Surface Water Supply of the United States 1960

Part 1-A. North Atlantic Slope Basins, Maine to Connecticut

Prepared under the direction of E. L. HENDRICKS, *Chief, Surface Water Branch*

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1701

Prepared in cooperation with the States of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont, and with other agencies

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont, and with other agencies, by personnel of the Water Resources Division, L. B. Leopold, chief, under the general direction of E. L. Hendricks, chief, Surface Water Branch, and F. J. Flynn, chief, Basic Records Section.

The data were collected and computed under supervision of district engineers, Surface Water Branch, as follows:

D. F. Dougherty ..... Albany, N. Y.
G. S. Hayes ..... Augusta, Maine
John Horton ..... Hartford, Conn.
C. E. Knox ..... Boston, Mass.

CALENDAR FOR WATER YEAR 1960

OCTOBER 1959

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

NOVEMBER 1959

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

DECEMBER 1959

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JANUARY 1960

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

FEBRUARY 1960

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29					

MARCH 1960

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

APRIL 1960

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

MAY 1960

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

JUNE 1960

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

JULY 1960

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

AUGUST 1960

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

SEPTEMBER 1960

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

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SCOPE OF WORK

This volume is one of a series of 20 reports presenting records of stage, discharge, and content, of streams, lakes, and reservoirs in the United States during the 1960 water year. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar records have been obtained at more than 15,500 gaging stations in the 50 States. On September 30, 1960, the Geological Survey and cooperating organizations were maintaining 7,300 gaging stations. Partial-record stations for low flow or for flood flow have been operated at many other points. In addition discharge measurements are made at miscellaneous sites. The records for the 1960 water year at gaging stations, partial-record stations, and miscellaneous sites in the North Atlantic slope basins, Maine to Connecticut, are given in this report.

COOPERATION

Many State, municipal, and private organizations have cooperated with the Geological Survey in this work by either furnishing or helping to collect data. Organizations that supplied data are acknowledged in station descriptions, and organizations that assisted in the collection of data through cooperative agreements with the Survey are:

Connecticut: State Water Resources Commission, E. J. McDonough, chairman, and W. S. Wise, director; State Highway Department, H. S. Ives, commissioner; city of Hartford, Department of Public Works, L. C. Lovell, director; Greater Hartford Flood Commission, C. W. Cooke, director; city of New Britain, Board of Water Commissioners, A. J. Giano, Chairman, and G. W. Wood, chief engineer; city of Torrington, A. C. Gelormino, mayor, and G. F. Mahoney, city engineer.

Maine: Maine Public Utilities Commission, F. N. Allen, chairman.

Massachusetts: State Department of Public Health, A. L. Frechette, commissioner; State Water Resources Commission, C. H. W. Foster, chairman, and C. I. Sterling, Jr., chief engineer; State Department of Public Works, A. N. DiNatale, commissioner, succeeded by J. P. Ricciardi; Metropolitan District Commission, J. E. Maloney, commissioner, and H. J. Toole, director and chief engineer of Water Division.

New Hampshire: Water Resources Board, W. G. White, chairman.

New York: State Department of Public Works, J. B. McMorran, superintendent; and State Department of Health, Water Pollution Control Board, H. E. Hillebee, commissioner.

Rhode Island: State Department of Public Works, Henry Ise', chief of Division of Harbors and Rivers.

Vermont: Water Conservation Board, R. W. Thieme, commissioner.

Assistance in the form of funds or services was given by the Corps of Engineers, Department of the Army, in collecting records published herein for 38 gaging stations, of which 2 were in Connecticut, 11 in Massachusetts, 15 in New Hampshire, and 10 in Vermont.

On waters adjacent to the international boundary, certain gaging stations are maintained by the United States (or Canada) under agreement with Canada (or the United States), and

the records are obtained and compiled in a manner equally acceptable in both countries. These stations are designated herein as "international gaging stations."

The following organizations aided in collecting records:

Connecticut: Metropolitan Water Bureau of Hartford; Borough of Groton; city of Waterbury; Bridgeport Hydraulic Co.; Collins Co.; Connecticut Light & Power Co.; Connecticut Power Co.; Farmington River Power Co.; Guilford-Chester Water Co.; and Rockville Water & Aqueduct Co.

Maine: St. Croix Paper Co. and Union Water Power Co.

Massachusetts: New England Power Association and Western Massachusetts Electric Co.

New Hampshire: New England Power Association.

Vermont: New England Power Association.

DIVISION OF WORK

The stream-gaging work was done by the Water Resources Division of the Geological Survey under the direction of personnel shown in the preface. The data for stations in the several States were collected and prepared for publication in the district offices listed below.

State	District office	Address
Connecticut a/	Hartford	203 Federal Building.
Maine b/	Augusta	Vickery-Hill Building.
Massachusetts c/	Boston	141 Milk Street.
New Hampshire d/	Boston, Mass.	Do.
New York	Albany	343 Federal Building.
Rhode Island	Boston, Mass.	141 Milk Street.
Vermont	....do	Do.

a/ Except for Connecticut River at Thompsonville.
b/ Including Androscoggin River near Errol and near Gorham, N. H., Diamond River near Wentworth Location, N. H., and Saco River near Conway, N. H.
c/ Including Connecticut River at Thompsonville, Conn.
d/ Except for Androscoggin River near Errol and near Gorham, Diamond River near Wertworth Location, and Saco River near Conway.

Information of a more detailed nature than that published for most of the gaging stations given in this report is on file in the district offices listed above. Some gaging-station records for Massachusetts and Vermont have been analyzed by electronic computer to give: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year. Provisional records of discharge, information on the availability of electronic computer results, and other unpublished data concerning the gaging-station records may generally be obtained from the district office.

DEFINITION OF TERMS AND ABBREVIATIONS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied herein only to those gaging stations where a continuous record of discharge is obtained.

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

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.

Runoff in inches (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.

Acre-foot (ac-ft) is the quantity of water required to cover an acre to the depth of 1 foot and is equivalent to 43,560 cubic feet.

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, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

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, a long reach of the channel, or an artificial structure.

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

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

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

DOWNSTREAM ORDER AND STATION NUMBERS

Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records was changed. In this report, in a downstream direction along the main stem, all stations on a tributary entering above a main-stem station are listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

The order of listing used before the publication of the 1951 report listed first all stations on the main stem from headwaters toward mouth, then all stations on the uppermost tributary to the main stem from the tributary's source to mouth, and then all stations from source to mouth of the uppermost tributary to the tributary.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and regular gaging stations, so that 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 numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete number for each station includes the part number, but the station number as shown in this report, just to the left of the station name, consists of only the essential digits of the complete number. For example, for a station with the complete number 1A-0345.00 the station number shown in this report is 345. The notation to the left of the hyphen is the part number; it is 1A for all stations in this report and is therefore omitted.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. 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. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, 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, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. 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 determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers 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 essentially the shifting-control method.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage. If so, the rate of change in stage is used as a factor in the determination of discharge.

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts 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 being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for other stations in the same or nearby basins. If the stage-discharge relation is affected by ice, thia information is given in a note to the

table. No mention is made of occasional days of ice effect if the degree of accuracy of daily records is not changed.

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the 1960 water year is shown on page IV for the purpose of finding the day of the week for any date.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations of revisions of the previously published record. 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 unless otherwise noted. Under "Records available" are given the periods for which there are published records generally equivalent to those at present site. Under "Gage" are given the type of gage currently in use and the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of records available. The references to "datum of 1929" and adjustments of other years are to the datum and adjustments of the U. S. Coast and Geodetic Survey. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five 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 the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and conditions which affect the natural flow at the gaging station is given under "Remarks."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. In order to make it easier to find such revised records, a paragraph headed "Revisions (water years)" 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 the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are concerned in the revision, that 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.

Skeleton rating tables are published for all stations except those at which the daily discharge for the greater part of the open-water period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than one-tenth foot. Skeleton rating tables are generally not published for stations on canals.

For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the daily table gives the discharge corresponding to the daily mean gage height. For stations subject to such fluctuation the daily mean gage height may not indicate the true daily mean discharge, which must be obtained by averaging the discharge for parts of the day or by using the discharge integrator, an instrument for obtaining the daily mean discharge from a continuous gage-height graph and containing, as an essential element, a curve representing the stage-discharge relation at the station. For stations equipped with nonrecording gages, the table of daily discharge gives the discharge corresponding to once-daily readings of the gage, or to the mean of twice-daily readings, or to the mean gage height determined from gage-height graphs based on gage readings. For periods of rapidly changing stage, the daily mean discharge is determined from gage-height graphs based on gage readings, the frequency of which is stated in the station description.

In the table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Discharge for the month may be expressed in cubic feet per second per square mile (line headed "Cfsm"), or in inches (line headed "In."), or in acre-feet (line headed "Ac-ft"). Figures for cubic feet per second per square mile and runoff in inches are omitted if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence and corresponding gage heights of most stations are listed below the table of daily and monthly discharge. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, 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.

Footnotes to the table of daily discharge indicate periods when discharge was computed or estimated by unusual or special methods during periods of no gage-height record and ice

effect, or by other effects that reduce the degree of accuracy of the records. Days on which discharge measurements were made are indicated by asterisk and footnote unless they were made at frequent regular intervals, in which instance the general frequency of discharge measurements is given under "Remarks" in the station description.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published each year for all reservoirs for which records are published on a daily basis, but is not published for reservoirs for which only monthly data are given.

At many gaging stations water samples are collected from the streams for the purpose of making chemical analyses, computing dissolved solids, suspended sediment loads, and particle-size distribution, or measuring water temperatures. For most of these samples the results are published in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States" which is issued in four volumes. In this report under "Remarks" a reference is made to quality-of-water records collected at gaging stations on a regular basis and published in the quality-of-water reports. At many other gaging stations quality-of-water data are obtained at irregular intervals and published as "miscellaneous analyses" in quality-of-water reports; such records are not referred to in "Remarks" paragraph in this report. At many gaging stations water temperature is obtained also at the time a discharge measurement is made; such temperature readings are not reported in the quality-of-water annual reports.

Data collected at partial-record stations and at miscellaneous sites are given at the end of each report. 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 is a table of annual maximum stage and discharge at crest-stage stations. Discharge measurements at miscellaneous sites are given in a third table. Occasionally, a series of discharge measurements are made within a short time period to investigate the seepage gains or losses along a reach of a stream or to determine the low-flow characteristics of an area. Such measurements are given in special tables after the list of measurements at miscellaneous sites.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is believed to be less than 5 percent; "good," less than 10 percent; "fair," less than 15 percent; and "poor," probably more than 15 percent. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

Discharge at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to 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 the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may

occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and therefore the discharge recorded does not actually show the water supply available at the stations for further development, because water must first be supplied to existing irrigation systems.

PUBLICATIONS

Basic data for gaging stations are published in an annual series of reports consisting of 20 volumes, including one each for the States of Alaska and Hawaii. The area of the other 48 States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the annual series of reports on surface water supply consisted of 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records for the 48 States were published in 18 volumes, there being 2 volumes each for Parts 1, 2, 3, and 6. The boundaries of the various parts are indicated by the following list and the map in figure 1.

Part 1. North Atlantic slope basins, in two volumes:
- A, North Atlantic slope basins, Maine to Connecticut.
- B, North Atlantic slope basins, New York to York River.

2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:
- A, South Atlantic slope basins, James River to Savannah River.
- B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.

3. Ohio River basin, in two volumes:
- A, Ohio River basin except Cumberland and Tennessee River basins.
- B, Cumberland and Tennessee River basins.

4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River basin, in two volumes:
- A, Missouri River basin above Sioux City, Iowa.
- B, Missouri River basin below Sioux City, Iowa.

7. Lower Mississippi River basin.
8. Western Gulf of Mexico basins.
9. Colorado River basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River basin.
13. Snake River basin.
14. Pacific slope basins in Oregon and lower Columbia River basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be purchased or consulted as follows:

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

3. Sets are available for consultation in the offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page 2.

Early records of the flow of streams in the United States are published in the reports listed below. In many of these reports records for years earlier than those indicated have been included for some streams.

Streamflow data for the years 1884-1901, in reports of the Geological Survey

(A = Annual Report; B = Bulletin)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2	....do.....	1884 to June 30, 1891.
13th A, pt. 3	....do.....	1884-92.

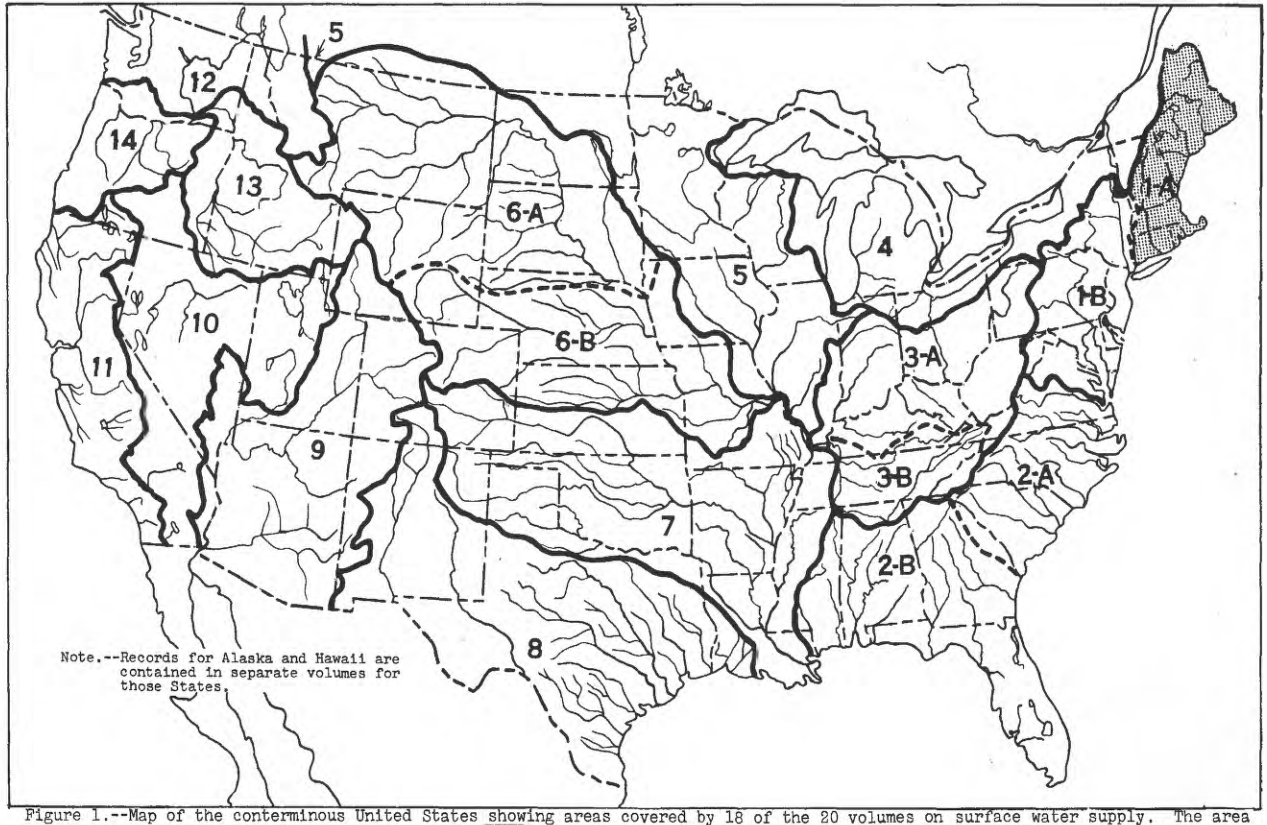

Figure 1.--Map of the conterminous United States showing areas covered by 18 of the 20 volumes on surface water supply. The area covered by this report is shaded.

Streamflow data for the years 1884-1901, in reports of the Geological Survey--Continued

(A = Annual Report; B = Bulletin)

Report	Character of data	Year
14th A, pt. 2	Monthly discharge	1888-93.
B 131	Descriptions, measurements, gage heights, and ratings	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
WSP 11	Gage heights	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1895-96.
WSP 15	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
WSP 16	Descriptions, measurements, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1897.
WSP 27	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
WSP 28	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge	1898.
WSP 35 to 39.	Descriptions, measurements, gage heights, and ratings	1899.
21st A, pt. 4	Monthly discharge	1899.
WSP 47 to 52.	Descriptions, measurements, gage heights, and ratings	1900.
22d A, pt. 4.	Monthly discharge	1900.
WSP 65, 66	Descriptions, measurements, gage heights, and ratings	1901.
WSP 75	Monthly discharge	1901

Reports on surface water supply containing records from 1899 to date for drainage basins in this report are listed below. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained. Before 1951, records for the North Atlantic slope basins, Maine to Connecticut, were included with those of the other rivers in the North Atlantic slope basins.

Numbers of water-supply papers containing results of stream measurements in North Atlantic slope basins, Maine to Connecticut, 1899-1960

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	35	1912	321	1925	601	1937	821	1949	1141
1900	47	1913	351	1926	621	1938	851	1950	1171
1901	65,75	1914	381	1927	641	1939	871	1951	1201
1902	82	1915	401	1928	661	1940	891	1952	1231
1903	97	1916	431	1929	681	1941	921	1953	1271
1904	124	1917	451	1930	696	1942	951	1954	1331
1905	165	1918	471	1931	711	1943	971	1955	1381
1906	201	1919-20	501	1932	726	1944	1001	1956	1431
1907-8	241	1921	521	1933	741	1945	1031	1957	1501
1909	261	1922	541	1934	756	1946	1051	1958	1551
1910	281	1923	561	1935	781	1947	1081	1959	1621
1911	301	1924	581	1936	801	1948	1111	1960	1701

A compilation of records for the area covered by this report through September 1950 has been published as Water-Supply Paper 1301. That report contains a summary of monthly and annual discharges for all previously published records as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these special reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier notable floods. The following list gives the numbers and titles of these reports:

Title

WSP 162: Destructive floods in the United States in 1905.
WSP 636-C: The New England flood of November 1927.
WSP 771: Floods in the United States, magnitude and frequency.
WSP 798: The floods of March 1936, Part 1, New England rivers.
WSP 836-A: Stages and flood discharges of the Connecticut River at Hartford, Conn.

Special reports on floods published by the Geological Survey and other agencies--Continued

Title

WSP 847: Maximum discharges at stream measurement stations through September 1938.
WSP 867: Hurricane floods of September 1938.
WSP 966: Minor floods of 1938 in North Atlantic States.
WSP 967-C: Flood of August 21, 1939, in town of Baldwin, Maine.
WSP 1137-I: Summary of floods in the United States during 1950.
WSP 1260-F: Summary of floods in the United States during 1952.
WSP 1320-E: Summary of floods in the United States during 1953.
WSP 1370-C: Summary of floods in the United States during 1954.
WSP 1420: Floods of August-October 1955 New England to North Carolina.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table below contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the 1960 water year by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
Androscoggin River.....	Lewiston, Maine.....	1929-60	Central Maine Power Co.
Kennebec River.....	Bingham, Maine.....	1931-60	Do.
Do.....	Indian Pond, Maine.....	1954-60	Do.
Penobscot River.....	Old Town, Maine.....	1915-60	Bangor Hydro-Electric Co.
Race Brook.....	Orange, Conn.....	1911-60	New Haven Water Co.
Saco River.....	Hiram, Maine.....	1930-60	Central Maine Power Co.
Do.....	West Buxton, Maine.....	1940-60	Do.
Stillwater Branch Penobscot River.	Stillwater, Maine.....	1915-60	Bangor Hydro-Electric Co.
Wepawaug River.....	Orange, Conn.....	1911-60	New Haven Water Co.
West River.....	Guilford, Conn.....	1930-60	Do.

Note.--The Agricultural Research Service of the U. S. Department of Agriculture has collected records of runoff from selected areas near Danville, Vt., as follows; beginning in 1958, 1 area of 146 acres and 1 area of 10,600 acres; beginning in 1959, 3 areas of 2,000 to 27,500 acres.

HYDROLOGIC CONDITIONS

Streamflow was excessive throughout the area covered by this report during October to December and in April. Monthly mean discharge was record-high for the month at the key gaging station in New Hampshire during October and at the key gaging stations in Vermont and southern Maine during November.

Frequent flooding, mostly limited to bankfull stages, occurred during the fall and spring. A storm in October caused the maximum discharge in 20 to 30 years of record at several gaging stations in central New England. A severe storm and extremely high tide in late December caused local flooding along the Maine and Massachusetts coast. Moderate flooding followed the passage of a tropical hurricane in September.

Streamflow was deficient in Connecticut and Massachusetts during March and in northern Maine July to September.

Figure 2, on page 12, for which records of three long-term representative gaging stations were used, shows a comparison of the monthly and yearly mean discharge for the 1960 water year with the median discharge for the period 1931-60.

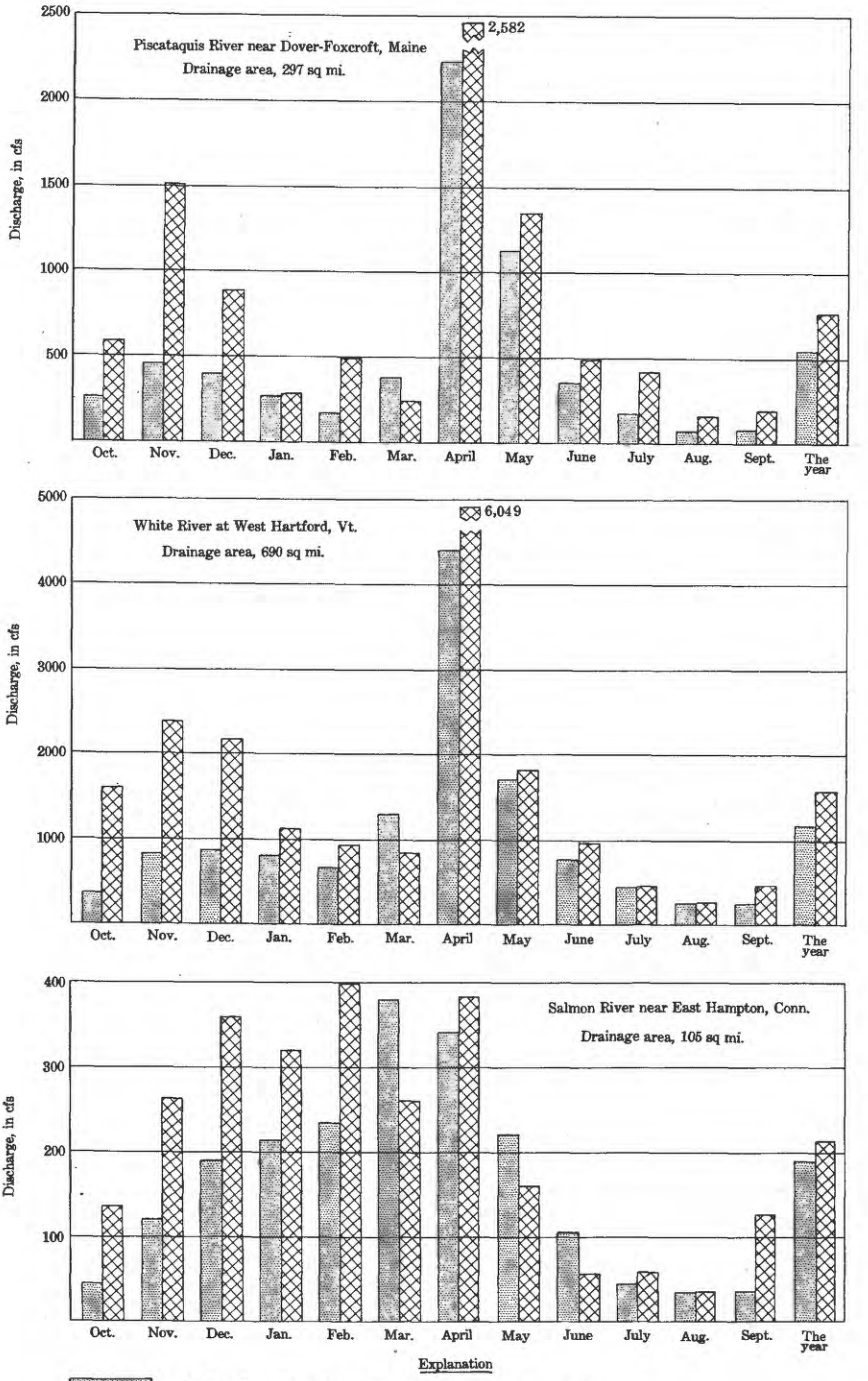

Figure 2. Comparison of discharge at three long-term representative gaging stations during 1960 water year with median discharge for period 1931–60.

ST. JOHN RIVER BASIN

100. St. John River at Ninemile Bridge, Maine

Location.--Lat 46°42'00", long 69°43'00", T.12, R.15, Aroostook County, on right bank about 0.1 mile downstream from Ninemile Brook, 0.4 mile downstream from Ninemile Bridge, and 11 miles northwest of Clayton Lake Post Office.

Drainage area.--1,290 sq mi, approximately.

Records available.--November 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 931.26 ft above mean sea level, adjustment of 1929.

Average discharge.--9 years (1951-60), 2,230 cfs.

Extremes.--Maximum discharge during year, about 26,000 cfs May 7; minimum, 113 cfs Sept. 11-12 (gage height, 0.25 ft).
1950-60: Maximum discharge, 34,200 cfs Apr. 25, 1958 (gage height, 10.97 ft), from rating curve extended above 16,000 cfs; minimum, 59 cfs Sept. 5, 1953; minimum gage height, 0.25 ft Sept. 5, 1953, Sept. 11-12, 1960.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18		Apr. 19 to Sept. 30			
2.5	1,430	0.2	103	3.0	2,240
3.0	2,180	.6	195	4.0	4,190
4.0	4,230	1.0	322	5.0	7,050
5.0	7,050	1.5	553	6.0	10,700
6.0	10,700	2.0	955	8.0	18,700
		2.5	1,550	10.0	28,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,230	2,080	4,280	540	430	490	725	10,800	935	1,130	572	145
2	3,550	2,180	3,780	540	430	490	1,090	12,200	955	875	717	136
3	6,090	2,420	3,270	545	430	485	1,490	13,000	1,450	717	559	125
4	4,880	2,320	2,880	540	425	480	2,080	13,400	1,520	636	458	121
5	3,620	2,250	2,640	545	425	470	2,710	16,100	2,270	609	390	117
6	2,660	3,310	2,530	560	425	470	3,440	20,000	5,070	565	345	117
7	2,080	5,870	2,530	565	425	470	4,040	25,000	5,570	565	315	117
8	3,130	5,920	3,060	560	420	470	4,230	21,200	4,290	504	*300	117
9	4,800	4,540	3,440	560	420	465	4,040	18,900	2,920	463	318	115
10	5,580	3,550	2,730	550	410	460	3,490	16,000	2,150	665	399	115
11	4,930	2,860	2,180	545	420	455	2,940	14,000	1,650	749	426	113
12	4,310	2,460	1,870	530	430	445	2,570	12,000	1,240	657	345	118
13	4,090	2,320	1,570	520	460	440	2,320	10,800	976	1,180	279	405
14	3,310	*2,150	1,410	510	495	440	2,210	10,400	757	1,870	238	2,580
15	2,660	3,560	1,250	495	605	440	2,180	21,000	643	1,460	217	2,460
16	2,210	5,470	1,090	495	655	435	2,350	16,000	671	976	190	1,730
17	1,920	4,830	975	490	675	435	3,050	12,500	935	701	177	1,180
18	1,620	3,440	880	485	650	440	4,500	9,200	1,960	559	164	819
19	1,510	2,790	800	480	610	440	8,000	7,200	4,420	553	155	625
20	1,350	2,320	725	480	565	445	12,800	5,700	3,930	1,320	150	526
21	1,250	2,000	690	*480	530	440	11,300	4,700	3,480	2,720	174	453
22	1,110	1,780	*650	480	495	435	10,000	3,900	2,810	2,360	605	403
23	1,040	1,700	625	480	485	*435	8,800	3,000	2,150	1,800	468	*369
24	1,760	1,750	580	470	470	435	8,100	2,400	*1,780	2,030	334	353
25	4,610	3,440	575	470	*455	435	7,500	2,000	2,560	2,210	260	315
26	6,390	7,130	565	470	465	430	7,800	1,800	4,440	1,730	215	276
27	5,610	6,540	560	465	485	430	8,200	1,580	3,840	1,220	186	256
28	4,360	5,690	560	460	490	430	8,600	1,300	2,720	855	164	232
29	3,380	5,330	550	445	490	430	9,100	1,140	2,010	671	150	217
30	2,690	4,800	550	440	-------	425	9,600	*986	1,470	548	147	209
31	2,260	-------	545	435	-------	460	-------	935	-------	493	138	-------
Total	99,990	106,800	50,340	15,630	14,170	13,950	159,255	309,141	71,572	33,391	9,555	14,868
Mean	3,225	3,560	1,624	504	489	450	5,308	9,972	2,386	1,077	308	496
Cfsm	2.50	2.76	1.26	0.391	0.379	0.349	4.11	7.73	1.85	0.835	0.239	0.384
In.	2.88	3.08	1.45	0.45	0.41	0.40	4.59	8.91	2.06	0.96	0.28	0.43

Calendar year 1959: Max 16,100 Min 115 Mean 2,461 Cfsm 1.91 In. 25.91
Water year 1959-60: Max 25,000 Min 113 Mean 2,455 Cfsm 1.90 In. 25.90

Peak discharge (base, 10,000 cfs).--Apr. 20 (time unknown) about 13,000 cfs; May 7 (time unknown) about 26,000 cfs; May 15 (time unknown) about 22,100 cfs.

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19-22, Nov. 30 to Apr. 15. No gage-height record Apr. 16 to May 28; discharge estimated on basis of weather records and records for downstream stations.

105. St. John River at Dickey, Maine

Location.--Lat 47°06'40", long 69°05'15", on right bank at Dickey, Aroostook County, 0.6 mile downstream from Little Black River and 2.5 miles upstream from Allegash River.

Drainage area.--2,700 sq mi, approximately.

Records available.--July to November 1910, April to November 1911 (published as "near Dickey"), September 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 590 ft (from topographic map). Prior to December 1911, staff gage at site 1,000 ft downstream at different datum.

Average discharge.--14 years (1946-60), 4,624 cfs.

Extremes.--Maximum discharge during year, 49,400 cfs May 7 (gage height, 13.92 ft); maximum gage height, 18.33 ft Apr. 19 (backwater from ice); minimum discharge, 237 cfs Sept. 13 (gage height, 1.38 ft).
1910-11, 1946-60: Maximum discharge, 71,200 cfs Apr. 25, 1958 (gage height, 16.58 ft); maximum gage height, 19.88 ft Mar. 29, 1953 (backwater from ice); minimum discharge, 129 cfs Sept. 17, 1948.

Remarks.--Records good except those for periods of ice effect, no gage-height record, or partly plugged intake, which are fair.

Revisions.--WSP 1141: Drainage area.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18		Apr. 19 to Sept. 30			
2.1	735	1.3	185	5.0	5,810
2.5	1,190	1.5	318	6.0	8,500
3.0	1,860	2.0	720	8.0	15,200
3.5	2,680	2.5	1,280	10.0	24,500
		3.0	1,930	12.0	36,000
Note.--Same as following table above 3.5 ft.		3.5	2,680	14.0	50,000
		4.0	3,600		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,260	4,090	7,880	1,500	850	1,010	1,030	25,500	2,680	2,700	1,000	257
2	3,860	3,990	7,070	1,460	840	975	1,280	28,500	2,710	2,300	1,120	250
3	8,860	4,120	6,050	1,410	840	975	1,580	29,500	3,070	2,100	1,020	250
4	8,470	4,240	5,520	1,350	840	960	2,310	30,200	3,760	1,850	900	250
5	6,680	4,300	5,100	1,320	840	950	3,030	*35,600	3,780	1,690	800	250
6	5,330	5,740	4,920	1,290	830	950	4,260	41,700	4,540	1,540	720	244
7	4,180	9,600	4,940	1,270	830	950	5,570	48,100	7,120	1,420	660	244
8	3,620	12,300	*5,760	1,220	820	940	6,810	46,600	6,760	1,290	630	244
9	4,980	10,100	6,970	1,190	820	940	6,860	46,700	5,260	1,190	630	244
10	6,890	7,740	6,730	1,170	820	930	6,300	43,000	3,950	1,320	640	244
11	7,880	*6,300	5,570	1,140	830	930	5,880	37,800	2,990	1,440	720	244
12	7,100	5,400	4,450	*1,090	840	875	5,520	29,800	2,420	1,320	630	244
13	7,040	5,120	3,800	1,070	860	860	5,170	23,600	1,990	1,230	621	825
14	6,400	5,010	3,400	1,060	915	850	5,150	24,900	*1,680	1,320	516	2,200
15	5,260	5,740	3,100	1,050	1,000	840	5,380	34,700	1,500	2,100	453	4,140
16	4,410	8,780	2,980	985	1,120	840	6,050	41,600	1,410	1,750	402	3,380
17	3,880	9,610	2,830	960	1,280	830	7,340	32,900	1,530	1,480	353	2,470
18	3,540	8,260	2,490	950	1,370	830	10,000	23,800	1,970	1,230	311	1,830
19	3,210	6,420	2,310	940	1,440	830	13,800	17,700	3,010	1,100	264	1,450
20	2,940	5,470	2,200	940	1,450	830	18,100	13,500	5,880	1,080	291	1,160
21	2,750	4,620	2,140	930	1,420	830	23,000	10,700	4,700	1,600	346	986
22	2,540	3,320	2,040	915	1,310	*820	21,500	8,800	4,100	2,600	339	860
23	2,390	3,380	2,000	895	1,190	820	20,000	7,230	3,500	2,200	410	760
24	2,610	3,680	1,920	885	1,150	810	18,500	6,220	2,900	1,980	880	684
25	4,680	5,270	1,850	875	1,060	810	18,000	5,380	2,700	1,720	711	621
26	9,920	11,800	1,800	875	*1,050	800	18,400	4,740	4,600	2,000	603	585
27	11,000	13,200	1,750	860	1,020	800	19,100	4,160	6,500	1,800	*424	540
28	8,860	11,300	1,710	860	1,020	790	20,700	3,700	5,200	1,500	332	500
29	6,810	9,760	1,680	860	1,010	800	21,600	3,460	4,000	1,300	298	453
30	5,350	9,400	1,610	850	-------	800	23,000	3,250	3,200	1,100	*277	431
31	4,540	-------	1,550	840	-------	840	-------	2,900	-------	950	277	-------
Total	168,240	208,060	114,120	33,010	29,665	27,015	325,200	718,240	109,410	50,200	17,578	26,840
Mean	5,427	6,935	3,681	1,065	1,023	871	10,840	23,170	3,647	1,619	567	895
Cfsm	2.01	2.57	1.36	0.394	0.379	0.326	4.01	8.58	1.35	0.600	0.210	0.331
In.	2.32	2.87	1.57	0.45	0.41	0.38	4.47	9.89	1.51	0.69	0.24	0.37

Calendar year 1959: Max 30,200 Min 295 Mean 5,053 Cfsm 1.87 In. 25.43
Water year 1959-60: Max 48,600 Min 244 Mean 4,993 Cfsm 1.85 In. 25.15

Peak discharge (base, 27,000 cfs).--May 7 (11 p.m.) 49,400 cfs (13.92 ft); May 16 (8 to 11 a.m.) 43,200 cfs (13.05 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 20, 21, Nov. 30 to Dec. 5, Dec. 13 to Mar. 25 (no gage-height record Jan. 22 to Feb. 11, Feb. 15, 16; discharge estimated on basis of weather records and records for nearby stations). No gage-height record Mar. 26 to May 5, June 21 to Aug. 12; discharge estimated on basis of recorded range in stage, 2 discharge measurements, and records for nearby stations. Intake partly plugged June 2-20; discharge estimated on basis of gage-height record, 1 discharge measurement, and records for nearby stations.

110. Allagash River near Allagash, Maine

Location.--Lat 47°04'15", long 69°04'50", on left bank 3 miles upstream from mouth and village of Allagash, Aroostook County.

Drainage area.--1,250 sq mi, approximately (not including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--July to November 1910, May to November 1911, September 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 604.6 ft above mean sea level, datum of 1929. Prior to December 1911, staff gage at site 3 miles downstream at different datum.

Average discharge.--29 years (1931-60), 1,909 cfs.

Extremes.--Maximum discharge during year, 20,400 cfs May 10 (gage height, 10.63 ft); maximum gage height, 14.16 ft Apr. 23 (ice jam); minimum discharge, 87 cfs Sept. 11, 1910-11, 1931-60: Maximum discharge, 23,400 cfs May 5, 1933 (gage height, 11.32 ft); maximum gage height, that of Apr. 23, 1960; minimum discharge, that of Sept. 11, 1960.

Remarks.--Records excellent except those below 150 cfs, which are good, and those for periods of ice effect, which are fair.

Revisions (water years).--WSP 726: Drainage area. WSP 1231: 1911.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	77	4.0	2,300
1.8	155	5.0	4,000
2.1	270	6.0	6,090
2.4	450	8.0	11,400
3.0	990	10.0	18,100
3.5	1,590	11.0	21,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	473	1,730	4,570	870	300	400	670	8,590	2,160	1,470	512	144
2	1,020	1,750	4,590	810	290	400	990	9,830	1,970	1,290	481	135
3	1,260	1,750	4,250	790	285	395	1,360	10,100	1,870	1,200	465	124
4	1,110	1,730	4,040	765	280	390	1,680	10,700	1,720	1,170	458	119
5	1,010	1,790	3,830	735	280	380	2,270	*12,200	1,750	1,080	423	111
6	930	2,220	3,760	700	275	370	2,610	14,800	2,360	1,010	402	104
7	861	2,800	3,700	655	270	360	2,960	16,800	2,500	940	376	101
8	880	2,660	*4,430	600	265	350	3,170	17,300	2,480	841	370	99
9	1,010	2,440	4,190	560	260	345	3,200	18,300	2,380	792	376	99
10	1,210	2,300	3,770	525	260	340	3,070	20,200	2,210	726	340	99
11	1,310	2,160	3,430	505	260	335	2,960	18,300	2,030	707	312	91
12	1,380	2,120	3,150	*490	270	335	2,820	15,500	1,870	707	296	101
13	1,500	2,110	2,950	450	285	330	2,740	13,900	1,710	736	286	270
14	1,380	2,020	2,800	435	310	330	2,670	15,600	*1,520	717	256	654
15	1,320	2,580	2,710	425	360	320	2,640	18,300	1,380	698	243	544
16	1,230	2,770	2,770	410	420	315	2,640	17,700	1,360	698	225	443
17	1,190	2,550	2,450	395	450	310	2,800	14,600	1,320	654	206	382
18	1,120	2,470	2,240	390	460	310	3,270	12,600	1,520	619	191	334
19	1,070	2,270	2,000	380	450	310	4,790	10,600	1,720	636	181	312
20	1,020	2,120	1,860	375	430	310	6,960	9,150	1,690	764	184	280
21	990	1,890	1,720	370	420	310	8,280	7,810	1,600	812	191	252
22	910	1,870	1,620	370	410	*305	7,260	6,770	1,470	792	187	225
23	890	1,820	1,500	365	400	305	6,720	5,940	1,330	802	187	206
24	940	1,800	1,420	360	400	305	6,270	5,210	1,260	773	177	191
25	1,260	2,820	1,320	345	400	300	6,090	4,550	1,710	726	168	177
26	2,160	4,510	1,210	335	*400	295	6,090	4,040	2,280	680	155	171
27	2,150	4,110	1,160	335	400	295	6,180	3,610	2,150	636	149	161
28	2,020	4,350	1,100	320	400	290	6,420	3,250	1,970	610	141	158
29	1,890	5,130	1,040	315	400	290	6,990	2,930	1,790	568	144	155
30	1,780	4,850	990	305	-------	280	7,740	2,640	1,630	527	149	152
31	1,750	-------	940	300	-------	380	-------	2,380	-------	535	147	-------
Total	39,024	77,490	81,510	14,985	10,090	10,290	124,310	334,200	54,710	24,916	8,358	6,394
Mean	1,259	2,583	2,629	483	348	332	4,144	10,780	1,824	804	270	213
Cfsm	1.01	2.07	2.10	0.386	0.278	0.266	3.32	8.62	1.46	0.643	0.216	0.170
In.	1.16	2.31	2.42	0.45	0.30	0.31	3.70	9.94	1.63	0.74	0.25	0.19

Calendar year 1959: Max 8,540 Min 250 Mean 1,925 Cfsm 1.54 In. 20.90
Water year 1959-60: Max 20,200 Min 91 Mean 2,148 Cfsm 1.72 In. 23.40

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 9 to Apr. 26.

115. St. Francis River at outlet of Glazier Lake, near Connors, New Brunswick

(International gaging station)

Location.--Lat 47°12'25", long 68°57'25", on left bank at outlet of Glazier Lake, 4 miles upstream from mouth and 6.5 miles west of Connors, Madawaska County.

Drainage area.--520 sq mi.

Records available.--October 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 550 ft (from International Boundary Map).

Average discharge.--9 years, 892 cfs.

Extremes.--Maximum discharge during year, 7,170 cfs May 12 (gage height, 10.85 ft); minimum, 68 cfs Sept. 11, 12 (gage height, 2.00 ft).
1951-60: Maximum discharge, 10,800 cfs Apr. 26, 1958 (gage height, 13.21 ft); minimum, that of Sept. 11, 12, 1960.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Lake area above station has not yet been developed for storage.

