	.1	3.7	85	72	.12	1240	87	.21	--	.07
AUG 09...	13	15	.1	3.6	85	78	.12	907	145	.15	--	.12
SEP 18...	10	12	.1	3.9	75	68	.10	1040	91	.23	.20	.13

DATE	NITRO- GEN, AMMONIA TOTAL (MG/L AS NH ₄)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO- GEN,NH ₄ + ORG. SUSP. TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, DIS- SOLVED (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS NO ₃)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS TOTAL (MG/L AS P0 ₄)	PHOS- PHORUS, DIS- SOLVED (MG/L AS P)
OCT 18...	--	.43	.47	.06	.41	.67	--	3.0	.07	--	.03
NOV 16...	--	.43	.56	.13	.43	.90	--	4.0	.07	--	.05
DEC 15...	--	.23	.40	.00	.48	.75	--	3.3	.06	--	.04
JAN 12...	--	.17	.25	.02	.23	.66	--	2.9	.06	--	.05
FEB 16...	--	.57	.79	.26	.53	1.3	--	5.6	.09	--	.05
MAR 12...	--	.31	.37	.00	.38	.65	--	2.9	.06	--	.01
APR 16...	--	.24	.28	.20	.08	.55	--	2.4	.02	--	.01
MAY 16...	.10	.29	.37	.16	.21	.78	--	3.5	.33	1.0	.17
JUN 15...	.13	.31	.42	.03	.39	.64	--	2.8	.33	1.0	.01
JUL 20...	.08	.34	.41	.17	.24	.62	--	2.7	.05	.15	.03
AUG 09...	.15	.28	.40	.34	.06	.55	--	2.4	.07	.21	.02
SEP 18...	.16	.46	.59	.18	.41	.82	.61	3.6	.08	.25	.03

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	ARSENIC TOTAL (UG/L AS AS)	ARSENIC DIS- SOLVED (UG/L AS AS)	BARIUM, TOTAL RECOV- ERABLE (UG/L AS BA)	BARIUM, SUS- PENDE RECOV- ERABLE (UG/L AS BA)	BARIUM, DIS- SOLVED (UG/L AS BA)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CADMIUM SUS- PENDE RECOV- ERABLE (UG/L AS CD)	CADMIUM DIS- SOLVED (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, SUS- PENDE RECOV- ERABLE (UG/L AS CR)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
OCT 18...	--	--	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--	--	--
DEC 15...	1	0	0	0	0	1	0	1	10	9	1	0
JAN 12...	--	--	--	--	--	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	2	1	0	0	0	3	0	3	10	10	0	2
APR 16...	--	--	--	--	--	--	--	--	--	--	--	--
MAY 16...	0	0	0	0	0	2	1	1	20	10	10	0
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	1	1	0	0	30	1	1	0	<10	0	<10	1
SEP 18...	--	--	--	--	--	--	--	--	--	--	--	--

DATE	COBALT, SUS- PENDE RECOV- ERABLE (UG/L AS CO)	COBALT, DIS- SOLVED (UG/L AS CO)	COPPER, TOTAL RECOV- ERABLE (UG/L AS CU)	COPPER, SUS- PENDE RECOV- ERABLE (UG/L AS CU)	COPPER, DIS- SOLVED (UG/L AS CU)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE)	IRON, SUS- PENDE RECOV- ERABLE (UG/L AS FE)	IRON, DIS- SOLVED (UG/L AS FE)	LEAD, TOTAL RECOV- ERABLE (UG/L AS PB)	LEAD, SUS- PENDE RECOV- ERABLE (UG/L AS PB)	LEAD, DIS- SOLVED (UG/L AS PB)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)
OCT 18...	--	--	--	--	5	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	3	--	--	--	--	--	--	--
DEC 15...	0	0	4	0	4	360	210	150	4	2	2	30
JAN 12...	--	--	--	--	1	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	4	--	--	--	--	--	--	--
MAR 12...	0	2	6	0	6	1320	1200	120	6	0	6	70
APR 16...	--	--	--	--	3	--	--	--	--	--	--	--
MAY 16...	0	0	8	5	3	370	250	120	6	1	5	30
JUN 15...	--	--	--	--	20	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	5	--	--	--	--	--	--	--
AUG 09...	1	0	9	3	6	310	260	50	9	8	1	83
SEP 18...	--	--	--	--	4	--	--	--	--	--	--	--

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

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	MANGA- NESE, SUS- PENDE RECOV. (UG/L AS MN)	MANGA- NESE, DIS- SOLVED (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	MERCURY SUS- PENDE RECOV- ERABLE (UG/L AS HG)	MERCURY DIS- SOLVED (UG/L AS HG)	SELE- NIUM, SUS- PENDE TOTAL (UG/L AS SE)	SELE- NIUM, DIS- SOLVED (UG/L AS SE)	SILVER, TOTAL RECOV- ERABLE (UG/L AS AG)	SILVER, SUS- PENDE RECOV- ERABLE (UG/L AS AG)	SILVER, DIS- SOLVED (UG/L AS AG)
OCT 18...	--	--	--	--	--	--	--	--	--	--
NOV 16...	--	--	--	--	--	--	--	--	--	--
DEC 15...	0	30	<.5	.0	<.5	0	0	0	0	0
JAN 12...	--	--	--	--	--	--	--	--	--	--
FEB 16...	--	--	--	--	--	--	--	--	--	--
MAR 12...	40	30	<.5	.0	<.5	0	0	0	0	0
APR 16...	--	--	--	--	--	--	--	--	--	--
MAY 16...	10	20	<.5	.0	<.5	0	0	0	0	0
JUN 15...	--	--	--	--	--	--	--	--	--	--
JUL 20...	--	--	--	--	--	--	--	--	--	--
AUG 09...	80	3	<.5	.0	<.5	0	0	0	0	0
SEP 18...	--	--	--	--	--	--	--	--	--	--

DATE	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	ZINC, SUS- PENDE RECOV- ERABLE (UG/L AS ZN)	ZINC, DIS- SOLVED (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC SUS- PENDE TOTAL (MG/L AS C)	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)
OCT 18...	--	--	50	5.3	--	--	.00	--	--	--
NOV 16...	--	--	20	3.8	--	--	--	--	--	--
DEC 15...	20	10	10	6.7	6.1	.6	.00	1400	.000	.000
JAN 12...	--	--	50	3.5	--	--	--	--	--	--
FEB 16...	--	--	20	4.1	--	--	--	--	--	--
MAR 12...	20	10	10	5.7	4.9	.8	.00	450	.000	.000
APR 16...	--	--	10	3.8	--	--	--	--	--	--
MAY 16...	40	20	20	5.9	5.7	.2	.00	1400	3.49	.000
JUN 15...	--	--	20	4.8	--	--	--	--	--	--
JUL 20...	--	--	10	--	--	--	--	20000	--	--
AUG 09...	30	20	10	4.4	3.8	.6	.00	--	16.0	.000
SEP 18...	--	--	0	--	--	--	--	660	--	--

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

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEO (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEO (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDEO (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDEO (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 18...	0945	8200	11	244	100	APR 16...	1020	35000	7	661	100
NOV 16...	1330	4400	5	59	100	MAY 16...	1000	17800	18	865	52
DEC 15...	0945	6660	7	126	--	JUN 15...	0940	17200	13	604	78
JAN 12...	0940	13000	6	211	100	JUL 20...	1010	5380	8	116	80
FEB 16...	0945	10300	3	83	100	AUG 09...	1100	3950	14	149	77
MAR 12...	1040	85900	58	13500	--	SEP 18...	0945	5130	12	166	85

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

PERIPHYTON

(sampling method - Polyethylene strip)

Dates of Exposure	LENGTH OF EXPO- SURE (DAYS)	PERI- PHYTON BIOMASS TOTAL DRY WEIGHT (G/SQ M)	PERI- PHYTON BIOMASS ASH WEIGHT (G/SQ M)	CHLOR-A PERI- PHYTON CHROMO- FLUOROM (MG/M ²)	CHLOR-B PERI- PHYTON CHROMO- GRAPHIC FLUOROM (MG/M ²)
September 20 to October 18	29	23.6	20.7	44.9	4.93
May 16 to June 15	31	--	--	5.58	.620

CONNECTICUT RIVER BASIN

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), OCTOBER 1978 TO JULY 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	177	170	173	143	134	137	171	157	164	147	142	145
2	175	169	173	145	134	140	171	164	168	150	141	147
3	176	166	171	146	141	144	163	150	156	137	103	111
4	175	168	171	141	138	140	159	150	155	106	103	105
5	170	165	168	144	139	141	171	155	165	105	100	103
6	168	160	164	155	141	146	168	154	161	104	96	99
7	166	159	163	157	145	152	161	152	155	112	100	104
8	163	156	159	150	144	147	161	153	158	150	120	132
9	160	156	159	143	134	138	161	155	158	116	97	102
10	157	154	156	153	141	148	156	134	142	106	96	101
11	160	155	158	153	146	150	143	136	141	118	107	110
12	163	157	160	156	148	151	144	138	141	118	110	113
13	165	157	161	158	149	152	141	112	127	164	112	118
14	163	157	160	155	140	148	140	117	129	192	141	169
15	161	156	158	144	137	141	141	136	138	192	157	175
16	160	153	156	140	136	138	140	138	139	158	137	144
17	161	143	153	148	142	145	149	139	142	139	135	137
18	143	139	142	154	148	151	154	138	146	139	133	136
19	156	145	152	149	143	146	156	144	150	138	130	134
20	164	156	159	149	143	146	150	136	146	144	139	142
21	158	150	153	150	142	147	179	136	144	---	---	---
22	162	153	157	146	140	142	201	173	185	206	172	191
23	160	155	157	143	137	139	178	160	170	170	137	148
24	167	155	160	151	141	147	162	155	160	143	139	141
25	157	150	153	167	152	161	160	153	156	136	124	132
26	155	151	153	154	148	151	180	152	164	133	128	131
27	157	150	154	158	151	154	175	155	166	131	121	124
28	156	147	151	159	142	150	155	152	153	134	125	130
29	149	141	144	149	144	146	155	148	153	143	136	139
30	143	138	141	156	144	149	152	148	150	146	144	145
31	143	139	141	---	---	---	151	147	150	151	148	150
MONTH	177	138	157	167	134	146	201	112	153	206	96	132

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	153	150	151	128	121	126	79	75	77	66	63	64
2	157	152	155	127	123	125	76	75	75	68	63	66
3	165	159	162	128	125	126	78	75	77	73	66	70
4	166	163	165	127	122	124	77	73	74	76	73	75
5	169	167	168	124	120	122	77	73	75	77	72	75
6	177	171	174	123	91	107	74	72	73	79	77	78
7	182	178	179	90	84	87	74	72	73	81	79	80
8	185	182	184	92	84	89	78	75	76	86	80	83
9	187	185	186	85	82	84	85	78	81	92	85	89
10	193	189	191	83	80	81	84	80	82	92	88	90
11	201	194	196	83	79	81	84	81	83	94	90	92
12	181	70	118	81	78	80	85	83	84	96	93	94
13	126	111	121	86	79	83	85	83	84	97	96	96
14	130	120	124	88	85	86	84	82	83	97	96	97
15	136	130	134	86	84	85	83	80	81	97	93	96
16	144	135	143	89	85	87	82	80	81	100	94	97
17	152	142	150	88	86	87	80	77	79	98	95	97
18	---	---	---	90	86	89	80	76	78	100	95	98
19	---	---	---	90	88	89	81	77	79	103	98	101
20	---	---	---	91	88	89	83	79	81	106	104	105
21	152	116	135	89	86	87	83	80	82	107	103	105
22	199	150	162	86	81	84	81	78	80	109	105	107
23	171	154	161	80	76	78	78	76	77	108	103	105
24	153	130	140	78	73	76	76	74	75	111	99	103
25	126	120	122	78	72	75	74	72	73	98	64	81
26	120	113	116	74	69	72	73	71	72	71	59	64
27	117	112	114	70	66	69	73	69	72	62	57	59
28	128	111	118	69	67	68	68	64	66	64	58	62
29	---	---	---	72	68	70	65	60	62	65	54	60
30	---	---	---	77	71	74	65	57	63	61	56	59
31	---	---	---	79	76	77	---	---	---	60	56	58
MONTH	201	70	151	128	66	89	85	57	77	111	54	84

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), OCTOBER 1978 TO JULY 1979--Continued

DAY	MAX	MIN JUNF	MEAN	MAX	MIN JULY	MEAN
1	66	57	62	152	142	147
2	74	65	70	153	147	149
3	79	73	77	147	135	141
4	84	78	82	137	123	132
5	89	83	86	130	122	127
6	90	87	88	138	129	132
7	92	88	89	---	---	---
8	91	88	90	---	---	---
9	98	91	95	---	---	---
10	102	96	99	---	---	---
11	104	99	100	---	---	---
12	108	103	105	---	---	---
13	104	99	102	---	---	---
14	102	96	99	---	---	---
15	104	98	101	---	---	---
16	107	102	104	---	---	---
17	111	106	108	---	---	---
18	126	112	119	---	---	---
19	117	109	112	---	---	---
20	112	108	109	---	---	---
21	116	109	112	---	---	---
22	121	114	117	---	---	---
23	121	115	118	---	---	---
24	125	115	120	---	---	---
25	137	124	128	---	---	---
26	137	123	131	---	---	---
27	129	125	127	---	---	---
28	133	130	131	---	---	---
29	137	131	134	---	---	---
30	145	136	141	---	---	---
31	---	---	---	---	---	---
MONTH	145	57	105	---	---	---
PERIOD	206	54	121			

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN	MAX	MIN JANUARY	MEAN
1	19.0	12.5	15.5	11.5	10.5	11.0	5.0	4.0	4.5	2.5	1.5	2.0
2	23.0	10.5	15.0	11.0	10.0	10.5	5.0	4.5	5.0	4.0	2.5	3.0
3	22.5	7.5	13.0	11.0	10.0	10.5	4.5	3.0	4.0	3.5	1.5	2.0
4	16.0	10.0	13.0	11.0	10.0	10.5	3.5	3.0	3.5	2.0	1.0	1.5
5	16.5	12.5	14.0	11.0	10.0	10.5	5.0	4.0	4.5	1.5	1.0	1.0
6	15.5	11.5	13.5	11.5	10.5	11.0	4.5	3.5	4.5	1.0	1.0	1.0
7	23.0	7.0	12.0	11.5	11.0	11.0	4.5	3.5	4.0	1.5	1.0	1.0
8	16.5	3.0	8.5	10.5	10.5	10.5	5.5	4.5	5.0	1.5	1.5	1.5
9	17.5	1.0	7.0	11.0	10.0	10.5	6.0	4.5	5.5	1.5	1.0	1.5
10	18.0	3.0	12.0	11.0	10.0	10.5	4.5	3.0	4.0	2.0	1.0	1.5
11	18.0	9.5	10.0	11.0	10.5	11.0	3.0	2.5	3.0	2.0	1.5	1.5
12	19.0	9.5	14.0	10.5	10.0	10.5	3.0	2.5	3.0	2.0	1.5	1.5
13	21.0	11.5	16.5	10.0	9.5	10.0	3.0	3.0	3.0	2.0	1.5	2.0
14	19.0	9.0	14.0	11.0	10.0	10.5	3.0	2.5	2.5	2.5	2.0	2.0
15	---	---	---	11.0	10.5	10.5	2.5	2.0	2.0	2.0	1.5	1.5
16	---	---	---	10.0	9.0	9.5	2.5	2.0	2.5	2.0	1.5	2.0
17	12.5	12.0	12.5	9.5	9.0	9.0	2.5	2.5	2.5	2.0	1.5	1.5
18	12.5	11.5	12.0	11.0	9.5	10.5	2.5	1.5	2.0	2.0	1.0	1.5
19	12.5	12.0	12.0	10.0	9.5	9.5	1.5	1.0	1.0	1.5	1.0	1.5
20	13.0	12.0	12.5	9.0	8.5	9.0	1.5	1.0	1.0	1.5	1.5	1.5
21	13.0	12.0	12.5	8.5	7.5	8.5	1.5	1.0	1.5	1.5	1.5	1.5
22	13.5	12.5	13.0	8.0	7.0	7.5	2.0	1.5	1.5	2.0	1.5	1.5
23	14.0	13.0	13.5	7.0	6.5	7.0	2.0	1.5	1.5	2.0	1.5	2.0
24	13.5	12.5	13.0	6.5	6.0	6.5	2.0	1.5	1.5	2.0	1.5	2.0
25	12.5	12.0	12.0	7.0	6.0	6.5	1.5	1.0	1.5	2.0	1.5	1.5
26	12.5	12.0	12.5	6.0	4.5	5.5	2.0	1.5	2.0	2.0	1.5	1.5
27	13.0	12.5	13.0	4.5	3.0	3.5	2.0	1.5	1.5	2.0	1.5	1.5
28	12.5	11.5	12.0	4.0	3.0	3.5	1.5	1.0	1.0	2.0	1.5	1.5
29	12.5	11.5	12.0	4.0	3.5	3.5	1.5	1.0	1.0	2.5	2.0	2.0
30	11.5	11.0	11.5	4.5	3.5	4.0	1.5	1.0	1.5	2.5	2.0	2.5
31	11.5	11.0	11.0	---	---	---	1.5	1.5	1.5	3.0	2.5	2.5
MONTH	23.0	1.0	12.5	11.5	3.0	9.0	6.0	1.0	2.5	4.0	1.0	1.5

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CT--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.5	1.5	2.0	2.0	1.0	1.5	6.0	5.5	6.0	13.5	13.0	13.5
2	1.5	1.0	1.5	2.5	1.5	2.0	6.0	6.0	6.0	14.0	12.5	13.5
3	1.5	1.0	1.5	2.5	2.0	2.5	6.0	5.5	5.5	13.5	13.0	13.5
4	1.5	1.0	1.0	2.5	2.0	2.5	6.0	5.0	5.5	14.0	13.0	13.5
5	1.5	1.0	1.0	4.0	2.5	3.0	6.0	5.5	6.0	14.0	13.0	13.5
6	1.0	1.0	1.0	4.0	2.0	3.5	6.0	5.5	6.0	14.0	13.0	13.5
7	1.0	1.0	1.0	2.0	1.5	1.5	6.0	5.5	5.5	14.0	13.0	13.5
8	1.5	1.0	1.0	2.0	1.5	1.5	6.5	5.0	6.0	15.5	13.5	14.5
9	1.0	.5	1.0	2.0	1.5	1.5	6.5	5.5	6.0	17.0	14.5	16.0
10	1.0	.5	.5	1.5	1.5	1.5	6.5	5.5	6.0	18.0	16.0	17.0
11	1.0	.5	.5	1.5	1.0	1.5	8.0	6.5	7.0	19.0	17.5	18.0
12	1.0	.5	.5	1.0	.5	1.0	9.0	7.5	8.0	18.0	17.5	17.5
13	1.0	.5	.5	1.5	.0	.5	9.5	8.5	9.0	17.5	17.0	17.5
14	1.0	.5	.5	2.0	1.5	1.5	9.5	8.5	9.0	17.0	16.5	17.0
15	1.0	.5	1.0	2.0	1.0	1.5	8.0	7.5	8.0	17.0	15.5	16.5
16	1.0	.5	.5	1.0	.5	1.0	7.5	7.0	7.5	17.5	16.0	17.0
17	1.0	.5	.5	1.5	.5	1.0	8.5	7.5	8.0	17.5	16.5	17.0
18	1.0	.0	.5	2.0	1.5	1.5	9.0	7.5	8.5	17.0	16.5	16.5
19	.5	.5	.5	2.5	1.5	2.0	9.5	8.5	9.0	17.0	16.0	16.5
20	1.0	.5	.5	3.5	2.0	3.0	10.0	8.5	9.5	16.5	15.5	16.0
21	1.0	.5	1.0	4.0	3.0	3.5	10.5	9.5	10.0	18.0	16.0	17.0
22	1.5	1.0	1.0	4.5	3.5	4.0	10.5	10.0	10.5	18.5	17.0	18.0
23	1.5	1.0	1.0	4.5	4.0	4.0	11.5	10.5	11.0	18.0	17.5	18.0
24	1.5	1.0	1.5	5.0	3.5	4.5	12.0	11.0	11.5	17.5	16.0	17.0
25	1.0	1.0	1.0	5.5	5.0	5.5	12.0	11.5	11.5	15.5	13.0	14.5
26	1.0	.5	1.0	5.5	5.0	5.0	12.5	11.5	12.0	13.5	13.0	13.5
27	1.5	1.0	1.0	5.0	4.5	4.5	13.5	12.0	12.5	13.0	13.0	13.0
28	2.5	1.0	1.5	4.5	4.0	4.0	12.5	11.5	12.0	13.5	13.0	13.0
29	---	---	---	4.5	4.0	4.0	13.5	12.5	13.0	14.0	13.0	13.5
30	---	---	---	5.0	4.0	4.5	13.5	13.0	13.5	14.5	13.5	14.0
31	---	---	---	5.5	4.5	5.0	---	---	---	15.0	13.5	14.5
MONTH	2.5	.0	1.0	5.5	.0	2.5	13.5	5.0	8.5	19.0	12.5	15.5
	JUNE			JULY			AUGUST			SEPTEMBER		
1	16.0	14.5	15.5	23.5	23.5	23.5	28.0	27.5	27.5	25.0	24.0	24.5
2	16.5	15.5	16.0	24.0	23.5	23.5	28.5	27.5	28.0	25.0	24.0	24.5
3	17.5	16.5	17.0	24.0	23.0	23.5	28.0	27.0	27.5	25.5	24.5	25.0
4	18.0	17.5	17.5	23.5	22.0	23.5	29.0	27.5	28.0	26.0	24.5	25

01184000 CONNECTICUT RIVER AT THOMPSONVILLE, CONN.--Continued

QUALITATIVE AND ASSOCIATED QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, DECEMBER 1978 TO SEPTEMBER 1979

PHYTOPLANKTON										
DATE TIME	DEC 15, 78 0945	MAR 12, 79 1040	MAY 16, 79 1000	JUL 20, 79 1010	SEP 18, 79 0945					
TOTAL CELLS/ML	1400	450	1400	20000	660					
DIVERSITY: DIVISION	1.2	0.6	1.1	1.4	1.5					
..CLASS	1.2	0.6	1.1	1.4	1.5					
..ORDER	1.6	0.8	1.9	2.1	1.6					
...FAMILY	2.7	3.3	2.4	2.7	2.4					
....GENUS	2.7	3.6	3.1	3.0	2.6					
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)										
..CHLOROPHYCEAE										
...CHLOROCOCCALES										
....CHARACIACEAE	--	--	--	--	* 0	--	--	--	--	--
....SCHROEDERIA	--	--	--	--						
....COELASTRACEAE	--	--	--	--						
....COELASTRUM	--	--	--	--	350	2	--	--	--	--
....MICRACTINIACEAE	--	--	--	--						
....MICRACTINIUM	--	--	--	--	1900	10	--	--	--	--
....OOCYSTACEAE	--	--	--	--						
....ANKISTRODESMUS	--	--	--	43	3	880	4	14	2	
....DICTYOSPHAERIUM	--	--	--	120	8	1200	6	--	--	--
....OOCYSTIS	--	--	--	14	1	--	--	--	--	--
....SELENASTRUM	--	--	--	29	2	--	--	--	--	--
....SCENEDESMACEAE										
....ACTINASTRUM	--	--	58	13	--	660	3	--	--	--
....CRUCIGENIA	--	--	--	--	--	180	1	110#	17	
....SCENEDESMUS	--	--	--	--	--	700	3	55	8	
..TETRASPORALES										
...PALMELLACEAE										
....SPHAEROCYSTIS	--	--	--	43	3	350	2	--	--	--
..VOLVOCALES										
...CHLAMYDOMONADACEAE										
....CHLAMYDOMONAS	42	3	--	29	2	310	2	14	2	
...VOLVOCAEAE										
....GONIUM	--	--	--	29	2	--	--	--	--	--
CHRYSOPHYTA										
..BACILLARIOPHYCEAE										
...CENTRALES										
....COSCINODISCAEAE										
....CYCLOTELLA	190	14	14	3	560#	40	2300	11	--	--
....MELOSIRA	--	--	--	--	160	11	--	--	--	--
...PENNALES										
....ACHNANTHACEAE										
....ACHNANTHES	97	7	87#	19	29	2	--	--	96	15
....CYMBELLACEAE	--	--	14	3	--	--	--	--	--	--
....CYMBELLA	--	--	--	--	--	--	--	--	--	--
....DIATOMACEAE										
....DIATOMA	14	1	14	3	--	--	--	--	--	--
....EUNOTIACEAE	--	--	29	6	--	--	--	--	--	--
....EUNOTIA	--	--	--	--	--	--	--	--	--	--
....FRAGILARIACEAE										
....ASTERIONELLA	84	6	--	--	--	--	--	--	--	--
....FRAGILARIA	--	--	14	3	29	2	--	--	--	--
....HANNAEA	--	--	14	3	--	--	--	--	--	--
....SYNEDRA	14	1	29	6	100	7	--	--	--	--
....GOMPHONEMATACEAE										
....GOMPHONEMA	14	1	43	10	--	--	--	--	--	--
....MERIDIONACEAE										
....MERIDION	--	--	14	3	--	--	--	--	--	--
....NAVICULACEAE										
....AMPHIPLEURA	--	--	14	3	--	--	--	--	--	--
....NAVICULA	56	4	58	13	14	1	* 0	160#	25	
....NITZSCHIAEAE										
....NITZSCHIA	70	5	--	--	43	3	400	2	41	6
....SURIPELLACEAE										
....CYMATOPLEURA	--	--	14	3	--	--	--	--	--	--
...TABELLARIACEAE										
....TABELLARIA	--	--	29	6	--	--	--	--	--	--
CYANOPHYTA (BLUE-GREEN ALGAE)										
..CYANOPHYCEAE										
...CHROOCOCCALES										
....CHROOCOCCACEAE										
....AGMENELLUM	--	--	--	--	310	2	--	--	--	--
....ANACYSTIS	--	--	--	--	2500	12	--	--	--	--
...HORMOGONALES										
....OSCILLATORIAEAE										
....LYNGBYA	--	--	--	--	7900#	39	160#	25	--	--
....OSCILLATORIA	290#	21	--	--	--	--	--	--	--	--
...SCYTONEMATACEAE										
....PLECTONEMA	490#	35	--	--	--	--	--	--	--	--
EUGLENOPHYTA (EUGLENOIDS)										
..EUGLENOPHYCEAE										
...EUGLENALES										
....EUGLENACEAE										
....EUGLENA	14	1	--	--	--	--	--	--	--	--
....TRACHELONAS	--	--	--	--	* 0	--	--	--	--	--

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

CONNECTICUT RIVER BASIN

01185100 FALL RIVER BELOW OTIS RESERVOIR, NEAR OTIS, MA

LOCATION.--Lat 42°09'42", long 73°03'48", Berkshire County, Hydrologic Unit 01080207, on right bank 0.4 mi (0.6 km) downstream from Otis Reservoir, 0.5 mi (0.8 km) upstream from mouth, and 2.6 mi (4.2 km) southeast of Otis.

DRAINAGE AREA.--16.5 mi² (42.7 km²).

PERIOD OF RECORD.--August 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,260 ft (384 m), from topographic map.

REMARKS.--Records good except those for period of no gage-height record Nov. 18 to Jan. 14, Feb. 20 to Apr. 9, which are fair. Flow regulated by Otis Reservoir (Reservoirs in Connecticut River basin). Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--10 years, 39.7 ft³/s (1.124 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 422 ft³/s (12.0 m³/s) July 2, 1972, gage height, 5.41 ft (1.649 m); minimum daily, 0.68 ft³/s (0.019 m³/s) June 20, 1973.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 338 ft³/s (9.57 m³/s) May 29, gage height, 5.03 ft (1.533 m); minimum daily, 1.4 ft³/s (0.040 m³/s) July 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	86	120	130	52	54	210	4.1	53	2.3	2.3	111
2	1.9	70	57	130	6.4	54	210	3.8	51	2.4	2.4	43
3	1.9	69	4.0	130	6.5	54	165	3.5	50	2.2	2.7	3.6
4	2.2	69	4.0	130	6.3	54	31	3.2	29	2.1	3.6	7.7
5	2.5	68	4.0	130	6.4	54	5.0	3.0	3.2	2.1	3.1	151
6	3.0	68	4.0	120	5.6	82	4.9	2.8	3.2	2.2	3.1	270
7	2.8	67	4.0	100	5.7	130	4.7	2.6	3.2	2.3	3.1	100
8	2.6	67	4.0	100	6.3	130	4.5	2.6	3.2	2.3	3.1	5.4
9	2.6	67	4.0	100	6.2	130	4.4	2.4	3.2	2.3	3.1	4.6
10	2.6	67	4.0	100	5.8	130	4.6	2.3	3.2	2.3	3.2	4.1
11	2.6	66	4.0	100	5.8	130	4.6	2.1	3.2	2.3	3.2	3.6
12	27	66	4.0	100	5.6	130	4.6	2.0	3.2	2.4	32	3.4
13	106	72	4.0	100	5.6	130	4.6	2.0	69	2.3	37	3.4
14	180	85	4.0	100	5.4	130	4.8	1.9	33	2.3	4.6	3.2
15	154	85	4.0	97	5.4	130	5.0	1.8	3.0	2.1	4.1	3.6
16	29	85	31	95	5.3	130	5.2	1.8	3.0	1.4	3.7	3.4
17	3.5	85	54	70	4.9	130	5.2	1.6	2.6	1.7	3.4	3.4
18	3.4	84	54	38	4.9	130	5.2	1.6	2.4	1.7	3.2	3.0
19	3.4	84	54	38	5.0	130	4.4	1.6	2.3	1.7	3.6	2.7
20	3.4	83	54	38	5.0	130	4.2	1.6	2.3	1.6	3.6	2.7
21	156	82	54	85	36	130	4.1	1.6	2.1	1.5	3.6	3.0
22	162	82	54	132	54	105	3.7	1.5	2.1	1.6	3.6	5.0
23	54	81	54	132	54	54	3.6	1.5	2.1	1.6	3.6	4.8
24	54	80	54	129	54	54	3.5	4.4	2.1	1.6	3.6	4.4
25	54	80	54	132	54	54	3.5	12	2.1	1.6	3.6	4.1
26	54	79	54	132	54	54	3.7	11	2.1	1.8	3.9	3.8
27	54	78	54	107	54	80	4.0	7.2	2.1	2.1	4.4	3.6
28	86	78	54	74	54	130	4.5	83	2.1	2.6	4.8	3.5
29	111	87	97	74	---	165	4.5	302	2.1	3.1	7.5	190
30	120	120	130	74	---	210	4.4	308	2.1	2.7	87	56
31	119	---	130	74	---	210	---	168	---	2.4	114	---
TOTAL	1562.3	2340	1265.0	3091	574.1	3418	731.4	948.5	347.2	64.6	367.7	1011.0
MEAN	50.4	78.0	40.8	99.7	20.5	110	24.4	30.6	11.6	2.08	11.9	33.7
MAX	180	120	130	132	54	210	210	308	69	3.1	114	270
MIN	1.9	66	4.0	38	4.9	54	3.5	1.5	2.1	1.4	2.3	2.7
CAL YR 1978	TOTAL	11770.4	MEAN	32.2	MAX	180	MIN	1.6				
WTR YR 1979	TOTAL	15720.8	MEAN	43.1	MAX	308	MIN	1.4				

01185500 WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA

LOCATION.--Lat 42°04'45", long 73°04'24", Berkshire County, Hydrologic Unit 01080207, on left bank 5 ft (1.5 m) downstream from highway bridge, 0.3 mi (0.5 km) downstream from Clam River, 1 mi (1.6 km) south of New Boston, and at mile 65.0 (104.6 km).

DRAINAGE AREA.--92.0 mi² (238.3 km²).

PERIOD OF RECORD.--May 1913 to current year. Prior to October 1948, published as Farmington River near New Boston.

REVISED RECORDS.--WSP 641: 1924(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1231: 1914.

GAGE.--Water-stage recorder. Datum of gage is 758.21 ft (231.102 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except those for winter period, which are poor. Flow regulated by Otis Reservoir 7.0 mi (11.3 km) upstream on Fall River (Reservoirs in Connecticut River basin). High flow slightly affected by retarding reservoirs since 1966. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--66 years, 183 ft³/s (5.183 m³/s), 27.01 in/yr (686 mm/yr), adjusted for storage.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,300 ft³/s (971 m³/s) Aug. 19, 1955, gage height, 14.06 ft (4.285 m), from rating curve extended above 9,600 ft³/s (270 m³/s) on basis of slope-area measurement of peak flow; minimum daily, 2.4 ft³/s (0.068 m³/s) Aug. 20, 21, 1957.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,380 ft³/s (95.7 m³/s) Mar. 7, gage height, 7.45 ft (2.271 m); minimum daily, 16 ft³/s (0.45 m³/s) Oct. 1-3, July 14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	116	147	200	199	270	549	343	289	29	22	178
2	16	92	98	800	135	260	544	266	237	36	26	120
3	16	91	46	959	130	250	505	224	204	32	22	65
4	17	91	66	580	150	250	360	234	156	25	27	61
5	23	89	89	435	145	330	341	206	128	23	24	161
6	46	88	77	330	140	1600	301	176	128	22	23	786
7	41	88	68	268	135	2300	244	157	109	21	25	605
8	31	94	73	1010	140	1280	202	143	94	20	29	264
9	26	124	197	717	135	840	211	130	86	19	30	156
10	25	93	199	514	130	841	254	118	81	19	37	107
11	24	89	140	393	125	1260	271	106	81	17	48	80
12	35	88	105	290	120	897	279	93	110	17	105	62
13	95	91	96	240	115	712	272	114	122	17	197	52
14	237	109	89	275	110	759	317	141	120	16	101	78
15	168	108	84	257	105	667	383	145	67	18	82	73
16	60	109	105	220	100	506	448	118	58	20	66	53
17	29	110	120	185	95	427	435	99	51	38	55	45
18	28	132	113	170	90	380	363	95	42	77	56	39
19	29	122	107	160	85	357	302	93	37	85	91	41
20	39	115	105	170	80	389	263	92	32	57	77	41
21	154	122	130	480	110	458	225	85	29	43	66	43
22	202	120	140	678	130	560	200	76	28	35	57	290
23	75	117	135	418	150	580	184	84	29	33	52	237
24	80	120	120	357	300	706	161	564	27	33	45	154
25	79	128	130	865	700	1460	152	1410	25	32	52	109
26	76	115	125	646	560	1300	162	987	23	34	66	89
27	95	113	120	505	420	695	569	565	22	48	62	78
28	115	115	120	372	330	534	592	657	20	35	76	74
29	149	118	160	309	---	510	624	860	19	33	88	345
30	144	168	190	261	---	529	439	705	19	28	244	279
31	143	---	180	231	---	534	---	490	---	25	213	---
TOTAL	2313	3275	3674	13295	5164	22441	10152	9576	2473	987	2164	4765
MEAN	74.6	109	119	429	184	724	338	309	82.4	31.8	69.8	159
MAX	237	168	199	1010	700	2300	624	1410	289	85	244	786
MIN	16	88	46	160	80	250	152	76	19	16	22	39
MEAN†	26.9	30.9	121	419	197	754	392	350	81.0	34.7	68.4	159
CFSM†	.29	.34	1.32	4.55	2.14	8.20	4.26	3.80	.88	.38	.74	1.73
IN.†	.34	.38	1.51	5.25	2.23	9.45	4.75	4.39	.98	.43	.86	1.93
CAL YR 1978 TOTAL	64368											
WTR YR 1979 TOTAL	80279											
MEAN 176												
MAX 1940												
MIN 14												
MEAN† 177												
MEAN† 220												
CFSM† 1.92												
CFSM† 2.39												
IN† 26.10												
IN† 32.50												

† Adjusted for change in contents in Otis Reservoir.

CONNECTICUT RIVER BASIN

Reservoirs in Connecticut River basin

- 01127850; 01128000. FIRST CONNECTICUT AND SECOND CONNECTICUT LAKES on Connecticut River are operated as a unit for storage of water for power and are used for recreation. The downstream order and usable capacity of each are as follows: Second Lake, 12 mi (19 km) northeast of Pittsburg, NH, 506,000,000 ft³ (14,300,000 m³); First Lake, 5.6 mi (9.0 km) northeast of Pittsburg, NH, 3,330,000,000 ft³ (94,300,000 m³). Records furnished by New England Power Co.
01129000. LAKE FRANCIS on Connecticut River at Pittsburg, NH, completed in March 1940, used for storage of water for power and for recreation, has usable capacity of 4,326,000,000 ft³ (122,500,000 m³). Records furnished by New Hampshire Water Resources Board.
- 01132000; 01132500. MOORE AND COMERFORD RESERVOIRS on Connecticut River are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Moore Reservoir, 4.5 mi (7.2 km) northwest of Littleton, NH, filled in April 1956, 4,970,000,000 ft³ (141,000,000 m³); Comerford Reservoir, 5 mi (8 km) northeast of Monroe, NH, completed in 1930, 1,279,000,000 ft³ (36,220,000 m³). Records furnished by New England Power Co.
01141000. UNION VILLAGE RESERVOIR on Ompompanoosuc River, 0.3 mi (0.5 km) north of Union Village, VT, completed in 1949 for flood control, has usable capacity of 1,660,000,000 ft³ (47,000,000 m³). Records furnished by Corps of Engineers.
- 01148000; 01150000. LAKES AND PONDS IN MASCOMA RIVER BASIN are operated as a unit for storage of water for power and are used for recreation. The reservoirs and usable capacity of each are as follows: 01148000 Goose Pond, 5.2 mi (8.4 km) northeast of Mascoma, NH, 509,000,000 ft³ (14,400,000 m³); Grafton Pond, 8.5 mi (13.7 km) southeast of Mascoma, 144,000,000 ft³ (4,080,000 m³); Crystal Lake, 5.8 mi (9.3 km) southeast of Mascoma, 75,000,000 ft³ (2,100,000 m³); 01150000 Mascoma Lake at Mascoma, 337,000,000 ft³ (9,540,000 m³); total usable capacity of the four reservoirs, 1,060,000,000 ft³ (30,000,000 m³). Records furnished by New Hampshire Water Resources Board.
01151400. NORTH HARTLAND RESERVOIR on Ottauquechee River at North Hartland, VT, completed in 1961, used for flood control and recreation, has usable capacity of 3,110,000,000 ft³ (88,100,000 m³). Records furnished by Corps of Engineers.
01152000. SUNAPEE LAKE on Sugar River at Sunapee, NH, used for recreation and storage of water for power, has usable capacity of 862,000,000 ft³ (24,400,000 m³). Records furnished by New Hampshire Water Resources Board.
01152900. NORTH SPRINGFIELD RESERVOIR on Black River at North Springfield, VT, completed in 1960, used for flood control and recreation, has usable capacity of 2,230,000,000 ft³ (63,200,000 m³). Records furnished by Corps of Engineers.
01155400. BALL MOUNTAIN RESERVOIR on West River, 2 mi (3.2 km) north of Jamaica, VT, completed in 1961, used for flood control and recreation, has usable capacity of 2,380,000,000 ft³ (67,400,000 m³). Records furnished by Corps of Engineers.
01155900. TOWNSHEND RESERVOIR on West River, 1.8 mi (2.9 km) northwest of Townshend, VT, completed in 1961, used for flood control and recreation, has usable capacity of 1,460,000,000 ft³ (41,300,000 m³). Records furnished by Corps of Engineers.
01157500. SURRY MOUNTAIN LAKE on Ashuelot River, 4.5 mi (7.2 km) north of Keene, NH, completed in 1942, used for flood control and recreation, has usable capacity of 1,420,000,000 ft³ (40,200,000 m³). Records furnished by Corps of Engineers.
01158550. OTTER BROOK LAKE on Otter Brook, 2.5 mi (4.0 km) northeast of Keene, NH, completed in 1958, used for flood control and recreation, has usable capacity of 798,000,000 ft³ (22,600,000 m³). Records furnished by Corps of Engineers.
01163500. BIRCH HILL RESERVOIR on Millers River, 1 mi (1.6 km) east of South Royalston, MA, completed in 1941 for flood control, has usable capacity of 2,180,000,000 ft³ (61,700,000 m³). Records furnished by Corps of Engineers.
01164500. TULLY RESERVOIR on East Branch Tully River, 3.5 mi (5.6 km) north of Athol, MA, completed in 1948 for flood control, has usable capacity of 958,000,000 ft³ (27,100,000 m³). Records furnished by Corps of Engineers.
- 01167490; 01168000. SOMERSET AND HARRIMAN RESERVOIRS in Deerfield River basin are operated as a unit for storage of water for hydroelectric power development and are used for recreation. The downstream order and usable capacity of each are as follows: Somerset Reservoir on East Branch Deerfield River, 2.5 mi (4.0 km) northeast of Somerset, VT, completed in 1913, 2,500,000,000 ft³ (71,000,000 m³); Harriman Reservoir on Deerfield River at Davis Bridge, VT, completed in 1924, 5,060,000,000 ft³ (143,000,000 m³). Records furnished by New England Power Co.
01172400. BARRE FALLS RESERVOIR on Ware River, 4 mi (6 km) east of Barre, MA, completed in 1958 for flood control, has usable capacity of 1,050,000,000 ft³ (29,700,000 m³). Records furnished by Corps of Engineers.
01175000. QUABBIN RESERVOIR on Swift River, 3.2 mi (5.1 km) east of Belchertown, MA, completed in August 1939 for storage of water for municipal supply, has usable capacity of 53,800,000,000 ft³ (1,520,000,000 m³). Records furnished by Water Division, Metropolitan District Commission.
01176410. CONANT BROOK RESERVOIR in Chicopee River basin, 1.5 mi (2.4 km) southeast of South Monson, MA, completed in September 1966 for flood control, has usable capacity of 163,000,000 ft³ (4,620,000 m³). Records furnished by Corps of Engineers.
01176500. LUDLOW RESERVOIR in Chicopee River basin, 3.2 mi (5.1 km) northwest of Three Rivers, MA, completed in 1875 for storage of water for municipal supply, has usable capacity of 201,000,000 ft³ (5,690,000 m³). Records furnished by Board of Water Commissioners, Springfield, MA.
01179000. KNIGHTVILLE RESERVOIR on Westfield River, 4 mi (6 km) north of Huntington, MA, completed in 1941 for flood control, has usable capacity of 2,130,000,000 ft³ (60,300,000 m³). Records furnished by Corps of Engineers.

Reservoirs in Connecticut River basin--Continued

01180450. LITTLEVILLE LAKE on Middle Branch Westfield River, 2 mi (3 km) north of Huntington, MA, completed in 1965, used for flood control, water supply, and recreation, has usable capacity of 1,410,000,000 ft³ (39,900,000 m³). Records furnished by Corps of Engineers.

01181900; 01182500. BORDEN BROOK AND COBBLE MOUNTAIN RESERVOIRS in Westfield Little River basin are operated as a unit for storage of water for municipal supply and for hydroelectric power development. The downstream order and usable capacity of each are as follows: Borden Brook Reservoir on Borden Brook, 3.5 mi (5.6 km) south of Blandford, MA, completed in 1909, 344,000,000 ft³ (9,740,000 m³); Cobble Mountain Reservoir on Westfield Little River, 6.5 mi (10.5 km) west of Westfield, MA, completed in 1931, 3,050,000,000 ft³ (86,400,000 m³). Records furnished by Board of Water Commissioners, Springfield, MA.

01185000. OTIS RESERVOIR in Farmington River basin, 3 mi (5 km) southeast of Otis, MA, completed in 1865, used for storage of water for power and for recreation, has usable capacity of 780,000,000 ft³ (22,000,000 m³). Records furnished by Massachusetts Department of Natural Resources, Division of Forests and Parks.

MONTHEND USABLE CONTENTS, IN MILLIONS OF CUBIC FEET, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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, 1978.....	2764.8	3128.0	5516.2	2.2	837.1	122.0
Oct. 31.....	1475.7	3768.4	5918.1	1.8	656.2	128.0
Nov. 30.....	1015.4	3569.7	5234.5	14.5	624.5	82.6
Dec. 31.....	1000.6	2949.5	5606.2	15.4	655.3	79.3
Jan. 31, 1979.....	1147.7	2655.6	5411.2	16.2	694.1	79.3
Feb. 28.....	838.5	1294.8	3502.3	15.7	639.6	82.6
Mar. 31.....	1370.3	1534.7	3066.3	16.5	981.6	94.7
Apr. 30.....	2967.3	3026.6	3838.5	7.7	1107.5	80.6
May 31.....	3516.9	4121.1	6072.2	5.3	1182.5	118.0
June 30.....	3377.2	3654.6	5555.2	1.4	1091.0	138.0
July 31.....	3207.3	3497.6	4908.0	1.4	971.1	129.0
Aug. 31.....	3088.0	3162.8	5020.1	1.5	918.1	127.0
Sept. 30.....	2768.7	3022.7	5499.7	1.6	895.1	122.0
	Sunapee Lake	North Springfield Reservoir	Bail Mountain Reservoir	Townshend Reservoir	Surry Mountain Lake	Otter Brook Lake
Sept. 30, 1978.....	396	21.6	107.1	34.4	33.5	37.2
Oct. 31.....	311	27.6	16.8	39.0	62.1	37.2
Nov. 30.....	213	22.5	14.4	37.6	63.2	37.2
Dec. 31.....	196	22.5	7.9	37.2	83.0	39.3
Jan. 31, 1979.....	326	25.4	46.4	38.6	83.0	36.8
Feb. 28.....	301	24.7	62.0	39.7	96.4	37.2
Mar. 31.....	502	37.8	257.4	35.5	434.4	127.8
Apr. 30.....	564	23.3	63.8	43.3	165.7	34.0
May 31.....	668	28.4	95.7	48.8	359.9	43.8
June 30.....	595	24.0	107.1	36.2	58.5	34.8
July 31.....	561	23.3	102.0	34.1	62.1	34.4
Aug. 31.....	481	23.3	102.8	35.5	69.1	37.2
Sept. 30.....	422	23.3	114.9	35.5	43.6	36.2
	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs	Barre Falls Reservoir	Quabbin Reservoir†	Conant Brook Reservoir
Sept. 30, 1978.....	1.2	37.6	4964.4	2.2	506610	0
Oct. 31.....	1.8	46.7	4402.1	2.6	49298	0
Nov. 30.....	1.5	53.0	3625.2	4.4	48566	.1
Dec. 31.....	1.5	21.5	3143.6	29.2	48185	.1
Jan. 31, 1979.....	15.8	40.8	2906.2	8.7	51554	.1
Feb. 28.....	7.0	41.6	2298.1	38.3	52238	.1
Mar. 31.....	18.2	60.7	3598.8	4.2	55516	.1
Apr. 30.....	37.0	118.8	6767.1	48.8	56020	.1
May 31.....	18.2	62.9	6945.1	4.2	55607	.1
June 30.....	1.5	54.1	6358.5	2.2	54616	.1
July 31.....	2.3	66.6	6057.9	3.1	53360	0
Aug. 31.....	5.7	71.8	5352.2	4.2	52472	.2
Sept. 30.....	7.0	67.9	5302.9	3.9	52198	.1
	Ludlow Reservoir	Knightville Reservoir	Littleville Lake	Borden Brook and Cobble Mountain Reservoirs	Otis Reservoir	
Sept. 30, 1978.....	165.1	0.1	415.9	2455.3	691.8	
Oct. 31.....	170.4	.2	417.2	2277.1	564.0	
Nov. 30.....	177.5	.2	418.5	2135.4	361.2	
Dec. 31.....	179.4	16.8	418.5	2094.0	367.4	
Jan. 31, 1979.....	181.1	15.7	423.7	2538.3	340.0	
Feb. 28.....	179.4	22.3	432.8	2404.9	370.5	
Mar. 31.....	179.4	95.2	482.2	3248.6	451.3	
Apr. 30.....	181.1	60.3	480.8	3295.6	589.7	
May 31.....	179.4	230.6	514.4	3344.1	699.5	
June 30.....	167.8	1.0	415.9	3058.3	695.7	
July 31.....	170.4	.2	417.2	2880.7	703.3	
Aug. 31.....	165.1	.5	423.7	2744.5	699.5	
Sept. 30.....	170.4	.5	427.6	2557.2	699.5	

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

01197000 EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA

LOCATION.--Lat 42°28'10", long 73°11'49", Berkshire County, Hydrologic Unit 01100005, on right bank 40 ft (12 m) downstream from Hubbard Avenue Bridge at Coltsville, 1.2 mi (1.9 km) upstream from Unkamet Brook, and 2 mi (3 km) northeast of Pittsfield.

DRAINAGE AREA.--57.1 mi² (147.9 km²).

PERIOD OF RECORD.--Discharge: March 1936 to current year. Prior to October 1945, published as Housatonic River at Coltsville.

Water-quality records: Water years 1963-65.

REVISED RECORDS.--WSP 851: 1936(M).

GAGE.--Water-stage recorder. Datum of gage is 993.49 ft (302.816 m) National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for period of no gage-height record, May 24-28, which are fair. Flow regulated by powerplants upstream and, since 1949, by Cleveland Brook Reservoir, usable capacity, 214,000,000 ft³ (6,060,000 m³), 5.4 mi (8.7 km) upstream; regulation greater prior to 1955. Diversion upstream from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950; see table below for figures of diversion. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--43 years, 116 ft³/s (3.285 m³/s), 27.59 in/yr (701 mm/yr), adjusted for diversion.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,400 ft³/s (181 m³/s) Sept. 21, 1938, gage height, 10.80 ft (3.292 m), from rating curve extended above 2,300 ft³/s (65 m³/s) on basis of computation of peak flow over dam; minimum daily, 4.4 ft³/s (0.12 m³/s) Aug. 15, 1936.

Maximum discharge since at least 1755, that of Sept. 21, 1938.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,200 ft³/s (34 m³/s), revised, and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2230	1920 54.4	5.19 1.582	May 25	-	2300 65	- -
Mar. 6	2400	*3030 85.8	6.00 1.829	Sept. 6	1815	1400 39.6	4.71 1.436
Mar. 25	0915	1670 47.3	4.97 1.515				

Minimum daily discharge, 12 ft³/s (0.34 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	36	30	118	105	118	354	190	170	26	23	30
2	31	34	30	1020	100	110	304	140	140	48	23	23
3	30	33	25	960	98	96	290	125	120	37	22	76
4	32	31	41	282	96	94	253	170	110	26	19	70
5	38	30	71	168	92	258	262	155	105	23	17	43
6	47	31	56	122	88	1270	250	125	105	23	14	647
7	45	32	44	115	84	2090	208	100	94	22	12	547
8	36	40	59	479	79	776	168	94	86	19	13	188
9	35	40	175	406	75	430	165	90	76	19	13	101
10	35	35	146	259	71	362	151	90	69	20	19	75
11	34	32	104	159	67	634	141	88	61	19	19	66
12	34	30	80	109	64	431	165	82	100	19	29	63
13	34	30	73	105	62	302	196	92	92	19	53	48
14	42	31	68	116	59	318	205	135	84	16	41	42
15	53	29	60	105	58	321	216	125	59	15	33	71
16	42	25	57	100	58	240	240	105	46	68	27	66
17	37	24	58	92	53	204	292	96	41	62	22	63
18	35	41	52	92	49	182	259	88	37	36	23	68
19	38	47	44	76	50	189	213	82	36	33	33	74
20	49	35	49	82	53	213	194	76	33	25	32	71
21	41	31	74	104	55	270	168	69	32	29	27	70
22	36	29	72	176	57	377	144	61	31	73	22	316
23	35	24	61	162	58	473	108	55	31	34	20	207
24	36	29	52	146	128	579	96	190	28	23	19	111
25	32	35	52	256	228	1380	84	1000	28	21	25	58
26	47	25	59	202	206	679	92	1200	24	34	45	46
27	124	25	55	170	163	350	250	390	20	85	34	41
28	78	25	48	145	139	251	250	200	18	39	27	37
29	47	27	48	130	---	233	360	270	19	28	29	70
30	40	29	46	120	---	254	260	235	21	23	66	73
31	37	---	48	110	---	302	---	220	---	22	53	---
TOTAL	1308	945	1937	6686	2495	13786	6338	6138	1916	986	854	3461
MEAN	42.2	31.5	62.5	216	89.1	445	211	198	63.9	31.8	27.5	115
MAX	124	47	175	1020	228	2090	360	1200	170	85	66	647
MIN	28	24	25	76	49	94	84	55	18	15	12	23
(†)	12.1	15.3	12.0	12.3	14.0	16.0	12.5	15.7	13.8	13.0	16.2	13.3
CAL YR 1978 TOTAL	36180											
WTR YR 1979 TOTAL	46850											
MEAN	99.1											
MAX	1200											
MIN	15											
MEAN†	113											
MEAN†	142											
CFSM†	1.98											
CFSM†	2.49											
IN†	26.75											
IN†	33.82											

† Diversion, in cubic feet per second, from Cleveland Brook Reservoir for municipal supply of Pittsfield; records furnished by city of Pittsfield.

‡ Adjusted for diversion.

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA

LOCATION.--Lat 42°13'55", long 73°21'19", Berkshire County, Hydrologic Unit 01100005, on left bank at upstream side of highway bridge at Van Deusenville, 0.5 mi (0.8 km) upstream from Williams River, and 2 mi (3 km) north of Great Barrington.
DRAINAGE AREA.--280 mi² (725 km²).

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1913 to current year.

REVISED RECORDS.--WSP 415: 1913-14. WSP 781: 1928(M). WSP 1051: 1928, 1933. WSP 1301: 1914-15(M), 1917-27(M), 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 683.04 ft (208.191 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at same site and datum.

REMARKS.--Records good except those for winter period, which are fair. Regulation at low flow by powerplants upstream. High flow slightly affected by retarding reservoir since 1973. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--66 years, 530 ft³/s (15.01 m³/s), 25.70 in/yr (653 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,200 ft³/s (346 m³/s) Jan. 1, 1949, gage height, 12.08 ft (3.682 m), from rating curve extended above 6,400 ft³/s (180 m³/s) on basis of computations of flow over dams at gage heights 11.72 ft (3.572 m) and 12.08 ft (3.682 m); minimum daily, 1.0 ft³/s (0.028 m³/s) Oct. 18, 1914.
EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 3	2200	2920	82.7	Mar. 26	1815	2640	74.8
Mar. 7	1045	*6850	194	May 26	1630	3160	89.5
						6.25	1.905
						6.95	2.118

Minimum daily discharge, 123 ft³/s (3.48 m³/s) Aug. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	235	257	373	730	731	1290	1230	1040	173	164	242
2	180	220	246	1280	630	705	1330	975	858	261	167	214
3	180	217	238	2670	620	680	1370	837	750	302	173	200
4	173	210	231	2680	610	705	1300	865	674	235	160	223
5	189	210	353	1980	560	1340	1250	887	618	203	165	345
6	217	206	348	1290	500	3320	1230	790	618	186	143	533
7	250	203	316	967	490	6500	1110	705	563	170	123	1600
8	238	213	298	1610	470	5440	960	650	510	164	128	1580
9	213	227	467	2050	450	3650	908	612	472	161	126	888
10	203	231	724	1800	420	2640	960	587	440	155	127	549
11	193	242	593	1400	405	2790	952	551	425	152	140	392
12	193	242	477	1100	385	2800	960	522	551	147	161	352
13	183	231	430	840	370	2350	960	569	527	144	329	280
14	200	224	399	710	360	1950	1030	712	445	141	392	293
15	261	227	363	640	350	1850	1180	718	383	139	249	301
16	250	224	334	580	340	1600	1210	618	353	139	216	392
17	217	217	329	550	320	1350	1320	505	325	316	197	351
18	200	253	315	530	310	1200	1290	467	302	353	175	272
19	200	307	290	510	300	1100	1100	461	273	318	220	285
20	217	307	280	510	310	1090	960	435	253	244	225	348
21	238	290	334	640	330	1140	872	404	235	205	170	315
22	227	281	420	960	350	1270	796	368	224	287	176	771
23	210	273	378	1010	370	1480	724	348	217	326	176	1110
24	210	273	329	908	560	1710	674	605	210	235	163	840
25	205	294	294	1580	1490	2110	631	2020	200	196	169	628
26	203	281	302	2000	1300	2550	624	3040	193	179	184	525
27	307	246	316	1710	952	2400	744	2830	186	268	258	479
28	425	242	300	1330	776	1900	990	2090	180	309	261	419
29	353	253	290	1090	---	1540	1350	1670	173	227	154	534
30	277	257	280	923	---	1380	1450	1430	170	192	224	664
31	246	---	281	837	---	1270	---	1230	---	176	271	---
TOTAL	7032	7336	10812	37058	15058	62541	31525	29731	12368	6703	5986	15925
MEAN	227	245	349	1195	538	2017	1051	959	412	216	193	531
MAX	425	307	724	2680	1490	6500	1450	3040	1040	353	392	1600
MIN	173	203	231	373	300	680	624	348	170	139	123	200
CFSM	.81	.88	1.25	4.27	1.92	7.20	3.75	3.43	1.47	.77	.69	1.90
IN.	.93	.97	1.44	4.92	2.00	8.31	4.19	3.95	1.64	.89	.80	2.12
CAL YR 1978 TOTAL	183628			MEAN 503	MAX 2950	MIN 112	CFSM 1.80	IN 24.40				
WTR YR 1979 TOTAL	242075			MEAN 663	MAX 6500	MIN 123	CFSM 2.37	IN 32.16				

HOUSATONIC RIVER BASIN

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

WATER-QUALITY RECORDS

LOCATION.--Lat 42°13'55", long 73°21'19", Berkshire County, Hydrologic Unit 01100005, on left bank at upstream side of highway at Van Deusenville, 0.5 mi (0.8 km) upstream from Williams River, and 2 mi (3 km) north of Great Barrington.

DRAINAGE AREA.--280 mi² (725 km²).

PERIOD OF RECORD.--Discharge: May 1913 to current year.

Water-quality records: Water years 1957-59, 1963-64, 1971, April 1979 to current year.

REVISED RECORDS.--WSP 415: 1913-14. WSP 781: 1928(M). WSP 1051: 1928, 1933. WSP 1301: 1914-15(M). 1917-27(M), 1929-31(M).

GAGE.--Water-stage recorder. Datum of gage is 683.04 ft (208.191 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1931, nonrecording gage at same site and datum.

REMARKS.--Daily discharge records are maintained by the New England District. Daily suspended-sediment record for this report will be published in the 1980 annual report.

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
APR					APR				
01...	1530	1320	12	43	21...	1720	858	7	16
02...	1700	1330	6	22	22...	1600	783	6	13
03...	1710	1390	5	14	23...	1630	718	9	17
04...	1800	1260	5	17	24...	1700	662	10	18
05...	0920	1260	--	--	28...	1700	1020	13	36
05...	1650	1260	5	17	29...	1600	1420	15	58
06...	1530	1210	3	4.8	30...	1700	1440	14	54
07...	1600	1080	3	4.7	MAY				
08...	1800	916	4	9.9	01...	1730	1150	12	37
09...	1710	916	4	9.9	02...	1700	945	8	20
10...	1700	960	3	7.8	03...	1225	824	--	--
11...	1700	945	4	10	03...	1900	810	9	20
12...	1800	960	5	13	04...	1930	908	13	32
13...	1730	967	4	10	05...	1900	865	12	28
14...	1800	1090	5	15	06...	1500	776	11	23
15...	1630	1190	4	13	07...	1700	687	10	19
16...	1630	1210	6	20	08...	1600	644	15	26
17...	1630	1330	6	22	10...	1700	581	9	14
18...	1700	1270	5	17	11...	2000	533	5	7.2
19...	1710	1040	9	25					
20...	1720	945	3	7.7					

32.00

4/38.2

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
MAY					JUN				
12...	1300	516	6	8.4	01...	1900	982	11	29
13...	1400	575	9	14	02...	1800	817	7	15
14...	1730	744	11	22	03...	1800	724	7	14
15...	1700	705	9	17	04...	2000	644	8	14
16...	1800	587	8	13	05...	1900	624	6	10
17...	1700	488	7	9.2	06...	1800	605	7	11
18...	1630	467	4	5.0	07...	2010	545	6	8.8
19...	1400	461	9	11	08...	1730	505	5	6.8
20...	1500	430	6	7.0	09...	1700	445	5	6.0
21...	1600	399	4	4.3	10...	1800	430	6	7.0
22...	1900	363	5	4.9	11...	1930	440	8	9.5
23...	1900	343	7	6.5	12...	1410	569	--	--
24...	1800	757	27	55	12...	1500	575	10	16
25...	1700	2310	63	393	13...	1800	499	5	6.7
26...	1600	3150	56	476	14...	1730	425	4	4.6
27...	1400	2780	31	233	15...	1830	373	3	3.0
28...	1800	1940	16	84	16...	1500	339	9	8.2
29...	1700	1630	13	57	17...	1530	325	10	8.8
30...	1800	1380	11	41	18...	1920	298	6	4.8
31...	1700	1200	13	42					

15.095

189.2

01197500 HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA--Continued

SUSPENDED-SEDIMENT MEASUREMENTS, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JUN					JUL				
19...	1800	265	7	5.0	09...	1800	164	10	4.4
20...	1930	246	9	6.0	10...	1830	155	11	4.6
21...	1710	235	10	6.3	11...	2000	149	10	4.0
22...	1700	224	7	4.2	12...	1600	147	10	4.0
23...	1500	217	9	5.3	13...	1500	144	10	3.9
24...	1600	210	9	5.1	14...	1700	141	10	3.8
25...	1700	203	10	5.5	15...	1800	141	16	6.1
26...	1600	189	11	5.6	16...	1530	141	15	5.7
27...	1630	185	12	6.0	17...	1500	420	13	15
28...	1600	180	12	5.8	18...	1215	348	--	--
29...	2000	170	12	5.5	18...	1640	343	14	13
30...	1600	170	14	6.4	19...	1600	311	12	10
JUL					20...	1400	231	10	6.2
01...	1400	175	10	4.8	21...	1530	203	14	7.7
02...	1700	316	16	14	22...	1400	302	11	9.0
03...	2000	273	11	8.1	23...	1700	302	10	8.2
04...	1600	224	9	5.4	24...	1500	227	14	8.6
05...	1630	200	11	5.2	25...	1700	193	12	6.3
06...	1605	183	11	5.4	26...	1040	180	14	6.8
07...	1230	176	11	5.2					
08...	1600	164	9	4.0					

127.1

127.3

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
JUL					AUG				
27...	1500	307	12	9.9	16...	1700	203	11	6.0
28...	1620	290	13	10	17...	1500	200	11	5.9
29...	1300	220	12	7.1	18...	1400	161	4	1.7
30...	2000	193	11	5.7	19...	1100	227	15	9.2
31...	1510	173	3	1.4	20...	1500	220	14	8.3
AUG					21...	1700	126	10	3.4
01...	1510	164	6	2.7	22...	1640	180	10	4.9
02...	1615	170	13	6.0	23...	1400	176	12	5.7
03...	0600	176	13	6.2	24...	1710	164	7	3.1
04...	0630	161	16	7.0	25...	0630	161	13	5.7
05...	1500	134	16	5.8	26...	0720	200	11	5.9
06...	1620	129	10	3.5	27...	1400	265	5	3.6
07...	1540	119	15	4.8	28...	1800	238	12	7.7
08...	1700	134	13	4.7	29...	1600	147	5	2.0
09...	2000	126	15	5.1	30...	1520	213	9	5.2
10...	1930	129	22	7.7	31...	1700	265	8	5.7
11...	1600	147	8	3.2	SEP				
12...	1610	167	4	1.8	01...	1300	242	7	4.6
13...	1600	404	30	33	02...	1520	213	7	4.0
14...	1500	343	12	12	03...	1750	210	8	4.5
15...	1540	238	12	7.7					

145.3

97.1

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SEDI- MENT, SUS- PENDED (MG/L)	SEDI- MENT DIS- CHARGE, SUS- PENDED (T/DAY)
SEP					SEP				
04...	1500	217	11	6.4	19...	1810	294	2	1.6
05...	1610	329	12	11	20...	1900	348	3	2.8
07...	1810	1700	2	9.2	21...	1810	325	1	1.88
08...	1700	1500	6	24	22...	1930	1030	2	5.6
09...	1630	770	1	2.1	23...	1930	1070	1	2.9
10...	1710	522	1	1.4	24...	1600	783	2	4.2
11...	1300	393	5	5.3	25...	1600	599	1	1.6
12...	1740	343	2	1.9	26...	1540	516	1	1.4
13...	1800	273	6	4.4	27...	1600	472	1	1.3
14...	1730	307	2	1.7	28...	1600	415	1	1.1
15...	1600	265	1	1.72	29...	1540	637	1	1.7
16...	1400	393	1	1.1	30...	1500	656	2	3.5
17...	1540	343	12	11					
18...	1710	265	1	1.72					

80.94

28.88

HUDSON RIVER BASIN

01331500 HOOSIC RIVER AT ADAMS, MA

LOCATION.--Lat 42°36'40", long 73°07'28", Berkshire County, Hydrologic Unit 02020003, on left bank at Adams, 500 ft (150 m) downstream from Dry Brook, and 0.4 mi (0.6 km) upstream from Pecks Brook.

DRAINAGE AREA.--46.3 mi² (119.9 km²).

PERIOD OF RECORD.--Discharge: October 1931 to current year.
Water-quality records: Water years 1967-69.

REVISED RECORDS.--WDR MA-NH-RI-VT-73-1: 1971-72.

GAGE.--Water-stage recorder. Datum of gage is 828.01 ft (252.377 m) National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, datum was 9.00 ft (2.743 m) higher and Oct. 1, 1964, to May 29, 1974, 8.00 ft (2.438 m) higher, at site 500 ft (150 m) upstream.

REMARKS. Records good. Discharge regulated by Cheshire Reservoir 5.1 mi (8.2 km) upstream. Several observations of stream prior to 1961. Flow regulated by Cheshire Reservoir 5.1 mi (8.2 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--48 years, 90.5 ft³/s (2.563 m³/s).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,080 ft³/s (144 m³/s) Sept. 21, 1938, gage height, 9.25 ft (2.819 m), site and datum then in use, from rating curve extended above 1,100 ft³/s (31 m³/s) on basis of computation of peak flow over dam; minimum daily, 8.0 ft³/s (0.23 m³/s) Aug. 31, Sept. 1, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 900 ft³/s (25 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1930	a1460 41.3	7.63 2.326	Mar. 25	0445	a1120 31.7	7.35 2.240
Mar. 6	1915	a*2000 56.6	8.00 2.438	May 25	1430	a1120 31.7	7.35 2.240

a From rating curve extended above 560 ft³/s (16 m³/s).

Minimum discharge, 18 ft³/s (0.51 m³/s) Oct. 1, 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	36	34	192	86	93	376	141	133	32	31	31
2	20	34	34	1130	80	95	302	125	120	45	30	28
3	19	33	30	661	80	93	302	112	110	36	30	107
4	20	32	52	282	78	102	248	150	98	31	29	53
5	25	31	69	190	75	395	263	123	66	30	28	39
6	32	30	50	168	71	1250	223	107	68	30	27	405
7	29	30	46	171	71	1090	190	102	58	31	26	256
8	25	37	64	639	71	579	171	95	55	32	26	97
9	22	37	192	340	69	420	171	91	53	30	26	70
10	21	34	135	223	68	467	165	86	53	28	35	58
11	22	32	82	174	64	698	168	78	57	28	40	50
12	21	31	69	144	62	330	183	71	71	28	45	44
13	21	29	71	153	60	306	186	78	57	28	71	40
14	31	30	65	162	60	386	186	88	50	28	41	42
15	43	30	59	150	60	310	190	80	45	30	36	78
16	28	28	55	141	60	237	219	71	44	49	33	51
17	25	30	55	136	58	230	196	73	41	115	31	43
18	24	49	46	130	57	223	171	64	38	80	31	38
19	24	42	43	78	57	216	133	66	37	56	47	39
20	28	36	42	78	58	186	125	66	34	39	40	36
21	26	34	62	91	60	219	123	66	34	33	35	57
22	24	33	64	139	60	270	125	62	33	45	32	248
23	23	32	55	105	58	353	130	58	33	37	31	123
24	23	37	50	93	133	456	128	298	32	35	30	78
25	23	43	67	159	203	906	112	753	31	34	31	64
26	43	32	57	133	150	494	107	446	28	38	31	57
27	147	31	52	107	110	327	180	259	30	69	29	52
28	70	31	50	102	95	255	196	199	28	41	28	47
29	49	33	47	95	---	234	282	203	28	35	27	62
30	41	34	46	91	---	263	174	171	28	33	34	58
31	38	---	46	88	---	336	---	159	---	32	37	---
TOTAL	1006	1011	1889	6545	2214	11879	5725	4541	1593	1238	1048	2451
MEAN	32.5	33.7	60.9	211	79.1	383	191	146	53.1	39.9	33.8	81.7
MAX	147	49	192	1130	203	1250	376	753	133	115	71	405
MIN	19	28	30	78	57	93	107	58	28	28	26	28

CAL YR 1978 TOTAL 30555 MEAN 83.7 MAX 750 MIN 19
WTR YR 1979 TOTAL 41140 MEAN 113 MAX 1250 MIN 19

01332000 NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA

LOCATION.--Lat 42°42'08", long 73°05'37", Berkshire County, Hydrologic Unit 02020003, on left bank at North Adams, 0.4 mi (0.6 km) downstream from Hudson Brook, and 1.5 mi (2.4 km) upstream from mouth.

DRAINAGE AREA.--39.0 mi² (101.0 km²).

PERIOD OF RECORD.--Discharge: June 1931 to current year.

Water-quality records: Water years 1967-69.

REVISED RECORDS.--WSP 756: Drainage area. WSP 781: 1933(M). WSP 801: 1928(M). WDR MA-NH-RI-VT-73-1: 1971.

GAGE.--Water-stage recorder. Concrete control at present site. Datum of gage is 820.46 ft (250.076 m) National

Geodetic Vertical Datum of 1929. Prior to Sept. 23, 1938, at site 100 ft (30 m) upstream at same datum.

July 9, 1959, to July 29, 1960, nonrecording gage at site 500 ft (150 m) upstream at datum about 4.6 ft (1.40 m) lower.

REMARKS.--Records good except those for winter period, which are fair. 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.--48 years, 97.4 ft³/s (2.758 m³/s), 33.92 in/yr (862 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,950 ft³/s (253 m³/s) Sept. 21, 1938, gage height, 12.05 ft (3.673 m), from floodmarks, by computation of peak flow over dam; maximum gage height, 12.24 ft (3.731 m).

Aug. 10, 1976; minimum discharge, 1.7 ft³/s (0.048 m³/s) July 30, 1965; minimum daily, 3.1 ft³/s (0.088 m³/s) July 30, 1965.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in November 1927 reached a discharge of 9,980 ft³/s (283 m³/s), by computation of flow over dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 1,300 ft³/s (37 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1730	2050 58.1	8.90 2.713
Mar. 6	2315	a2360 66.8	9.14 2.786
Mar. 25	0345	a*2750 77.9	9.43 2.874
May 25	1600	1600 45.3	8.52 2.597
Sept. 6	1800	2080 58.9	8.92 2.719

a From rating curve extended above 1,100 ft³/s (31.2 m³/s) on basis of computations of flow over dam at gage heights 10.28 ft (3.133 m) and 12.24 ft (3.731 m).

Minimum discharge, 4.8 ft³/s (0.14 m³/s) June 20; minimum daily, 6.4 ft³/s (0.18 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	45	26	160	52	71	771	174	93	23	17	11
2	8.7	38	24	1410	49	72	489	137	78	28	16	9.1
3	8.3	35	21	678	50	66	454	118	66	18	16	56
4	9.1	31	42	223	53	74	334	180	57	13	12	37
5	15	29	80	133	52	327	304	129	49	11	11	23
6	37	28	52	111	49	1220	230	105	51	10	10	743
7	29	26	45	108	46	1170	169	93	40	10	9.6	366
8	17	44	76	371	43	450	145	82	36	10	9.1	134
9	14	38	271	205	41	270	138	74	34	8.7	8.3	84
10	12	31	155	140	38	240	125	66	32	7.9	9.1	61
11	12	28	99	110	36	477	123	59	35	8.3	12	46
12	11	26	83	90	34	260	143	54	62	7.9	22	38
13	11	24	81	120	32	182	163	61	40	7.1	51	32
14	72	24	66	130	31	196	177	68	30	6.8	29	60
15	90	24	56	100	30	188	162	56	24	6.4	36	177
16	44	23	53	85	29	137	210	48	20	10	32	79
17	29	23	51	76	28	126	199	42	18	279	19	60
18	23	62	33	69	27	114	203	38	16	90	15	50
19	23	49	34	64	27	110	203	37	15	68	44	53
20	42	38	38	66	27	118	211	37	13	35	31	43
21	30	35	62	90	26	154	244	36	12	22	21	121
22	24	31	76	250	26	272	261	35	15	26	17	714
23	22	29	53	190	25	482	329	31	15	19	14	239
24	27	34	44	151	111	745	326	340	15	31	11	131
25	23	36	43	168	248	1770	282	971	13	38	14	95
26	52	20	44	130	141	668	258	567	11	46	21	76
27	350	23	39	95	96	331	506	241	10	115	14	63
28	126	27	37	80	77	222	452	156	11	54	12	54
29	80	26	35	69	---	203	498	192	36	34	12	95
30	61	27	36	61	---	318	248	140	16	23	14	76
31	51	---	35	56	---	562	---	123	---	19	14	---
TOTAL	1360.6	954	1890	5789	1524	11595	8357	4490	963	1085.1	573.1	3826.1
MEAN	43.9	31.8	61.0	187	54.4	374	279	145	32.1	35.0	18.5	128
MAX	350	62	271	1410	248	1770	771	971	93	279	51	743
MIN	7.5	20	21	56	25	66	123	31	10	6.4	8.3	9.1
CFSM	1.13	.82	1.56	4.80	1.40	9.59	7.15	3.72	.82	.90	.47	3.28
IN.	1.30	.91	1.80	5.52	1.45	11.06	7.97	4.28	.92	1.03	.55	3.65
CAL YR 1978	TOTAL	28074.3	MEAN	76.9	MAX	1270	MIN	5.5	CFSM	1.97	IN	26.78
WTR YR 1979	TOTAL	42406.9	MEAN	116	MAX	1770	MIN	6.4	CFSM	2.97	IN	40.45

HUDSON RIVER BASIN

01332500 HOOSIC RIVER NEAR WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'01", long 73°09'34", Berkshire County, Hydrologic Unit 02020003, on left bank 0.3 mi (0.5 km) downstream from Sherman Brook and 2.7 mi (4.3 km) east of junction of U.S. Highway 7 and State Highway 2 in Williamstown.

DRAINAGE AREA.--126 mi² (326 km²). Area at site used prior to June 6, 1979, 132 mi² (342 km²).

PERIOD OF RECORD.--Discharge: July 1940 to current year.

Water-quality records: Water years 1953-54, 1957-58, 1967-69.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 616.11 ft (187.790 m), Corps of Engineers datum. Prior to June 6, 1979, at site 1.2 mi (1.9 km) downstream at different datum.

REMARKS.--Records good except those for October to December and February (no gage-height record during most of each of these months), which are fair. Prior to 1966, slight diurnal fluctuation at low flow caused by mills upstream. Some regulation by Cheshire Reservoir 16 mi (26 km) upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--39 years, 277 ft³/s (7.845 m³/s), 28.50 in/yr (724 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft³/s (368 m³/s) Dec. 31, 1948, gage height, 14.85 ft (4.526 m), former site and datum, from rating curve extended above 4,300 ft³/s (120 m³/s) on basis of contracted-opening measurement of peak flow; minimum, 5.8 ft³/s (0.16 m³/s) Aug. 30, 31, Oct. 26, 1940; minimum daily, 25 ft³/s (0.71 m³/s) Sept. 2, 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,400 ft³/s (68 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	2045	4350 123	7.65 2.332	May 25	1600	2840 80.4	6.06 1.847
Mar. 7	0045	a*5970 169	9.21 2.807	Sept. 6	1730	2740 77.6	8.45 2.576
Mar. 25	0745	3660 104	6.95 2.118				

a From rating curve extended above 2,700 ft³/s (76 m³/s) on basis of slope-area measurements at gage heights 11.80 ft (3.597 m) and 13.02 ft (3.968 m).

Minimum discharge, 34 ft³/s (0.96 m³/s) July 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	130	98	508	210	214	1390	500	316	73	79	67
2	56	120	95	3050	200	226	1040	386	271	99	76	61
3	52	110	83	1920	200	214	1010	325	248	79	73	219
4	60	100	155	759	200	263	828	487	229	64	70	133
5	80	98	230	582	190	1050	820	355	217	52	64	92
6	120	95	165	462	180	3110	692	277	190	52	55	1190
7	100	92	150	370	175	3340	565	255	154	55	52	876
8	72	135	190	1310	170	1410	483	223	146	61	55	323
9	62	120	634	779	165	977	474	207	141	49	55	209
10	58	105	420	513	160	991	453	184	137	49	64	158
11	60	98	270	424	150	1570	454	172	133	49	82	129
12	56	94	220	391	145	961	495	165	200	47	86	110
13	56	87	217	353	140	749	515	170	150	44	167	103
14	150	90	200	324	135	888	536	190	133	44	96	141
15	210	90	175	334	135	786	526	170	121	41	96	348
16	120	92	165	321	135	609	650	160	114	82	89	172
17	90	98	160	289	130	573	632	146	99	612	76	133
18	76	160	130	266	130	525	590	133	89	244	73	117
19	76	140	125	230	130	534	529	133	82	176	114	129
20	115	120	130	220	130	520	505	125	79	106	103	106
21	92	115	190	300	130	606	528	121	86	86	86	181
22	78	105	235	515	130	809	554	110	73	106	73	1170
23	72	100	180	292	130	1100	623	107	70	82	64	487
24	80	115	155	240	400	1440	625	785	70	92	61	288
25	74	130	180	454	548	2970	550	2120	67	103	70	214
26	150	84	165	322	344	1540	500	1500	67	121	73	181
27	659	88	150	261	251	946	853	756	64	255	64	154
28	270	94	140	250	219	722	874	545	64	133	64	137
29	190	96	130	240	---	668	1060	592	79	103	61	204
30	160	100	130	226	---	796	651	466	67	89	70	176
31	140	---	130	220	---	1080	---	411	---	82	79	---
TOTAL	3686	3201	5797	16725	5362	32187	20005	12276	3960	3330	2390	8008
MEAN	119	107	187	540	192	1038	667	396	132	107	77.1	267
MAX	659	160	634	3050	548	3340	1390	2120	316	612	167	1190
MIN	52	84	83	220	130	214	453	107	64	41	52	61
CFSM	.90	.81	1.42	4.09	1.46	7.86	5.05	3.00	1.03	.85	.61	2.12
IN.	1.04	.90	1.63	4.71	1.51	9.07	5.64	3.46	1.15	.98	.71	2.36
CAL YR 1978	TOTAL	86500	MEAN	237	MAX	2500	MIN	50	CFSM	1.80	IN	24.38
WTR YR 1979	TOTAL	116927	MEAN	320	MAX	3340	MIN	41	CFSM	2.44	IN	33.17

01333000 GREEN RIVER AT WILLIAMSTOWN, MA

LOCATION.--Lat 42°42'32", long 73°11'50", Berkshire County, Hydrologic Unit 02020003, on left bank 0.1 mi (0.2 km) upstream from bridge on State Highway 2 at Williamstown and 0.8 mi (1.3 km) upstream from mouth.

DRAINAGE AREA.--42.6 mi² (110.3 km²).

PERIOD OF RECORD.--Discharge: September 1949 to current year.

Water-quality records: Water years 1967-69.

GAGE.--Water-stage recorder. Altitude of gage is 615 ft (187 m), from topographic map.

REMARKS.--Records good except those for winter period and period of no gage-height record, July 28 to Sept. 6, which are poor. Slight diurnal fluctuation at times caused by mill upstream. Several observations of water temperature and specific conductance were made during the year.

AVERAGE DISCHARGE.--30 years, 84.4 ft³/s (2.390 m³/s), 26.91 in/yr (684 mm/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,060 ft³/s (115 m³/s) Dec. 21, 1973, gage height, 5.68 ft (1.731 m) in gage well, from rating curve extended above 750 ft³/s (21 m³/s) on basis of slope-area measurement at gage height 4.94 ft (1.506 m); maximum gage height, 6.35 ft (1.935 m) Mar. 13, 1977, from floodmarks, gage height in well unknown; minimum discharge, 3.1 ft³/s (0.088 m³/s) Sept. 20, 22, 24, 25, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Dec. 31, 1948, reached a stage of about 7.5 ft (2.3 m), from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 850 ft³/s (24 m³/s) and maximum (*):

Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)	Date	Time	Discharge (ft ³ /s) (m ³ /s)	Gage height (ft) (m)
Jan. 2	1730	a2180 61.7	4.61 1.405	May 25	1500	1100 31.2	3.78 1.152
Mar. 6	1730	a*2740 77.6	4.95 1.509				

a From rating curve extended as explained above.

Minimum discharge, 4.0 ft³/s (0.11 m³/s) Aug. 10, based on minimum-stage indicator.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	33	23	290	77	78	299	170	116	27	10	12
2	11	30	22	1610	72	85	241	150	100	28	10	10
3	8.7	28	21	777	72	88	226	137	89	21	10	56
4	10	26	39	313	74	198	189	152	81	18	8.0	35
5	16	25	44	205	71	1210	198	127	77	18	7.0	23
6	28	24	36	168	64	2240	167	113	74	17	6.0	290
7	21	23	34	160	62	1410	150	102	65	16	5.3	120
8	17	29	41	477	60	609	131	94	60	15	4.8	56
9	15	25	125	211	58	376	134	87	56	14	4.4	40
10	14	24	97	164	54	483	126	81	54	13	5.0	32
11	13	23	75	125	50	630	136	74	62	12	7.0	27
12	13	23	66	108	47	360	142	69	63	12	11	23
13	13	21	61	127	45	273	136	72	51	11	35	21
14	40	21	56	132	43	355	161	72	47	9.8	20	41
15	42	21	49	97	41	245	164	65	43	10	22	77
16	29	20	46	80	39	195	195	60	40	13	21	41
17	24	21	51	78	38	170	195	55	37	37	18	34
18	22	29	40	75	36	155	173	53	35	31	17	29
19	21	25	32	68	36	150	155	51	33	25	30	35
20	26	24	33	145	36	150	144	49	31	17	25	27
21	22	23	62	215	37	164	134	47	29	17	20	72
22	20	23	51	238	39	185	129	45	27	22	17	313
23	20	23	46	115	45	241	134	44	27	15	15	144
24	21	26	42	98	160	331	139	192	26	19	13	97
25	19	27	45	332	137	623	131	630	25	18	15	77
26	35	20	42	159	87	408	136	375	23	26	18	63
27	151	18	39	121	69	265	223	220	22	30	15	53
28	69	25	37	109	67	202	219	191	22	17	13	48
29	51	23	35	99	---	189	336	201	21	13	13	58
30	42	24	35	89	---	198	205	155	20	12	15	47
31	37	---	35	83	---	257	---	137	---	11	15	---
TOTAL	878.6	727	1460	7068	1716	12523	5248	4070	1456	564.8	445.5	2001
MEAN	28.3	24.2	47.1	228	61.3	404	175	131	48.5	18.2	14.4	66.7
MAX	151	33	125	1610	160	2240	336	630	116	37	35	313
MIN	7.9	18	21	68	36	78	126	44	20	9.8	4.4	10
CFSM	.66	.57	1.11	5.35	1.44	9.48	4.11	3.08	1.14	.43	.34	1.57
IN.	.77	.63	1.27	6.17	1.50	10.94	4.58	3.55	1.27	.49	.39	1.75
CAL YR 1978	TOTAL	23900.3	MEAN	65.5	MAX	997	MIN	5.9	CFSM	1.54	IN	20.87
WTR YR 1979	TOTAL	38157.9	MEAN	105	MAX	2240	MIN	4.4	CFSM	2.47	IN	33.32

HUDSON RIVER BASIN

01333300 HOOSIC RIVER BELOW WILLIAMSTOWN, MA

LOCATION.--Lat 42°44'28", long 73°12'47", Berkshire County, multiple-parameter monitor on right bank 0.3 mi (0.5 km) upstream from Massachusetts-Vermont State line, 2 mi (3 km) northwest of Williamstown, and 3.9 mi (6.3 km) downstream from gaging station on Hoosic River near Williamstown.

DRAINAGE AREA.--203 mi² (526 km²).

PERIOD OF RECORD.--Water years 1969-75, July 1977 to current year, (no winter records in 1973, 1978, and 1979).

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: November 1968 to May 1975, October 1977 to current year.

pH: November 1968 to May 1975, August 1977 to current year.

WATER TEMPERATURES: November 1968 to May 1975, July 1977 to current year.

DISSOLVED OXYGEN: November 1968 to May 1975, July 1977 to current year.

INSTRUMENTATION.--Water-quality monitor since November 1968.

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

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 573 micromhos Feb. 20, 1974; minimum, 59 micromhos Apr. 19, 1972.

pH: Maximum recorded, 9.9 units Dec. 24, 1970; minimum, 5.8 units July 5, 1970.

WATER TEMPERATURES: Maximum recorded, 27.0°C Aug. 4, 1979; minimum, freezing point on several days during winter periods.

DISSOLVED OXYGEN: Maximum recorded, 16.5 mg/L Feb. 15, 1971; minimum, 0.0 mg/L July 24, 25, 27, 28, 1970.

EXTREMES FOR CURRENT PERIOD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 407 micromhos Aug. 9; minimum recorded, 80 micromhos Sept. 22.

pH: Maximum recorded, 9.0 units July 29, 30, 31, Aug. 5, 6; minimum recorded, 7.1 units Oct. 20.

WATER TEMPERATURES: Maximum recorded, 27.0°C Aug. 4; minimum recorded, 10.0°C Sept. 25.

DISSOLVED OXYGEN: Maximum recorded, 15.2 mg/L Aug. 7; minimum recorded, 5.6 mg/L Oct. 14.