Cooperation.--This station is maintained by Canada under agreement with the United States.

Revision.--WSP 1621: Drainage area.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31		Apr. 1 to Sept. 30			
2.5	170	2.0	68	5.0	1,450
2.7	229	2.3	121	6.0	2,250
3.0	334	2.6	198	8.0	4,100
3.5	551	3.0	330	10.0	6,200
4.0	827	3.5	543	12.0	8,550
5.0	1,530	4.0	798		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	266	895	1,290	416	229	259	224	4,300	*918	458	135	82
2	304	839	1,210	401	229	255	227	4,650	845	410	128	79
3	327	796	1,140	393	226	252	240	5,000	787	370	126	75
4	357	754	1,080	389	223	249	265	5,270	760	346	121	71
5	368	742	1,020	376	220	245	309	*5,620	734	358	119	71
6	376	777	970	372	217	239	410	6,260	728	309	119	69
7	372	920	951	361	217	232	525	6,310	677	285	115	69
8	372	1,110	951	353	220	229	642	6,530	637	269	*115	69
9	364	1,260	964	345	220	232	744	6,750	592	262	115	69
10	361	1,290	1,010	334	217	232	816	6,930	553	243	111	69
11	349	*1,230	1,010	323	214	229	851	7,110	516	236	106	68
12	368	1,160	970	315	217	229	857	7,170	485	230	100	69
13	372	1,090	951	297	220	223	851	7,130	454	224	98	95
14	385	1,020	895	290	226	220	845	6,990	*414	220	98	*115
15	401	1,060	827	279	229	217	851	6,530	382	204	98	133
16	410	1,070	790	283	229	211	857	5,980	374	195	96	162
17	406	1,110	765	279	229	208	875	5,680	358	187	95	187
18	401	1,150	725	272	232	211	973	5,000	376	178	91	201
19	389	1,100	697	269	232	208	1,310	4,300	382	170	89	214
20	376	1,050	670	269	236	208	1,560	3,420	419	176	91	214
21	376	964	638	269	252	208	1,800	2,970	441	167	100	208
22	357	914	601	269	276	208	2,040	2,700	441	160	98	198
23	342	846	571	*259	279	211	2,250	2,520	441	162	96	195
24	*345	815	541	255	276	205	2,390	2,250	436	162	95	187
25	376	846	512	252	272	202	2,520	1,910	480	160	89	173
26	462	970	497	249	276	199	2,700	1,720	503	149	86	167
27	633	1,170	484	245	279	199	2,970	1,540	521	144	84	167
28	846	1,400	479	242	272	199	3,290	1,370	534	144	82	160
29	957	1,430	470	239	262	196	3,560	1,230	516	139	82	147
30	964	1,370	457	236	-------	196	3,900	1,100	489	133	82	142
31	945	-------	435	232	-------	202	-------	979	-------	139	82	-------
Total	13,927	31,148	24,571	9,365	6,926	6,813	41,652	137,219	16,195	6,989	3,142	3,925
Mean	449	1,038	793	302	239	220	1,388	4,426	540	225	101	131
Cfsm	0.863	2.00	1.52	0.581	0.460	0.423	2.67	8.51	1.04	0.433	0.194	0.252
In.	1.00	2.23	1.76	0.67	0.49	0.49	2.98	9.81	1.16	0.50	0.22	0.28

Calendar year 1959: Max 4,890 Min 142 Mean 832 Cfsm 1.60 In. 21.73
Water year 1959-60: Max 7,170 Min 68 Mean 825 Cfsm 1.59 In. 21.59

* Discharge measurement made on this day.

Note.--Doubtful or no gage-height record Nov. 27 to Dec. 2, Apr. 19 to May 4, May 7-16, 18-25, 28-31; discharge estimated on basis of partial recorder graph, weather records, and records for stations on nearby streams.

135. Fish River near Fort Kent, Maine

Location.--Lat 47°14'15", long 68°34'55", on right bank 300 ft upstream from highway bridge at Fort Kent Mills, 2 miles upstream from mouth, and 2 miles south of Fort Kent, Aroostook County.

Drainage area.--871 sq mi.

Records available.--July 1903 to December 1908, May to November 1911, September 1929 to September 1960. Published as "at Wallagrass" 1903-8, 1911.

Gage.--Water-stage recorder. Datum of gage is 511.38 ft above mean sea level, datum of 1929. July 1903 to December 1908 and May to November 1911, chain gage at site 10 miles upstream at different datum.

Average discharge.--36 years (1903-8, 1929-60), 1,357 cfs.

Extremes.--Maximum discharge during year, 10,100 cfs May 16 (gage height, 9.85 ft); minimum, 48 cfs Sept. 8, 12.
1903-8, 1911, 1929-60: Maximum discharge, 12,000 cfs Apr. 26, 1958 (gage height, 10.81 ft); minimum, 46 cfs Oct. 9, 10, 1950.

Remarks.--Records excellent except those for periods of ice effect, no gage-height record, or backwater from temporary dam, which are fair. Large lake area above station has not yet been developed for storage.

Revisions.--WSP 1001: Drainage area.

Rating table, water year 1959-60, except periods of ice effect or backwater from temporary dam (gage height, in feet, and discharge, in cubic feet per second)

2.0	39	5.0	2,000
2.3	102	6.0	3,420
2.6	193	7.0	5,020
3.0	354	8.0	6,660
3.5	625	10.0	10,400
4.0	990		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	571	1,680	2,480	1,190	465	715	550	6,150	2,690	669	221	78
2	644	1,700	2,580	1,110	460	700	590	6,710	2,490	644	183	67
3	631	1,700	2,690	1,050	460	700	665	7,050	2,290	619	200	60
4	631	1,690	2,800	1,000	455	690	742	*7,440	2,100	625	186	56
5	625	1,770	2,900	920	455	675	905	7,950	1,980	595	183	54
6	625	1,840	3,000	880	455	665	1,220	8,840	1,890	559	183	53
7	625	1,920	3,020	820	455	650	1,400	9,540	1,770	525	180	53
8	644	1,920	3,030	770	450	640	1,580	9,820	1,650	502	183	48
9	663	1,920	*3,080	715	445	625	1,730	9,840	1,600	470	167	53
10	688	1,900	3,130	680	440	625	1,870	9,780	1,510	448	157	51
11	695	1,880	3,010	640	450	625	1,950	9,490	1,420	438	154	49
12	748	1,870	2,900	*625	475	615	2,010	9,120	1,330	443	154	51
13	735	1,810	2,920	605	510	605	2,050	8,690	*1,260	402	148	172
14	735	1,800	2,800	585	555	590	2,100	8,930	1,180	392	138	176
15	728	1,880	2,670	575	600	585	2,140	9,600	1,140	368	132	154
16	728	1,870	2,580	565	650	575	2,220	10,100	1,090	354	116	138
17	728	1,890	2,480	555	675	575	2,310	9,860	1,040	345	92	124
18	701	1,920	2,360	555	695	570	2,730	9,340	999	327	85	124
19	682	1,940	2,230	530	700	565	3,280	8,690	973	332	80	116
20	682	1,980	2,120	530	720	560	3,550	8,060	914	336	92	110
21	663	1,980	1,990	520	735	555	3,800	7,440	873	292	124	106
22	650	1,940	1,890	515	740	*540	4,040	6,790	825	292	121	100
23	644	1,880	1,800	510	750	520	4,140	6,250	811	301	135	100
24	675	1,870	1,730	500	750	515	4,270	5,740	762	280	126	95
25	*865	1,910	1,620	495	*750	510	4,400	5,240	825	263	107	95
26	1,180	2,020	1,540	495	750	500	4,540	4,750	797	263	102	95
27	1,300	2,060	1,460	490	805	495	4,600	4,350	783	259	97	95
28	1,410	2,100	1,410	485	750	495	4,880	3,930	755	248	88	92
29	1,500	2,200	1,330	475	735	495	5,230	3,580	748	224	85	85
30	1,560	2,300	1,280	470	-------	490	5,680	3,230	722	221	85	85
31	1,630	-------	1,240	465	-------	500	-------	2,950	-------	236	80	-------
Total	25,586	57,140	72,070	20,320	17,335	18,165	81,172	229,250	39,217	12,272	4,184	2,735
Mean	825	1,905	2,325	655	598	586	2,706	7,395	1,307	396	135	91.2
Cfsm	0.947	2.19	2.67	0.752	0.687	0.673	3.11	8.49	1.50	0.455	0.155	0.105
In.	1.09	2.44	3.08	0.87	0.74	0.78	3.47	9.79	1.67	0.52	0.18	0.12

Calendar year 1959: Max 5,640 Min 230 Mean 1,363 Cfsm 1.56 In. 21.25
Water year 1959-60: Max 10,100 Min 48 Mean 1,575 Cfsm 1.81 In. 24.65

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 19 to Dec. 9; discharge estimated on basis of weather records, 1 discharge measurement, and recorded range in stage. Stage-discharge relation affected by ice Dec. 23-25, Dec. 28, 29, Jan. 1 to Apr. 3 (no gage-height record Jan. 8-12, Feb. 23-25). Backwater from temporary dam Sept. 9-30.

140. St. John River below Fish River at Fort Kent, Maine

(International gaging station)

Location.--Lat 47°15'25", long 68°35'35", on right bank at Fort Kent, Aroostook County, a quarter of a mile downstream from Fish River.

Drainage area.--5,690 sq mi, approximately (not including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--October 1926 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 488.9 ft above mean sea level, datum of 1929. Prior to Oct. 10, 1933, staff gage on opposite bank at same datum.

Average discharge.--34 years, 9,558 cfs.

Extremes.--Maximum discharge during year, 91,000 cfs May 8 (gage height, 21.37 ft); maximum gage height, 22.04 ft Apr. 20 (backwater from ice); minimum discharge, 618 cfs Sept. 11, 12.
1926-60: Maximum discharge, 121,000 cfs May 5, 1933 (gage height, 25.1 ft); minimum daily, 510 cfs Mar. 13-15, 1948.

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Cooperation.--This station is maintained by the United States under agreement with Canada.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	585	10.0	22,900
1.0	920	12.0	32,000
1.5	1,300	14.0	42,000
2.0	1,800	16.0	53,000
3.0	2,980	18.0	67,000
4.0	4,540	20.0	81,000
6.0	8,900	22.0	96,000
8.0	14,900		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,220	9,550	18,100	3,890	2,000	2,760	2,540	54,000	9,090	6,040	2,150	767
2	5,540	9,240	17,000	3,830	1,980	2,710	3,010	60,200	8,590	5,230	2,040	734
3	10,100	9,160	18,100	3,780	1,970	2,700	3,910	62,300	8,370	4,650	1,980	689
4	11,700	9,330	17,000	3,700	1,950	2,660	5,000	*62,000	8,710	4,430	2,010	682
5	9,840	9,520	15,100	3,560	1,920	2,610	6,410	66,200	8,640	4,020	1,920	682
6	8,160	10,700	14,100	3,500	1,900	2,580	8,300	75,800	8,920	3,780	1,740	676
7	6,810	15,300	14,100	3,320	1,900	2,560	11,500	86,700	12,200	3,610	1,600	670
8	6,080	19,900	*15,500	3,090	1,890	2,510	13,400	90,600	12,400	3,370	1,480	656
9	6,660	18,100	15,800	2,980	1,880	2,470	14,500	90,200	10,800	3,200	*1,430	644
10	9,210	15,300	14,000	2,850	1,870	2,460	13,100	88,600	9,190	2,980	1,370	637
11	10,500	*13,000	12,200	2,800	1,890	2,420	12,800	83,200	7,990	2,880	1,300	618
12	10,200	11,700	11,000	2,710	1,920	2,380	12,200	72,300	7,070	3,020	1,270	624
13	10,000	10,900	10,200	*2,610	2,110	2,340	12,000	60,700	6,320	3,110	1,340	1,070
14	9,670	10,500	9,810	2,560	2,340	2,330	11,900	57,600	5,680	3,080	1,260	2,210
15	8,540	11,500	9,690	2,510	2,480	2,300	12,000	70,500	*5,210	3,640	1,160	4,430
16	7,530	15,000	9,810	2,480	2,620	2,270	12,800	82,400	5,010	3,760	1,080	5,210
17	6,810	16,600	9,500	2,460	2,750	2,260	14,100	74,100	4,830	3,300	997	4,070
18	6,320	15,300	8,900	2,420	2,980	2,230	18,100	60,500	5,190	2,850	927	3,220
19	5,890	12,500	8,110	2,390	3,050	2,220	24,900	48,200	6,650	2,580	871	2,620
20	5,570	10,100	7,460	2,350	3,120	2,210	32,000	40,600	9,840	2,590	920	2,240
21	5,330	8,420	7,000	2,340	3,110	2,200	43,000	34,400	9,500	2,790	1,260	1,930
22	5,000	8,060	6,410	2,300	3,040	2,190	44,200	29,400	8,730	4,200	1,120	1,720
23	4,740	8,560	6,100	2,260	2,980	*2,180	40,600	25,500	7,760	4,740	1,080	1,580
24	4,770	9,280	5,800	2,220	2,910	2,140	37,400	22,500	6,790	4,100	1,140	1,420
25	*6,880	11,500	5,490	2,190	2,850	2,120	36,700	19,900	7,090	3,810	1,380	1,290
26	13,700	19,400	5,310	2,140	*2,840	2,110	38,300	17,500	9,260	4,140	1,160	1,220
27	17,000	23,000	5,090	2,110	2,870	2,090	40,400	15,200	11,700	3,730	1,040	1,160
28	15,000	22,200	4,810	2,100	2,840	2,080	42,000	13,400	10,300	3,200	913	1,100
29	12,800	21,600	4,590	2,070	2,830	2,060	43,800	12,100	8,490	2,750	836	1,040
30	11,200	20,600	4,310	2,040	-------	2,030	48,300	10,900	7,040	2,400	808	1,020
31	10,100	-------	4,100	2,000	-------	2,200	-------	9,860	-------	2,320	780	-------
Total	265,870	406,120	314,490	83,560	70,790	72,380	659,170	1,597,360	247,360	110,300	40,362	46,629
Mean	8,576	13,540	10,140	2,695	2,441	2,335	21,970	51,530	8,245	3,558	1,302	1,554
Cfsm	1.51	2.38	1.78	0.474	0.429	0.410	3.86	9.06	1.45	0.625	0.229	0.273
In.	1.74	2.66	2.05	0.55	0.46	0.47	4.31	10.44	1.62	0.72	0.26	0.30

Calendar year 1959: Max 51,400 Min 1,300 Mean 9,836 Cfsm 1.73 In. 23.46
Water year 1959-60: Max 90,600 Min 618 Mean 10,700 Cfsm 1.88 In. 25.58

Peak discharge (base, 45,000 cfs).--Apr. 21 (8 p.m.) 45,300 cfs (14.66 ft); May 8 (11 a.m.) 91,000 cfs (21.37 ft); May 16 (2 p.m.) 83,200 cfs (20.31 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19-21, Dec. 9 to Apr. 21.

158. Aroostook River near Masardis, Maine

Location.--Lat 46°31'20", long 68°22'25", on left bank 80 ft upstream from highway bridge and 1.8 miles downstream from St. Croix Stream and Masardis, Aroostook County.

Drainage area.--888 sq mi.

Records available.--September 1957 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 530.0 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 13,100 cfs May 16 (gage height, 13.58 ft); maximum gage height, 14.17 ft Apr. 21 (ice jam); minimum discharge, 146 cfs Sept. 11-12 (gage height, 2.49 ft).
1957-60: Maximum discharge, 21,500 cfs Apr. 25, 1958 (gage height, 16.30 ft); maximum recorded gage height, 16.44 ft Dec. 23, 1957 (ice jam); minimum discharge, 69 cfs Sept. 16, 1957 (gage height, 2.08 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow partly regulated by Millinocket Lake (capacity, 1,007,000,000 cu ft) used for power.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	126	6.0	2,020
2.7	198	8.0	4,000
3.0	288	10.0	6,540
4.0	710	12.0	9,650
5.0	1,300	14.0	14,200

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	266	1,620	6,700	820	530	660	575	8,030	800	757	655	220
2	286	1,680	5,760	800	530	640	700	8,670	822	660	612	209
3	298	1,680	4,590	780	525	630	835	*9,030	822	603	603	204
4	312	1,570	4,070	760	525	610	1,140	*9,010	767	655	612	193
5	295	1,430	3,470	740	520	580	1,790	9,470	822	710	563	185
6	285	1,270	3,000	720	520	570	2,100	10,700	1,960	700	548	175
7	291	1,310	3,010	700	515	550	2,550	12,100	1,540	685	512	167
8	420	1,370	4,090	680	510	530	2,980	12,600	1,530	655	482	158
9	646	1,310	*4,260	670	510	510	3,280	12,300	1,300	617	474	160
10	762	1,190	4,090	650	510	490	3,430	12,100	1,310	607	449	155
11	762	1,090	3,120	625	510	475	3,450	11,200	1,120	566	412	146
12	736	*1,010	2,510	620	540	465	3,400	10,900	757	589	392	158
13	700	989	2,390	*610	560	450	3,340	10,000	544	700	366	278
14	584	995	2,410	605	600	435	3,220	9,900	508	794	354	412
15	571	1,180	2,400	605	635	430	3,120	12,200	*495	794	329	381
16	521	1,540	2,190	605	655	410	3,260	12,800	607	690	315	333
17	478	1,550	2,020	600	675	400	3,620	10,600	720	612	295	285
18	449	1,540	1,830	595	680	390	4,170	8,220	690	566	285	259
19	432	1,260	1,680	585	660	380	4,930	6,500	655	548	269	241
20	400	1,100	1,520	580	650	375	5,840	5,060	660	767	262	226
21	388	1,070	1,410	575	635	370	6,400	4,110	1,070	816	262	212
22	362	1,000	1,320	570	605	360	5,910	3,140	1,240	685	259	198
23	354	1,120	1,220	565	600	*355	5,260	2,600	1,070	612	250	188
24	392	1,400	1,140	560	610	350	5,030	2,320	918	622	235	180
25	1,110	1,820	1,110	560	*630	335	4,960	2,110	1,480	650	220	177
26	3,490	3,430	1,050	560	650	330	5,420	1,620	2,600	594	215	201
27	4,130	4,470	1,000	555	660	330	5,840	1,400	2,330	559	295	201
28	3,340	5,180	950	555	660	325	6,370	1,270	1,660	512	273	198
29	2,530	7,900	918	545	650	335	6,920	1,040	1,190	478	263	193
30	2,000	7,800	890	540	--------	375	7,500	822	936	474	253	195
31	1,690	--------	850	540	--------	450	--------	784	--------	622	235	--------
Total	29,282	61,874	76,968	19,475	17,060	13,895	117,340	222,606	32,923	19,879	11,554	6,488
Mean	945	2,062	2,483	628	588	448	3,911	7,181	1,097	641	373	216
(†)	+61	+99	+12	-73	-213	-75	+355	-25	+25	-16	-137	-126

Adjusted for change in reservoir contents

Mean	1,006	2,161	2,495	555	375	373	4,266	7,156	1,122	625	239	90
Cfsm	1.13	2.43	2.81	0.625	0.422	0.420	4.80	8.06	1.26	0.704	0.266	0.101
In.	1.30	2.71	3.24	0.72	0.46	0.48	5.36	9.29	1.41	0.81	0.31	0.11

	Observed			Adjusted		
Calendar year 1959:	Max 7,900	Min 172	Mean 1,411	Mean 1,415	Cfsm 1.59	In. 21.63
Water year 1959-60:	Max 12,800	Min 146	Mean 1,720	Mean 1,711	Cfsm 1.93	In. 29.20

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Millinocket Lake.
Note.--Stage-discharge relation affected by ice Nov. 20-26, Dec. 14 to Apr. 27.

165. Machias River near Ashland, Maine

Location.--Lat 46°37'40", long 68°26'05", on right bank just upstream from highway bridge, 0.8 mile upstream from mouth and 1½ miles west of Ashland, Aroostook County.

Drainage area.--330 sq mi.

Records available.--June 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 535 ft (from topographic map).

Average discharge.--9 years, 579 cfs.

Extremes.--Maximum discharge during year, 8,270 cfs May 9 (gage height, 7.47 ft); maximum gage height, 9.74 ft Apr. 19 (backwater from ice); minimum discharge, 26 cfs Sept. 9. 1951-60: Maximum discharge, 16,600 cfs June 29, 1954 (gage height, 11.94 ft), from rating curve extended above 7,900 cfs by logarithmic plotting; minimum, 5.4 cfs Sept. 17, 1952 (gage height, 0.64 ft).

Remarks.--Records excellent except those for period of ice effect, which are fair. Flow partly regulated by Machias and Rowe Lakes (combined capacity, about 280,000,000 cu ft) used for log driving and power.

Revisions.--WSP 1501: Drainage area.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 21				Apr. 22 to Sept. 30			
0.8	71	2.5	1,070	0.5	27	2.5	1,070
1.0	123	3.0	1,550	.7	60	3.0	1,540
1.3	237	4.0	2,720	.9	110	4.0	2,670
1.6	390	5.0	3,990	1.2	215	5.0	4,060
2.0	660			1.6	423	6.0	5,660
				2.0	688	7.0	7,380

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	908	2,130	305	180	225	180	3,330	251	300	203	40
2	120	868	1,450	300	180	225	220	3,730	256	275	131	38
3	140	600	716	300	176	225	270	3,820	251	265	144	36
4	146	224	836	290	176	220	320	*3,920	242	265	211	34
5	149	247	868	280	170	215	410	4,480	505	256	199	33
6	146	275	860	275	170	210	640	5,120	1,240	377	187	30
7	160	310	924	270	170	205	900	5,500	1,730	348	175	28
8	242	368	1,280	265	170	198	1,060	6,060	1,410	326	168	28
9	275	488	*1,380	260	168	194	1,120	7,000	1,000	251	168	27
10	225	534	1,220	260	168	186	1,300	6,150	660	207	161	30
11	109	527	1,020	260	170	182	1,300	5,420	473	246	137	28
12	115	*660	876	260	176	180	1,250	4,960	435	354	122	34
13	106	985	836	*255	190	176	1,200	3,980	417	394	110	122
14	98	748	836	250	198	168	1,190	5,340	377	442	102	191
15	93	764	684	245	215	170	1,210	5,770	*343	388	94	150
16	85	756	611	240	225	168	1,280	5,610	435	338	86	125
17	83	756	590	235	235	168	1,400	4,510	454	305	78	107
18	81	716	500	230	240	164	1,810	3,200	411	290	74	99
19	78	684	490	225	235	160	2,010	2,440	394	295	69	91
20	78	653	460	220	230	160	2,500	1,820	411	343	72	86
21	76	450	435	215	225	156	2,650	1,360	460	316	78	78
22	71	179	410	215	220	152	2,450	1,120	423	280	78	76
23	76	203	385	210	220	*152	2,190	980	377	265	74	72
24	85	228	375	205	215	152	2,020	857	348	260	67	67
25	260	710	370	205	*215	150	1,950	753	565	246	60	62
26	764	1,620	355	198	210	146	2,060	498	864	233	55	58
27	1,190	1,770	335	194	210	142	2,220	382	834	215	53	56
28	1,340	2,220	330	190	215	142	2,430	377	688	207	47	53
29	1,200	3,060	320	186	220	146	2,770	343	530	199	46	51
30	1,060	2,650	315	186	-------	146	3,020	270	354	195	46	53
31	972	-------	310	182	-------	156	-------	246	-------	290	44	-------
Total	9,716	25,161	22,507	7,411	5,792	5,439	45,330	99,346	17,138	8,971	3,339	1,983
Mean	313	839	726	239	200	175	1,511	3,205	571	289	108	66.1
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 3,160 Min 14 Mean 518 Cfsm 1.57 In. 21.30
Water year 1959-60: Max 7,000 Min 27 Mean 689 Cfsm 2.09 In. 28.40

Peak discharge (base, 3,200 cfs).--May 9 (3 p.m.) 8,270 cfs (7.47 ft); May 15 (7 p.m.) 6,080 cfs (6.25 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 17 to Apr. 25 (no gage-height record Jan. 21 to Feb. 24; discharge estimated on basis of weather records and records for Aroostcok River at Washburn).

170. Aroostook River at Washburn, Maine

Location.--Lat 46°46'35", long 68°09'30", on right bank just upstream from Bangor & Aroostook Railroad bridge, 0.1 mile downstream from Salmon Brook and 1 mile south of railroad station at Washburn, Aroostook County.

Drainage area.--1,652 sq mi.

Records available.--August 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 436.40 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1948, at datum 2.0 ft higher.

Average discharge.--30 years, 2,573 cfs (unadjusted).

Extremes.--Maximum discharge during year, 25,000 cfs May 16 (gage height, 10.40 ft); minimum, 201 cfs Sept. 11 (gage height, 1.49 ft).
1930-60: Maximum discharge, 37,800 cfs Mar. 22, 1936 (gage height, 13.80 ft, present datum); maximum gage height, 15.78 ft Apr. 6, 1951 (backwater from ice); minimum daily discharge, 75 cfs Feb. 13-15, 1948.

Remarks.--Records excellent except those for period of ice effect, which are fair. Flow partly regulated by Squapan Lake (capacity, 2,554,000,000 cu ft), and by Millinocket Lake (capacity, 1,007,000,000 cu ft) used for power, and Machias and Rowe Lakes (combined capacity, about 280,000,000 cu ft) used for log driving and power.

Revisions (water years).--WSP 951: 1935. WSP 1301: 1933-50 (adjusted monthly runoff). WSP 1501: Drainage area.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	207	5.0	5,300
1.8	425	6.0	7,990
2.2	800	8.0	14,500
2.6	1,250	10.0	23,000
3.0	1,750	12.0	33,000
4.0	3,240		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	573	3,120	12,000	1,370	900	1,140	1,130	15,200	1,360	1,360	1,020	310
2	740	3,160	10,100	1,330	890	1,130	1,350	16,500	1,380	1,200	899	280
3	780	3,140	7,290	1,270	865	1,130	1,780	17,000	1,380	1,110	830	266
4	740	2,580	6,370	1,230	845	1,130	2,330	*16,800	1,320	1,130	780	266
5	700	2,450	5,860	1,180	820	1,130	3,040	17,400	1,940	1,180	760	247
6	650	2,450	5,120	1,150	810	1,110	3,950	19,000	4,220	1,240	760	227
7	710	2,500	*5,250	1,110	800	1,050	5,250	21,000	5,080	1,210	760	220
8	910	2,600	7,800	1,100	760	1,030	6,150	21,800	4,340	1,170	940	214
9	1,150	2,500	7,940	1,050	720	1,030	6,750	22,300	3,390	1,090	900	214
10	1,380	2,420	6,370	1,020	790	1,020	7,020	21,700	2,690	987	840	214
11	1,260	2,260	5,300	*985	820	1,010	6,880	19,900	2,270	921	770	207
12	1,250	2,120	4,150	975	835	1,010	6,590	19,400	1,870	1,110	700	302
13	1,200	2,480	4,050	955	845	1,000	6,340	18,200	*1,420	1,250	650	468
14	1,110	2,330	4,280	1,040	910	955	6,150	18,100	1,300	1,450	537	770
15	998	2,510	4,190	1,130	1,000	930	6,100	22,900	1,370	1,430	502	770
16	921	2,890	3,860	1,150	1,130	930	6,590	24,200	1,560	1,250	484	650
17	833	2,940	3,410	1,110	1,180	1,020	7,770	20,200	2,100	1,110	442	573
18	790	2,940	3,070	1,000	1,180	1,140	9,260	15,300	1,880	1,010	425	555
19	730	2,510	2,630	1,010	1,140	1,140	11,700	11,700	1,750	998	401	537
20	822	2,340	2,450	1,010	1,110	1,110	13,000	9,280	1,850	1,230	409	425
21	800	2,030	2,300	975	1,040	*1,090	12,900	7,210	2,320	1,390	425	401
22	770	1,490	2,160	930	1,000	1,050	11,900	5,830	2,360	1,270	425	425
23	630	1,620	2,020	890	955	1,040	11,400	4,650	2,020	1,240	393	442
24	690	1,750	1,880	865	1,020	1,010	11,000	4,030	1,670	1,110	370	362
25	1,370	3,700	1,820	1,040	1,030	1,000	10,700	3,580	2,420	1,110	346	331
26	4,540	8,400	1,750	1,040	1,050	955	11,200	2,940	4,090	1,180	324	295
27	6,990	8,880	1,650	1,020	*1,120	930	11,700	2,230	3,970	888	295	317
28	6,320	10,300	1,590	985	1,130	910	12,100	2,080	3,100	844	370	310
29	4,880	14,100	1,520	930	1,140	900	13,400	1,880	2,270	790	370	295
30	3,950	14,000	1,470	900	--------	910	14,300	1,560	1,740	760	362	386
31	3,380	--------	1,410	800	--------	985	--------	1,360	--------	866	339	--------
Total	52,567	118,510	131,060	32,550	27,835	31,925	239,730	405,230	70,430	34,885	17,828	11,279
Mean	1,696	3,950	4,228	1,050	960	1,030	7,991	13,070	2,348	1,125	575	376
(†)	+101	+204	+31	-152	-238	-583	+747	+230	-61	-21	-179	-163
Adjusted for change in reservoir contents												
Mean	1,797	4,154	4,259	898	722	447	8,738	13,300	2,287	1,104	396	213
Cfsm	1.09	2.51	2.58	0.544	0.437	0.271	5.29	8.05	1.38	0.668	0.240	0.129
In.	1.26	2.80	2.97	0.63	0.47	0.31	5.90	9.28	1.54	0.77	0.28	0.14

	Observed			Adjusted		
Calendar year 1959:	Max 14,100	Min 340	Mean 2,554	Mean 2,583	Cfsm 1.56	In. 21.21
Water year 1959-60:	Max 24,200	Min 207	Mean 3,207	Mean 3,199	Cfsm 1.94	In. 26.35

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Millinocket and Squapan Lakes.
Note.---Stage-discharge relation affected by ice Dec. 10 to Apr. 24. No gage-height record Nov. 7-9, Aug. 3-11; discharge estimated on basis of weather records and recorded range in stage.

180. Meduxnekeag River near Houlton, Maine

Location.--Lat 46°06'15", long 67°52'00", on right bank 0.3 mile downstream from South Branch and 2 miles upstream from Houlton, Aroostook County.

Drainage area.--175 sq mi.

Records available.--October 1940 to September 1960, October 1940 monthly discharge only, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 333.92 ft above mean sea level, datum of 1929.

Average discharge.--20 years, 284 cfs.

Extremes.--Maximum discharge during year, 3,350 cfs Nov. 29 (gage height, 6.95 ft); minimum, 4.0 cfs Sept. 9, 10, 11, 12 (gage height, 2.15 ft).
1940-60: Maximum discharge, 6,620 cfs Apr. 23, 1958 (gage height, 8.30 ft); maximum gage height, 10.83 ft Mar. 27, 1953 (backwater from ice); minimum discharge, 3.6 cfs Sept. 19, 1946 (gage height, 2.09 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 1031: 1944.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	2.2	3.0	175
2.2	5.9	3.5	400
2.3	12	4.0	695
2.4	21	5.0	1,420
2.5	34	6.0	2,320
2.7	76	7.0	3,400

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	522	1,520	320	144	220	240	1,460	130	90	41	7.7
2	41	570	1,070	315	128	215	305	1,380	148	71	34	5.9
3	45	504	864	365	114	205	450	1,320	152	62	30	5.2
4	43	422	734	545	104	196	670	1,170	134	114	25	4.8
5	41	390	650	515	90	182	930	1,110	127	137	22	4.8
6	39	375	606	460	82	176	1,540	*1,040	256	117	21	4.4
7	39	380	*766	405	76	168	1,830	925	211	93	20	4.4
8	79	395	1,180	355	102	160	1,620	806	152	74	20	4.4
9	104	406	1,020	320	108	152	1,440	708	117	64	20	4.4
10	98	380	760	285	104	148	1,280	669	96	62	18	4.4
11	84	336	575	*270	104	140	1,180	650	82	50	17	4.0
12	84	323	480	255	152	138	1,070	838	71	59	16	5.5
13	84	385	575	240	235	134	995	825	*66	87	*15	17
14	71	365	810	230	325	130	995	1,030	54	156	15	28
15	62	466	800	215	450	128	965	1,390	50	134	14	18
16	54	528	675	205	575	124	1,160	1,260	90	96	13	14
17	52	482	570	200	560	120	1,500	939	127	74	11	11
18	52	528	520	188	465	118	2,450	734	98	66	10	10
19	59	460	495	182	405	114	2,920	582	82	54	9.6	9.6
20	57	375	465	180	385	114	2,480	472	82	64	9.6	9.6
21	52	323	445	176	350	*118	1,970	395	167	79	10	9.6
22	48	305	420	170	330	114	1,680	341	148	64	11	9.6
23	47	287	410	168	305	110	1,440	305	104	59	11	9.0
24	57	305	395	164	285	108	1,350	274	96	66	10	9.0
25	835	1,100	390	160	270	104	1,440	242	540	57	9	8.3
26	2,030	2,630	375	148	260	98	1,600	211	564	47	7.7	7.7
27	1,580	1,950	365	146	250	96	1,600	422	341	38	7.7	7.1
28	939	1,560	355	140	225	93	1,550	167	220	33	6.5	7.1
29	606	2,980	345	146	220	87	1,630	148	152	30	7.1	7.1
30	438	2,490	335	156	-------	84	1,570	148	114	29	7.7	7.7
31	385	-------	330	156	-------	108	-------	134	-------	39	9.0	-------
Total	8,244	22,522	19,300	7,780	7,203	4,202	41,810	22,095	4,771	2,265	478.9	259.3
Mean	266	751	623	251	248	136	1,394	713	159	73.1	15.4	8.64
Cfsm	1.52	4.29	3.56	1.43	1.42	0.777	7.97	4.07	0.909	0.418	0.088	0.049
In.	1.75	4.79	4.10	1.65	1.53	0.90	8.89	4.69	1.01	0.48	0.10	0.05

Calendar year 1959: Max 4,080 Min 11 Mean 345 Cfsm 1.97 In. 26.77
Water year 1959-60: Max 2,980 Min 4.0 Mean 385 Cfsm 2.20 In. 29.94

Peak discharge (base, 2,100 cfs).--Oct. 26 (1:30 p.m.) 2,140 cfs (5.82 ft); Nov. 28 (2 to 4 p.m.) 2,830 cfs (6.48 ft); Nov. 29 (7 p.m.) 3,350 cfs (6.95 ft); Apr. 19 (9 a.m.) 3,020 cfs (6.65 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 8 to Apr. 11, Apr. 13-17.

185. St. Croix River at Vanceboro, Maine

(International gaging station)

Location.--Lat 45°34'10", long 67°25'45", on right bank at international highway bridge in Vanceboro, Washington County, 400 ft downstream from outlet of Spednik Lake.

Drainage area.--417 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 367.75 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 700 cfs.

Extremes.--Maximum discharge during year, 4,830 cfs Nov. 30 (from gate records at Spednik Lake dam); minimum, 342 cfs Sept. 12 (gage height, 4.47 ft).
1929-60: Maximum discharge, that of Nov. 30, 1959; minimum, 1.9 cfs several times during October and November 1936 (gage height, 1.91 ft), when flow was held back by cofferdam during repairs to dam just upstream.

Remarks.--Records excellent except those for period of no gage-height record, which are good. Flow regulated by Chiputneticook Lakes (combined usable capacity, about 13,200,000,000 cu ft).

Cooperation.--This station is maintained by the United States under agreement with Canada.

Revisions.--WSP 1431: Drainage area.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 27				Nov. 28 to Sept. 30			
4.5	395	7.0	2,010	4.5	350	8.0	3,000
5.0	595	8.0	3,000	5.0	538	9.0	4,150
5.5	848	9.0	4,150	6.0	1,150	9.6	4,920
6.0	1,180			7.0	1,980		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,270	600	4,800	1,190	1,620	1,700	1,340	613	730	520	650	392
2	840	600	*4,790	1,190	1,610	1,670	1,320	629	767	520	635	392
3	551	600	4,750	1,560	1,590	1,660	1,310	639	*767	520	*634	386
4	551	604	4,650	1,660	1,560	1,880	1,310	644	767	1,330	*623	379
5	1,080	609	4,570	1,120	1,530	2,060	1,330	785	767	1,600	618	376
6	1,330	613	4,480	1,120	1,520	2,010	1,370	855	773	1,600	613	370
7	1,310	613	4,390	1,120	1,510	1,980	*1,020	683	773	1,570	608	367
8	855	613	3,710	1,130	1,490	1,940	779	688	773	1,550	603	370
9	564	618	2,630	1,130	1,470	1,900	792	694	779	1,530	597	370
10	564	618	2,380	1,130	1,450	1,880	811	694	779	1,510	587	376
11	564	*618	1,860	1,130	1,150	1,850	817	694	779	1,470	587	373
12	564	623	1,890	1,120	882	1,860	824	694	779	1,460	577	373
13	564	623	2,960	1,120	876	1,770	885	694	779	1,440	572	382
14	870	623	4,450	1,120	876	1,740	1,050	712	779	1,430	567	389
15	1,260	627	2,640	*1,120	882	*1,710	1,070	1,800	767	1,410	475	386
16	1,250	627	1,490	1,120	889	1,640	1,080	3,160	767	1,390	405	386
17	1,240	632	1,980	1,120	889	1,580	1,090	3,410	760	1,370	440	382
18	1,240	641	2,260	1,120	889	1,400	1,120	2,760	760	1,350	450	382
19	1,230	641	2,260	1,110	882	1,060	1,150	2,900	754	1,320	446	379
20	1,210	641	2,260	1,110	882	1,040	1,180	2,060	754	1,300	442	382
21	*1,200	641	1,870	1,100	882	1,040	1,190	1,090	1,530	1,280	442	382
22	1,180	641	*1,090	1,090	882	1,020	1,690	1,100	2,310	1,360	439	382
23	1,170	641	1,640	1,090	970	1,020	1,980	1,090	2,260	1,240	435	379
24	1,150	646	1,460	1,080	1,010	1,010	2,000	1,090	1,220	1,230	431	379
25	890	1,280	1,210	1,080	1,160	1,000	2,030	1,090	724	1,210	427	379
26	577	3,170	1,210	1,070	1,610	991	1,800	1,090	1,600	1,180	420	376
27	586	3,650	1,210	1,070	1,690	979	1,540	1,090	2,140	1,160	416	376
28	595	4,040	1,210	1,440	1,740	1,160	925	1,860	1,980	1,140	409	*376
29	595	4,800	1,210	1,700	1,710	1,390	592	2,870	1,730	780	405	376
30	595	4,820	1,210	1,670	-------	1,370	608	3,170	770	656	402	376
31	600	-------	1,210	1,660	-------	1,360	-------	1,250	-------	656	396	-------
Total	28,045	36,713	79,730	37,590	36,101	46,670	36,003	42,598	31,617	38,082	15,755	11,373
Mean	905	1,224	2,572	1,213	1,245	1,505	1,200	1,374	1,054	1,228	508	379
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 4,820 Min 159 Mean 881 Cfsm - In. -
Water year 1959-60: Max 4,820 Min 367 Mean 1,203 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 25 to Dec. 2; discharge estimated on basis of gate openings and lake levels at Spednik Lake dam.

190. Grand Lake Stream at Grand Lake Stream, Maine

Location.--Lat 45°10'25", long 67°46'05", on left bank at Big Falls, 0.5 mile southeast of village of Grand Lake Stream, Washington County, and 0.8 mile downstream from outlet dam of Grand Lake.

Drainage area.--224 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 273.96 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 365 cfs.

Extremes.--Maximum discharge during year, 2,320 cfs June 14 (gage height, 5.70 ft); minimum, 125 cfs June 21 (gage height, 1.83 ft).
1928-60: Maximum discharge, 2,840 cfs June 12, 1952 (gage height, 6.35 ft); minimum daily, 5 cfs Dec. 3-6, 11, 1945.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Grand and other lakes (combined usable capacity, about 8,250,000,000 cu ft).