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			
1	377	354	363	---	---	---	358	290	316
2	357	332	342	---	---	---	299	276	285
3	349	306	329	---	---	---	274	263	269
4	347	318	333	---	---	---	296	249	273
5	363	300	334	---	---	---	---	---	---
6	339	235	291	---	---	---	---	---	---
7	254	227	241	---	---	---	---	---	---
8	266	245	255	---	---	---	---	---	---
9	271	243	257	---	---	---	---	---	---
10	298	249	269	---	---	---	---	---	---
11	334	290	314	---	---	---	---	---	---
12	352	315	336	---	---	---	---	---	---
13	375	331	354	---	---	---	---	---	---
14	355	219	290	---	---	---	---	---	---
15	214	151	167	---	---	---	---	---	---
16	224	151	179	360	326	348	---	---	---
17	239	178	207	345	313	330	---	---	---
18	250	190	211	326	250	292	---	---	---
19	276	248	266	255	233	244	---	---	---
20	268	234	252	258	222	243	---	---	---
21	273	207	237	262	236	250	---	---	---
22	302	238	266	275	234	258	---	---	---
23	292	235	258	279	250	263	---	---	---
24	256	196	231	378	236	311	---	---	---
25	274	213	247	347	233	285	---	---	---
26	320	212	286	258	229	247	---	---	---
27	---	---	---	264	251	257	---	---	---
28	---	---	---	289	253	269	---	---	---
29	---	---	---	360	296	322	---	---	---
30	---	---	---	360	295	324	---	---	---
31	---	---	---	---	---	---	---	---	---
MONTH	377	151	274	---	---	---	---	---	---

01333300 HOOSIC RIVER BELOW WILLIAMSTOWN, MA--Continued

SPECIFIC CONDUCTANCE (MICROMHOS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	343	302	325	349	303	326
2	---	---	---	358	304	337	336	306	323
3	---	---	---	363	310	342	326	178	238
4	---	---	---	357	315	338	242	184	207
5	---	---	---	338	305	319	302	243	273
6	---	---	---	340	287	310	300	280	292
7	---	---	---	372	302	336	141	102	120
8	---	---	---	380	320	351	161	135	148
9	---	---	---	407	338	371	188	161	172
10	---	---	---	404	361	385	226	179	199
11	327	322	324	391	328	361	255	221	239
12	371	320	341	324	266	309	275	242	262
13	385	326	351	266	223	238	290	253	274
14	366	325	340	287	244	265	300	177	274
15	336	317	328	310	274	292	174	123	145
16	360	319	333	319	278	301	190	154	170
17	331	128	179	326	294	310	216	182	201
18	238	128	194	336	310	321	252	218	238
19	245	166	206	312	234	273	258	229	245
20	292	243	265	267	220	241	273	234	264
21	314	279	296	301	262	284	289	137	254
22	297	276	288	328	284	309	143	80	91
23	296	270	283	352	305	323	132	96	115
24	314	292	302	370	322	348	166	126	143
25	308	266	289	358	336	349	186	156	172
26	340	220	305	333	281	300	204	176	189
27	234	170	198	308	280	293	214	189	201
28	241	204	226	349	290	320	231	208	219
29	255	232	244	354	313	339	217	160	180
30	288	248	264	359	319	340	177	159	169
31	323	281	304	351	311	331	---	---	---
MONTH	---	---	---	407	220	318	349	80	211
YEAR	407	80	272						

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN
1	8.0	7.5	7.8	---	---	---	7.7	7.3	7.5
2	7.9	7.5	7.7	---	---	---	7.7	7.3	7.5
3	8.0	7.4	7.7	---	---	---	7.7	7.5	7.6
4	7.7	7.3	7.5	---	---	---	7.6	7.4	7.5
5	8.0	7.3	7.6	---	---	---	---	---	---
6	7.7	7.4	7.6	---	---	---	---	---	---
7	7.9	7.4	7.5	---	---	---	---	---	---
8	8.0	7.3	7.7	---	---	---	---	---	---
9	8.0	7.5	7.7	---	---	---	---	---	---
10	7.8	7.4	7.6	---	---	---	---	---	---
11	7.9	7.3	7.6	---	---	---	---	---	---
12	8.0	7.4	7.7	---	---	---	---	---	---
13	7.9	7.4	7.6	---	---	---	---	---	---
14	7.5	7.2	7.4	---	---	---	---	---	---
15	7.5	7.2	7.4	---	---	---	---	---	---
16	7.5	7.3	7.4	8.4	7.7	8.1	---	---	---
17	7.4	7.3	7.4	8.2	7.5	7.8	---	---	---
18	7.5	7.2	7.3	8.1	7.3	7.6	---	---	---
19	7.5	7.2	7.3	8.1	7.4	7.7	---	---	---
20	7.3	7.1	7.2	8.2	7.4	7.8	---	---	---
21	7.4	7.3	7.3	8.2	7.5	7.7	---	---	---
22	7.8	7.2	7.4	8.2	7.4	7.7	---	---	---
23	7.7	7.4	7.6	8.5	7.5	7.8	---	---	---
24	7.8	7.3	7.5	8.6	7.8	8.4	---	---	---
25	7.8	7.3	7.5	8.5	7.7	8.3	---	---	---
26	7.8	7.2	7.5	8.4	8.0	8.2	---	---	---
27	---	---	---	8.1	7.7	7.8	---	---	---
28	---	---	---	8.0	7.6	7.8	---	---	---
29	---	---	---	8.1	7.5	7.8	---	---	---
30	---	---	---	7.9	7.4	7.7	---	---	---
31	---	---	---	---	---	---	---	---	---
MONTH	8.0	7.1	7.5	---	---	---	---	---	---

HUDSON RIVER BASIN

01333300 HOOSIC RIVER BELOW WILLIAMSTOWN, MA--Continued

PH (UNITS), WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979--Continued

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	8.8	7.8	8.2	8.5	7.8	8.1
2	---	---	---	8.9	7.8	8.3	8.5	7.9	8.2
3	---	---	---	8.9	7.7	8.3	8.1	7.7	7.8
4	---	---	---	8.9	7.9	8.4	8.3	7.6	7.9
5	---	---	---	9.0	7.8	8.4	8.3	7.6	7.9
6	---	---	---	9.0	7.8	8.4	7.7	7.6	7.7
7	---	---	---	8.9	7.6	8.2	7.6	7.4	7.5
8	---	---	---	8.8	7.6	8.1	7.7	7.6	7.6
9	---	---	---	8.7	7.6	8.1	7.8	7.7	7.7
10	---	---	---	8.4	7.7	8.0	7.8	7.7	7.8
11	7.8	7.8	7.8	8.2	7.7	7.9	7.9	7.7	7.8
12	8.7	7.8	8.1	8.0	7.8	7.9	8.0	7.7	7.8
13	8.7	7.6	8.0	8.2	7.8	8.0	8.1	7.7	7.8
14	8.6	7.6	8.1	8.2	7.7	7.9	8.0	7.7	7.8
15	8.6	7.7	8.0	8.1	7.8	7.9	7.8	7.6	7.7
16	8.6	7.7	8.1	8.2	7.8	7.9	7.9	7.7	7.8
17	8.1	7.6	7.8	8.1	7.7	8.0	8.0	7.7	7.8
18	7.9	7.7	7.8	8.1	7.8	8.0	8.1	7.7	7.8
19	8.1	7.7	7.9	8.2	7.8	8.0	8.0	7.7	7.8
20	8.3	7.7	8.0	8.4	7.7	8.0	8.2	7.7	8.0
21	8.4	7.8	8.0	8.4	7.7	8.0	8.0	7.5	7.8
22	8.6	7.8	8.2	8.4	7.7	8.0	7.6	7.4	7.4
23	8.8	7.9	8.3	8.5	7.6	8.0	7.7	7.5	7.6
24	8.6	7.7	8.1	8.0	7.7	7.8	7.8	7.6	7.7
25	8.8	7.7	8.2	8.3	7.7	8.0	7.9	7.6	7.7
26	8.8	7.7	8.1	8.5	7.8	8.1	8.1	7.6	7.8
27	8.4	7.6	7.9	8.4	7.8	8.1	8.0	7.7	7.8
28	8.7	7.7	8.2	8.4	7.7	8.0	8.0	7.7	7.8
29	9.0	7.8	8.4	8.2	7.7	7.9	8.0	7.6	7.7
30	9.0	7.9	8.4	8.4	7.7	8.0	7.9	7.6	7.8
31	9.0	7.8	8.4	8.4	7.7	8.0	---	---	---
MONTH	---	---	---	9.0	7.6	8.1	8.5	7.4	7.8
PERIOD	9.0	7.1	7.9						

TEMPERATURE (DEG. C) OF WATER, JULY TO SEPTEMBER 1979

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

01333300 HOOSIC RIVER BELOW WILLIAMSTOWN, MA--Continued

DISSOLVED OXYGEN (DO), MG/L, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DAY	MAX	MIN OCTOBER	MEAN	MAX	MIN NOVEMBER	MEAN	MAX	MIN DECEMBER	MEAN
1	10.3	8.0	8.9	---	---	---	10.5	9.5	9.9
2	10.0	7.7	8.7	---	---	---	10.1	9.8	9.9
3	10.5	8.3	9.3	---	---	---	10.8	10.3	10.5
4	9.9	8.4	9.1	---	---	---	11.1	10.1	10.6
5	10.9	8.6	9.4	---	---	---	---	---	---
6	10.5	8.2	8.5	---	---	---	---	---	---
7	9.9	8.0	9.0	---	---	---	---	---	---
8	9.9	7.9	8.9	---	---	---	---	---	---
9	9.4	7.3	8.5	---	---	---	---	---	---
10	8.2	6.5	7.4	---	---	---	---	---	---
11	7.7	6.3	6.9	---	---	---	---	---	---
12	7.3	6.0	6.6	---	---	---	---	---	---
13	7.4	6.1	6.6	---	---	---	---	---	---
14	8.1	5.6	6.5	---	---	---	---	---	---
15	7.3	5.8	6.6	---	---	---	---	---	---
16	8.1	7.5	7.7	14.0	11.2	12.6	---	---	---
17	8.4	7.2	7.9	13.9	11.0	12.1	---	---	---
18	8.3	7.4	7.6	11.9	9.1	10.4	---	---	---
19	8.7	6.8	7.7	11.7	9.3	10.1	---	---	---
20	7.8	7.0	7.4	12.5	9.5	10.7	---	---	---
21	8.9	7.8	8.3	12.3	9.9	10.9	---	---	---
22	9.4	8.1	8.6	12.3	9.8	10.7	---	---	---
23	9.3	8.6	9.0	11.0	9.6	10.1	---	---	---
24	10.1	9.3	9.6	10.5	8.8	9.8	---	---	---
25	10.4	9.6	9.9	10.2	9.0	9.5	---	---	---
26	12.3	9.9	11.1	10.2	9.3	9.7	---	---	---
27	---	---	---	10.1	9.2	9.7	---	---	---
28	---	---	---	9.7	9.0	9.4	---	---	---
29	---	---	---	9.9	8.8	9.4	---	---	---
30	---	---	---	9.6	9.1	9.3	---	---	---
31	---	---	---	---	---	---	---	---	---
MONTH	12.3	5.6	8.3	---	---	---	---	---	---

DAY	MAX	MIN JULY	MEAN	MAX	MIN AUGUST	MEAN	MAX	MIN SEPTEMBER	MEAN
1	---	---	---	12.6	6.9	9.0	10.8	6.8	8.4
2	---	---	---	13.2	7.1	9.5	10.7	6.6	8.3
3	---	---	---	13.6	7.1	9.7	8.6	6.8	7.6
4	---	---	---	14.2	7.2	10.1	9.9	7.2	8.4
5	---	---	---	14.7	6.9	10.1	10.3	7.0	8.3
6	---	---	---	14.1	7.1	10.0	7.3	6.6	6.8
7	---	---	---	15.2	7.8	10.5	8.9	8.5	8.7
8	---	---	---	14.4	7.5	10.4	9.2	8.7	9.0
9	---	---	---	14.5	7.9	10.4	10.0	9.2	9.6
10	---	---	---	10.8	6.4	8.5	10.0	8.8	9.5
11	9.2	8.7	8.9	10.2	6.3	8.0	9.8	8.8	9.2
12	11.5	6.4	9.0	9.5	7.2	8.4	10.2	8.8	9.5
13	11.6	6.0	8.3	10.6	8.5	9.5	10.3	8.6	9.4
14	11.2	5.8	8.2	10.3	8.2	8.9	9.5	8.0	8.7
15	11.2	6.1	8.1	9.9	8.0	9.0	9.6	8.7	9.3
16	11.4	6.4	8.4	10.3	7.9	9.2	10.3	9.5	9.9
17	9.8	7.2	8.7	10.4	7.7	8.9	10.6	9.1	9.9
18	9.7	8.1	8.9	9.6	7.3	8.5	10.3	8.7	9.5
19	10.3	8.3	9.5	10.3	8.1	9.0	10.2	8.6	9.4
20	10.5	8.0	9.3	10.3	7.5	8.8	11.5	9.7	10.4
21	10.9	7.8	9.0	10.4	7.1	8.5	10.9	9.6	10.2
22	11.4	7.8	9.3	10.3	6.8	8.2	10.7	9.2	10.4
23	12.0	7.7	9.5	10.6	6.5	8.4	11.1	10.3	10.7
24	11.5	7.2	8.9	8.7	6.7	7.6	11.4	10.3	10.8
25	11.9	7.2	9.3	9.6	6.8	8.1	11.5	10.1	10.7
26	12.2	6.8	8.7	10.4	7.0	8.4	11.0	9.7	10.3
27	9.7	7.3	8.3	10.1	6.8	8.1	10.8	9.6	10.2
28	10.6	7.3	8.7	10.3	6.6	8.1	11.1	9.6	10.2
29	11.9	7.4	9.3	9.8	6.4	7.7	10.4	9.2	9.9
30	12.0	7.4	9.2	10.0	6.5	7.9	10.5	9.7	10.0
31	12.6	7.1	9.4	10.3	6.5	8.1	---	---	---
MONTH	---	---	---	15.2	6.3	8.9	11.5	6.6	9.4
YEAR	15.2	5.6	9.1						

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second, a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in a third table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Merrimack River basin						
01096800	North Brook at Berlin, MA	Lat 42°22'10", long 71°38'22", Worcester County, at bridge on Jones Rd., 0.8 mi south of Berlin, and 2.2 mi above mouth.	11.1	1962-66, 1978-79	6-28-79 9-20-79	3.0 3.8
01097400	Spencer Brook near Concord, MA	Lat 42°30'07", long 71°22'55", Middlesex County, at bridge on Spencer Brook Rd., 3.3 mi northwest of Concord.	3.74	1962-65, 1978-79	6-28-79 9-21-79	.72 .79
01100700	East Meadow River near Haverhill, MA	Lat 42°48'41", long 71°01'59", Essex County, 10 ft downstream from culvert on State Highway 110, and 3.5 mi north-east of Haverhill.	4.93	1963-74†, 1978-79	6-28-79 9-21-79	2.7 .57
Taunton River basin						
01106500	Matfield River at Elmwood, MA	Lat 42°00'55", long 70°57'42", Plymouth County, 20 ft upstream from bridge on State Highway 18 at Elmwood.	40.6	1958-60†, 1965, 1978-79	7-10-79	21
01107400	Fall Brook near Middleboro, MA	Lat 41°51'55", long 70°54'32", Plymouth County, at twin-box culvert on Wood St., 2 mi south of Middleboro, MA.	9.34	1966-68, 1978-79	7-10-79 8-28-79	5.8 a8.6
01108320	Canoe River near Norton, MA	Lat 41°58'38", long 71°08'40", Bristol County, at culvert on Plain St., 2.4 mi northeast of Norton.	18.6	1965-68, 1978-79	7-10-79	4.5
Warren River basin						
01109225	Rocky Run near Rehoboth, MA	Lat 41°46'52", long 71°15'05", Bristol County, at culvert on Davis St., 4 mi south of Rehoboth.	7.37	1972-74, 1979	7-10-79 8-27-79	1.5 2.6
Thames River basin						
01123200	Stevens Brook at Holland, MA	Lat 42°03'41", long 72°09'45", Hampden County, 100 ft upstream from bridge on Mashapaug Rd., 0.3 mi south of Holland.	4.44	1960-62, 1965-66, 1979	6-26-79	1.2
01124750	Browns Brook near Webster, MA	Lat 42°03'24", long 71°49'51", Worcester County, 15 ft downstream from culvert on State Highway 16, 1.8 mi east of Webster.	.49	1963-77†, 1978-79	7- 9-79	.10
01124800	Sucker Brook near Webster, MA	Lat 42°04'01", long 71°51'16", Worcester County, at bridge on Mine Brook Rd., 1.5 mi northeast of Webster.	2.54	1960-62, 1965-66, 1979	6-27-79 7- 9-79	.67 .27
Connecticut River basin						
01162900	Otter River at Gardner, MA	Lat 42°33'52", long 72°00'43", Worcester County, at bridge on State Highway 2A at Gardner.	19.1	1965-66, 1978-79	6- 4-79 7-31-79 9-10-79 9-13-79	33 22 30 11

† Operated as a continuous-record gaging station.

a Not base flow.

Discharge measurements made at low-flow partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Measurements	
					Date	Discharge (ft ³ /s)
Connecticut River basin--Continued						
01166100	Whetstone Brook at Wendell Depot, MA	Lat 42°35'22", long 72°21'31", Franklin County, 0.5 mi upstream from mouth, and 0.5 mi south of Wendell Depot.	4.88	1965-66, 1978-79	6-11-79 8- 1-79 9-10-79 9-13-79	5.6 2.2 a4.1 2.8
01168300	Cold River near Zoar, MA	Lat 42°38'12", long 72°56'10", Franklin County, at bridge 150 ft east of State Highway 2, 0.9 mi upstream from mouth, and 1.1 mi south of Zoar.	29.6	1967-69, 1978-79	6- 4-79	46
01173050	Pleasant Brook at Barre, MA	Lat 42°25'10", long 72°05'22", Worcester County, 0.35 mi upstream from mouth, and 0.8 mi east of Barre.	2.46	1960-62, 1965, 1978-79	4-18-79 6-27-79 8- 6-79 9-13-79	a.53 .21 a.76 1.9
01180800	Walker Brook near Becket Center, MA	Lat 42°15'49", long 73°02'48", Berkshire County, 20 ft upstream from culvert on U.S. Highway 20, and 1.7 mi southeast of Becket Center.	3.01	1963-77 [†] , 1978-79	6-14-79	2.3
01183400	Great Brook near Southwick, MA	Lat 42°03'58", long 72°44'10", Hampden County, 50 ft upstream from bridge on State Highway 57, and 2 mi northeast of Southwick.	23.2	1962-68, 1978-79	6-26-79	11
Housatonic River basin						
01198030	Schenob Brook near Sheffield, MA	Lat 42°06'33", long 73°22'09", Berkshire County, at upstream side of Berkshire School Road bridge, 0.8 mi west of Sheffield.	22.7	1971-72 [†] , 1978-79	8- 1-79	3.2
Hudson River basin						
01331360	Kitchen Brook at Cheshire, MA	Lat 42°33'31", long 73°10'04", Berkshire County, at culvert on South St., 0.2 mi southwest of Cheshire, and 0.4 mi upstream from mouth.	4.78	1965b, 1967-69, 1978-79	9-12-79 9-24-79	3.6 a7.4
01333100	Hemlock Brook near Williamstown, MA	Lat 42°41'16", long 73°13'50", Berkshire County, at culvert on U.S. Highway 7 and State Highway 2, and 2.2 mi southwest of Williamstown, MA.	5.25	1967-69, 1978-79	8- 1-79 9-19-79	.64 a2.1

[†] Operated as a continuous-record gaging station.

a Not base flow.

b Published in table of miscellaneous measurements.

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 established from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained, and discharge measurements may have been made for purposes of establishing the stage-discharge relation, but these are not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations during water year 1979

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum			
					Date	Gage height (feet)	Discharge (ft ³ /s)	
Merrimack River basin								
01095200	Houghton Brook near Oakdale, MA	Lat 42°24'57", long 71°48'12", Worcester County, at culvert on State Highway 140, 2 mi north of Oakdale.	0.69	1964-79	1-25-79	9.82	60	
01097452	Jackstraw Brook at Hopkinton Road, Westborough, MA	Lat 42°15'28", long 71°36'13", Worcester County, at culvert on Hopkinton Rd. (Route 135), 0.9 mi southeast of Westborough.	1.24	1972-79	1-25-79	9.59	60	
01100100	Richardson Brook near Lowell, MA	Lat 42°39'48", long 71°16'02", Middlesex County, at culvert on Methuen St., 3 mi northeast of Lowell.	4.32	1963-79	1-25-79	19.15	424	
01100800	Cobbler Brook near Merrimac, MA	Lat 42°50'55", long 71°01'10", Essex County, at culvert on Highland St., 1.3 mi northwest of Merrimac.	.77	1963-79	1-25-79	9.45	84	
Charles River basin								
01104600	Beaver Brook at Belmont, MA	Lat 42°23'26", long 71°11'51", Middlesex County, at culvert on State Highway 60 (Trapelo Rd.), 1 mi southwest of Belmont.	4.09	1963-79	1-25-79	a16.2	a300	
South River basin								
01105850	Furnace Brook near Marshfield, MA	Lat 42°06'30", long 70°43'53", Plymouth County, at culvert on Furnace St., 1.7 mi northwest of Marshfield.	1.61	1964-79	8-13-79	8.95	b34	
Taunton River basin								
01109100	Taunton River tributary near Fall River, MA	Lat 41°45'31", long 71°07'01", Bristol County, at culvert on State Highway 79, 4 mi northeast of Fall River.	0.25	1964-79	8-4-79 or 8-13-79	12.12	76	
Runnins River basin								
01109270	Runnins River at Seekonk, MA	Lat 41°49'25", long 71°20'00", Bristol County, at culvert on Pleasant St., 1.0 mi north of Seekonk.	4.24	1967-79	1-25-79	7.23	138	
Blackstone River basin								
01109480	Kettle Brook Diversion Weir at Auburn, MA	Lat 42°13'06", long 71°49'40", Worcester County, on right bank behind Mackensie Machinery Co., on State Highway 12, 1.8 mi north of Massachusetts Turnpike overpass.	-	1979	1-25-79	a2.45	a1,900	
01109500	Kettle Brook at Worcester, MA	Lat 42°13'55", long 71°50'07", Worcester County, on right bank, 75 ft downstream from Webster St. bridge, 1.0 mi upstream from Beaver Brook.	-	1923-78†, 1979	1-25-79	4.19	c372	
*01110500	Blackstone River at Northbridge, MA	Lat 42°09'13", long 71°39'09", Worcester County, on left bank, 100 ft downstream from Sutton St. bridge at Northbridge.	-	1940-77†, 1979	1-25-79	12.48	6,190	

* Also a miscellaneous measurement site.

† Operated as continuous-record station.

a Estimated.

b Discharge may have been higher in January, but available data indicated otherwise.

c Diversion flow at station 01109480 not included.

Annual maximum discharge at crest-stage partial-record stations during water year 1979--Continued

Station No.	Station name	Location	Drainage area (mi ²)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (ft ³ /s)
Thames River basin							
01123160	Wales Brook tributary near Wales, MA	Lat 42°04'48", long 72°11'51", Hampden County, at culvert on Holland Rd., 1.5 mi northeast of Wales.	0.71	1964-79	1-25-79	9.44	51
01124050	Tufts Branch at Dudley, MA	Lat 42°03'11", long 71°56'22", Worcester County, at culvert on Dudley-Southbridge Rd., 0.7 mi northwest of Dudley.	1.06	1963-79	1-25-79	d13.02	e118
Connecticut River basin							
01161300	Millers Brook at Northfield, MA	Lat 42°41'07", long 72°27'11", Franklin County, at culvert on Beers Plain Rd., 0.8 mi south of Northfield.	2.33	1964-79	3- 6-79	16.85	162
01171910	Broad Brook near Holyoke, MA	Lat 42°11'59", long 72°41'11", Hampden County, at culvert on Keys Rd., 3.5 mi west of Holyoke.	2.26	1965-79	3- 6-79	16.45	51
01175600	Caruth Brook near Paxton, MA	Lat 42°19'00", long 71°58'16", Worcester County, at culvert on Spring St., 2.2 mi west of Paxton.	2.35	1964-79	3- 6-79	10.10	203
01178230	Mill Brook at Plainfield, MA	Lat 42°30'57", long 72°55'30", Hampshire County, at culvert on High St., 0.4 mi west of Plainfield.	4.47	1964-79	5-25-79	14.34	191
01183100	Seymour Brook tributary at Granville, MA	Lat 42°03'53", long 72°51'42", Hampden County, at culvert on State Highway 189, at Granville.	.66	1964-79	1-25-79	12.27	111
01183810	Longmeadow Brook at Ponds Rd., near Longmeadow, MA	Lat 42°02'22", long 72°35'32", Hampden County, at culvert on Ponds Rd., 2 mi southwest of Longmeadow.	4.15	1967-79	9- 6-79	5.65	116
Housatonic River basin							
01197550	Housatonic River tributary at Risingdale, MA	Lat 42°13'57", long 73°20'47", Berkshire County, at culvert on State Highway 183, 0.7 mi southeast of Risingdale.	0.69	1965-79	3- 6-79	16.85	41

d Possibly affected by backwater from ice.

e May be lower; possibly affected by backwater from ice.

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites during water year 1979

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis-charge (ft ³ /s)
Bound Brook basin						
01105660	Bound Brook	Musquashcut Brook	Lat 42°12'44", long 70°49'18", Norfolk County, at culvert on Doane St., 2.2 mi southwest of Cohasset.	4.88	1969††, 1970-71†, 1978††	7- 9-79 5.8
Blackstone River basin						
01110500	Blackstone River	Providence River (Narraganset Bay)	Lat 42°09'13", long 71°39'09", Worcester County, 100 ft downstream from Sutton St. Bridge, at Northbridge, MA.	139	1940-77†, 1978	10-31-78 90 12- 7-78 163 1-19-79 220 1-26-79 3,380 3- 6-79 788 4-12-79 438 5-24-79 479 6-21-79 176 8- 2-79 136
Pawcatuck River basin						
01117600	Meadow Brook	Pawcatuck River	Lat 41°27'59", long 71°41'26", Washington County, 50 ft upstream from culvert on Pine Hill Rd., 1.5 mi northwest of Carolina, RI.	5.53	1965-74†, 1977	11-14-78 *0.49
01117745	Wood River	do	Lat 41°35'53", long 71°44'47", Washington County, at bridge on dirt road 1.1 mi east of Escoheag, and 4.0 mi northwest of Arcadia, RI.	17.5	-	11-13-78 *5.6
01117760	Flat River	Wood River	Lat 41°35'44", long 71°43'14", Washington County, at bridge on Plain Rd., 3.1 mi northwest of Arcadia, RI.	8.38	-	11-13-78 *3.7
01117780	Breakheart Brook	Flat River	Lat 41°35'16", long 71°42'36", Washington County, at bridge on Frosty Hollow Rd., 0.8 mi north of West Exeter, and 2.4 mi northwest of Arcadia, RI.	6.68	1966-67	11-13-78 *3.5
01117840	Parris Brook	Wood River	Lat 41°33'54", long 71°43'35", Washington County, at bridge on Blitzkrieg Rd., 800 ft below Woody Hill Brook, 0.7 mi above mouth, and 1.7 mi northwest of Arcadia, RI.	7.18	1966-67	11-13-78 *2.5
01117870	Roaring Brook	do	Lat 41°33'24", long 71°41'54", Washington County, at culvert on Ball Hill Rd., 0.15 mi northwest of Arcadia, RI.	5.84	-	11-13-78 *2.4
01117875	Baker Brook	do	Lat 41°32'32", long 71°41'37", Washington County, at culvert on old Nooseneck Hill Rd., 0.9 mi south of Arcadia, RI.	1.86	-	11-13-78 *.02
01117900	Brushy Brook	do	Lat 41°31'43", long 71°44'13", Washington County, at bridge on Sawmill Rd., 0.4 mi northeast of Moscow, and 1.8 mi northwest of Hope Valley, RI.	3.71	1966-67, 1977	11-14-78 *1.3
01117950	Moscow Brook	Brushy Brook	Lat 41°31'38", long 71°44'12", Washington County, at bridge on Sawmill Rd., 0.3 mi northeast of Moscow, and 1.8 mi northwest of Hope Valley, RI.	6.37	1966-67, 1977	11-14-78 *2.0

† Also a crest-stage partial-record station.

†† Low-flow partial-record station.

* Operated as a continuous-record station.

Discharge measurements made at miscellaneous sites during water year 1979--Continued

Stream	Tributary to	Location	Drainage area (mi ²)	Measured previously (water years)	Measurements	
					Date	Dis- charge (ft ³ /s)
Pawcatuck River basin--Continued						
01117990 Locustville Pond Outlet	Wood River	Lat 41°30'27", long 71°42'59", Washington County, at bridge on State Highway 138, at Hope Valley, RI.	12.2	1977	11-14-78	*4.3
01118006 Canonchet Brook	do	Lat 41°28'39", long 71°43'47", Washington County, at bridge on Rockville-Alton Rd., 1.3 mi southeast of Canonchet, and 1.3 mi northwest of Woodville, RI.	5.89	1977	11-14-78	*1.8
01118009 Wood River	Pawcatuck River	Lat 41°26'10", long 71°43'17", Washington County, 0.1 mi south of Alton-Carolina Rd., and 0.1 mi south of Alton, RI.	85.7	1977	11-14-78	*40
01118010 Pawcatuck River	Block Island Sound (Atlantic Ocean)	Lat 41°24'58", long 71°43'46", Washington County, at bridge on Burdickville Rd., at Burdickville, 1.5 mi south of Alton, RI	205	1966-67, 1977	11-14-78	*88

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCTI- VANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CALCS)	HARD- NESS, NONCAR- BONATE (MG/L CALCS)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS Mg)	SODIUM, DIS- SOLVED (MG/L AS Na)
01098704 - WARD BROOK NEAR MARLBOROUGH, MA (LAT 42 21 07 LONG 071 29 43.01)												
NOV , 1976												
01...	0830	.13	290	6.6	6.5	10.6	86	--	--	--	--	--
01098705 - SEWAGE BROOK NEAR MARLBOROUGH, MA (LAT 42 21 03 LONG 071 29 29.01)												
NOV , 1976												
01...	1030	4.9	620	6.2	13.0	10.1	95	--	--	--	--	--
APR , 1977												
05...	0800	31	420	6.7	7.5	7.8	65	--	--	--	--	--
JUN												
15...	0730	5.1	710	6.8	18.0	7.7	81	--	--	--	--	--
AUG												
10...	1100	3.9	597	7.2	22.2	8.5	97	--	--	--	--	--
OCT												
12...	0900	6.5	740	7.3	16.0	9.2	92	--	--	--	--	--
APR , 1978												
04...	0930	11	460	6.5	6.5	11.4	93	--	--	--	--	--
JUN												
21...	1430	5.8	570	6.9	20.5	7.6	84	--	--	--	--	--
JUL												
26...	0745	4.1	600	6.6	19.0	6.2	66	--	--	--	--	--
AUG												
23...	1015	4.9	590	6.9	21.5	7.9	89	150	81	53	3.5	46
NOV												
21...	0730	4.1	540	6.4	10.0	10.5	93	120	100	42	3.4	62
01098706 - TANTIC BROOK NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 30.01)												
NOV , 1976												
01...	1300	.28	73	5.8	7.0	8.9	73	--	--	--	--	--
01098707 - BROAD BROOK NEAR MARLBOROUGH, MA (LAT 42 20 30 LONG 071 29 20.01)												
NOV , 1976												
01...	1430	.09	68	6.1	6.5	10.3	84	--	--	--	--	--
01098708 - NIXON BROOK NEAR MARLBOROUGH, MA (LAT 42 20 48 LONG 071 29 03.01)												
NOV , 1976												
02...	1300	.12	90	5.9	7.0	12.3	101	--	--	--	--	--
01098709 - HAGER POND NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 14.01)												
NOV , 1976												
02...	1030	--	440	7.7	5.5	13.5	107	--	--	--	--	--
APR , 1977												
05...	1300	--	440	7.2	8.5	9.9	84	--	--	--	--	--
JUN												
14...	0930	--	580	7.3	20.0	8.3	91	--	--	--	--	--
AUG												
11...	0900	--	550	9.9	25.0	16.2	193	--	--	--	--	--
OCT												
13...	0830	--	575	7.0	13.0	11.2	106	--	--	--	--	--
APR , 1978												
05...	0830	--	360	6.7	6.5	12.0	97	--	--	--	--	--
JUN												
22...	0815	--	525	9.3	22.5	14.2	162	90	23	30	3.7	60
JUL												
26...	0830	--	540	8.7	24.0	7.2	84	--	--	--	--	--
AUG												
22...	1045	--	425	9.3	25.0	>20.0	239	100	34	37	2.5	46
NOV												
21...	0900	--	535	7.1	7.5	11.9	99	120	88	41	3.2	46

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (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)
01098704 - WARD BROOK NEAR MARLBOROUGH, MA (LAT 42 21 07 LONG 071 29 43.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	--	.39	.01	.40
01098705 - SEWAGE BROOK NEAR MARLBOROUGH, MA (LAT 42 21 03 LONG 071 29 29.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	--	18	.01	18
APR , 1977 05...	--	--	--	--	--	--	--	--	--	5.7	.01	5.7
JUN 15...	--	--	--	--	--	--	--	--	--	21	.02	21
AUG 10...	--	--	--	--	--	--	--	--	--	16	.00	16
OCT 12...	--	--	--	--	--	--	--	--	--	16	.01	16
APR , 1978 04...	--	--	--	--	--	--	--	--	--	6.8	.02	6.8
JUN 21...	--	--	--	--	--	--	--	--	--	18	.12	18
JUL 26...	--	--	--	--	--	--	--	--	--	14	.17	14
AUG 23...	12	80	0	66	16	59	65	9.6	288	4.2	.06	4.3
NOV 21...	11	23	0	19	15	58	76	9.8	274	18	.01	18
01098706 - TANC BROOK NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 30.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	--	.02	.01	.03
01098707 - BROAD BROOK NEAR MARLBOROUGH, MA (LAT 42 20 30 LONG 071 29 20.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	--	.02	.01	.03
01098708 - NIXON BROOK NEAR MARLBOROUGH, MA (LAT 42 20 48 LONG 071 29 03.01)												
NOV , 1976 02...	--	--	--	--	--	--	--	--	--	.01	.01	.02
01098709 - HAGER POND NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 14.01)												
NOV , 1976 02...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977 05...	--	--	--	--	--	--	--	--	--	4.0	.03	4.0
JUN 14...	--	--	--	--	--	--	--	--	--	13	.08	13
AUG 11...	--	--	--	--	--	--	--	--	--	9.5	.29	9.8
OCT 13...	--	--	--	--	--	--	--	--	--	11	.11	11
APR , 1978 05...	--	--	--	--	--	--	--	--	--	4.8	.04	4.8
JUN 22...	8.4	70	6	67	.1	28	74	6.8	252	9.7	.12	9.8
JUL 26...	--	--	--	--	--	--	--	--	--	5.1	.30	5.4
AUG 22...	12	69	7	68	.1	53	59	7.7	258	6.1	.13	6.2
NOV 21...	11	34	0	28	4.3	58	60	8.5	245	16	.06	16

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	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)	NITRO- GEN,TOT IN HOT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, IN BOT. MAT. (MG/KG AS P)	PHOS- PHORUS, ORTHO. TOTAL (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CU)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
01098704 - WARD BROOK NEAR MARLBOROUGH, MA (LAT 42 21 07 LONG 071 29 43.01)												
NOV , 1976												
01...	.07	.18	.25	.65	--	.020	--	.01	--	--	--	--
01098705 - SEWAGE BROOK NEAR MARLBOROUGH, MA (LAT 42 21 03 LONG 071 29 29.01)												
NOV , 1976												
01...	.50	.90	1.4	14	--	.660	--	.21	--	--	--	--
APR , 1977												
05...	.63	1.2	1.8	7.5	--	.340	--	.08	--	--	--	--
JUN												
15...	.71	2.0	2.7	24	--	3.00	--	1.2	--	--	--	--
AUG												
10...	.31	.10	.41	16	--	2.10	--	.80	--	--	--	--
OCT												
12...	.47	1.2	1.7	18	--	1.70	--	.46	--	--	--	--
APR , 1978												
04...	.74	.86	1.6	8.4	--	.430	--	.14	--	--	--	--
JUN												
21...	.52	.40	.92	19	--	.580	--	.34	--	--	--	--
JUL												
24...	.88	1.9	2.8	17	--	.490	--	.10	--	--	--	--
AUG												
23...	.29	1.2	1.5	5.8	--	.760	--	.30	1	--	--	--
NOV												
21...	.87	1.5	2.4	20	--	.790	--	.42	2	2	10	--
01098706 - TANC BROOK NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 30.01)												
NOV , 1976												
01...	.03	.40	.43	.46	--	.030	--	.01	--	--	--	--
01098707 - BROAD BROOK NEAR MARLBOROUGH, MA (LAT 42 20 30 LONG 071 29 20.01)												
NOV , 1976												
01...	.01	.32	.33	.36	--	.030	--	.02	--	--	--	--
01098708 - NIXON BROOK NEAR MARLBOROUGH, MA (LAT 42 20 48 LONG 071 29 03.01)												
NOV , 1976												
02...	.02	.16	.18	.20	--	.020	--	.02	--	--	--	--
01098709 - HAGER POND NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 14.01)												
NOV , 1976												
02...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	.44	1.2	1.6	5.6	--	.220	--	.03	--	--	--	--
JUN												
14...	.60	1.2	1.8	15	--	.540	--	.16	--	--	--	--
AUG												
11...	.15	1.5	1.6	11	--	.510	--	.19	--	--	--	--
OCT												
13...	.75	1.3	2.0	13	--	.630	--	.14	2	0	<10	0
APR , 1978												
05...	.71	.59	1.3	6.1	57000	.290	3700	.10	--	--	--	--
JUN												
22...	.33	2.0	2.3	12	33000	.550	4900	.26	1	2	10	4
JUL												
26...	1.1	1.8	2.9	8.3	--	.470	--	.26	--	--	--	--
AUG												
22...	.95	3.1	4.0	10	14000	6.00	630	.28	1	--	--	--
NOV												
21...	.50	1.8	2.3	18	--	.700	--	.49	1	1	<10	--

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	COPPER, TOTAL RECOV- ERABLE (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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
01098704 - WARD BROOK NEAR MARLBOROUGH, MA (LAT 42 21 07 LONG 071 29 43.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	6.7	--	--	--
01098705 - SEWAGE BROOK NEAR MARLBOROUGH, MA (LAT 42 21 03 LONG 071 29 29.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	6.0	--	--	--
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 15...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 10...	--	--	--	--	--	--	--	--	--	--	--	--
OCT 12...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978 04...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 21...	--	--	--	--	--	--	--	--	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 23...	--	--	20	--	--	<.5	0	--	7.9	--	--	--
NOV 21...	12	1700	520	45	310	<.5	0	40	10	11	--	9.1
01098706 - TANC BROOK NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 30.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	9.6	--	--	--
01098707 - BROAD BROOK NEAR MARLBOROUGH, MA (LAT 42 20 30 LONG 071 29 20.01)												
NOV , 1976 01...	--	--	--	--	--	--	--	--	19	--	--	--
01098708 - NIXON BROOK NEAR MARLBOROUGH, MA (LAT 42 20 48 LONG 071 29 03.01)												
NOV , 1976 02...	--	--	--	--	--	--	--	--	3.6	--	--	--
01098709 - HAGER POND NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 14.01)												
NOV , 1976 02...	--	--	--	--	--	--	--	--	10	--	--	--
APR , 1977 05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN 14...	--	--	--	--	--	--	--	--	7.1	--	--	--
AUG 11...	--	--	--	--	--	--	--	--	4.9	--	--	--
OCT 13...	10	490	--	7	170	<.5	0	30	8.3	--	--	--
APR , 1978 05...	--	--	--	--	--	--	--	--	8.1	--	147	--
JUN 22...	8	800	120	8	150	.5	0	10	--	--	--	--
JUL 26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG 22...	--	--	20	--	--	<.5	0	--	12	--	--	--
NOV 21...	12	800	140	12	170	<.5	0	20	13	13	--	4.9

[illegible]

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	LINDANE TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
01098704 - WARD BROOK NEAR MARLBOROUGH, MA (LAT 42 21 07 LONG 071 29 43.01)											
NOV , 1976	--	--	--	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--	--	--	--
01098705 - SEWAGE BROOK NEAR MARLBOROUGH, MA (LAT 42 21 03 LONG 071 29 29.01)											
NOV , 1976	--	--	--	--	--	--	--	--	--	--	58
01...	--	--	--	--	--	--	--	--	--	--	58
APR , 1977	--	--	--	--	--	--	--	--	--	--	24
05...	--	--	--	--	--	--	--	--	--	--	24
JUN	--	--	--	--	--	--	0.000	0.000	--	--	20
15...	--	--	--	--	--	--	1.26	0.000	--	--	251
AUG	--	--	--	--	--	--	--	--	--	--	126
10...	--	--	--	--	--	--	--	--	--	--	126
OCT	--	--	--	--	--	--	--	--	--	--	13
12...	--	--	--	--	--	--	--	--	--	--	126
APR , 1978	--	--	--	--	--	--	--	--	--	--	13
04...	--	--	--	--	--	--	--	--	--	--	126
JUN	--	--	--	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--	--	--	--
JUL	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG	0.00	0.00	0.00	--	0	480	5.20	1.25	--	--	113
23...	0.00	0.00	--	0.00	0	980	--	--	0.000	0.000	--
NOV	0.00	0.00	--	0.00	0	980	--	--	0.000	0.000	--
21...	0.00	0.00	--	0.00	0	980	--	--	0.000	0.000	--
01098706 - TANC BROOK NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 30.01)											
NOV , 1976	--	--	--	--	--	--	--	--	--	--	2.9
01...	--	--	--	--	--	--	--	--	--	--	2.9
01098707 - BROAD BROOK NEAR MARLBOROUGH, MA (LAT 42 20 30 LONG 071 29 20.01)											
NOV , 1976	--	--	--	--	--	--	--	--	--	--	1.1
01...	--	--	--	--	--	--	--	--	--	--	1.1
01098708 - NIXON BROOK NEAR MARLBOROUGH, MA (LAT 42 20 48 LONG 071 29 03.01)											
NOV , 1976	--	--	--	--	--	--	--	--	--	--	.4
02...	--	--	--	--	--	--	--	--	--	--	.4
01098709 - HAGER POND NEAR MARLBOROUGH, MA (LAT 42 20 57 LONG 071 29 14.01)											
NOV , 1976	0.00	0.00	--	--	0	150000	24.0	13.0	--	--	105
02...	0.00	0.00	--	--	0	150000	24.0	13.0	--	--	105
APR , 1977	--	--	--	--	--	--	--	--	--	--	27
05...	--	--	--	--	--	--	--	--	--	--	27
JUN	--	--	--	--	--	16000	18.2	3.50	--	--	57
14...	--	--	--	--	--	46000	16.5	5.90	--	--	23
AUG	--	--	--	--	--	41000	17.1	1.65	--	--	61
11...	0.00	0.00	--	--	0	41000	17.1	1.65	--	--	61
OCT	0.00	0.00	--	--	0	41000	17.1	1.65	--	--	61
13...	0.00	0.00	--	--	0	41000	17.1	1.65	--	--	61
APR , 1978	--	--	--	--	--	--	--	--	--	--	14
05...	--	--	--	--	--	--	--	--	--	--	14
JUN	0.00	0.00	0.00	--	0	95000	43.6	10.4	--	--	77
22...	0.00	0.00	0.00	--	0	95000	43.6	10.4	--	--	77
JUL	--	--	--	--	--	--	--	--	--	--	--
26...	--	--	--	--	--	--	--	--	--	--	--
AUG	0.00	0.00	0.00	--	0	17000	7.03	1.23	--	--	64
22...	0.00	0.00	0.00	--	0	17000	7.03	1.23	--	--	64
NOV	0.00	0.00	--	0.00	0	93000	--	--	30.3	0.000	--
21...	0.00	0.00	--	0.00	0	93000	--	--	30.3	0.000	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	HARD- NESS (MG/L AS CACO3)	HARD- NESS, NONCAR- BONATE (MG/L AS CACO3)	CALCIUM DIS- SOLVED (MG/L AS CA)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG)	SODIUM, DIS- SOLVED (MG/L AS NA)
01070110 - COTLET MTL BRNDR NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)												
NOV , 1976												
03...	1030	2.8	910	7.4	6.5	12.2	99	--	--	--	--	--
APR , 1977												
05...	1100	19	450	7.2	8.5	8.6	73	--	--	--	--	--
JUN												
15...	1100	4.2	570	7.8	21.0	7.8	87	--	--	--	--	--
AUG												
10...	1330	3.0	575	9.9	27.2	10.7	133	--	--	--	--	--
OCT												
12...	1100	5.4	575	6.8	13.5	10.4	99	--	--	--	--	--
APR , 1978												
04...	1145	14	260	6.6	5.0	12.7	99	--	--	--	--	--
JUN												
22...	1430	4.8	525	9.3	24.5	11.3	134	--	--	--	--	--
JUL												
26...	0915	33	540	8.4	24.5	7.4	88	--	--	--	--	--
AUG												
23...	1200	2.3	475	9.3	25.0	10.6	126	110	30	41	2.6	47
NOV												
22...	0930	5.1	525	7.4	6.0	12.0	96	110	86	40	3.4	45

01000710 - COTLET MTL BRNDR NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)

NOV , 1976												
02...	1430	--	580	7.2	6.5	12.8	104	--	--	--	--	--
APR , 1977												
05...	1345	--	360	7.1	8.5	9.2	78	--	--	--	--	--
JUN												
14...	1130	--	545	7.2	21.0	7.4	82	--	--	--	--	--
AUG												
11...	1045	--	560	9.7	25.5	17.0	205	--	--	--	--	--
OCT												
13...	1145	--	535	7.1	12.0	9.2	85	--	--	--	--	--
APR , 1978												
05...	1100	--	275	6.5	7.0	12.0	99	--	--	--	--	--
JUN												
22...	1030	--	485	9.2	24.0	13.6	159	84	20	28	3.5	55
JUL												
26...	1030	--	515	9.2	24.5	10.4	123	--	--	--	--	--
AUG												
22...	1330	--	475	9.8	28.0	20.0	253	96	0	35	2.2	47
NOV												
21...	1030	--	515	8.1	5.5	12.2	97	110	80	39	3.2	45

01098714 - PARMENTER BROOK NEAR SUDBURY, MA (LAT 42 21 16 LONG 071 28 44.01)

NOV , 1976												
03...	0930	.18	146	6.4	4.0	12.4	94	--	--	--	--	--

01090710 - BRIDGES CROSSING BROOK NEAR SUDBURY, MA (LAT 42 21 27 LONG 071 28 42.01)

NOV , 1976												
03...	1215	.03	200	5.9	7.5	5.0	40	--	--	--	--	--

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (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)
01098710 - HAGER POND OUTLET AT MARLBOROUGH, MA (LAT 42 21 06 LONG 071 29 11)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	15	.09	15
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	5.4	.04	5.4
JUN												
15...	--	--	--	--	--	--	--	--	--	14	.10	14
AUG												
10...	--	--	--	--	--	--	--	--	--	9.7	.29	10
OCT												
12...	--	--	--	--	--	--	--	--	--	9.9	.11	10
APR , 1978												
04...	--	--	--	--	--	--	--	--	--	2.8	.03	2.8
JUN												
22...	--	--	--	--	--	--	--	--	--	9.4	.12	9.5
JUL												
26...	--	--	--	--	--	--	--	--	--	5.3	.32	5.6
AUG												
23...	12	59	21	83	.1	52	58	7.8	271	5.8	.16	6.0
NOV												
22...	11	34	0	28	2.2	59	59	8.3	242	16	.07	16
01098712 - GRIST MILL POND NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)												
NOV , 1976												
02...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	3.7	.03	3.7
JUN												
14...	--	--	--	--	--	--	--	--	--	9.9	.13	10
AUG												
11...	--	--	--	--	--	--	--	--	--	5.4	.36	5.8
OCT												
13...	--	--	--	--	--	--	--	--	--	8.8	.20	9.0
APR , 1978												
05...	--	--	--	--	--	--	--	--	--	2.5	.03	2.5
JUN												
22...	7.3	78	0	64	.1	34	69	6.2	242	5.6	.15	5.7
JUL												
26...	--	--	--	--	--	--	--	--	--	1.8	.28	2.1
AUG												
27...	10	48	36	99	.0	48	59	6.9	268	1.1	.23	1.3
NOV												
21...	10	37	0	30	.5	59	58	7.9	240	14	.12	14
01098714 - PARMENTER BROOK NEAR SUDBURY, MA (LAT 42 21 16 LONG 071 28 44.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	.00	.01	.01
01098718 - PRIDES CROSSING BROOK NEAR SUDBURY, MA (LAT 42 21 27 LONG 071 28 42.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	.04	.01	.05

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, NH- MONIA, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOT IN BOT- TOMAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/KG AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (UG/L AS AS)	PHOS- PHORUS, TOTAL (UG/L AS CD)	PHOS- PHORUS, TOTAL (UG/L AS CR)	PHOS- PHORUS, TOTAL (UG/L AS CO)
------	---	---	---	---	---	---	--	---	---	--	--	--	--

01098710 - HAGER POND OUTLET AT MARLBOROUGH, MA (LAT 42 21 06 LONG 071 29 11)

NOV , 1976													
03...	.34	1.2	1.5	17	--	.440	--	.17	--	--	--	--	--
APR , 1977													
06...	.67	.07	1.5	1.0	--	.270	--	.07	--	--	--	--	--
JUN													
15...	.51	1.3	1.8	16	--	.510	--	.20	--	--	--	--	--
AUG													
10...	.14	2.2	2.3	12	--	.440	--	.20	--	--	--	--	--
OCT													
12...	.66	1.2	1.9	12	--	.460	--	.12	--	--	--	--	--
APR , 1978													
04...	.47	.53	1.0	3.8	--	.160	--	.05	--	--	--	--	--
JUN													
22...	.14	1.9	2.0	12	--	.480	--	.18	--	--	--	--	--
JUL													
26...	1.5	2.2	3.7	9.3	--	.470	--	.22	--	--	--	--	--
AUG													
NOV													
22...	.41	1.7	2.1	18	--	.600	--	.38	1	4	10	--	--

01098712 - GRIST MILL POND NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)

NOV , 1976													
02...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977													
05...	.32	.98	1.3	5.0	--	.120	--	.05	--	--	--	--	--
JUN													
14...	.53	.97	1.5	12	--	.260	--	.11	--	--	--	--	--
AUG													
11...	.21	1.9	2.1	7.9	--	.380	--	.12	--	--	--	--	--
OCT													
13...	.33	1.4	1.7	11	--	.400	--	.09	3	0	<10	0	0
APR , 1978													
05...	.35	.53	.88	3.4	67000	.160	8500	.06	--	--	--	--	--
JUN													
22...	.38	1.4	1.8	7.5	58000	.380	5500	.21	1	--	--	--	--
JUL													
26...	.33	2.4	2.7	4.8	--	.540	--	.29	--	--	--	--	--
AUG													
22...	.07	3.0	3.1	4.4	21000	.450	0400	.14	2	--	--	--	--
NOV													
21...	.31	2.1	2.4	16	--	.450	--	.37	1	1	<10	--	--

01098714 - PARMENTER BROOK NEAR SUDBURY, MA (LAT 42 21 16 LONG 071 28 44.01)

NOV , 1976													
03...	.01	.19	.20	.21	--	.020	--	.01	--	--	--	--	--

01098718 - PRIDES CROSSING BROOK NEAR SUDBURY, MA (LAT 42 21 27 LONG 071 28 42.01)

NOV , 1976													
07...	.01	1.1	1.1	1.7	--	.300	--	.01	--	--	--	--	--

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	COPPER, TOTAL RECOV- ERABLE (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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
01098710 - HAGER POND OUTLET AT MARLBOROUGH, MA (LAT 42 21 06 LONG 071 29 11)												
NOV , 1976									5.1	--	--	--
03...	--	--	--	--	--	--	--	--				
APR , 1977									--	--	--	--
05...	--	--	--	--	--	--	--	--				
JUN									--	--	--	--
15...	--	--	--	--	--	--	--	--				
AUG									--	--	--	--
10...	--	--	--	--	--	--	--	--				
OCT									--	--	--	--
12...	--	--	--	--	--	--	--	--				
APR , 1978									--	--	--	--
04...	--	--	--	--	--	--	--	--				
JUN									--	--	--	--
22...	--	--	--	--	--	--	--	--				
JUL									--	--	--	--
26...	--	--	--	--	--	--	--	--				
AUG									3.6	--	--	--
23...	--	--	20	--	--	<.5	0	--				
NOV									13	15	--	5.1
22...	11	710	20	25	140	<.5	0	40				
01098712 - GRIST MILL POND NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)												
NOV , 1976									14	--	--	--
02...	--	--	--	--	--	--	--	--				
APR , 1977									--	--	--	--
05...	--	--	--	--	--	--	--	--				
JUN									4.7	--	--	--
14...	--	--	--	--	--	--	--	--				
AUG									4.5	--	--	--
11...	--	--	--	--	--	--	--	--				
OCT									6.0	--	--	--
13...	8	440	--	5	160	<.5	0	20				
APR , 1978									7.6	--	188	--
05...	--	--	--	--	--	--	--	--				
JUN									--	--	--	--
22...	--	--	180	--	--	.5	0	--				
JUL									--	--	--	--
26...	--	--	--	--	--	--	--	--				
AUG									9.2	--	--	--
22...	--	--	10	--	--	<.5	0	--				
NOV									12	11	--	6.0
21...	8	410	50	14	100	<.5	0	50				
01098714 - PARMENTER BROOK NEAR SUDBURY, MA (LAT 42 21 16 LONG 071 28 44.01)												
NOV , 1976									5.4	--	--	--
03...	--	--	--	--	--	--	--	--				
01098718 - PRIDES CROSSING BROOK NEAR SUDBURY, MA (LAT 42 21 27 LONG 071 28 42.01)												
NOV , 1976									14	--	--	--
03...	--	--	--	--	--	--	--	--				

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DOD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPUXIDE TOTAL (UG/L)
01098710 - HAGER POND OUTLET AT MARLBOROUGH, MA (LAT 42 21 06 LONG 071 29 11)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
10...	--	--	--	--	--	--	--	--	--	--	--	--
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978												
04...	.10	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	.10	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
NOV												
22...	.30	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
01098712 - GRIST MILL POND NEAR SUDBURY, MA (LAT 42 21 17 LONG 071 28 51.01)												
NOV , 1976												
02...	--	.0	.00	<.1	.01	.01	.00	.00	--	.00	.00	.00
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
11...	--	--	--	--	--	--	--	--	--	--	--	--
OCT												
13...	--	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
APR , 1978												
05...	.10	--	--	--	--	--	--	--	--	--	--	--
JUN												
22...	--	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
22...	.10	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
NOV												
21...	.20	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
01098714 - PARMENTER BROOK NEAR SUDBURY, MA (LAT 42 21 16 LONG 071 28 44.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	--	--	--
01098718 - PRIDES CROSSING BROOK NEAR SUDBURY, MA (LAT 42												

DATE	LINDANE TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLORO- PHYLL A PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
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[illegible]

NOV	.	1976									
02...	.00	.00	--	--	0	140000	7.44	.047	--	--	96
APR	,	1977									
05...	--	--	--	--	--	--	--	--	--	--	26
JUN											
14...	--	--	--	--	--	13000	5.06	.904	--	--	84
AUG											
11...	--	--	--	--	--	85000	24.6	7.54	--	--	16
OCT											
13...	.00	.00	--	--	0	46000	6.63	.813	--	--	50
APR	,	1978									
05...	--	--	--	--	--	--	--	--	--	--	15
JUN											
22...	.00	.00	.00	--	0	14000	53.5	11.9	--	--	77
JUL											
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
22...	.00	.00	.00	--	0	84000	52.2	8.61	--	--	64
NOV											
21...	.00	.00	--	.00	0	120000	--	--	35.0	6.71	-

[illegible][illegible]

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MIDDLEBURY DISTRICT

DATE	TIME	STREAM- FLOW- INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
01098722 - GRIST BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 28 15.01)												
NOV , 1976												
01...	1300	1.2	400	7.0	6.8	12.2	80	--	--	--	--	--
APR , 1977												
05...	1445	31	350	7.2	7.5	9.3	77	--	--	--	--	--
JUN												
15...	1400	5.3	530	7.5	22.5	6.3	72	--	--	--	--	--
AUG												
12...	0930	3.2	515	9.9	25.5	7.1	86	--	--	--	--	--
OCT												
12...	1430	3.6	510	7.5	13.5	10.0	95	--	--	--	--	--
APR , 1978												
04...	1315	22	245	6.5	5.0	13.1	102	--	--	--	--	--
JUN												
23...	0815	5.2	515	8.9	21.5	6.0	67	--	--	--	--	--
JUL												
26...	1115	3.1	500	8.4	25.0	5.6	67	--	--	--	--	--
AUG												
23...	1400	3.6	445	9.2	25.5	6.1	73	85	0	31	1.9	46
NOV												
21...	1445	3.3	520	8.1	5.5	12.3	97	110	78	38	3.5	44

NOV , 1976
25... 1458

8.5 8.6 8.8 8.5 9.8 8.5

01098728 - NOBSCOT BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 27 48.01)

NOV , 1976												
04...	0830	.09	154	6.1	6.0	8.5	68	--	--	--	--	--

01098730 - CARDING MILL POND NEAR SUDBURY, MA (LAT 42 21 42 LONG 071 27 57.01)

NOV , 1976												
03...	0800	--	530	8.6	5.5	13.8	109	--	--	--	--	--
APR , 1977												
05...	1530	--	310	7.4	8.5	10.0	85	--	--	--	--	--
JUN												
14...	1330	--	425	9.1	23.0	12.4	143	--	--	--	--	--
AUG												
11...	1430	--	560	9.9	29.5	19.9	258	--	--	--	--	--
OCT												
13...	1500	--	455	9.4	13.0	17.4	164	--	--	--	--	--
APR , 1978												
05...	1345	--	193	6.3	6.0	11.9	95	--	--	--	--	--
JUN												
22...	1315	--	435	8.9	25.5	10.2	123	79	5	26	3.3	48
JUL												
26...	1315	--	550	10.2	25.5	>20.0	241	--	--	--	--	--
AUG												
22...	1600	--	435	9.6	29.0	>20.0	257	79	0	28	2.2	49
NOV												
21...	1145	--	515	10.2	6.0	19.7	158	120	120	41	3.5	45

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (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)
01098722 - GRIST BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 28 15.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	2.1	.02	2.1
JUN												
15...	--	--	--	--	--	--	--	--	--	9.9	.12	10
AUG												
12...	--	--	--	--	--	--	--	--	--	4.7	.37	5.1
OCT												
12...	--	--	--	--	--	--	--	--	--	8.2	.15	8.3
APR , 1978												
04...	--	--	--	--	--	--	--	--	--	2.3	.02	2.3
JUN												
23...	--	--	--	--	--	--	--	--	--	5.5	.17	5.7
JUL												
26...	--	--	--	--	--	--	--	--	--	1.7	.25	1.9
AUG												
23...	12	65	19	85	.1	46	58	5.6	252	1.0	.17	1.2
NOV												
21...	10	38	0	31	.5	57	57	7.8	236	14	.12	14
01098725 - WAYSIDE BROOK NEAR SUDBURY, MA (LAT 42 21 24 LONG 071 28 00.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	.02	.01	.03
01098728 - NOHSCOT BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 27 48.01)												
NOV , 1976												
04...	--	--	--	--	--	--	--	--	--	.00	.01	.01
01098730 - CARDING MILL POND NEAR SUDBURY, MA (LAT 42 21 42 LONG 071 27 57.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	1.3	.01	1.3
JUN												
14...	--	--	--	--	--	--	--	--	--	5.6	.10	5.7
AUG												
11...	--	--	--	--	--	--	--	--	--	.13	.03	.16
OCT												
13...	--	--	--	--	--	--	--	--	--	5.4	.12	5.5
APR , 1978												
05...	--	--	--	--	--	--	--	--	--	1.8	.02	1.8
JUN												
22...	6.8	80	5	74	.2	30	61	6.3	226	2.0	.18	2.2
JUL												
26...	--	--	--	--	--	--	--	--	--	.01	.00	.01
AUG												
22...	10	61	30	100	.0	33	58	6.5	247	.01	.00	.01
NOV												
21...	10	0	1	19	.0	63	61	6.6	237	7.8	.13	7.9

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN, TOTAL (MG/L AS N)	NITRO- GEN,AM- MONIA + TOTAL (MG/L AS N)	NITRO- GEN, TOT IN HOT- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL (MG/L AS P)	CADMIUM TOTAL (UG/L AS CD)	CHRO- MIUM, TOTAL (UG/L AS CR)	COBALT, TOTAL (UG/L AS CO)
01098722 - GRIST BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 28 15.01)										
NOV , 1976 03...	--	--	--	--	--	--	--	--	--	--
APR , 1977 05...	.21	.99	1.2	3.3	--	.160	--	.03	--	--
JUN 15...	.24	1.3	1.5	12	--	.230	--	.12	--	--
AUG 12...	.20	1.4	1.6	6.7	--	.260	--	.11	--	--
OCT 12...	.18	1.2	1.4	9.7	--	.260	--	.06	--	--
APR , 1978 04...	.33	.41	.74	3.0	--	.150	--	.05	--	--
JUN 23...	.49	1.7	2.2	7.9	--	.450	--	.25	--	--
JUL 26...	.40	2.8	3.2	5.1	--	.560	--	.25	--	--
AUG 23...	.42	1.6	2.0	3.2	--	.340	--	.23	1	--
NOV 21...	.30	1.8	2.1	16	--	.410	--	.31	1	3
01098725 - WAYSIDE BROOK NEAR SUDBURY, MA (LAT 42 21 24 LONG 071 28 00.01)										
NOV , 1976 03...	.01	.24	.25	.28	--	.030	--	.01	--	--
01098728 - NOHSCOT BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 27 48.01)										
NOV , 1976 04...	.01	.19	.20	.21	--	.030	--	.01	--	--
01098730 - CARDING MILL POND NEAR SUDBURY, MA (LAT 42 21 42 LONG 071 27 57.01)										
NOV , 1976 03...	--	--	--	--	--	--	--	--	--	--
APR , 1977 05...	.08	.92	1.0	2.3	--	.140	--	.02	--	--
JUN 14...	.36	1.7	2.1	7.8	--	.290	--	.13	--	--
AUG 11...	.02	1.8	1.8	2.0	--	.360	--	.11	--	--
OCT 13...	.14	1.9	2.0	7.5	--	.340	--	.06	3	0
APR , 1978 05...	.24	.47	.71	2.5	78000	.100	6900	.04	--	--
JUN 22...	.54	1.8	2.3	4.5	23000	.380	4200	.23	1	--
JUL 26...	.01	3.1	3.1	3.1	--	.530	--	.31	--	--
AUG 22...	.23	3.0	3.2	3.2	24000	.660	5500	.31	2	--
NOV 21...	.18	2.2	2.4	10	--	.240	--	.12	1	1

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	COPPER, TOTAL RECOV- ERABLE (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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL RECOV- ERABLE (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
01098722 - GRIST BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 28 15.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	10	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
15...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	--	--	--	--	--	--	--	--	--	--	--	--
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	--	--	10	--	--	<.5	0	--	9.0	--	--	--
NOV												
21...	7	400	10	22	90	<.5	0	20	12	11	--	1.6
01098725 - WAYSIDE BROOK NEAR SUDBURY, MA (LAT 42 21 24 LONG 071 28 00.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	6.0	--	--	--
01098728 - NORSCOT BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 27 48.01)												
NOV , 1976												
04...	--	--	--	--	--	--	--	--	4.8	--	--	--
01098730 - CARDING MILL POND NEAR SUDBURY, MA (LAT 42 21 42 LONG 071 27 57.01)												
NOV , 1976												
03...	--	--	--	--	--	--	--	--	9.0	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
14...	--	--	--	--	--	--	--	--	5.4	--	--	--
AUG												
11...	--	--	--	--	--	--	--	--	5.7	--	--	--
OCT												
13...	7	290	--	9	60	<.5	0	20	8.2	--	--	--
APR , 1978												
05...	--	--	--	--	--	--	--	--	9.3	--	206	--
JUN												
22...	--	--	100	--	--	.5	0	--	9.7	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
22...	--	--	10	--	--	<.5	0	--	8.4	--	--	--
NOV												
21...	6	150	30	11	30	<.5	0	10	7.0	13	--	5.3

[illegible]

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	LINDANE TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR. TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLOR-A PHYTO- PLANK- TON, CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON, CHROMO FLUOROM (UG/L)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
01098722 - GRIST BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 28 15.01)											
NOV , 1976											
03...	--	--	--	--	--	--	--	--	--	--	96
APR , 1977											
05...	--	--	--	--	--	--	--	--	--	--	19
JUN											
15...	--	--	--	--	--	--	5.21	1.00	--	--	26
AUG											
12...	--	--	--	--	--	--	12.2	2.43	--	--	35
OCT											
12...	--	--	--	--	--	--	--	--	--	--	46
APR , 1978											
04...	--	--	--	--	--	--	--	--	--	--	10
JUN											
23...	--	--	--	--	--	--	43.8	8.85	--	--	86
JUL											
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	.00	.00	.00	--	0	41000	188	16.0	--	--	48
NOV											
21...	.00	.00	--	.00	0	100000	--	--	39.1	7.62	--
01098725 - WAYSIDE BROOK NEAR SUDBURY, MA (LAT 42 21 24 LONG 071 28 00.01)											
NOV , 1976											
03...	--	--	--	--	--	--	--	--	--	--	2.3
01098728 - NOBSCOT BROOK NEAR SUDBURY, MA (LAT 42 21 26 LONG 071 27 48.01)											
NOV , 1976											
04...	--	--	--	--	--	--	--	--	--	--	.5
01098730 - CARDING MILL POND NEAR SUDBURY, MA (LAT 42 21 42 LONG 071 27 57.01)											
NOV , 1976											
03...	.00	.00	--	--	0	100000	39.0	7.89	--	--	82
APR , 1977											
05...	--	--	--	--	--	--	--	--	--	--	22
JUN											
14...	--	--	--	--	--	--	13.1	3.23	--	--	71
AUG											
11...	--	--	--	--	--	130000	11.2	.226	--	--	--
OCT											
13...	.00	.00	--	--	0	220000	12.3	4.28	--	--	49
APR , 1978											
05...	--	--	--	--	--	--	--	--	--	--	10
JUN											
22...	.00	.00	.00	--	0	8900	88.7	10.9	--	--	42
JUL											
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
22...	.00	.00	.00	--	0	65000	41.9	.000	--	--	6.1
NOV											
21...	.00	.00	--	.00	0	120000	--	--	127	39.2	--

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	OXYGEN, DIS- SOLVED (MG/L)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION)	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)
01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)												
NOV , 1976												
04...	1130	4.6	500	8.2	7.0	11.7	96	--	--	--	--	--
APR , 1977												
05...	1615	29	310	7.2	8.0	9.2	78	--	--	--	--	--
JUN												
16...	0800	5.1	435	8.7	20.0	6.7	73	--	--	--	--	--
AUG												
12...	1030	2.7	455	9.6	25.5	5.1	61	--	--	--	--	--
OCT												
12...	1530	12	445	8.4	14.5	11.8	115	--	--	--	--	--
APR , 1978												
04...	1500	27	188	6.6	5.0	12.8	100	--	--	--	--	--
JUN												
23...	0945	6.0	450	7.4	20.5	3.7	41	--	--	--	--	--
JUL												
26...	1445	2.6	485	9.8	27.0	7.0	87	--	--	--	--	--
AUG												
23...	1615	2.7	415	9.0	25.5	5.5	66	85	9	30	2.4	48
NOV												
21...	1330	3.5	510	9.8	6.5	13.5	110	120	49	40	3.7	45

DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K)	BICAR- BONATE (MG/L AS HCO3)	CAR- BONATE (MG/L AS CO3)	ALKA- LINITY (MG/L AS CACO3)	CARBON DIOXIDE DIS- SOLVED (MG/L AS CO2)	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	SILICA, DIS- SOLVED (MG/L AS SiO2)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (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)
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01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)

NOV , 1976												
04...	--	--	--	--	--	--	--	--	--	7.6	.09	7.7
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	2.3	.03	2.3
JUN												
16...	--	--	--	--	--	--	--	--	--	4.8	.11	4.9
AUG												
12...	--	--	--	--	--	--	--	--	--	.27	.08	.35
OCT												
12...	--	--	--	--	--	--	--	--	--	4.9	.10	5.0
APR , 1978												
04...	--	--	--	--	--	--	--	--	--	1.7	.02	1.7
JUN												
23...	--	--	--	--	--	--	--	--	--	1.8	.16	2.0
JUL												
26...	--	--	--	--	--	--	--	--	--	.10	.01	.11
AUG												
23...	10	93	0	76	.1	33	58	6.5	234	.14	.00	.14
NOV												
21...	10	46	17	66	.0	63	60	7.2	269	7.5	.12	7.6

CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	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)	NITRO- GEN,TOT IN BUT- TOM MA- TERIAL (MG/KG AS N)	PHOS- PHORUS, TOTAL (MG/L AS P)	PHOS- PHORUS, TOTAL IN BOT. MAT. (MG/KG AS P)	PHOS- PHORUS, TOTAL OKTHO. (MG/L AS P)	ARSENIC TOTAL (UG/L AS AS)	CADMIUM TOTAL RECOV- ERABLE (UG/L AS CD)	CHRO- MIUM, TOTAL RECOV- ERABLE (UG/L AS CR)	COBALT, TOTAL RECOV- ERABLE (UG/L AS CO)
01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)												
NOV , 1976												
04...	.17	1.5	1.7	9.4	--	.310	--	.16	--	--	--	--
APR , 1977												
05...	.15	.95	1.1	3.4	--	.160	--	.03	--	--	--	--
JUN												
16...	.48	2.0	2.5	7.4	--	.330	--	.14	--	--	--	--
AUG												
12...	.74	2.1	2.8	3.2	--	.540	--	.24	--	--	--	--
OCT												
12...	.12	1.8	1.9	6.9	--	.330	--	.08	--	--	--	--
APR , 1978												
04...	.24	.28	.52	2.2	--	.100	--	.04	--	--	--	--
JUN												
23...	.50	.80	1.3	3.3	--	.360	--	.25	--	--	--	--
JUL												
26...	.05	2.7	2.7	2.8	--	.460	--	.27	--	--	--	--
AUG												
23...	.23	2.8	3.0	3.1	--	.600	--	.35	2	--	--	--
NOV												
21...	.23	2.7	2.9	11	--	.310	--	.12	--	--	--	--

DATE	COPPER, TOTAL RECOV- ERABLE (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)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV- ERABLE (UG/L AS HG)	SELE- NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV- ERABLE (UG/L AS ZN)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C)	CARBON, ORGANIC TOT. IN BOTTOM MAT. (G/KG AS C)	CARBON, INOR- GANIC, DIS- SOLVED (MG/L AS C)
------	---	---	--	---	---	---	--	---	---	--	---	--

01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)

NOV , 1976												
04...	--	--	--	--	--	--	--	--	7.8	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	--	--	--	--	--	--	--	--	--	--	--	--
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978												
04...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	--	--	60	--	--	<.5	0	--	1.8	--	--	--
NOV												
21...	--	--	40	--	--	--	--	--	17	11	--	8.7

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
CHEMICAL ANALYSES OF SURFACE WATER IN MERRIMACK RIVER BASIN--Continued

DATE	METHY- LENE BLUE ACTIVE SUB- STANCE (MG/L)	PCB, TOTAL (UG/L)	ALDRIN, TOTAL (UG/L)	CHLOR- DANE, TOTAL (UG/L)	DDD, TOTAL (UG/L)	DDE, TOTAL (UG/L)	DDT, TOTAL (UG/L)	DI- ELDRIN TOTAL (UG/L)	ENDO- SULFAN, TOTAL (UG/L)	ENDRIN, TOTAL (UG/L)	HEPTA- CHLOR, TOTAL (UG/L)	HEPTA- CHLOR EPOXIDE TOTAL (UG/L)
01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)												
NOV , 1976												
04...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1977												
05...	--	--	--	--	--	--	--	--	--	--	--	--
JUN												
16...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
12...	--	--	--	--	--	--	--	--	--	--	--	--
OCT												
12...	--	--	--	--	--	--	--	--	--	--	--	--
APR , 1978												
04...	.10	--	--	--	--	--	--	--	--	--	--	--
JUN												
23...	--	--	--	--	--	--	--	--	--	--	--	--
JUL												
26...	--	--	--	--	--	--	--	--	--	--	--	--
AUG												
23...	.10	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00
NOV												
21...	.10	.0	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00

DATE	LINDANE TOTAL (UG/L)	NAPH- THA- LENES, POLY- CHLOR, TOTAL (UG/L)	MIREX, TOTAL (UG/L)	PER- THANE TOTAL (UG/L)	TOX- APHENE, TOTAL (UG/L)	PHYTO- PLANK- TON, TOTAL (CELLS PER ML)	CHLORO- PHYLL A PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLORO- PHYLL B PHYTO- PLANK- TON, UNCORR. (UG/L)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	CHLOR-B PHYTO- PLANK- TON CHROMO FLUOROM (UG/L)	ALGAL GROWTH POTEN- TIAL, BOTTLE TEST (MG/L)
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01098733 - HOP BROOK NEAR SUDBURY, MA (LAT 42 22 02 LONG 071 28 01.01)

NOV , 1976											
04...	--	--	--	--	--	--	--	--	--	--	82
APR , 1977											
05...	--	--	--	--	--	--	--	--	--	--	26
JUN											
16...	--	--	--	--	--	--	19.2	4.06	--	--	47
AUG											
12...	--	--	--	--	--	--	76.5	2.35	--	--	15
OCT											
12...	--	--	--	--	--	--	--	--	--	--	29
APR , 1978											
04...	--	--	--	--	--	--	--	--	--	--	12
JUN											
23...	--	--	--	--	--	--	42.6	7.64	--	--	85
JUL											
26...	--	--	--	--	--	--	--	--	--	--	--
AUG											
23...	.00	.00	.00	--	0	61000	25.5	3.91	--	--	9.9
NOV											
21...	.00	.00	--	.00	0	150000	--	--	154	47.2	--

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422103071292900 SEWAGE BROOK NEAR MARLBOROUGH, MA
 PHYTOPLANKTON ANALYSES, AUGUST 1978 TO NOVEMBER 1978

STA 2

DATE	AUG 23,78	NOV 21,78		
TIME	1015	0730		
TOTAL CELLS/ML	480	980		
DIVERSITY: DIVISION	1.0	0.4		
..CLASS	1.0	0.4		
..ORDER	1.0	0.4		
...FAMILY	1.4	0.4		
....GENUS	1.4	0.4		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....COSCINODISCUS	--	-	14	1
...PENNIALES				
...ACHNANTHACEAE				
....ACHNANTHES	16	3	--	-
...GOMPHONEMATACEAE				
....GOMPHONEMA	11	2	--	-
...NAVICULACEAE				
....NAVICULA	16	3	14	1
...NITZSCHACEAE				
....NITZSCHIA	110#	22	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...HORMOGONALES				
...OSCILLATORIACEAE				
....OSCILLATORIA	320#	67	920#	94
EUGLENOPHYTA (EUGLENOIDS)				
..EUGLENOPHYCEAE				
...EUGLENALES				
...EUGLENACEAE				
....EUGLENA	5	1	29	3

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

° - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422057071291400 HAGER POND NEAR MARLBOROUGH, MA
PHYTOPLANKTON ANALYSES, NOVEMBER 1976 TO NOVEMBER 1978

STA 5

DATE TIME	NOV 2,76 1030	JUN 14,77 0930	AUG 11,77 0900	OCT 13,77 0830				
TOTAL CELLS/ML	150000	16000	46000	41000				
DIVERSITY: DIVISION	0.0	0.7	0.0	0.3				
..CLASS	0.0	0.7	0.0	0.3				
..ORDER	0.1	0.0	0.0	0.4				
...FAMILY	1.1	0.0	1.5	1.5				
....GENUS	1.1	0.0	1.5	1.5				
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)								
..CHLOROPHYCEAE	--	-	2300	14	--	-	--	-
...CHLOROCOCCALES								
....HYDRODICTYACEAE								
.....PEDIASTRUM	--	-	2100	13	23000#	51	25000#	59
...MICRACTINIACEAE								
....GOLENKINIA	*	0	--	-	7800#	17	2600	6
...MICRACTINIUM	--	-	530	3	--	-	--	-
...OOCYSTACEAE								
....ANKISTROESMUS	--	-	*	0	--	-	--	-
....CHLORELLA	88000#	60	--	-	--	-	--	-
...KIRCHNERIELLA	--	-	600	4	--	-	--	-
...OOCYSTIS	--	-	270	2	380	1	--	-
...TETRAEDRON	--	-	--	-	--	-	*	0
...SCENEDESMACEAE								
....SCENEDESMUS	57000#	39	8200#	50	14000#	31	12000#	29
..TETRASPORALES								
...PALMELLACEAE								
....GLOEOCYSTIS	--	-	--	-	--	-	--	-
..VOLVOCALES								
...CHLAMYDOMONADACEAE								
....CHLAMYDOMONAS	960	1	*	0	--	-	340	1
..ZYGNEMATALES								
...DESMIDIACEAE								
....STAURASTRUM	--	-	--	-	--	-	--	-
CHRYSTOPHYTA								
..BACILLARIOPHYCEAE								
...CENTRALES								
...COSCINODISCACEAE								
....CYCLOTELLA	--	-	*	0	--	-	--	-
..PENNALES								
...ACHNANTHACEAE								
....ACHNANTHES	--	-	*	0	--	-	--	-
...FRAGILARIACEAE								
....FRAGILARIA	--	-	--	-	--	-	340	1
...NAVICULACEAE								
....GYROSIGMA	--	-	--	-	--	-	*	0
....NAVICULA	--	-	--	-	--	-	--	-
...NITZSCHIAEAE								
....NITZSCHIA	*	0	870	5	--	-	250	1
...SURIARELLACEAE								
....SURIARELLA	*	0	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)								
..CRYPTOPHYCEAE								
...CRYPTOMONADALES								
....CRYPTOCHRYSIDACEAE								
....CHROOMONAS	--	-	--	-	*	0	--	-
...CRYPTOMONADACEAE								
....CRYPTOMONAS	--	-	*	0	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)								
..CYANOPHYCEAE								
...CHROOCOCCALES								
....CHROOCOCCACEAE								
....ANACYSTIS	--	-	1200	7	--	-	850	2
...HORMOGONALES								
...RIVULARIACEAE								
....RAPHIIDIOPSIS	--	-	--	-	--	-	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN (Continued)

422057071291400 HAGER POND NEAR MARLBOROUGH, MA
PHYTOPLANKTON ANALYSES, NOVEMBER 1976 TO NOVEMBER 1978

STA 5

DATE TIME	JUN 22,78 0815	AUG 22,78 1045	NOV 21,78 0900
TOTAL CELLS/ML	95000	17000	93000
DIVERSITY: DIVISION	0.1	1.0	0.0
..CLASS	0.1	1.0	0.0
...ORDER	0.3	1.1	0.2
....FAMILY	1.4	1.6	0.2
.....GENUS	1.4	1.6	0.2

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)						
..CHLOROPHYCEAE	--	-	--	-	--	-
...CHLOROCOCCALES						
....HYDRODICTYACEAE						
.....PEDIASTRUM	62000#	65	3100#	18	--	-
....MICHACTINIACEAE						
.....GOLENKINIA	--	-	--	-	--	-
....MICHACTINIUM	--	-	--	-	--	-
...OOCYSTACEAE						
....ANKISTRODESMUS	--	-	--	-	--	-
....CHLORELLA	--	-	--	-	--	-
....KIRCHNERIELLA	--	-	--	-	--	-
...OOCYSTIS	4500	5	--	-	--	-
....TETRAEDRON	--	-	--	-	--	-
...SCENEDESMACEAE						
....SCENEDESMUS	25000#	26	8500#	50	90000#	97
..TETRASPORALES						
...PALMELLACEAE						
....GLOEUCYSTIS	2800	3	--	-	--	-
..VOLVOCALES						
...CHLAMYDOMONADACEAE						
....CHLAMYDOMONAS	--	-	230	1	--	-
..ZYGNEMATALES						
...DESMIDIACEAE						
....STAUSTRUM	--	-	--	-	2700	3
CHRYSOPHYTA						
..BACILLARIOPHYCEAE						
...CENTRALES						
....COSCINODISCACEAE						
.....CYCLOTELLA	780	1	--	-	--	-
..PENNALES						
...ACHNANTHACEAE						
....ACHNANTHES	--	-	--	-	--	-
...FRAGILARIACEAE						
....FRAGILARIA	--	-	--	-	--	-
...NAVICULACEAE						
....GYROSIGMA	--	-	--	-	--	-
....NAVICULA	*	0	--	-	--	-
...NITZSCHIA						
....NITZSCHIA	560	1	--	-	--	-
...SURIKELLACEAE						
....SURIKELLA	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)						
..CRYPTOPHYCEAE						
...CRYPTOMONADALES						
....CRYPTOCHRYSIDACEAE						
.....CHROOMONAS	--	-	5000#	29	--	-
....CRYPTOMONADACEAE						
.....CRYPTOMONAS	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)						
..CYANOPHYCEAE						
...CHROOCOCCALES						
....CHROOCOCCACEAE						
.....ANACYSTIS	--	-	--	-	--	-
...HORMOGONALES						
....RIVULARIACEAE						
.....RAPHIIDIOPSIS	--	-	230	1	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES
QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

01098710 HAGER POND OUTLET AT MARLBOROUGH, MA STA 8
PHYTOPLANKTON ANALYSES, AUGUST 1978 TO NOVEMBER 1978

DATE	AUG 23, 78	NOV 22, 78
TIME	1200	0930
TOTAL CELLS/ML	12000	88000
DIVERSITY: DIVISION	0.8	0.0
..CLASS	0.8	0.0
..ORDER	0.8	0.3
...FAMILY	1.3	0.7
....GENUS	1.3	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
....CHARACIACEAE				
....SCHROEDERIA	87	1	--	-
...HYDRODICTYACEAE				
...PEDIASTRUM	1500	12	6900	8
...SCENEDESMACEAE				
....SCENEDESMUS	8900#	72	77000#	88
..ZYGNEMATALES				
...DESMIDIACEAE				
....STAUSTRUM	--	-	3900	4
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...PENNALES				
...NAVICULACEAE				
....NAVICULA	*	0	--	-
CRYPTOPHYTA (CRYPTOMONADS)				
..CRYPTOPHYCEAE				
...CRYPTOMONADALES				
...CRYPTOCHRYSIDACEAE				
....CHROOMONAS	1100	9	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	650	5	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422117071285100 GRIST MILL POND NEAR SUDBURY, MA									
PHYTOPLANKTON ANALYSES, NOVEMBER 1976 TO NOVEMBER 1978									
DATE		NOV 2,76		JUN 14,77		AUG 11,77		OCT 13,77	
TIME		1430		1130		1045		1145	
TOTAL CELLS/ML		140000		13000		85000		46000	
DIVERSITY: DIVISION		0.3		0.8		0.0		0.3	
..CLASS		0.3		0.9		0.0		0.3	
..ORDER		0.4		0.9		0.0		0.3	
...FAMILY		1.4		1.7		1.4		1.4	
....GENUS		1.4		1.8		1.4		1.4	
ORGANISM		CELLS	PER-	CELLS	PER-	CELLS	PER-	CELLS	PER-
		/ML	CENT	/ML	CENT	/ML	CENT	/ML	CENT
CHLOROPHYTA (GREEN ALGAE)									
..CHLOROPHYCEAE									
...CHLOROCOCCALES									
...COELASTRAEAE									
....COELASTRUM		--	-	* 0		--	-	--	-
...HYDRODICTYACEAE									
....PEDIASTRUM		--	-	1600	12	45000#	53	31000#	67
...MIRACTINIACEAE									
....GULENKINIA		* 0		* 0		13000#	15	4000	9
...MIRACTINIUM		890	1	180	1	--	-	--	-
...OOCYSTACEAE									
....ANKISTROUESMUS		--	-	* 0		--	-	--	-
...CHLORELLA		40000#	29	--	-	--	-	--	-
....OOCYSTIS		--	-	89	1	--	-	--	-
...SELENASTRUM		--	-	* 0		--	-	--	-
...TETRAEDRON		--	-	130	1	--	-	--	-
...SCENEDESMACEAE									
...SCENEDESMUS		89000#	64	9200#	68	27000#	32	9500#	21
..VOLVOCALES									
...CHLAMYDOMONADACEAE									
...CHLAMYDOMONAS		* 0		--	-	--	-	--	-
...VOLVOCAEAE									
....PANDORINA		--	-	* 0		--	-	--	-
..ZYGNEMATALES									
...DESMIDIACEAE									
...STAUROSTRUM		--	-	* 0		--	-	--	-
CHRYSTOPHYTA									
..BACILLARIOPHYCEAE									
...CENTRALES									
...COSCINODISCACEAE									
...CYCLOTELLA		* 0		--	-	--	-	--	-
..PENNALES									
...ACHNANTHACEAE									
...ACHNANTHES		* 0		--	-	--	-	--	-
...CYMBELLACEAE									
...AMPHORA		* 0		--	-	--	-	--	-
...EUNOTIACEAE									
...EUNOTIA		1800	1	--	-	--	-	--	-
...FRAGILARIACEAE									
...FRAGILARIA		1300	1	220	2	--	-	--	-
...SYNEURA		* 0		--	-	--	-	--	-
...GOMPHONEMACEAE									
...GOMPHONEMA		* 0		--	-	--	-	--	-
...MERIDIONACEAE									
...MERIDIUM		* 0		--	-	--	-	--	-
...NAVICULACEAE									
...NAVICULA		* 0		* 0		--	-	--	-
...PINNULARIA		* 0		--	-	--	-	--	-
...NITZSCHIAEAE									
...NITZSCHIA		890	1	650	5	* 0		260	1
CHRYSTOPHYCEAE									
..CHRYSONOMADALES									
...OCHROMONADACEAE									
...OCHROMONAS		--	-	89	1	--	-	--	-
..XANTHOPHYCEAE									
...RHIZOCHLORIDIALES									
...STIPITOCOCCACEAE									
...STIPITOCOCCUS		--	-	--	-	--	-	260	1
CRYPTOPHYTA (CRYPTOMONADS)									
..CRYPTOPHYCEAE									
...CRYPTOMONADALES									
...CRYPTOMONADACEAE									
...CRYPTOMONAS		--	-	160	1	--	-	* 0	
CYANOPHYTA (BLUE-GREEN ALGAE)									
..CYANOPHYCEAE									
...CHROOCOCCALES									
...CHROOCOCCACEAE									
....ANACYSTIS		--	-	800	6	--	-	970	2
...HORMOGONALES									
...OSCILLATORIACEAE									
...OSCILLATORIA		--	-	240	2	--	-	* 0	
EUGLENOPHYTA (EUGLENOIDS)									
..EUGLENOPHYCEAE									
...EUGLENALES									
...EUGLENAEAE									
....TRACHELOMONAS				* 0		--	-	* 0	

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN (Continued)

422117071285100 GRIST MILL POND NEAR SUDBURY, MA STA 9
 PHYTOPLANKTON ANALYSES, NOVEMBER 1976 TO NOVEMBER 1978

DATE TIME	JUN 22.78 1030	AUG 22.78 1330	NOV 21.78 1030
TOTAL CELLS/ML	14000	84000	120000
DIVERSITY: DIVISION	0.0	0.1	0.0
..CLASS	0.0	0.1	0.0
...ORDER	0.0	0.1	0.1
...FAMILY	0.9	0.5	0.1
...GENUS	0.9	0.5	0.1
ORGANISM	CELLS /ML PER- CENT	CELLS /ML PER- CENT	CELLS /ML PER- CENT
CHLOROPHYTA (GREEN ALGAE)			
..CHLOROPHYCEAE			
...CHLOROCOCCALES			
...COELASTRACEAE			
....COELASTRUM	-- --	-- --	-- --
...HYDRODICTYACEAE			
...PEDIASTRUM	9700# 71	4700 6	-- --
...MICRACTINIACEAE			
....GULENKINIA	-- --	670 1	-- --
...MICRACTINIUM	-- --	-- --	-- --
...OOCYSTACEAE			
...ANKISTRODESMUS	-- --	-- --	-- --
...CHLORELLA	-- --	-- --	-- --
...OOCYSTIS	-- --	-- --	-- --
...SELENASTRUM	-- --	-- --	-- --
...TETRAEDRON	-- --	-- --	-- --
...SCENEDESMACEAE			
...SCENEDESMUS	3800# 28	78000# 93	110000# 98
..VOLVOCALES			
...CHLAMYDOMONADACEAE			
...CHLAMYDOMONAS	-- --	* 0	-- --
...VOLVOCAEEAE			
...PANDORINA	-- --	-- --	-- --
...ZYGNEATALES			
...DESMIDIACEAE			
...STAUSTRUM	-- --	-- --	2200 2
CHRYSTOPHYTA			
..BACILLARIOPHYCEAE			
...CENTRALES			
...COSCINODISCACEAE			
...CYCLOTELLA	-- --	* 0	-- --
..PENNALES			
...ACHNANTHACEAE			
....ACHNANTHES	-- --	-- --	-- --
...CYMBELLACEAE			
...AMPHORA	-- --	-- --	-- --
...EUNOTIACEAE			
...EUNOTIA	-- --	-- --	-- --
...FRAGILARIACEAE			
...FRAGILARIA	-- --	-- --	-- --
...SYNEDRA	-- --	-- --	-- --
...GUMPHONEMACEAE			
...GUMPHONEMA	-- --	-- --	-- --
...MERIDIONACEAE			
...MERIDION	-- --	-- --	-- --
...NAVICULACEAE			
...NAVICULA	-- --	* 0	-- --
...PINNULARIA	-- --	-- --	-- --
...NITZSCHACEAE			
...NITZSCHIA	* 0	* 0	-- --
..CHRYSTOPHYCEAE			
...CHRYSOMONADALES			
...OCHROMONADACEAE			
...OCHROMONAS	-- --	-- --	-- --
..XANTHOPHYCEAE			
...RHIZOCHLORIDALES			
...STIPITOCOCCACEAE			
...STIPITOCOCCUS	-- --	-- --	-- --
CRYPTOPHYTA (CRYPTOMONADS)			
..CRYPTOPHYCEAE			
...CRYPTOMONADALES			
...CRYPTOMONADACEAE			
....CRYPTOMONAS	-- --	-- --	-- --
CYANOPHYTA (BLUE-GREEN ALGAE)			
..CYANOPHYCEAE			
...CHROOCOCCALES			
...CHROOCOCCACEAE			
....ANACYSTIS	-- --	-- --	-- --
...HORMOGONALES			
...OSCILLATORIA	-- --	-- --	-- --
...OSCILLATORIA	-- --	-- --	-- --
EUGLENOPHYTA (EUGLENOIDS)			
..EUGLENOPHYCEAE			
...EUGLENALES			
...EUGLENACEAE			
....TRACHELOMONAS	-- --	-- --	-- --

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM; MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422126071281500 GRIST BROOK NEAR SUDBURY, MA
PHYTOPLANKTON ANALYSES, AUGUST 1978 TO NOVEMBER 1978

STA 12

DATE TIME	AUG 23, 78 1400	NOV 21, 78 1445		
TOTAL CELLS/ML	41000	100000		
DIVERSITY: DIVISION	0.0	0.4		
..CLASS	0.0	0.4		
...ORDER	0.0	0.5		
...FAMILY	0.0	0.5		
...GENUS	0.0	0.5		
ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...SCENEDESMACEAE				
....SCENEDESMUS	41000#100		94000# 92	
...VOLVOCALES				
...CHLAMYDOMONADACEAE				
....CHLAMYDOMONAS	--	-	690	1
CHRYSOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	--	-	*	0
...PENNALES				
...NITZSCHIACEAE				
....NITZSCHIA	--	-	*	0
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	--	-	6900	7

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

ANALYSES OF SAMPLES COLLECTED AT MISCELLANEOUS SITES

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422142071275700 CARDING MILL POND NEAR SUDBURY, MA STA 15
 PHYTOPLANKTON ANALYSES, NOVEMBER 1976 TO NOVEMBER 1978