Revisions.--WSP 971: Drainage area.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.3	258	4.0	1,080
2.5	326	5.0	1,760
3.0	541	6.0	2,560
3.5	790		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	912	419	1,470	690	806	1,270	530	446	358	319	1,050	465
2	690	424	1,660	690	801	1,250	389	451	*358	319	1,040	460
3	460	460	1,870	780	801	1,240	389	650	354	316	*1,030	455
4	460	565	1,850	867	796	1,280	397	834	358	319	1,010	437
5	650	620	1,560	867	790	1,440	419	834	361	319	996	437
6	818	620	1,080	867	790	1,420	428	834	365	319	984	370
7	818	530	856	867	790	1,390	424	834	365	316	966	336
8	650	435	1,010	862	790	1,370	424	828	361	312	948	340
9	393	435	1,210	862	790	1,360	424	828	361	312	942	336
10	381	435	1,210	856	785	1,340	406	823	365	312	755	336
11	377	435	1,210	856	785	1,310	377	720	361	312	580	333
12	381	435	1,200	850	796	1,370	377	795	361	312	575	336
13	381	440	1,780	845	790	1,450	381	1,120	1,340	312	570	336
14	377	440	2,150	840	796	1,420	381	1,440	1,520	310	566	336
15	377	440	2,100	834	806	1,390	385	1,490	1,390	310	561	330
16	377	440	2,110	840	796	1,360	385	1,480	1,630	300	556	326
17	377	442	2,160	845	796	1,240	385	1,180	1,260	295	551	326
18	377	446	2,140	840	796	984	389	630	305	290	541	326
19	377	442	2,090	840	801	966	393	365	344	475	536	326
20	550	442	1,690	845	806	954	393	361	855	715	527	330
21	755	442	1,050	845	806	936	393	358	980	710	527	330
22	740	437	750	840	806	936	401	350	425	705	522	322
23	735	437	690	840	1,100	924	575	350	322	700	517	322
24	710	442	690	828	1,330	906	745	347	322	695	512	319
25	600	484	690	823	1,240	912	755	347	319	690	503	319
26	428	498	685	818	1,310	889	760	347	319	680	493	322
27	428	493	690	818	1,310	878	765	347	319	675	484	322
28	424	507	690	818	1,290	815	595	347	319	665	479	322
29	419	700	690	818	1,270	546	442	350	319	850	474	319
30	419	1,040	690	818	-------	541	442	354	319	1,070	470	319
31	419	-------	690	812	-------	551	-------	358	-------	1,060	465	-------
Total	16,260	14,825	40,411	25,721	26,369	34,638	13,949	20,798	16,935	15,294	20,730	10,493
Mean	525	494	1,304	830	909	1,117	465	671	565	493	669	350
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 2,160 Min 108 Mean 616 Cfsm - In. -
Water year 1959-60: Max 2,160 Min 290 Mean 701 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 6-16, July 14 to Aug. 3; discharge estimated on basis of occasional observer readings, weather records, and records of gate openings and lake levels at dam just upstream.

200. St. Croix River near Baileyville, Maine

(International gaging station)

Location.--Lat 45°15'55", long 67°28'35", in township of Baileyville, Washington County, on right bank 700 ft downstream from powerhouse of St. Croix Paper Co. at Grand Falls, and 8 miles upstream from village of Woodland.

Drainage area.--1,320 sq mi.

Records available.--November 1919 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 148.8 ft above mean sea level, datum of 1929.

Average discharge.--41 years, 2,239 cfs.

Extremes.--Maximum discharge during year, 17,400 cfs Nov. 30 (gage height, 9.98 ft); minimum daily discharge, 498 cfs Sept. 4.
1919-60: Maximum discharge, about 23,300 cfs May 1, 1923 (gage height, 13.90 ft); minimum daily, 64 cfs Oct. 13, 1957.

Remarks.--Records excellent. Flow regulated by Chiputneticook Lakes, Grand and other lakes (combined usable capacity, about 25,000,000,000 cu ft).

Cooperation.--This station is maintained by the United States under agreement with Canada.

Revisions (water years).--WSP 1231: 1922.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

0.9	485	3.0	2,700
1.0	548	4.0	4,170
1.2	688	6.0	7,850
1.4	855	8.0	12,400
1.7	1,130	10.0	17,500
2.0	1,450		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,780	2,890	*15,200	2,990	2,240	4,230	3,280	3,790	2,710	2,810	1,440	1,000
2	2,780	3,180	13,000	2,950	3,050	4,190	3,600	4,800	*2,780	1,470	*2,690	992
3	1,310	3,040	11,900	2,320	3,020	4,100	2,280	4,210	2,800	768	*2,370	755
4	659	2,870	11,300	4,080	3,150	3,890	3,490	4,090	1,370	750	2,050	498
5	2,150	2,880	10,700	4,390	3,490	2,910	5,640	4,380	712	2,370	1,720	516
6	2,520	3,430	9,460	3,950	3,420	3,200	7,090	3,850	2,120	2,990	1,670	895
7	2,710	3,290	9,590	3,870	2,340	4,500	7,050	3,270	2,670	2,850	1,020	945
8	2,620	3,130	9,680	3,680	3,710	4,590	6,930	1,930	2,730	2,810	1,490	845
9	2,750	3,420	9,350	3,790	3,780	4,520	6,790	2,890	2,720	2,750	1,630	936
10	2,620	2,950	8,650	2,520	3,440	4,550	5,610	2,970	2,730	1,380	1,260	900
11	1,200	2,680	6,950	3,180	3,440	4,460	6,770	2,800	1,360	1,870	964	780
12	2,100	2,690	5,810	3,280	3,350	4,420	6,470	3,350	644	2,960	1,010	790
13	2,680	3,290	7,320	2,670	3,420	3,090	6,340	4,260	2,030	2,330	1,270	1,630
14	2,810	2,090	11,100	2,220	2,360	3,990	6,530	5,590	2,500	2,750	700	975
15	2,810	1,310	12,000	2,400	3,420	*4,510	6,430	6,830	2,560	2,680	1,010	909
16	2,780	2,340	11,900	2,520	3,600	4,300	5,210	9,040	2,710	2,630	1,040	850
17	2,620	2,730	9,600	1,680	3,720	4,270	5,430	8,880	2,480	1,400	1,040	1,150
18	1,320	2,900	7,230	2,260	4,410	4,330	7,060	8,330	2,140	2,260	1,040	690
19	2,280	3,000	6,360	2,820	4,670	4,220	7,550	6,980	860	2,840	1,040	840
20	*2,830	3,560	5,720	3,090	3,320	2,970	7,510	5,870	1,580	2,980	1,200	974
21	2,700	3,520	5,710	3,020	3,460	3,230	7,250	4,930	2,840	2,920	1,370	900
22	2,270	1,920	*4,870	2,920	4,940	3,100	7,250	3,200	2,730	2,810	910	954
23	2,630	2,320	4,460	2,910	4,660	2,850	7,310	2,740	2,760	2,320	964	954
24	2,610	2,680	3,460	1,710	4,140	2,850	6,560	2,730	2,560	1,490	1,040	810
25	2,280	8,370	2,700	2,490	3,750	2,750	7,490	2,620	1,800	2,320	1,030	652
26	7,000	13,900	3,400	2,920	3,680	2,840	7,510	2,600	920	2,930	1,030	910
27	8,390	13,900	3,130	2,980	3,320	1,580	7,350	2,760	1,290	2,980	1,240	*1,010
28	6,810	13,900	2,420	2,810	3,490	2,200	6,790	1,240	2,870	2,880	705	1,020
29	5,060	15,400	2,970	2,810	4,090	2,600	6,240	580	2,750	2,860	945	964
30	4,520	16,900	2,710	2,820	-------	2,850	5,790	1,660	2,660	1,970	983	909
31	4,280	-------	2,880	1,760	-------	2,870	-------	2,770	-------	1,010	983	-------
Total	94,879	150,480	231,530	89,810	102,880	110,960	186,600	125,940	65,386	72,138	38,854	26,953
Mean	3,061	5,016	7,469	2,897	3,548	3,579	6,220	4,063	2,180	2,327	1,253	898
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 16,900 Min 659 Mean 3,400 Cfsm - In. -
Water year 1959-60: Max 16,900 Min 498 Mean 3,542 Cfsm - In. -

* Discharge measurement made on this day.

212. Dennys River at Dennysville, Maine

Location.--Lat 44°54'05", long 67°14'55", on right bank just upstream from railroad bridge, 0.9 mile upstream from Cathance Stream and 1 mile west of Dennysville, Washington County.

Drainage area.--92.4 sq mi.

Records available.--October 1955 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 54.78 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 182 cfs.

Extremes.--Maximum discharge during year, 1,340 cfs Dec. 13 (gage height, 5.21 ft); minimum, 23 cfs Aug. 15 (gage height, 0.58 ft).
1955-60: Maximum discharge, 1,640 cfs Apr. 3, 1959 (gage height, 5.85 ft); minimum, 8.4 cfs Oct. 1, 1957 (gage height, 0.28 ft).

Remarks.--Records excellent except those for period of ice effect, which are fair. Flow partly regulated by power development at Meddybemps Lake. Records of water temperatures for the 1960 water year are given in WSP 1741.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	24	2.5	345
.8	42	3.0	490
1.0	65	4.0	830
1.5	140	5.0	1,240
2.0	230		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	192	559	107	126	439	362	252	134	133	178	57
2	45	226	355	106	125	391	412	260	*143	173	*155	55
3	43	176	266	305	125	373	418	258	154	148	84	55
4	40	138	238	705	124	348	511	234	154	132	52	54
5	51	125	216	517	102	330	825	218	149	77	44	54
6	38	118	206	348	101	318	1,180	202	148	152	40	53
7	44	122	260	254	194	310	*1,030	186	143	193	31	53
8	95	132	403	220	236	302	802	178	138	167	35	54
9	101	125	318	190	220	298	645	194	137	184	48	54
10	94	113	246	170	212	280	574	252	134	176	50	52
11	78	100	206	162	222	282	535	310	119	176	51	52
12	150	92	230	162	469	280	517	529	124	164	55	60
13	166	88	1,080	161	460	275	592	415	126	176	37	71
14	122	83	1,220	160	511	268	574	970	125	183	26	65
15	90	94	795	156	822	262	511	800	128	160	28	63
16	74	124	510	*156	673	252	595	529	350	178	57	63
17	63	*204	358	155	547	248	607	394	315	183	51	61
18	77	236	275	154	424	252	652	312	226	161	42	61
19	94	204	230	138	325	258	684	260	214	160	55	63
20	86	156	194	125	475	256	574	224	176	161	58	81
21	74	136	b162	142	628	242	454	202	161	152	59	122
22	61	137	b140	138	496	188	475	186	148	112	59	98
23	57	142	b122	134	424	161	547	174	142	184	61	83
24	54	178	118	132	385	156	451	167	138	236	58	76
25	104	760	114	125	394	156	403	162	164	222	55	71
26	385	925	112	132	365	152	368	154	178	204	54	68
27	375	645	108	128	493	155	338	143	155	172	54	*66
28	240	640	102	122	511	149	318	137	119	184	54	65
29	168	880	104	128	478	154	302	131	155	185	54	65
30	146	830	110	128	-------	162	275	128	92	184	54	68
31	132	-------	110	119	-------	238	-------	125	-------	185	58	-------
Total	3,380	8,121	9,467	5,879	10,667	7,935	16,531	8,686	4,789	5,287	1,797	1,963
Mean	109	271	305	190	368	256	551	280	160	171	58.0	65.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 1,340 Min 30 Mean 196 Cfsm 2.12 In. 28.80
Water year 1959-60: Max 1,220 Min 26 Mean 231 Cfsm 2.50 In. 34.00

Peak discharge (base, 600 cfs).--Nov. 26 (12:30 a.m.) 1,040 cfs (4.52 ft); Nov. 29 (7 to 8 p.m.) 954 cfs (4.31 ft); Dec. 13 (10 to 11 p.m.) 1,340 cfs (5.21 ft); Jan. 4 (time unknown) about 790 cfs; Feb. 15 (3:30 a.m.) 878 cfs (4.12 ft); Feb. 21 (4 a.m.) 676 cfs (3.59 ft); Apr. 6 (4 p.m.) 1,200 cfs (4.92 ft); Apr. 19 (5 a.m.) 718 cfs (3.71 ft); May 14 (12 m.) 1,140 cfs (4.77 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

215. Machias River at Whitneyville, Maine

Location.--Lat 44°43'25", long 67°31'15", on right bank 800 ft downstream from highway bridge at Whitneyville, Washington County.

Drainage area.--457 sq mi.

Records available.--October 1905 to September 1921, September 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 37.22 ft above mean sea level, datum of 1929. Oct. 1, 1905, to Sept. 30, 1921, staff and chain gages on highway bridge at different datum.

Average discharge.--47 years, 942 cfs.

Extremes.--Maximum discharge during year, 6,990 cfs Dec. 14 (gage height, 10.93 ft); minimum, 59 cfs Aug. 24 (gage height, 2.77 ft).
1905-21, 1929-60: Maximum discharge, 11,800 cfs Nov. 28, 1950 (gage height, 14.70 ft, from floodmarks), from rating curve extended above 7,000 cfs by logarithmic plotting; maximum gage height, 16.18 ft Mar. 14, 1936 (ice jam); minimum daily discharge, 3.5 cfs Oct. 12, 1939, when flow was held back by cofferdam during reconstruction of highway bridge upstream.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some storage in lakes above station.

Revisions (water years).--WSP 241: 1903-4. WSP 971: Drainage area. WSP 1231: 1907-15, 1916-21(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	50	5.0	1,430
2.9	78	6.0	2,380
3.2	145	7.0	3,160
3.6	295	9.0	4,910
4.0	520	11.0	7,070
4.5	950		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	272	995	4,900	1,160	465	1,450	1,240	2,020	*501	242	286	74
2	375	1,420	3,850	1,150	460	1,220	1,820	1,950	483	238	*286	154
3	335	1,390	3,190	1,140	460	1,090	2,120	2,050	483	280	254	192
4	350	1,220	2,870	2,700	460	985	2,350	2,010	483	420	246	200
5	310	1,110	2,660	3,160	460	870	3,500	1,910	483	230	151	206
6	295	1,030	2,480	2,680	465	830	5,210	2,210	470	242	89	203
7	425	986	2,390	2,120	785	750	*5,230	2,600	423	264	78	205
8	590	1,000	3,040	1,600	1,270	695	4,290	2,560	378	325	160	206
9	1,030	1,010	3,010	1,440	1,230	670	3,460	2,370	325	335	189	206
10	598	940	2,630	1,330	1,080	630	3,110	2,600	250	300	186	203
11	576	850	2,490	1,220	1,040	590	2,900	2,680	264	282	142	189
12	722	785	2,610	1,120	1,920	575	2,760	3,020	272	254	62	590
13	1,290	740	4,910	1,020	2,620	560	2,860	3,120	268	250	62	240
14	900	654	6,880	950	2,650	*525	2,800	4,120	264	250	63	138
15	813	654	6,240	850	4,000	520	2,530	4,070	242	246	320	154
16	550	*780	4,550	815	3,990	520	2,540	2,940	412	246	238	210
17	441	986	3,650	765	3,370	525	2,610	1,960	714	246	290	246
18	429	1,210	3,140	730	2,750	562	2,620	1,730	606	250	238	242
19	441	1,300	2,870	680	2,380	606	2,690	1,670	477	259	203	188
20	458	1,150	2,460	660	1,780	606	2,550	1,370	394	286	178	250
21	520	850	1,680	620	1,570	614	2,200	1,030	356	290	169	310
22	501	804	1,800	590	1,430	590	2,050	900	300	277	151	290
23	441	804	1,490	590	1,260	555	2,300	495	295	264	142	259
24	520	880	1,340	585	1,140	569	2,310	1,040	295	290	83	200
25	1,080	2,800	1,250	560	1,050	560	2,120	370	300	325	70	186
26	3,440	4,900	1,240	535	1,040	555	2,230	850	305	295	250	186
27	3,180	4,400	1,250	520	1,530	540	2,270	794	295	286	286	*178
28	2,330	4,800	1,230	520	2,070	520	2,210	662	259	290	238	175
29	1,870	5,400	1,230	495	1,730	540	2,200	598	250	277	218	175
30	1,430	5,500	1,180	485	-------	590	2,130	548	246	254	112	175
31	995	-------	1,180	470	-------	715	-------	527	-------	282	72	-------
Total	27,507	51,348	85,690	33,260	46,365	21,127	81,210	56,774	11,093	8,575	5,512	6,428
Mean	887	1,712	2,764	1,073	1,599	682	2,707	1,831	370	277	178	214
Cfsm	1.94	3.75	6.05	2.35	3.50	1.49	5.92	4.01	0.810	0.606	0.389	0.468
In.	2.24	4.18	6.98	2.71	3.78	1.72	6.60	4.62	0.90	0.70	0.45	0.52

Calendar year 1959: Max 6,880 Min 163 Mean 1,150 Cfsm 2.52 In. 34.16
Water year 1959-60: Max 6,880 Min 62 Mean 1,188 Cfsm 2.60 In. 35.40

Peak discharge (base, 3,200 cfs).--Oct. 26 (1 p.m.) 3,840 cfs (7.81 ft); Nov. 26 (time unknown) 5,500 cfs (9.57 ft); Dec. 14 (1 to 3 p.m.) 6,990 cfs (10.93 ft); Dec. 21 (2 p.m.) 3,310 cfs (7.19 ft); Jan. 5 (4 a.m.) 3,300 cfs (7.18 ft); Feb. 15 (time unknown) about 4,150 cfs; Apr. 6 (9 to 12 p.m.) 5,530 cfs (9.60 ft); May 14 (10 to 12 p.m.) 4,510 cfs (8.56 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 1-4, 9-14, 16-22, Jan. 24 to Feb. 6, Mar. 2, 3, 9-17, 25-27, Mar. 29 to Apr. 3. No gage-height record Nov. 25 to Dec. 1; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

225. Narraguagus River at Cherryfield, Maine

Location --Lat 44°36'30", long 67°56'15", on left bank at Cherryfield, Washington County, 800 ft upstream from railroad bridge and 0.7 mile downstream from West Branch Narraguagus River.

Drainage area.--232 sq mi.

Records available.--February 1948 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 44.2 ft above mean sea level, datum of 1929. Prior to July 1, 1948, staff gage at same site and datum.

Average discharge.--12 years, 500 cfs.

Extremes.--Maximum discharge during year, 5,400 cfs Nov. 26 (gage height, 14.57 ft); minimum, 31 cfs Sept. 8, 9, 10 (gage height, 7.06 ft).
1948-60: Maximum discharge, 7,250 cfs Nov. 28, 1950 (gage height, 15.81 ft); minimum, 27 cfs Oct. 6, 1957 (gage height, 6.98 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 1301: 1948(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

7.0	28	9.0	425
7.2	40	9.5	620
7.4	58	10.0	850
7.7	96	11.0	1,460
8.0	149	13.0	3,300
8.5	270	15.0	6,060

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118	1,030	2,930	490	275	580	1,680	681	*320	93	*145	35
2	199	1,090	2,070	580	270	530	1,770	690	293	90	118	35
3	242	972	1,590	800	270	490	1,700	717	279	82	102	34
4	214	811	1,330	1,980	265	445	2,180	663	262	99	88	33
5	192	722	1,180	1,690	265	425	3,280	616	245	100	79	33
6	177	659	1,070	1,340	270	408	*4,270	562	237	95	70	34
7	219	629	1,140	983	540	386	3,660	511	214	89	67	33
8	465	642	1,510	778	800	365	2,970	480	183	82	64	32
9	534	629	1,380	713	710	355	2,380	554	170	81	65	32
10	469	578	1,150	665	665	340	2,080	646	166	77	60	32
11	382	518	956	620	660	330	1,840	676	153	74	58	32
12	*558	476	895	580	1,530	325	1,700	978	147	77	56	36
13	663	443	3,460	540	1,670	323	1,810	978	139	82	54	69
14	526	418	4,410	505	1,820	314	1,720	1,700	131	90	50	74
15	408	456	3,470	480	2,840	308	1,540	1,770	127	93	49	57
16	335	530	2,390	*445	2,160	300	1,500	1,450	232	83	48	49
17	293	792	1,780	420	1,610	300	1,490	1,240	329	73	47	45
18	314	924	1,380	385	1,310	323	1,470	988	270	69	46	42
19	363	876	1,120	370	1,110	373	1,480	782	219	72	43	42
20	341	728	940	365	951	378	1,420	650	183	81	43	46
21	305	612	773	365	886	382	1,250	562	172	78	45	82
22	270	570	681	355	745	370	1,140	495	172	68	43	74
23	245	522	620	335	663	354	1,140	447	155	65	46	61
24	239	655	580	330	595	332	1,070	422	147	86	56	55
25	1,400	2,470	545	315	542	332	972	574	145	88	47	50
26	3,200	5,220	535	300	538	332	913	599	147	79	42	*47
27	2,950	4,460	510	300	897	308	850	484	129	69	40	47
28	2,140	3,400	505	285	860	311	821	408	115	69	39	46
29	1,460	3,910	500	280	736	330	773	360	108	70	38	46
30	1,030	3,800	495	280	-------	375	726	320	100	70	37	48
31	826	-------	490	275	-------	850	-------	296	-------	111	36	-------
Total	21,077	39,520	42,385	18,149	26,253	11,872	51,595	22,299	5,689	2,541	1,821	1,381
Mean	680	1,317	1,367	585	905	383	1,720	719	190	82.0	58.7	46.0
Cfsm	2.93	5.68	5.89	2.52	3.90	1.65	7.41	3.10	0.819	0.353	0.253	0.198
In.	3.38	6.34	6.79	2.90	4.21	1.90	8.27	3.57	0.91	0.41	0.29	0.22

Calendar year 1959: Max 5,220 Min 64 Mean 666 Cfsm 2.87 In. 38.98
Water year 1959-60: Max 5,220 Min 32 Mean 668 Cfsm 2.88 In. 39.19

Peak discharge (base, 1,500 cfs).--Oct. 26 (1 to 5 p.m.) 3,300 cfs (13.00 ft); Nov. 26 (1 p.m.) 5,400 cfs (14.57 ft); Dec. 14 (2 to 5 a.m.) 4,580 cfs (14.00 ft); Jan. 4 (3 p.m.) 2,070 cfs (11.80 ft); Feb. 15 (time unknown) about 3,000 cfs; Apr. 6 (5 a.m.) 4,410 cfs (13.88 ft); May 14 (8 p.m.) 1,910 cfs (11.60 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23 to Jan. 3, Jan. 10 to Feb. 12, Mar. 1-4, 8-12, 16, 17, 29-31.

230. West Branch Union River at Amherst, Maine

Location.--Lat 44°50'25", long 68°22'20", on right bank 200 ft upstream from site of old tannery dam, 0.6 mile upstream from Indian Camp Brook, and 0.7 mile northwest of Amherst, Hancock County.

Drainage area.--148 sq mi.

Records available.--July 1909 to September 1919, July 1929 to September 1960. Published as Union River at Amherst October 1910 to September 1913.

Gage.--Water-stage recorder. Altitude of gage is 160 ft (from topographic map). July 1909 to Sept. 30, 1919, staff and chain gages at highway bridge 1 mile downstream at different datum.

Average discharge.--41 years, 263 cfs.

Extremes.--Maximum discharge during year, 2,250 cfs Nov. 29 (gage height, 7.60 ft); minimum, 4.1 cfs Sept. 11 (gage height, 2.83 ft).
1909-19, 1929-60: Maximum discharge, 4,140 cfs Apr. 13, 1940 (gage height, 9.58 ft); maximum gage height, 10.41 ft Mar. 9, 1942 (ice jam); minimum discharge, 3.6 cfs Sept. 29, 1941; minimum gage height, 2.82 ft Sept. 14, 1949.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 801: 1935. WSP 821: Drainage area. WSP 1231: 1912-15, 1916-19(M). WSP 1301: 1910-11.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.8	3.5	3.3	26	5.0	515
2.9	5.9	3.4	37	5.5	780
3.0	9.0	3.6	66	6.0	1,100
3.1	13	4.0	155	7.0	1,770
3.2	19	4.5	305	8.0	2,600

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	900	1,890	425	104	245	420	668	*152	37	*27	6.1
2	103	815	1,680	445	104	230	725	663	145	35	25	5.9
3	90	745	1,470	670	104	205	1,050	647	139	34	25	5.3
4	86	680	1,270	900	104	184	1,500	599	134	37	24	5.3
5	84	630	1,090	780	104	174	1,730	564	126	35	21	5.6
6	88	580	913	*465	104	164	*1,650	520	118	34	20	4.8
7	110	540	882	395	124	154	1,450	477	110	30	18	4.6
8	163	515	926	355	140	150	1,360	431	106	29	18	4.8
9	171	481	845	320	140	144	1,360	409	99	26	18	4.8
10	179	458	769	290	134	140	1,370	384	93	25	17	4.6
11	171	418	*690	270	154	134	1,360	372	90	25	15	4.3
12	208	380	663	240	240	130	1,370	472	86	25	14	8.6
13	205	353	1,570	210	380	124	1,420	515	82	26	13	21
14	182	327	1,560	196	565	120	1,330	712	78	27	13	12
15	160	364	1,360	180	825	118	1,260	679	75	25	12	9.4
16	150	401	1,310	164	725	118	1,300	631	100	23	13	8.6
17	134	462	1,240	152	*600	*114	1,310	589	140	21	12	8.0
18	155	554	1,130	*148	535	114	1,320	535	114	20	11	8.3
19	158	530	978	140	465	114	1,350	481	86	19	9.8	8.3
20	155	486	839	134	415	114	1,310	418	77	20	9.4	10
21	150	431	770	130	345	114	1,220	360	80	18	9.4	13
22	134	401	695	126	305	114	1,200	316	75	18	9.8	11
23	132	364	652	122	270	112	1,160	282	71	19	9.4	10
24	134	409	585	118	245	112	1,090	263	68	20	9.0	9.8
25	1,490	1,560	550	112	235	114	1,020	270	64	20	8.6	9.8
26	1,640	1,700	515	110	225	120	952	255	60	20	8.0	*9.8
27	1,440	1,520	480	110	230	118	870	238	52	18	7.0	9.4
28	1,250	1,700	455	108	240	118	821	225	49	20	6.4	9.8
29	1,110	2,200	440	108	240	118	769	210	44	19	6.1	9.8
30	998	2,090	420	108	-------	130	712	194	40	21	6.4	12
31	894	-------	420	108	-------	225	-------	177	-------	36	6.1	-------
Total	12,208	22,994	29,057	8,139	8,401	4,385	35,759	13,556	2,753	782	421.4	254.7
Mean	394	766	937	263	290	141	1,192	437	91.8	25.2	13.6	8.49
Cfsm	2.66	5.18	6.33	1.78	1.96	0.953	8.05	2.95	0.620	0.170	0.092	0.057
In.	3.07	5.78	7.30	2.05	2.11	1.10	8.98	3.40	0.69	0.20	0.11	0.06

Calendar year 1959: Max 2,200 Min 11 Mean 397 Cfsm 2.68 In. 36.45
Water year 1959-60: Max 2,200 Min 4.3 Mean 379 Cfsm 2.56 In. 34.85

Peak discharge (base, 1,000 cfs).--Oct. 25 (1 p.m.) 1,830 cfs (7.08 ft); Nov. 25 (7 p.m.) 1,960 cfs (7.24 ft); Nov. 29 (9 a.m.) 2,250 cfs (7.60 ft); Dec. 13 (2:30 p.m.) 1,930 cfs (7.20 ft); Apr. 5 (time unknown) 1,750 cfs (6.97 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 6 to Mar. 31. No gage-height record Nov. 1-8, Dec. 21, 22, Dec. 24 to Jan. 5, Apr. 1-6, May 25, 26, 28-30, June 5-19; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

295. East Branch Penobscot River at Grindstone, Maine

Location.--Lat 45°43'50", long 68°35'20", on left bank 500 ft downstream from Bangor and Aroostook Railroad bridge, half a mile south of Grindstone, Penobscot County, and 9½ miles upstream from confluence with West Branch Penobscot River.

Drainage area.--1,070 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--October 1902 to September 1960. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 294.74 ft above mean sea level, datum of 1929. Prior to June 30, 1929, chain gage on railroad bridge at same datum.

Average discharge.--58 years, 1,897 cfs (unadjusted).

Extremes.--Maximum discharge during year, 13,800 cfs Oct. 26 (gage height, 10.65 ft); minimum daily, 184 cfs Sept. 10.
1902-60: Maximum discharge, 37,000 cfs Apr. 30, 1923 (gage height, 16.9 ft, site then in use, present datum); minimum daily (1914-60), 77 cfs Nov. 19, 1924.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Chamberlain, Telos, Second, and Grand Lakes and Round Pond (see p. 40).

Revisions (water years).--WSP 501: Drainage area. WSP 1301: 1907-12, 1914-29(M).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.0	165	7.0	3,800
4.4	325	8.0	6,020
4.9	650	9.0	8,600
5.5	1,260	11.0	15,000
6.0	1,970		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	767	3,420	9,300	3,030	1,360	1,670	1,740	8,350	1,300	1,240	1,670	1,100
2	767	3,520	7,140	3,050	1,320	1,560	2,730	8,350	1,450	1,080	1,400	1,090
3	758	3,200	6,000	3,200	1,360	1,530	3,600	8,290	1,470	731	1,270	1,080
4	1,070	2,990	5,560	3,800	1,390	1,460	4,770	8,180	1,300	795	1,210	250
5	1,200	2,880	5,240	3,600	1,390	1,390	5,740	8,990	1,200	850	*1,180	220
6	1,200	2,840	4,400	3,300	1,320	1,310	6,950	9,220	1,320	798	1,200	210
7	1,220	3,120	4,160	3,010	1,320	1,260	6,920	9,190	1,240	767	1,180	200
8	1,440	3,200	5,840	2,820	1,340	1,220	6,480	9,510	*1,730	767	1,160	194
9	1,640	2,930	5,470	2,680	1,360	1,190	6,040	9,740	2,070	900	1,160	188
10	1,260	2,950	4,750	2,550	1,320	1,180	5,560	11,000	1,110	900	1,050	184
11	1,110	2,840	3,760	2,410	1,400	1,160	5,170	10,400	812	860	1,000	300
12	1,040	2,620	3,030	2,290	1,740	1,160	4,950	9,770	794	910	990	1,500
13	980	2,680	2,780	2,180	2,460	1,150	4,860	9,190	758	1,060	970	1,100
14	812	2,390	4,640	2,100	2,290	1,150	4,840	10,900	704	1,200	960	700
15	626	2,190	4,620	1,990	2,130	1,140	4,620	11,900	722	1,140	950	400
16	578	2,680	3,900	1,940	1,970	*1,120	5,060	10,800	1,010	1,160	930	300
17	556	2,660	3,880	1,820	1,900	1,060	5,720	9,680	1,130	1,160	1,180	200
18	642	3,140	3,280	1,740	1,820	1,030	7,130	8,910	722	1,150	1,290	920
19	960	3,090	2,900	1,700	1,740	1,030	9,600	8,130	602	980	1,290	915
20	950	2,900	2,860	1,670	1,670	1,010	9,250	7,520	722	1,080	1,290	915
21	930	2,730	2,750	1,660	1,610	960	8,320	7,030	960	1,030	1,310	910
22	740	2,290	2,860	1,610	1,530	930	7,750	5,970	1,610	930	1,300	910
23	618	2,000	3,050	1,590	1,520	830	7,390	5,420	1,040	900	1,260	905
24	980	1,970	3,200	1,530	*1,490	760	6,980	4,460	890	920	1,250	900
25	6,560	3,880	3,300	1,500	1,460	720	*7,000	3,120	2,490	880	1,210	970
26	12,200	7,480	3,360	1,460	1,540	660	7,490	3,090	4,280	840	1,190	970
27	7,620	6,780	3,240	1,450	1,670	675	7,550	2,530	3,040	795	1,180	965
28	4,860	6,680	3,220	1,450	1,700	720	7,390	1,720	1,330	803	1,150	965
29	3,700	11,900	3,260	1,420	1,670	805	7,890	880	890	795	1,130	960
30	3,460	10,900	3,200	1,430	-------	860	8,160	830	1,110	773	1,130	960
31	3,140	-------	3,070	1,390	-------	980	-------	749	-------	1,480	1,110	-------
Total	64,384	114,850	128,020	67,370	46,790	33,680	187,650	223,819	39,806	29,670	36,550	21,381
Mean	2,077	3,828	4,130	2,173	1,613	1,086	6,255	7,220	1,327	957	1,179	713
(†)	+148	-2	-204	-783	-621	-600	+1,076	+1,070	+114	-215	-893	-400
Adjusted for change in reservoir contents												
Mean	2,225	3,826	3,926	1,390	992	486	7,331	8,290	1,441	742	286	313
Cfsm	2.08	3.58	3.67	1.30	0.927	0.454	6.85	7.75	1.35	0.693	0.267	0.292
In.	2.40	3.99	4.23	1.50	1.00	0.52	7.64	8.94	1.51	0.80	0.31	0.32

	Observed		Adjusted	
Calendar year 1959:	Max 12,200	Min 350	Mean 2,341	Mean 2,418 Cfsm 2.26 In. 30.69
Water year 1959-60:	Max 12,200	Min 184	Mean 2,716	Mean 2,606 Cfsm 2.44 In. 33.16

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Chamberlain, Telos, Second, and Grand Lakes and Round Pond.
Note.--Stage-discharge relation affected by ice Dec. 22 to Apr. 6. No gage-height record Sept. 1-30; discharge estimated on basis of recorded range in stage, weather records, and flow records at dam at Grand Lake.

300. Penobscot River near Mattawamkeag, Maine

Location.--Lat 45°34'00", long 68°24'10", on left bank 1,800 ft downstream from Mattaseunk Dam and powerhouse, 1¼ miles upstream from Mattaseunk Brook, and 4¼ miles upstream from Mattawamkeag, Penobscot County.

Drainage area.--3,310 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--June 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 191.72 ft above mean sea level, datum of 1929.

Average discharge.--20 years, 5,618 cfs (unadjusted).

Extremes.--Maximum discharge during year, 36,500 cfs May 15 (gage height, 10.43 ft); minimum daily discharge, 1,920 cfs Sept. 7.
1940-60: Maximum discharge, 40,200 cfs May 21, 1945 (gage height, 11.09 ft); minimum daily, 1,430 cfs Aug. 17, 1941.

Remarks.--Records good. Flow regulated by several reservoirs above station (see p. 40).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,240	7,560	15,000	6,740	6,200	6,310	7,720	14,000	7,050	5,880	5,400	3,650
2	3,410	7,770	12,500	6,420	5,770	6,310	8,310	14,700	6,630	5,020	5,400	3,950
3	3,900	7,660	11,800	7,050	5,770	6,040	8,310	14,500	4,750	3,510	*4,650	3,560
4	4,400	6,630	10,800	8,220	5,770	5,880	8,400	16,600	5,300	3,900	4,860	2,340
5	4,960	6,740	10,200	8,310	5,510	5,830	10,000	24,200	5,130	4,300	5,240	2,340
6	4,700	6,950	9,180	7,770	5,930	5,770	11,800	30,400	6,530	3,800	4,600	2,810
7	6,100	7,560	9,270	7,250	5,560	6,260	12,300	29,500	*5,670	4,800	4,750	1,920
8	5,300	7,200	11,200	6,740	5,880	5,930	*12,200	29,700	5,350	4,400	4,800	2,940
9	3,560	6,950	10,600	7,660	5,720	5,560	11,500	30,100	5,880	5,130	4,800	2,340
10	5,300	6,740	*10,100	7,450	5,720	5,720	11,000	34,000	5,300	4,450	4,750	2,460
11	4,550	6,630	9,090	6,680	5,880	5,990	10,800	33,700	4,650	4,150	4,550	2,550
12	4,550	6,900	8,310	6,100	6,100	5,670	10,400	33,400	4,750	4,860	4,400	3,220
13	4,500	6,260	8,500	5,670	6,790	5,880	9,990	31,600	4,650	6,150	4,550	4,350
14	4,250	6,630	10,800	6,260	7,350	5,350	10,500	33,400	4,750	5,180	4,650	3,950
15	3,850	6,840	11,700	5,620	6,950	5,880	10,100	35,800	4,450	5,510	4,700	3,650
16	4,400	7,450	16,100	6,310	6,470	5,560	10,800	31,800	5,240	4,650	4,650	3,170
17	3,900	6,900	22,000	5,830	6,680	5,670	11,100	26,600	5,080	5,180	4,550	3,030
18	4,700	7,400	19,000	5,670	6,260	5,400	12,800	25,100	5,180	5,670	4,860	3,030
19	4,450	8,030	8,000	5,560	5,620	6,200	15,100	21,300	4,750	4,550	4,750	3,410
20	4,000	6,790	6,200	5,670	6,100	5,510	15,400	19,300	4,650	4,910	4,150	4,100
21	4,150	6,630	5,700	5,830	5,830	5,880	14,200	16,100	4,250	4,800	4,600	3,510
22	4,500	6,370	5,400	5,930	6,150	5,830	14,300	14,600	5,670	4,800	4,150	3,850
23	4,050	6,040	5,670	5,560	6,260	5,400	14,000	13,600	4,910	4,750	4,250	3,700
24	4,550	6,260	5,130	5,130	5,990	5,240	13,200	9,270	4,600	4,860	3,950	3,260
25	12,000	9,270	4,700	5,400	6,100	5,560	13,000	6,950	6,680	4,750	4,050	3,600
26	19,400	14,000	5,350	6,100	6,150	5,560	*13,600	8,400	7,980	4,100	4,550	3,600
27	13,700	13,000	6,420	5,510	6,260	5,460	13,500	8,940	5,880	4,400	4,300	3,700
28	8,450	12,200	6,530	5,990	6,470	5,460	13,600	7,450	6,100	4,500	3,900	*3,310
29	7,930	20,400	6,680	5,720	6,040	5,300	13,900	6,950	5,560	4,860	4,350	3,800
30	7,250	18,000	6,900	5,510	-------	5,460	13,900	6,840	4,650	4,200	4,300	3,650
31	7,200	-------	6,790	6,200	-------	5,880	-------	6,530	-------	4,860	3,800	-------
Total	183,200	253,760	295,620	195,860	177,280	177,750	355,730	635,330	162,020	146,880	141,260	98,750
Mean	5,910	8,459	9,536	6,318	6,113	5,734	11,860	20,490	5,401	4,738	4,557	3,292
(†)	-150	+2,358	+286	-3,167	-2,255	-3,179	+8,775	+2,414	-860	-1,791	-3,681	-2,490

Adjusted for change in reservoir contents

Mean	5,760	10,820	9,822	3,151	3,858	2,555	20,640	22,900	4,541	2,947	876	802
Cfsm	1.74	3.27	2.97	0.952	1.17	0.772	6.24	6.92	1.37	0.890	0.265	0.242
In.	2.01	3.65	3.42	1.10	1.26	0.89	6.96	7.98	1.53	1.03	0.31	0.27

	Observed			Adjusted			
Calendar year 1959:	Max 22,000	Min 3,380	Mean 6,333	Mean 6,914	Cfsm 2.09	In. 28.38	
Water year 1959-60:	Max 35,800	Min 1,920	Mean 7,714	Mean 7,388	Cfsm 2.23	In. 30.41	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in reservoirs on East and West Branches of Penobscot River.
Note.--Stage-discharge relation affected by aquatic growth or ice Oct. 1 to Apr. 5, May 24 to Sept. 30 (no gage-height record Nov. 30 to Dec. 2, Dec. 17-23; discharge estimated on basis of records at powerhouse just upstream).

305. Mattawamkeag River near Mattawamkeag, Maine

Location.--Lat 45°30'20", long 68°18'05", on right bank at Gordon Lower Falls, 1 mile upstream from Mattakeunk Stream, 4 miles upstream from Mattawamkeag, Penobscot County, and 4½ miles upstream from mouth.

Drainage area.--1,418 sq mi.

Records available.--October 1934 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 230 ft (from topographic map).

Average discharge.--26 years, 2,403 cfs.

Extremes.--Maximum discharge during year, 17,300 cfs Dec. 1 (gage height, 10.72 ft); minimum, 45 cfs Sept. 11 (gage height, 0.04 ft).
1934-60: Maximum discharge, 29,200 cfs Mar. 23, 1936 (gage height, 15.34 ft); minimum, 38 cfs Sept. 19, 1952.

Remarks.--Records excellent except those for period of ice effect, which are fair.

Revisions.--WSP 1501: Drainage area.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 30

1.0	375	6.0	6,080
1.5	685	8.0	10,500
2.0	1,040	10.0	15,400
3.0	1,820	12.0	20,500
4.0	2,860		

Dec. 1 to Sept. 30

0.0	35	0.6	200
0.2	88	1.0	375

Note.--Same as preceding table above 1.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	650	7,020	17,100	2,300	1,020	1,350	1,120	11,600	1,370	1,210	408	96
2	622	6,380	15,900	2,190	1,040	1,300	1,580	11,400	1,360	1,020	430	88
3	608	6,020	14,100	2,110	965	1,230	2,290	11,400	1,470	853	424	83
4	596	5,590	12,200	3,010	895	1,170	2,980	11,200	1,470	965	*386	77
5	550	5,170	10,200	4,210	875	1,120	3,820	10,800	1,430	1,220	345	74
6	526	4,760	8,580	4,690	830	1,050	4,970	10,200	1,930	1,250	320	69
7	520	4,600	7,420	4,810	825	1,020	7,740	9,560	2,260	1,140	287	61
8	783	4,600	7,330	4,470	830	965	10,000	8,940	*1,950	951	274	58
9	1,190	4,550	7,870	3,740	895	945	11,400	8,220	1,600	804	265	56
10	1,400	4,350	7,920	3,280	990	890	11,600	7,520	1,340	671	244	51
11	1,350	4,070	7,160	2,880	1,000	830	11,200	6,910	1,160	576	236	48
12	1,340	3,740	6,100	2,600	1,020	805	10,700	6,780	1,010	538	218	80
13	1,350	3,560	5,980	2,400	1,270	755	9,930	6,870	888	895	200	110
14	1,270	3,550	7,060	2,190	1,590	740	9,260	7,120	790	1,440	194	120
15	1,120	3,720	7,870	2,050	1,910	725	8,670	7,940	692	1,740	185	142
16	980	4,160	8,000	1,910	2,290	*705	8,620	9,130	741	1,670	173	150
17	895	4,450	7,590	1,820	2,740	685	9,030	9,540	853	1,420	170	148
18	944	*4,670	6,780	1,740	3,110	685	10,100	9,310	881	1,180	162	139
19	1,000	4,770	5,890	1,660	3,110	705	12,000	8,440	804	995	150	131
20	1,020	4,450	4,970	1,500	2,860	685	13,500	7,270	748	881	145	123
21	951	3,860	4,190	1,400	2,510	680	14,000	6,040	881	818	142	120
22	881	3,490	3,670	1,290	2,190	670	14,200	4,970	1,030	790	139	115
23	818	3,300	3,280	1,230	2,000	665	14,000	4,100	988	734	134	112
24	832	3,140	3,110	1,190	*1,810	670	13,300	3,510	853	671	126	110
25	3,270	4,720	2,930	1,130	1,690	645	12,600	2,850	874	622	118	102
26	8,780	9,210	2,900	1,090	1,600	645	*12,000	2,410	1,430	550	115	96
27	12,000	12,300	2,750	1,040	1,560	630	11,700	2,090	1,940	484	112	91
28	12,100	13,100	2,660	1,020	1,500	620	11,600	1,810	1,970	436	107	88
29	11,300	15,200	2,510	970	1,430	620	11,800	1,650	1,690	397	104	*88
30	9,910	17,000	2,390	965	-------	645	11,700	1,530	1,400	370	107	93
31	8,220	-------	2,310	965	-------	700	-------	1,440	-------	380	104	-------
Total	87,776	179,500	208,720	67,850	46,355	25,550	287,410	212,550	37,803	27,671	6,524	2,919
Mean	2,831	5,983	6,733	2,189	1,598	824	9,580	6,856	1,260	893	210	97.3
Cfsm	2.00	4.22	4.75	1.54	1.13	0.581	6.76	4.83	0.889	0.630	0.148	0.069
In.	2.31	4.71	5.48	1.78	1.22	0.67	7.54	5.57	0.99	0.73	0.17	0.08

Calendar year 1959: Max 17,100 Min 195 Mean 3,268 Cfsm 2.30 In. 31.29
Water year 1959-60: Max 17,100 Min 48 Mean 3,253 Cfsm 2.29 In. 31.25

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 12 to Apr. 9.