DATE TIME	NOV 3.76 0800	AUG 11.77 1430	OCT 13.77 1500	JUN 22.78 1315	AUG 22.78 1600	NOV 21.78 1145
TOTAL CELLS/ML	100000	130000	220000	8900	65000	120000
DIVERSITY: DIVISION	0.1	0.5	0.4	0.0	0.8	0.0
..CLASS	0.1	0.5	0.4	0.0	0.8	0.0
..ORDER	0.2	0.5	0.5	0.0	1.0	0.6
...FAMILY	0.9	0.6	1.4	0.8	1.2	0.7
....GENUS	0.9	0.6	1.4	0.8	1.2	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)												
..CHLOROPHYCEAE												
...CHLOROCOCCALES												
...HYDRODICTYACEAE												
....PEDIASTRUM	--	-	8300	6	150000#	71	2200#	25	3600	5	--	-
....MICRACTINIACEAE												
....GOLENKINIA	*	0	*	0	14000	6	--	-	360	1	--	-
....OOCYSTACEAE												
....ANKISTRODESMUS	--	-	*	0	--	-	--	-	--	-	--	-
....CHLORELLA	18000#	17	--	-	--	-	--	-	--	-	--	-
....CHODATELLA	--	-	--	-	--	-	--	-	--	-	*	0
....TETRAEDRON	*	0	--	-	*	0	--	-	--	-	--	-
...SCENEDESMACEAE												
....SCENEDESMUS	81000#	79	3600	3	32000	15	6700#	75	7500	11	100000#	84
...TETRASPORALES												
...PALMELLACEAE												
...SPHAEROCYSTIS	--	-	--	-	--	-	--	-	4300	7	--	-
...VOLVOCALES												
...CHLAMYDOMONADACEAE												
....CHLAMYDOMONAS	1600	2	*	0	*	0	--	-	--	-	*	0
...VOLVOCAEAE												
...PANDORINA	--	-	--	-	--	-	--	-	--	-	19000#	16
CHRYSOPHYTA												
..BACILLARIOPHYCEAE												
...PENNALES												
...FRAGILARIACEAE												
....SYNEDRA	*	0	--	-	--	-	--	-	--	-	--	-
....NITZSCHIAEAE												
....NITZSCHIA	--	-	*	0	*	0	--	-	--	-	--	-
...XANTHOPHYCEAE												
...RHIZOCHLORIDALES												
...STIPITOCOCCACEAE												
....STIPITOCOCCUS	--	-	--	-	*	0	--	-	--	-	--	-
CRYPTOPHYTA (CRYPTOMONADS)												
..CRYPTOPHYCEAE												
...CRYPTOMONADALES												
...CRYPTOMONADACEAE												
....CRYPTOMONAS	--	-	--	-	*	0	--	-	--	-	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)												
..CYANOPHYCEAE												
...CHROOCOCCALES												
...CHROOCOCCACEAE												
....ANACYSTIS	1600	2	120000#	90	16000	7	--	-	50000#	76	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%

* - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

QUALITATIVE AND QUANTITATIVE ANALYSES OF BIOLOGICAL DATA, MERRIMACK RIVER BASIN

422702071280100 HOP BROOK NEAR SUDBURY, MA
 PHYTOPLANKTON ANALYSES, AUGUST 1978 TO NOVEMBER 1978

STA 16

DATE	AUG 23, 78	NOV 21, 78
TIME	1615	1330
TOTAL CELLS/ML	61000	150000
DIVERSITY: DIVISION	0.9	0.0
..CLASS	0.9	0.0
...ORDER	1.2	0.6
...FAMILY	1.2	0.7
....GENUS	1.2	0.7

ORGANISM	CELLS /ML	PER- CENT	CELLS /ML	PER- CENT
CHLOROPHYTA (GREEN ALGAE)				
..CHLOROPHYCEAE				
...CHLOROCOCCALES				
...HYDRODICTYACEAE				
....PEDIASTRUM	--	-	1000	1
...OOCYSTACEAE				
...CHODATELLA	--	-	*	0
...SCENEDESMACEAE				
....SCENEDESMUS	14000#	23	130000#	85
..TETRASPORALES				
...PALMELLACEAE				
...SPHAEROCYSTIS	4000	7	--	-
..VOLVOCALES				
...CHLAMYDOMONADACEAE				
...CHLAMYDOMONAS	*	0	--	-
...VOLVOCAEAE				
....PANDORINA	--	-	20000	13
CHRYSTOPHYTA				
..BACILLARIOPHYCEAE				
...CENTRALES				
...COSCINODISCACEAE				
....CYCLOTELLA	*	0	*	0
...PENNALES				
...NAVICULACEAE				
...NAVICULA	*	0	--	-
...NITZSCHIAEAE				
....NITZSCHIA	*	0	--	-
CYANOPHYTA (BLUE-GREEN ALGAE)				
..CYANOPHYCEAE				
...CHROOCOCCALES				
...CHROOCOCCACEAE				
....ANACYSTIS	42000#	69	--	-

NOTE: # - DOMINANT ORGANISM; EQUAL TO OR GREATER THAN 15%
 * - OBSERVED ORGANISM, MAY NOT HAVE BEEN COUNTED; LESS THAN 1/2%

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
MERRIMACK RIVER BASIN									
01094400 - NORTH NASHUA RIVER AT FITCHBURG, MA (LAT 42 34 34 LONG 071 47 19.01)									
NOV , 1978					MAY , 1979				
01...	0845	27	10.5	190	31...	0845	156	17.0	195
DEC					JUL				
11...	0750	74	1.0	215	11...	1220	22	25.0	240
JAN , 1979					AUG				
08...	1435	1240	.0	305	14...	1040	109	19.0	140
24...	1200	197	.0	175	SEP				
MAR					19...	0815	26	20.0	325
06...	0850	1100	.5	181					
APR									
18...	0825	174	2.5	--					
01094500 - NORTH NASHUA RIVER NEAR LEOMINSTER, MA (LAT 42 30 06 LONG 071 43 23)									
NOV , 1978					MAY , 1979				
01...	1240	51	10.5	272	31...	1335	297	17.0	185
DEC					JUL				
11...	1430	124	1.0	305	11...	0850	48	23.0	290
JAN , 1979					AUG				
24...	0920	289	.0	254	14...	0650	180	17.0	143
APR					SEP				
18...	1230	300	3.0	--	19...	1130	57	19.5	265
01096000 - SQUANNACOOK RIVER NEAR WEST GROTON, MA (LAT 42 38 03 LONG 071 39 30)									
NOV , 1978					JUN , 1979				
02...	1130	18	9.0	112	06...	0840	100	16.0	102
DEC					JUL				
13...	1140	42	.0	88	10...	1010	19	21.0	110
JAN , 1979					AUG				
31...	1110	240	.0	66	16...	1350	37	18.0	96
MAR					SEP				
07...	1200	2200	.0	54	26...	0900	37	13.0	93
APR									
17...	1040	234	4.5	--					
01096500 - NASHUA RIVER AT EAST PEPPERELL, MA (LAT 42 40 03 LONG 071 34 32)									
NOV , 1978					JUN , 1979				
02...	0800	209	9.5	240	06...	1115	387	18.0	285
DEC					JUL				
13...	0800	315	1.0	210	10...	0825	305	23.0	190
JAN , 1979					AUG				
31...	0630	1670	.0	187	16...	1020	402	19.0	130
MAR					SEP				
07...	0910	4860	.0	161	26...	1050	366	16.5	163
APR									
17...	0845	1170	3.0	205					
01096800 - NORTH BROOK AT BERLIN, MA (LAT 42 22 10 LONG 071 38 22)									
JUN , 1979									
28...	0700	3.0	23.0	--					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
MERRIMACK RIVER BASIN--CONTINUED									
01096910 - BOULDER BROOK AT EAST BOLTON, MA (LAT 42 27 04 LONG 071 34 39)									
NOV , 1978					APR , 1979				
03...	1015	.42	8.5	304	18...	1410	6.9	2.5	182
DEC					JUN				
19...	1050	.71	.0	134	05...	0930	5.5	15.0	152
JAN , 1979					JUL				
08...	1145	22	.0	--	13...	0850	.22	16.5	370
25...	0845	208	1.5	116	AUG				
FEB					17...	1020	1.8	12.5	137
07...	1010	5.8	.0	128	SEP				
MAR					20...	1000	.83	10.0	192
06...	1415	16	.5	134					
01097000 - ASSABET RIVER AT MAYNARD, MA (LAT 42 25 55 LONG 071 27 01)									
NOV , 1978					JUN , 1979				
03...	1245	20	11.5	190	05...	1140	182	17.0	167
DEC					JUL				
19...	1315	51	.0	154	13...	1130	23	25.5	200
JAN , 1979					AUG				
25...	1150	1700	.0	74	17...	0800	148	18.0	137
MAR					SEP				
09...	0930	841	.5	128	20...	1300	57	17.0	137
APR									
20...	0940	220	4.5	187					
01097300 - NASHOBA BROOK NEAR ACTON, MA (LAT 42 30 39 LONG 071 24 25)									
NOV , 1978					JUN , 1979				
03...	0800	3.4	6.0	145	05...	1340	17	16.0	147
DEC					JUL				
13...	1340	16	.0	--	10...	1405	2.1	21.0	143
JAN , 1979					AUG				
26...	1040	624	.0	87	14...	1430	35	16.5	152
MAR					SEP				
09...	0810	36	.5	160	21...	0730	3.0	12.0	139
01097400 - SPENCER BROOK NEAR CONCORD, MA (LAT 42 30 07 LONG 071 22 55)									
JUN , 1979									
28...	0920	.72	21.0	--					
01099500 - CONCORD R BELOW R MEADOW BROOK, AT LOWELL, MA (LAT 42 38 12 LONG 071 18 09)									
OCT , 1978					APR , 1979				
31...	0935	189	11.0	192	19...	1210	1200	4.0	156
DEC					JUL				
14...	0845	521	.5	182	09...	1110	143	23.0	205
JAN , 1979					AUG				
26...	1430	4470	2.0	140	13...	0900	572	20.0	167
MAR					SEP				
02...	1200	1400	.5	204	28...	1050	340	17.0	173
01100000 - MERRIMACK RIVER BL CONCORD RIVER AT LOWELL, MA (LAT 42 38 45 LONG 071 17 56.01)									
MAR , 1979									
02...	1000	8060	.0	--					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
MERRIMACK RIVER BASIN--CONTINUED									
01100600 - SHAWSEEN RIVER NEAR WILMINGTON, MA (LAT 42 34 05 LONG 071 12 55.01)									
OCT , 1978					JUN , 1979				
31... 1410	9.9	9.0	96	01... 1435	58	15.0	105		
JAN , 1979				JUL					
08... 1715	114	.0	285	09... 1430	4.7	22.0	260		
22... 1415	770	1.0	165	AUG					
26... 1715	1540	2.0	112	16... 0805	112	21.5	205		
MAR				SEP					
02... 1510	106	.0	212	25... 0745	68	13.0	164		
APR									
19... 1415	63	3.5	142						
01100700 - EAST MEADOW RIVER NEAR HAVERHILL, MA (LAT 42 48 41 LONG 071 01 59.01)									
JUN , 1979									
28... 1240	2.7	22.0	--						
PARKER RIVER BASIN									
01101000 - PARKER RIVER AT BYFIELD, MA (LAT 42 45 10 LONG 070 56 46)									
OCT , 1978				APR , 1979					
30... 0735	5.7	9.5	155	20... 1400	53	3.5	150		
DEC				JUL					
12... 1120	18	.0	122	12... 1350	2.7	22.0	153		
JAN , 1979				AUG					
22... 0725	85	.0	--	15... 1020	27	17.0	122		
26... 0935	328	.0	108	SEP					
MAR				21... 1230	2.7	15.0	144		
01... 0840	90	.0	177						
IPSWICH RIVER BASIN									
01101500 - IPSWICH RIVER AT SOUTH MIDDLETON, MA (LAT 42 34 10 LONG 071 01 39)									
OCT , 1978				MAY , 1979					
30... 1200	4.5	10.0	145	29... 1100	102	16.0	107		
DEC				JUL					
12... 0800	12	.5	124	16... 1030	3.0	25.0	210		
JAN , 1979				AUG					
22... 1245	266	.0	--	15... 0655	20	17.0	196		
25... 1605	697	.0	258	SEP					
MAR				25... 1115	9.7	14.0	167		
01... 1235	113	.0	177						
APR									
16... 1005	102	5.5	132						
01102000 - IPSWICH RIVER NEAR IPSWICH, MA (LAT 42 39 35 LONG 070 53 39)									
OCT , 1978				MAY , 1979					
30... 1425	9.7	10.0	--	16... 1745	134	18.0	166		
DEC				29... 1335	284	16.5	245		
12... 1330	44	.0	166	JUL					
JAN , 1979				16... 1300	7.9	23.0	195		
26... 0810	1520	.0	315	AUG					
MAR				15... 1335	52	17.5	205		
01... 1545	373	.0	220	SEP					
APR				21... 1425	9.3	17.5	160		
16... 1405	315	4.0	190						
MYSTIC RIVER BASIN									
01102500 - ABERJONA RIVER AT WINCHESTER, MA (LAT 42 26 50 LONG 071 08 22.01)									
OCT , 1978				APR , 1979					
17... 1730	2.8	10.5	455	09... 1155	43	5.5	460		
NOV				MAY					
30... 1630	23	1.5	1130	21... 1240	34	15.0	380		
JAN , 1979				JUL					
17... 1645	47	.0	--	05... 1700	6.1	19.5	615		
26... 1830	696	2.0	215	AUG					
FEB				24... 2015	5.8	21.0	515		
22... 1700	17	2.0	900						

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
CHARLES RIVER BASIN									
01103305 - CHARLES RIVER NEAR MILLIS, MA (LAT 42 07 59 LONG 071 21 46.01)									
OCT , 1978					APR , 1979				
13...	1730	33	14.5	230	06...	1135	290	6.0	135
NOV					MAY				
22...	1145	41	4.5	230	17...	1135	157	17.0	155
JAN , 1979					JUL				
12...	1630	278	.0	115	02...	1440	50	22.5	198
FEB					AUG				
21...	1210	111	.0	160	29...	1220	98	23.0	185
01104000 - MOTHER BROOK AT DEDHAM, MA (LAT 42 15 18 LONG 071 09 53)									
OCT , 1978					APR , 1979				
10...	1525	.88	12.0	325	10...	1700	151	6.0	155
NOV					MAY				
16...	1140	2.7	9.0	300	18...	1220	29	17.0	160
JAN , 1979					JUL				
15...	1630	197	.0	145	09...	1445	5.5	25.5	230
FEB					AUG				
23...	1450	4.7	2.0	375	16...	1235	82	18.5	161
01104200 - CHARLES RIVER AT WELLESLEY, MA (LAT 42 18 59 LONG 071 13 42)									
OCT , 1978					APR , 1979				
16...	1315	141	12.0	240	10...	1300	513	5.5	165
NOV					MAY				
16...	1620	65	8.0	250	18...	1700	314	18.0	180
JAN , 1979					JUL				
16...	1300	797	.0	180	05...	1215	86	21.0	235
FEB					AUG				
23...	1110	287	.0	230	16...	1750	397	19.0	175
01104500 - CHARLES RIVER AT WALTHAM, MA (LAT 42 22 20 LONG 071 14 03)									
OCT , 1978					FEB , 1979				
17...	1145	157	12.0	225	22...	1155	298	1.0	250
NOV					APR				
30...	1220	201	1.0	365	09...	1625	625	5.5	185
DEC					MAY				
06...	1305	257	3.0	365	21...	1650	338	16.5	185
07...	1535	264	3.0	325	JUL				
JAN , 1979					03...	1125	107	24.0	250
17...	1330	739	.0	155	AUG				
27...	1100	2660	1.0	135	24...	1220	192	21.5	176
NEPONSET RIVER BASIN									
01105000 - NEPONSET RIVER AT NORWOOD, MA (LAT 42 10 39 LONG 071 12 05.01)									
OCT , 1978					FEB , 1979				
03...	1145	12	15.5	235	12...	1630	57	.0	205
NOV					MAR				
13...	1100	21	9.0	225	26...	1120	96	11.5	170
DEC					MAY				
28...	1150	45	1.0	225	09...	1155	57	21.0	170
JAN , 1979					JUN				
09...	1130	210	1.5	155	19...	1420	16	24.5	198
15...	1150	188	1.0	160	AUG				
25...	1135	828	1.5	155	13...	1115	133	18.0	172

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
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NEPONSET RIVER BASIN--CONTINUED

01105500 - EAST BRANCH NEPONSET RIVER AT CANTON, MA (LAT 42 09 16 LONG 071 08 47.01)

OCT , 1978					MAR , 1979				
03...	1635	13	14.0	210	26...	1535	72	12.0	155
NOV					28...	1310	56	9.0	155
13...	1640	17	7.0	175	MAY				
DEC					09...	1600	49	24.0	150
28...	1650	63	.5	200	JUN				
JAN , 1979					19...	1805	16	25.0	188
09...	1515	220	1.5	140	AUG				
22...	1520	394	1.0	140	13...	1720	128	17.0	120
FEB									
20...	1740	45	.0	180					

BLACKS CREEK BASIN

01105557 - FURNACE BROOK AT QUINCY, MA (LAT 42 15 28 LONG 071 00 33)

OCT , 1978					MAR , 1979				
06...	1100	5.5	13.5	110	30...	1440	4.3	7.0	365
NOV					MAY				
20...	1340	.86	9.0	300	14...	1315	4.7	14.5	320
DEC					JUL				
01...	1405	1.4	6.0	475	06...	1130	.71	15.0	315
JAN , 1979					AUG				
02...	1325	7.7	8.0	330	20...	1410	6.3	17.5	220
25...	1525	108	3.0	275					
FEB									
16...	1130	3.0	1.5	445					

WEYMOUTH FORE RIVER BASIN

01105585 - TOWN BROOK AT QUINCY, MA (LAT 42 14 52 LONG 070 59 52.01)

OCT , 1978					MAR , 1979				
06...	1550	5.4	13.5	275	30...	1655	11	8.0	470
NOV					MAY				
20...	1635	.91	9.0	455	14...	1620	15	17.0	185
JAN , 1979					JUL				
02...	1630	22	9.0	245	06...	1640	2.8	18.0	455
FEB					AUG				
20...	1220	2.4	4.0	515	20...	1735	3.6	17.0	375

WEYMOUTH BACK RIVER BASIN

01105600 - OLD SWAMP RIVER NEAR SOUTH WEYMOUTH, MA (LAT 42 11 25 LONG 070 56 43)

OCT , 1978					APR , 1979				
05...	1215	.63	13.0	200	02...	1305	6.8	5.0	180
NOV					05...	1035	16	5.5	145
15...	1130	1.1	9.0	200	MAY				
JAN , 1979					11...	1645	3.7	18.0	180
03...	1645	55	1.5	105	JUN				
08...	1625	71	3.5	100	21...	1700	1.5	19.0	215
FEB					AUG				
13...	1210	4.3	.0	115	14...	1225	11	16.0	152

BOUND BROOK BASIN

01105660 - BOUND BROOK NEAR COHASSET, MA (LAT 42 12 44 LONG 070 49 18)

JUL , 1979				
09...	1835	5.8	25.0	--

NORTH RIVER BASIN

01105730 - INDIAN HEAD RIVER AT HANOVER, MA (LAT 42 06 02 LONG 070 49 23)

OCT , 1978					APR , 1979				
04...	1610	3.9	14.0	265	02...	1650	55	6.5	210
NOV					MAY				
14...	1620	13	8.0	265	11...	1130	36	21.5	195
DEC					JUN				
01...	1100	72	2.0	275	21...	1235	20	20.5	215
JAN , 1979					AUG				
04...	1320	204	.5	105	14...	1625	85	18.0	170
08...	1435	320	3.0	175					
FEB									
15...	1140	34	.0	260					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
JONES RIVER BASIN									
01105870 - JONES RIVER AT KINGSTON, MA (LAT 41 59 27 LONG 070 44 03)									
OCT , 1978					MAR , 1979				
04...	1120	7.2	12.0	100	29...	1140	38	6.0	85
NOV					MAY				
14...	1100	10	7.0	90	10...	1155	28	23.0	80
JAN , 1979					JUN				
03...	1050	66	5.5	70	20...	1135	42	18.5	69
FEB					AUG				
13...	1530	32	.0	60	15...	1140	55	18.0	62
HERRING RIVER BASIN									
01105880 - HERRING RIVER AT NORTH HARWICH, MA (LAT 41 42 00 LONG 070 06 27)									
OCT , 1978					MAR , 1979				
05...	1700	4.2	15.0	85	29...	1545	16	7.5	80
NOV					MAY				
15...	1545	2.3	10.0	85	10...	1640	16	19.5	75
JAN , 1979					JUN				
05...	1545	9.5	1.5	90	20...	1735	14	21.5	77
FEB					AUG				
15...	1545	11	1.5	90	15...	1830	2.3	19.5	80
TAUNTON RIVER BASIN									
01106500 - MATFIELD RIVER AT ELMWOOD, MA (LAT 42 00 55 LONG 070 57 42)									
JUL , 1979									
10...	0935	21	19.5	--					
01107400 - FALL BROOK NEAR MIDDLEBORO, MA (LAT 41 51 55 LONG 070 54 32)									
JUL , 1979					AUG , 1979				
10...	1205	5.8	20.0	--	28...	0955	8.6	21.0	--
01108320 - CANOE RIVER NEAR NORTON, MA (LAT 41 58 38 LONG 071 08 40)									
JUL , 1979									
10...	1845	4.5	22.0	--					
01108500 - WADING RIVER AT WEST MANSFIELD, MA (LAT 42 00 00 LONG 071 15 38)									
OCT , 1978					APR , 1979				
11...	1120	3.6	12.0	155	03...	1215	57	8.0	130
NOV					MAY				
17...	1630	3.7	6.0	165	15...	1140	45	17.0	130
JAN , 1979					JUN				
12...	1150	121	.0	27	27...	1740	7.9	20.0	146
24...	1530	219	1.0	150	AUG				
26...	0950	368	1.5	120	23...	1105	12	20.0	145
FEB									
14...	1140	35	.0	150					
01109000 - WADING RIVER NEAR NORTON, MA (LAT 41 56 51 LONG 071 10 38)									
OCT , 1978					APR , 1979				
11...	1605	11	13.0	245	03...	1630	134	8.0	115
NOV					11...	1625	127	8.0	105
17...	1135	9.6	6.0	255	MAY				
JAN , 1979					15...	1620	106	17.0	110
11...	1340	219	.0	70	JUN				
23...	1725	491	.5	105	27...	1230	18	19.0	146
26...	1325	864	2.0	80	AUG				
FEB					23...	1525	45	20.0	128
14...	1525	66	.0	150					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
TAUNTON RIVER BASIN--CONTINUED									
01109060 - THREEMILE RIVER AT NORTH DIGHTON, MA (LAT 41 51 58 LONG 071 07 24)									
OCT , 1978					MAY , 1979				
12...	1200	30	12.0	230	16...	1205	222	18.0	110
NOV					JUN				
21...	1115	52	6.0	185	28...	1230	42	21.0	130
JAN , 1979					JUL				
10...	1650	685	.0	105	11...	1215	35	22.0	--
FEB					AUG				
28...	1555	810	.5	90	21...	1145	120	18.0	120
APR									
04...	1240	267	8.0	110					
01109070 - SEGREGANSET RIVER NEAR DIGHTON, MA (LAT 41 50 25 LONG 071 08 36)									
OCT , 1978					APR , 1979				
12...	1740	2.1	12.0	105	05...	1735	34	7.5	60
NOV					MAY				
21...	1605	7.5	4.5	85	16...	1615	44	18.5	45
JAN , 1979					JUN				
10...	1100	104	.0	55	28...	1915	.88	20.0	80
23...	1230	142	.5	45	AUG				
FEB					21...	1605	6.1	18.0	78
28...	1130	125	1.0	40					
PALMER RIVER BASIN									
01109225 - ROCKY RUN NEAR REHOBOTH, MA (LAT 41 46 52 LONG 071 15 05)									
JUL , 1979					AUG , 1979				
10...	1610	1.5	21.0	--	27...	1445	2.6	21.5	--
BLACKSTONE RIVER BASIN									
01110000 - QUINSIGAMOND RIVER AT NORTH GRAFTON, MA (LAT 42 13 49 LONG 071 42 41)									
OCT , 1978					MAY , 1979				
30...	1100	5.9	10.0	360	17...	1115	40	18.5	335
DEC					JUN				
07...	1115	17	4.0	320	21...	1320	32	20.0	280
JAN , 1979					AUG				
15...	1345	85	.0	280	02...	1215	18	26.0	215
MAR					SEP				
06...	1145	111	.0	320	17...	1015	31	15.0	330
27...	1430	65	9.0	260					
APR									
13...	1030	64	8.0	300					
01110500 - BLACKSTONE RIVER AT NORTHBRIDGE, MA (LAT 42 09 13 LONG 071 39 09)									
OCT , 1978					AUG , 1979				
31...	1520	90	13.0	--	02...	1050	136	27.0	--
MAY , 1979					SEP				
24...	1005	479	15.0	--	20...	1125	152	18.0	--
JUN									
21...	1145	176	23.0	--					
01111200 - WEST RIVER BELOW WEST HILL DAM, NR UXBRIDGE, MA (LAT 42 06 17 LONG 071 36 28)									
NOV , 1978					MAY , 1979				
01...	0915	9.7	7.0	180	24...	0810	60	15.0	95
DEC					JUN				
07...	0830	32	3.0	170	21...	1045	16	18.0	150
JAN , 1979					AUG				
19...	0845	98	.0	70	02...	0945	16	26.0	115
MAR					SEP				
06...	0815	149	.0	78	20...	0945	14	14.0	140
29...	0930	71	6.5	92					
APR									
13...	0900	87	6.0	90					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
BLACKSTONE RIVER BASIN--CONTINUED									
01111300 - NIPMUC RIVER NEAR HARRISVILLE, RI (LAT 41 58 52 LONG 071 41 11)									
OCT , 1978					MAR , 1979				
10...	0820	9.0	7.0	47	21...	0840	43	5.0	38
NOV					JUL				
16...	1015	6.1	7.0	42	18...	0815	4.8	21.0	57
JAN , 1979					AUG				
25...	0900	1770	.5	29	28...	1110	35	21.0	42
01111500 - BRANCH RIVER AT FORESTDALE, RI (LAT 41 59 47 LONG 071 33 47)									
OCT , 1978					APR , 1979				
25...	0920	84	11.0	80	24...	0800	125	12.0	68
NOV					MAY				
07...	0845	43	10.5	80	02...	1030	277	15.5	52
27...	0825	67	2.5	105	29...	0810	411	16.0	50
DEC					JUN				
13...	1315	133	2.0	82	07...	1330	252	20.0	58
JAN , 1979					25...	0800	52	21.0	78
03...	1115	783	2.5	70	JUL				
25...	1100	4050	1.0	53	10...	1100	36	24.0	88
FEB					25...	0840	41	26.5	103
15...	1000	151	.5	65	AUG				
MAR					09...	1200	33	25.5	105
07...	1230	1120	4.0	49	27...	0915	65	24.0	80
27...	0745	242	9.0	48	SEP				
APR					18...	1030	48	20.0	82
04...	1200	327	8.0	67					
01112500 - BLACKSTONE RIVER AT WOONSOCKET, RI (LAT 42 00 22 LONG 071 30 13)									
OCT , 1978					MAR , 1979				
10...	1045	299	12.0	178	21...	1045	1040	7.0	157
JAN , 1979									
02...	0740	979	5.5	250					
MOSHASSUCK RIVER BASIN									
01114000 - MOSHASSUCK RIVER AT PROVIDENCE, RI (LAT 41 50 02 LONG 071 24 42)									
OCT , 1978					MAY , 1979				
20...	1245	18	13.5	240	17...	0935	43	17.5	240
DEC					JUL				
04...	1245	34	6.0	370	02...	1045	23	21.0	295
FEB , 1979					AUG				
05...	1305	50	2.0	225	17...	1115	27	18.5	250
MAR									
22...	0945	45	8.0	250					
WOONASQUATUCKET RIVER BASIN									
01114500 - WOONASQUATUCKET RIVER AT CENTERDALE, RI (LAT 41 51 32 LONG 071 29 16)									
OCT , 1978					MAY , 1979				
20...	1015	21	12.0	115	17...	0740	86	17.5	113
DEC					JUL				
04...	1030	34	4.5	168	02...	0750	28	21.0	130
MAR , 1979					AUG				
22...	0745	105	5.5	103	17...	0740	31	18.0	137

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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PAWTUXET RIVER BASIN									
01115630 - NOOSENECK RIVER AT NOOSENECK, RI (LAT 41 37 36 LONG 071 37 59)									
OCT , 1978					MAY , 1979				
05...	1520	7.1	14.0	92	17...	1245	25	16.0	65
NOV					JUN				
14...	1400	4.1	6.0	142	27...	1030	9.6	15.5	83
DEC					AUG				
29...	1055	15	.0	85	15...	1245	35	16.5	50
MAR , 1979									
23...	1355	25	10.5	62					
01115770 - CARR RIVER NEAR NOOSENECK, RI (LAT 41 38 35 LONG 071 36 30)									
OCT , 1978					MAY , 1979				
19...	1355	3.6	10.5	83	21...	1140	17	16.5	52
DEC					JUL				
01...	1320	11	3.5	40	02...	1310	6.2	22.0	90
MAR , 1979					AUG				
22...	1230	27	8.0	50	15...	1445	24	18.5	88
01116000 - SOUTH BRANCH PAWTUXET RIVER AT WASHINGTON, RI (LAT 41 41 24 LONG 071 33 59)									
OCT , 1978					MAY , 1979				
10...	1320	49	12.5	72	21...	1315	159	18.0	67
NOV					JUL				
17...	1105	103	8.0	116	19...	1315	56	25.5	84
DEC					AUG				
29...	0815	82	.5	74	31...	0710	75	23.5	70
MAR , 1979									
30...	1025	322	9.5	65					
PAWCATUCK RIVER BASIN									
01117468 - BEAVER RIVER NEAR USQUEPAUG, RI (LAT 41 29 33 LONG 071 37 43.01)									
OCT , 1978					MAR , 1979				
05...	1220	5.0	12.5	42	28...	1020	27	6.0	43
NOV					MAY				
17...	0800	4.2	4.5	55	22...	1315	30	15.0	42
DEC									
29...	1500	20	.5	55					
01117500 - PAWCATUCK RIVER AT WOOD RIVER JUNCTION, RI (LAT 41 26 42 LONG 071 40 53)									
OCT , 1978					MAR , 1979				
17...	1350	71	9.5	73	29...	0815	262	7.0	63
NOV									
14...	0720	56	7.5	102					
01117800 - WOOD RIVER NEAR ARCADIA, RI (LAT 41 34 26 LONG 071 43 16)									
OCT , 1978					MAY , 1979				
05...	1410	26	13.5	36	23...	1210	79	14.0	35
NOV					JUN				
13...	0800	20	4.5	41	27...	0815	44	12.5	34
17...	0950	19	4.5	73	AUG				
DEC					17...	1420	76	17.0	35
29...	1300	72	1.0	43					
MAR , 1979									
28...	1245	102	8.0	37					
01118000 - WOOD RIVER AT HOPE VALLEY, RI (LAT 41 29 53 LONG 071 43 01)									
NOV , 1978									
13...	1620	39	8.0	75					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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PAWCATUCK RIVER BASIN--CONTINUED									
01118500 - PAWCATUCK RIVER AT WESTERLY, RI (LAT 41 23 01 LONG 071 50 01)									
OCT , 1978					APR , 1979				
19...	1300	159	11.0	122	04...	0830	873	8.0	72
24...	0905	155	10.5	105	11...	1330	805	8.0	80
NOV					MAY				
08...	1500	178	10.0	106	03...	0815	933	15.0	67
14...	1055	171	8.0	126	08...	1045	685	16.0	72
29...	1250	299	2.5	92	23...	0805	768	16.5	70
DEC					JUN				
13...	1320	641	1.0	80	06...	0815	1340	17.2	59
14...	1030	730	2.0	78	13...	1235	613	19.5	72
JAN , 1979					JUL				
10...	0830	2240	1.0	64	11...	0800	212	19.5	83
10...	1420	2190	.5	76	18...	1220	191	25.0	80
FEB					19...	1005	186	24.5	92
15...	1100	627	.0	85	AUG				
16...	0800	693	.5	87	08...	0930	376	23.0	88
MAR					29...	0740	268	22.0	--
09...	1105	2240	6.0	58	SEP				
14...	0900	1460	4.0	58	19...	1015	263	20.0	94
30...	0845	715	8.0	75					
THAMES RIVER BASIN									
01123200 - STEVENS BROOK AT HOLLAND, MA (LAT 42 03 41 LONG 072 09 45)									
JUN , 1979									
26...	0655	1.2	10.0	--					
01123360 - QUINEBAUG R BL E BRIMSFIELD DAM AT FISKDALE, MA (LAT 42 06 31 LONG 072 07 27)									
OCT , 1978					MAY , 1979				
25...	1415	28	10.0	80	21...	1430	114	20.0	82
DEC					JUN				
05...	1545	84	3.5	100	25...	1445	27	20.0	80
JAN , 1979					AUG				
17...	1300	253	.0	80	06...	1615	27	27.0	88
FEB					SEP				
28...	1515	399	.0	85	27...	1330	91	17.0	75
APR									
11...	1415	244	7.0	90					
01123600 - QUINEBAUG R BL WESTVILLE DAM NR SOUTHBRIDGE, MA (LAT 42 04 58 LONG 072 03 27)									
OCT , 1978					APR , 1979				
31...	0915	48	12.0	120	09...	1515	239	7.0	90
DEC					MAY				
06...	1000	111	1.5	110	21...	1445	148	18.5	105
JAN , 1979					JUN				
17...	1500	336	.0	110	25...	1600	41	22.0	115
MAR					AUG				
01...	1030	239	.0	90	06...	1330	38	26.0	120
01124350 - FRENCH RIVER BELOW DAM, AT HODGES VILLAGE, MA (LAT 42 07 06 LONG 071 52 54)									
OCT , 1978					APR , 1979				
31...	1400	7.4	13.0	150	12...	1415	113	10.0	105
DEC					24...	1130	52	14.0	120
06...	1400	38	3.0	90	MAY				
JAN , 1979					23...	1615	34	16.0	105
18...	1430	76	.0	110	JUN				
MAR					27...	1230	26	20.0	120
05...	1315	111	3.0	150					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
THAMES RIVER BASIN--CONTINUED									
01124500 - LITTLE RIVER NEAR OXFORD, MA (LAT 42 06 57 LONG 071 53 26)									
OCT , 1978					MAY , 1979				
31...	1215	37	12.0	85	23...	1500	37	19.0	85
DEC					JUN				
06...	1245	37	5.0	85	27...	1145	9.1	20.0	75
JAN , 1979					AUG				
18...	1245	153	.0	85	08...	1430	6.2	22.0	75
MAR					SEP				
05...	1145	113	.0	130	18...	1310	13	21.0	95
APR									
12...	1245	110	8.0	115					
01125000 - FRENCH RIVER AT WEBSTER, MA (LAT 42 03 03 LONG 071 53 08)									
OCT , 1978					APR , 1979				
26...	1015	29	13.0	125	12...	1100	308	8.0	120
NOV					MAY				
08...	1030	35	9.5	115	23...	1315	109	19.0	105
DEC					JUN				
06...	1520	116	7.0	170	27...	0930	36	20.0	105
JAN , 1979					AUG				
18...	1045	.45	.0	130	08...	1300	28	26.0	100
26...	1230	672	2.0	--					
MAR									
05...	1500	328	5.0	140					
CONNECTICUT RIVER BASIN									
01161500 - TARBELL BROOK NEAR WINCHENDON, MA (LAT 42 42 45 LONG 072 05 09)									
OCT , 1978					APR , 1979				
03...	0905	1.7	11.5	62	24...	1018	47	10.5	46
NOV					JUN				
14...	0725	2.1	6.0	67	12...	0603	15	19.0	43
DEC					JUL				
20...	0700	6.1	.0	67	31...	0604	4.3	24.0	54
JAN , 1979					AUG				
31...	1200	56	1.0	59	30...	0635	10	19.0	57
MAR									
13...	0700	208	.0	52					
01162000 - MILLERS RIVER NEAR WINCHENDON, MA (LAT 42 41 03 LONG 072 05 02)									
OCT , 1978					APR , 1979				
03...	1130	73	13.0	54	11...	0755	310	2.0	57
18...	0935	63	6.5	54	24...	0605	202	9.5	54
NOV					JUN				
14...	1100	13	6.0	71	12...	1010	87	18.5	52
DEC					JUL				
19...	1255	63	.0	92	30...	1405	42	26.0	62
JAN , 1979					AUG				
31...	0630	272	.0	72	30...	1245	145	20.5	58
MAR									
19...	1440	377	4.0	53					
01162500 - PRIEST BROOK NEAR WINCHENDON, MA (LAT 42 40 57 LONG 072 06 56)									
OCT , 1978					MAR , 1979				
03...	1430	1.1	13.5	39	12...	1450	318	.0	44
18...	1020	2.5	5.0	45	APR				
NOV					23...	1310	43	10.5	42
13...	1400	2.8	4.5	80	JUN				
DEC					04...	1420	35	18.0	35
18...	1253	9.2	.0	82	JUL				
JAN , 1979					30...	0850	2.6	22.0	31
04...	0625	94	.0	68	AUG				
30...	1141	70	.0	54	29...	1105	10	20.5	39

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CONNECTICUT RIVER BASIN--CONTINUED									
01162900 - OTTER RIVER AT GARDNER, MA (LAT 42 33 52 LONG 072 00 43)									
JUN , 1979					SEP , 1979				
04...	1225	33	20.0	--	10...	1030	30	16.5	--
JUL					13...	1250	11	17.0	--
31...	1130	22	25.5	--					
01163200 - OTTER RIVER AT OTTER RIVER, MA (LAT 42 35 18 LONG 072 02 29)									
OCT , 1978					APR , 1979				
12...	0955	16	11.0	200	23...	0815	66	10.0	124
NOV					MAY				
13...	1030	9.2	5.5	190	09...	0750	60	17.0	130
DEC					JUN				
18...	0825	27	.0	255	04...	0842	55	18.0	104
19...	0855	22	.0	250	JUL				
JAN , 1979					16...	0915	8.1	21.5	194
30...	0620	177	.0	140	AUG				
MAR					29...	0620	27	22.0	129
12...	0820	342	.0	66					
01164000 - MILLERS RIVER AT SOUTH ROYALSTON, MA (LAT 42 37 47 LONG 072 09 03)									
OCT , 1978					MAR , 1979				
11...	0725	104	10.0	142	13...	1315	2070	.5	55
18...	0820	115	6.0	138	APR				
NOV					24...	1440	446	12.0	92
15...	0630	44	6.0	163	JUN				
DEC					13...	0535	187	17.0	96
20...	1600	123	.0	167	JUL				
JAN , 1979					31...	1300	121	26.0	132
31...	1642	778	.5	104	AUG				
FEB					31...	0635	403	21.0	87
02...	1100	480	.0	102					
01165000 - EAST BRANCH TULLY RIVER NEAR ATHOL, MA (LAT 42 38 32 LONG 072 13 34)									
OCT , 1978					MAR , 1979				
10...	1055	4.1	11.5	41	13...	1515	469	1.0	30
18...	0700	4.4	10.0	40	APR				
NOV					25...	0955	88	12.0	35
15...	1245	5.2	8.0	46	JUN				
DEC					07...	1125	88	20.0	33
20...	1204	35	3.0	51	AUG				
FEB , 1979					01...	0545	4.4	19.5	37
01...	0620	247	.5	44	27...	1005	8.7	19.0	48
01165300 - LAKE ROHUNTA OUTLET NEAR ATHOL, MA (LAT 42 34 13 LONG 072 16 22)									
OCT , 1978					MAR , 1979				
11...	1345	15	13.0	53	14...	1615	141	1.0	43
12...	0645	14	12.0	51	APR				
17...	1700	11	9.5	67	25...	1352	45	15.0	64
NOV					JUN				
16...	1350	5.1	8.0	69	07...	0530	2.4	20.0	63
DEC					JUL				
21...	0630	19	3.0	--	17...	0545	6.0	22.5	70
FEB , 1979					SEP				
01...	1520	83	.5	76	05...	0545	14	23.0	58
02...	0600	76	.5	76					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
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CONNECTICUT RIVER BASIN--CONTINUED

01165500 - MOSS BROOK AT WENDELL DEPOT, MA (LAT 42 36 10 LONG 072 21 36)

OCT , 1978					MAR , 1979				
05...	1225	2.0	11.0	34	20...	0605	32	.5	28
NOV					APR				
17...	1258	1.1	2.5	50	27...	0550	34	11.0	33
DEC					JUN				
22...	1210	7.7	.0	47	11...	1109	11	17.0	30
27...	0709	4.6	.0	46	JUL				
JAN , 1979					19...	0605	16	18.0	35
29...	1638	58	.0	33	SEP				
FEB					10...	1255	9.5	13.5	28
05...	1545	21	.0	37					

01166100 - WHETSTONE BROOK AT WENDELL DEPOT, MA (LAT 42 35 22 LONG 072 21 31)

JUN , 1979					SEP , 1979				
11...	1025	5.6	15.5	--	10...	1220	4.1	12.0	--
AUG					13...	0745	2.8	11.0	--
01...	1135	2.2	20.0	--					

01166500 - MILLERS RIVER AT ERVING, MA (LAT 42 35 51 LONG 072 26 19)

OCT , 1978					APR , 1979				
05...	0835	136	12.5	235	11...	0910	1490	3.5	79
17...	1555	203	9.0	130	30...	0835	2720	14.0	55
NOV					JUN				
20...	1215	116	6.0	177	13...	0950	380	17.0	87
DEC					AUG				
27...	1200	220	.0	175	01...	1230	177	28.0	141
FEB , 1979					28...	1235	329	24.5	103
06...	1355	647	.0	88					
MAR									
20...	1150	3350	2.0	57					

01168151 - DEERFIELD RIVER NEAR ROWE, MA (LAT 42 40 57 LONG 072 58 37.01)

OCT , 1978					MAY , 1979				
03...	1420	999	20.0	47	01...	0925	1070	9.0	33
NOV					JUN				
14...	1410	982	10.0	45	12...	0930	1150	15.0	--
15...	1500	82	9.0	--	JUL				
DEC					10...	1020	92	22.0	38
19...	1040	1020	2.0	40	31...	1130	94	25.0	--
FEB , 1979					SEP				
07...	1015	976	2.0	--	11...	1400	1010	18.0	33
MAR									
29...	1015	1790	4.0	38					

01168500 - DEERFIELD RIVER AT CHARLEMONT, MA (LAT 42 37 33 LONG 072 51 20)