315. Piscataquis River near Dover-Foxcroft, Maine

Location.--Lat 45°10'35", long 69°18'55", on left bank at Lows Bridge, 1 mile upstream from Black Stream and 4½ miles upstream from Dover-Foxcroft, Piscataquis County.

Drainage area.--297 sq mi.

Records available.--August 1902 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 358.1 ft above mean sea level, datum of 1929. Prior to July 20, 1930, staff gage at same site and datum.

Average discharge.--58 years, 586 cfs.

Extremes.--Maximum discharge during year, 7,190 cfs Oct. 25 (gage height, 9.20 ft); minimum, 18 cfs Sept. 8 (gage height, 1.55 ft).
1902-60: Maximum discharge, 21,500 cfs Apr. 29, 1923 (gage height, 17.67 ft, from graph based on gage readings), from rating curve extended above 13,000 cfs by logarithmic plotting; minimum, 5 cfs Aug. 6, 1905, Nov. 22, 1908.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Low flow regulated by operation of powerplant above station.

Revisions (water years).--WSP 279: 1902. WSP 1171: Drainage area. WSP 1201: 1903-17, 1918-30(M), 1934-35. WSP 1301: 1909(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	21	3.5	700
1.8	40	4.0	1,060
2.0	72	5.0	1,990
2.2	119	6.0	3,100
2.5	209	8.0	5,560
3.0	415		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	1,080	2,100	*265	156	310	1,080	2,000	593	338	670	68
2	22	1,120	1,540	260	152	300	1,790	2,100	680	281	440	61
3	21	870	1,220	370	150	290	1,690	1,950	575	220	330	54
4	23	706	1,050	1,060	146	285	1,910	1,760	492	509	253	51
5	23	668	928	800	140	280	3,510	1,660	548	379	206	48
6	23	*674	842	575	146	275	4,820	1,550	935	281	196	48
7	34	1,220	1,100	465	230	269	3,590	1,370	593	220	174	47
8	260	1,520	2,030	390	335	257	2,650	1,160	420	187	152	44
9	301	1,180	1,390	325	395	257	2,190	1,370	334	174	146	46
10	227	988	1,080	295	350	255	1,850	1,670	285	146	*130	46
11	171	828	821	275	340	255	1,640	1,460	245	138	114	43
12	138	732	700	255	1,230	250	1,610	1,710	213	390	106	62
13	112	758	1,540	250	1,790	245	1,890	1,780	183	1,300	98	1,480
14	87	680	1,960	240	1,410	234	1,940	4,180	162	2,600	88	891
15	74	1,530	1,300	230	1,060	231	1,790	3,060	158	1,030	75	542
16	65	1,420	*1,110	225	855	231	2,860	2,120	343	593	68	361
17	56	1,150	920	215	685	227	3,520	1,710	309	420	65	261
18	56	1,120	772	205	575	227	4,440	1,340	234	352	62	209
19	61	905	674	*205	520	225	4,850	1,060	206	321	60	171
20	61	746	575	196	465	220	3,570	842	174	361	90	149
21	56	629	515	190	440	220	2,750	700	149	305	180	152
22	54	575	455	180	405	220	2,870	587	*138	241	225	149
23	56	558	395	170	*380	215	2,650	520	124	220	220	135
24	295	611	355	166	355	215	2,090	542	138	203	180	116
25	4,670	3,920	335	162	330	*215	2,340	828	2,440	162	132	106
26	4,810	5,180	315	158	320	215	2,500	680	1,680	135	102	96
27	2,410	2,620	310	156	330	210	*2,430	548	965	116	88	90
28	1,500	2,890	295	156	340	206	2,180	445	629	124	78	90
29	1,060	5,370	295	*174	325	215	2,310	370	445	158	76	90
30	821	3,120	290	170	-------	220	2,160	410	366	155	76	*99
31	706	-------	290	166	-------	384	-------	356	-------	1,040	72	-------
Total	18,274	45,368	27,502	8,949	14,355	7,658	77,450	41,838	14,756	13,099	4,952	5,805
Mean	589	1,512	887	289	495	247	2,582	1,350	492	423	160	194
Cfsm	1.98	5.09	2.99	0.973	1.67	0.832	8.69	4.55	1.66	1.42	0.539	0.653
In.	2.28	5.68	3.45	1.12	1.80	0.96	9.70	5.25	1.85	1.64	0.62	0.73

Calendar year 1959: Max 5,370 Min 21 Mean 656 Cfsm 2.21 In. 30.01
Water year 1959-60: Max 5,370 Min 21 Mean 765 Cfsm 2.58 In. 35.08

Peak discharge (base, 4,000 cfs).--Oct. 25 (11 p.m.) 7,190 cfs (9.20 ft); Nov. 26 (12 to 1 a.m.) 6,800 cfs (8.92 ft); Nov. 29 (6 a.m.) 6,120 cfs (8.42 ft); Apr. 6 (6 a.m.) 5,050 cfs (7.60 ft); Apr. 19 (7 a.m.) 5,310 cfs (7.81 ft); May 14 (1:30 p.m.) 4,910 cfs (7.49 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20 to Mar. 6, Mar. 10-12, 19-27, 29, Apr. 1-4. No gage-height record Aug. 12-30; discharge estimated on basis of weather records, recorded range in stage, and records for Piscataquis River at Medford.

330. Sebec River at Sebec, Maine

Location.--Lat 45°16'10", long 69°06'45", on right bank at Sebec, Piscataquis County, 1,000 ft downstream from highway bridge and dam at outlet of Sebec Lake.

Drainage area.--327 sq mi.

Records available.--October 1924 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 296.3 ft above mean sea level, datum of 1929. Prior to June 22, 1942, water-stage recorder on opposite bank 60 ft downstream at same datum.

Average discharge.--36 years, 610 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,280 cfs Nov. 30 (gage height, 6.91 ft); minimum, 23 cfs Sept. 29 (gage height, 1.55 ft).
1924-60: Maximum discharge, 11,400 cfs Mar. 20, 1936 (gage height, 14.46 ft), from rating curve extended above 6,000 cfs on basis of velocity-area studies; minimum, about 2 cfs Oct. 14-17, 1930 (gage height, 0.87 ft), when gates in dam were closed.

Remarks.--Records excellent. Flow partly regulated by Sebec Lake (see p. 40) and other reservoirs above station.

Revisions (water years).--WSP 1171: Drainage area, 1936(M). WSP 1301: 1935.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 19				Apr. 20 to Sept. 30			
2.1	114	4.0	1,250	1.6	27	3.0	523
2.3	184	5.0	1,980	1.8	47	4.0	1,180
2.5	274	7.0	3,340	2.0	82	5.0	1,850
3.0	550			2.2	137	7.0	3,290
				2.5	254		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	154	743	3,040	494	602	608	476	2,010	748	440	87	102
2	355	820	2,750	470	602	596	596	2,040	755	429	92	102
3	428	850	2,450	507	602	576	729	2,050	715	423	97	100
4	406	850	2,180	563	615	563	771	2,010	675	463	97	87
5	372	842	1,940	582	582	544	895	1,940	675	463	102	84
6	336	*850	1,740	589	556	525	1,220	1,860	675	452	110	76
7	320	940	1,630	589	550	513	1,610	1,740	500	423	107	76
8	341	1,030	1,700	582	544	507	1,860	1,630	301	401	107	78
9	336	1,080	1,640	576	531	500	1,950	1,580	301	395	116	80
10	336	1,080	1,580	544	519	482	1,970	1,570	301	374	*110	84
11	302	1,050	1,460	576	513	464	1,900	*1,550	301	363	113	78
12	292	1,030	1,360	602	556	446	1,870	1,560	301	366	113	84
13	274	998	1,440	596	596	422	1,850	1,560	301	412	110	148
14	233	970	1,570	576	622	411	1,850	1,780	296	452	107	184
15	210	1,030	1,540	563	660	394	1,820	1,990	292	468	104	188
16	202	1,110	1,490	556	667	389	1,920	2,110	292	455	102	192
17	188	1,100	*1,440	550	674	378	2,090	2,050	292	429	100	188
18	193	1,160	1,250	544	680	378	2,430	1,910	292	406	97	188
19	188	1,090	1,080	544	680	372	2,840	1,770	287	417	92	180
20	154	1,050	1,060	538	687	367	2,890	1,600	287	363	102	176
21	146	991	991	531	680	362	2,790	1,460	282	205	116	180
22	136	962	925	525	674	351	2,750	1,360	*278	32	119	176
23	133	910	872	519	667	351	2,720	1,270	278	37	128	172
24	150	888	806	519	654	336	2,590	1,170	278	40	125	162
25	315	1,340	764	580	648	336	2,480	1,120	296	38	119	165
26	346	2,170	722	628	648	320	2,410	1,080	347	40	116	158
27	378	2,220	687	622	641	315	*2,330	946	395	40	113	61
28	440	2,320	654	615	634	315	2,240	877	429	44	102	36
29	544	3,020	641	615	628	306	2,150	850	*440	45	102	48
30	602	3,210	622	602	-------	311	2,080	823	446	47	102	*75
31	648	-------	589	608	-------	367	-------	*748	-------	74	102	-------
Total	9,458	37,704	42,613	17,505	17,912	13,105	58,077	48,014	12,056	9,039	3,309	3,708
Mean	305	1,257	1,375	565	618	423	1,936	1,549	402	292	107	124
(†)	+218	+237	-204	-185	-156	-325	+818	-147	-121	+142	+8	+69
Adjusted for change in reservoir contents												
Mean	523	1,494	1,171	380	462	98.0	2,754	1,402	281	434	115	193
Cfsm	1.60	4.57	3.58	1.16	1.41	0.300	8.42	4.29	0.859	1.33	0.352	0.590
In.	1.84	5.10	4.13	1.34	1.52	0.35	9.39	4.95	0.96	1.53	0.41	0.66

	Observed			Adjusted		
Calendar year 1959:	Max 3,210	Min 133	Mean 676	Mean 688	Cfsm 2.10	In. 28.60
Water year 1959-60:	Max 3,210	Min 32	Mean 745	Mean 773	Cfsm 2.36	In. 32.18

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Sebec Lake and Wilson Pond.

335. Pleasant River near Milo, Maine

Location.--Lat 45°17'05", long 69°00'25", on left bank 2 miles northeast of Milo, Piscataquis County, and 8¼ miles upstream from mouth.

Drainage area.--322 sq mi.

Records available.--June 1920 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 302 ft (from river-profile map). Prior to June 17, 1929, chain gage at Snows Bridge, 2 miles downstream at datum 32 ft lower.

Average discharge.--40 years, 696 cfs.

Extremes.--Maximum discharge during year, 8,180 cfs Oct. 26 (gage height, 7.39 ft); minimum, 65 cfs Sept. 11 (gage height, 1.57 ft).
1920-60: Maximum discharge, 24,400 cfs Apr. 30, 1923 (gage height, 14.33 ft, from floodmarks, site and datum then in use), from rating curve extended above 5,500 cfs; minimum, 15 cfs Aug. 17, 1944 (gage height, 1.21 ft).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by power development at Brownville and by small storage dams above station.

Revisions (water years).--WSP 1301: 1921-22(M), 1924-27(M), 1929(M).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-25

1.5	50	3.5	1,370
1.7	98	4.0	1,990
2.0	202	5.0	3,520
2.5	480	6.0	5,300
3.0	875		

Oct. 26 to Sept. 30

3.0	875	5.0	3,300
3.5	1,350	7.0	7,320
4.0	1,900		

Note.--Same as preceding table below 3.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	1,300	3,100	375	178	350	1,060	2,540	621	614	555	101
2	110	1,360	2,400	370	170	340	1,940	3,080	751	528	394	98
3	110	1,200	1,900	550	166	335	2,020	*2,950	700	467	310	87
4	110	1,030	1,600	1,030	166	330	2,470	2,530	614	760	245	82
5	98	974	1,400	875	166	330	3,140	2,600	584	700	207	74
6	101	1,000	1,300	785	200	325	4,380	2,650	1,090	570	198	71
7	136	1,260	1,600	700	360	320	3,470	2,500	974	480	198	69
8	467	1,480	2,100	620	550	315	2,680	2,260	760	411	194	69
9	521	1,320	1,600	550	570	315	2,060	2,220	621	359	198	69
10	455	1,180	1,350	520	515	310	1,760	2,400	528	320	*182	69
11	382	1,080	1,150	480	480	310	1,520	2,270	455	310	158	67
12	326	1,000	1,100	440	875	305	1,440	2,310	405	359	141	76
13	266	1,070	1,400	415	1,250	305	1,500	2,120	359	563	128	715
14	231	1,030	1,750	380	1,150	300	1,560	3,200	320	592	128	726
15	198	1,340	1,350	350	920	300	1,460	3,110	310	461	122	500
16	186	1,550	1,180	315	750	295	2,000	2,300	480	365	113	376
17	165	1,410	*1,060	305	620	295	2,530	1,840	487	304	104	299
18	169	1,350	995	290	550	305	3,470	1,540	417	282	98	240
19	165	1,210	910	270	515	310	4,710	1,290	359	250	95	202
20	161	1,120	840	*265	465	300	3,960	1,100	332	337	135	194
21	158	1,020	770	255	440	290	2,980	965	342	293	231	182
22	148	965	700	250	425	280	2,980	839	*315	245	221	161
23	144	902	645	245	415	275	2,830	760	293	245	207	154
24	310	893	620	235	*410	*275	2,240	708	304	216	177	144
25	4,900	2,180	550	225	390	275	2,390	726	2,710	198	151	125
26	7,270	4,530	520	215	370	270	2,530	668	2,490	182	128	122
27	4,220	3,370	480	205	365	270	*2,370	592	1,570	158	122	113
28	2,460	3,120	440	200	360	270	2,400	528	1,060	161	174	113
29	1,690	6,290	415	198	355	270	2,550	474	785	169	171	110
30	1,280	4,750	395	194	-------	275	2,540	448	621	165	174	119
31	1,070	-------	380	186	-------	360	-------	*417	-------	470	110	-------
Total	28,108	52,284	36,000	12,293	14,146	9,405	74,940	53,915	21,657	11,534	5,559	5,527
Mean	907	1,743	1,161	397	488	303	2,498	1,739	722	372	179	184
Cfsm	2.82	5.41	3.61	1.23	1.52	0.941	7.76	5.40	2.24	1.16	0.556	0.571
In.	3.25	6.04	4.16	1.42	1.64	1.08	8.66	6.23	2.50	1.34	0.64	0.64

Calendar year 1959: Max 7,270 Min 84 Mean 862 Cfsm 2.68 In. 36.34
Water year 1959-60: Max 7,270 Min 67 Mean 889 Cfsm 2.76 In. 37.60

Peak discharge (base, 3,700 cfs).--Oct. 26 (12 to 1 a.m.) 8,180 cfs (7.39 ft); Nov. 26 (1 to 3 p.m.) 4,710 cfs (5.77 ft); Nov. 29 (1 p.m.) 6,700 cfs (6.72 ft); Apr. 6 (time unknown) about 4,500 cfs; Apr. 19 (3 to 5 p.m.) 4,850 cfs (5.84 ft); June 25 (5 p.m.) 3,730 cfs (5.25 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 18 to Apr. 6. No gage-height record Nov. 30 to Dec. 17; discharge estimated on basis of recorded range in stage, weather records, and records for stations in Piscataquis River basin.

340. Pisqataquis River at Medford, Maine

Location.--Lat 45°15'40", long 68°52'05", on left bank 1¾ miles southwest of Medford, Piscataquis County, and 3½ miles downstream from Pleasant River.

Drainage area.--1,161 sq mi.

Records available.--June 1924 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 248.68 ft above mean sea level, datum of 1929. Prior to Aug. 14, 1929, staff gage at site 1¾ miles downstream at different datum.

Average discharge.--36 years, 2,282 cfs.

Extremes.--Maximum discharge during year, about 18,600 cfs Nov. 29; minimum, 206 cfs Sept. 12 (gage height, 1.55 ft).
1924-60: Maximum discharge, 50,200 cfs Mar. 20, 1936 (gage height, 15.07 ft), from rating curve extended above 20,000 cfs by logarithmic plotting; minimum, 99 cfs Oct. 28, 1947 (gage height, 1.28 ft).
Maximum stage known, 20.8 ft May 1, 1923, at former site 1¾ miles downstream.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some regulation for power and log-driving by lakes above station.

Revisions (water years).--WSP 1171: Drainage area. WSP 1231: 1936. WSP 1301: 1925-29(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	185	4.0	2,770
1.7	273	5.0	4,880
2.0	440	6.0	7,720
2.5	840	7.0	11,300
3.0	1,340	8.0	15,700
3.5	1,980	9.0	20,200

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	314	3,290	9,720	1,580	1,030	1,450	2,640	7,370	1,880	1,480	1,760	330
2	390	3,910	7,380	1,570	1,030	1,390	4,880	8,050	2,330	1,360	1,160	314
3	524	3,450	6,140	2,050	1,030	1,360	5,520	8,120	2,260	1,210	894	304
4	524	2,950	5,310	2,770	1,030	1,340	5,950	7,120	1,990	1,490	723	259
5	524	2,720	4,660	3,100	1,020	1,340	8,720	6,820	1,850	1,810	588	232
6	517	2,740	4,190	2,770	1,020	1,300	13,000	6,640	2,650	1,510	517	236
7	580	3,370	4,250	2,400	1,020	1,270	12,300	6,170	2,600	1,270	510	236
8	1,070	4,570	6,140	2,120	1,180	1,250	10,100	5,600	1,870	1,120	503	232
9	1,470	4,040	5,650	1,910	1,340	1,230	8,620	5,440	1,480	1,020	503	241
10	1,350	3,530	4,640	1,750	1,210	1,200	7,560	6,000	1,280	940	503	241
11	1,130	3,140	3,870	1,670	1,110	1,170	6,730	6,030	1,130	876	475	219
12	990	2,900	3,100	1,580	1,640	1,140	6,490	6,230	980	1,000	428	219
13	858	2,930	4,510	1,510	3,740	1,120	6,910	6,060	940	1,990	404	1,410
14	741	2,810	7,150	1,460	3,910	1,090	7,240	9,360	894	4,020	352	2,570
15	660	3,680	5,440	1,390	3,570	1,050	6,670	10,200	849	2,940	341	1,620
16	596	4,640	4,930	1,340	3,330	1,030	8,480	7,950	1,060	1,950	341	1,200
17	559	3,970	*4,330	1,250	2,740	1,010	10,200	6,640	1,330	1,520	324	960
18	566	3,930	3,700	1,230	2,400	1,000	12,400	5,620	1,170	1,260	324	795
19	559	3,430	3,100	1,210	2,120	1,020	15,000	4,760	1,020	1,150	319	696
20	538	2,990	2,790	*1,180	1,980	1,060	13,800	4,060	912	1,210	341	636
21	517	2,570	2,600	1,150	1,850	1,050	10,900	3,530	876	1,160	496	612
22	489	2,450	2,450	1,140	1,810	1,010	10,300	3,060	*858	940	687	596
23	475	2,370	2,380	1,130	*1,720	990	10,500	2,810	768	768	732	566
24	565	2,370	2,270	1,110	1,660	*980	8,720	2,620	768	644	696	531
25	7,490	7,160	2,140	1,090	1,580	970	8,410	2,790	3,640	566	573	489
26	16,800	15,300	2,020	1,070	1,510	950	*8,690	2,790	5,840	454	475	461
27	9,440	10,600	1,980	1,050	1,500	930	8,580	2,430	3,340	386	422	428
28	5,390	8,920	1,870	1,050	1,470	912	8,020	2,090	2,350	350	374	363
29	3,740	16,700	1,810	1,040	1,460	921	7,950	1,870	1,830	500	*335	330
30	2,990	14,500	1,720	1,030	-------	940	7,790	1,780	1,540	496	346	319
31	2,620	-------	1,680	1,030	-------	1,190	-------	1,710	-------	945	341	-------
Total	64,976	151,930	123,920	47,730	52,010	34,663	263,070	161,720	52,285	38,335	16,787	17,645
Mean	2,096	5,064	3,997	1,540	1,793	1,118	8,769	5,217	1,743	1,237	542	588
Cfsm	1.81	4.36	3.44	1.33	1.54	0.963	7.55	4.49	1.50	1.07	0.467	0.506
In.	2.09	4.86	3.97	1.53	1.66	1.11	8.42	5.18	1.67	1.23	0.54	0.56

Calendar year 1959: Max 16,800 Min 298 Mean 2,534 Cfsm 2.18 In. 29.63
Water year 1959-60: Max 16,800 Min 219 Mean 2,801 Cfsm 2.41 In. 32.82

Peak discharge (base, 13,000 cfs).--Oct. 26 (9 a.m.) 18,000 cfs (8.52 ft); Nov. 26 (time unknown) about 16,400 cfs; Nov. 29 (time unknown) about 18,600 cfs; Apr. 6 (7 to 8 p.m.) 14,000 cfs (7.63 ft); Apr. 19 (6:30 p.m.) 15,700 cfs (8.10 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 21 to Mar. 6, Mar. 9-11, 15, 27-29. No gage-height record Nov. 26, 29, 30, Dec. 21 to Jan. 20; discharge estimated on basis of weather records, recorded range in stage, and flow at other gaging stations in Piscataquis River basin.

345. Penobscot River at West Enfield, Maine

Location.--Lat 45°14'15", long 68°39'10", on left bank at highway bridge, 1,000 ft downstream from Piscataquis River and 1 mile southwest of West Enfield, Penobscot County.

Drainage area.--6,600 sq mi, approximately (including about 240 sq mi drained by Chamberlain Lake through Telos Canal).

Records available.--November 1901 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 125.94 ft above mean sea level, datum of 1929. Prior to Dec. 11, 1912, chain gage at same site and datum.

Average discharge.--58 years (1902-60), 11,580 cfs (unadjusted).

Extremes.--Maximum discharge during year, 62,000 cfs Nov. 30 (gage height, 14.26 ft); minimum daily, 3,400 cfs Sept. 8.
1901-60: Maximum discharge, 153,000 cfs May 1, 1923 (gage height, 25.15 ft), from rating curve extended above 88,000 cfs by logarithmic plotting; minimum, 1,630 cfs Oct. 29, 1905 (gage height, 1.0 ft).

Remarks.--Records excellent except those for periods of ice effect or backwater from aquatic growth, which are fair. Flow regulated by several reservoirs above station (see p. 40).

Cooperation.--Water-stage-recorder graph furnished by Bangor Hydro-Electric Co.

Revisions (water years).--WSP 279: 1902-10. WSP 1171: 1940. WSP 1231: 1902-13.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,660	20,700	51,200	10,000	7,180	9,970	8,550	36,400	9,610	7,780	7,520	4,980
2	7,160	21,200	43,800	9,700	7,140	9,760	10,000	36,000	10,700	8,410	7,340	4,720
3	5,820	20,400	37,800	10,100	7,080	9,700	12,500	37,100	9,530	7,370	7,040	4,700
4	6,150	18,500	33,700	12,700	7,080	9,440	14,600	36,000	8,270	6,610	*6,360	4,590
5	6,860	17,000	30,400	16,000	7,080	9,380	23,000	37,300	8,610	7,340	6,050	3,500
6	7,160	16,600	26,600	17,200	7,060	9,150	32,500	42,100	10,400	7,600	5,890	3,510
7	7,140	16,800	24,000	17,200	7,060	9,210	39,100	44,800	*11,700	7,260	5,430	3,630
8	9,610	18,800	26,000	16,200	7,060	8,980	*40,800	45,100	10,200	7,470	5,700	3,400
9	8,550	18,500	28,400	15,000	7,210	8,860	39,400	44,500	9,610	7,040	5,450	3,630
10	8,270	17,300	26,700	13,200	7,470	8,890	36,900	44,500	9,120	7,340	5,470	3,610
11	8,920	16,000	24,400	12,000	7,680	8,890	34,500	45,900	8,030	6,360	5,520	3,440
12	8,690	15,200	21,000	12,200	8,000	8,830	33,200	46,300	7,210	6,390	5,290	3,690
13	*8,410	*14,900	22,400	11,500	8,860	8,610	31,800	46,700	6,860	8,080	5,090	4,760
14	8,000	14,600	28,000	10,400	10,600	8,470	31,500	48,000	6,660	11,700	5,140	7,700
15	7,390	15,500	30,800	9,260	12,400	8,270	30,600	52,800	6,710	11,300	5,180	6,270
16	6,740	17,600	31,000	8,270	13,000	8,240	30,100	53,600	6,860	9,700	5,200	5,570
17	6,940	18,000	34,300	8,690	12,900	8,110	32,400	49,700	7,680	8,750	5,340	4,740
18	6,560	18,000	34,500	8,800	12,500	8,000	35,700	44,900	7,700	8,520	5,160	4,400
19	7,180	18,200	25,600	8,610	12,200	7,920	41,200	41,100	7,260	8,160	5,360	4,480
20	7,110	17,500	17,800	8,270	11,900	8,000	46,600	35,700	6,860	7,240	5,400	4,380
21	6,660	15,300	13,700	8,380	11,500	7,760	46,400	31,800	6,740	7,240	5,070	5,030
22	6,560	14,200	12,700	8,190	11,300	7,700	44,000	24,400	6,640	6,910	5,380	4,720
23	6,860	13,400	12,100	7,760	11,000	7,470	44,800	22,000	7,730	6,660	5,380	4,630
24	6,680	13,000	11,500	7,500	10,800	7,310	42,400	18,800	6,940	6,510	5,470	4,570
25	13,900	17,800	11,200	7,390	10,600	7,140	39,600	13,400	7,940	6,320	5,290	4,270
26	45,700	38,700	10,900	7,290	10,300	6,980	38,700	12,100	15,500	5,980	5,030	4,460
27	45,600	44,900	10,900	7,570	10,200	6,960	38,400	13,500	14,200	5,750	5,270	4,460
28	34,700	40,300	10,600	7,500	10,100	6,780	37,600	12,000	12,100	5,770	5,180	4,340
29	27,400	50,100	10,500	7,440	10,000	6,660	37,100	10,200	9,730	5,840	*4,810	4,210
30	24,200	60,400	10,300	7,290	---------	6,710	36,900	9,970	8,980	6,000	5,070	*4,500
31	21,600	--------	10,300	7,210	---------	7,470	--------	9,580	--------	5,860	5,180	--------
Total	389,180	659,400	723,100	318,820	277,260	255,620	1,010,850	1,046,250	266,080	229,260	172,060	134,890
Mean	12,550	21,980	23,330	10,280	9,561	8,246	33,700	33,750	8,869	7,395	5,550	4,496
(†)	+68	+2,596	+82	-3,352	-2,410	-3,504	+9,592	-2,267	-981	-1,649	-3,673	-2,421

Adjusted for change in reservoir contents

Mean	12,620	24,580	23,410	6,928	7,151	4,742	43,290	31,480	7,888	5,746	1,877	2,075
Cfsm	1.91	3.72	3.55	1.05	1.08	0.718	6.56	4.77	1.20	0.871	0.284	0.314
In.	2.20	4.15	4.09	1.21	1.16	0.83	7.32	5.50	1.34	1.00	0.33	0.35

	Observed			Adjusted			
Calendar year 1959:	Max 60,400	Min 4,360	Mean 13,700	Mean 14,290	Cfsm 2.17	In. 29.38	
Water year 1959-60:	Max 60,400	Min 3,400	Mean 14,980	Mean 14,680	Cfsm 2.22	In. 29.48	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in reservoirs on East and West Branches of Penobscot River, also Sebec Lake and Wilson Pond in Piscataquis River basin.
Note.--Stage-discharge relation affected by ice Dec. 22 to Apr. 5 and by aquatic growth July 16 to Sept. 30.

350. Passadumkeag River at Lowell, Maine

Location.--Lat 45°11'00", long 68°28'25", on right bank at Lowell, Penobscot County, half a mile downstream from dam and highway bridge and 10 miles upstream from mouth.

Drainage area.--299 sq mi.

Records available.--October 1915 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 151.3 ft above mean sea level, datum of 1929. Oct. 1, 1915, to Sept. 30, 1917, chain and staff gages at same site and datum. Oct. 1, 1917, to Nov. 30, 1921, chain gage at site on left bank 400 ft downstream from highway bridge at different datum.

Average discharge.--45 years, 497 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Nov. 30 (gage height, 5.93 ft); minimum, 34 cfs Sept. 10, 11.
1915-60: Maximum discharge, 5,680 cfs May 2, 1923 (gage height, 9.40 ft); minimum, about 5 cfs several times in July and August 1921 (gates in dam closed).

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Revisions.--WSP 821: Drainage area.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 29				Nov. 30 to Sept. 30	
1.5	205	4.0	1,340	0.5	33
2.0	365	5.0	1,980	1.0	98
2.5	560	6.0	2,770	1.5	205
3.0	780			Note.--Same as preceding table above 1.5 ft.	

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	213	1,270	2,690	870	375	560	649	1,640	536	244	169	57
2	224	1,210	2,660	870	370	545	820	1,600	540	235	169	53
3	229	1,110	2,450	1,050	365	530	930	1,570	540	232	174	51
4	229	1,030	2,290	1,120	360	520	1,060	1,510	544	241	*153	47
5	226	936	2,130	1,230	350	508	1,320	1,460	568	244	142	44
6	224	875	1,980	1,280	350	488	1,740	1,380	694	246	134	42
7	244	850	1,890	1,290	480	472	1,910	1,320	*745	241	128	40
8	321	850	1,870	1,280	640	464	1,960	1,250	745	232	119	37
9	399	835	1,790	1,210	720	449	1,990	1,200	712	221	115	37
10	437	810	*1,730	1,120	720	440	1,990	1,140	654	213	113	35
11	437	775	1,650	1,080	690	430	1,940	1,100	588	221	110	34
12	426	740	1,580	1,010	680	420	1,900	1,110	528	238	105	41
13	407	716	1,950	930	755	410	1,910	1,140	472	249	100	64
14	384	685	2,260	*855	830	405	1,920	1,240	433	258	98	76
15	350	685	2,240	780	870	400	1,880	1,330	407	271	95	87
16	318	708	2,230	740	930	*395	1,890	1,360	437	271	93	90
17	296	730	2,170	690	900	384	1,920	1,360	460	255	90	87
18	300	795	2,070	670	865	384	1,990	1,350	468	240	87	80
19	318	825	1,960	640	830	380	2,090	1,290	457	225	84	76
20	332	825	1,840	600	780	376	2,100	1,210	433	215	82	73
21	332	800	1,680	565	750	373	2,070	1,130	414	208	79	72
22	318	760	1,530	545	715	369	2,100	1,040	388	187	78	67
23	304	716	1,440	520	*685	369	2,110	942	365	174	78	64
24	304	712	1,340	495	660	361	2,060	870	346	169	73	62
25	835	1,070	1,230	480	640	361	*2,010	805	332	160	68	59
26	1,300	1,580	1,160	460	620	360	1,940	745	314	151	64	57
27	1,510	1,780	1,100	445	605	354	1,880	698	293	142	62	54
28	1,560	2,080	1,020	435	590	350	1,830	644	277	138	59	52
29	1,540	2,580	960	420	570	346	1,770	608	258	138	58	*52
30	1,470	2,700	910	405	-------	354	1,710	576	252	138	60	52
31	1,350	-------	865	390	-------	449	-------	548	-------	160	59	-------
Total	17,137	32,038	54,665	24,475	18,695	13,006	53,389	35,166	14,200	6,557	3,098	1,742
Mean	553	1,068	1,763	790	645	420	1,780	1,134	473	212	99.9	58.1
Cfsm	1.85	3.57	5.90	2.64	2.16	1.40	5.95	3.79	1.58	0.709	0.334	0.194
In.	2.13	3.98	6.80	3.04	2.33	1.61	6.64	4.37	1.76	0.82	0.39	0.22

Calendar year 1959: Max 2,700 Min 110 Mean 748 Cfsm 2.50 In. 33.94
Water year 1959-60: Max 2,700 Min 34 Mean 749 Cfsm 2.51 In. 34.09

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20-24, 27-29, Jan. 1-3, Jan. 5 to Feb. 10, Feb. 16 to Mar. 4, Mar. 10-15, 26.

365. Kenduskeag Stream near Kenduskeag, Maine

Location.--Lat 44°53'50", long 68°53'00", on right bank 300 ft upstream from highway bridge, 1.8 miles downstream from Black Stream, and 2.9 miles south of Kenduskeag, Penobscot County.

Drainage area.--178 sq mi.

Records available.--October 1941 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 97 ft (from topographic map).

Average discharge.--19 years, 316 cfs.

Extremes.--Maximum discharge during year, about 5,000 cfs Apr. 6 (gage height, 12.85 ft, backwater from ice jam); minimum daily, 4.7 cfs Sept. 11.
1941-60: Maximum discharge, 6,440 cfs Sept. 12, 1954 (gage height, 14.83 ft); minimum, 1.0 cfs Sept. 30, Oct. 1, 1948 (gage height, 1.09 ft).

Remarks.--Records good except those for periods of ice effect or backwater from aquatic growth, which are fair. An artificial cut has been made through a low divide between Souadabscook Stream and Black Stream which enters Kenduskeag Stream 1.8 miles above station. During high stages of Souadabscook Stream part of its flow passes through the cut into Kenduskeag Stream; at low stages of Souadabscook Stream all flow continues down its own channel.

Rating table, water year 1959-60, except periods of ice effect or backwater from aquatic growth (gage height, in feet, and discharge, in cubic feet per second)

1.1	2.8	2.5	153	8.0	2,560
1.2	6.0	3.0	263	10.0	3,760
1.3	11	4.0	560	12.0	4,960
1.6	33	5.0	980		
2.0	76	6.0	1,480		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	595	1,650	177	136	240	980	328	151	45	*79	8.5
2	19	748	1,120	171	136	230	1,730	369	218	43	54	7.5
3	29	592	*858	280	132	215	2,080	*398	198	42	43	6.0
4	32	456	736	1,140	132	205	2,560	333	169	89	33	5.7
5	28	389	664	1,360	130	205	3,640	276	295	135	27	5.4
6	28	366	608	*1,040	136	196	*4,840	234	995	96	26	5.7
7	39	375	730	716	162	194	4,600	194	740	73	24	5.7
8	156	546	1,220	529	215	192	4,000	175	350	59	23	5.7
9	225	506	958	392	265	190	3,300	239	209	51	22	5.7
10	179	422	708	315	240	188	2,570	392	146	44	22	5.0
11	133	347	*516	240	230	184	2,190	453	119	39	21	4.7
12	*113	301	434	194	490	180	2,070	670	101	37	19	8.5
13	125	*322	1,360	172	720	172	2,330	650	86	41	17	44
14	98	309	2,480	160	700	172	2,310	1,260	71	112	16	73
15	77	530	1,860	150	600	170	1,890	1,170	68	122	15	50
16	66	660	1,310	146	510	168	2,100	804	300	73	14	34
17	56	572	976	144	460	*168	2,130	612	333	53	14	25
18	62	736	760	*144	410	166	2,000	466	214	48	14	20
19	97	616	580	146	375	170	1,900	363	146	42	13	16
20	101	476	475	146	345	176	1,560	283	113	46	13	16
21	86	375	415	146	315	184	1,140	223	157	49	14	18
22	72	333	350	146	305	180	1,060	181	139	40	18	18
23	63	301	310	142	*280	172	1,120	153	104	38	17	17
24	64	361	270	138	265	170	872	168	87	37	13	15
25	1,100	1,540	240	136	245	160	760	*344	119	32	12	12
26	2,010	2,960	215	136	240	152	688	401	161	30	10	*12
27	1,390	2,200	194	132	245	152	572	322	116	27	9.5	12
28	872	1,850	179	130	250	152	519	259	87	28	8.0	13
29	596	2,790	184	130	260	158	456	167	59	31	*8.0	13
30	422	2,550	196	138	-------	172	381	122	51	33	9.5	14
31	333	-------	192	140	-------	315	-------	103	-------	54	9.0	-------
Total	8,684	25,124	22,748	9,276	8,929	5,748	58,348	12,092	6,102	1,689	637.0	496.1
Mean	280	837	734	299	308	185	1,945	390	203	54.5	20.5	16.5
Cfsm	1.57	4.70	4.12	1.68	1.73	1.04	10.9	2.19	1.14	0.306	0.115	0.093
In.	1.81	5.24	4.75	1.94	1.87	1.20	12.16	2.52	1.27	0.35	0.13	0.10

Calendar year 1959: Max 5,740 Min 8.5 Mean 397 Cfsm 2.23 In. 32.26
Water year 1959-60: Max 4,840 Min 4.7 Mean 437 Cfsm 2.46 In. 33.34

Peak discharge (base, 1,600 cfs).--Oct. 26 (5 a.m.) 2,140 cfs (7.30 ft); Nov. 26 (1 p.m.) 3,060 cfs (8.83 ft); Nov. 29 (8 to 9 p.m.) 3,010 cfs (8.75 ft); Dec. 14 (12 m.) 2,580 cfs (8.04 ft); Apr. 6 (9 p.m.) about 5,000 cfs (12.85 ft, ice jam).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20-27, Jan. 10 to Apr. 8. Backwater from aquatic growth Oct. 1-8, July 21 to Sept. 30.

Reservoirs in Penobscot River basin

270. Chesuncook, Ripogenus, and Caribou Lakes and Moose Pond in West Branch Penobscot River basin are controlled by Ripogenus Dam, in T.3, R.11, Piscataquis County, Maine, 36 miles upstream from Millinocket and 42 miles northeast of Greenville; present dam completed in 1917 for power and log driving; usable capacity of reservoir, 30,000,000,000 cu ft. Records furnished by Great Northern Paper Co.

270. Ambajejus, Pemadumcook, North Twin, South Twin, and Elbow Lakes in West Branch Penobscot River basin are controlled by North Twin Dam, 3 miles upstream from Millinocket, Penobscot County, Maine, for power and log driving; usable capacity of reservoir, 15,000,000,000 cu ft. Records furnished by Great Northern Paper Co.

285. Chamberlain and Telos Lakes and Round Pond in East Branch Penobscot River basin are controlled by dams in outlets of Chamberlain and Telos Lakes, although regulation is at Telos Dam, in T.6, R.11, Piscataquis County, Maine. Telos Dam rebuilt during 1941; usable capacity, 5,040,000,000 cu ft between gage heights 2.0 and 11.0 ft. Records furnished by Bangor Hydro-Electric Co.

290. Second and Grand Lakes in East Branch Penobscot River basin are controlled by dam rebuilt in 1942 at outlet of Grand Lake, in T.6, R.8, Penobscot County, Maine; usable capacity, 1,785,000,000 cu ft between elevations 643.0 and 655.0 ft. Records furnished by Bangor Hydro-Electric Co.

320. Wilson Pond on Wilson Stream, 2¾ miles east of Greenville, Piscataquis County, Maine, used for power; usable capacity, 390,000,000 cu ft between gage heights 27.5 and 33.5 ft. Gage-height record furnished by Central Maine Power Co.

325. Sebec Lake on Sebec River at Sebec, Piscataquis County, Maine, used for power and log driving; usable capacity, 2,511,000,000 cu ft between elevations 316.1 and 325.1 ft. Records furnished by Bangor Hydro-Electric Co.