OCT , 1978					MAR , 1979				
03...	1550	982	18.0	50	29...	1220	2380	4.0	42
NOV					MAY				
16...	0905	151	7.0	60	01...	1415	1410	12.0	37
DEC					JUN				
19...	1145	1240	.0	45	07...	1240	1110	16.0	45
FEB , 1979					JUL				
07...	1215	730	.0	61	31...	1510	141	26.0	52
22...	1200	825	3.0	--					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
CONNECTICUT RIVER BASIN--CONTINUED									
01169000 - NORTH RIVER AT SHATTUCKVILLE, MA (LAT 42 38 18 LONG 072 43 32)									
OCT , 1978					APR , 1979				
05...	1300	35	14.0	160	30...	1035	576	9.0	52
NOV					JUN				
14...	0945	30	7.0	167	11...	1050	134	17.0	108
DEC					JUL				
18...	1320	40	.0	117	30...	1025	50	23.0	130
FEB , 1979					SEP				
06...	1400	98	.0	--	10...	1620	61	17.0	102
MAR									
01...	1200	154	2.0	108					
28...	0955	511	1.0	64					
01169900 - SOUTH RIVER NEAR CONWAY, MA (LAT 42 32 31 LONG 072 41 39)									
OCT , 1978					MAY , 1979				
17...	1240	8.4	6.0	143	01...	0800	106	9.0	96
NOV					10...	1337	51	19.5	113
21...	0930	9.7	2.5	141	JUN				
DEC					14...	1325	38	16.5	110
28...	1000	16	.0	142	JUL				
FEB , 1979					27...	0610	26	20.5	134
07...	1400	32	.0	114	SEP				
MAR					11...	1235	13	16.5	142
21...	0945	105	3.0	88					
01170000 - DEERFIELD RIVER NEAR WEST DEERFIELD, MA (LAT 42 32 09 LONG 072 39 14)									
NOV , 1978					APR , 1979				
21...	0705	993	4.5	77	30...	1545	4210	12.0	65
DEC					JUN				
28...	0745	718	.0	73	14...	0612	1270	13.5	78
FEB , 1979					JUL				
07...	0730	883	.0	90	25...	1300	678	26.0	87
MAR					SEP				
21...	0630	2450	3.0	76	11...	0955	780	18.0	73
01170100 - GREEN RIVER NEAR COLRAIN, MA (LAT 42 42 12 LONG 072 40 16)									
OCT , 1978					APR , 1979				
05...	1420	17	13.0	112	30...	1350	262	12.0	53
NOV					JUN				
13...	1325	14	4.0	90	11...	1355	59	17.0	99
30...	1300	20	1.0	--	JUL				
DEC					30...	1315	19	25.0	88
18...	1210	22	.0	70	SEP				
MAR , 1979					10...	1415	24	15.0	77
01...	1250	70	.0	83					
28...	1350	288	4.0	61					
01170500 - CONNECTICUT RIVER AT MONTAGUE CITY, MA (LAT 42 34 48 LONG 072 34 30)									
OCT , 1978					APR , 1979				
04...	1635	4490	16.0	108	26...	1025	33600	9.5	72
NOV					JUN				
20...	1350	8980	9.0	126	13...	1525	12500	19.0	98
DEC					JUL				
27...	1500	7790	2.0	114	25...	0645	456	25.0	96
FEB , 1979					SEP				
06...	1545	14100	1.0	117	11...	0635	1260	19.0	75
MAR									
21...	1425	33000	1.5	80					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
CONNECTICUT RIVER BASIN--CONTINUED									
01171300 - FORT RIVER NEAR AMHERST, MA (LAT 42 21 28 LONG 072 30 17)									
OCT , 1978					MAR , 1979				
16...	1530	8.7	8.5	112	22...	1355	80	7.0	69
NOV					MAY				
22...	0702	9.2	2.5	128	02...	0930	90	9.5	66
DEC					JUN				
29...	1215	13	.0	130	19...	0625	20	20.0	101
JAN , 1979					AUG				
02...	1030	225	.5	80	02...	1240	91	23.0	106
05...	0645	59	.0	94	SEP				
FEB					07...	0625	80	19.0	71
08...	1245	39	.5	78					
01171500 - MILL RIVER AT NORTHAMPTON, MA (LAT 42 19 05 LONG 072 39 21)									
OCT , 1978					MAY , 1979				
17...	0805	16	7.0	108	01...	1540	208	14.0	66
NOV					JUN				
21...	1330	16	4.5	119	15...	0625	62	15.0	82
DEC					JUL				
29...	0645	20	.0	114	24...	1600	23	23.5	106
FEB , 1979					SEP				
08...	0700	74	.0	81	12...	0710	28	14.0	98
MAR									
22...	0630	285	2.0	50					
01172500 - WARE RIVER NEAR BARRE, MA (LAT 42 25 35 LONG 072 01 30)									
OCT , 1978					MAY , 1979				
04...	0900	3.6	10.5	61	04...	0610	169	12.0	50
NOV					JUN				
28...	0720	14	.0	66	18...	1125	18	23.0	57
JAN , 1979					AUG				
05...	1225	401	.0	64	06...	0930	36	22.5	50
FEB					SEP				
09...	1020	77	.0	53	04...	0915	95	19.5	50
MAR									
27...	0950	323	4.0	38					
01173000 - WARE RIVER AT INTAKE WORKS NEAR BARRE, MA (LAT 42 23 26 LONG 072 03 39)									
JUN , 1979					SEP , 1979				
20...	1113	44	20.5	--	04...	1730	136	21.0	--
JUL									
26...	1310	65	24.0	--					
01173050 - PLEASANT BROOK AT BARRE, MA (LAT 42 25 10 LONG 072 05 22)									
JUN , 1979					SEP , 1979				
18...	1035	.53	16.5	--	13...	0950	1.9	11.0	--
AUG									
06...	1535	.76	19.5	--					
01173500 - WARE RIVER AT GIBBS CROSSING, MA (LAT 42 14 07 LONG 072 16 45)									
OCT , 1978					APR , 1979				
25...	1045	58	9.0	100	25...	1015	338	16.0	85
DEC					MAY				
05...	1215	192	3.0	97	22...	1115	236	18.0	140
12...	1015	265	.0	--	JUN				
JAN , 1979					26...	0915	62	19.0	95
16...	0915	400	.0	95	AUG				
FEB					07...	1030	101	22.0	67
28...	1130	340	.0	135	SEP				
MAR					26...	0955	343	14.0	58
28...	1045	412	7.5	90					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM-FLOW, INSTANTANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
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CONNECTICUT RIVER BASIN--CONTINUED

01174000 - HOP BROOK NEAR NEW SALEM, MA (LAT 42 28 42 LONG 072 20 05)

OCT , 1978					APR , 1979				
04...	1330	.33	9.5	81	26...	1500	8.8	12.5	62
NOV					JUN				
17...	0635	.59	1.0	77	08...	0622	3.5	15.0	55
DEC					AUG				
22...	0700	2.7	.0	100	02...	0640	4.5	20.0	63
FEB , 1979					SEP				
05...	1000	5.6	.0	68	05...	1000	1.3	18.0	73
MAR									
16...	0640	14	.0	56					

01174500 - EAST BRANCH SWIFT RIVER NEAR HARDWICK, MA (LAT 42 23 36 LONG 072 14 21)

OCT , 1978					MAY , 1979				
12...	1430	14	13.0	44	02...	1515	141	17.5	46
NOV					JUN				
22...	1315	12	6.0	44	20...	0615	15	--	42
30...	1430	22	3.0	46	AUG				
JAN , 1979					03...	0710	32	26.0	44
04...	1445	243	3.0	--	SEP				
FEB					05...	1445	36	24.0	42
09...	0650	58	.0	50					
MAR									
27...	0655	137	4.0	35					

01174600 - CADWELL CREEK NEAR PELHAM, MA (LAT 42 21 16 LONG 072 23 18)

NOV , 1978					JUN , 1979				
27...	1015	.14	.0	76	19...	1530	.08	23.0	46
JAN , 1979					JUL				
03...	1200	6.2	1.0	76	18...	1130	.12	20.5	49
FEB					AUG				
06...	1020	.78	.0	58	07...	1235	.01	17.0	50
MAR					SEP				
26...	1210	1.3	9.0	78	06...	1120	.51	19.5	67
MAY									
03...	1046	1.3	11.0	64					

01174900 - CADWELL CREEK NEAR BELCHERTOWN, MA (LAT 42 20 08 LONG 072 22 12)

OCT , 1978					MAY , 1979				
12...	1800	.47	10.5	42	03...	0625	6.7	8.0	35
NOV					JUN				
27...	1355	.94	.0	41	19...	1230	.87	15.0	29
JAN , 1979					AUG				
03...	0730	34	1.5	41	07...	0730	.21	15.5	34
FEB					SEP				
06...	0800	2.6	.0	43	06...	1015	.63	19.0	45
MAR									
23...	0650	5.4	3.0	37					

01175500 - SWIFT RIVER AT WEST WARE, MA (LAT 42 16 04 LONG 072 19 59)

OCT , 1978					APR , 1979				
16...	1445	118	10.5	--	10...	1315	418	4.0	50
DEC					MAY				
05...	1000	110	2.0	40	22...	1315	130	15.5	41
JAN , 1979					JUN				
16...	1015	113	.0	40	26...	1100	113	10.0	38
FEB					AUG				
28...	0915	106	2.0	35	07...	1115	112	12.0	33
MAR					SEP				
21...	1850	310	9.0	--	27...	0945	118	13.0	38

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
CONNECTICUT RIVER BASIN--CONTINUED									
01175670 - SEVENMILE RIVER NEAR SPENCER, MA (LAT 42 15 54 LONG 072 00 19)									
OCT , 1978					MAY , 1979				
30...	1500	2.8	9.5	57	21...	1230	9.8	15.5	55
DEC					JUN				
11...	1400	11	.0	60	25...	1215	1.5	20.0	52
JAN , 1979					AUG				
15...	1615	35	.0	40	06...	1130	4.8	23.0	48
MAR					29...	1045	22	18.0	--
01...	1400	20	.0	40	SEP				
28...	1230	22	8.0	50	19...	1105	5.7	16.0	48
APR									
25...	1315	16	14.0	55					
01176000 - QUABOAG RIVER AT WEST BRIMFIELD, MA (LAT 42 10 56 LONG 072 15 51)									
OCT , 1978					MAY , 1979				
25...	1215	62	10.0	125	22...	0915	198	17.0	85
DEC					JUN				
05...	1345	118	3.0	65	26...	0745	50	18.0	135
12...	1115	210	.0	--	AUG				
JAN , 1979					07...	0845	91	24.0	85
16...	0745	651	.0	70	SEP				
FEB					25...	1245	180	14.0	90
28...	1345	642	.0	85					
APR									
10...	1000	501	4.0	75					
01177000 - CHICOPEE RIVER AT INDIAN ORCHARD, MA (LAT 42 09 38 LONG 072 30 52)									
OCT , 1978					MAY , 1979				
24...	1500	116	10.0	--	23...	0930	118	17.0	92
DEC					JUN				
04...	1300	116	1.0	150	26...	1300	159	20.0	110
JAN , 1979					AUG				
16...	1400	1470	.0	100	08...	1030	302	25.0	90
FEB					SEP				
27...	1530	1660	.0	100	25...	1000	1260	15.0	72
APR									
10...	1600	2300	6.0	75					
01179500 - WESTFIELD RIVER AT KNIGHTVILLE, MA (LAT 42 17 16 LONG 072 51 53)									
NOV , 1978					MAY , 1979				
27...	1350	49	.0	77	08...	0820	362	12.0	51
JAN , 1979					JUN				
16...	0825	208	.0	64	14...	1050	163	13.0	64
24...	0915	472	.0	--	JUL				
FEB					24...	1245	72	24.0	72
14...	1245	171	.0	64	SEP				
APR					10...	1325	198	17.0	--
05...	1445	1340	4.0	40					
01180500 - MIDDLE B WESTFIELD RIVER AT GOSS HEIGHTS, MA (LAT 42 15 31 LONG 072 52 23)									
NOV , 1978					JUN , 1979				
27...	1515	22	1.0	47	14...	1220	56	18.0	48
JAN , 1979					AUG				
16...	1045	90	1.0	40	02...	1455	19	28.0	47
FEB					SEP				
14...	1110	61	.0	50	10...	1120	89	20.0	--
MAY									
07...	1115	134	12.0	40					

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
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CONNECTICUT RIVER BASIN--CONTINUED

01181000 - WEST BRANCH WESTFIELD RIVER AT HUNTINGTON, MA (LAT 42 14 14 LONG 072 53 46)

OCT , 1978					APR , 1979				
25...	1325	22	10.0	--	18...	1125	430	6.0	53
NOV					MAY				
21...	1330	33	4.0	52	23...	1015	105	13.0	77
DEC					JUN				
21...	1345	76	.0	64	21...	1235	34	21.0	95
JAN , 1979					JUL				
24...	1045	239	.0	--	24...	0930	31	22.0	--
FEB					AUG				
21...	1330	78	1.0	--	22...	1135	36	20.0	--
MAR					SEP				
22...	1000	577	8.0	60	20...	0815	38	10.0	78

01183450 - GREAT BROOK NEAR WESTFIELD, MA (LAT 42 05 18 LONG 072 43 24)

OCT , 1978					MAY , 1979				
24...	1000	11	7.5	200	22...	1630	26	18.5	190
DEC					JUN				
04...	1615	13	3.0	220	26...	1610	11	20.0	210
JAN , 1979					AUG				
16...	1615	36	.0	80	07...	1545	7.2	22.0	180
FEB					28...	1530	11	19.0	160
27...	1200	38	.0	75	SEP				
APR					24...	1630	13	13.0	175
11...	1030	74	7.0	150					

01183500 - WESTFIELD RIVER NEAR WESTFIELD, MA (LAT 42 06 24 LONG 072 41 58)

OCT , 1978					APR , 1979				
24...	1210	218	10.0	154	11...	1140	1850	6.5	100
DEC					MAY				
04...	1445	227	2.0	150	23...	0830	622	16.0	95
JAN , 1979					JUN				
16...	1640	754	.0	100	26...	1500	244	19.0	130
FEB					AUG				
27...	1240	2120	.0	100	07...	1430	182	27.0	120

01185100 - FALL RIVER BELOW OTIS RESERVOIR, NEAR OTIS, MA (LAT 42 09 42 LONG 073 03 48)

OCT , 1978					APR , 1979				
04...	1040	2.0	12.0	67	10...	1140	4.6	4.0	61
NOV					MAY				
28...	1550	82	3.0	62	08...	1110	2.7	14.0	68
JAN , 1979					JUN				
11...	1010	94	2.0	67	13...	1005	104	16.0	69
15...	1230	97	1.0	--	JUL				
FEB					12...	1535	2.3	20.0	65
13...	1515	5.6	2.0	73					

01185500 - WEST BRANCH FARMINGTON RIVER NEAR NEW BOSTON, MA (LAT 42 04 45 LONG 073 04 24)

OCT , 1978					MAY , 1979				
04...	0945	16	10.0	98	07...	1455	161	16.0	73
NOV					JUN				
28...	1115	115	2.0	75	13...	1415	178	17.0	85
JAN , 1979					AUG				
15...	1455	247	.0	81	02...	0900	27	24.0	100
FEB					SEP				
14...	0900	110	.0	86	11...	0905	82	16.0	--
APR									
09...	1150	202	2.0	50					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS

WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
HOUSATONIC RIVER BASIN									
01197000 - EAST BRANCH HOUSATONIC RIVER AT COLTSVILLE, MA (LAT 42 28 10 LONG 073 11 49)									
OCT , 1978					JUN , 1979				
04...	1400	30	15.0	275	19...	1400	37	22.0	280
NOV					JUL				
29...	1415	27	7.0	520	19...	1145	33	20.0	250
JAN , 1979					SEP				
10...	1300	253	1.0	110	13...	1340	44	18.0	190
APR									
04...	1300	250	4.0	97					
01197500 - HOUSATONIC RIVER NEAR GREAT BARRINGTON, MA (LAT 42 13 55 LONG 073 21 19)									
OCT , 1978					MAY , 1979				
04...	1250	173	14.0	350	03...	1225	824	13.0	215
NOV					JUN				
29...	1045	253	2.0	370	12...	1410	569	17.0	295
JAN , 1979					JUL				
10...	1525	1760	1.0	155	18...	1215	348	24.0	300
APR									
05...	0920	1260	5.0	185					
HUDSON RIVER BASIN									
01331360 - KITCHEN BROOK AT CHESHIRE, MA (LAT 42 33 31 LONG 073 10 04)									
SEP , 1979									
24...	1645	7.4	10.5	--					
01331500 - HOOSIC RIVER AT ADAMS, MA (LAT 42 36 40 LONG 073 07 28)									
OCT , 1978					APR , 1979				
04...	1445	18	12.0	260	03...	0840	298	4.0	122
NOV					MAY				
29...	1450	33	3.0	250	03...	0855	112	10.0	140
JAN , 1979					JUN				
10...	0940	216	.0	122	07...	1025	57	16.0	195
FEB					SEP				
12...	1230	60	.0	195	13...	1115	40	15.0	200
MAR									
08...	0945	586	1.0	109					
01332000 - NORTH BRANCH HOOSIC RIVER AT NORTH ADAMS, MA (LAT 42 42 08 LONG 073 05 37)									
OCT , 1978					MAY , 1979				
05...	1110	19	11.0	163	02...	1450	132	12.0	56
NOV					JUN				
30...	0930	26	1.0	95	06...	1500	48	19.0	100
DEC					JUL				
19...	1415	41	.0	85	25...	1400	34	22.0	93
APR , 1979					SEP				
03...	1135	458	4.0	50	12...	1545	42	17.0	85
01332500 - HOOSIC RIVER NEAR WILLIAMSTOWN, MA (LAT 42 42 21 LONG 073 10 50)									
OCT , 1978					MAY , 1979				
05...	1035	77	13.0	405	02...	1630	365	12.0	--
NOV					15...	1520	167	18.5	240
16...	1310	81	8.0	365	JUN				
MAR , 1979					06...	1310	190	19.0	232
07...	1450	2490	2.0	100					
APR									
03...	1410	1000	5.0	111					

MISCELLANEOUS TEMPERATURE AND SPECIFIC CONDUCTANCE MEASUREMENTS
WATER-QUALITY DATA, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

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DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	DATE	TIME	STREAM- FLOW, INSTAN- TANEOUS (CFS)	TEMPER- ATURE (DEG C)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)
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HUDSON RIVER BASIN--CONTINUED

01333000 - GREEN RIVER AT WILLIAMSTOWN, MA (LAT 42 42 32 LONG 073 11 50)

OCT , 1978					APR , 1979				
05...	1000	17	12.0	223	03...	1630	216	--	130
NOV					MAY				
16...	1505	20	7.0	167	02...	1210	150	10.0	136
DEC					16...	0815	61	12.5	160
19...	1510	47	.0	118	JUN				
FEB , 1979					05...	1335	74	18.0	178
07...	1445	65	.0	120	JUL				
MAR					26...	0840	14	22.0	205
08...	1300	573	2.0	110					

01333100 - HEMLOCK BROOK NEAR WILLIAMSTOWN, MA (LAT 42 41 16 LONG 073 13 50)

SEP , 1979				
19...	1645	2.1	14.0	--

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BARNSTABLE COUNTY

413956070164301. Local number, AIW 230.

LOCATION.--Lat 41°39'56", long 70°16'43", Hydrologic Unit 01090002, 50 ft (15 m) west of Mary Dunn Road at Hyannis Airport and 0.3 mi (0.5 km) north of intersection of Willow Street and State Highway 28 in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 35.8 ft (10.9 m), screened 32.8 to 35.8 ft (10.0 to 10.9 m).

DATUM.--Land-surface datum is 43.23 ft (13.18 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land surface datum.

PERIOD OF RECORD.--January 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.05 ft (6.42 m) below land-surface datum, May 12, 1973; lowest, 26.22 ft (7.99 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1978	23.74	JAN 24, 1979	22.80	APR 27, 1979	21.84	JUL 27, 1979	22.75
NOV 29	24.12	FEB 27	22.43	MAY 25	21.79	AUG 28	23.37
DEC 28	23.90	MAR 28	22.06	JUN 27	21.94	SEP 25	23.69

414154070165001. Local number, AIW 247.

LOCATION.--Lat 41°41'54", long 70°16'50", Hydrologic Unit 01090002, 30 ft (9.1 m) east of Mary Dunn Road and 0.2 mi (0.33 km) south of State Highway 6A in Barnstable.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 52 ft (15.8 m), screened 49 to 52 ft (14.9 to 15.8 m).

DATUM.--Land-surface datum is 44.52 ft (13.57 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft (6.39 m) below land-surface datum, May 25, 1973; lowest measured, 28.64 ft (8.73 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	23.30	JAN 25, 1979	23.70	APR 27, 1979	22.24	JUL 27, 1979	22.27
NOV 26	24.20	FEB 23	23.10	MAY 30	21.90	AUG 27	22.87
DEC 28	24.10	MAR 28	22.50	JUN 27	21.73	SEP 27	23.48

414129070361401. Local number, BHW 198.

LOCATION.--Lat 41°41'29", long 70°36'14", Hydrologic Unit 01090002, 50 ft (15.2 m) west of County Road and 0.3 mi (0.48 km) south of Pocasset Road in Bourne.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 50 ft (15.2 m), screened 47 to 50 ft (14.3 to 15.2 m).

DATUM.--Land-surface datum is 55.56 ft (16.93 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 5.0 ft (1.5 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.43 ft (9.28 m) below land-surface datum, Dec. 27, 1972; lowest measured, 36.17 ft (11.02 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1978 TO AUGUST 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	33.34	JAN 31, 1979	32.17	APR 24, 1979	31.53	JUL 25, 1979	32.22
NOV 28	33.92	FEB 23	31.53	MAY 29	31.32	AUG 24	32.69
DEC 27	33.36	MAR 26	31.18	JUN 28	31.59		

414518070020301. Local number, BMW 21.

LOCATION.--Lat 41°45'18", long 70°02'03", Hydrologic Unit 01090002, about 50 ft (15 m) north of Nook Road, 0.1 mi (0.2 km) south of Cliff Pond, 0.3 mi (0.5 km) east of Silas Road, and at Nickerson State Park in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.5 in (0.06 m), depth 25 ft (7.6 m), screened 22 to 25 ft (6.7 to 7.6 m).

DATUM.--Land-surface datum is 36.97 ft (11.27 m), corrected, National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.40 ft (0.73 m) above land-surface datum.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft (2.10 m) below land-surface datum, Apr. 25, 1974; lowest measured, 13.34 ft (4.07 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	9.24	JAN 24, 1979	9.00	APR 25, 1979	8.24	JUL 27, 1979	8.16
NOV 27	9.54	FEB 27	8.65	MAY 28	7.85	AUG 28	8.41
DEC 26	9.44	MAR 27	8.43	JUN 24	7.89	SEP 25	8.69

414630070014901. Local number, BMW 22.

LOCATION.--Lat 41°46'30", long 70°01'49", Hydrologic Unit 01090002, 50 ft (15.2 m) east of entrance to Nickerson State Park and 50 ft (15.2 m) south of State Highway 6A in Brewster.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 52 ft (15.8 m) screened 49 to 52 ft (14.9 to 15.8 m).

DATUM.--Land-surface datum is 50.45 ft (15.38 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.62 ft (8.72 m) below land-surface datum, June 27, 1973; lowest measured, 33.60 ft (10.24 m) below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	30.51	JAN 24, 1979	30.53	APR 25, 1979	29.02	JUL 27, 1979	29.31
NOV 27	31.12	FEB 27	29.62	MAY 28	28.89	AUG 22	29.59
DEC 26	30.77	MAR 27	29.04	JUN 24	28.71	SEP 25	30.28

414100070011101. Local number, CGW 138.

LOCATION.--Lat 41°41'00", long 70°01'11", Hydrologic Unit 01090002, 50 ft (15.2 m) east of State Highway 137 and 300 ft (91 m) north of State Highway 28 in Chatham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 44 ft (13.4 m), screened 41 to 44 ft (12.5 to 13.4 m).

DATUM.--Land-surface datum is 35.28 ft (10.75 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.80 ft (1.16 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.13 ft (6.44 m) below land-surface datum, June 27, 1967; lowest measured, 26.22 ft (7.99 m) below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	23.86	JAN 24, 1979	23.68	APR 25, 1979	22.39	JUL 27, 1979	23.00
NOV 27	24.14	FEB 27	23.14	MAY 28	22.36	AUG 27	23.49
DEC 26	23.80	MAR 27	22.46	JUN 27	22.42	SEP 25	24.00

413449070322401. Local number, FSW 5.

LOCATION.--Lat 41°34'49", long 70°32'24", Hydrologic Unit 01090002, near old pumping house, about 300 ft (90 m) southwest of water tank, 400 ft (120 m) northwest of intersection of Fresh Pond Road and State Highway 28 in Falmouth.

Owner: Town of Falmouth.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 50 ft (15.2 m), cased to 50 ft (15.2 m), open end.

DATUM.--Land-surface datum is 11.18 ft (3.41 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.50 ft (0.15 m) above land-surface datum. Prior to Dec. 28, 1977, 0.23 ft (0.05 m) above land-surface datum.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.55 ft (0.78 m) below land-surface datum, May 1, 1958; lowest measured, 5.69 ft (1.73 m) below land-surface datum, Dec. 31, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	5.22	JAN 25, 1979	4.29	APR 24, 1979	4.19	JUL 25, 1979	4.75
NOV 28	5.13	FEB 24	3.88	MAY 27	4.16	AUG 24	5.10
DEC 27	4.95	MAR 26	3.87	JUN 26	4.37	SEP 24	5.42

414418070241601. Local number, SDW 252.

LOCATION.--Lat 41°44'18", long 70°24'16", Hydrologic Unit 01090002, 0.5 mi (0.8 km) north of State Highway 6A and 15 ft (4.6 m) east of Private Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 57 ft (17.4 m), screened 55 to 57 ft (16.8 to 17.4 m).

DATUM.--Land-surface datum is 53.47 ft (16.30 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.97 ft (14.01 m) below land-surface datum, Feb. 27, 1978; lowest measured, 48.23 ft (14.70 m) below land-surface datum, Oct. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	47.37	JAN 25, 1979	47.15	APR 26, 1979	46.76	JUL 26, 1979	47.07
NOV 27	47.33	FEB 24	47.00	MAY 25	46.75	AUG 24	47.19
DEC 27	46.80	MAR 26	46.80	JUN 26	46.73	SEP 24	47.45

414124070265901. Local number, SDW 253.

LOCATION.--Lat 41°41'24", long 70°26'59", Hydrologic Unit 01090002, 800 ft (240 m) west of Stowe Road and 50 ft (15.2 m) south of Farmersville Road in Sandwich.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 70 ft (21.3 m), screened 67 to 70 ft (20.4 to 21.3 m).

DATUM.--Land-surface datum is 111.20 ft (33.89 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.78 ft (13.95 m), below land-surface datum, July 30, 1973; lowest measured, 55.05 ft (16.78 m) below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	47.67	JAN 25, 1979	47.78	APR 26, 1979	46.96	JUL 26, 1979	47.22
NOV 29	47.98	FEB 24	47.68	MAY 25	46.79	AUG 24	47.60
DEC 27	48.11	MAR 26	47.18	JUN 26	46.98	SEP 24	47.90

420239070062001. Local number, TSW 1.

LOCATION.--Lat 42°02'39", long 70°06'20", Hydrologic Unit 01090002, near old pumping station about 200 ft (60 m) north of State Highway 6A and 1.2 mi (1.9 km) northwest of North Truro.

Owner: Town of Provincetown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 68 ft (20.7 m), cased to 68 ft (20.7 m), open end.

DATUM.--Land-surface datum is 16.80 ft (5.12 m), corrected, National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft (1.07 m) above land-surface datum.

REMARKS.--Water levels affected by pumping, barometric pressure, and tide.

PERIOD OF RECORD.--August 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.73 ft (2.97 m) below land-surface datum, Dec. 27, 1972; lowest measured, 12.1 ft (3.69 m) below land-surface datum, Sept. 11, 1954.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, NOVEMBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 27, 1978	11.17	FEB 26, 1979	11.02	MAY 28, 1979	10.66	AUG 28, 1979	11.21
DEC 26	11.02	MAR 27	10.87	JUN 24	10.56	SEP 25	11.09
JAN 24, 1979	10.84	APR 25	10.82	JUL 27	11.09		

420206070045901. Local number, TSW 89.

LOCATION.--Lat 42°02'06", long 70°04'59", Hydrologic Unit 01090002, 300 ft (91.4 m) west of U.S. Highway 6 and 50 ft (15.2 m) north of Highland Road in Truro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 27.7 ft (8.4 m), screened 24.7 to 27.7 ft (7.5 to 8.4 m).

DATUM.--Land-surface datum is 16.60 ft (4.88 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.7 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--September 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.36 ft (3.16 m) below land-surface datum, Feb. 27, 1978; lowest measured, 12.96 ft (3.95 m), revised, below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1978	12.38	FEB 27, 1979	11.43	JUN 14, 1979	11.70	AUG 28, 1979	12.28
27	12.36	MAR 27	11.28	24	11.72	SEP 25	12.45
NOV 27	12.42	APR 25	11.41	28	11.55		
DEC 26	12.05	MAY 03	11.44	JUL 19	11.85		
JAN 24, 1979	11.81	24	11.55	27	12.09		

415353069585401. Local number, WNW 17.

LOCATION.--Lat 41°53'53", long 69°58'54", Hydrologic Unit 01090002, about 150 ft (45.7 m) east of old pumping station and 45 ft (13.7 m) west of road to the public beach at Cape Cod National Seashore in Wellfleet.

Owner: Cape Cod National Seashore.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 42 ft (12.8 m), screen information not available.

DATUM.--Land-surface datum is 19.10 ft (5.82 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.13 ft (0.34 m) above land-surface datum.

PERIOD OF RECORD.--November 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft (2.22 m) below land-surface datum, June 27, 1967; lowest measured, 12.75 ft (3.89 m) below land-surface datum, Jan. 31, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	9.98	JAN 24, 1979	10.11	APR 25, 1979	8.76	JUL 27, 1979	9.22
NOV 27	10.40	FEB 26	9.25	MAY 28	8.99	AUG 28	9.66
DEC 26	10.52	MAR 27	8.77	JUN 24	8.76	SEP 25	10.13

BERKSHIRE COUNTY

423503073075401. Local number, CJW 2.

LOCATION.--Lat 42°35'03", long 73°07'54", Hydrologic Unit 02020003, at intersection of Wells and Jenks Roads 2.3 mi (3.7 km) northeast of Cheshire.

Owner: John Jayko.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 22 ft (6.7 m), cased with stone to 22 ft (6.7 m), open end.

DATUM.--Altitude of land-surface datum is 1,210 ft (369 m). Measuring point: Inside rim of concrete well top, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft (0.03 m) below land-surface datum, Jan. 19, 1952; lowest measured, 14.03 ft (4.28 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	9.40	MAR 28, 1979	2.19	JUN 21, 1979	5.67	SEP 24, 1979	5.16
NOV 21	8.60	APR 26	2.22	JUL 25	7.76		
DEC 20	7.18	MAY 24	5.01	AUG 23	8.38		

421316073212801. Local number, GMW 2.

LOCATION.--Lat 42°13'16", long 73°21'28", Hydrologic Unit 01100005, 30 ft (9 m) west of State Highway 41 and 1.5 mi (2.4 km) north of intersection of State Highway 41 and U.S. Highway 7 in Great Barrington.

Owner: Mr. Jacobson.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 15 ft (4.6 m), cased with stone to 15 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 732 ft (223 m). Measuring point: Top of stone curbing, east side of well at land-surface datum.

REMARKS.--Water level affected by stream.

PERIOD OF RECORD.--June 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.02 ft (1.23 m) below land-surface datum, Feb. 12, 1970; lowest, 14.97 ft (4.56 m) below land-surface datum, Nov. 20, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	12.76	JAN 05, 1979	8.25	APR 05, 1979	5.78	JUL 05, 1979	12.04
10	12.77	10	8.18	10	5.66	10	12.33
15	12.77	15	9.68	15	5.53	15	12.55
20	12.78	20	10.04	20	6.75	20	12.61
25	12.79	25	8.38	25	7.42	25	12.64
31	12.80	31	7.88	30	5.45	31	12.66
NOV 05	12.78	FEB 05	8.87	MAY 05	7.25	AUG 05	12.68
10	12.76	10	9.66	10	8.50	10	12.70
15	12.77	15	10.18	15	9.30	15	12.68
20	12.79	20	10.63	20	9.80	20	12.69
25	12.80	25	10.70	25	5.90	25	12.70
30	12.81	28	10.35	31	7.70	31	12.53
DEC 05	12.80	MAR 05	9.98	JUN 05	9.13	SEP 05	12.60
10	12.69	10	7.00	10	9.45	10	12.48
15	12.54	15	7.02	15	9.50	15	12.53
20	12.51	20	7.46	20	10.52	20	12.61
25	12.46	25	6.47	25	11.05	25	12.44
31	12.50	31	6.10	30	11.61	30	12.42

WTR YEAR 1979 MAX 5.25 APR. 29, 1979 MIN 12.82 DEC. 3, 1978

420912073043001. Local number, OTW 7.

LOCATION.--Lat 42°09'12", long 73°04'30", Hydrologic Unit 01080207, about 400 ft (126 m) south of Hawley Road and 15 ft (4.6 m) west of State Highway 8 in Otis.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 17.5 ft (5.3 m), screened 15.5 to 17.5 ft (4.7 to 5.3 m).

DATUM.--Altitude of land-surface datum is 1,145 ft (349 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

REMARKS.--Water levels affected by Minor Brook and Farmington River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.54 ft (1.69 m) below land-surface datum, Dec. 27, 1973; lowest measured, 9.93 ft (3.03 m) below land-surface datum, Aug. 23, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	9.58	JAN 24, 1979	7.47	APR 25, 1979	7.36	JUL 25, 1979	9.44
NOV 21	9.43	FEB 21	8.49	MAY 23	8.19	AUG 22	9.32
DEC 21	8.82	MAR 27	6.30	JUN 21	8.52	SEP 25	8.30

422745073112001. Local number, PTW 51.

LOCATION.--Lat 42°27'45", long 73°11'20", Hydrologic Unit 01100005, 30 ft (9.1 m) east of Hubbard Ave. and about 100 ft (30 m) north of Barton Brook in Pittsfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft (0.03 m), depth 31.5 ft (9.6 m), screened 29.5 to 31.5 ft (9 to 9.6 m).

DATUM.--Altitude of land-surface datum is 1,050 ft (320 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--August 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.30 ft (3.75 m) below land-surface datum, Apr. 25, 1969; lowest measured, 27.57 ft (8.40 m) below land-surface datum, Dec. 22, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	20.68	JAN 25, 1979	16.32	APR 25, 1979	14.53	JUL 25, 1979	16.32
NOV 21	21.04	FEB 21	16.58	MAY 24	15.05	AUG 23	17.31
DEC 20	20.70	MAR 28	14.34	JUN 21	15.28	SEP 25	16.54

420351073193601. Local number, SJW 59.

LOCATION.--Lat 42°03'51", long 73°19'36", Hydrologic Unit 01100005, about 200 ft (61 m) east of U.S. Highway 7 and 30 ft (9.1 m) north of Hewins Road in Sheffield.

Owner: U.S. Geological Survey.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 ft (0.03 m), depth 24 ft (7.3 m), screened 22 to 24 ft (6.7 to 7.3 m).

DATUM.--Altitude of land-surface datum is 680 ft (210 m). Measuring point: Top of casing, 3.70 ft (1.13 m) above land-surface datum.

PERIOD OF RECORD.--November 1963 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.19 ft (2.80 m) below land-surface datum, Mar. 28, 1978; lowest measured, 19.69 ft (6.00 m) below land-surface datum, Jan. 25, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	12.46	JAN 24, 1979	13.01	APR 25, 1979	11.55	JUL 25, 1979	11.87
NOV 21	13.49	FEB 21	12.74	MAY 23	11.59	AUG 22	12.33
DEC 21	14.05	MAR 27	11.36	JUN 21	11.22	SEP 25	12.83

BRISTOL COUNTY

415447071155301. Local number, ATW 83.

LOCATION.--Lat 41°54'47", long 71°15'53", Hydrologic Unit 01090004, about 150 ft (46 m) north of parking lot and 200 ft (61 m) west of dirt road at Bristol County Nursing Home in Attleboro.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.6 ft (6.3 m), screened 18.6 to 20.6 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.98 ft (0.60 m) below land-surface datum, Jan. 27, 1978; lowest measured, 5.23 ft (1.59 m) below land-surface datum, Aug. 26, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	4.14	JAN 29, 1979	2.47	APR 25, 1979	3.56	JUL 26, 1979	4.72
NOV 27	5.04	FEB 26	3.06	MAY 24	2.97	AUG 27	3.87
DEC 26	3.38	MAR 28	3.43	JUN 25	4.04	SEP 26	3.70

414228071091401. Local number, FRW 67.

LOCATION.--Lat 41°42'28", long 71°09'14", Hydrologic Unit 01090004, about 200 ft (61 m) east of Main Street and 50 ft (15.2 m) north of Walnut Street at Bristol County Court in Fall River.

Owner: Bristol County Court.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 12.0 ft (3.7 m), cased with stone to 12.0 ft (3.7 m), open end.

DATUM.--Altitude of land-surface datum is 135 ft (41.2 m). Measuring point: Top of stone casing, at land-surface datum.

PERIOD OF RECORD.--May 1948 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.77 ft (1.45 m) below land-surface datum, Mar. 22, 1972; dry, Oct. 30, 1950, Sept. 30 to Nov. 25, 1957, Sept. 27, 1965 to Jan. 29, 1966, Aug. 23 and Oct. 25, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	9.10	JAN 23, 1979	5.77	APR 26, 1979	7.63	JUL 27, 1979	8.18
NOV 27	9.00	FEB 26	6.63	MAY 25	5.55	AUG 27	8.60
DEC 22	8.32	MAR 23	7.23	JUN 25	8.03	SEP 25	8.57

414705071045301. Local number, F3W 23.

LOCATION.--Lat 41°47'05", long 71°04'53", Hydrologic Unit 01090004, about 300 ft (91.4 m) west of State Highway 24 and 200 ft (61 m) north of State Highway 79 in Freetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 42 ft (12.8 m), screened 40 to 42 ft (12.2 to 12.8 m).

DATUM.--Altitude of land-surface datum is 38 ft (12 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

REMARKS.--Water level affected by tide.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.82 ft (2.99 m) below land-surface datum, Jan. 29, 1979; lowest measured, 15.70 ft (4.79 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	13.11	JAN 29, 1979	9.82	APR 25, 1979	12.16	JUL 26, 1979	12.83
NOV 27	13.50	FEB 26	11.37	MAY 24	11.96	AUG 27	12.38
DEC 26	13.09	MAR 28	11.47	JUN 25	11.86	SEP 25	12.59

414025070572801. Local number, NGW 116.

LOCATION.--Lat 41°40'25", long 70°57'28", Hydrologic Unit 01090002, New Bedford Municipal Airport, 30 ft (9 m) east of control tower building in New Bedford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 27.3 ft (8.3 m), screened 25.3 to 27.3 ft (7.7 to 8.3 m).

DATUM.--Altitude of land-surface datum is 65 ft (20 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.31 ft (0.70 m) below land-surface datum, Mar. 26, 1969; lowest measured, 5.20 ft (1.58 m) below land-surface datum, July 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	4.29	JAN 29, 1979	3.27	APR 25, 1979	3.94	JUL 26, 1979	4.69
NOV 27	4.11	FEB 26	2.64	MAY 24	3.12	AUG 27	4.14
DEC 27	3.65	MAR 28	3.90	JUN 25	4.31	SEP 26	3.98

41581207111101. Local number, N4W 37.

LOCATION.--Lat 41°58'12", long 71°11'11", Hydrologic Unit 01090004, at Wheaton College, 250 ft (76 m) northeast of observatory in Norton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 19.4 ft (5.9 m), screened 17.4 to 19.4 ft (5.3 to 5.9 m).

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft (0.72 m) below land-surface datum, Dec. 29, 1969; lowest measured, 10.64 ft (3.24 m) below land-surface datum, Aug. 25, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	9.44	JAN 29, 1979	3.70	APR 25, 1979	6.50	JUL 26, 1979	9.49
NOV 27	9.16	FEB 26	6.15	MAY 24	5.51	AUG 27	6.77
DEC 26	6.00	MAR 28	5.85	JUN 25	7.82	SEP 26	6.70

414714071175901. Local number, SHW 275.

LOCATION.--Lat 41°47'14", long 71°17'59", Hydrologic Unit 01090004, middle of median strip of Interstate Highway 195 and 1.1 mi (1.77 km) west of Palmer River in Seekonk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 14.4 ft (4.39 m), screened 12.4 to 14.4 ft (3.78 to 4.39 m).

DATUM.--Altitude of land-surface datum is 21 ft (9 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.33 ft (1.62 m) below land-surface datum, May 24, 1979; lowest measured, 8.00 ft (2.44 m) below land-surface datum, Aug. 27, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	6.97	JAN 29, 1979	5.89	APR 25, 1979	6.80	JUL 26, 1979	7.55
NOV 27	6.90	FEB 26	6.00	MAY 24	5.33	AUG 27	6.98
DEC 26	6.22	MAR 28	6.71	JUN 25	7.09	SEP 26	6.79

414420071084401. Local number, SPW 161.

LOCATION.--Lat 41°44'20", long 71°08'44", Hydrologic Unit 01090004, 110 ft (34 m) east of Riverside Avenue and 335 ft (102 m) south of the Johnson Street and Riverside Avenue intersection in Somerset.

Owner: Montaup Electric.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 3 in (0.08 m), depth 1,500 ft (457 m), cased to 26 ft (7.9 m), open hole.

DATUM.--Altitude of land-surface datum is 40 ft (12 m). Measuring point: Top of casing, 0.8 ft (0.2 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.87 ft (1.79 m) below land-surface datum, Jan. 29, 1979; lowest measured, 19.34 ft (5.89 m) below land-surface datum, Oct. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	19.34	JAN 29, 1979	5.87	APR 25, 1979	12.33	JUL 26, 1979	16.60
NOV 27	18.84	FEB 26	11.73	MAY 24	10.14	AUG 27	16.92
DEC 26	14.49	MAR 28	10.87	JUN 25	13.06	SEP 26	17.81

415454071061801. Local number, TAW 258.

LOCATION.--Lat 41°54'54", long 71°06'18", Hydrologic Unit 01090004, 420 ft (128 m) northwest of Danforth Street and 520 ft (158 m) southwest of Chester Street in Taunton.

Owner: Joseph Mozzone.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3.0 in (0.08 m), depth 1,006.0 ft (306.6 m), cased to 10.0 ft (3.0 m), open hole.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--November 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.10 ft (3.08 m) below land-surface datum, Jan. 27, 1978; lowest measured, 14.98 ft (4.57 m) Oct. 25, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	14.98	JAN 29, 1979	10.14	APR 25, 1979	11.80	JUL 26, 1979	14.23
NOV 27	14.85	FEB 26	11.24	MAY 24	11.21	AUG 27	13.88
DEC 26	12.95	MAR 28	11.42	JUN 25	12.65	SEP 26	13.82

415457071060101. Local number, TAW 337.

LOCATION.--Lat 41°54'57", long 71°06'01", Hydrologic Unit 01090004, Taunton State Hospital, about 200 ft (61 m) west of Mill River and about 300 ft (91 m) east of Danforth Street in Taunton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20 ft (6.1 m), screened 18 to 20 ft (5.5 to 6.1 m).

DATUM.--Altitude of land-surface datum is 50 ft (15 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

REMARKS.--Water levels affected by Mill River.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.96 ft (1.82 m) below land-surface datum, Dec. 29, 1969; lowest measured, 10.29 ft (3.14 m) below land-surface datum, Aug. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	9.75	JAN 29, 1979	6.24	APR 25, 1979	8.34	JUL 26, 1979	9.48
NOV 27	9.71	FEB 26	7.72	MAY 24	7.34	AUG 27	9.32
DEC 26	8.85	MAR 28	7.94	JUN 25	8.79	SEP 26	9.41

DUKES COUNTY

412346070353403. Local number, ENW 52.

LOCATION.--Lat 41°23'46", long 70°35'34", Hydrologic Unit 01090002, 0.5 mi (0.80 km) west of Airport Road and 0.6 mi (0.97 km) north of West Tisbury Road in Edgartown.

Owner: Martha's Vineyard State Forest.

AQUIFER.--Glacial sand, gravel and cobbles of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in (0.05 m), depth 64.02 ft (19.51 m), screened 61.02 to 64.02 ft (18.60 to 19.51 m).

DATUM.--Altitude of land-surface datum is 34 ft (10 m). Measuring point: Top of casing, 0.02 ft (0.01 m) below land-surface datum.

PERIOD OF RECORD.--December 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.17 ft (4.32 m) below land-surface datum, July 28, 1979; lowest measured, 19.74 ft (6.01 m) Dec. 16, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	16.39	JAN 28, 1979	17.04	MAY 26, 1979	14.66
NOV 26	17.07	MAR 04	15.61	JUL 28	14.17
DEC 26	17.43	APR 29	15.00	SEP 01	14.93

ESSEX COUNTY

423734071080901. Local number, AJW 26.

LOCATION.--Lat 42°37'34", long 71°08'09", Hydrologic Unit 01070002, 90 ft (27.4 m) north of Ballardvale Road and 30 ft (9.1 m) west of Sunset Rock Road in Andover.

Owner: Harry K. Jenkins.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 25 in (0.64 m), depth 15 ft (4.6 m), cased with stone to 15 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 189 ft (57.6 m). Measuring point: Upper edge of brick lip in corner of opening, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.47 ft (1.06 m) below land-surface datum, Mar. 26, 1969; lowest measured, 13.44 ft (4.10 m) below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	12.68	JAN 29, 1979	7.68	APR 26, 1979	9.23	JUL 26, 1979	12.07
NOV 27	12.76	FEB 27	9.84	MAY 30	9.32	AUG 30	11.27
DEC 26	11.86	MAR 28	8.29	JUN 27	11.38	SEP 24	12.39

423641071102501. Local number, AJW 462.

LOCATION.--Lat 42°36'41", long 71°10'25", Hydrologic Unit 01070002, about 1,200 ft (366 m) south of Shawsheen River, and 30 ft (9.1 m) west of Interstate Highway 93 in Andover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 32.5 ft (9.9 m), screened 30.5 to 32.5 ft (9.3 to 9.9 m).