Month-end contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Chesuncook, Ripogenus, Caribou, Ambajejus, Pemadumcook, North Twin, South Twin, and Elbow Lakes and Moose Pond†	Chamberlain, Telos, Second, and Grand Lakes and Round Pond	Wilson Pond and Sebec Lake
Sept.30, 1959	44,388	5,679	1,328
Oct. 31	43,591	6,075	1,912
Nov. 30	49,708	6,071	2,527
Dec. 31	51,021	5,524	1,980
Jan. 31, 1960	44,637	3,428	1,484
Feb. 29	40,543	1,872	1,094
Mar. 31	33,637	265	223
Apr. 30	53,592	3,054	2,342
May 31	57,191	5,920	1,947
June 30	54,668	6,215	1,633
July 31	50,449	5,638	2,014
Aug. 31	42,983	3,246	2,036
Sept.30	37,564	2,210	2,215

† Includes month-end contents of following additional reservoirs in West Branch Penobscot River basin; used primarily for log driving (total capacity approximately 12,000,000,000 cu ft); Penobscot, Seboomook, Caucomgomoc, Loon, Shallow, Umbazooksus, Harrington, Sourdnahunk, Rainbow, Ragged, and Millinocket Lakes, Canada Falls Reservoir, Dole, and Poland Ponds.

380. Sheepscot River at North Whitefield, Maine

Location.--Lat 44°13'20", long 69°35'40", on left bank at North Whitefield, Lincoln County, just upstream from highway bridge, half a mile downstream from Pleasant Pond Brook.

Drainage area.--148 sq mi.

Records available.--October 1938 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 101.1 ft above mean sea level, datum of 1929.

Average discharge.--22 years, 239 cfs.

Extremes.--Maximum discharge during year, 2,970 cfs Apr. 6 (gage height, 8.20 ft); minimum, 16 cfs Sept. 9-11.
1938-60: Maximum discharge, 5,260 cfs Apr. 13, 1940 (gage height, 11.81 ft, backwater from fish weir), from rating curve extended above 1,900 cfs by logarithmic plotting; minimum, 5.0 cfs Oct. 24, 1941 (gage height, 1.70 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair. Some regulation at low flow by sawmill at North Whitefield. Records of water temperatures for the water year 1960 are given in WSP 1741.

Revisions (water years).--WSP 1231: 1940.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
2.0	20	4.0	520	5.0	970	8.0	2,820
2.2	38	5.0	970	6.0	1,510	9.0	3,590
2.4	62	6.0	1,550	7.0	2,160		
2.6	93	7.0	2,250				
3.0	180	8.0	3,060				
3.5	325						

Note.--Same as preceding table below 5.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	512	1,110	b190	b132	b270	960	388	295	116	99	26
2	42	528	1,000	b186	131	b250	970	376	286	108	80	24
3	41	464	885	536	133	b235	1,040	346	256	61	65	22
4	34	365	790	810	131	226	1,490	313	241	36	50	22
5	32	283	696	604	b128	214	2,500	295	220	35	47	22
6	75	286	640	584	154	208	*2,850	268	200	73	47	20
7	168	390	700	544	274	198	2,490	244	178	106	46	18
8	247	460	730	488	283	195	2,160	223	161	87	47	17
9	188	460	624	b425	256	190	1,810	238	147	71	57	16
10	170	496	568	b370	229	b176	1,550	238	135	59	52	16
11	149	412	520	b320	430	b170	*1,340	229	127	54	47	16
12	142	356	496	*b285	880	b168	1,290	301	120	52	45	38
13	77	325	1,250	b255	600	166	1,290	353	*112	62	42	135
14	53	298	1,210	229	568	158	1,190	648	104	101	41	74
15	47	448	1,020	211	628	154	1,120	532	146	74	46	45
16	31	412	*980	211	608	b150	1,080	516	295	59	47	37
17	36	396	875	b198	576	154	1,010	480	205	54	45	34
18	59	512	760	180	540	156	945	444	180	87	41	31
19	53	440	670	178	536	168	880	400	163	91	40	29
20	39	400	584	175	528	166	795	356	158	93	44	31
21	38	372	480	170	484	163	708	319	154	88	47	35
22	37	350	424	166	432	163	704	280	135	90	48	34
23	37	328	360	158	396	158	660	250	127	99	*46	29
24	102	435	310	154	356	158	596	315	104	95	39	26
25	935	1,100	277	154	325	154	568	*532	106	88	36	25
26	720	1,150	250	147	322	b144	552	416	104	82	34	23
27	588	955	226	149	336	144	524	372	97	77	33	22
28	508	1,150	208	140	310	144	540	346	82	79	32	21
29	460	1,410	208	144	289	151	472	313	112	76	30	21
30	416	1,250	205	142	-------	192	424	283	116	82	30	25
31	400	-------	200	b136	-------	620	-------	259	-------	140	28	-------
Total	5,954	16,743	19,256	8,639	10,995	5,963	34,508	10,873	4,866	2,475	1,431	934
Mean	192	558	621	279	379	192	1,150	351	162	79.8	46.2	31.1
Cfsm	1.30	3.77	4.20	1.89	2.56	1.30	7.77	2.37	1.09	0.539	0.312	0.210
In.	1.50	4.21	4.84	2.18	2.76	1.50	8.67	2.73	1.22	0.62	0.36	0.23

Calendar year 1959: Max 3,010 Min 27 Mean 301 Cfsm 2.03 In. 27.62
Water year 1959-60: Max 2,850 Min 16 Mean 335 Cfsm 2.26 In. 30.82

Peak discharge (base, 1,100 cfs).--Nov. 25 (8 p.m.) 1,350 cfs (5.68 ft); Nov. 29 (8 a.m.) 1,450 cfs (5.85 ft); Dec. 13 (9 p.m.) 1,400 cfs (5.76 ft); Apr. 6 (3 a.m.) 2,970 cfs (8.20 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

405. Moosehead Lake at East Outlet, Maine

Location.--Lat 45°35'10", long 69°42'45", at wharf at east outlet of lake at Moosehead, Piscataquis County.

Drainage area.--1,240 sq mi, approximately.

Records available.--April 1895 to September 1960.

Gage.--Staff gage read daily at 7 a.m. Datum of gage is 1,011.48 ft above mean sea level, datum of 1929.

Extremes.--Maximum gage height observed during year, 17.68 ft June 25; minimum observed, 14.54 ft Oct. 23, 24.
1895-1960: Maximum gage height, 18.0 ft May 30, 1902; minimum, 10.0 ft or lower, present datum, Mar. 20-29, 1911.

Remarks.--Lake is controlled by dams at East and West Outlets originally built prior to 1840. East Outlet dam partly rebuilt of concrete in 1947-48 with gate sills at gage height 7.0 ft. Remaining wooden section rebuilt of concrete in 1955-56. Lake outlet dredged in 1948 to permit drawing level down to gage height 10.0 ft at a faster rate than formerly. Capacity, 23,735,000,000 cu ft between gage heights 10.0 and 17.5 ft. Water is used primarily for power, although some logs are driven each year. Some water was diverted through gates in dam at West Outlet; monthly mean diversion, in cubic feet per second, during water year 1960, is given below:

October.....	50	July.....	80
April.....	120	August.....	80
May.....	330	September.....	80
June.....	90		

Cooperation.--Gage-height record furnished by Kennebec Water Power Co.

Revisions (water years).--WSP 1111: 1946-47 (change in contents).

Capacity table, water year 1959-60 (gage height, in feet, and capacity, in millions of cubic feet)

10.0	0	15.0	15,713
11.0	3,110	16.0	18,908
12.0	6,237	17.0	22,121
13.0	9,397	18.0	25,355
14.0	12,537		

Gage height, in feet, at 7 a.m., water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15.35	14.83	16.72	17.47	16.94	16.31	15.06	16.96	17.47	17.50	16.56	15.39
2	15.38	14.88	16.76	17.44	16.90	16.25	15.07	17.10	17.47	17.50	16.53	15.34
3	15.32	14.90	16.78	17.40	16.85	16.19	15.10	17.21	17.47	17.47	16.50	15.30
4	15.31	14.90	16.87	17.40	16.81	16.14	15.12	17.29	17.47	17.46	16.45	15.26
5	15.30	14.90	16.87	17.38	16.77	16.09	15.18	17.35	17.46	17.44	16.40	15.26
6	15.30	14.91	16.84	17.36	16.74	16.03	15.26	17.33	17.54	17.40	16.37	15.25
7	15.28	15.00	16.84	17.35	16.74	15.96	15.31	17.33	17.52	17.36	16.33	15.21
8	15.28	15.03	16.88	17.34	16.74	15.95	15.33	17.40	17.51	17.30	16.27	15.15
9	15.30	15.03	16.96	17.33	16.72	15.92	15.33	17.44	17.50	17.25	16.22	15.11
10	15.30	15.06	17.05	17.29	16.72	15.85	15.35	17.41	17.51	17.20	16.20	15.08
11	15.27	15.08	17.08	17.27	16.69	15.80	15.35	17.42	17.51	17.18	16.16	15.03
12	15.22	15.09	17.10	17.25	16.64	15.75	15.37	17.40	17.51	17.16	16.11	15.03
13	15.20	15.13	17.34	17.22	16.67	15.68	15.38	17.43	17.51	17.13	16.06	15.22
14	15.15	15.16	17.36	17.19	16.69	15.62	15.38	17.50	17.52	17.17	16.01	15.29
15	15.10	15.28	17.36	17.18	16.70	15.57	15.40	17.50	17.51	17.13	15.99	15.30
16	15.02	15.34	17.38	17.16	16.68	15.54	15.42	17.50	17.54	17.10	15.96	15.35
17	14.95	15.43	17.40	17.12	16.64	15.50	15.42	17.48	17.51	17.08	15.90	15.38
18	14.87	15.50	17.42	17.12	16.60	15.48	15.50	17.46	17.50	17.09	15.85	15.38
19	14.82	15.55	17.44	17.12	16.57	15.44	15.61	17.42	17.50	17.03	15.81	15.38
20	14.75	15.58	17.45	17.16	16.58	15.40	15.81	17.41	17.47	17.02	15.78	15.40
21	14.71	15.62	17.48	17.15	16.60	15.36	15.98	17.46	17.47	17.00	15.77	15.40
22	14.64	15.67	17.48	17.13	16.58	15.33	16.10	17.46	17.48	16.93	15.76	15.38
23	14.54	15.71	17.47	17.11	16.55	15.28	16.28	17.49	17.50	16.89	15.77	15.38
24	14.54	15.75	17.45	17.09	16.51	15.24	16.33	17.50	17.50	16.84	15.79	15.39
25	14.68	15.88	17.43	17.07	16.48	15.19	16.40	17.52	17.68	16.80	15.74	15.41
26	14.78	16.00	17.43	17.04	16.48	15.15	16.46	17.52	17.67	16.75	15.68	15.41
27	14.81	16.18	17.43	17.02	16.45	15.12	16.50	17.51	17.60	16.70	15.62	15.37
28	14.83	16.45	17.43	16.99	16.42	15.08	16.61	17.49	17.54	16.65	15.56	15.36
29	14.83	16.55	17.43	17.01	16.37	15.07	16.72	17.46	17.52	16.58	15.51	15.36
30	14.83	16.66	17.48	17.00	-------	15.03	16.81	17.47	17.50	16.50	15.47	15.33
31	14.82	-------	17.48	16.98	-------	15.04	-------	17.45	-------	16.56	15.46	-------
(†)	15,141	21,027	23,670	22,057	20,096	15,841	21,509	23,574	23,735	20,706	17,180	16,766
(‡)	-1,689	+5,886	+2,643	-1,613	-1,961	-4,255	+5,668	+2,065	+161	-3,029	-3,526	-414

Calendar year 1959..... ‡ +3,769
Water year 1959-60..... ‡ -64

† Contents, in millions of cubic feet, at end of month.
‡ Change in contents, in millions of cubic feet.

410. Kennebec River at Moosehead, Maine

Location.--Lat 45°35'10", long 69°43'10", on right bank an eighth of a mile downstream from dam at East Outlet of Moosehead Lake and half a mile northwest of Moosehead, Piscataquis County.

Drainage area.--1,240 sq mi, approximately.

Records available.--October 1919 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,015.53 ft above mean sea level, datum of 1929. Prior to Oct. 9, 1924, chain gage on railroad bridge 300 ft downstream at same datum.

Average discharge.--41 years, 1,870 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,210 cfs May 5 (gage height, 7.50 ft); minimum, 127 cfs Nov. 27 (gage height, 2.19 ft).
1919-60: Maximum discharge, 15,600 cfs May 8, 1947 (gage height, 9.94 ft); minimum, about 62 cfs Apr. 7-15, 1923.

Remarks.--Records excellent. Some water diverted down west channel by leakage and occasional opening of gates in dam at West Outlet. Flow regulated by Moosehead Lake (see preceding page) and by Brassua Lake and Second and First Roach Ponds (see p. 55).

Revisions (water years).--WSP 1301: 1928-50 (adjusted monthly runoff).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 5				May 6 to Sept. 30			
2.2	130	3.5	1,110	4.0	1,750	6.0	5,110
2.4	220	4.0	1,750	4.5	2,480	7.0	7,300
2.7	420	4.5	2,500	5.0	3,260	7.5	8,520
3.0	650	5.0	3,360				
6.0	5,410						
7.0	7,820						

Note.--Same as preceding table below 4.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,080	800	138	2,520	2,560	3,180	2,520	2,660	2,290	1,630	980	2,400
2	2,260	355	134	2,660	2,560	3,160	2,470	3,930	1,770	1,550	2,020	2,380
3	1,880	1,020	130	2,640	2,560	3,110	2,210	4,910	1,500	1,570	2,100	1,960
4	1,740	1,020	1,370	2,630	2,560	3,090	2,040	4,970	1,360	1,580	2,100	618
5	2,070	1,020	2,060	2,640	2,550	3,070	2,070	6,730	995	2,140	2,090	626
6	2,220	1,020	2,060	2,660	2,550	3,040	2,100	7,740	2,460	2,760	2,090	1,700
7	2,250	465	1,450	2,640	2,530	3,340	2,730	5,680	2,710	2,940	2,060	2,060
8	2,000	1,310	522	2,640	2,550	3,610	3,090	5,810	1,660	2,940	2,040	2,460
9	1,410	1,310	530	2,640	2,520	3,610	3,070	6,580	1,080	2,360	*2,030	2,660
10	1,220	910	530	2,610	2,530	3,280	3,090	6,360	1,890	2,020	2,090	1,540
11	1,210	910	530	2,810	2,530	3,050	3,070	6,470	1,170	2,120	2,340	1,050
12	1,220	901	530	3,000	2,550	3,000	2,750	6,400	1,170	2,200	2,340	450
13	1,550	920	522	3,000	2,290	2,970	2,380	7,090	1,840	2,200	2,140	138
14	2,190	920	885	3,000	1,680	2,950	2,190	7,000	2,200	1,340	2,030	134
15	2,140	940	1,140	3,000	2,220	2,950	2,200	7,320	2,560	805	2,260	134
16	2,120	950	1,140	3,000	2,560	2,930	2,200	8,100	1,410	730	2,400	138
17	2,080	950	1,140	2,900	2,550	3,170	1,370	7,760	1,240	1,760	2,390	138
18	2,060	950	1,140	2,340	2,550	3,400	775	6,430	1,660	2,360	2,360	134
19	2,010	950	1,130	2,040	2,560	3,380	802	*4,660	1,980	2,360	2,340	200
20	2,010	950	1,130	2,060	2,550	3,340	811	*3,500	2,120	2,440	2,340	515
21	2,000	950	1,770	2,400	2,530	3,320	829	2,800	166	2,500	1,770	1,060
22	1,960	950	2,320	2,600	2,520	3,290	725	1,000	166	2,500	1,610	1,060
23	1,940	950	2,340	2,580	2,550	3,290	650	1,920	*365	2,480	665	935
24	965	970	2,200	2,580	2,550	3,250	1,060	2,510	840	2,460	1,290	602
25	138	435	2,010	2,580	2,550	3,230	2,010	3,050	1,890	2,450	2,140	594
26	138	134	2,010	2,580	2,610	3,220	2,500	3,100	3,780	2,450	2,480	765
27	130	130	1,980	2,580	2,680	3,180	2,520	3,010	3,970	2,400	2,480	1,140
28	130	138	2,000	2,580	2,660	2,810	2,560	2,660	3,460	2,730	2,450	1,060
29	355	134	2,010	2,580	3,000	2,530	2,600	2,450	2,870	2,670	2,420	1,740
30	1,040	130	2,010	2,580	-------	2,500	2,630	1,570	2,130	2,520	*2,400	2,150
31	1,040	-------	2,200	2,560	-------	2,550	-------	1,470	-------	205	2,400	-------
Total	47,556	23,492	41,061	81,630	73,160	96,800	62,022	145,640	54,702	65,170	64,645	32,541
Mean	1,534	783	1,325	2,633	2,523	3,123	2,067	4,698	1,823	2,102	2,085	1,085
(†)	-519	+2,378	+1,385	-1,396	-1,138	-2,422	+5,053	+1,733	+120	-1,278	-1,787	-590
Adjusted for change in reservoir contents												
Mean	1,015	3,161	2,710	1,237	1,385	701	7,120	6,431	1,943	824	298	495
Cfsm	0.819	2.55	2.19	0.998	1.12	0.565	5.74	5.19	1.57	0.665	0.240	0.399
In.	0.94	2.84	2.52	1.15	1.21	0.65	6.40	5.98	1.75	0.77	0.28	0.45

	Observed			Adjusted				
Calendar year 1959:	Max 14,500	Min 100	Mean 1,959	Mean	2,160	Cfsm 1.74	In. 23.64	
Water year 1959-60:	Max 8,100	Min 130	Mean 2,154	Mean	2,272	Cfsm 1.83	In. 24.94	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Brassua and Moosehead Lakes and Second and First Roach Ponds, also diversion through West Outlet.

425. Kennebec River at The Forks, Maine

Location.--Lat 45°20'35", long 69°57'45", on right bank at The Forks, Somerset County, half a mile upstream from highway bridge and 1 mile upstream from Dead River.

Drainage area.--1,570 sq mi, approximately.

Records available.--September 1901 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 569.03 ft above mean sea level, datum of 1929. Prior to June 21, 1912, chain gage and June 21, 1912, to Oct. 17, 1919, water-stage recorder and chain gage, at highway bridge half a mile downstream at different datum.

Average discharge.--59 years, 2,546 cfs (unadjusted).

Extremes.--Maximum discharge during year, 13,300 cfs May 15 (gage height, 7.64 ft); minimum daily, 410 cfs Sept. 27.
1901-60: Maximum discharge, about 23,700 cfs June 18, 1917 (gage height, 10.1 ft, site then in use); minimum, 85 cfs Sept. 3, 1953 (gage height, 1.02 ft).

Remarks.--Records excellent. Flow regulated by Moosehead Lake (see p. 55), Brassua Lake, and Moxie, Indian, Second and First Roach Ponds (see p. 55).

Revisions (water years).--WSP 198: Drainage area. WSP 1231: 1902-4, 1906-8, 1912, 1914, 1919-20(M), 1923(M), 1926(M), 1928-29(M), 1936(M), 1938(M). WSP 1301: 1928-35 (adjusted monthly runoff).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.8	367	4.0	3,250
2.0	519	4.5	4,360
2.5	983	5.0	5,590
3.0	1,570	7.0	11,500
3.5	2,300		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,520	500	2,730	3,440	3,360	4,590	3,020	3,380	2,200	2,280	1,950	3,100
2	1,620	1,240	3,170	3,660	2,580	2,720	3,400	6,600	2,740	2,160	1,760	2,720
3	2,490	1,450	1,830	1,880	3,170	3,670	3,080	7,220	2,600	2,520	1,920	2,500
4	1,000	1,140	2,340	3,240	3,110	3,390	3,230	8,060	1,180	2,590	3,100	1,640
5	3,070	*1,240	1,910	2,320	2,740	2,830	5,250	8,390	1,450	2,230	2,650	420
6	2,050	2,870	2,400	3,000	2,940	3,790	4,360	7,430	3,550	2,500	2,500	1,860
7	2,230	2,250	2,480	3,570	2,100	3,480	3,780	8,690	3,280	3,780	1,800	2,630
8	3,270	720	1,210	3,690	3,580	2,980	4,820	7,780	2,820	3,740	2,650	3,270
9	1,510	1,090	1,830	4,080	2,560	3,600	4,810	8,050	1,500	1,870	*2,440	3,120
10	2,140	2,220	1,230	3,670	3,520	2,580	2,920	8,760	1,510	2,490	3,030	1,040
11	450	630	1,840	4,360	3,050	2,660	4,440	8,860	1,100	3,030	2,670	1,250
12	2,250	2,590	1,530	3,480	2,770	3,550	4,060	7,460	1,380	2,280	2,490	2,930
13	2,250	2,400	1,990	3,610	2,220	3,400	3,930	8,980	2,290	1,820	2,600	1,160
14	2,260	800	1,640	3,600	2,200	3,430	3,840	10,800	3,060	1,660	1,480	975
15	2,330	730	2,160	4,140	3,140	3,590	4,000	11,300	3,080	1,380	3,190	650
16	2,010	1,860	1,810	2,710	2,510	3,540	4,540	11,400	1,160	1,940	1,760	1,060
17	1,210	1,540	2,320	2,300	2,940	3,580	2,000	10,200	1,080	2,240	2,090	1,310
18	2,100	550	1,880	2,170	3,250	3,470	4,540	9,200	1,690	2,150	1,900	1,010
19	3,280	700	1,210	2,540	3,070	3,240	5,280	7,160	2,410	2,490	2,590	1,860
20	2,040	1,800	1,980	2,770	3,290	2,560	5,210	4,900	2,550	2,820	2,240	1,910
21	1,250	2,520	2,930	2,930	2,440	4,260	4,200	4,170	590	2,160	2,350	1,240
22	2,830	1,070	3,280	3,000	3,690	3,350	4,570	1,470	855	2,550	3,040	*1,300
23	1,650	1,740	3,270	2,750	2,540	2,910	3,690	3,320	*2,270	2,900	440	1,170
24	2,270	1,740	2,720	2,350	3,020	4,150	3,100	3,680	790	3,000	1,950	1,250
25	1,170	2,170	2,530	3,220	4,590	4,250	5,260	3,440	1,560	2,960	2,380	2,310
26	910	2,780	2,430	3,200	2,930	2,900	5,200	3,500	4,430	2,870	2,350	490
27	605	2,930	2,180	2,900	3,050	4,520	6,140	3,790	5,250	3,100	2,370	410
28	1,570	2,940	2,170	2,900	2,090	2,880	5,940	3,780	4,930	2,920	2,460	2,060
29	1,240	6,060	3,290	2,890	3,990	2,980	5,890	2,980	3,260	2,720	2,690	2,960
30	1,470	4,080	3,310	2,870	-------	3,780	6,070	1,430	3,310	2,380	2,070	1,480
31	1,670	-------	1,980	2,640	-------	2,210	-------	3,600	-------	620	2,280	-------
Total	58,715	56,350	69,580	95,880	86,440	104,840	130,570	199,780	69,875	76,150	71,190	51,085
Mean	1,894	1,878	2,245	3,093	2,981	3,382	4,352	6,445	2,329	2,456	2,296	1,703
(†)	-515	+2,514	+1,236	-1,461	-1,229	-2,422	+5,009	+1,678	+68	-1,409	-1,870	-912
Adjusted for change in reservoir contents												
Mean	1,397	4,392	3,481	1,632	1,752	960	9,361	8,123	2,397	1,047	426	791
Cfsm	0.878	2.80	2.22	1.04	1.12	0.611	5.96	5.17	1.53	0.667	0.271	0.504
In.	1.01	3.12	2.56	1.20	1.21	0.70	6.65	5.96	1.71	0.77	0.31	0.56

	Observed					Adjusted				
Calendar year 1959:	Max	18,700	Min	365	Mean	2,619	Mean	2,794	Cfsm	1.78	In.	24.15
Water year 1959-60:	Max	11,400	Min	410	Mean	2,925	Mean	2,972	Cfsm	1.89	In.	25.76

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Brassua and Moosehead Lakes, and Second and First Roach, Indian, and Moxie Ponds.

435. Dead River near Dead River, Maine

Location.--Lat 45°13'48", long 70°11'58", T.3, R.4, Somerset County, on right bank at foot of Long Falls, 0.3 mile upstream from Black Brook and 0.5 mile downstream from Flagstaff Lake Dam.

Drainage area.--520 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for October to December 1939, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 1,037.32 ft above mean sea level, datum of 1929.

Average discharge.--21 years, 829 cfs (unadjusted).

Extremes.--Maximum discharge during year, 6,740 cfs May 12, June 27 (gage height, 8.85 ft); minimum daily, 2.8 cfs Nov. 13.
1939-60: Maximum discharge, 18,000 cfs Sept. 12, 1954 (gage height, 11.50 ft); no flow part of July 31, 1949, when flow was completely shut off by cofferdam during construction of Flagstaff Lake Dam.

Remarks.--Records good. Flow regulated by Flagstaff Lake (see p. 55).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

3.3	2.1	3.9	26	5.5	550
3.4	3.5	4.1	48	6.0	942
3.5	5.7	4.3	78	7.0	2,230
3.6	8.9	4.5	120	8.0	4,320
3.7	13	5.0	285	9.0	7,290

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	255	22	1,370	1,290	2,130	550	67	790	5.4	235	900
2	1,060	4.3	26	1,350	1,280	1,900	6.2	2,720	770	5.2	1,270	2,220
3	1,160	·3.7	32	1,340	1,280	1,960	5.0	3,050	840	5.2	1,970	2,180
4	1,090	*190	34	1,340	1,280	2,330	7.8	2,710	1,070	5.0	3.9	2,170
5	1,020	965	42	1,340	1,280	2,330	10	3,130	1,180	420	405	2,040
6	1,370	510	46	1,340	1,280	2,320	6.8	3,360	1,650	834	618	1,150
7	1,450	295	390	1,340	1,280	2,280	5.4	3,480	250	826	618	784
8	530	3.7	933	1,340	1,280	2,260	5.0	3,200	420	285	*755	865
9	6.8	3.5	942	1,340	1,270	2,250	4.7	3,440	990	3.5	1,010	1,270
10	6.6	3.5	953	1,340	1,270	2,210	4.3	5,300	1,340	184	1,110	2,000
11	6.2	3.4	953	1,340	1,270	2,200	720	6,300	940	744	950	1,820
12	825	2.9	974	1,340	1,270	2,180	1,070	4,830	1,450	744	638	505
13	1,640	2.8	1,260	1,340	1,270	2,150	1,080	3,610	760	759	800	16
14	1,750	3.0	1,470	1,340	1,260	2,120	1,090	2,810	915	744	1,080	11
15	1,680	4.3	1,460	1,330	1,260	2,100	1,100	4,170	1,790	500	1,160	190
16	1,610	3.7	1,450	*1,320	1,260	2,090	390	3,610	1,680	371	855	1,280
17	1,550	3.5	1,440	1,320	1,270	2,060	10	4,090	1,840	371	2,100	2,200
18	1,490	3.5	*1,440	1,320	1,260	2,040	15	3,260	1,810	371	1,330	2,280
19	1,450	3.7	1,430	1,320	1,260	2,020	10	2,080	1,830	870	1,310	2,740
20	1,380	4.3	1,410	1,310	1,260	1,980	7.2	1,280	1,670	770	805	1,820
21	1,330	3.5	1,410	1,310	1,260	1,950	6.8	1,070	2,360	795	910	*1,330
22	1,280	3.5	1,400	1,310	1,500	1,920	*7.8	705	2,760	446	2,100	1,610
23	1,250	182	1,390	1,310	1,680	1,910	6.8	713	2,330	755	1,010	1,810
24	1,140	215	1,390	1,310	1,670	1,880	6.6	955	2,140	695	560	1,910
25	14	14	1,390	1,310	1,670	1,850	8.5	1,840	1,930	362	865	2,060
26	6.2	8.5	1,390	1,290	1,670	1,840	8.1	2,730	11	362	2,050	2,590
27	5.2	7.5	1,380	1,290	1,670	1,780	8.1	2,060	2,000	540	1,370	2,620
28	4.3	13	1,380	1,310	1,970	1,750	21	1,660	2,230	632	960	2,440
29	410	9.6	1,380	1,310	2,130	1,720	38	1,180	*2,390	450	740	2,260
30	654	21	1,370	1,290	-------	1,680	58	37	2,580	280	435	2,170
31	654	-------	1,370	1,290	-------	1,650	-------	410	-------	3.7	3.9	-------
Total	29,142.3	2,746.4	31,957	41,050	40,650	62,840	6,267.1	79,857	44,716	14,138.0	30,146.8	49,241
Mean	940	91.5	1,031	1,324	1,402	2,027	209	2,576	1,491	456	972	1,641
(†)	+240	+1,449	-56	-772	-849	-1,683	+3,681	+224	-713	-240	-813	-1,064

Adjusted for change in reservoir contents

Mean	1,180	1,540	975	552	553	344	3,890	2,800	778	216	159	577
Cfsm	2.27	2.96	1.87	1.06	1.06	0.662	7.48	5.38	1.50	0.415	0.306	1.11
In.	2.62	3.30	2.16	1.22	1.14	0.76	8.34	6.20	1.67	0.48	0.35	1.24

	Observed						Adjusted					
Calendar year 1959:	Max	9,140	Min	2.6	Mean	838	Mean	996	Cfsm	1.92	In.	26.00
Water year 1959-60:	Max	6,300	Min	2.8	Mean	1,182	Mean	1,127	Cfsm	2.17	In.	29.48

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Flagstaff Lake.

450. Dead River at The Forks, Maine

Location.--Lat 45°21'00", long 69°59'30", on left bank 1½ miles northwest of The Forks, Somerset County, and 1½ miles upstream from mouth.

Drainage area.--872 sq mi.

Records available.--September 1901 to August 1907, March 1910 to September 1960. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 600.5 ft above mean sea level, adjustment of 1912. Prior to September 29, 1923, staff gage at site 100 ft downstream at same datum.

Average discharge.--55 years (1902-7, 1910-60), 1,425 cfs (unadjusted).

Extremes.--Maximum discharge during year, 9,490 cfs May 10 (gage height, 6.25 ft); minimum daily, 176 cfs Sept. 1.
1901-7, 1910-60: Maximum discharge, 28,700 cfs Mar. 20, 1936 (gage height, 10.54 ft), from rating curve extended above 15,000 cfs; minimum since September 1923, 54 cfs Sept. 27, 1941 (gage height, 1.50 ft).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Flagstaff and Spencer Lakes (see p. 55).

Revisions (water years).--WSP 801: Drainage area. WSP 1231: 1913-15, 1916-17(M), 1919-20(M), 1922(M). WSP 1301: 1904(M), 1907, 1911-12.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	134	4.0	3,440
1.9	255	5.0	5,810
2.1	409	6.0	8,700
2.5	835	7.0	12,000
3.0	1,550		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,380	1,030	1,840	1,640	1,380	2,230	1,620	2,650	1,920	494	343	176
2	1,160	637	1,470	1,620	1,360	2,180	798	4,120	1,380	326	1,100	2,130
3	1,260	585	1,260	1,600	1,340	1,890	913	5,260	1,490	298	2,270	2,070
4	1,180	513	1,130	1,600	1,340	2,460	1,110	4,980	1,350	283	855	2,070
5	1,110	1,180	992	1,580	1,340	2,480	1,840	5,780	1,460	315	595	2,050
6	1,270	1,110	939	1,570	1,380	2,460	2,440	5,910	1,840	1,050	774	1,530
7	1,570	1,330	1,050	1,570	1,360	2,440	2,330	6,380	1,350	1,030	737	861
8	1,650	1,210	2,200	1,550	1,380	2,440	1,910	4,950	564	1,290	823	874
9	670	1,050	2,020	1,550	1,340	2,420	1,520	5,880	1,490	750	*1,350	1,020
10	484	928	1,840	1,550	1,380	2,380	1,240	8,140	1,450	670	965	2,020
11	351	835	1,720	1,550	1,390	2,340	2,950	9,110	1,270	1,140	1,380	2,000
12	460	774	1,690	1,530	1,520	2,340	2,230	7,670	1,650	978	874	1,060
13	1,550	737	1,860	1,530	1,600	2,310	2,310	6,000	1,060	926	900	1,520
14	1,820	713	2,180	1,520	1,570	2,270	2,360	5,140	1,100	926	1,100	1,230
15	1,740	874	2,070	1,500	1,530	2,250	2,460	6,300	2,030	798	1,240	648
16	1,670	965	1,960	1,490	1,550	2,250	2,910	6,230	2,470	564	1,120	1,060
17	1,580	835	1,930	1,470	1,530	2,250	3,030	6,190	2,610	554	1,920	2,340
18	1,530	762	1,890	1,470	1,450	2,230	4,160	5,230	2,480	554	1,710	2,520
19	1,490	737	1,860	1,450	1,420	2,200	5,230	3,760	2,380	895	1,490	2,730
20	1,420	670	1,840	1,440	1,420	2,160	3,720	2,570	2,190	1,050	1,410	2,420
21	1,390	750	*1,820	1,420	1,440	2,120	2,730	2,050	2,780	1,160	242	1,490
22	1,330	574	1,790	*1,420	1,580	2,110	2,930	1,410	3,100	681	2,210	*1,540
23	1,320	544	1,770	1,410	1,870	2,090	2,830	1,280	*2,580	737	2,270	1,940
24	1,730	1,280	1,750	1,410	1,840	2,070	2,230	2,760	2,480	1,010	415	1,930
25	2,990	1,690	1,750	1,410	1,820	2,050	2,610	2,700	3,290	585	978	2,110
26	2,290	2,730	1,740	1,410	1,840	2,020	2,930	3,760	1,640	523	1,740	2,460
27	1,210	1,840	1,720	1,390	1,800	1,940	2,810	2,790	2,900	585	1,890	2,770
28	835	2,020	1,720	1,390	1,940	1,910	2,440	2,230	2,790	786	952	2,590
29	786	3,740	1,700	1,390	2,250	1,890	2,790	2,020	2,780	725	1,010	2,420
30	1,130	2,570	1,670	1,390	---------	1,870	2,730	1,020	2,880	544	795	2,270
31	1,110	-------	1,650	1,390	---------	1,930	-------	1,170	-------	418	184	---------
Total	41,466	35,211	52,821	46,210	44,960	67,980	74,111	135,440	60,754	22,645	35,642	53,849
Mean	1,338	1,174	1,704	1,491	1,550	2,193	2,470	4,369	2,025	730	1,150	1,795
(†)	+269	+1,279	-146	-772	-849	-1,683	+3,927	+161	-697	-317	-845	-1,064

Adjusted for change in reservoir contents

Mean	1,607	2,453	1,558	719	701	510	6,397	4,530	1,328	413	305	731
Cfsm	1.84	2.81	1.79	0.825	0.804	0.585	7.34	5.19	1.52	0.474	0.350	0.838
In.	2.12	3.14	2.06	0.95	0.87	0.67	8.19	5.98	1.70	0.55	0.40	0.94

	Observed			Adjusted		
Calendar year 1959:	Max 11,300	Min 134	Mean 1,439	Mean 1,597 Cfsm	1.83 In.	24.84
Water year 1959-60:	Max 9,110	Min 176	Mean 1,834	Mean 1,767 Cfsm	2.03 In.	27.57

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Flagstaff and Spencer Lakes.
Note.--Stage-discharge relation affected by ice Dec. 22 to Feb. 2. No gage-height record Dec. 12-21; discharge estimated on basis of weather records, recorded range in stage, and records for Dead River near Dead River.

460. Austin Stream at Bingham, Maine

Location.--Lat 45°03'55", long 69°52'55", on right bank at Bingham, Somerset County, three-quarters of a mile upstream from mouth.

Drainage area.--91.1 sq mi.

Records available.--October 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 350.14 ft above mean sea level, datum of 1929.

Average discharge.--29 years, 174 cfs.

Extremes.--Maximum discharge during year, 2,580 cfs Nov. 25 (gage height, 9.55 ft); minimum, 11 cfs Oct. 1.
1931-60: Maximum discharge, 5,820 cfs Sept. 17, 1932, Nov. 27, 1950; maximum gage height, 17.63 ft Mar. 13, 1936 (backwater from ice jam); minimum discharge, 1.6 cfs Sept. 30, Oct. 1, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions.--WSP 1171: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	291	624	81	52	84	302	721	140	73	400	20
2	15	310	446	81	49	81	394	*691	147	63	210	18
3	15	246	355	148	47	77	422	656	138	61	142	17
4	14	*197	306	290	45	76	535	598	126	111	100	16
5	13	183	272	225	44	73	921	604	140	102	77	15
6	14	194	245	172	43	71	1,040	581	164	85	81	14
7	27	426	291	148	57	68	881	521	126	69	73	14
8	199	481	302	124	79	67	728	449	94	57	63	14
9	218	364	394	110	104	65	570	429	75	52	*55	13
10	188	287	310	102	81	64	446	548	65	46	51	13
11	133	234	231	94	110	64	376	*542	59	46	45	13
12	98	216	186	91	340	63	351	581	53	164	39	25
13	65	231	355	87	720	63	385	800	48	405	33	500
14	51	216	417	84	655	61	417	1,330	44	992	28	250
15	37	503	326	81	385	60	451	941	42	668	25	150
16	33	513	272	77	265	58	728	621	67	313	23	100
17	27	390	231	74	200	57	1,010	474	69	196	21	80
18	27	330	*200	71	168	57	1,240	377	67	157	19	64
19	27	258	183	*68	142	57	1,320	297	61	147	18	50
20	24	216	162	67	124	57	1,010	238	67	194	21	45
21	24	180	136	64	110	57	783	202	*44	*161	33	45
22	22	172	122	50	102	56	808	174	39	120	36	*44
23	29	154	114	58	91	54	740	154	36	104	37	42
24	315	210	104	57	87	53	592	166	60	87	45	39
25	1,500	1,780	102	57	82	*52	673	251	585	75	37	36
26	*1,500	1,890	96	56	*81	52	764	225	464	63	31	30
27	735	905	91	54	87	52	777	184	241	59	28	27
28	426	1,180	87	54	89	52	697	147	149	61	25	27
29	.284	1,740	85	57	87	52	770	122	*102	61	23	27
30	212	*1,070	84	56	-------	52	764	106	79	72	22	32
31	192	-------	82	54	-------	119	-------	102	-------	485	21	-------
Total	6,476	15,366	7,211	2,902	4,526	1,974	20,895	13,832	3,591	5,349	1,862	1,780
Mean	209	512	233	93.6	156	63.7	696	446	120	173	60.1	59.3
Cfsm	2.29	5.62	2.56	1.03	1.71	0.699	7.64	4.90	1.32	1.90	0.660	0.651
In.	2.64	6.27	2.95	1.19	1.84	0.81	8.52	5.65	1.47	2.19	0.76	0.73

Calendar year 1959: Max 1,890 Min 7.9 Mean 190 Cfsm 2.09 In. 28.27
Water year 1959-60: Max 1,890 Min 12 Mean 234 Cfsm 2.57 In. 35.02

Peak discharge (base, 1,200 cfs).--Oct. 25 (10 p.m.) 2,000 cfs (9.12 ft); Nov. 25 (5 p.m.) 2,580 cfs (9.55 ft); Nov. 29 (12 to 1 a.m.) 1,950 cfs (9.08 ft); Apr. 19 (12 to 1 a.m.) 1,450 cfs (8.82 ft); May 14 (7 to 9 a.m.) 1,430 cfs (8.80 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 12 to Mar. 20, Mar. 22-30. No gage-height record Dec. 22 to Jan. 11, Aug. 9 to Sept. 21; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

465. Kennebec River at Bingham, Maine

Location.--Lat 45°03'05", long 69°53'15", on right bank at Bingham, Somerset County, 200 ft downstream from highway bridge, half a mile downstream from Austin Stream, and 1¾ miles downstream from Wyman Dam.

Drainage area.--2,710 sq mi, approximately.

Records available.--June 1907 to June 1910, October 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 330.2 ft above mean sea level, datum of 1929. June 1907 to June 1910, chain gage on highway bridge at different datum.

Average discharge.--32 years (1907-9, 1930-60), 4,300 cfs (unadjusted).

Extremes.--Maximum discharge during year, 27,900 cfs May 16 (gage height, 11.15 ft); minimum daily, 2,210 cfs Nov. 15.
1907-10, 1930-60: Maximum discharge, 58,800 cfs Mar. 20, 1936 (gage height, 14.44 ft), from rating curve extended above 30,000 cfs on basis of computations of flow at Wyman Dam plus inflow; minimum daily, 110 cfs Dec. 25, 1947.

Remarks.--Records excellent. Flow regulated by Moosehead Lake (see p. 55); Brassua, Flagstaff, and Spencer Lakes, Second Roach, First Roach, Indian, Moxie, and Wyman Ponds (see p. 55). Considerable diurnal fluctuation caused by powerplant above station.

Revisions (water years).--WSP 1271: 1951(M). WSP 1301: 1936(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Mar. 1, 2)

6.0	1,940	8.5	10,600
6.5	3,090	9.0	13,200
7.0	4,500	10.0	19,300
7.5	6,270	11.0	26,700
8.0	8,320		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,530	2,490	7,280	4,520	4,710	5,400	5,150	9,400	4,680	3,960	3,210	3,630
2	3,760	2,480	5,460	4,880	4,490	5,500	5,130	*17,700	4,500	3,660	3,310	3,660
3	3,840	2,540	4,380	4,820	4,620	5,550	5,070	13,200	4,840	2,840	3,490	3,570
4	2,770	2,840	3,780	4,760	4,720	5,500	5,480	13,400	3,800	3,010	3,560	3,570
5	4,110	*3,130	3,850	4,880	4,620	5,370	8,840	14,400	3,410	3,680	3,620	3,470
6	3,500	2,810	3,250	4,950	3,980	5,430	9,780	14,700	3,640	3,560	3,250	3,680
7	3,690	2,870	4,150	5,040	3,130	5,380	8,930	15,800	4,530	3,620	2,960	3,480
8	3,010	3,400	4,480	4,920	4,740	5,420	8,210	13,500	4,190	3,470	3,630	3,510
9	2,920	2,470	4,620	4,860	4,480	5,350	7,850	16,600	3,550	3,600	3,440	3,740
10	3,000	3,000	4,700	4,860	4,600	5,670	5,480	17,500	3,690	3,100	3,680	3,540
11	2,370	2,850	4,770	5,070	4,570	5,890	6,760	*19,100	3,520	3,730	3,620	3,510
12	3,560	3,100	4,190	5,310	4,840	5,650	7,360	17,300	3,100	3,810	3,740	3,600
13	3,550	3,350	3,640	5,020	5,070	5,520	7,110	17,300	3,620	3,540	3,480	4,570
14	3,460	3,140	4,690	5,100	4,730	5,900	6,430	20,500	3,560	3,480	3,150	3,000
15	3,510	2,210	4,800	4,980	5,090	5,760	6,390	19,600	3,380	3,280	3,870	3,040
16	3,640	2,530	4,720	4,110	4,980	5,630	7,290	20,000	3,600	3,260	3,540	3,270
17	3,640	2,940	5,080	3,590	5,020	5,750	7,160	17,700	3,790	3,080	3,790	3,740
18	2,880	2,780	4,850	4,420	5,020	5,660	12,100	15,300	3,900	3,550	3,690	3,550
19	3,820	2,820	4,280	4,540	5,200	5,720	14,000	11,500	4,370	3,500	3,850	3,240
20	3,840	3,000	3,240	4,770	5,040	5,700	11,300	8,900	5,080	3,650	3,120	3,670
21	3,620	2,950	4,560	4,700	5,160	5,750	9,320	7,020	4,580	3,530	3,210	*3,550
22	3,710	2,290	4,820	4,750	5,320	5,590	9,070	6,000	3,860	3,740	3,830	3,510
23	3,520	3,220	4,740	4,110	5,540	5,460	8,820	4,820	3,760	3,500	4,050	3,670
24	3,480	3,140	4,600	3,060	5,500	5,600	8,950	4,560	3,740	3,360	3,750	3,470
25	8,660	6,370	4,120	4,450	5,490	5,670	8,510	4,820	5,680	3,550	3,660	3,140
26	5,820	9,320	4,290	4,730	5,290	5,390	9,160	6,450	7,310	3,660	3,390	3,860
27	3,900	6,760	4,860	4,520	5,480	5,690	9,890	7,590	8,290	3,680	3,570	3,540
28	2,890	7,100	4,700	4,730	5,240	5,320	10,200	6,160	7,810	3,520	2,960	3,670
29	3,110	13,100	4,680	5,100	5,340	4,750	10,300	4,450	6,580	3,620	3,750	4,050
30	2,870	9,160	4,750	3,920	--------	4,800	10,400	4,550	5,840	3,490	3,590	4,210
31	2,810	--------	4,570	3,410	--------	5,020	--------	4,630	--------	2,580	3,790	--------
Total	112,790	120,160	140,900	142,880	142,010	170,790	250,440	374,450	136,200	107,610	109,550	107,710
Mean	3,638	4,005	4,545	4,609	4,897	5,509	8,348	12,080	4,540	3,471	3,534	3,590
(†)	-246	+3,816	+1,046	-2,210	-2,154	-4,019	+8,948	+1,817	-602	-1,785	-2,726	-1,903

Adjusted for change in reservoir contents

Mean	3,392	7,821	5,591	2,399	2,743	1,490	17,300	13,900	3,938	1,686	808	1,687
Cfsm	1.25	2.89	2.06	0.885	1.01	0.550	6.38	5.13	1.45	0.622	0.298	0.623
In.	1.44	3.22	2.38	1.02	1.09	0.63	7.12	5.91	1.62	0.72	0.34	0.70

	Observed			Adjusted			
Calendar year 1959:	Max 31,300	Min 2,040	Mean 4,428	Mean 4,761	Cfsm 1.76	In. 23.83	
Water year 1959-60:	Max 20,500	Min 2,210	Mean 5,234	Mean 5,216	Cfsm 1.92	In. 26.19	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Brassua, Moosehead, Flagstaff, and Spencer Lakes, Second Roach, First Roach, Indian, Moxie, and Wyman Ponds.

470. Carrabassett River near North Anson, Maine

Location.--Lat 44°52'00", long 69°57'10", on left bank 3 miles upstream from Mill Stream and North Anson, Somerset County.

Drainage area.--354 sq mi.

Records available.--November and December 1901, June 1902 to May 1907, August 1925 to September 1960. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 303.3 ft above mean sea level, datum of 1929. Nov. 1, 1901, to May 5, 1907, chain and rod gages 1 mile upstream at different datum.

Average discharge.--39 years (1902-6, 1925-60), 695 cfs.

Extremes.--Maximum discharge during year, 21,800 cfs Oct. 25 (gage height, 17.16 ft); minimum, 40 cfs Sept. 11 (gage height, 2.40 ft).
1902-7, 1925-60: Maximum discharge, 30,800 cfs Mar. 19, 1936 (gage height, 21.17 ft); minimum, 18 cfs Oct. 29, 1929 (gage height, 2.02 ft).

Remarks.--Records excellent except those for period of ice effect, which are fair. Some regulation at low flow by mills above station.

Revisions (water years).--WSP 851: Drainage area. WSP 1231: 1904-7, 1928(M), 1932(M), 1936(M), 1938(M), 1944(M), 1950(M).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.5	50	6.0	2,030
2.7	74	7.0	3,230
3.0	128	8.0	4,530
3.5	270	10.0	7,670
4.0	490	12.0	11,200
5.0	1,160	14.0	15,000

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	1,250	2,030	340	198	295	2,030	1,980	774	358	572	87
2	158	1,150	1,420	345	205	270	2,250	1,690	720	324	341	76
3	130	942	1,150	440	205	270	2,140	1,550	637	297	256	79
4	104	*795	1,030	1,160	200	270	2,840	1,470	600	506	204	58
5	99	774	874	760	200	265	5,590	1,540	583	402	174	57
6	137	817	860	620	205	250	7,670	1,530	643	312	182	65
7	330	1,530	1,210	545	310	245	6,070	1,450	522	263	174	68
8	1,190	1,540	2,010	480	405	245	2,590	1,380	435	229	*158	68
9	720	1,230	1,400	430	465	235	1,890	4,060	380	198	156	69
10	572	1,040	1,150	385	440	235	1,590	7,110	345	179	137	59
11	431	897	965	350	465	240	1,330	3,490	312	168	126	50
12	358	817	795	310	1,310	250	1,390	3,250	293	161	106	77
13	300	838	1,400	295	1,550	250	1,830	4,050	260	450	101	2,760
14	256	795	1,620	280	1,250	240	2,030	7,020	235	375	92	1,200
15	223	1,410	1,200	270	965	235	2,420	3,910	232	278	85	740
16	213	1,290	1,100	*265	760	230	4,200	2,780	830	216	77	522
17	196	1,170	973	265	620	240	4,520	2,010	594	182	80	393
18	190	1,190	*874	250	525	270	5,820	1,510	501	171	79	270
19	207	973	781	240	480	300	5,370	1,270	470	174	80	266
20	190	824	700	235	430	300	3,300	934	371	274	74	238
21	179	733	630	230	395	*305	2,570	824	316	226	114	*242
22	171	668	570	220	360	280	*2,870	680	270	171	118	232
23	176	637	515	215	335	270	2,420	618	238	154	120	204
24	3,300	700	480	210	315	265	1,990	965	274	146	140	184
25	14,100	5,870	440	205	310	235	2,440	4,140	*1,790	133	130	168
26	5,260	5,520	405	200	300	220	2,570	1,930	1,160	122	116	156
27	3,020	2,730	395	198	*310	235	2,330	1,290	720	116	103	144
28	1,990	4,290	375	200	310	230	2,000	989	522	120	95	140
29	1,320	5,750	360	205	315	215	2,220	795	412	126	88	140
30	860	2,960	350	205	-------	235	2,050	680	349	190	82	154
31	706	-------	345	200	-------	440	-------	606	-------	1,150	80	-------
Total	37,210	51,130	28,407	10,553	14,138	8,065	90,330	67,501	15,788	8,171	4,440	8,966
Mean	1,200	1,704	916	340	488	260	3,011	2,177	526	264	143	299
Cfsm	3.39	4.81	2.59	0.960	1.38	0.734	8.51	6.15	1.49	0.746	0.404	0.845
In.	3.91	5.37	2.99	1.11	1.49	0.84	9.50	7.09	1.66	0.86	0.47	0.94

Calendar year 1959: Max 14,100 Min 62 Mean 794 Cfsm 2.24 In. 30.47
Water year 1959-60: Max 14,100 Min 50 Mean 942 Cfsm 2.66 In. 36.23

Peak discharge (base, 6,000 cfs).--Oct. 25 (5:30 a.m.) 21,800 cfs (17.16 ft); Nov. 25 (8:30 p.m.) 10,300 cfs (11.48 ft); Apr. 6 (1 a.m.) about 9,000 cfs; Apr. 19 (2 a.m.) 7,010 cfs (9.59 ft); May 10 (9 a.m.) 9,970 cfs (11.32 ft); May 14 (9 a.m.) 8,760 cfs (10.64 ft); Sept. 13 (11 a.m.) 7,080 cfs (9.63 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21 to Apr. 8.

480. Sandy River near Mercer, Maine

Location.--Lat 44°42'30", long 69°56'25", on right bank 0.9 mile upstream from Bog Stream, 3 miles north of Mercer, Somerset County, and 9½ miles upstream from mouth.

Drainage area.--514 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 197.1 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 935 cfs.

Extremes.--Maximum discharge during year, 20,100 cfs Oct. 25 (gage height, 12.38 ft); minimum, 50 cfs Sept. 7, 8 (gage height, 2.41 ft).
1928-60: Maximum discharge, 38,600 cfs Mar. 19, 1936 (gage height, 16.75 ft), from rating curve extended above 12,000 cfs on basis of records for stations on Kennebec River at Bingham and Waterville, Carrabassett River near North Anson, and Sebasticook River near Pittsfield; minimum, 32 cfs Sept. 22-26, 1939 (gage height, 2.15 ft).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 756: 1933. WSP 801: Drainage area. WSP 1231: 1936(M).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	49	5.0	1,650
2.7	92	6.0	3,100
3.0	160	7.0	5,180
3.5	358	8.0	7,550
4.0	671	10.0	13,100
4.5	1,100	12.0	19,000

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	2,520	2,750	585	355	455	*2,850	2,130	1,210	412	855	70
2	241	2,140	2,240	565	365	440	4,730	1,930	1,150	407	447	70
3	314	*1,580	1,980	670	360	435	4,950	1,720	1,040	375	319	68
4	249	1,330	1,820	1,530	325	430	4,950	1,650	955	2,510	257	66
5	190	1,280	1,650	1,260	320	425	7,550	1,760	928	1,100	211	61
6	204	1,240	1,530	1,100	320	420	10,600	1,670	1,680	695	194	57
7	535	2,050	2,130	1,000	440	410	6,260	1,510	928	572	208	54
8	1,690	2,820	3,520	910	600	405	4,800	1,340	703	513	*197	51
9	1,490	1,870	2,090	830	615	400	3,830	5,470	613	441	181	57
10	1,000	1,530	1,700	765	530	395	3,240	9,380	539	369	172	57
11	758	1,360	1,420	735	530	395	2,960	5,010	482	309	163	55
12	606	1,240	1,200	670	*1,770	390	3,450	4,470	447	300	150	76
13	539	1,300	1,100	605	2,460	385	4,730	6,080	407	278	137	2,600
14	482	1,190	1,770	590	1,840	380	4,770	10,700	*363	314	132	1,440
15	429	2,030	*1,650	530	1,340	375	4,160	5,820	348	329	120	687
16	353	2,030	1,690	520	1,100	370	6,690	4,550	1,290	269	122	435
17	338	1,700	1,530	470	955	395	6,470	3,280	1,130	225	113	309
18	343	1,950	1,360	*430	845	425	7,090	2,540	710	253	113	249
19	390	1,450	1,170	410	775	470	6,690	2,160	703	222	107	208
20	380	1,310	1,000	405	735	565	4,440	1,750	539	287	107	*184
21	343	1,140	815	390	705	565	3,410	1,450	447	334	107	181
22	334	1,060	765	375	670	*545	*3,690	1,240	380	261	122	181
23	353	991	750	370	620	530	3,470	1,130	329	218	134	172
24	2,370	1,140	720	365	565	520	2,830	1,450	358	190	118	155
25	16,300	6,850	685	360	525	480	3,190	7,360	1,970	175	109	139
26	7,140	7,830	670	360	490	455	3,570	4,200	1,630	155	102	127
27	3,730	3,190	665	355	475	440	2,950	2,370	870	147	96	116
28	2,610	4,120	615	350	500	490	2,610	1,730	621	144	90	113
29	1,870	8,730	605	345	470	545	2,580	1,400	489	144	79	116
30	1,550	4,100	600	340	-------	605	2,340	1,160	412	166	72	132
31	1,480	-------	600	340	-------	910	-------	1,000	-------	915	67	-------
Total	48,736	73,071	42,790	18,530	21,600	14,450	135,850	99,410	23,671	13,029	5,401	8,286
Mean	1,572	2,436	1,380	598	745	466	4,528	3,207	789	420	174	276
Cfsm	3.06	4.74	2.68	1.16	1.45	0.907	8.81	6.24	1.54	0.817	0.339	0.537
In.	3.53	5.29	3.09	1.34	1.56	1.05	9.83	7.19	1.72	0.94	0.39	0.60

Calendar year 1959: Max 16,300 Min 113 Mean 1,176 Cfsm 2.29 In. 31.06
Water year 1959-60: Max 16,300 Min 51 Mean 1,379 Cfsm 2.68 In. 36.53

Peak discharge (base, 6,000 cfs).--Oct. 25 (2 p.m.) 20,100 cfs (12.38 ft); Nov. 26 (2 a.m.) 11,200 cfs (9.33 ft); Nov. 29 (6 a.m.) 11,200 cfs (9.32 ft); Apr. 6 (4 a.m.) 12,200 cfs (9.64 ft); Apr. 18 (8 a.m.) 7,900 cfs (8.14 ft); May 10 (3 p.m.) 10,100 cfs (8.97 ft); May 14 (2 p.m.) 12,100 cfs (9.67 ft); May 25 (5 p.m.) 8,780 cfs (8.48 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 19 to Apr. 5. No gage-height record Dec. 11-15; discharge estimated on basis of recorded range in stage and weather records.

490. Sebasticook River near Pittsfield, Maine

Location.--Lat 44°42'55", long 69°24'55", on right bank $1\frac{3}{4}$ miles upstream from Twentyfive-mile Stream and 4 miles south of Pittsfield, Somerset County.

Drainage area.--579 sq mi.

Records available.--October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 133.9 ft above mean sea level, datum of 1929.

Average discharge.--31 years (1929-60), 935 cfs.

Extremes.--Maximum discharge during year, 8,450 cfs Apr. 8 (gage height, 9.82 ft); minimum daily, 8.1 cfs Oct. 3.
1928-60: Maximum discharge, 14,400 cfs Mar. 22, 1936 (gage height, 13.18 ft); minimum, 2.9 cfs Dec. 30, 1941 (gage height, 0.40 ft); minimum daily, 4.5 cfs Nov. 10, 1956.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Considerable diurnal fluctuation caused by powerplants above station. Flow partly regulated by powerplants above station and by Great Moose and Sebasticook Lakes and Plymouth Pond (combined capacity, about 2,345,000,000 cu ft).

Revisions.--WSP 1271: Drainage area.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	6.9	2.5	284
1.0	14	3.0	524
1.2	25	3.5	874
1.4	42	4.0	1,340
1.6	65	6.0	3,400
1.8	95	8.0	5,900
2.0	134	10.0	8,700

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	290	2,070	a5,600	890	735	670	1,550	1,690	670	540	275	120
2	128	2,210	a5,200	590	560	620	2,100	1,570	695	375	265	220
3	8.1	*2,100	a4,800	842	510	620	2,680	1,390	675	421	225	8.8
4	8.8	2,110	4,070	1,500	500	565	3,830	1,310	649	635	230	9.4
5	310	2,170	3,520	1,650	475	360	4,980	1,110	677	545	220	158
6	180	2,120	3,070	1,740	100	502	6,860	934	959	545	16	108
7	215	1,940	2,750	1,720	359	660	7,860	764	1,210	530	10[illegible]	106
8	325	2,030	2,650	1,580	660	520	8,360	764	1,310	455	270	98
9	530	2,200	2,600	1,510	530	505	8,150	795	1,200	330	192	130
10	188	2,090	2,500	b1,440	550	495	7,590	755	1,060	333	163	9.7
11	342	1,920	2,370	b1,400	575	480	6,920	874	900	490	*173	10
12	575	1,700	2,090	1,210	810	245	6,280	1,130	756	405	19[illegible]	225
13	450	1,530	2,430	1,010	959	416	5,910	1,340	610	295	14	220
14	305	1,200	3,010	905	1,330	630	5,730	1,810	74	325	24	235
15	305	1,430	3,290	845	1,660	465	5,500	2,180	425	230	205	194
16	270	1,690	*3,310	560	1,620	475	5,280	2,440	725	17	180	225
17	28	1,710	3,100	719	1,550	480	5,200	2,520	690	190	173	11
18	203	1,870	2,870	755	1,450	505	5,200	2,410	642	345	172	106
19	530	1,920	2,520	730	1,370	360	5,160	2,220	636	280	146	275
20	275	1,850	2,290	690	1,110	530	5,080	1,990	635	280	9.7	245
21	425	1,610	2,150	655	1,160	695	4,890	1,620	580	*260	13	240
22	425	1,600	1,860	620	1,180	615	4,580	1,250	530	260	196	235
23	340	1,570	1,630	490	945	540	4,240	995	475	118	182	215
24	11	1,510	1,420	530	845	610	3,960	916	440	208	184	158
25	570	2,110	1,260	820	780	650	3,700	*1,050	284	305	182	110
26	1,630	3,050	959	600	740	530	3,370	1,140	397	255	174	270
27	2,080	3,760	977	b500	580	642	*3,040	1,100	600	225	8.8	225
28	2,340	a4,400	1,120	420	705	785	2,650	959	580	230	8.8	134
29	2,400	a4,800	965	440	820	670	2,340	826	590	225	200	168
30	2,300	a5,400	755	210	-------	680	1,950	715	565	14	134	220
31	2,090	-------	985	518	-------	925	-------	650	-------	49	122	-------
Total	20,076.9	67,670	78,121	28,089	25,168	17,445	144,740	41,217	20,239	9,711	4,666.3	4,688.9
Mean	648	2,256	2,520	906	868	563	4,825	1,330	675	313	151	156
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 8,240 Min 4.6 Mean 1,090 Cfsm - In. -
Water year 1959-60: Max 8,360 Min 8.1 Mean 1,262 Cfsm - In. -

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

495. Cobbosseecontee Stream at Gardiner, Maine

Location.--Lat 44°13'15", long 69°47'25", at dam of Gardiner Water Power Co., in Gardiner, Kennebec County, 1.2 miles upstream from mouth.

Drainage area.--217 sq mi.

Records available.--June 1890 to September 1960.

Gage.--Staff gage in pond above dam and in tailrace of powerplant. Datum of gage is about at mean sea level.

Average discharge.--70 years, 335 cfs.

Extremes.--Maximum daily discharge during year, 2,900 cfs Apr. 6; minimum daily, 10 cfs July 3-8.
1890-1960: Maximum discharge, 5,020 cfs Mar. 21, 1936 (elevation, 139.4 ft above mean sea level); maximum daily, 4,320 cfs Mar. 20, 21, 1936; minimum, leakage only, when all gates in dam are closed.

Remarks.--Discharge is sum of flow over dam, through gates and water wheels (computed on basis of coefficients and experiments), and leakage. Flow regulated by Cobbosseecontee Lake (surface area, 8.5 sq mi) and several other lakes above station.

Cooperation.--Records of daily discharge furnished by S. D. Warren Co.

Revisions (water years).--WSP 541: 1916-20. WSP 1201: Drainage area. WSP 1231: 1910-15. Revised figures of discharge, in cubic feet per second, for the water years 1956-59, superseding those published in WSP 1431, 1501, 1551, and 1621, are given herein.

Discharge, in cubic feet per second, water year October 1955 to September 1956

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	180	180	200	290	370	300	775	230	97	230	230
2	180	180	180	185	240	365	300	775	230	97	230	230
3	180	180	180	180	230	365	300	790	230	96	230	230
4	180	180	180	180	230	365	300	795	230	95	230	230
5	180	180	180	180	230	350	325	805	230	95	230	230
6	180	180	180	180	230	335	420	815	230	95	230	230
7	180	180	180	180	230	330	445	795	230	195	230	230
8	180	180	180	180	230	330	445	765	230	230	230	230
9	180	180	180	180	230	330	1,060	750	230	230	230	230
10	180	180	180	180	230	310	1,270	510	230	230	230	230
11	180	180	180	180	230	300	1,270	430	230	230	230	230
12	180	180	180	180	230	305	1,270	425	230	230	230	230
13	180	180	180	175	230	305	1,450	320	230	230	230	230
14	180	180	180	685	230	305	2,070	290	230	230	230	230
15	180	180	180	860	230	305	2,250	290	230	230	230	230
16	180	180	180	860	230	305	2,370	290	230	230	230	230
17	180	180	180	860	230	305	2,410	260	230	230	230	230
18	180	180	200	860	230	285	2,410	250	230	230	230	230
19	180	180	200	785	230	280	2,410	250	230	230	230	230
20	180	180	200	715	230	295	2,410	250	230	230	230	230
21	180	180	200	700	230	305	2,290	235	230	230	230	230
22	180	180	200	675	230	305	2,210	230	230	230	230	230
23	180	180	200	670	230	305	2,160	230	230	230	230	230
24	180	180	105	500	230	305	2,080	230	230	230	230	230
25	180	180	175	415	360	305	1,990	230	230	230	230	230
26	180	180	200	430	405	305	1,900	230	230	230	230	230
27	180	180	200	435	390	305	1,820	230	230	230	230	230
28	180	180	200	425	385	300	1,740	230	230	230	230	230
29	180	180	200	425	385	300	1,720	230	230	230	230	230
30	180	180	200	410	-------	300	1,000	230	130	230	230	230
31	180	-------	200	370	-------	300	-------	230	-------	230	230	-------
Total	5,580	5,400	5,740	13,435	7,515	9,775	44,395	13,165	6,800	6,290	7,130	6,900
Mean	180	180	185	433	259	315	1,480	425	227	203	230	230
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1955: Max 895 Min 10 Mean 300 Cfsm - In. -
Water year 1955-56: Max 2,410 Min 95 Mean 361 Cfsm - In. -

495. Cobbosseecontee Stream at Gardiner, Maine--Continued

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	210	210	260	270	260	230	230	230	125	190	150
2	230	210	210	260	270	260	230	230	230	125	190	170
3	230	210	210	260	270	260	230	230	230	125	190	180
4	230	210	210	260	270	260	230	230	230	125	190	180
5	230	210	210	260	270	250	230	230	230	125	190	180
6	230	210	210	260	270	250	230	230	230	90	190	180
7	230	210	210	260	270	250	230	230	230	170	190	180
8	230	210	210	260	270	250	230	230	230	200	190	180
9	230	210	210	260	270	250	230	230	230	200	190	180
10	230	210	210	260	270	250	230	230	230	200	190	180
11	230	210	210	260	270	250	230	230	230	200	190	180
12	230	210	210	260	270	250	230	230	230	200	190	180
13	230	210	210	260	270	250	230	230	230	200	190	180
14	230	210	210	260	270	250	230	230	230	200	185	180
15	230	210	210	260	270	250	230	230	230	200	180	180
16	230	210	210	260	270	250	230	230	230	200	180	180
17	230	210	210	260	270	250	230	230	230	200	180	180
18	230	210	210	260	270	240	230	230	230	200	180	180
19	230	210	210	260	270	240	230	230	230	195	180	180
20	230	210	210	260	270	240	230	230	230	190	180	180
21	230	210	210	260	270	240	230	230	230	190	180	180
22	230	210	210	260	270	240	230	230	230	190	180	180
23	230	210	210	275	265	240	230	230	230	190	180	180
24	230	210	210	270	260	240	230	230	230	190	180	180
25	230	210	210	270	260	240	230	230	230	190	180	180
26	230	210	210	270	260	240	230	230	230	190	180	180
27	230	210	210	270	260	240	230	230	230	190	180	180
28	230	210	260	270	260	235	230	230	230	190	180	180
29	215	210	260	270	-	230	230	230	150	190	180	180
30	210	210	260	270	--------	230	230	230	125	190	180	180
31	210	--------	260	270	--------	230	--------	230	--------	190	180	--------
Total	7,075	6,300	6,710	8,155	7,505	7,615	6,900	7,130	6,715	5,560	5,715	5,360
Mean	228	210	216	263	268	246	230	230	224	179	184	179
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1956: Max 2,410 Min 95 Mean 370 Cfsm - In. -
Water year 1956-57: Max 275 Min 90 Mean 221 Cfsm - In. -

Discharge, in cubic feet per second, water year October 1957 to September 1958

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	180	180	180	1,290	725	1,280	1,800	270	110	190	135
2	180	180	180	180	730	725	1,280	1,770	270	110	190	205
3	170	180	180	180	690	725	1,280	1,700	270	110	190	230
4	170	180	180	180	775	705	1,280	1,620	270	110	190	230
5	170	180	180	180	775	695	1,300	1,510	270	110	190	230
6	170	180	180	180	740	695	1,330	1,450	270	200	190	230
7	170	180	180	180	405	675	1,400	1,390	270	200	190	230
8	170	180	180	180	645	665	1,430	1,440	270	190	190	230
9	170	180	180	180	785	665	1,430	1,540	270	190	190	230
10	170	180	180	180	770	665	1,430	1,490	270	175	190	230
11	170	180	180	180	760	710	1,430	1,460	270	180	190	230
12	170	180	180	180	735	750	1,430	1,440	270	185	190	230
13	170	180	180	180	725	760	1,430	1,410	270	190	190	230
14	170	180	180	180	405	760	1,430	1,350	270	190	190	230
15	170	180	180	180	620	760	1,980	825	270	190	190	230
16	170	180	180	180	725	760	2,130	655	255	190	190	230
17	170	180	180	180	725	735	2,000	430	260	190	190	230
18	170	180	180	180	725	705	1,850	305	250	190	190	230
19	170	180	180	180	705	695	1,710	290	250	190	190	230
20	180	180	180	180	675	695	1,140	290	250	190	190	230
21	180	180	180	180	665	695	955	290	250	190	190	230
22	180	180	180	180	665	695	955	290	250	190	205	230
23	180	180	180	180	665	695	1,110	290	250	190	210	230
24	180	180	180	180	650	720	1,680	290	235	190	220	230
25	180	180	180	180	685	725	1,860	290	230	190	220	230
26	180	180	180	1,420	695	750	1,860	290	230	190	220	230
27	180	180	180	2,140	695	785	1,830	290	230	190	220	230
28	180	180	180	2,210	720	790	1,800	290	160	190	220	230
29	180	180	180	2,080	-	1,250	1,800	275	115	190	225	230
30	180	180	180	1,870	--------	1,350	1,800	150	115	190	160	245
31	180	--------	180	1,760	--------	1,290	--------	230	--------	190	135	--------
Total	5,410	5,400	5,580	15,980	19,845	24,015	45,620	27,140	7,370	5,480	6,025	6,795
Mean	175	180	180	515	709	775	1,521	875	246	177	194	227
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1957: Max 275 Min 90 Mean 211 Cfsm - In. -
Water year 1957-58: Max 2,210 Min 110 Mean 479 Cfsm - In.

495. Cobbosseecontee Stream at Gardiner, Maine--Continued

Discharge, in cubic feet per second, water year October 1958 to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	250	250	250	270	270	220	310	310	240	240	240	240
2	250	250	250	270	270	270	380	310	240	240	240	240
3	250	250	250	270	270	270	1,440	310	70	240	240	240
4	250	250	250	270	270	270	1,790	295	10	240	240	240
5	250	250	250	270	270	270	1,790	290	180	240	240	240
6	250	250	70	270	270	270	1,790	290	240	240	240	165
7	250	250	190	270	270	175	1,790	290	240	240	240	140
8	250	250	250	270	270	240	1,790	290	240	240	240	215
9	250	250	250	270	270	270	1,790	290	240	240	240	240
10	250	250	250	270	270	270	1,790	290	240	240	240	250
11	250	250	250	270	270	270	1,790	290	240	240	240	250
12	250	250	250	270	270	270	1,790	290	240	240	240	250
13	250	250	250	270	270	270	1,710	290	240	240	240	250
14	250	250	250	270	170	180	1,640	290	240	240	240	250
15	250	70	250	270	235	240	1,560	290	240	240	240	250
16	250	190	250	270	270	270	1,490	290	240	240	240	250
17	250	250	250	75	270	270	1,360	270	240	240	240	250
18	155	250	250	10	270	270	1,200	260	240	240	240	250
19	220	250	250	205	270	270	1,150	260	240	240	240	220
20	250	250	250	270	270	270	525	260	240	240	240	210
21	250	250	265	270	170	270	310	260	240	240	240	210
22	250	250	270	270	235	270	310	260	240	240	240	210
23	250	250	270	270	270	270	310	260	240	240	240	210
24	250	250	270	270	270	300	310	260	240	240	240	210
25	165	250	75	270	270	310	310	260	240	240	240	210
26	210	70	205	270	270	310	310	260	240	240	240	210
27	250	190	270	270	270	310	310	260	240	240	240	210
28	250	250	270	270	170	310	310	250	240	240	240	225
29	250	250	270	270	-	310	310	240	240	240	240	230
30	250	250	270	270	-------	310	310	160	240	240	240	230
31	250	-------	270	270	-------	310	-------	210	-------	240	240	-------
Total	7,500	7,020	7,465	7,850	7,190	8,385	31,975	8,435	6,740	7,440	7,440	6,795
Mean	242	234	241	253	257	270	1,066	272	225	240	240	226
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1958: Max 2,210 Min 70 Mean 494 Cfsm - In. -
Water year 1958-59: Max 1,790 Min 10 Mean 313 Cfsm - In. -

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	230	310	1,060	310	1,130	930	310	385	270	210	230
2	230	230	250	1,060	310	1,220	1,940	310	270	75	210	230
3	230	230	230	1,110	310	920	2,270	310	270	10	210	230
4	230	230	230	1,120	310	830	2,270	310	270	10	210	155
5	230	230	230	1,120	310	790	2,740	310	270	10	210	205
6	230	230	230	1,080	310	770	2,900	280	270	10	210	230
7	230	230	290	1,060	310	760	2,660	270	270	10	210	230
8	230	230	310	500	310	760	2,500	270	270	10	210	230
9	230	230	310	310	310	760	2,380	270	270	175	210	230
10	230	230	310	310	310	755	2,310	270	270	230	210	230
11	230	230	310	310	310	755	2,330	270	270	230	210	230
12	230	230	1,140	310	995	755	2,410	1,000	270	230	210	230
13	230	230	1,510	310	1,780	755	2,400	1,260	270	235	210	230
14	230	230	1,520	310	1,960	645	2,390	2,020	270	240	210	230
15	230	230	1,510	310	1,910	605	2,350	2,270	270	220	210	230
16	230	230	1,530	310	1,840	605	2,230	2,270	270	210	210	230
17	230	230	1,540	310	1,040	605	2,090	2,250	270	210	210	230
18	230	230	1,540	310	545	605	1,990	2,170	270	210	220	230
19	230	230	1,540	310	475	605	1,570	2,120	270	210	220	230
20	230	230	1,520	310	475	605	1,470	1,920	270	210	220	230
21	230	230	1,510	310	500	605	1,170	1,840	270	210	220	245
22	230	230	1,480	310	510	605	1,130	1,740	270	210	220	250
23	230	230	1,470	310	520	605	1,090	1,630	270	210	220	250
24	230	230	1,440	310	540	605	1,070	1,240	270	210	225	250
25	230	290	1,790	310	560	605	1,070	1,160	270	210	230	250
26	230	310	1,520	310	640	605	1,060	1,170	270	210	230	250
27	230	310	1,380	310	640	605	1,060	1,130	270	210	230	250
28	230	310	1,380	310	630	605	980	865	270	210	230	250
29	230	310	1,360	310	630	605	835	765	270	210	230	250
30	230	310	1,270	310	-------	605	435	725	270	210	230	250
31	230	-------	1,110	310	-------	825	-------	715	-------	210	230	-------
Total	7,130	7,360	32,070	15,240	19,600	22,110	54,030	33,440	8,215	5,325	6,725	6,995
Mean	230	245	1,035	492	676	713	1,801	1,079	274	172	217	233
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 1,790 Min 10 Mean 380 Cfsm - In. -
Water year 1959-60: Max 2,900 Min 10 Mean 596 Cfsm - In. -

Reservoirs in Kennebec River basin

385. Brassua Lake on Moose River, 4 miles southwest of Rockwood, Maine, completed in 1928, for power, has usable capacity of 8,560,000,000 cu ft between elevations 1,043.0 and 1,073.0 ft. Elevation record furnished by Kennebec Water Power Co.

395. Second Roach Pond on Roach River, 6 miles east of Kokadjo, Maine, used for power, has usable capacity of 216,000,000 cu ft between gage heights 0.5 and 10.0 ft. Gage-height record furnished by Kennebec Water Power Co.

400. First Roach Pond on Roach River, at Kokadjo, Maine, used for power, has usable capacity of 938,000,000 cu ft between gage heights 1.5 and 8.0 ft. Gage-height record furnished by Kennebec Water Power Co.

405. Moosehead Lake on Kennebec River (see p. 42).

415. Indian Pond on Kennebec River, 13 miles downstream from East Outlet of Moosehead Lake, Maine, completed in 1954 for power, has capacity of 830,000,000 cu ft in normal operating range between elevations 950.0 and 955.0 ft (total capacity of pond 3,150,000,000 cu ft below elevation 955.0 ft). Elevation record furnished by Central Maine Power Co.

420. Moxie Pond on Moxie Stream, 4½ miles east of The Forks, Maine, used for power, has usable capacity of 640,000,000 cu ft between gage heights 6.0 and 14.0 ft. Gage-height record furnished by Kennebec Water Power Co.

430. Flagstaff Lake on Dead River, three-quarters of a mile upstream from Black Brook, Maine, in T.3, R.4, completed in 1950 for power, has usable capacity of 12,050,000,000 cu ft between elevations 1,110 and 1,146 ft. Elevation record furnished by Kennebec Water Power Co.

445. Spencer Lake on Little Spencer Stream, Maine, 4 miles upstream from mouth, in T.3, R.5, used for power, has usable capacity of 639,000,000 cu ft between gage heights 3.5 and 12.0 ft. Gage-height record furnished by Kennebec Water Power Co.

455. Wyman Pond on Kennebec River, 1½ miles upstream from Bingham, Maine, completed in 1930 for power, has capacity of 2,630,000,000 cu ft in normal operating range between elevations 465.0 and 485.0 ft (total capacity of pond, 9,080,000,000 cu ft below elevation 485.0 ft). Elevation record furnished by Central Maine Power Co.

Month-end contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Brassua Lake	Second Roach Pond	First Roach Pond	Indian Pond	Moxie Pond	Flagstaff Lake	Spencer Lake	Wyman Pond
Sept.30, 1959	4,631	0	316	3,132	116	6,444	604	8,980
Oct. 31	4,971	11	131	3,060	332	7,086	683	8,980
Nov. 30	5,040	22	329	3,060	685	10,842	241	9,040
Dec. 31	6,457	0	0	2,988	359	10,692	0	8,920
Jan. 31, 1960	4,331	0	0	3,114	60	8,625	0	8,980
Feb. 29	3,441	0	0	2,885	60	6,498	0	8,790
Mar. 31	1,211	0	0	2,902	42	1,991	0	9,020
Apr. 30	7,349	180	801	2,851	290	11,531	639	9,050
May 31	8,980	185	856	3,186	694	12,131	471	8,990
June 30	9,023	155	760	3,258	721	10,284	511	9,060
July 31	8,318	142	870	3,186	658	9,640	307	8,900
Aug. 31	6,840	147	870	3,222	613	7,464	220	8,870
Sept.30	5,715	142	678	3,078	130	4,705	220	9,060

Note.--Wyman Pond contents at 12 p.m. on day shown. All others at 7 a.m. on first day of following month.

525. Diamond River near Wentworth Location, N. H.

Location.--Lat 44°52'40", long 71°03'25", on left bank 0.7 mile upstream from mouth and 1½ miles north of Wentworth Location, Coos County.

Drainage area.--153 sq mi.

Records available.--July 1941 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,275 ft (from topographic map).

Average discharge.--19 years, 346 cfs.

Extremes.--Maximum discharge during year, 5,640 cfs Apr. 18 (gage height, 9.01 ft); minimum, 13 cfs about Sept. 11 (gage height, 1.13 ft).
1941-60: Maximum discharge, 8,630 cfs June 16, 1943 (gage height, 10.66 ft), from rating curve extended above 3,900 cfs; minimum, 6.8 cfs Aug. 27, 28, 1949, Sept. 1, 1952 (gage height, 0.81 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
1.8	64	4.0	705	1.1	12	3.0	345
2.0	89	5.0	1,270	1.3	21	4.0	754
2.5	185	6.0	2,010	1.6	43	5.0	1,310
3.0	320			2.0	91	6.0	2,030
				2.5	188	8.0	4,180

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	658	698	128	49	91	1,430	1,460	169	164	144	21
2	190	689	552	162	49	91	1,270	1,280	162	155	88	20
3	128	508	476	275	48	91	883	1,020	169	136	*76	19
4	92	415	434	755	47	91	1,110	1,240	144	125	71	18
5	75	590	378	455	53	91	1,790	1,340	129	111	66	17
6	280	764	349	355	57	90	1,460	1,180	420	132	61	16
7	1,600	1,100	397	290	56	88	894	1,010	302	108	58	15
8	1,870	680	552	255	54	87	658	878	169	102	55	15
9	840	496	*378	230	53	87	544	936	131	91	52	14
10	515	404	313	240	52	85	461	1,410	*111	77	50	14
11	362	349	253	210	53	85	386	899	92	65	48	13
12	385	338	199	178	440	85	434	694	81	63	46	500
13	342	331	423	156	755	85	552	721	72	530	45	1,200
14	255	615	427	*134	455	83	536	1,110	63	325	43	600
15	212	1,170	266	122	230	81	1,100	1,120	300	162	42	275
16	185	645	240	112	174	*78	2,130	1,560	925	106	41	200
17	173	492	210	98	*132	78	2,610	883	349	84	40	160
18	260	434	188	91	122	77	4,180	662	316	77	40	140
19	247	371	166	78	116	76	*4,120	536	289	230	39	130
20	*202	302	150	74	110	74	1,820	446	186	360	39	180
21	266	299	140	68	112	73	1,290	382	162	162	45	260
22	209	278	138	64	112	72	1,760	327	131	111	66	200
23	285	260	136	60	106	70	1,610	282	106	111	73	160
24	1,490	282	132	54	97	68	1,810	311	112	98	54	130
25	3,840	1,350	128	53	96	70	2,290	504	1,570	81	43	110
26	1,550	1,160	124	52	96	65	2,050	345	955	67	37	100
27	*868	602	122	51	94	68	1,560	235	469	60	33	93
28	658	2,430	122	49	94	67	1,320	193	295	63	29	87
29	496	2,610	122	49	91	65	1,550	169	212	56	26	82
30	397	1,020	122	48	-------	77	1,490	232	188	68	24	78
31	389	-------	122	48	-------	345	-------	166	-------	272	23	-------
Total	18,802	21,642	8,457	4,994	4,003	2,734	45,098	23,551	8,779	4,352	1,597	4,867
Mean	607	721	273	161	138	88.2	1,503	760	293	140	51.5	162
Cfsm	3.97	4.71	1.78	1.05	0.902	0.576	9.82	4.97	1.92	0.915	0.337	1.06
In.	4.58	5.26	2.05	1.21	0.97	0.66	10.96	5.73	2.14	1.05	0.39	1.18

Calendar year 1959: Max 3,840 Min 26 Mean 388 Cfsm 2.54 In. 34.41
Water year 1959-60: Max 4,180 Min 13 Mean 407 Cfsm 2.66 In. 36.18

Peak discharge (base, 3,600 cfs).--Oct. 25 (time unknown) about 4,400 cfs; Nov. 28 (5 p.m.) 3,940 cfs (7.81 ft); Apr. 18 (9:30 p.m.) 5,640 cfs (9.01 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 16-20, Dec. 22 to Apr. 1, Apr. 5. No gage-height record Oct. 7, 8, 25, Aug. 4 to Sept. 30; discharge estimated on basis of recorded range in stage, weather records, and records for nearby stations.

535. Androscoggin River at Errol, N. H.

Location.--Lat 44°46'55", long 71°07'45", on right bank 0.4 mile downstream from Errol Dam, 0.4 mile northeast of Errol, Coos County, and 0.6 mile upstream from Clear Stream.

Drainage area.--1,045 sq mi.

Records available.--January 1905 to September 1960. Monthly discharge only for October 1922 to November 1943, published in WSP 1301. Prior to 1922, published as "at Errol Dam."