DATUM.--Altitude of land-surface datum is 110 ft (33.5 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.77 ft (3.89 m) below land-surface datum, June 23, 1972, Jan. 29, 1979; lowest measured, 15.75 ft (4.80 m) below land-surface datum, Nov. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	15.63	JAN 29, 1979	12.77	APR 26, 1979	14.08	JUL 26, 1979	14.73
NOV 27	15.75	FEB 27	14.10	MAY 30	13.85	AUG 30	14.73
DEC 26	15.32	MAR 28	14.06	JUN 28	14.21	SEP 24	14.83

424322070592401. Local number, GCW 168.

LOCATION.--Lat 42°43'22", long 70°59'24", Hydrologic Unit 01090001, 18 ft (5.5 m) south of State Highway 133 and 25 ft (7.6 m) east of Winter Street at Murca Park in Georgetown.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 21 ft (6.4 m), screened 19 to 21 ft (5.8 to 6.4 m).

DATUM.--Altitude of land-surface datum is 80 ft (24 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft (0.74 m) below land-surface datum, Mar. 27, 1969; lowest measured, 6.65 ft (2.03 m) below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	5.75	JAN 30, 1979	3.15	APR 25, 1979	4.25	JUL 26, 1979	5.40
NOV 28	5.60	FEB 26	3.83	MAY 29	4.00	AUG 29	5.65
DEC 27	4.65	MAR 27	3.87	JUN 27	5.02	SEP 24	5.56

424841071004101. Local number, HLW 23.

LOCATION.--Lat 42°48'41", long 71°00'41", Hydrologic Unit 01070002, about 50 ft (15 m) north of Amesbury Line Road and 0.9 mi (1.4 km) south of State Highway 110 in Haverhill.

Owner: Benjamin Hamm.

AQUIFER.--Glacial sand of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 12 in (0.3 m), depth 15.1 ft (4.6 m), cased with tile to 15.1 ft (4.6 m), open end.

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of hole in base of wooden recorder shelter, 1 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.08 ft (2.46 m) below land-surface datum, Apr. 19, 1961; lowest, 15.02 ft (5.48 m) below land-surface datum, Feb. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	13.93	JAN 05, 1979	13.43	APR 05, 1979	10.44	JUL 05, 1979	11.51
10	13.93	10	12.85	10	10.13	10	11.75
15	13.99	15	12.55	15	9.90	15	11.97
20	14.01	20	12.50	20	9.90	20	12.07
25	14.08	25	11.38	25	9.99	25	12.24
31	14.09	31	10.59	30	10.02	31	12.40
NOV 05	14.14	FEB 05	10.90	MAY 05	10.05	AUG 05	12.53
10	14.20	10	11.13	10	10.18	10	12.65
15	14.25	15	11.38	15	10.35	15	12.77
20	14.30	20	11.56	20	10.53	20	12.87
25	14.32	25	11.20	25	10.60	25	12.95
30	14.20	28	11.08	31	10.32	31	13.00
DEC 05	14.15	MAR 05	10.66	JUN 05	10.44	SEP 05	13.10
10	14.10	10	10.44	10	10.65	10	13.21
15	14.05	15	10.32	15	10.86	15	12.32
20	14.00	20	10.43	20	10.89	20	13.43
25	13.85	25	10.55	25	11.07	25	13.48
31	13.63	31	10.60	30	11.30	30	13.48

WTR YEAR 1979 MAX 9.88 APR. 18, 1979 MIN 14.35 NOV. 24, 1978

424520070562401. Local number, NIW 27.

LOCATION.--Lat 42°45'20", long 70°56'24", Hydrologic Unit 01090001, about 300 ft (91 m) east of Interstate Highway 95 and 100 ft (30 m) north of Central Street in Newbury.

Owner: Mrs. George Brown.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 31 in (0.79 in), depth 19.8 ft (6.0 m), cased with tile to 19.8 ft (6.0 m), open end.

DATUM.--Altitude of land-surface datum is 55 ft (16.8 m). Measuring point: Top of hole in base of wooden recorder shelter, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.15 ft (0.96 m) below land-surface datum, Mar. 25, 1969; lowest, 12.68 ft (3.86 m) below land-surface datum, Nov. 24, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	11.84	JAN 05, 1979	8.77	APR 05, 1979	5.20	JUL 05, 1979	8.28
10	11.86	10	7.40	10	5.01	10	8.67
15	11.90	15	7.19	15	5.04	15	8.99
20	11.89	20	7.49	20	5.30	20	9.19
25	11.89	25	5.87	25	5.57	25	9.49
31	11.92	31	5.39	30	5.47	31	9.81
NOV 05	11.92	FEB 05	5.60	MAY 05	5.60	AUG 05	9.99
10	11.96	10	5.89	10	5.88	10	10.20
15	12.03	15	6.18	15	6.21	15	9.47
20	12.08	20	6.40	20	6.48	20	9.55
25	12.06	25	5.95	25	6.40	25	9.72
30	12.00	28	6.17	31	5.55	31	9.91
DEC 05	11.75	MAR 05	5.10	JUN 05	5.86	SEP 05	10.07
10	11.35	10	4.92	10	6.28	10	10.08
15	10.79	15	4.93	15	6.75	15	10.21
20	10.68	20	5.14	20	7.19	20	10.40
25	10.25	25	5.35	25	7.58	25	10.34
31	9.62	31	5.51	30	7.98	30	10.31

WTR YEAR 1979 MAX 4.80 MAR. 12, 1979 MIN 12.11 NOV. 24, 1978

425103070513401. Local number, SBW 9.

LOCATION.--Lat 42°51'03", long 70°51'34", Hydrologic Unit 01070002, at intersection of Gerrish and Seabrook Roads 0.6 mi (1.0 km) north of Salisbury.

Owner: Eugene G. Folsum.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 11 ft (3.4 m), cased with tile to 11 ft (3.4 m), open end.

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top inside lip of tile casing, 1.60 ft (0.49 m) above land-surface datum.

PERIOD OF RECORD.--August 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.06 ft (0.93 m) below land-surface datum, Mar. 27, 1969; lowest measured, 8.20 ft (2.50 m) below land-surface datum, Sept. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	7.26	JAN 30, 1979	3.80	APR 25, 1979	4.69	JUL 26, 1979	6.31
NOV 28	6.90	FEB 26	4.64	MAY 29	4.01	AUG 29	5.90
DEC 27	5.43	MAR 27	4.26	JUN 27	5.95	SEP 25	5.98

423845070542501. Local number, TQW 1.

LOCATION.--Lat 42°38'45", long 70°54'25", Hydrologic Unit 01090001, 0.7 mi (1.2 km) south of Ipswich Road and 120 ft (36.6 m) west of Hamilton Road in Topsfield.

Owner: Mr. Sullivan.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 22.0 ft (6.7 m), cased with stone to 22.0 ft (6.7 m), open end.

DATUM.--Altitude of land-surface datum is 130 ft (40 m). Measuring point: Top edge of steel rim in concrete cover, 0.6 ft (0.2 m) above land-surface datum.

PERIOD OF RECORD.--February 1936 to October 1947, April 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.64 ft (1.72 m) below land-surface datum, Jan. 27, 1958; lowest measured, 17.52 ft (5.34 m) below land-surface datum, Jan. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	16.44	JAN 30, 1979	6.97	APR 25, 1979	9.37	JUL 26, 1979	13.03
NOV 28	17.05	FEB 26	9.72	MAY 29	9.50	AUG 29	14.50
DEC 26	16.97	MAR 27	8.40	JUN 27	11.99	SEP 25	14.77

423505070491702. Local number, WPW 76.

LOCATION.--Lat 42°35'05", long 70°49'17", Hydrologic Unit 01090001, 45 ft (13.7 m) west of State Highway 128 and 120 ft (36.6 m) of Grapevine Road in Wenham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 22.0 ft (6.7 m), screened 20.0 to 22.0 ft (6.1 to 6.7 m).

DATUM.--Altitude of land-surface datum is 60 ft (18.3 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.39 ft (0.12 m) below land-surface datum, Jan. 26, 1978; lowest measured, 4.36 ft (1.33 m) below land-surface datum, Sept. 28, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	3.68	JAN 30, 1979	1.55	APR 25, 1979	2.53	JUL 26, 1979	3.66
NOV 28	3.40	FEB 26	2.12	MAY 29	2.39	AUG 29	3.30
DEC 27	2.22	MAR 27	2.25	JUN 27	3.04	SEP 25	3.40

FRANKLIN COUNTY

423809072435601. Local number, CSW 8.

LOCATION.--Lat 42°38'09", long 72°43'56", Hydrologic Unit 01080203, 15 ft (4.6 m) east of State Highway 112 and 100 ft (30.5 m) north of North River Bridge in Colrain.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 32.3 ft (9.8 m), screened 30.3 to 32.3 ft (9.2 to 9.8 m).

DATUM.--Altitude of land-surface datum is 460 ft (140 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

REMARKS.--Water levels affected by North River.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.62 ft (4.46 m) below land-surface datum, Apr. 24, 1969; lowest measured, 23.48 ft (7.16 m) below land-surface datum, Jan. 31, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	21.99	JAN 31, 1979	21.69	APR 26, 1979	16.37	JUL 27, 1979	19.14
NOV 21	22.71	FEB 23	20.98	MAY 24	17.03	AUG 23	20.44
DEC 20	22.74	MAR 24	16.25	JUN 21	17.67	SEP 24	20.83

423310072355801. Local number, DFW 44.

LOCATION.--Lat 42°33'10", long 72°35'58", Hydrologic Unit 01080203, 1.2 mi (1.93 km) south of Deerfield River Bridge and 15 ft (4.6 m) east of U.S. Highway 5 in Deerfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 27.6 ft (8.4 m), screened 25.6 to 27.6 ft (7.8 to 8.4 m).

DATUM.--Altitude of land-surface datum is 140 ft (42.7 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--December 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.42 ft (0.43 m) below land-surface datum, May 29, 1979; lowest measured, 5.46 ft (1.66 m) below land-surface datum, July 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	3.42	JAN 29, 1979	2.15	APR 26, 1979	2.68	JUL 26, 1979	3.27
NOV 30	2.63	FEB 22	3.25	MAY 29	1.42	AUG 28	3.07
DEC 26	2.77	MAR 28	2.45	JUN 27	3.07	SEP 24	2.68

423305072320301. Local number, MSW 5.

LOCATION.--Lat 42°33'05", long 72°32'03", Hydrologic Unit 01080201, about 15 ft (5 m) west of Montague Road, 0.2 mi (0.3 km) north of Old Northfield Road, and 1.0 mi (1.6 km) north of Montague.

Owner: Thomas C. Kurtyka.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 12 ft (3.6 m), screened 9 to 12 ft (2.7 to 3.6 m).

DATUM.--Altitude of land-surface datum is 240 ft (73 m). Measuring point: Top of casing, 1.75 ft (0.69 m) above land-surface datum.

PERIOD OF RECORD.--January 1936 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.41 ft (0.11 m) below land-surface datum, Feb. 26, 1976; lowest measured, 8.00 ft (2.44 m) below land-surface datum, Dec. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	3.53	JAN 29, 1979	2.04	APR 26, 1979	1.93	JUL 26, 1979	3.15
NOV 28	3.54	FEB 22	3.20	MAY 29	1.26	AUG 28	3.17
DEC 26	3.33	MAR 24	1.84	JUN 27	2.69	SEP 24	3.17

423424072170301. Local number, ORW 5.

LOCATION.--Lat 42°34'24", long 72°17'03", Hydrologic Unit 01080202, Orange Airport, 300 ft (91 m) east of main building and 600 ft (182 m) southwest of East River Street in Orange.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 20.6 ft (6.3 m), screened 18.6 to 20.6 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 530 ft (162 m). Measuring point: Top of casing, 2.40 ft (0.73 m) above land-surface datum.

PERIOD OF RECORD.--January 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft (1.29 m) below land-surface datum, Feb. 26, 1976; lowest measured, 7.56 ft (2.30 m) below land-surface datum, Sept. 27, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	6.38	JAN 29, 1979	4.80	APR 26, 1979	5.06	JUL 26, 1979	5.63
NOV 30	6.44	FEB 22	5.89	MAY 29	4.24	AUG 28	5.66
DEC 26	5.97	MAR 25	5.26	JUN 27	5.12	SEP 24	5.40

422607072324401. Local number, S6W 7.

LOCATION.--Lat 42°26'07", long 72°32'44", Hydrologic Unit 01080201, about 100 ft (30 m) east of State Highway 116 and 30 ft (10 m) north of Russellville Brook in Sunderland.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 54 ft (16.5 m), cased to 54 ft (16.5 m), open end.

DATUM.--Altitude of land-surface datum is 210 ft (64 m). Measuring point: Top of casing, at land-surface datum.

REMARKS.--Water level affected by pumping and nearby Russellville Brook.

PERIOD OF RECORD.--November 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.85 ft (2.09 m) below land-surface datum, Apr. 25, 1973; lowest measured, 23.26 ft (7.09 m) below land-surface datum, Feb. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	18.03	JAN 29, 1979	16.86	APR 26, 1979	12.51	JUL 26, 1979	10.42
NOV 28	18.19	FEB 22	15.84	MAY 29	11.43	AUG 28	10.86
DEC 26	18.69	MAR 28	13.41	JUN 27	10.47	SEP 24	11.45

HAMPDEN COUNTY

420357072511601. Local number, GLW 5.

LOCATION.--Lat 42°03'57", long 72°51'16", Hydrologic Unit 01080206, near Granville Public School, 275 ft (83.8 m) south of State Highway 57 and 0.2 mi (0.32 km) west of Sodom Street in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 67.7 ft (20.6 m), screened 65.7 to 67.7 ft (20.2 to 20.6 m).

DATUM.--Altitude of land-surface datum is 675 ft (236 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.28 ft (8.92 m) below land-surface datum, July 27, 1972; lowest, 37.20 ft (11.34 m) below land-surface datum, Jan. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	33.02	JAN 24, 1979	33.61	APR 25, 1979	31.52	JUL 25, 1979	31.16
NOV 21	33.52	FEB 21	32.99	MAY 23	30.99	AUG 22	31.76
DEC 21	33.84	MAR 27	31.99	JUN 21	30.65	SEP 25	32.28

420259072581701. Local number, GLW 6.

LOCATION.--Lat 42°02'59", long 72°58'17", Hydrologic Unit 01080207, at Granville State Forest, 20 ft (6.1 m) west of West Hartland Road and 0.9 mi (1.4 km) north of state boundary in Granville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.8 ft (6.3 m), screened 18.8 to 20.8 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 1,160 ft (353 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

REMARKS.--Water levels affected by Halfway Brook.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.49 ft (0.76 m) below land-surface datum, Apr. 26, 1972; lowest measured, 7.66 ft (2.33 m) below land-surface datum, Aug. 26, 1971, July 25, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	7.36	JAN 24, 1979	3.85	APR 25, 1979	3.52	JUL 25, 1979	7.66
NOV 21	7.12	FEB 21	5.72	MAY 23	5.43	AUG 22	6.78
DEC 21	6.24	MAR 27	3.16	JUN 21	6.25	SEP 25	6.05

420646072420101. Local number, WVW 62.

LOCATION.--Lat 42°06'46", long 72°42'01", Hydrologic Unit 01080206, at Western Massachusetts Hospital about 200 ft (60 m) east of East Mountain Road and 0.4 mi (0.6 km) north of U.S. Highway 20 in Westfield.

Owner: Commonwealth of Massachusetts.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 25 ft (7.6 m), casing information not available.

DATUM.--Altitude of land-surface datum is 210 ft (64 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--August 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.70 ft (1.13 m) below land-surface datum, Oct. 29, 1975; lowest measured, 11.18 ft (3.41 m) below land-surface datum, Sept. 5, 1957, Nov. 21, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	10.96	JAN 22, 1979	8.51	APR 24, 1979	7.40	JUL 27, 1979	8.37
NOV 21	11.18	FEB 27	9.28	MAY 23	6.62	AUG 29	8.64
DEC 22	10.55	MAR 28	9.83	JUN 26	7.25	SEP 24	8.67

420905072254001. Local number, XJW 55.

LOCATION.--Lat 42°09'05", long 72°25'40", Hydrologic Unit 01080204, 45 ft (13.7 m) south of U.S. Highway 20 and 0.1 mi (0.16 km) west of North Main Street in Wilbraham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 62.5 ft (19.1 m), screened 60.5 to 62.5 ft (18.5 to 19.1 m).

DATUM.--Altitude of land-surface datum is 255 ft (78 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.56 ft (9.31 m) below land-surface datum, Mar. 28, 1979; lowest measured, 45.44 ft (13.85 m) below land-surface datum, Jan. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1978	44.17	JAN 22, 1979	42.43	APR 24, 1979	33.40	JUL 27, 1979	40.01
NOV 21	44.75	FEB 27	36.84	MAY 23	33.33	AUG 28	41.75
DEC 22	45.18	MAR 28	30.56	JUN 27	35.85	SEP 24	42.60

GROUND-WATER LEVELS IN MASSACHUSETTS

HAMPSHIRE COUNTY

421355072322001. Local number, GWK 68.

LOCATION.--Lat 42°13'55", long 72°32'20", Hydrologic Unit 01080201, about 15 ft (5 m) east of Morgan Street, 0.3 mi (0.5 km) south of East Street, and 2.0 mi (3.2 km) southwest of Granby.

Owner: Holyoke Water Power Co.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 18 ft (5.5 m), screened 16 to 18 ft (4.9 to 5.5 m).

DATUM.--Land-surface datum is 239.17 ft (72.90 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--April 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.99 ft (1.52 m) below land-surface datum, Aug. 22, Nov. 15, 1955; lowest measured, 11.17 ft (3.40 m) below land-surface datum, Nov. 25, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	9.95	JAN 22, 1979	7.33	APR 24, 1979	6.44	JUL 27, 1979	8.29
NOV 21	10.13	FEB 27	6.09	MAY 23	6.65	AUG 28	7.55
DEC 22	9.32	MAR 28	6.72	JUN 26	7.54	SEP 24	7.99

421627072201701. Local number, WEW 43.

LOCATION.--Lat 42°16'27", long 72°20'17", Hydrologic Unit 01080204, 30 ft (9.1 m) north of State Highway 9 and 200 ft (61 m) east of Swift River in Ware.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 27.2 ft (8.3 m), screened 25.2 to 27.2 ft (7.7 to 8.3 m).

DATUM.--Altitude of land-surface datum is 380 ft (116 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

REMARKS.--Water levels affected by Swift River.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1975, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.78 ft (2.07 m) below land-surface datum, Feb. 25, 1976; lowest measured, 10.34 ft (3.15 m) below land-surface datum, Jan. 26, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	9.34	JAN 29, 1979	8.52	APR 26, 1979	6.99	JUL 26, 1979	9.25
NOV 28	9.50	FEB 22	9.10	MAY 29	7.07	AUG 28	9.06
DEC 26	9.46	MAR 28	7.50	JUN 27	8.74	SEP 25	8.96

MIDDLESEX COUNTY

422812071244401. Local number, ACW 158.

LOCATION.--Lat 42°28'12", long 71°24'44", Hydrologic Unit 01070005, 30 ft (9.1 m) north of State Highway 2 and 150 ft (45.7 m) east of Wetherbee Street in Acton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.8 ft (10.3 m), screened 31.8 to 33.8 ft (9.7 to 10.3 m).

DATUM.--Altitude of land-surface datum is 153 (47 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.32 ft (4.97 m) below land-surface datum, Apr. 24, 1970; lowest measured, 21.86 ft (6.66 m) below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	20.42	JAN 29, 1979	19.70	APR 26, 1979	18.28	JUL 27, 1979	18.76
NOV 27	20.75	FEB 27	19.55	MAY 30	17.83	AUG 30	19.02
DEC 26	20.67	MAR 28	19.05	JUN 28	18.06	SEP 24	18.97

423349071134101. Local number, BCW 363.

LOCATION.--Lat 42°33'49", long 71°13'41", Hydrologic Unit 01070002, 20 ft (6.1 m) south of Baldwin Road and 50 ft (15.2 m) west of Westminster Road in Billerica.

Owner: Robert M. Young.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 15.5 ft (4.7 m), cased with stone to 15.5 ft (4.7 m), open end.

DATUM.--Altitude of land-surface datum is 166 ft (50.6 m). Measuring point: Top of hole in wooden cover, 2.35 ft (0.72 m) above land-surface datum.

PERIOD OF RECORD.--June 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.75 ft (0.53 m) below land-surface datum, Mar. 24, 1972; lowest measured, 13.11 ft (4.00 m) below land-surface datum, Oct. 27, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	13.11	JAN 29, 1979	4.25	APR 26, 1979	4.79	JUL 27, 1979	8.00
NOV 27	12.50	FEB 27	5.72	MAY 30	4.35	AUG 30	8.74
DEC 26	10.75	MAR 28	4.45	JUN 28	6.10	SEP 25	9.14

422316071092501. Local number, CAW 667.

LOCATION.--Lat 42°23'16", long 71°09'25", Hydrologic Unit, 01090001, 270 ft (80 m) east of Blanchard Road and 950 ft (290 m) south of Concord Avenue, at Fresh Pond Golf Course in Cambridge.

Owner: Cambridge Water Department.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.2 m), depth 129 ft (39.2 m), casing information not available.

DATUM.--Land-surface datum is 11.63 ft (3.54 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.39 ft (0.12 m) above land-surface datum.

PERIOD OF RECORD.--October 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.79 ft (1.46 m) below land-surface datum, Jan. 27, 1978; lowest measured, 27.21 ft (8.29 m) below land-surface datum, Dec. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	12.29	FEB 27, 1979	4.29	MAY 30, 1979	5.42	AUG 29, 1979	10.96
NOV 27	14.77	MAR 28	5.86	JUN 28	6.91	SEP 24	9.76
JAN 29, 1979	12.60	APR 26	5.97	JUL 27	9.19		

423845071231401. Local number, CHW 68.

LOCATION.--Lat 42°38'45", long 71°23'14", Hydrologic Unit 01070002, 1,300 ft (400 m) north of intersection of Wharton Lane and B¹ M Railroad, 400 ft (640 m) east of Middlesex Street, and 0.5 mi (0.8 km) north of Vinal Square in North Chelmsford.

Owner: Mrs. Harold Blakie.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 50 ft (15.2 m), cased to 50 ft (15.2 m), open end.

DATUM.--Land-surface datum is 100.83 ft (30.73 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of hole in cap on casing, 1.40 ft (0.43 m) below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.25 ft (1.60 m) below land-surface datum; Apr. 25, 1969; lowest measured, 12.24 ft (3.73 m) below land-surface datum, Sept. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	10.82	JAN 29, 1979	5.64	APR 26, 1979	6.78	JUL 27, 1979	9.40
NOV 28	10.27	FEB 27	7.50	MAY 30	6.43	AUG 30	9.18
DEC 27	9.55	MAR 28	6.16	JUN 28	7.70	SEP 25	9.06

423546071190702. Local number, CHW 385.

LOCATION.--Lat 42°35'46", long 71°19'07", Hydrologic Unit 01070002, 15 ft (4.6 m) east of U.S. Highway 3 and 0.4 mi (0.64 km) north of State Highway 129 in Chelmsford.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 42.8 ft (13.0 m), screened 40.8 to 42.8 ft (12.4 to 13.0 m).

DATUM.--Land-surface datum is 123.30 ft (37.58 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.85 ft (4.53 m) below land-surface datum, Feb. 23, 1976; lowest measured, 19.04 ft (5.80 m) below land-surface datum, Nov. 21, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	17.89	JAN 29, 1979	16.06	APR 26, 1979	15.78	JUL 27, 1979	16.97
NOV 28	17.83	FEB 27	16.08	MAY 30	15.43	AUG 30	17.16
DEC 27	17.37	MAR 28	15.83	JUN 28	16.35	SEP 25	17.38

422637071202701. Local number, CTW 165.

LOCATION.--Lat 42°26'37", long 71°20'27", Hydrologic Unit 01070005, 30 ft (9.1 m) south of State Highway 2 and 0.1 mi (0.3 km) west of State Highway 126 in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 66.7 ft (20.3 m), screened 64.7 to 66.7 ft (19.7 to 20.3 m).

DATUM.--Land-surface datum is 201.12 ft (61.30 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--February 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.19 ft (11.64 m) below land-surface datum, July 25, 1973; lowest measured, 47.10 ft (14.36 m) below land-surface datum, Feb. 28, 1967.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	40.35	JAN 29, 1979	40.78	APR 26, 1979	39.45	JUL 27, 1979	39.26
NOV 27	40.85	FEB 27	39.94	MAY 30	39.18	AUG 30	39.62
DEC 26	41.23	MAR 28	39.69	JUN 28	39.06	SEP 24	39.94

422650071214402. Local number, CTW 167.

LOCATION.--Lat 42°26'50", long 71°21'44", Hydrologic Unit 01070005, 10 ft (0.3 m) south of State Highway 2 and 10 ft (0.3 m) west of Sudbury Road in Concord.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 24.8 ft (7.5 m), screened 21.8 to 24.8 ft (6.6 to 7.5 m).

DATUM.--Altitude of land-surface datum is 135 ft (41.2 m). Measuring point: Top of casing, 3.30 ft (1.01 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.67 ft (1.40 m) below land-surface datum, Mar. 24, 1971; lowest measured, 10.59 ft (3.23 m) below land-surface datum, Sept. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	9.05	JAN 29, 1979	6.82	APR 26, 1979	6.43	JUL 27, 1979	7.72
NOV 27	9.10	FEB 27	7.48	MAY 30	6.15	AUG 30	7.36
DEC 26	7.75	MAR 28	6.34	JUN 28	7.37	SEP 24	7.78

422627071154002. Local number, LTW 104.

LOCATION.--Lat 42°26'27", long 71°15'40", Hydrologic Unit 01090001, at The Commonwealth of Massachusetts Department of Public Works maintenance depot, 0.2 mi (0.32 km) west of State Highway 128 and 500 ft (152 m) south of State Highway 2A in Lexington.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 20.7 ft (6.3 m), screened 18.7 to 20.7 ft (5.7 to 6.3 m).

DATUM.--Altitude of land-surface datum is 180 ft (55 m). Measuring point: Top of casing, 4.5 ft (1.4 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.44 ft (0.44 m) below land-surface datum, Jan. 27, 1978; lowest measured, 4.35 ft (1.32 m) below land-surface datum, Aug. 26, 1975.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	3.20	JAN 29, 1979	1.69	APR 26, 1979	2.56	JUL 27, 1979	3.25
NOV 27	3.13	FEB 27	2.50	MAY 30	2.53	AUG 30	2.95
DEC 26	2.37	MAR 28	2.48	JUN 27	3.09	SEP 24	3.04

423812071174801. Local number, L2W 14.

LOCATION.--Lat 42°38'12", long 71°17'48", Hydrologic Unit, 01070005, at YWCA (formerly Rogers Hall School), about 50 ft (15 m) north of Rogers Street, and 800 ft (240 m) northwest of intersection of Rogers Street and State Highway 38 in Lowell.

Owner: Y.W.C.A.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 30 ft (9.1 m), cased with stone to 30 ft (9.1 m), open end.

DATUM.--Land-surface datum is 157.78 ft (48.09 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of stone slab under wooden cover, 0.20 ft (0.06 m) below land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.79 ft (2.37 m) below land-surface datum, Mar. 27, 1958; lowest measured, 19.79 ft (6.03 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	13.32	JAN 30, 1979	11.18	APR 26, 1979	10.12	JUL 26, 1979	13.08
NOV 28	15.30	FEB 27	12.69	MAY 30	9.63	AUG 30	14.14
DEC 27	14.70	MAR 28	11.14	JUN 27	11.30	SEP 25	14.70

424055071435301. Local number, TRW 13.

LOCATION.--Lat 42°40'55", long 71°43'53", Hydrologic Unit 01070004, 15 ft (4.6 m) south of Dudley Road and 15 ft (4.6 m) north of Turnpike Road in Townsend.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 32.9 ft (10.0 m), screened 30.9 to 32.9 ft (9.4 to 10.0 m).

DATUM.--Altitude of land-surface datum is 313 ft (95.4 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.95 ft (3.03 m) below land-surface datum, Apr. 25, 1973; lowest measured, 17.41 ft (5.31 m) below land-surface datum, Jan. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	14.37	JAN 29, 1979	14.17	APR 26, 1979	11.83	JUL 26, 1979	12.78
NOV 30	14.91	FEB 22	13.81	MAY 29	11.55	AUG 28	13.27
DEC 26	15.17	MAR 28	12.18	JUN 27	12.18	SEP 24	13.62

423115071032001. Local number, WAW 38.

LOCATION.--Lat 42°31'15", long 71°03'20", Hydrologic Unit 01090001, 75 ft (22.9 m) north of State Highway 128 and 0.4 mi (0.7 km) southeast of Saugus River in Wakefield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 25.5 ft (7.8 m), screened 23.5 to 25.5 ft (7.2 to 7.8 m).

DATUM.--Altitude of land-surface datum is 80 ft (24 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.51 ft (1.37 m) below land-surface datum, Mar. 27, 1969; lowest measured, 9.99 ft (3.04 m) below land-surface datum, Sept. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	9.31	JAN 30, 1979	4.74	APR 25, 1979	6.34	JUL 26, 1979	8.23
NOV 28	9.25	FEB 26	6.00	MAY 24	6.32	AUG 29	8.29
DEC 27	7.70	MAR 27	5.95	JUN 27	7.13	SEP 25	8.20

421852071220501. Local number, WKW 2.

LOCATION.--Lat 42°18'52", long 71°22'05", Hydrologic Unit 01070005, 0.25 mi (0.40 km) west of State Highway 27 and 100 ft (30.5 m) south of State Highway 30, at Cochituate State Park in Wayland.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.0 ft (10.0 m), screened 31.0 to 33.0 ft (9.4 to 10.0 m).

DATUM.--Land-surface datum is 157.75 ft (48.08 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 4.0 ft (1.2 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.96 ft (4.26 m) below land-surface datum, Mar. 27, 1972; lowest measured, 17.29 ft (5.27 m) below land-surface datum, Feb. 23, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	16.89	JAN 29, 1979	14.20	APR 26, 1979	15.55	JUL 27, 1979	16.56
NOV 27	17.04	FEB 27	15.39	MAY 30	15.37	AUG 30	16.44
DEC 26	16.59	MAR 28	15.68	JUN 28	16.11	SEP 24	16.50

423401071093801. Local number, XMW 78.

LOCATION.--Lat 42°34'01", long 71°09'38", Hydrologic Unit 01090001, at Whitefield Public School in Wilmington, about 30 ft (9 m) west of State Highway 62, and 0.3 mi (0.5 km) north of Concord Street.

Owner: Town of Wilmington.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 42 in (1.07 m), depth 12 ft (3.7 m) cased with stone to 12 ft (3.7 m), open end.

DATUM.--Altitude of land-surface datum is 95 ft (29 m). Measuring point: Hole in base of wooden recorder shelter, 0.33 ft (0.10 m) above land-surface datum.

PERIOD OF RECORD.--July 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.46 ft (1.36 m) above land-surface datum, Feb. 27, 1976; lowest, 11.27 ft (3.44 m) below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	9.92	JAN 05, 1979	8.11	APR 05, 1979	6.42	JUL 05, 1979	7.90
10	9.93	10	7.57	10	6.14	10	8.09
15	9.90	15	7.13	15	6.11	15	8.26
20	9.90	20	7.28	20	6.32	20	8.35
25	9.90	25	5.24	25	6.58	25	8.47
31	9.86	31	6.09	30	6.70	31	8.64
NOV 05	9.86	FEB 05	6.24	MAY 05	6.76	AUG 05	8.76
10	9.87	10	6.47	10	6.82	10	8.89
15	9.88	15	6.66	15	7.01	15	8.62
20	9.89	20	6.85	20	7.18	20	8.65
25	9.78	25	6.40	25	6.75	25	8.78
30	9.65	28	6.28	31	6.94	31	8.75
DEC 05	9.53	MAR 05	6.51	JUN 05	7.11	SEP 05	8.83
10	9.30	10	6.06	10	7.27	10	8.89
15	9.06	15	5.89	15	7.43	15	8.97
20	8.78	20	6.09	20	7.38	20	9.07
25	8.59	25	6.24	25	7.61	25	9.05
31	8.46	31	6.48	30	7.75	30	9.08

WTR YEAR 1979 MAX 5.24 JAN. 25, 1979 MIN 9.96 OCT. 14, 1978

422819071065701. Local number, XOW 14.

LOCATION.--Lat 42°28'19", long 71°06'57", Hydrologic Unit 01090001, at 220 Forest Street and 100 ft (30.5 m) north of Forest Street in Winchester.

Owner: E. B. Rotondi.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 17.0 ft (5.2 m), cased with stone to 17.0 ft (5.2 m), open end.

DATUM.--Land-surface datum is 116.29 ft (35.45 m) National Geodetic Vertical Datum of 1929. Measuring point:

Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--July 1940 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.03 ft (1.23 m) below land-surface datum, Mar. 26, 1969; lowest measured, 15.60 ft (4.75 m) below land-surface datum, Oct. 31, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	13.53	JAN 29, 1979	5.43	APR 25, 1979	8.87	JUL 26, 1979	12.63
NOV 27	14.70	FEB 26	5.59	MAY 30	7.60	AUG 29	11.93
DEC 26	11.06	MAR 27	7.64	JUN 27	11.17	SEP 24	11.93

NANTUCKET COUNTY

411555070021901. Local number, NBW 228.

LOCATION.--Lat 41°15'55", long 70°02'19", Hydrologic Unit 01090002, 165 ft (50 m) south of Milestone Road and 300 ft (91 m) east of Madequecham Valley Brook in Nantucket.

Owner: Nantucket Conservation Foundation.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 35.6 ft (10.9 m), screened 32.6 to 35.6 ft (9.9 to 10.9 m).

DATUM.--Altitude of land-surface datum is 39 ft (11.8 m). Measuring point: Top of casing, 0.7 ft (0.2 m) above land-surface datum.

PERIOD OF RECORD.--March 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.45 ft (6.54 m) below land-surface datum, Apr. 21, 1978; lowest measured, 26.63 ft (8.12 m) Dec. 30, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24, 1978	23.53	JAN 24, 1979	22.95	APR 25, 1979	23.21	JUL 27, 1979	23.15
NOV 23	24.17	FEB 27	24.49	MAY 31	23.05	AUG 27	23.35
DEC 29	23.57	MAR 27	23.73	JUN 27	22.94	SEP 26	24.14

NORFOLK COUNTY

421250071090901. Local number, DDW 231.

LOCATION.--Lat 42°12'50", long 71°09'09", Hydrologic Unit 01090001, 50 ft (15.2 m) south of State Highway 128 and 0.3 mi (0.48 km) west of University Avenue in Dedham.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 21.9 ft (6.7 m), screened 19.9 to 21.9 ft (6.1 to 6.7 m).

DATUM.--Altitude of land-surface datum is 65 ft (19.8 m). Measuring point: Top of casing, 1.9 ft (0.6 m) above land-surface datum. Prior to July 17, 1978, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.45 ft (0.75 m) below land-surface datum, Mar. 28, 1978; lowest measured, 13.81 ft (4.21 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	9.98	JAN 30, 1979	3.49	APR 26, 1979	5.00	JUL 26, 1979	10.26
NOV 28	10.11	FEB 27	3.54	MAY 25	4.78	AUG 28	9.95
DEC 27	5.10	MAR 27	2.86	JUN 26	7.64	SEP 26	9.06

421435071165701. Local number, DVW 10.

LOCATION.--Lat 42°14'35", long 71°16'57", Hydrologic Unit 01090001, at Dover Public School about 400 ft (120 m) southwest of and about 400 ft (120 m) west of Center Street in Dover.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 54 ft (16.5 m), screened 52 to 54 ft (15.8 to 16.5 m).

DATUM.--Altitude of land-surface datum is 160 ft (48.8 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.25 ft (9.22 m) below land-surface datum, Feb. 20, 1970; lowest measured, 36.87 ft (11.24 m) below land-surface datum, Jan. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	34.86	JAN 29, 1979	32.28	APR 25, 1979	31.81	JUL 26, 1979	33.24
NOV 27	35.33	FEB 26	31.91	MAY 24	32.04	AUG 27	33.66
DEC 26	35.49	MAR 27	31.57	JUN 25	32.44	SEP 25	33.87

420432071151201. Local number, FXW 3.

LOCATION.--Lat 42°04'32", long 71°15'12", Hydrologic Unit 01090004, at Foxborough State Hospital, near railroad tracks, 100 ft (30 m) east of driveway, and 250 ft (76 m) north of Chestnut Street in Foxborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 32 ft (9.8 m), screened 30 to 32 ft (9.2 to 9.8 m).

DATUM.--Altitude of land-surface datum is 290 ft (88 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.24 ft (4.95 m) below land-surface datum, Mar. 25, 1968; lowest measured, 21.42 ft (6.53 m) below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	20.20	JAN 29, 1979	17.15	APR 25, 1979	17.68	JUL 26, 1979	19.28
NOV 27	20.48	FEB 26	17.95	MAY 24	18.02	AUG 27	18.96
DEC 26	19.44	MAR 27	17.65	JUN 25	18.52	SEP 26	18.90

420545071174001. Local number NNW 27.

LOCATION.--Lat 42°05'45", long 71°17'40", Hydrologic Unit 01090001, 15 ft (4.8 m) northwest of State Highway 1A and 0.1 mi (0.16 km) northeast of Valley Street in Norfolk.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 18.4 ft (5.6 m), screened 16.4 to 18.4 ft (5.0 to 5.6 m).

DATUM.--Altitude of land-surface datum is 160 ft (48.8 m). Measuring point: Top of casing, 1.7 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.73 ft (1.44 m), revised, below land-surface datum, Sept. 26, 1975; lowest measured, 7.87 ft (2.40 m) below land-surface datum, Aug. 24, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	6.46	JAN 29, 1979	5.02	APR 25, 1979	5.90	JUL 26, 1979	6.70
NOV 27	6.57	FEB 26	5.65	MAY 24	5.79	AUG 27	6.14
DEC 26	5.90	MAR 27	5.74	JUN 25	6.34	SEP 26	6.21

420954070564501. Local number, XGW 2.

LOCATION.--Lat 42°09'54", long 70°56'45", Hydrologic Unit 01090001, 40 ft (12 m) south of main gate guard house at U.S. Naval Air Station at Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 30 ft (9.1 m), screened 28 to 30 ft (8.5 to 9.1 m).

DATUM.--Altitude of land-surface datum is 180 ft (55 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.25 ft (1.60 m), revised, below land-surface datum, Jan. 28, 1970; lowest measured, 22.06 ft (6.72 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	19.56	JAN 30, 1979	6.89	APR 26, 1979	8.67	JUL 27, 1979	15.11
NOV 27	20.06	FEB 27	7.82	MAY 25	8.06	AUG 28	16.69
DEC 27	15.71	MAR 27	7.83	JUN 26	11.63	SEP 25	17.97

421147070571901. Local number, XGW 3.

LOCATION.--Lat 42°11'47", long 70°57'19", Hydrologic Unit 01090001, about 100 ft (30 m) east of State Highway 18 and about 600 ft (183 m) off State Highway 3 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 22.3 ft (6.8 m), screened 20.3 to 22.3 ft (6.2 to 6.8 m).

DATUM.--Altitude of land-surface datum is 90 ft (27.4 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

REMARKS.--Water level affected by pumping.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.91 ft (0.89 m) below land-surface datum, Jan. 27, 1978; lowest, 18.10 ft (5.52 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	5.94	JAN 30, 1979	3.76	APR 26, 1979	4.67	JUL 27, 1979	7.10
NOV 28	5.28	FEB 27	3.60	MAY 25	4.09	AUG 28	6.06
DEC 27	4.59	MAR 27	4.41	JUN 26	7.64	SEP 25	5.39

421120070562801. Local number, XGW 4.

LOCATION.--Lat 42°11'20", long 70°56'28", Hydrologic Unit 01090001, at median strip of State Highway 3 and 0.8 mi (1.3 km) south of State Highway 18 in Weymouth.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 22.6 ft (6.9 m), screened 20.6 to 22.6 ft (6.3 to 6.9 m).

DATUM.--Altitude of land-surface datum is 90 ft (27.4 m). Measuring point: Top of casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 4.77 ft (1.45 m) below land-surface datum, Mar. 26, 1969; lowest measured, 10.45 ft (3.19 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	7.67	JAN 30, 1979	5.42	APR 26, 1979	6.67	JUL 27, 1979	7.91
NOV 28	7.18	FEB 27	5.45	MAY 25	5.60	AUG 28	7.63
DEC 27	6.48	MAR 27	6.30	JUN 26	7.47	SEP 25	7.27

GROUND-WATER LEVELS IN MASSACHUSETTS

PLYMOUTH COUNTY

420321070433502. Local number, D4W 79.

LOCATION.--Lat 42°03'21", long 70°43'35", Hydrologic Unit 01090002, 30 ft (9.1 m) west of State Highway 3 and about 300 ft (91 m) north of State Highway 14 in Duxbury.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and silty clay of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 23.5 ft (7.2 m), screened 21.5 to 23.5 ft (6.6 to 7.2 m).

DATUM.--Altitude of land-surface datum is 55 ft (16.8 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.10 ft (1.86 m) below land-surface datum, Jan. 26, 1978; lowest measured, 10.68 ft (3.26 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	8.72	JAN 30, 1979	6.79	APR 26, 1979	8.05	JUL 27, 1979	8.98
NOV 28	8.40	FEB 27	6.98	MAY 25	7.11	AUG 28	8.36
DEC 27	7.68	MAR 27	7.79	JUN 26	8.49	SEP 25	8.39

420317070432901. Local number, D4W 80.

LOCATION.--Lat 42°03'17", long 70°43'29", Hydrologic Unit 01090002, 78 ft (23.8 m) south of State Highway 14 and 250 ft (76.2 m) east of State Highway 3 in Duxbury.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Bedrock.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6.0 in (0.15 m), depth 181 ft (54.6 m), cased to 59 ft (18.0 m), open hole.

DATUM.--Altitude of land-surface datum is 65 ft (19.8 m). Measuring point: Top of hole in concrete cover, at land-surface datum.

PERIOD OF RECORD.--April 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.53 ft (5.95 m) below land-surface datum, Jan. 26, 1978; lowest measured, 24.02 ft (7.32 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	22.45	JAN 30, 1979	20.03	APR 26, 1979	21.63	JUL 27, 1979	22.28
NOV 28	22.14	FEB 27	20.34	MAY 25	20.79	AUG 28	21.72
DEC 27	21.08	MAR 27	21.35	JUN 26	21.80	SEP 25	22.03

420056070575701. Local number, EBW 30.

LOCATION.--Lat 42°00'56", long 70°57'57", Hydrologic Unit 01090004, about 100 ft (30.5 m) north of State Highway 106 and 800 ft (244 m) west of State Highway 18 in East Bridgewater.

Owner: East Bridgewater Medical Center.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 24 ft (7.3 m), cased with stone to 24 ft (7.3 m), open end.

DATUM.--Altitude of land-surface datum is 85 ft (25.9 m). Measuring point: Top of stone casing curb, 2.6 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--July 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.40 ft (0.73 m) below land-surface datum, Mar. 27, 1969; lowest measured, 17.83 ft (5.43 m) below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	15.30	JAN 30, 1979	2.89	APR 26, 1979	4.74	JUL 27, 1979	9.67
NOV 28	15.92	FEB 27	3.42	MAY 25	2.67	AUG 28	9.10
DEC 27	13.04	MAR 27	3.77	JUN 26	8.13	SEP 25	9.40

415820070522801. Local number, HBW 97.

LOCATION.--Lat 41°58'20", long 70°52'28", Hydrologic Unit 01090004, 1,950 ft (594 m) west of South Street and 130 ft (39.6 m) south of River Street in Halifax.

Owner: Richard W. Green.

AQUIFER.--Sandstone interbedded with shale and conglomerate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 3.0 in (0.08 m), depth 945 ft (288.0 m), cased to 90 ft (27.4 m), open hole.

DATUM.--Altitude of land-surface datum is 35 ft (11 m). Measuring point: Top of casing, 0.5 ft (0.2 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.30 ft (0.70 m) below land-surface datum, Jan. 26, 1978; lowest measured, 4.97 ft (1.51 m) below land-surface datum, Sept. 26, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	4.79	JAN 30, 1979	2.90	APR 26, 1979	3.37	JUL 27, 1979	4.32
NOV 28	4.44	FEB 27	2.82	MAY 25	2.76	AUG 28	3.92
DEC 27	3.84	MAR 27	3.24	JUN 26	3.90	SEP 25	3.88

420353070520301. Local number, HGW 76.

LOCATION.--Lat 42°03'53", long 70°52'03", Hydrologic Unit 01090002, 100 ft (30.5 m) south of State Highway 14 and 150 ft (46 m) west of town hall in Hanson.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 26.6 ft (8.1 m), screened 24.6 to 26.6 ft (7.5 to 8.1 m).

DATUM.--Altitude of land-surface datum is 71 ft (21.6 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

REMARKS.--Water level affected by Wampatuck Pond.