Gage.--Water-stage recorder. Datum of gage is 1,227.30 ft above mean sea level, datum of 1929. Prior to Dec. 8, 1943, movable rod gage at Errol Dam at datum 5.0 ft higher.

Average discharge.--55 years, 1,890 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 9,230 cfs May 14 (gage height, 6.90 ft); minimum daily, 420 cfs Oct. 25.
1905-60: Maximum daily discharge, 15,700 cfs June 18, 1943; minimum daily, leakage only at various times when gates in dam were closed.
Instantaneous maximum not available prior to Dec. 9, 1943.

Remarks.--Records excellent. Flow regulated by Kennebago, Rangeley, Mooselookmegumtic, Richardson, Umbagog, and Aziscohos Lakes (see p. 65).

Cooperation.--Records prior to Dec. 9, 1943, furnished by Union Water Power Co.

Revisions.--WSP 1001: Drainage area.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

0.7	345	3.0	2,420
1.0	485	4.0	3,860
1.5	786	5.0	5,390
2.0	1,200	7.0	9,450
2.5	1,760		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	1,470	2,480	2,760	2,970	2,920	1,040	2,060	2,270	1,630	1,840	1,930
2	1,680	1,220	2,670	2,770	2,970	2,950	1,440	2,080	2,190	1,580	1,920	1,920
3	1,750	1,490	3,050	2,600	2,970	3,010	1,830	1,890	2,180	1,550	*1,930	1,880
4	1,750	1,730	3,270	2,500	2,970	3,020	2,430	2,180	2,100	1,470	1,930	1,890
5	1,790	1,810	2,700	2,530	2,980	3,010	2,820	2,580	2,060	1,570	1,890	1,860
6	1,700	1,810	2,160	2,570	2,990	3,010	3,050	3,070	2,120	1,580	1,790	1,860
7	1,490	1,400	2,210	2,570	2,970	3,010	3,080	3,350	2,200	1,630	1,810	1,860
8	1,160	1,500	2,130	2,600	2,970	2,980	3,020	3,350	2,220	1,640	1,900	1,890
9	1,170	1,710	1,980	2,660	2,950	2,980	2,880	3,550	2,150	1,680	1,920	1,880
10	1,420	1,790	1,990	2,670	2,970	2,980	2,700	5,530	*2,060	1,810	1,930	1,860
11	1,570	1,930	2,170	2,660	2,880	2,970	2,520	7,810	2,020	1,930	1,940	1,860
12	1,570	1,930	2,350	2,700	2,710	2,980	2,360	8,700	1,980	1,910	1,960	1,590
13	1,620	1,880	2,850	2,730	2,740	2,970	2,240	8,750	1,990	1,890	1,960	735
14	1,640	1,820	2,870	2,760	2,770	2,950	2,190	9,190	1,880	1,880	1,960	1,490
15	1,750	1,530	2,870	2,740	2,780	2,970	2,150	9,120	1,420	1,850	1,960	1,530
16	1,770	1,190	2,840	2,740	2,810	2,980	2,450	9,120	1,010	1,860	1,970	1,600
17	1,750	1,490	2,830	2,760	2,830	3,010	2,850	8,740	1,620	1,850	1,970	1,680
18	1,700	2,310	2,800	2,770	2,760	2,990	3,260	7,330	1,560	1,840	1,980	1,700
19	1,670	1,800	2,780	2,780	2,780	2,940	*4,030	5,720	1,400	1,760	2,010	1,710
20	1,700	1,920	2,780	2,780	2,780	2,910	4,660	4,340	1,580	1,670	2,010	1,750
21	1,730	1,940	2,830	2,800	2,760	2,900	4,260	2,990	1,590	1,790	2,010	1,730
22	1,760	1,920	2,880	2,810	2,760	2,900	3,980	2,480	1,620	1,820	1,980	1,760
23	1,680	1,940	2,900	2,830	2,830	2,870	3,940	2,240	1,660	1,840	1,920	1,730
24	960	1,970	2,880	2,830	2,920	2,840	3,760	2,240	1,610	1,860	1,900	1,750
25	420	1,290	2,870	2,830	2,880	2,770	3,600	2,130	860	1,940	1,930	1,790
26	2,130	940	2,800	2,810	2,850	2,700	3,070	2,060	990	1,970	1,940	1,750
27	2,720	1,370	2,760	2,810	2,840	2,620	2,770	2,080	1,480	1,920	1,940	1,760
28	1,470	1,430	2,730	2,800	2,850	2,550	2,090	2,150	1,580	1,890	1,960	1,760
29	1,500	3,730	2,730	2,850	2,880	2,520	1,890	2,230	1,620	1,890	1,970	1,800
30	1,580	3,840	2,730	2,910	---------	2,440	1,980	2,000	1,660	1,850	1,970	1,790
31	1,770	--------	2,740	2,940	--------	1,770	--------	2,310	--------	1,720	1,940	--------
Total	50,070	54,100	82,630	84,870	83,120	88,420	84,340	133,370	52,680	55,070	60,120	52,095
Mean	1,615	1,803	2,665	2,738	2,866	2,852	2,811	4,302	1,756	1,776	1,939	1,736
(†)	+1,701	+2,301	-450	-1,710	-2,091	-2,593	+5,890	+1,202	-57	-1,119	-1,807	-986

Adjusted for change in reservoir contents

Mean	3,316	4,104	2,215	1,028	775	259	8,701	5,504	1,699	657	132	750
Cfsm	3.17	3.93	2.12	0.984	0.742	0.248	8.33	5.27	1.63	0.629	0.126	0.718
In.	3.66	4.38	2.44	1.13	0.80	0.29	9.29	6.08	1.82	0.73	0.15	0.80

	Observed			Adjusted		
Calendar year 1959:	Max 7,440	Min 375	Mean 1,998	Mean 2,334 Cfsm 2.23 In		30.32
Water year 1959-60:	Max 9,190	Min 420	Mean 2,407	Mean 2,423 Cfsm 2.32 In.		31.57

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Kennebago, Rangeley, Mooselookmegumtic, Richardson, Umbagog, and Aziscohos Lakes.

540. Androscoggin River near Gorham, N. H.

Location.--Lat 44°26'30", long 71°11'15", on right bank at Pulsifer Rips, 2 miles downstream from Dead River and 4 miles upstream from Gorham, Coos County.

Drainage area.--1,363 sq mi.

Records available.--October 1913 to September 1960. Monthly discharge only for October 1922 to February 1929, published in WSP 1301. Published as "at Berlin" prior to October 1928.

Gage.--Water-stage recorder since Mar. 16, 1929. Datum of gage is 832.88 ft above mean sea level, datum of 1929. Prior to Sept. 30, 1922, staff gages showing head and tailwater elevations at site 3 miles upstream at different datum.

Average discharge.--47 years, 2,453 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 11,200 cfs May 16 (gage height, 8.03 ft); minimum daily, 1,780 cfs July 9.
1913-60: Maximum daily discharge, 20,000 cfs June 18, 1917, Apr. 30, 1923; minimum (since 1929), 456 cfs Aug. 10, 1947 (gage height, 1.74 ft), from rating curve extended below 1,400 cfs; minimum daily, 795 cfs Mar. 15, 1948.

Remarks.--Records excellent. Flow regulated by powerplants above station and by Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, and Aziscohos Lakes (see p. 65).

Revisions.--WSP 1001: Drainage area.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

3.0	1,300	6.0	6,000
4.0	2,460	7.0	8,430
5.0	4,050	8.0	11,100

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,940	2,680	4,610	3,020	3,290	3,210	3,680	3,340	2,610	1,990	1,990	1,950
2	1,940	2,360	3,600	3,050	3,310	3,230	3,440	3,260	2,610	1,880	1,990	1,940
3	1,930	2,100	3,600	3,260	3,290	3,290	3,690	3,090	2,490	1,820	*1,990	1,940
4	1,890	2,230	4,050	3,490	3,280	3,340	4,270	2,850	2,390	2,150	1,980	1,840
5	1,890	2,220	3,760	3,410	3,330	3,330	6,570	3,290	2,290	1,930	1,980	1,940
6	2,060	2,310	3,170	3,250	3,360	3,330	6,450	3,680	2,260	1,930	1,980	1,920
7	2,220	2,700	3,090	3,230	3,370	3,290	5,380	4,120	2,330	1,820	1,920	1,890
8	2,850	2,280	3,880	3,120	3,290	3,310	4,720	4,230	2,350	1,820	1,950	1,890
9	2,270	2,220	*2,990	2,960	3,310	3,290	4,250	4,340	2,270	1,730	1,940	1,900
10	1,940	2,200	2,820	2,990	3,290	3,260	3,850	5,580	*2,180	1,820	1,950	1,890
11	1,880	2,180	2,820	3,050	3,410	3,250	3,500	7,250	2,140	1,910	1,940	1,890
12	1,950	2,310	2,840	2,990	3,530	3,230	3,550	8,740	2,070	1,990	1,950	2,070
13	1,920	2,270	3,550	3,090	3,520	3,250	3,830	9,450	2,020	1,960	1,950	4,080
14	1,920	2,230	3,950	3,120	3,420	3,230	3,910	10,500	2,050	2,040	1,940	2,360
15	1,920	2,780	3,580	*3,090	3,340	3,250	4,540	10,400	2,120	2,020	1,950	2,270
16	1,950	2,460	3,570	3,100	3,260	3,260	6,400	11,000	2,670	1,960	1,960	1,980
17	1,980	2,040	3,500	3,050	3,330	3,280	7,300	10,300	2,070	1,880	1,950	1,870
18	2,020	2,230	3,360	3,090	*3,230	3,280	9,220	9,190	2,320	1,960	1,990	1,920
19	2,010	2,220	3,340	3,120	3,210	3,250	9,270	7,740	2,020	2,070	1,990	1,890
20	*1,930	2,200	3,230	3,130	3,210	3,210	7,700	6,090	1,820	2,150	2,050	1,890
21	1,940	2,280	3,090	3,170	3,200	3,170	6,740	4,320	1,900	1,960	2,060	1,940
22	1,960	2,230	3,120	3,180	3,150	3,120	6,620	3,370	1,840	1,960	2,060	1,930
23	1,980	2,190	3,170	3,180	3,150	3,130	6,500	2,860	1,830	1,980	2,060	1,930
24	4,570	2,320	3,170	3,180	3,250	3,100	6,430	2,850	1,930	1,990	1,990	1,890
25	7,100	3,420	3,200	3,180	3,250	3,050	6,520	3,660	2,920	2,040	1,950	1,890
26	3,630	3,570	3,250	3,180	3,230	2,940	6,400	3,070	2,140	2,090	1,950	1,920
27	4,160	2,520	3,100	3,170	3,230	2,900	*5,260	2,780	1,920	2,100	1,960	1,870
28	3,250	3,900	3,090	3,170	3,200	2,840	4,480	2,610	1,930	2,060	1,940	1,860
29	2,260	6,400	3,070	3,170	3,210	2,780	3,580	2,610	1,830	2,050	1,960	1,860
30	2,010	6,220	3,090	3,230	---	2,840	3,390	2,550	1,920	2,020	2,000	1,930
31	2,190	---	3,090	3,280	---	3,210	---	2,390	---	2,100	1,980	---
Total	75,460	81,270	103,750	97,700	95,450	98,450	161,440	161,510	65,240	61,370	61,250	60,340
Mean	2,434	2,709	3,347	3,152	3,291	3,176	5,381	5,210	2,175	1,980	1,976	2,011
(†)	+1,701	+2,301	-450	-1,710	-2,091	-2,593	+5,890	+1,202	-57	-1,119	-1,807	-986
Adjusted for change in reservoir contents												
Mean	4,135	5,010	2,897	1,442	1,200	583	11,270	6,412	2,118	861	169	1,025
Cfsm	3.03	3.68	2.13	1.06	0.880	0.428	8.27	4.70	1.55	0.632	0.124	0.752
In.	3.49	4.11	2.46	1.22	0.95	0.49	9.23	5.42	1.73	0.73	0.14	0.84

	Observed			Adjusted		
Calendar year 1959:	Max 8,330	Min 1,700	Mean 2,555	Mean 2,891	Cfsm 2.12	In. 28.81
Water year 1959-60:	Max 11,000	Min 1,780	Mean 3,069	Mean 3,085	Cfsm 2.26	In. 30.81

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, and Aziscohos Lakes.

545. Androscoggin River at Rumford, Maine

Location.--Lat 44°32'45", long 70°32'35", on left bank at upper powerplant of Rumford Falls Power Co., 0.8 mile upstream from Swift River, at Rumford, Oxford County.

Drainage area.--2,067 sq mi.

Records available.--May 1892 to September 1960. Monthly discharge only for October 1903 to September 1904, published in WSP 1301.

Gage.--Gages in pond above dam and in tailrace of upper plant. Prior to Aug. 1, 1937, gages in pond and tailrace of middle plant.

Average discharge.--68 years, 3,691 cfs (adjusted for storage).

Extremes.--Maximum daily discharge during year, 41,700 cfs Oct. 25; minimum daily, 1,800 cfs Sept. 4.
1892-1960: Maximum discharge, 74,000 cfs Mar. 20, 1936; minimum daily, 625 cfs Mar. 27, 1911.

Remarks.--Discharge computed from flow over upper dam and through wheels. Flow regulated by Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, and Aziscohos Lakes (see p. 65).

Cooperation.--Records furnished by Rumford Falls Power Co.

Revisions.--WSP 1001: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,160	6,160	10,100	3,480	3,640	3,410	10,500	6,940	3,500	2,760	3,100	2,060
2	2,270	5,810	7,510	3,590	3,610	3,310	9,510	7,270	3,730	2,560	2,490	2,060
3	2,160	4,760	6,480	4,610	3,570	3,510	8,270	5,880	3,620	2,650	2,370	2,080
4	2,110	4,420	6,990	6,550	3,540	3,600	10,500	6,290	3,460	3,630	2,230	1,800
5	2,000	4,530	7,140	5,490	3,600	3,630	19,800	6,670	3,410	3,400	2,240	2,060
6	2,470	4,660	6,250	4,630	3,620	3,690	15,600	6,950	3,190	2,710	2,370	2,320
7	3,870	8,570	7,930	4,350	3,570	3,620	11,100	7,180	3,020	2,540	2,230	1,840
8	4,970	6,940	10,200	4,070	3,750	3,580	8,840	7,450	3,020	2,360	2,230	1,970
9	4,290	5,210	8,180	3,810	3,640	3,560	7,610	13,300	2,900	2,300	2,230	1,950
10	3,160	4,480	6,960	3,540	3,640	3,510	6,790	19,500	2,820	2,220	2,240	1,960
11	2,850	4,040	4,720	3,400	4,310	3,450	6,280	15,500	2,800	2,260	2,180	1,990
12	2,620	4,030	5,490	3,610	7,030	3,460	6,880	16,100	2,660	2,320	2,210	5,190
13	2,700	4,150	8,800	3,650	5,400	3,540	8,600	20,100	2,590	2,430	2,160	15,500
14	2,430	4,580	10,500	3,730	4,850	3,550	8,690	25,800	2,560	2,360	2,180	6,570
15	2,250	8,610	8,540	3,780	4,510	3,550	11,900	20,800	3,380	2,360	2,180	3,800
16	2,190	6,360	7,170	3,750	4,080	3,580	15,800	20,800	6,220	2,300	2,180	3,210
17	2,240	4,900	6,140	3,680	4,040	3,600	17,500	17,700	3,990	2,210	2,190	2,650
18	2,260	4,800	5,960	3,590	3,940	3,620	21,900	14,500	3,450	2,370	2,120	2,170
19	2,340	4,220	5,560	3,570	3,760	3,620	20,400	12,100	3,260	2,390	2,180	2,400
20	2,250	3,830	5,350	3,550	3,620	3,590	14,500	9,830	2,800	2,710	2,180	2,400
21	2,180	3,730	3,630	3,540	3,650	3,640	11,900	7,600	2,480	2,380	2,240	2,660
22	2,220	3,270	4,120	3,530	3,620	3,470	12,400	5,790	2,500	2,230	2,260	2,460
23	2,370	3,280	3,210	3,530	3,610	3,650	12,200	4,670	2,320	2,190	2,510	2,410
24	23,600	3,940	3,560	3,840	3,590	3,530	11,600	7,050	2,480	2,190	2,350	2,280
25	41,700	16,600	4,150	3,660	3,630	3,430	12,700	14,500	4,140	2,160	2,090	2,230
26	16,900	15,000	4,600	3,530	3,620	3,220	12,700	8,740	4,160	2,220	2,100	2,250
27	9,820	8,670	4,370	3,480	3,610	3,310	10,400	6,110	2,800	2,220	2,080	2,160
28	7,360	19,100	4,070	3,520	3,560	3,240	9,160	4,150	2,570	2,280	2,090	2,190
29	4,920	21,900	3,580	3,530	3,620	3,230	8,160	4,050	2,420	2,200	2,100	2,160
30	4,070	14,700	3,860	3,490	-------	3,540	7,130	3,740	2,560	2,560	2,120	2,240
31	4,300	-------	3,890	3,690	-------	6,580	-------	3,520	-------	4,830	2,110	-------
Total	173,030	215,050	189,010	119,770	114,230	111,820	349,320	330,580	94,810	78,300	69,610	89,020
Mean	5,582	7,168	6,097	3,864	3,939	3,607	11,640	10,660	3,160	2,526	2,245	2,967
(†)	+1,701	+2,301	-450	-1,710	-2,091	-2,593	+5,890	+1,202	-57	-1,119	-1,807	-986

Adjusted for change in reservoir contents

Mean	7,283	9,469	5,647	2,154	1,848	1,014	17,530	11,860	3,103	1,407	438	1,981
Cfsm	3.52	4.58	2.73	1.04	0.894	0.491	8.48	5.74	1.50	0.681	0.212	0.958
In.	4.06	5.11	3.15	1.20	0.96	0.57	9.46	6.62	1.67	0.79	0.24	1.07

	Observed			Adjusted		
Calendar year 1959:	Max 41,700	Min 1,850	Mean 4,318	Mean 4,654	Cfsm 2.25	In. 30.56
Water year 1959-60:	Max 41,700	Min 1,800	Mean 5,286	Mean 5,302	Cfsm 2.57	In. 34.90

† Change in contents, equivalent in cubic feet per second, in Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, and Aziscohos Lakes.

550. Swift River near Roxbury, Maine

Location.--Lat 44°38'30", long 70°35'15", on left bank 2½ miles downstream from Roxbury, Oxford County, and 6 miles upstream from mouth.

Drainage area.--95.8 sq mi.

Records available.--June 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 615.67 ft above mean sea level, datum of 1929.

Average discharge.--31 years, 198 cfs.

Extremes.--Maximum discharge during year, 16,800 cfs Oct. 24 (gage height, 12.87 ft), from rating curve extended above 7,000 cfs; minimum, 7.8 cfs Sept. 10, 11 (gage height, 1.10 ft).
1929-60: Maximum discharge, that of Oct. 24, 1959; minimum, 3.8 cfs Sept. 16, 17, 1948 (gage height, 0.93 ft).

Remarks.--Records excellent except those for period of ice effect, which are fair.

Revisions (water years).--WSP 801: 1934(m). WSP 1031: Drainage area. WSP 1301: 1937-38(M), 1942(M).

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24

1.5	43	3.5	680
1.7	69	4.0	1,010
2.0	124	5.0	1,810
2.5	255	6.0	2,890
3.0	437	8.0	5,800

Oct. 25 to Sept. 30

1.1	7.8	1.6	49
1.2	12	2.0	124
1.4	27		

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	454	394	102	51	72	500	648	193	94	108	12
2	100	330	323	100	51	70	470	526	193	91	59	12
3	63	252	285	168	49	68	420	494	168	144	38	9.5
4	51	214	262	440	49	68	625	642	152	290	*32	9.9
5	43	242	233	335	49	68	1,940	675	128	137	30	11
6	164	252	223	270	48	68	1,040	595	120	104	56	11
7	320	690	535	215	48	68	531	517	100	83	39	9.1
8	494	414	517	170	47	68	406	498	85	68	33	8.6
9	268	312	309	152	45	68	342	1,990	83	54	33	8.2
10	199	265	255	138	45	66	298	2,670	74	45	27	7.8
11	145	226	214	124	76	66	288	925	66	41	26	8.2
12	159	226	190	112	690	66	336	850	63	39	23	635
13	139	233	360	104	575	66	441	1,200	51	45	20	1,340
14	108	223	255	94	305	64	441	1,790	47	44	19	255
15	93	680	*200	*87	225	64	935	930	182	39	18	128
16	86	379	178	85	160	64	1,260	855	480	31	19	85
17	83	320	166	81	130	63	1,600	536	170	27	18	59
18	150	306	150	79	*116	63	1,900	414	188	29	15	49
19	124	236	146	72	110	61	1,380	338	145	60	13	45
20	99	202	140	70	100	61	703	275	106	102	27	*44
21	97	190	132	66	96	59	631	226	*87	49	36	56
22	88	173	126	66	91	59	856	193	68	32	29	48
23	154	168	124	64	87	59	631	180	59	31	37	39
24	5,250	260	122	61	83	59	664	475	118	26	26	36
25	3,990	2,100	120	59	81	58	1,070	*1,550	720	22	20	35
26	940	925	116	56	79	58	905	517	258	20	17	31
27	*512	437	114	54	77	58	*686	323	143	21	14	29
28	356	2,040	112	54	76	*58	720	242	102	33	12	28
29	272	1,290	110	51	74	61	776	193	83	26	12	30
30	233	546	106	51	-------	70	709	168	91	60	*13	49
31	275	-------	104	51	-------	325	-------	159	-------	375	15	-------
Total	15,145	14,585	6,621	3,631	3,713	2,246	23,506	21,594	4,523	2,263	884	3,128.3
Mean	489	486	214	117	128	72.5	784	697	151	73.0	28.5	104
Cfsm	5.10	5.07	2.23	1.22	1.34	0.757	8.18	7.28	1.58	0.762	0.297	1.09
In.	5.88	5.66	2.57	1.41	1.44	0.87	9.13	8.39	1.76	0.88	0.34	1.22

Calendar year 1959: Max 5,250 Min 12 Mean 245 Cfsm 2.56 In. 34.70
Water year 1959-60: Max 5,250 Min 7.8 Mean 278 Cfsm 2.90 In. 39.55

Peak discharge (base, 2,400 cfs).--Oct. 24 (10:30 p.m.) 16,800 cfs (12.87 ft); Nov. 25 (3 p.m.) 3,470 cfs (6.47 ft); Nov. 28 (6:30 p.m.) 4,340 cfs (7.09 ft); Apr. 5 (11 a.m.) 2,440 cfs (5.60 ft); Apr. 18 (9 p.m.) 2,910 cfs (6.02 ft); May 10 (3:30 a.m.) 5,150 cfs (7.61 ft); May 13 (11 p.m.) 3,120 cfs (6.19 ft); May 25 (6 a.m.) 2,560 cfs (5.71 ft); Sept. 12 (12 p.m.) 6,180 cfs (8.22 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13 to Apr. 4.

555. Nezinscot River at Turner Center, Maine

Location.--Lat 44°16'10", long 70°13'50", on left bank 500 ft upstream from upper highway bridge at Turner Center, Androscoggin County, and 3 miles upstream from mouth.

Drainage area.--171 sq mi.

Records available.--August 1941 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 276.29 ft above mean sea level, unadjusted.

Average discharge.--19 years, 306 cfs.

Extremes.--Maximum discharge during year, 4,090 cfs Apr. 6 (gage height, 6.21 ft); minimum, 18 cfs Sept. 11 (gage height, 0.98 ft).
1941-60: Maximum discharge, 13,900 cfs Mar. 27, 1953 (gage height, 11.18 ft); minimum, 5.6 cfs Aug. 29, 1956 (gage height, 0.72 ft).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	13	3.0	620
1.1	26	4.0	1,350
1.3	47	5.0	2,390
1.6	98	6.0	3,750
2.0	195	7.0	5,450
2.5	375		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	485	1,100	255	114	295	1,100	420	424	122	186	25
2	50	505	800	305	114	290	1,500	402	406	122	122	23
3	61	416	670	395	112	295	1,580	367	359	118	93	21
4	57	339	575	722	110	295	1,780	331	327	160	*73	20
5	49	307	515	728	112	280	2,960	299	311	195	60	22
6	71	292	465	662	140	265	*4,020	274	*406	158	58	21
7	140	440	565	576	285	265	3,160	250	402	131	57	20
8	260	710	1,000	465	425	260	2,140	265	295	114	52	20
9	250	614	565	400	420	260	1,610	1,120	239	96	57	20
10	195	490	440	295	400	255	1,300	2,240	204	82	57	20
11	152	398	390	*240	420	255	1,200	1,940	183	75	52	18
12	127	347	515	210	880	245	1,360	1,480	165	75	45	52
13	112	315	1,000	196	1,000	230	1,790	1,930	152	80	41	430
14	98	303	*865	182	810	*215	1,860	3,290	138	108	39	442
15	87	447	775	170	*730	215	1,670	2,610	164	102	40	250
16	78	495	632	166	620	210	1,820	1,800	605	82	80	160
17	73	460	530	156	555	225	1,780	1,350	560	70	80	122
18	71	555	460	142	500	240	1,600	1,010	375	65	58	102
19	71	480	411	140	470	250	1,440	831	288	68	43	*96
20	66	388	367	140	465	235	1,150	668	219	78	41	102
21	63	323	335	138	435	225	887	555	180	75	43	106
22	58	288	305	132	405	220	803	470	150	61	49	98
23	65	267	275	130	370	205	761	398	133	55	65	85
24	235	345	240	128	335	200	692	615	125	50	77	77
25	1,660	1,240	230	128	300	196	668	1,640	174	46	58	68
26	1,870	2,020	216	128	295	196	692	1,840	213	42	43	60
27	1,040	1,300	210	126	325	192	632	1,000	171	41	37	55
28	710	1,080	205	120	325	186	644	710	140	43	32	53
29	515	1,700	210	122	310	196	565	550	122	45	30	52
30	398	1,700	215	130	-------	242	480	447	116	61	27	58
31	347	-------	225	118	-------	500	-------	388	-------	194	25	-------
Total	9,066	19,049	15,306	7,943	11,782	7,638	43,644	31,490	7,746	2,814	1,820	2,698
Mean	292	635	494	256	406	246	1,455	1,016	258	90.8	58.7	89.9
Cfsm	1.71	3.71	2.89	1.50	2.37	1.44	8.51	5.94	1.51	0.531	0.343	0.526
In.	1.97	4.14	3.33	1.73	2.56	1.66	9.50	6.85	1.68	0.61	0.40	0.59

Calendar year 1959: Max 4,030 Min 22 Mean 318 Cfsm 1.86 In. 25.24
Water year 1959-60: Max 4,020 Min 18 Mean 440 Cfsm 2.57 In. 35.02

Peak discharge (base, 1,700 cfs).--Oct. 26 (1 a.m.) 2,230 cfs (4.87 ft); Nov. 26 (7 to 11 a.m.) 2,100 cfs (4.75 ft); Nov. 29 (7 a.m.) 1,820 cfs (4.50 ft); Apr. 6 (2 to 5 p.m.) 4,090 cfs (6.21 ft); Apr. 14 (6 a.m.) 1,930 cfs (4.60 ft); May 10 (4 to 6 p.m.) 2,370 cfs (4.98 ft); May 14 (1 to 2 p.m.) 3,510 cfs (5.84 ft); May 25 (9 to 10 p.m.) 1,850 cfs (4.53 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21-25, Dec. 27 to Jan. 3, Jan. 9 to Mar. 29. No gage-height record Nov. 30 to Dec. 14; discharge estimated on basis of recorded range in stage, weather records, and records for nearby stations.

570. Little Androscoggin River near South Paris, Maine

Location.--Lat 44°17'05", long 70°32'10", on right bank just upstream from Biscoe Falls, 4½ miles upstream from South Paris, Oxford County.

Drainage area.--76.2 sq mi.

Records available.--September 1913 to April 1924, October 1931 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 394.48 ft above mean sea level, datum of 1929. Prior to Apr. 30, 1924, chain gage at same site and datum.

Average discharge.--39 years (1913-23, 1931-60), 138 cfs.

Extremes.--Maximum discharge during year, 2,110 cfs Apr. 5 (gage height, 7.35 ft); minimum, 4.6 cfs Sept. 11 (gage height, 1.54 ft).
1913-24, 1931-60: Maximum discharge, 8,000 cfs Mar. 27, 1953 (gage height, 12.41 ft), from rating curve extended above 2,800 cfs, verified by computation of flow over dam at South Paris; minimum, 1 cfs Aug. 16, 1914, Feb. 22 to Mar. 5, 1920.

Remarks.--Records excellent. Occasional slight diurnal fluctuation at low and medium flow by sawmills and gristmills above station.

Revisions (water years).--WSP 726: Drainage area. WSP 1301: 1915-23(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.5	3.8	3.0	99
1.6	5.9	3.5	180
1.7	8.3	4.0	289
1.8	11	5.0	651
2.0	20	6.0	1,140
2.3	36	7.0	1,840
2.6	59		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	264	390	87	68	94	651	202	182	57	71	9.9
2	34	224	297	83	68	89	702	198	169	50	44	8.3
3	28	176	259	215	68	91	619	178	144	49	34	7.6
4	20	142	239	430	67	89	736	157	128	172	*28	7.3
5	18	144	216	289	67	89	1,590	139	180	108	24	7.3
6	47	139	206	216	71	87	1,640	123	475	73	26	7.1
7	110	465	315	186	116	85	841	115	235	57	23	6.6
8	153	471	*479	157	125	83	623	111	155	49	20	5.9
9	93	309	314	126	107	79	498	595	112	42	22	5.9
10	76	237	241	109	92	76	423	*1,010	91	34	22	5.5
11	61	198	206	106	172	75	423	592	79	36	22	4.8
12	64	182	182	97	615	76	517	529	69	67	20	425
13	57	170	359	91	434	75	732	755	63	42	16	615
14	49	172	434	93	303	74	758	1,320	55	61	11	259
15	42	327	392	88	250	72	754	745	118	51	13	142
16	39	276	237	92	204	73	1,030	655	445	39	22	86
17	35	250	210	86	174	76	950	441	237	32	18	61
18	34	300	188	80	153	82	895	323	163	23	14	48
19	32	224	172	79	136	86	*790	269	129	43	11	40
20	28	188	153	82	155	84	556	214	*97	60	11	*37
21	28	161	142	79	139	82	438	182	78	40	13	50
22	26	148	111	76	126	79	449	161	65	30	15	42
23	*34	140	99	75	122	78	408	148	53	26	77	35
24	410	184	92	72	113	77	363	250	49	24	51	31
25	1,680	1,140	86	72	104	75	405	719	107	20	30	28
26	736	1,080	92	72	107	76	387	479	88	20	24	25
27	376	517	89	69	115	72	339	284	64	18	22	23
28	237	655	87	68	109	72	336	210	51	22	18	23
29	176	1,240	94	75	99	77	274	165	40	22	14	24
30	140	619	99	75	-------	106	228	132	35	22	12	27
31	146	-------	95	70	-------	286	-------	129	-------	124	11	-------
Total	5,026	10,742	6,575	3,595	4,479	2,715	19,355	11,530	3,956	1,518	759	2,097.2
Mean	162	358	212	116	154	87.6	645	372	132	49.0	24.5	69.9
Cfsm	2.13	4.70	2.78	1.52	2.02	1.15	8.46	4.88	1.73	0.643	0.322	0.917
In.	2.46	5.24	3.20	1.75	2.18	1.33	9.44	5.63	1.93	0.74	0.37	1.02

Calendar year 1959: Max 1,680 Min 8.1 Mean 145 Cfsm 1.90 In. 25.88
Water year 1959-60: Max 1,680 Min 4.8 Mean 198 Cfsm 2.60 In. 35.29

Peak discharge (base, 1,000 cfs).--Oct. 25 (6:30 a.m.) 2,040 cfs (7.26 ft); Nov. 25 (9:30 a.m.) 1,590 cfs (6.66 ft); Nov. 29 (4:30 a.m.) 1,530 cfs (6.59 ft); Apr. 5 (11 p.m.) 2,110 cfs (7.35 ft); Apr. 16 (3 to 4 a.m.) 1,140 cfs (6.00 ft); May 10 (8:30 to 10:30 a.m.) 1,150 cfs (6.02 ft); May 14 (9:30 a.m.) 1,510 cfs (6.56 ft).

* Discharge measurement made on this day.

585. Little Androscoggin River near Auburn, Maine

Location.--Lat 44°03'50", long 70°16'25", on right bank just upstream from highway bridge at Littlefields, 3 miles southwest of Auburn, Androscoggin County, and 3.6 miles upstream from mouth.

Drainage area.--328 sq mi.

Records available.--October 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 215 ft (from topographic map).

Average discharge.--20 years, 559 cfs (adjusted).

Extremes.--Maximum discharge during year, 5,700 cfs Apr. 7 (gage height, 8.65 ft); minimum, daily, 48 cfs Aug. 21.
1940-60: Maximum discharge, 16,500 cfs Mar. 28, 1953 (gage height, 14.76 ft); minimum, 14 cfs Oct. 14, 22, 1949; minimum gage height, 1.07 ft Sept. 8, 1941.
Maximum discharge known, 16,800 cfs Mar. 20, 1936, at mouth of river.

Remarks.--Records excellent except those for period of ice effect, which are good. Flow regulated by Pennesseewassee and Thompson Lakes (see p. 65) and several powerplants above station.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	40	4.0	1,150
1.5	73	5.0	1,880
2.0	198	7.0	3,710
2.5	377	9.0	6,180
3.0	597		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	602	1,920	401	340	640	1,670	908	792	304	304	102
2	113	632	1,450	389	325	630	2,370	852	798	285	286	148
3	104	602	1,200	540	325	615	2,700	798	766	120	261	148
4	106	531	1,070	970	320	615	3,000	792	716	106	214	145
5	108	499	965	1,110	340	605	4,230	825	637	138	*167	143
6	118	481	903	1,080	415	595	*5,470	745	*745	220	156	138
7	148	583	1,020	970	550	595	5,350	678	897	254	151	135
8	220	814	1,190	830	645	595	4,060	680	750	247	156	135
9	300	886	1,280	725	650	595	3,130	1,360	612	224	138	132
10	289	858	1,110	555	645	585	2,610	1,880	540	208	138	128
11	244	766	954	*480	*685	575	2,360	2,180	578	250	143	125
12	214	693	852	455	1,030	559	2,400	2,290	531	346	135	225
13	186	632	1,090	440	1,140	554	2,660	2,830	485	304	87	455
14	170	592	*1,340	435	1,100	540	2,860	3,740	463	350	64	612
15	159	683	1,290	415	1,000	521	2,870	3,840	517	430	60	517
16	148	792	1,170	415	920	512	2,820	3,300	820	361	60	438
17	140	864	1,040	405	875	512	2,890	2,740	903	315	52	377
18	140	880	931	380	825	521	2,800	2,250	825	296	50	327
19	*135	820	830	375	770	583	2,480	1,910	703	282	49	*296
20	125	703	703	375	770	657	2,140	1,650	632	278	49	280
21	118	597	573	360	765	672	1,800	1,380	587	275	48	261
22	113	535	535	350	745	662	1,610	1,220	540	261	52	235
23	122	490	481	340	735	627	1,500	1,080	503	224	60	200
24	225	565	421	335	700	563	1,410	1,120	472	220	68	198
25	850	1,140	405	325	685	531	1,410	1,690	459	204	120	189
26	1,540	1,770	413	350	665	490	1,350	1,900	463	198	125	182
27	1,520	2,090	389	345	700	481	1,290	1,640	438	192	122	168
28	1,070	1,850	385	345	700	490	1,260	1,290	397	198	113	158
29	785	1,990	369	345	670	494	1,190	1,050	361	189	106	150
30	602	2,250	425	350	------	559	1,040	886	342	220	106	164
31	526	------	417	350	------	900	------	771	------	289	102	------
Total	10,727	27,190	27,121	15,540	20,035	18,073	74,730	50,275	18,275	7,768	3,742	6,911
Mean	346	906	875	501	691	583	2,491	1,622	609	251	121	230
(†)	-9	+43	+98	-7	-32	-59	+174	+52	-35	-46	-73	-33
Adjusted for change in reservoir contents												
Mean	337	949	973	494	659	524	2,665	1,674	574	205	48	197
Cfsm	1.03	2.89	2.97	1.51	2.01	1.60	8.12	5.10	1.75	0.625	0.146	0.601
In.	1.19	3.22	3.42	1.74	2.17	1.84	9.06	5.88	1.95	0.72	0.17	0.67

	Observed			Adjusted			
Calendar year 1959:	Max 4,840	Min 46	Mean 532	Mean 541	Cfsm 1.65	In. 22.40	
Water year 1959-60:	Max 5,470	Min 48	Mean 766	Mean 772	Cfsm 2.35	In. 32.03	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Pennesseewassee and Thompson Lakes.
Note.--Stage-discharge relation affected by ice Jan. 3 to Mar. 11.

590. Androscoggin River near Auburn, Maine

Location.--Lat 44°04'15", long 70°12'35", on right bank 1½ miles downstream from Little Androscoggin River and 2 miles downstream from north bridge between Auburn and Lewiston, Androscoggin County.
Drainage area.--3,257 sq mi.
Records available.--October 1928 to September 1960. Monthly discharge only for October 1928, published in WSP 1301.
Gage.--Water-stage recorder. Datum of gage is 109.18 ft above mean sea level, datum of 1929.
Average discharge.--32 years, 6,034 cfs (adjusted).
Extremes.--Maximum discharge during year, 51,500 cfs Oct. 26 (gage height, 14.94 ft); minimum daily, 500 cfs Oct. 4.
1928-60: Maximum discharge, 135,000 cfs Mar. 20, 1936 (gage height, 27.57 ft), from rating curve extended above 76,000 cfs on basis of slope-area measurement of peak flow and computation of flow over dams; minimum, 309 cfs Sept. 28, 1941 (gage height, 0.34 ft); minimum daily, 340 cfs Sept. 28, 1941.
Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Considerable diurnal fluctuation and some regulation caused by powerplants above station. Flow regulated by Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, Aziscohos, Pennesseewassee, and Thompson Lakes, and Gulf Island Pond (see p. 65).
Revisions (water years).--WSP 781: 1930, 1933-34. WSP 1301: 1932-36.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

0.7	500	6.0	11,100
1.0	695	8.0	18,900
1.5	1,100	10.0	28,700
2.0	1,650	12.0	38,400
3.0	3,240	14.0	47,200
4.0	5,350		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,230	8,600	17,000	5,400	5,000	6,480	11,200	11,300	7,090	4,550	5,750	3,260
2	3,160	9,270	15,100	5,100	5,140	6,960	18,600	10,900	6,740	4,130	5,170	3,170
3	1,540	8,800	12,200	6,000	5,270	5,950	18,600	10,400	7,250	2,800	4,450	1,190
4	500	7,310	10,800	8,000	5,460	6,270	18,800	8,980	7,330	3,530	4,400	545
5	3,390	6,870	10,200	10,000	5,520	5,580	30,100	9,220	6,500	4,670	*3,910	560
6	3,520	6,760	9,900	7,800	5,800	4,480	39,400	9,480	*6,880	5,020	1,860	3,670
7	4,450	7,800	10,100	7,000	6,030	5,650	31,900	9,380	7,090	4,450	615	3,480
8	4,870	12,800	13,800	6,600	5,380	5,920	24,200	9,530	6,600	4,300	3,620	3,110
9	5,500	10,700	13,800	6,200	6,160	6,500	19,900	15,600	5,480	2,810	3,840	2,680
10	4,940	8,410	10,800	6,200	5,990	5,930	16,800	*27,600	5,260	3,300	3,960	1,110
11	3,890	7,250	9,170	6,300	6,420	6,270	*15,200	27,100	4,630	3,750	3,880	585
12	4,110	7,110	7,980	6,420	8,040	4,920	15,500	23,900	3,220	4,280	3,570	3,400
13	4,200	6,700	8,920	5,830	12,200	4,350	17,300	27,200	5,030	4,080	1,290	11,000
14	4,200	6,250	6,500	5,770	10,300	5,470	19,800	30,000	5,000	4,010	585	16,900
15	4,150	7,350	10,000	5,740	9,130	6,160	19,000	31,500	5,050	4,130	3,500	8,520
16	4,130	11,500	10,600	5,870	8,500	6,120	24,800	31,800	6,070	3,310	3,730	5,440
17	2,000	9,200	9,980	6,490	7,760	6,130	27,600	29,400	9,750	1,260	3,750	3,700
18	600	9,250	9,150	5,770	7,490	6,000	29,600	24,400	7,010	3,670	3,660	3,500
19	3,480	8,950	8,080	5,560	7,640	4,850	32,100	20,800	6,160	4,090	3,100	*3,800
20	3,680	7,000	7,830	5,520	7,230	4,540	28,500	17,100	5,660	4,160	1,190	3,930
21	3,730	5,500	6,230	5,630	6,320	5,880	22,600	14,200	5,410	4,520	605	4,320
22	3,880	5,740	5,720	5,540	6,690	6,280	19,800	11,700	4,970	4,400	3,550	4,140
23	3,760	6,200	5,850	5,490	6,630	6,200	20,000	10,200	4,890	1,760	3,640	3,920
24	3,720	6,310	6,080	5,050	6,480	6,150	18,600	9,760	4,800	655	3,660	1,900
25	38,600	14,000	4,370	5,180	6,540	6,130	18,400	18,400	4,230	3,590	3,740	655
26	46,500	26,000	3,530	5,390	6,490	4,360	19,700	21,800	4,270	3,770	3,590	3,670
27	24,300	17,000	5,290	5,400	6,230	3,940	18,500	14,500	5,760	3,680	1,190	3,750
28	15,300	14,100	5,800	5,620	5,830	5,350	16,000	11,000	5,040	3,270	580	3,360
29	11,600	30,000	5,200	5,080	5,920	6,110	14,400	8,780	4,890	3,120	3,500	3,420
30	9,230	23,000	5,000	5,550	-------	5,970	*12,700	8,230	4,750	1,850	3,700	3,650
31	7,500	-------	5,300	4,090	-------	7,390	-------	7,850	-------	2,100	3,650	-------
Total	237,660	315,730	270,280	185,590	197,590	178,290	639,600	522,010	172,810	109,015	97,235	116,335
Mean	7,666	10,520	8,719	5,987	6,813	5,751	21,320	16,840	5,760	3,517	3,137	3,878
(†)	+1,786	+2,400	-358	-1,712	-2,111	-2,721	+6,147	+1,251	-172	-1,153	-2,036	-1,017

Adjusted for change in reservoir contents

Mean	9,452	12,920	8,361	4,275	4,702	3,030	27,470	18,090	5,588	2,364	1,011	2,861
Cfsm	2.90	3.97	2.57	1.31	1.44	0.930	8.43	5.55	1.72	0.726	0.338	0.878
In.	3.34	4.43	2.96	1.51	1.55	1.07	9.40	6.40	1.92	0.84	0.39	0.98

	Observed			Adjusted			
Calendar year 1959:	Max 46,500	Min 500	Mean 6,527	Mean 6,881	Cfsm 2.11	In. 28.66	
Water year 1959-60:	Max 46,500	Min 500	Mean 8,312	Mean 8,329	Cfsm 2.56	In. 34.79	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Kennebago, Rangeley, Mooselookmeguntic, Richardson, Umbagog, Aziscohos, Auburn, Pennesseewassee, and Thompson Lakes and Gulf Island Pond.
Note.--No gage-height record Nov. 25, 26, 29, 30, Dec. 28 to Jan. 11, Sept. 17-19; discharge estimated on basis of recorded range in stage and/or flow at Gulf Island powerhouse and Little Androscoggin River.