PERIOD OF RECORD.--June 1964 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.50 ft (0.76 m) below land-surface datum, Mar. 26, 1969; lowest measured, 6.50 ft (1.98 m) below land-surface datum, Sept. 27, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	4.74	JAN 30, 1979	3.39	APR 26, 1979	4.46	JUL 27, 1979	5.19
NOV 28	4.55	FEB 27	3.60	MAY 25	3.54	AUG 28	4.96
DEC 27	4.25	MAR 27	4.21	JUN 26	4.88	SEP 25	4.84

415228070554601. Local number, LKW 14.

LOCATION.--Lat 41°52'28", long 70°55'46", Hydrologic Unit 01090004, 30 ft (9 m) west of parking lot at Lakeville State Hospital in Lakeville.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 41 ft (12.5 m), screened 39 to 41 ft (11.9 to 12.5 m).

DATUM.--Altitude of land-surface datum is 105 ft (32 m). Measuring point: Top of casing, 1.5 ft (0.5 m) above land-surface datum.

PERIOD OF RECORD.--June 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.84 ft (3.00 m) below land-surface datum, May 29, 1979; lowest, 23.59 ft (7.19 m) below land-surface datum, Oct. 26, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	15.70	JAN 05, 1979	14.85	APR 05, 1979	11.46	JUL 05, 1979	13.12
10	15.83	10	14.27	10	11.44	10	13.49
15	15.93	15	13.73	15	11.25	15	13.82
20	16.05	20	12.61	20	11.35	20	14.14
25	16.18	25	11.48	25	11.55	25	14.46
31	16.35	31	10.45	30	10.93	31	14.77
NOV 05	16.40	FEB 05	10.86	MAY 05	10.86	AUG 05	14.93
10	16.49	10	11.34	10	11.25	10	14.82
15	16.57	15	11.72	15	11.38	15	14.55
20	16.69	20	12.04	20	11.15	20	14.27
25	16.76	25	12.25	25	10.35	25	14.25
30	16.81	28	11.32	31	9.96	31	14.51
DEC 05	16.70	MAR 05	10.81	JUN 05	10.45	SEP 05	14.78
10	16.34	10	10.30	10	10.90	10	14.92
15	16.01	15	10.33	15	11.37	15	14.99
20	15.65	20	10.65	20	11.84	20	15.15
25	15.32	25	10.96	25	12.28	25	15.24
31	15.10	31	11.28	30	12.72	30	15.26

WTR YEAR 1979 MAX 9.84 MAY 29, 1979 MIN 16.87 DEC. 3, 1978

GROUND-WATER LEVELS IN MASSACHUSETTS

415433070583302. Local number, MTW 82.

LOCATION.--Lat 41°54'33", long 70°58'33", Hydrologic Unit 01090004, 15 ft (4.6 m) southeast of southbound side of State Highway 25 and 435 ft (133 m) southeast of Puddingshear Brook in Middleborough.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 26.5 ft (8.1 m), screened 24.5 to 26.5 ft (7.5 to 8.1 m).

DATUM.--Altitude of land-surface datum is 45 ft (13.8 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-table level measured, 1.57 ft (0.48 m) below land-surface datum, Dec. 29, 1969; lowest measured, 17.30 ft (5.27 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1978	15.86	JAN 30, 1979	1.86	APR 26, 1979	5.54	JUL 27, 1979	12.48
NOV 28	15.94	FEB 27	4.68	MAY 25	5.37	AUG 28	9.04
DEC 27	9.47	MAR 27	4.45	JUN 26	7.18	SEP 26	11.90

415453070434901. Local number, PWV 22.

LOCATION.--Lat 41°54'53", long 70°43'49", Hydrologic Unit 01090004, 10 ft (3 m) from northeast corner of main building at Plymouth Airport.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 1.25 in (0.03 m), depth 42 ft (12.8 m) screened 40 to 42 ft (12.2 to 12.8 m).

DATUM.--Altitude of land-surface datum is 145 ft (44 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.82 ft (6.04 m) below land-surface datum, May 26, 1958; lowest measured, 28.99 ft (8.84 m) below land-surface datum, Jan. 28, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	23.62	JAN 30, 1979	22.54	APR 25, 1979	22.07	JUL 27, 1979	22.05
NOV 28	24.34	FEB 27	22.06	MAY 24	22.19	AUG 28	22.66
DEC 27	24.36	MAR 28	21.70	JUN 25	21.38	SEP 25	23.29

414518070435701. Local number, WFW 51.

LOCATION.--Lat 41°45'18", long 70°43'57", Hydrologic Unit 01090002, 50 ft (15 m) east of U.S. Highway 6 and 100 ft (30 m) north of Exxon service station in Wareham.

Owner: Thomas B. Rogers.

AQUIFER.--Glacial outwash of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 12.5 ft (3.8 m), cased with tile to 12.5 ft (3.8 m), open end.

DATUM.--Altitude of land-surface datum is 21 ft (6.4 m). Measuring point: Top edge of tile casing, 2.5 ft (0.8 m) above land-surface datum.

PERIOD OF RECORD.--July 1959 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft (1.02 m) below land-surface datum, Jan. 26, 1978; lowest measured, 10.98 ft (3.35 m) below land-surface datum, Dec. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	8.78	JAN 29, 1979	6.10	APR 25, 1979	5.68	JUL 26, 1979	6.99
NOV 27	9.26	FEB 26	6.36	MAY 24	5.70	AUG 27	7.52
DEC 26	8.03	MAR 28	5.58	JUN 25	5.92	SEP 26	8.11

SUFFOLK COUNTY

422133071033801. Local number, BGW 925.

LOCATION.--Lat 42°21'33", long 71°03'38", Hydrologic Unit 01090001, in basement room at Scolley Building, intersection of Court and Tremont Streets in Boston.

Owner: United States Trust.

AQUIFER.--Cambridge slate of Carboniferous age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8.0 in (0.20 m), depth 624 ft (190.2 m), cased to 90 ft (27.4 m), open hole.

DATUM.--Altitude of land-surface datum is 35 ft (11.7 m). Measuring point: Top of casing, 15 ft (4.6 m) below land-surface datum.

REMARKS.--Water levels affected by tide and barometric pressure.

PERIOD OF RECORD.--February 1960 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water-level measured, 18.61 ft (5.67 m) below measuring point, Oct. 31, 1975; lowest measured, 26.20 ft (7.99 m) below measuring point, Oct. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	21.54	JAN 05, 1979	21.32	APR 05, 1979	21.15	JUL 05, 1979	22.57
10	21.73	10	21.25	10	21.28	10	22.70
15	21.76	15	20.88	15	21.4	15	22.77
20	21.76	20	21.04	20	21.5	20	22.75
25	21.71	25	20.56	25	21.75	25	22.75
31	21.64	31	20.84	30	21.80	31	22.77
NOV 05	21.60	FEB 05	20.77	MAY 05	21.76	AUG 05	22.72
10	21.58	10	20.86	10	21.9	10	22.65
15	21.44	15	20.84	15	22.0	15	22.75
20	21.39	20	20.82	20	22.1	20	22.79
25	21.08	25	20.87	25	22.2	25	22.82
30	21.28	28	20.88	31	22.36	31	22.84
DEC 05	21.12	MAR 05	20.88	JUN 05	22.28	SEP 05	22.82
10	21.21	10	20.82	10	22.34	10	22.71
15	21.31	15	20.88	15	22.42	15	22.61
20	21.26	20	20.89	20	22.53	20	22.87
25	20.83	25	20.88	25	22.49	25	22.80
31	21.32	31	21.23	30	22.51	30	22.87
WTR YEAR 1979	MAX 20.56	JAN. 25, 1979	MIN 22.94	Sept. 24, 1979			

WORCESTER COUNTY

422058072085501. Local number, HHW 1.

LOCATION.--Lat 42°20'58", long 72°08'55", Hydrologic Unit 01080204, 30 ft (9.1 m) southeast of State Highway 32 and 0.6 mi (0.96 km) southwest of Hardwick Road in Hardwick.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 33.2 ft (10.1 m), screened 31.2 to 33.2 ft (9.5 to 10.1 m).

DATUM.--Altitude of land-surface datum is 580 ft (177 m). Measuring point: Top of casing, 3.5 ft (1.1 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.23 ft (2.81 m) below land-surface datum, Apr. 25, 1969; lowest measured, 17.77 ft (5.42 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	16.69	JAN 29, 1979	10.93	APR 26, 1979	12.26	JUL 26, 1979	15.10
NOV 28	16.95	FEB 22	14.32	MAY 29	12.29	AUG 28	12.39
DEC 26	16.50	MAR 28	12.11	JUN 27	14.80	SEP 25	12.69

GROUND-WATER LEVELS IN MASSACHUSETTS

421837071380901. Local number, NUW 38.

LOCATION.--Lat 42°18'37", long 71°38'09", Hydrologic Unit 01070005, 0.7 mi (1.13 km) south of U.S. Highway 20 and about 400 ft (122 m) west of School Street in Northborough.

Owner: Eric MacLean.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 14 ft (4.3 m), cased with concrete to 14 ft (4.3 m), open end.

DATUM.--Altitude of land-surface datum is 285 ft (86.9 m). Measuring point: Top edge of concrete casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--August 1962 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.96 ft (0.29 m) below land-surface datum, Mar. 25, 1969; lowest measured, 13.30 ft (4.05 m) below land-surface datum, Sept. 28, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	9.71	JAN 23, 1979	2.83	APR 24, 1979	4.66	JUL 26, 1979	7.78
NOV 22	9.10	FEB 26	3.52	MAY 24	4.81	AUG 28	6.29
DEC 21	6.12	MAR 28	3.55	JUN 25	5.95	SEP 21	7.22

420610071421401. Local number, NXW 1.

LOCATION.--Lat 42°06'10", long 71°42'14", Hydrologic Unit 01090003, about 100 ft (30 m) northeast of the intersection of State Highway 146 and Main Street in Northbridge.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2 in (0.05 m), depth 12 ft (3.7 m), screened 10 to 12 ft (3.0 to 3.7 m).

DATUM.--Altitude of land-surface datum is 370 ft (113 m). Measuring point: Top of casing, 2.0 ft (0.6 m) above land-surface datum.

PERIOD OF RECORD.--January 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.88 ft (0.57 m) below land-surface datum, Mar. 27, 1978; lowest measured, 4.75 ft (1.45 m) below land-surface datum, Nov. 22, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	3.00	JAN 23, 1979	2.20	APR 24, 1979	2.61	JUL 26, 1979	2.90
NOV 22	3.16	FEB 27	2.50	MAY 24	2.58	AUG 28	2.87
DEC 21	2.79	MAR 28	2.50	JUN 27	2.72	SEP 24	3.18

422805071480801. Local number, SYW 1.

LOCATION.--Lat 42°28'05", long 71°48'08", Hydrologic Unit 01070004, 45 ft (14 m) northeast of Justice Hill Road and 0.8 mi (1.3 km) west of South Nelson Road in Sterling.

Owner: N. Lanciani.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 15 ft (4.5 m), cased with stone to 15 ft (4.5 m), open end.

DATUM.--Altitude of land-surface datum is 710 ft (220 m). Measuring point: Top edge of angle iron, at land-surface datum.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.66 ft (0.51 m) below land-surface datum, Mar. 26, 1969; dry, Nov. 28, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	13.09	JAN 29, 1979	2.99	APR 24, 1979	3.07	JUL 26, 1979	7.62
NOV 22	13.30	FEB 26	3.02	MAY 24	3.05	AUG 29	4.22
DEC 21	9.82	MAR 28	3.03	JUN 25	5.34	SEP 21	6.06

423717072043101. Local number, TMW 3.

LOCATION.--Lat 42°37'17", long 72°04'31", Hydrologic Unit 01080202, 60 ft (18.3 m) east of U.S. Highway 202 and 0.2 mi (0.32 km) south of Winchendon town line in Templeton.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 14 ft (4.3 m), screened 12 to 14 ft (3.7 to 4.3 m).

DATUM.--Altitude of land-surface datum is 900 ft (270 m). Measuring point: Top of casing, 4.2 ft (1.2 m) above land-surface datum.

PERIOD OF RECORD.--December 1957 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.46 ft (0.75 m) below land-surface datum, Mar. 26, 1969; lowest measured, 5.10 ft (1.55 m) below land-surface datum, Sept. 29, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	3.88	JAN 29, 1979	2.72	APR 26, 1979	3.35	JUL 26, 1979	4.10
NOV 30	3.80	FEB 22	3.60	MAY 29	3.24	AUG 28	3.73
DEC 21	3.66	MAR 28	3.13	JUN 27	4.04	SEP 24	3.55

420313071514201. Local number, WLW 1.

LOCATION.--Lat 42°03'13", long 71°51'42", Hydrologic Unit 01100001, 100 ft (30.5 m) east of State Highway 52 and 100 ft (30.5 m) south of Memorial Beach Drive in Webster.

Owner: Town of Webster.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 27.0 ft (8.2 m) cased to 27.0 ft (8.2 m), open end.

DATUM.--Altitude of land-surface datum is 500 ft (152 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--September 1958 to current year. Prior to October 1974, published in Massachusetts Hydrologic Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.28 ft (3.13 m) below land-surface datum, Mar. 25, 1968; lowest measured, 17.90 ft (5.46 m) below land-surface datum, Dec. 20, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	15.02	JAN 23, 1979	12.80	APR 24, 1979	13.77	JUL 26, 1979	15.10
NOV 22	15.36	FEB 27	12.93	MAY 24	13.67	AUG 28	15.12
DEC 21	14.97	MAR 28	13.44	JUN 27	14.10	SEP 24	15.20

421410072081301. Local number, WUW 2.

LOCATION.--Lat 42°14'10", long 72°08'13", Hydrologic Unit 01080204, about 50 ft (15 m) north of State Highway 9 and about 500 ft (150 m) south of State Highway 67 in West Brookfield.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 1.25 in (0.03 m), depth 43.0 ft (13.1 m), screened 40 to 43 ft (12.2 to 13.1 m).

DATUM.--Altitude of land-surface datum is 630 ft (192 m). Measuring point: Top of casing, 1.0 ft (0.3 m) above land-surface datum.

PERIOD OF RECORD.--October 1959 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.17 ft (5.23 m) below land-surface datum, Apr. 24, 1973; lowest measured, 23.63 ft (7.20 m) below land-surface datum, Feb. 21, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	19.53	JAN 29, 1979	19.21	APR 26, 1979	18.32	JUL 26, 1979	18.50
NOV 28	19.89	FEB 22	19.08	MAY 29	17.89	AUG 28	18.62
DEC 26	20.03	MAR 28	18.61	JUN 27	18.17	SEP 25	18.77

421522072113401. Local number, WUW 10.

LOCATION.--Lat 42°15'22", long 72°11'34", Hydrologic Unit 01080204, 15 ft (4.6 m) east of Coy Hill Road and 1,850 ft (569 m) south of State Highway 9 in West Brookfield.

Owner: The Commonwealth of Massachusetts Department of Public Works.

AQUIFER.--Brimfield schist.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2.5 in (0.06 m), depth 64.5 ft (19.6 m), cased to 40 ft (12.2 m), open hole.

DATUM.--Land-surface datum is 833.23 ft (253.99 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.85 ft (0.87 m) above land-surface datum.

PERIOD OF RECORD.--October 1970 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft (0.48 m) below land-surface datum, Feb. 2, 1976; lowest measured, 12.12 ft (3.69 m) below land-surface datum, Oct. 27, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	11.15	JAN 29, 1979	1.96	APR 26, 1979	2.47	JUL 26, 1979	8.60
NOV 28	11.55	FEB 22	5.17	MAY 29	2.24	AUG 28	6.77
DEC 26	9.54	MAR 28	5.34	JUN 27	6.85	SEP 25	6.49

423430072015201. Local number, XNW 13.

LOCATION.--Lat 42°42'04", long 72°01'52", Hydrologic Unit 01080202, about 50 ft (15 m) east of Forristall Road, 0.2 mi (0.3 km) north of Elmwood Road, and 1.6 mi (2.6 km) northeast of Winchendon.

Owner: W. B. Hart.

AQUIFER.--Glacial till of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 12 ft (3.7 m), cased with stone to 12 ft (3.7 m), open end.

DATUM.--Land-surface datum is 1,209.36 ft (368.61 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of extension pipe, 3.8 ft (1.2 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.86 ft (0.57 m) below land-surface datum, Mar. 20, 1948; lowest measured, 13.36 ft (4.07 m) below land-surface datum, Dec. 24, 1964.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25, 1978	12.47	JAN 29, 1979	3.46	APR 26, 1979	3.50	JUL 26, 1979	7.05
NOV 30	12.67	FEB 22	5.41	MAY 29	3.42	AUG 28	5.38
DEC 26	11.14	MAR 28	2.97	JUN 27	6.59	SEP 24	4.59

421538071451301. Local number, XSW 274.

LOCATION.--Lat 42°15'38", long 71°45'13", Hydrologic Unit 01090003, about 300 ft (91.4 m) north of Hamilton Street and about 300 ft (91.4 m) east of North Lake Avenue in Worcester.

Owner: U.S. Geological Survey.

AQUIFER.--Glacial sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Augered observation water-table well, diameter 2.0 in (0.05 m), depth 54.6 ft (16.6 m), screened 52.6 to 54.6 ft (16.0 to 16.6 m).

DATUM.--Altitude of land-surface datum is 400 ft (122 m). Measuring point: Top of casing, 3.0 ft (0.9 m) above land-surface datum.

REMARKS.--Water levels affected by Lake Quinsigamond.

PERIOD OF RECORD.--January 1965 to current year. Prior to October 1974, published in Massachusetts Hydrologic-Data Report No. 17.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.23 ft (6.76 m) below land-surface datum, Mar. 27, 1972; lowest measured, 24.62 ft (7.50 m) below land-surface datum, Oct. 25, 1968.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1978	23.74	JAN 23, 1979	22.27	APR 24, 1979	23.30	JUL 26, 1979	23.49
NOV 22	23.72	FEB 27	22.85	MAY 24	23.32	AUG 28	23.32
DEC 21	23.67	MAR 28	23.15	JUN 25	23.58	SEP 21	23.98

KENT COUNTY

414022071332801. Local number, COW 411.

LOCATION.--Lat 41°40'22", long 71°33'28", Hydrologic Unit 01090004, town of Coventry, about 75 ft (23 m) west of house on Powhattan Avenue, 1.3 mi (2.1 km) southeast of Washington.

Owner: Robert Card.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 26 ft (7.9 m), cased with concrete to 26 ft (7.9 m), open end.

DATUM.--Altitude of land-surface datum is 260 ft (79 m). Measuring point: Hole in top of wooden cover, 1.98 ft (0.60 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.77 ft (5.11 m) below land-surface datum, Jan. 27, 1979; lowest measured, 23.73 ft (7.23 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	22.02	JAN 27, 1979	16.77	APR 20, 1979	20.39	JUL 26, 1979	21.12
NOV 24	22.19	FEB 24	20.52	MAY 26	16.94	AUG 25	20.76
DEC 23	21.49	MAR 24	19.78	JUN 23	19.52	SEP 22	21.66

413907071465001. Local number, GWG 181.

LOCATION.--Lat 41°39'07", long 71°46'50", Hydrologic Unit 01090005, town of West Greenwich, about 50 ft (15 m) from southeast corner of a house 1.3 mi (2.1 km) north of intersection of Hazard and Muddy Brook Roads, and 1.8 mi (2.9 km) northwest of West Greenwich Center.

Owner: E. Lambert.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 18.5 ft (5.64 m), lined with stone to 18.5 ft (5.64 m), shored.

DATUM.--Altitude of land-surface datum is 380 ft (115 m). Measuring point: Edge of shelter floor, 2.19 ft (0.67 m) above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.15 ft (3.70 m) below land-surface datum, Jan. 27, 1979; lowest measured, 17.68 ft (5.39 m) below land-surface datum, Sept. 28, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	16.75	JAN 27, 1979	12.15	APR 20, 1979	15.61	JUL 26, 1979	16.61
NOV 24	16.71	FEB 24	15.60	MAY 26	14.58	AUG 25	15.62
DEC 26	15.38	MAR 24	15.08	JUN 23	16.31	SEP 22	15.69

PROVIDENCE COUNTY

415710071402201. Local number, BUW 187.

LOCATION.--Lat 41°57'10", long 71°40'22", Hydrologic Unit 01090003, town of Burrillville, 25 ft (8 m) east of road and 75 ft (23 m) southwest of a house 0.6 mi (1.0 km) north of intersection of Harrisville and Lapham Farm Roads, and 0.9 mi (1.4 km) south of Harrisville.

Owner: Brothers of the Sacred Heart.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 19.8 ft (6.04 m), lined with stone to 19.8 ft (6.04 m), shored.

DATUM.--Altitude of land-surface datum is 462 ft (141 m). Measuring point: Hole in base of shelter, 0.59 ft (0.18 m) above land-surface datum.

PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.15 ft (3.71 m) below land-surface datum, Apr. 9, 1970; lowest, 18.83 (5.74 m) below land-surface datum, Nov. 3, 1970.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	17.91	JAN 27, 1979	14.57	APR 20, 1979	13.65	JUL 26, 1979	15.80
NOV 24	18.06	FEB 24	14.62	MAY 26	13.78	AUG 25	15.99
DEC 23	17.04	MAR 24	13.57	JUN 23	14.12	SEP 22	15.97

GROUND-WATER LEVELS IN RHODE ISLAND

415626071254601. Local number, CUV 265.

LOCATION.--Lat 41°56'26", long 71°25'46", Hydrologic Unit 01090003, town of Cumberland, at 27 Scott Street, 900 ft (270 m) northeast of intersection of Scott Street and Mendon Road in Ashton.

Owner: Francis J. Varone.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 20 ft (6.1 m), lined with stone to 20 ft (6.1 m), shored.

DATUM.--Altitude of land-surface datum is 130 ft (40 m). Measuring point: Hole in wooden cover, 0.06 ft (0.02 m) above land-surface datum.

PERIOD OF RECORD.--August 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.20 ft (2.80 m) below land-surface datum, Jan. 27, 1979; lowest measured, 17.20 (5.24 m) below land-surface datum, Sept. 29, 1949.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	14.70	JAN 27, 1979	9.20	APR 20, 1979	11.71	JUL 26, 1979	14.47
NOV 24	14.49	FEB 24	12.24	MAY 26	11.72	AUG 25	12.99
DEC 23	11.62	MAR 24	11.38	JUN 23	12.86	SEP 22	13.75

415437071242201. Local number, LIW 84.

LOCATION.--Lat 41°54'37", long 71°24'22", Hydrologic Unit 01090003, town of Lincoln, at north side of Maplehurst Farms building, and 800 ft (240 m) west of Blackstone River bridge in Lonsdale.

Owner: Maplehurst Farm, Inc.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 107 ft (32.6 m), cased to 107 ft (32.6 m), open end.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Inside lower lip of 8-in (0.20 m) pipe, 3.32 ft (1.01 m) above land-surface datum.

REMARKS.--Water level affected by Blackstone River floods.

PERIOD OF RECORD.--June 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.76 ft (0.23 m) above land-surface datum, Jan. 27, 1979; lowest measured, 7.30 ft (2.23 m) below land-surface datum, Aug. 24, 1966.

WATER LEVEL, IN FEET ABOVE OR BELOW(-) LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	-5.96	JAN 27, 1979	0.76	APR 20, 1979	-5.03	JUL 26, 1979	-5.40
NOV 24	-6.41	FEB 24	-4.85	MAY 26	-2.07	AUG 25	-5.16
DEC 23	-5.82	MAR 24	-4.75	JUN 23	-5.17	SEP 22	-4.78

415948071325001. Local number, NSW 21.

LOCATION.--Lat 41°59'48", long 71°32'50", Hydrologic Unit 01090003, town of North Smithfield, 500 ft (152 m) southwest of State Highway 146A, 900 ft (270 m) west of intersection of State Highway 146A and Harkness Road at Branch Village.

Owner: Thomas E. Esty.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug domestic water-table well, diameter 24 in (0.61 m), depth 16 ft (4.9 m), cased with tile to 16 ft (4.9 m), open end.

DATUM.--Land-surface datum is 238.68 ft (72.77 m) National Geodetic Vertical Datum of 1929. Measuring point: Hole in wooden cover at top of tile casing, 2.08 ft (0.63 m) below land-surface datum.

REMARKS.--Well used for domestic supply. Water levels affected by pumping.

PERIOD OF RECORD.--May 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.67 ft (1.12 m) below land-surface datum, Mar. 26, 1969; lowest measured, 11.71 ft (3.57 m) below land-surface datum, Oct. 28, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	10.52	JAN 27, 1979	3.73	APR 20, 1979	6.71	JUL 26, 1979	8.95
NOV 24	10.70	FEB 24	5.72	MAY 26	5.93	AUG 25	8.86
DEC 23	8.64	MAR 24	6.60	JUN 23	8.57	SEP 22	8.68

415318071220401. Local number, PAW 136.

LOCATION.--Lat 41°53'18", long 71°22'04", Hydrologic Unit 01090004, city of Pawtucket, at 314 Woodbine Street, and 1,500 ft (457 m) northeast of intersection of Cottage Street and Central Avenue.

Owner: Greenhalgh Mills, Inc.

AQUIFER.--Gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 2 in (0.05 m), depth 43 ft (13.11 m), cased to about 40 ft (12.2 m), screened about 40 to 43 ft (12.2 to 13.1 m).

DATUM.--Altitude of land-surface datum is 86 ft (26 m). Measuring point: Top of casing, 3.15 ft (0.96 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.32 ft (0.71 m) below land-surface datum, Dec. 27, 1972; lowest measured, 7.28 ft (2.22 m) below land-surface datum, Jan. 29, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	5.48	JAN 27, 1979	3.05	APR 20, 1979	3.43	JUL 26, 1979	4.02
NOV 24	5.77	FEB 24	3.49	MAY 26	2.85	AUG 25	3.99
DEC 23	5.33	MAR 24	3.04	JUN 23	3.20	SEP 22	4.30

414746071255601. Local number, PRW 48.

LOCATION.--Lat 41°47'46", long 71°25'56", Hydrologic Unit 01090004, city of Providence, at 333 Adelaide Avenue, and 800 ft (240 m) northwest of Adelaide and 800 ft (240 m) west of Narragansett Avenues.

Owner: Gorham Division of Textron.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation artesian well, diameter 8 in (0.20 m), depth 124 ft (37.8 m), cased to 116 ft (35.4 m), screened 116 to 124 ft (35.4 to 37.8 m).

DATUM.--Land-surface datum is 45.79 ft (13.96 m), National Geodetic Vertical Datum of 1929. Measuring point:

Top edge of hole in center of steel cover, 0.48 ft (0.15 m) below land-surface datum.

REMARKS.--Water-level affected by pumping from one or more nearby wells.

PERIOD OF RECORD.--December 1944 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.31 ft (1.31 m) below land-surface datum, Jan. 27, 1979; lowest, 10.22 ft (3.12 m) below land-surface datum, Oct. 20, 1947.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	6.51	JAN 27, 1979	4.31	APR 20, 1979	5.39	JUL 26, 1979	5.48
NOV 24	6.54	FEB 24	4.94	MAY 26	4.71	AUG 25	5.70
DEC 26	6.33	MAR 24	4.98	JUN 23	5.17	SEP 22	5.80

414939071260801. Local number, PRW 1051.

LOCATION.--Lat 41°49'39", long 71°26'08", Hydrologic Unit 01090004, city of Providence, at 10 Eagle Street, and 200 ft (60 m) south of Valley and 300 ft (690 m) east of Eagle Streets.

Owner: Licht Industries.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 10 in (0.25 m), depth 82 ft (25.0 m), cased to 82 ft (25.0 m), open end.

DATUM.--Altitude of land-surface datum is 10 ft (3.0 m). Measuring point: Floor of recorder shelter, 1.65 ft (0.50 m) above land-surface datum.

REMARKS.--Water level affected by pumping from one or more nearby wells.

PERIOD OF RECORD.--January 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level flowing at land-surface datum, July 26, 1978, Mar. 24, May 26, July 26, and Sept. 22, 1979; lowest measured, 16.10 ft (4.91 m) below land-surface datum, Jan. 16, 1948.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	2.18	JAN 27, 1979	0.10	APR 20, 1979	0.02	JUL 26, 1979	0.0
NOV 24	1.90	FEB 24	0.75	MAY 26	0.0	AUG 25	0.60
DEC 23	1.83	MAR 24	0.0	JUN 23	0.60	SEP 22	0.0

WASHINGTON COUNTY

412214071394001. Local number, CHW 18.

LOCATION.--Lat 41°22'14", long 71°39'40", Hydrologic Unit 01090005, town of Charlestown, 1,900 ft (579 m) southeast of U.S. Highway 1, at former U.S. Navy Auxiliary Air Station.

Owner: U.S. General Services Administration.

AQUIFER.--Sand and clay of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table, diameter 8 in (0.20 m), depth 32 ft (9.8 m), cased to 32 ft (9.8 m), open end.

DATUM.--Altitude of land-surface datum is 26 ft (7.9 m). Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.89 ft (3.62 m) below land-surface datum, Jan. 27, 1979; lowest measured, 21.63 ft (6.59 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	19.25	JAN 27, 1979	11.89	APR 20, 1979	14.90	JUL 26, 1979	17.20
NOV 24	19.83	FEB 24	14.66	MAY 26	13.73	AUG 25	18.19
DEC 23	17.43	MAR 24	13.53	JUN 23	14.73	SEP 22	18.25

413423071431901. Local number, EXW 6.

LOCATION.--Lat 41°34'23", long 71°43'19", Hydrologic Unit 01090005, town of Exeter, in Arcadia State Forest, 150 ft (46 m) west of Wood River, 250 ft (76 m) south of Ten Rod Road, and 2.0 mi (3.2 m) west of Millville.

Owner: State Dept. of Natural Resources.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 10 ft (3.0 m), cased with concrete to 10 ft (3.0 m), open end.

DATUM.--Altitude of land-surface datum is 130 ft (40 m). Measuring point: Hole on east side of concrete cover, at land-surface datum.

REMARKS.--Water level affected by stage of nearby Wood River.

PERIOD OF RECORD.--December 1948 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.34 ft (0.71 m) below land-surface datum, Jan. 27, 1979; lowest measured, 7.74 ft (2.36 m) below land-surface datum, Sept. 27, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	6.48	JAN 27, 1979	2.34	APR 20, 1979	4.85	JUL 26, 1979	6.17
NOV 24	6.50	FEB 24	4.28	MAY 26	3.19	AUG 25	5.81
DEC 23	5.89	MAR 24	4.40	JUN 23	5.12	SEP 22	5.39

413307071323601. Local number, EXW 16.

LOCATION.--Lat 41°33'07", long 71°32'36", Hydrologic Unit 01090005, town of Exeter, about 25 ft (8 m) southwest of fire station at Exeter State (Dr. Joseph H. Ladd) School.

Owner: State Dept. of Public Welfare.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Driven observation water-table well, diameter 2.5 in (0.06 m), depth 27 ft (8.2 m), cased to 27 ft (8.2 m), open end.

DATUM.--Land-surface datum is 154.47 ft (47.09 m) National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.78 ft (0.54 m) above land-surface datum.

REMARKS.--Nearby well either being pumped or pumped recently.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.38 ft (2.25 m) below land-surface datum, Apr. 15, 1953; lowest measured, 15.40 ft (4.69 m) below land-surface datum, Oct. 30, 1957.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	12.40	JAN 27, 1979	9.17	APR 20, 1979	9.15	JUL 26, 1979	10.22
NOV 24	12.73	FEB 24	8.86	MAY 26	8.84	AUG 25	10.82
DEC 23	12.03	MAR 24	8.71	JUN 23	8.83	SEP 22	10.65

413148071281601. Local number, NKW 255.

LOCATION.--Lat 41°31'48", long 71°28'16", Hydrologic Unit 01090004, town of North Kingston, 100 ft (30 m) east of Pendar Road, 0.6 mi (0.9 km) south of intersection of Pendar and Tower Hill Roads, and 1.0 mi (1.6 km) south of Allenton.

Owner: Carlton Cook.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 14 ft (4.3 m), cased with concrete to 14 ft (4.3 m), open end.

DATUM.--Altitude of land-surface datum is 50 ft (15 m). Measuring point: Top edge of casing on west rim of well, at land-surface datum.

PERIOD OF RECORD.--August 1954 to December 1963, January 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.81 ft (1.16 m) below land-surface datum, Mar. 26, 1968; lowest measured, 12.33 ft (3.76 m) below land-surface datum, Sept. 27, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	9.55	JAN 27, 1979	6.01	APR 20, 1979	7.27	JUL 26, 1979	9.00
NOV 24	9.78	FEB 24	7.41	MAY 26	5.57	AUG 25	8.73
DEC 23	8.89	MAR 24	6.98	JUN 23	7.61	SEP 22	9.15

413308071280501. Local number, NKW 450.

LOCATION.--Lat 41°33'08", long 71°28'05", Hydrologic Unit 01090004, town of North Kingston, at 890 Tower Hill Road in Belleville, and 0.35 mi (0.56 km) north of intersection of alternate U.S. Highway 1 and West Allenton Road.

Owner: Richard S. Bannister.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 24 in (0.61 m), depth 17 ft (5.2 m), cased with concrete to 17 ft (5.2 m), open end.

DATUM.--Altitude of land-surface datum is 60 ft (18 m). Measuring point: Hole in top of wooden base, 2.80 ft (0.85 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.69 ft (2.65 m) below land-surface datum, Jan. 28, 1978; lowest measured, 16.45 ft (5.01 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	14.83	JAN 27, 1979	9.31	APR 20, 1979	10.36	JUL 26, 1979	13.07
NOV 24	14.99	FEB 24	10.60	MAY 26	10.40	AUG 25	13.44
DEC 23	13.42	MAR 24	10.49	JUN 23	11.47	SEP 22	13.60

412717071415301. Local number, RIW 231.

LOCATION.--Lat 41°27'17", long 71°41'53", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) west of Narragansett Trail, and 1.2 mi (1.9 km) north of Wood River Junction.

Owner: N. D. MacLeod.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 29 ft (8.8 m), lined with stone to 29 ft (8.8 m), shored.

DATUM.--Altitude of land-surface datum is 84 ft (26 m). Measuring point: Hole in top of wooden cover, 0.36 ft (0.11 m) above land-surface datum.

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.65 ft (6.29 m) below land-surface datum, May 23, 1958. Dry several times in 1965-67, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	25.81	DEC 23	26.75	FEB 24	22.58	APR 20	21.84	JUN 23	20.99	AUG 25	23.21
NOV 24	26.48	JAN 27	24.25	MAR 24	21.27	MAY 26	21.94	JUL 26	22.13	SEP 22	23.73

412932071374302. Local number RIW 417.

LOCATION.--Lat 41°29'32", long 71°37'43", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) south of State Highway 138, about 75 ft (228 m) west of Beaver River, and 3.3 mi (5.3 km) north of Kenyon.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 6 in (0.15 m), depth 40 ft (12.2 m), cased to 37 ft (11.3 m), screened 37 to 40 ft (11.3 to 12.2 m).

DATUM.--Land-surface datum is 115.56 ft (35.22 m), National Geodetic Vertical Datum of 1929. Measuring point:

Floor of recorder shelter, 0.65 ft (0.20 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.83 ft (1.47 m) below land-surface datum, Jan. 22, 1979; lowest, 7.83 ft (2.39 m) below land-surface datum, Nov. 14, 15, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	7.71	OCT 31, 1978	7.73	NOV 25, 1978	7.66	DEC 20, 1978	7.21
10	7.70	NOV 05	7.78	30	7.54	25	6.99
15	7.66	10	7.80	DEC 05	7.43	31	7.05
20	7.73	15	7.83	10	7.11	JAN 05, 1979	6.36
25	7.76	20	7.67	15	7.15	15	5.70
JAN 20, 1979	5.09	MAR 10, 1979	5.52	APR 25, 1979	6.45	JUN 20, 1979	6.2.E
31	5.17	15	5.64	30	6.13	25	6.43
FFB 05	5.48	20	5.82	MAY 05	6.22	30	6.63
10	5.75	25	5.98	10	6.36	JUL 31	7.26
15	6.05	31	6.16	15	5.98	AUG 05	6.93
20	6.24	APR 05	6.18	31	5.32	25	7.31
25	5.92	10	6.24	JUN 05	5.49	SEP 30	7.42
28	5.58	15	6.25	10	5.75E		
MAR 05	5.85	20	6.35	15	5.98E		

WTR YEAR 1979 MAX 4.83 JAN. 22, 1979 MIN 7.83 NOV. 14, 15, 1978

E, ESTIMATED.

412844071422802. Local number, RIW 600.

LOCATION.--Lat 41°28'44", long 71°42'28", Hydrologic Unit 01090005, town of Richmond, about 50 ft (15 m) west of Hope Valley Road, and 1.5 mi (2.4 km) northeast of Woodville.

Owner: State Department of Transportation.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water-table well, diameter 8 in (0.20 m), depth 54 ft (16.4 m), cased to 49 ft (14.9 m), screened 49 to 54 ft (14.9 to 16.4 m).

DATUM.--Land-surface datum is 100.17 ft (30.53 m), National Geodetic Vertical Datum of 1929. Measuring point:

Floor of recorder shelter, 2.68 ft (0.82 m) above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.21 ft (9.82 m) below land-surface datum, Feb. 1, 1979; lowest, 34.97 ft (10.66 m) below land-surface datum, Nov. 17, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1978	34.60	DEC 31, 1978	34.38	MAR 31, 1979	32.78	JUN 30, 1979	33.12
10	34.62	JAN 05, 1979	34.15	APR 05	32.86	JUL 05	33.24
15	34.67	10	33.78	10	32.94	10	33.37
20	34.70	15	33.44	15	33.03	15	33.50
25	34.75	20	33.19	20	33.08	20	33.61
31	34.78	31	32.23	25	33.15	25	33.71
NOV 05	34.82	FEB 05	32.24	30	33.08	31	33.84
10	34.88	10	32.41	MAY 05	33.08	AUG 05	33.83
15	34.93	15	32.60	10	33.16	10	33.84
20	34.94	20	32.76	15	33.10	15	33.78
25	34.94	25	32.84	20	33.05	20	33.84
30	34.91	28	32.67	31	32.40	25	33.85
DEC 05	34.83	MAR 05	32.64	JUN 05	32.34	31	33.90
10	34.72	10	32.53	10	32.50	SEP 05	33.96
15	34.58	15	32.50	15	32.67	25	34.06
20	34.51	20	32.54	20	32.83	30	34.14
25	34.46	25	32.64	25	32.97		

WTR YEAR 1979 MAX 32.21 FEB. 1, 1979 MIN 34.97 NOV. 17, 1978

412918071321001. Local number, SNW 6.

LOCATION.--Lat 41°29'18", long 71°32'10", Hydrologic Unit 01090005, town of South Kingston, at northwest corner of Mead Field at University of Rhode Island, and 0.9 mi (1.4 km) northwest of Kingston.

Owner: University of Rhode Island.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled observation water table well, diameter 10 in (0.25 m), depth 34 ft (10.4 m), cased to 34 ft (10.4 m), open end.

DATUM.--Land-surface datum is 111.89 ft (34.11 m) National Geodetic Vertical Datum of 1929. Measuring point: Floor of recorder shelter, 0.57 ft (0.17 m) above land-surface datum (since July 12, 1973).

RECORD OF PERIOD.--November to December 1947, February 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.92 ft (2.41 m) below land-surface datum, Apr. 12, 13, 1958; lowest, 15.06 ft (4.59 m) below land-surface datum, Dec. 29, 1965.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 31, 1978	11.46	JAN 25, 1979	9.84	APR 20, 1979	11.10	JUL 20, 1979	11.92
NOV 05	11.51	31	9.60	25	11.23	25	12.06
10	11.58	FEB 05	9.80	30	11.08	31	12.10
15	13.12	10	10.05	MAY 05	11.14	AUG 05	11.65
20	13.46	15	10.31	10	11.26	10	11.90
25	13.60	20	10.59	15	11.30	15	11.82
30	13.60	25	10.52	20	11.30	20	12.02
DEC 05	13.53	28	10.07	31	10.42	25	12.17
10	13.23	MAR 05	10.32	JUN 05	10.43	31	12.32
15	13.07	10	9.79	10	10.58	SEP 05	12.45
20	13.08	15	9.90	15	10.65	10	12.41
25	12.94	20	10.11	20	10.77	15	12.56
31	12.77	25	10.28	25	10.89	20	12.69
JAN 05, 1979	12.16	31	10.58	30	11.15	25	12.53
10	11.57	APR 05	10.74	JUL 05	11.38	30	12.64
15	11.11	10	10.89	10	11.61		
20	10.95	15	11.01	15	11.80		

WTR YEAR 1979 MAX 9.60 JAN. 31, FEB. 1, 1979 MIN 13.64 NOV. 29, 1978

412923071361601. Local number, SNW 515.

LOCATION.--Lat 41°29'23", long 71°36'16", Hydrologic Unit 01090005, town of South Kingston, at Laurel Lane Golf Course, 2.7 mi (4.3 km) west of West Kingston.

Owner: R. R. Holley.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 36 in (0.91 m), depth 30 ft (9.15 m), lined with stone to 30 ft (9.15 m), shored.

DATUM.--Land-surface datum is 127.84 ft (38.97 m) National Geodetic Vertical Datum of 1929. Measuring point: Top edge of concrete casing on south rim of well, 0.50 ft (0.15 m) above land-surface datum (since Dec. 27, 1975).

PERIOD OF RECORD.--May 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.38 ft (7.43 m) below land-surface datum, Apr. 18, 1958, Mar. 26, 1968; dry Oct. 23, Nov. 23, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1978	DRY	JAN 27, 1979	24.53	APR 20, 1979	26.10	JUL 26, 1979	27.64
NOV 23	DRY	FEB 24	25.59	MAY 26	25.75	AUG 25	27.60
DEC 23	27.58	MAR 24	25.19	JUN 23	25.83	SEP 22	28.24

412154071462901. Local number, WEW 522.

LOCATION.--Lat 41°21'54", long 71°46'29", Hydrologic Unit 01090005, town of Westerly, 350 ft (107 m) northwest of intersection of Pound and Old Shore Roads and 1.0 mi (1.6 km) north of Dunn Corner.

Owner: S. Panciera.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Dug observation water-table well, diameter 30 in (0.76 m), depth 16 ft (4.88 m), lined with stone to 16 ft (4.88 m), shored.

DATUM.--Altitude of land-surface datum is 45 ft (13.72 m). Measuring point: Southwest corner of stone casing, 0.91 ft (0.28 m) above land-surface datum.

PERIOD OF RECORD.--January 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.32 ft (3.15 m) below land-surface datum, Dec. 28, 1978; lowest measured, 14.39 ft (4.39 m) below land-surface datum, Aug. 25, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1978 TO SEPTEMBER 1979

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1978	12.95	JAN 27, 1979	10.50	APR 20, 1979	11.07	JUL 26, 1979	12.91
NOV 24	13.07	FEB 24	11.06	MAY 26	10.50	AUG 25	12.61
DEC 23	11.39	MAR 24	10.63	JUN 23	11.52	SEP 22	13.09

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- N O T E S -

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
<i>Length</i>		
inches (in)	2.54×10^1	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^0	kilometers (km)
<i>Area</i>		
acres	4.047×10^3	square meters (m ²)
	4.047×10^{-1}	square hectometers (hm ²)
	4.047×10^{-3}	square kilometers (km ²)
square miles (mi ²)	2.590×10^0	square kilometers (km ²)
<i>Volume</i>		
gallons (gal)	3.785×10^0	liters (L)
	3.785×10^0	cubic decimeters (dm ³)
	3.785×10^{-3}	cubic meters (m ³)
million gallons	3.785×10^3	cubic meters (m ³)
	3.785×10^{-3}	cubic hectometers (hm ³)
cubic feet (ft ³)	2.832×10^1	cubic decimeters (dm ³)
	2.832×10^{-2}	cubic meters (m ³)
cfs-days	2.447×10^3	cubic meters (m ³)
	2.447×10^{-3}	cubic hectometers (hm ³)
acre-feet (acre-ft)	1.233×10^3	cubic meters (m ³)
	1.233×10^{-3}	cubic hectometers (hm ³)
	1.233×10^{-6}	cubic kilometers (km ³)
<i>Flow</i>		
cubic feet per second (ft ³ /s)	2.832×10^1	liters per second (L/s)
	2.832×10^1	cubic decimeters per second (dm ³ /s)
	2.832×10^{-2}	cubic meters per second (m ³ /s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm ³ /s)
	6.309×10^{-5}	cubic meters per second (m ³ /s)
million gallons per day	4.381×10^1	cubic decimeters per second (dm ³ /s)
	4.381×10^{-2}	cubic meters per second (m ³ /s)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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