Reservoirs in Androscoggin River basin

500. Kennebago Lake on Kennebago River, at Kennebago, Maine, used for power, has usable capacity of 721,000,000 cu ft between elevations 1,773.0 and 1,780.5 ft above mean sea level, unadjusted. Gage-height record furnished by Union Water Power Co.

505. Rangeley Lake on Rangeley Stream, at Oquossoc, Maine, used for power and log driving, has usable capacity of 1,339,200,000 cu ft in top 4 ft of lake (top of flashboards). Gage-height record furnished by Union Water Power Co.

510. Mooselookmeguntic Lake at Upper Dam, in Richardson Township, Maine, used for power and log driving, has usable capacity of 8,370,000 cu ft between gage heights 8.3 and 20.5 ft. Gage-height record furnished by Union Water Power Co.

515. Upper and Lower Richardson Lakes on Rapid River, at Middle Dam, Maine, used for power and log driving, has usable capacity of 5,691,500,000 cu ft between gage heights 3.0 and 20.5 ft. Gage-height record furnished by Union Water Power Co.

520. Aziscohos Lake on Magalloway River, in Lincoln Township, 3 miles east of village of Wilsons Mills, Maine, completed in 1911 for power, has usable capacity of 9,593,000,000 cu ft between elevations 1,490.0 and 1,535.0 ft. Elevation record furnished by Union Water Power Co.

530. Umbagog Lake on Androscoggin River, at Errol Dam, three-quarters of a mile northeast of Errol, N. H., used for power and log driving, has usable capacity of 3,080,160,000 cu ft between gage heights 5.5 and 15.0 ft. Gage-height record furnished by Union Water Power Co.

560. Gulf Island Pond on Androscoggin River, 3 miles upstream from Lewiston, Maine, completed in 1928 for power, has capacity of 1,100,000,000 cu ft in top 10 ft of pond below elevation 262 ft. Elevation record furnished by Central Maine Power Co.

565. Lake Auburn on outlet stream to Androscoggin River, at East Auburn, Maine, used for storing water supply of Auburn and Lewiston, has usable capacity of 580,000,000 cu ft between elevations 254.7 and 260.7 ft. Elevation record furnished by Auburn Water District.

575. Pennesseewassee Lake on short outlet stream to Little Androscoggin River, at Norway, Maine, used for power, has usable capacity of 192,000,000 cu ft between gage heights 95.0 and 100.0 ft. Gage-height record furnished by Central Maine Power Co.

580. Thompson Lake on short outlet stream to Little Androscoggin River, at Oxford, Maine, used for power, has usable capacity of 950,000,000 cu ft between gage heights 95.0 and 100.0 ft. Gage-height record furnished by Robinson Manufacturing Co.

Month-end contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Kennebago Lake†	Rangeley Lake†	Mooselookmeguntic Lake†	Upper and Lower Richardson Lakes†	Aziscohos Lake†
Sept.30, 1959	335	920	4,334	3,252	6,772
Oct. 31	974	1,061	5,373	4,084	7,558
Nov. 30	974	1,198	8,082	5,162	9,500
Dec. 31	963	1,326	7,152	5,481	9,531
Jan. 31, 1960	848	1,061	5,941	4,639	7,746
Feb. 29	710	392	4,130	3,862	6,212
Mar. 31	513	154	1,499	2,321	4,560
Apr. 30	698	1,185	6,794	4,454	9,454
May 31	*698	1,339	8,190	5,557	9,748
June 30	*698	1,339	8,298	5,652	9,903
July 31	*698	1,306	7,724	5,350	8,605
Aug. 31	*698	1,196	6,367	3,862	6,576
Sept.30	*698	1,088	4,953	3,714	6,016

Date	Umbagog Lake†	Gulf Island Pond‡	Lake Auburn†	Pennesseewassee Lake††	Thompson Lake‡‡
Sept.30, 1959	1,884	2,213	364	93	1,533
Oct. 31	3,002	2,456	375	144	1,457
Nov. 30	3,100	2,468	508	85	1,628
Dec. 31	2,358	2,428	532	63	1,913
Jan. 31, 1960	1,996	2,455	520	63	1,894
Feb. 29	1,686	2,435	568	98	1,780
Mar. 31	1,000	2,276	544	130	1,590
Apr. 30	2,729	2,479	556	107	2,065
May 31	3,002	2,435	592	130	2,180
June 30	2,495	2,336	485	116	2,103
July 31	1,704	2,434	419	107	1,989
Aug. 31	1,848	2,080	353	102	1,799
Sept.30	1,524	2,107	331	93	1,723

* No gage readings available after Apr. 30. Flows adjusted on basis of no change in contents for remainder of year.
† Contents at 7 a.m. on first day of following month.
‡ Contents at 12 p.m.
†† Contents as of last day of month determined by interpolation.
‡‡ Contents at 8 a.m.

600. Royal River at Yarmouth, Maine

Location.--Lat 43°47'55", long 70°10'45", on right bank 150 ft upstream from lower highway bridge, in Yarmouth, Cumberland County.

Drainage area.--142 sq mi.

Records available.--October 1949 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

Average discharge.--11 years, 288 cfs.

Extremes.--Maximum discharge during year, 4,770 cfs Apr. 6 (gage height, 5.62 ft); minimum, 34 cfs Oct. 1 (gage height, 1.02 ft).
1949-60: Maximum discharge, 7,960 cfs Sept. 12, 1954 (gage height, 7.12 ft); minimum, 4.4 cfs Oct. 17, 18, 1952 (gage height, 0.71 ft); minimum gage height, 0.64 ft Aug. 23, 24, 1950.

Remarks.--Records excellent except those for periods with debris on control or of ice effect, which are fair. Some diurnal fluctuation at low flow caused by mill above station.

Rating table, water year 1959-60, except periods of ice effect or debris on control (gage height, in feet, and discharge, in cubic feet per second)

1.0	31	2.5	705
1.1	47	3.0	1,140
1.3	92	4.0	2,290
1.6	196	5.0	3,740
2.0	385	6.0	5,500

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	290	492	156	92	192	2,010	276	262	85	*114	47
2	62	343	391	156	90	156	2,340	290	254	82	73	47
3	75	267	349	415	85	152	2,230	272	231	82	64	45
4	55	209	333	1,120	82	140	2,630	240	222	92	60	44
5	45	188	314	860	90	134	4,060	218	200	90	62	45
6	44	180	290	570	106	130	4,460	200	240	80	53	45
7	62	300	575	415	240	124	*2,930	180	*209	73	49	45
8	127	570	*968	323	360	120	1,840	198	163	66	62	44
9	144	396	576	285	335	*112	1,360	1,490	144	66	73	42
10	184	280	385	255	285	110	1,160	2,100	134	64	66	42
11	144	214	319	225	*385	106	1,110	1,290	124	64	60	42
12	117	180	280	*210	1,030	102	1,150	1,040	117	60	58	158
13	109	163	915	184	820	100	1,320	1,870	112	58	55	354
14	90	159	1,310	164	635	100	1,210	3,450	103	64	51	184
15	75	360	735	148	540	100	1,030	2,300	215	70	58	112
16	62	455	531	138	415	102	1,000	1,310	642	66	75	82
17	58	375	455	134	315	106	765	836	414	60	73	70
18	58	538	385	120	275	110	656	564	254	58	60	66
19	55	425	333	120	240	120	583	442	171	58	55	64
20	*55	299	290	118	210	138	480	364	134	66	58	75
21	51	240	215	114	220	140	425	319	114	64	58	82
22	49	209	196	110	240	140	436	276	103	58	58	73
23	49	196	180	106	192	140	455	276	100	55	64	64
24	112	285	156	106	180	140	391	450	100	55	70	55
25	820	1,290	144	102	180	140	425	1,600	134	53	60	53
26	820	1,420	138	102	176	138	480	1,230	141	49	53	49
27	550	735	134	102	200	138	414	665	112	47	53	45
28	385	698	134	98	220	148	467	402	98	51	49	44
29	258	1,000	138	92	196	184	385	309	90	53	49	44
30	184	758	144	95	-------	333	319	262	87	70	47	60
31	163	-------	148	98	-------	1,170	-------	236	-------	180	47	-------
Total	5,098	13,022	11,953	7,241	8,434	5,265	38,521	24,955	5,424	2,139	1,887	2,222
Mean	164	434	386	234	291	170	1,284	805	181	69.0	60.9	74.1
Cfsm	1.15	3.06	2.72	1.65	2.05	1.20	9.04	5.67	1.27	0.485	0.429	0.522
In.	1.33	3.41	3.14	1.90	2.21	1.38	10.09	6.54	1.42	0.56	0.49	0.58

Calendar year 1959: Max 4,230 Min 34 Mean 244 Cfsm 1.72 In. 23.33
Water year 1959-60: Max 4,460 Min 36 Mean 345 Cfsm 2.43 In. 33.05

Peak discharge (base, 1,500 cfs).--Nov. 25 (11 p.m.) 1,640 cfs (3.45 ft); Apr. 6 (1 a.m.) 4,770 cfs (5.62 ft); May 10 (7 a.m.) 2,240 cfs (3.96 ft); May 14 (10:30 a.m.) 3,660 cfs (4.95 ft); May 25 (4:30 p.m.) 1,690 cfs (3.49 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21-25, Jan. 1, 2, 5-7, Jan. 9 to Mar. 29, and by debris on control Sept. 22-30.

640. Presumpscot River at outlet of Sebago Lake, Maine

Location.--Lat 43°49'05", long 70°27'00", at dam of hydroelectric plant at Eel Weir Falls, 1 mile downstream from lake outlet, Cumberland County.

Drainage area.--436 sq mi.

Records available.--January 1887 to September 1960.

Gage.--Float gages in forebay and tailrace of hydroelectric plant at Eel Weir Falls and staff gages at dam on outlet of Sebago Lake.

Average discharge.--73 years, 663 cfs (unadjusted).

Remarks.--Discharge computed from Allen Meter records for each of three pairs of water wheels and from records of openings of two regulating gates at Eel Weir hydroelectric plant. Water wasted at rare intervals through gates in dam on outlet of Sebago Lake; flow computed from records of gate openings. Water diverted by Portland Water District and leakage through dam, totaling about 35 cfs, not included in figures of daily discharge. Flow regulated by Long Pond and Sebago Lake (surface area, 45.6 sq mi), which have a combined usable capacity of 11,000,000,000 cu ft.

Cooperation.--Records furnished by S. D. Warren Co.

Revisions (water years).--WSP 261: Drainage area. WSP 1301: 1920-50 (adjusted monthly runoff).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	425	428	422	496	662	671	404	838	1,170	846	841	845
2	428	429	426	495	663	662	462	985	1,070	846	843	845
3	427	428	421	435	662	778	450	1,080	1,080	238	842	846
4	423	427	422	407	662	838	426	1,010	1,080	0	819	0
5	427	422	282	574	662	836	349	956	952	0	826	0
6	431	422	208	628	541	841	397	869	1,180	0	742	908
7	420	423	409	641	494	837	780	946	903	329	648	813
8	426	413	388	631	546	837	840	831	1,130	837	826	822
9	428	417	422	647	543	836	840	835	1,040	837	842	834
10	427	420	422	651	408	836	935	1,150	1,000	810	813	842
11	431	420	422	649	444	837	1,090	1,420	905	841	835	836
12	422	420	411	650	407	834	1,090	2,000	909	803	685	453
13	423	420	181	650	497	836	1,200	2,650	831	978	639	621
14	425	420	387	661	534	835	1,360	3,290	829	788	656	869
15	426	380	533	665	599	722	1,650	3,320	723	812	812	919
16	428	422	550	661	657	836	1,850	3,330	772	841	846	835
17	426	422	551	666	656	838	1,650	3,300	844	841	850	857
18	428	422	552	665	655	838	1,770	3,100	854	875	842	839
19	429	422	550	666	664	840	1,930	2,310	859	845	838	844
20	428	422	553	667	497	836	1,920	1,080	864	827	743	821
21	427	422	606	666	629	836	1,810	908	864	843	636	859
22	426	423	619	697	826	837	1,340	901	864	814	851	844
23	425	441	630	665	770	838	1,080	907	861	840	819	844
24	405	410	0	662	839	837	1,030	1,710	891	846	845	691
25	304	279	0	668	838	837	1,240	3,420	859	843	844	573
26	395	325	0	660	810	836	1,360	3,360	843	843	844	705
27	425	420	571	656	675	833	1,010	2,490	845	843	739	841
28	428	389	681	661	597	838	834	1,480	843	842	634	845
29	426	349	607	662	765	839	836	1,060	842	833	815	841
30	425	420	526	658	---	707	833	903	870	817	812	840
31	427	---	496	660	---	383	---	875	---	845	844	---
Total	13,041	12,277	13,248	19,520	18,202	24,845	32,566	53,314	27,577	22,403	24,451	22,532
Mean	421	409	427	630	628	801	1,086	1,720	919	723	789	751
(†)	+347	+548	+744	+510	+390	+35	+1,487	+116	-249	-463	-437	-639

Adjusted for change in reservoir contents

Mean	768	957	1,171	1,140	1,018	836	2,573	1,836	670	260	352	112
Cfsm	1.76	2.19	2.69	2.61	2.33	1.92	5.90	4.21	1.54	0.596	0.807	0.257
In.	2.03	2.44	3.10	3.01	2.51	2.21	6.58	4.85	1.72	0.69	0.93	0.29

	Observed			Adjusted		
Calendar year 1959:	Max 750	Min 0	Mean 520	Mean 636	Cfsm 1.46	In. 19.69
Water year 1959-60:	Max 3,420	Min 0	Mean 776	Mean 973	Cfsm 2.23	In. 30.36

† Change in contents, equivalent in cubic feet per second, in Long Pond and Sebago Lake, diversion by Portland Water District, and leakage through dam.

645. Saco River near Conway, N. H.

Location.--Lat 43°59'25", long 71°05'30", on left bank at Odell Falls, 1¾ miles downstream from Swift River and Conway, Carroll County.

Drainage area.--386 sq mi.

Records available.--August 1903 to December 1909, January 1910 to June 1912 (gage heights only), February 1929 to September 1960. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 418.19 ft above mean sea level, datum of 1929. Aug. 26, 1903, to June 30, 1912, chain gage at site three-quarters of a mile downstream at different datum.

Average discharge.--37 years (1903-9, 1929-60), 931 cfs.

Extremes.--Maximum discharge during year, 40,600 cfs Oct. 24, 25 (gage height, 16.39 ft, from floodmark); minimum discharge, 104 cfs Sept. 10, 11 (gage height, 2.01 ft).
1903-9, 1929-60: Maximum discharge, 43,900 cfs Mar. 27, 1953 (gage height, 17.20 ft), from rating curve extended above 13,000 cfs on basis of slope-area measurement of peak flow; minimum, 40 cfs Mar. 16, 1932 (gage height, 1.61 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 756: Drainage area. WSP 1301: 1908-9.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.0	102	5.0	2,330
2.3	162	6.0	3,970
2.5	217	7.0	6,080
3.0	417	9.0	11,800
4.0	1,140	11.0	18,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	175	1,230	2,690	585	370	379	5,640	2,780	1,290	369	890	135
2	350	1,400	2,180	650	365	369	3,730	2,560	1,260	343	555	129
3	293	1,150	1,860	1,540	365	370	2,810	2,140	1,140	165	*438	123
4	220	1,020	1,650	2,040	355	365	4,590	2,220	1,040	915	379	121
5	194	996	1,450	1,290	350	360	9,320	2,510	943	555	338	125
6	202	996	1,340	1,020	370	360	6,740	2,400	987	448	334	123
7	310	1,900	2,280	875	380	355	3,880	2,240	827	383	309	119
8	650	1,630	2,570	720	345	350	2,920	2,140	728	351	281	116
9	549	1,280	1,700	630	325	350	2,390	3,890	*671	329	274	112
10	491	1,120	*1,440	585	315	343	2,040	6,700	637	308	253	107
11	398	1,000	1,290	706	460	343	1,840	3,470	592	278	253	107
12	356	943	1,270	664	2,330	350	2,000	3,630	555	271	243	810
13	329	934	3,680	635	1,150	365	2,520	4,800	514	263	227	6,680
14	301	1,050	2,780	*610	735	360	2,700	7,510	475	407	214	1,710
15	274	3,660	1,900	580	680	351	3,970	4,610	1,000	486	208	1,000
16	256	1,960	1,660	545	650	351	5,720	6,040	3,280	360	208	692
17	239	1,570	1,460	520	*625	365	5,710	3,590	1,400	297	200	537
18	236	1,560	1,310	495	575	360	7,170	2,740	1,080	308	183	459
19	243	1,270	1,230	475	490	365	6,730	2,240	884	407	178	412
20	227	1,100	1,070	470	525	351	3,950	1,870	750	537	197	445
21	*220	1,030	969	460	530	338	3,230	1,610	664	365	227	728
22	220	960	935	440	525	325	3,930	1,430	585	278	208	537
23	253	892	875	420	480	334	4,340	1,310	537	256	202	438
24	13,500	1,040	795	415	470	317	3,740	2,100	514	239	197	388
25	16,600	8,180	780	415	460	317	4,210	6,880	758	220	175	360
26	*5,180	4,230	735	405	450	256	*4,100	3,480	728	211	160	338
27	2,950	2,540	720	400	440	343	3,520	2,380	565	211	157	317
28	2,050	8,850	670	395	425	317	3,430	1,870	470	281	150	301
29	1,560	7,370	650	400	410	347	3,260	1,570	420	256	148	285
30	1,310	3,720	625	395	-------	412	2,880	1,370	388	315	146	305
31	1,260	-------	590	375	-------	4,470	-------	1,280	-------	2,420	139	-------
Total	51,396	66,581	45,154	20,155	15,950	14,938	123,010	95,360	25,682	12,830	8,071	18,059
Mean	1,658	2,219	1,457	650	550	482	4,100	3,076	856	414	260	602
Cfsm	4.30	5.75	3.77	1.68	1.42	1.25	10.6	7.97	2.22	1.07	0.674	1.56
In.	4.96	6.42	4.35	1.94	1.53	1.44	11.83	9.19	2.48	1.23	0.78	1.74

Calendar year 1959: Max 16,600 Min 66 Mean 1,008 Cfsm 2.61 In. 35.48
Water year 1959-60: Max 16,600 Min 107 Mean 1,358 Cfsm 3.52 In. 47.89

Peak discharge (base, 8,700 cfs).--Oct. 24 or 25 (time unknown) 40,600 cfs (16.39 ft); Nov. 25 (12 m.) 11,000 cfs (8.75 ft); Nov. 28 (time unknown) about 16,500 cfs; Apr. 5 (4 to 8 p.m.) 10,600 cfs (8.59 ft); Apr. 19 (12:30 a.m.) 9,410 cfs (8.22 ft); May 10 (5:30 a.m.) 8,790 cfs (8.01 ft); May 14 (4 a.m.) 9,740 cfs (8.33 ft); Sept. 13 (4:30 a.m.) 13,100 cfs (9.37 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 22 to Jan. 4, Jan. 7-8, Jan. 13 to Feb. 11, Feb. 15-18, 20-29, Mar. 3-9, 12, 13. No gage-height record Oct. 7, 8, 24, 25, Nov. 28; discharge estimated on basis of floodmark or weather records and records for stations on nearby streams.

650. Ossipee River at Effingham Falls, N. H.

Location.--Lat 43°47'40", long 71°03'40", on left bank 0.3 mile upstream from highway bridge at Effingham Falls, Carroll County, 0.35 mile downstream from outlet of Ossipee Lake, and 4 miles northwest of Effingham.

Drainage area.--330 sq mi.

Records available.--September 1942 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Average discharge.--18 years, 732 cfs.

Extremes.--Maximum discharge during year, 5,640 cfs Apr. 7 (gage height, 8.98 ft); minimum, 166 cfs Oct. 1, Sept. 4-6; minimum daily, 166 cfs Sept. 4, 5.
1942-60: Maximum discharge, 11,700 cfs Mar. 28, 1953 (gage height, 11.64 ft); minimum, 10 cfs Oct. 9, 10, 1944; minimum daily, 11 cfs Oct. 10, 1944.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Ossipee and Silver Lakes and Pine River Pond (combined capacity, 1,430,000,000 cu ft).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.0	160	5.0	1,380
2.5	266	7.0	2,950
3.0	420	8.0	4,130
4.0	840	9.0	5,670

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	168	1,120	2,900	471	678	692	958	1,850	571	*579	696	170
2	170	772	2,610	692	656	700	1,720	1,190	741	571	692	168
3	170	559	2,270	994	633	620	2,210	995	955	480	391	168
4	170	563	a1,900	*1,460	611	599	2,590	1,000	950	301	168	166
5	170	567	1,680	1,500	*591	583	3,620	1,010	940	301	168	166
6	170	620	1,300	1,470	571	567	5,200	1,010	925	304	210	201
7	170	624	1,120	1,420	575	551	5,550	990	790	304	289	264
8	170	804	990	1,360	559	535	5,070	975	551	304	352	264
9	171	1,050	1,120	1,300	555	515	4,440	1,060	551	301	375	264
10	171	1,140	1,350	a1,240	551	491	3,900	1,350	547	266	333	264
11	171	1,100	1,280	a1,200	555	467	3,390	1,960	539	201	*318	264
12	173	1,030	1,210	a1,150	615	448	3,120	2,420	535	207	171	269
13	173	960	1,660	a1,100	692	438	2,890	2,520	487	207	171	772
14	173	945	2,000	a920	750	430	2,940	2,800	424	207	171	1,480
15	173	945	2,020	a700	782	424	3,230	2,880	537	210	171	1,550
16	173	955	1,930	804	782	*416	3,720	2,850	1,210	210	173	1,440
17	171	960	1,790	795	782	410	4,040	2,750	1,230	210	173	1,320
18	171	970	1,660	790	777	416	4,160	2,560	1,140	191	175	1,240
19	171	965	1,530	782	790	420	4,200	2,250	1,050	179	175	830
20	171	965	1,170	768	782	424	*3,970	1,490	870	240	220	638
21	*171	960	723	764	772	424	3,620	1,160	629	456	289	836
22	171	955	595	754	768	424	3,350	950	306	583	289	732
23	171	*945	595	741	750	420	3,180	865	259	567	287	563
24	242	945	595	732	746	416	2,990	1,000	203	438	284	813
25	1,890	1,120	595	790	728	416	2,840	2,180	224	235	282	795
26	3,270	1,660	529	813	718	402	2,790	2,670	284	171	231	782
27	2,960	2,530	282	782	714	396	2,700	2,600	388	171	171	768
28	2,540	2,860	306	764	700	396	2,610	2,330	508	171	171	656
29	2,110	3,030	343	746	705	392	2,450	1,880	633	170	170	471
30	1,110	3,150	378	723	-------	410	2,270	1,210	599	234	170	467
31	750	-------	410	700	-------	543	-------	535	-------	700	170	-------
Total	18,805	35,769	38,841	29,225	19,888	14,785	99,718	53,290	19,576	9,669	8,106	18,781
Mean	607	1,192	1,253	943	686	477	3,324	1,719	653	312	261	626
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 3,450 Min 122 Mean 652 Cfsm 1.98 In. 26.82
Water year 1959-60: Max 5,550 Min 166 Mean 1,001 Cfsm 3.03 In. 41.30

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, appearance of recorder chart, and records for Ossipee River at Cornish, Maine.

655. Ossipee River at Cornish, Maine

Location.--Lat 43°48'25", long 70°47'55", on left bank just downstream from highway bridge in Cornish, York County, 1¼ miles upstream from mouth.

Drainage area.--453 sq mi.

Records available.--July 1916 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 276.1 ft above mean sea level, datum of 1929. Prior to Aug. 21, 1929, chain gage and Aug. 21, 1929, to Sept. 30, 1942, water-stage recorder, at same site at datum 1 ft higher.

Average discharge.--44 years, 879 cfs.

Extremes.--Maximum discharge during year, 7,010 cfs Apr. 6 (gage height, 9.08 ft); minimum, 52 cfs Oct. 20, Sept. 3 (gage height, 0.85 ft); minimum daily, 178 cfs Oct. 4, Sept. 3.

1916-60: Maximum discharge, 17,200 cfs Mar. 21, 1936 (gage height, 16.32 ft, present datum), from rating curve extended above 7,500 cfs; minimum, 25 cfs Oct. 23, 1947 (gage height, 0.60 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow partly regulated by powerplants at Kezar Falls and by Ossipee and Silver Lakes, Pine River, Bickford and Colcord Ponds (combined capacity, 1,600,000,000 cu ft).

Revisions (water years).--WSP 756: Drainage area. WSP 1301: 1917-29(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	158	4.0	1,480
1.5	183	5.0	2,300
2.0	351	7.0	4,270
3.0	844	9.0	6,900

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	186	1,210	3,160	804	825	907	1,690	2,370	896	684	799	194
2	225	1,080	2,840	1,070	799	886	2,440	1,780	939	654	*759	196
3	215	724	2,540	1,200	789	886	2,940	1,350	1,160	649	680	178
4	178	714	2,170	1,960	765	804	3,690	1,280	1,160	574	266	190
5	196	729	1,960	1,880	745	784	5,440	1,270	1,160	464	215	194
6	196	729	1,580	1,780	744	759	6,870	1,260	1,180	420	210	200
7	194	849	1,540	1,660	794	724	*6,700	1,230	1,090	392	295	275
8	225	901	1,490	1,570	789	709	6,130	1,210	804	378	347	295
9	245	1,090	1,370	1,520	789	709	5,370	1,330	*744	364	454	288
10	255	1,230	*1,510	1,480	769	699	4,670	*1,880	739	364	347	284
11	230	1,190	1,520	1,440	844	694	4,160	2,040	714	265	444	292
12	192	1,140	1,400	1,380	1,110	684	3,940	2,990	699	250	245	840
13	215	1,040	1,960	*1,340	1,110	594	4,030	3,280	684	250	200	1,420
14	210	1,030	2,470	1,280	1,090	589	3,960	3,940	579	273	200	1,670
15	205	1,110	2,310	1,070	1,070	579	4,310	3,500	725	273	198	1,660
16	190	1,080	2,210	895	*1,100	569	4,820	3,450	1,690	260	285	1,510
17	200	1,080	2,050	970	1,040	569	4,970	3,230	1,550	250	250	1,370
18	200	1,140	1,890	1,040	962	584	4,980	2,980	1,310	240	230	1,280
19	210	1,100	1,770	1,010	945	594	4,920	2,690	1,230	237	210	930
20	180	1,070	1,560	985	1,100	594	4,590	2,120	1,010	375	220	849
21	188	1,060	1,090	918	1,030	594	4,160	1,480	925	444	335	980
22	*180	1,060	974	891	1,050	594	3,910	1,350	519	659	339	855
23	210	1,030	910	880	968	594	3,670	1,130	449	649	335	710
24	470	1,080	865	875	912	574	3,420	1,330	335	629	318	886
25	1,400	1,560	810	880	923	574	3,320	2,580	515	380	326	870
26	3,270	1,980	745	928	918	564	3,260	3,070	479	250	310	849
27	3,090	2,400	645	920	918	549	3,110	2,920	524	210	225	834
28	2,660	3,130	539	891	891	554	3,000	2,650	529	222	210	730
29	2,220	3,310	574	891	870	559	2,800	2,300	729	225	190	574
30	1,600	3,360	629	865	-------	634	2,610	1,800	694	250	202	594
31	834	-------	649	840	-------	980	-------	950	-------	685	199	-------
Total	20,269	40,206	47,730	36,113	26,659	20,687	123,880	66,740	25,761	12,219	9,843	21,997
Mean	654	1,340	1,540	1,165	919	667	4,129	2,153	859	394	318	733
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 4,200 Min 132 Mean 787 Cfsm 1.74 In. 23.58
Water year 1959-60: Max 6,870 Min 178 Mean 1,235 Cfsm 2.73 In. 37.11

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 23-27, Jan. 10-20, 24, 25, 27, Jan. 30 to Feb. 1, Feb. 4, 5.

660. Saco River at Cornish, Maine

Location.--Lat 43°48'30", long 70°46'55", on left bank just upstream from highway bridge at Cornish, York County, half a mile downstream from Ossipee River.

Drainage area.--1,298 sq mi.

Records available.--June 1916 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 263.48 ft above mean sea level, datum of 1929. Prior to Oct. 30, 1919, chain gage on bridge just upstream at different datum.

Average discharge.--44 years, 2,715 cfs.

Extremes.--Maximum discharge during year, 16,800 cfs Apr. 8 (gage height, 11.08 ft); minimum, 200 cfs Aug. 3, Sept. 4 (gage height, 1.12 ft).
1916-60: Maximum discharge, 45,000 cfs Mar. 21, 22, 1936 (gage height, 21.90 ft, from floodmarks); minimum, 90 cfs Oct. 1, 1921 (gage height, 0.03 ft).

Remarks.--Records excellent except those below 600 cfs, which are good, and those for periods of ice effect, which are fair. Flow partly regulated by powerplants above station and by Ossipee, Silver, Conway, and Kezar Lakes, and Moose, Hancock, Pine River, Bickford, and Colcord Ponds (combined capacity, 3,400,000,000 cu ft).

Revisions (water years).--WSP 1301: 1917-18(M), 1936(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	439	6.0	4,950
2.0	527	7.0	7,000
2.5	773	8.0	9,360
3.0	1,090	10.0	14,100
4.0	1,930	12.0	19,200
5.0	3,240		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	580	6,220	11,000	2,290	2,180	2,360	4,570	8,150	4,970	1,710	2,100	600
2	768	5,460	10,800	2,630	2,180	2,290	6,350	7,260	4,590	1,640	*2,130	590
3	752	4,500	10,100	2,990	2,170	2,240	7,020	6,450	4,590	1,590	1,950	600
4	560	4,160	9,010	4,440	2,150	2,170	8,710	6,120	4,350	1,510	1,820	545
5	625	3,820	7,990	4,370	2,090	2,150	9,820	5,780	4,090	1,420	1,330	525
6	736	3,420	6,870	4,120	2,090	2,250	14,500	5,460	3,920	1,420	1,260	525
7	640	3,450	6,500	3,760	2,190	2,180	15,600	5,220	3,420	1,370	1,220	575
8	773	3,470	5,910	3,520	2,180	2,150	*16,700	4,990	3,030	1,320	1,220	580
9	1,000	3,730	5,580	3,410	2,150	2,120	15,800	5,040	*2,820	1,260	1,270	650
10	1,130	3,850	*5,600	3,500	2,060	2,040	14,100	5,740	2,630	1,200	1,150	615
11	1,030	3,710	5,500	3,630	2,170	1,910	12,600	6,220	2,450	1,090	1,180	640
12	1,010	3,570	5,160	3,580	2,680	1,930	11,700	7,670	2,280	1,010	994	930
13	994	3,300	5,780	*3,390	2,950	1,800	11,300	8,910	2,110	980	877	2,610
14	961	3,210	6,220	3,240	2,990	1,800	10,900	10,400	1,890	1,010	889	3,970
15	934	3,240	6,160	3,090	*2,780	1,760	11,100	10,600	2,070	1,020	847	4,140
16	896	3,450	6,160	2,920	2,740	1,730	11,700	11,500	3,490	1,030	*854	3,940
17	871	3,680	6,130	2,960	2,770	1,720	11,900	11,700	3,690	1,040	880	3,680
18	865	3,890	5,740	2,890	2,920	1,720	12,600	11,400	3,550	1,030	902	3,330
19	841	3,850	5,420	2,810	2,780	1,730	13,400	10,700	3,490	1,000	883	3,010
20	779	3,730	5,010	2,740	2,420	1,730	14,100	9,310	3,160	1,150	896	2,550
21	*779	3,580	4,210	2,630	2,410	1,800	13,900	7,850	2,840	1,250	865	2,690
22	829	3,420	3,870	2,520	2,640	1,760	12,900	7,040	2,320	1,440	928	2,550
23	807	3,260	3,530	2,430	2,800	1,720	11,800	6,160	2,120	1,410	760	2,100
24	970	3,270	3,240	2,420	2,940	1,700	11,000	6,160	1,890	1,380	871	2,220
25	3,890	4,260	3,020	2,420	2,880	1,680	10,600	7,510	1,950	1,120	871	2,240
26	7,610	5,180	2,780	2,410	2,640	1,610	10,300	7,970	1,850	954	853	2,180
27	10,600	5,970	2,650	2,380	2,520	1,620	10,000	8,080	1,840	845	725	2,120
28	11,400	7,510	2,550	2,340	2,480	1,610	9,620	8,060	1,820	908	640	2,070
29	10,300	8,540	2,290	2,290	2,430	1,630	9,160	7,650	1,930	896	644	1,700
30	8,570	9,870	1,830	2,240	-------	1,770	8,680	6,750	1,820	941	565	1,590
31	6,660	-------	2,040	2,210	-------	2,550	-------	5,460	-------	1,430	600	---------
Total	79,160	132,570	168,650	92,570	72,380	59,230	342,430	237,310	86,970	37,374	32,874	56,065
Mean	2,554	4,419	5,440	2,986	2,496	1,911	11,410	7,655	2,899	1,206	1,060	1,869
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 11,700 Min 445 Mean 2,620 Cfsm 2.02 In. 27.40
Water year 1959-60: Max 16,700 Min 525 Mean 3,819 Cfsm 2.94 In. 40.03

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 22-27, Jan. 1, 2, 10-15, 25, Jan. 27 to Feb. 1, Feb. 10 to Mar. 3.

665. Little Ossipee River near South Limington, Maine

Location.--Lat 43°41'15", long 70°40'05", on right bank just upstream from highway bridge, 2 miles southeast of South Limington, York County, and 4 miles upstream from mouth.

Drainage area.--161 sq mi.

Records available.--August 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 260 ft (from topographic map).

Average discharge.--20 years, 296 cfs.

Extremes.--Maximum discharge during year, 3,600 cfs Apr. 6 (gage height, 5.83 ft); minimum daily, 23 cfs July 23, 24.
1940-60: Maximum discharge, 5,300 cfs May 10, 1954 (gage height, 6.78 ft); minimum, 4.7 cfs Nov. 7, 1953 (gage height, 1.23 ft).
Maximum discharge known, 8,530 cfs Mar. 19, 1936, at "Ledgemere" dam 4 miles upstream.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by Little Ossipee Lake, Ledgemere, and Balch Ponds (combined capacity, 581,000,000 cu ft).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	12	3.0	509
1.6	29	3.5	835
1.8	58	4.0	1,260
2.0	104	5.0	2,400
2.5	269	6.0	3,850

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	162	686	261	369	b345	622	573	337	159	184	48
2	58	200	555	250	369	b330	755	620	328	156	*62	44
3	58	147	445	385	369	b325	1,110	440	355	144	68	39
4	58	153	379	707	360	314	1,460	55	389	159	77	39
5	58	165	365	842	b365	328	2,410	45	369	169	77	44
6	58	169	346	806	365	310	3,420	38	379	165	73	42
7	60	213	408	622	374	298	*3,120	30	369	162	71	41
8	79	269	579	550	b385	294	2,310	33	332	156	77	45
9	129	213	585	b465	379	294	1,740	330	*273	144	79	53
10	153	159	498	b430	379	b275	1,380	604	235	124	75	56
11	153	165	*429	b300	389	b265	1,220	805	199	107	79	53
12	230	192	419	b300	419	b260	1,300	942	199	96	79	164
13	294	192	573	294	b420	258	1,580	1,030	168	92	73	710
14	294	169	842	294	555	239	1,780	1,400	129	92	68	714
15	290	185	820	290	679	231	1,760	1,490	205	96	66	482
16	194	202	634	298	641	231	1,730	1,340	870	94	77	250
17	110	209	561	285	610	235	1,640	1,130	735	84	77	172
18	107	213	526	285	598	239	1,490	820	573	79	73	172
19	107	224	477	298	622	250	1,340	700	360	89	68	153
20	104	227	429	285	598	246	1,180	445	227	230	73	169
21	104	199	346	273	648	246	1,040	419	184	265	84	185
22	104	188	285	269	b730	273	950	413	99	198	84	172
23	104	175	239	265	700	265	895	398	141	23	77	156
24	115	185	227	261	628	261	828	495	153	23	71	138
25	156	400	235	319	b510	258	813	1,160	220	38	60	124
26	298	567	235	379	403	242	*910	1,410	235	52	55	121
27	350	526	227	379	b395	246	895	1,060	224	56	53	118
28	314	515	239	384	b380	231	820	784	195	66	50	112
29	240	714	261	379	b360	242	748	550	172	68	50	104
30	79	813	265	379	-------	285	654	379	159	124	50	124
31	50	-------	269	374	-------	434	-------	346	-------	379	48	-------
Total	4,564	8,110	13,384	11,908	13,999	8,550	41,900	20,284	8,813	3,889	2,258	4,844
Mean	147	270	432	384	483	276	1,397	654	294	125	72.8	161
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 2,430 Min 9.6 Mean 247 Cfsm - In. -
Water year 1959-60: Max 3,420 Min 23 Mean 389 Cfsm - In. -

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

695. Mousam River near West Kennebunk, Maine

Location.--Lat 43°25'05", long 70°39'35", on right bank 100 ft upstream from highway bridge, 1½ miles downstream from Middle Branch, and 4 miles west of West Kennebunk, York County.

Drainage area.--105 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 170 ft (from topographic map).

Average discharge.--21 years, 182 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,930 cfs Apr. 6 (gage height, 4.33 ft); minimum, 4.4 cfs Aug. 28-30, Sept. 2-8 (gage height, 0.34 ft).
1939-60: Maximum discharge, 2,830 cfs Sept. 12, 1954 (gage height, 5.69 ft); minimum, 1.1 cfs Aug. 22, 1941; minimum gage height, 0.29 ft Nov. 15, 16, 1947.

Remarks.--Records good. Flow regulated by Square Pond and Mousam and Estes Lakes (combined capacity, about 700,000,000 cu ft) and powerplants above station.

Rating table, water year 1959-60 (gage height, in feet and discharge, in cubic feet per second)

0.3	3.2	2.0	412
.4	6.1	2.5	655
.5	11	3.0	963
.6	18	3.5	1,300
.8	40	4.0	1,670
1.0	73	4.5	2,070
1.5	216		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	267	416	192	122	241	745	374	245	34	150	4.6
2	134	248	370	188	122	241	815	412	267	46	20	4.4
3	104	216	354	302	128	230	815	387	263	52	130	4.4
4	102	202	337	461	119	220	1,060	366	256	62	54	4.4
5	86	212	317	421	119	245	1,710	350	196	55	184	4.4
6	66	209	306	362	188	227	1,710	337	290	44	35	4.4
7	75	260	425	321	298	216	1,190	321	*230	42	14	4.4
8	114	306	531	298	306	220	*976	321	195	46	16	4.4
9	139	267	412	252	290	206	847	321	195	46	15	4.9
10	134	234	358	238	260	206	797	421	184	34	14	6.4
11	104	212	325	220	325	202	754	399	192	39	8.7	8.1
12	104	206	345	206	507	198	797	474	188	39	6.1	230
13	86	206	612	202	425	198	885	635	130	39	5.2	400
14	75	216	639	195	387	195	822	766	134	57	5.2	225
15	71	263	479	195	350	195	736	633	120	52	120	188
16	66	267	430	198	306	198	701	623	120	44	38	140
17	69	271	395	174	282	209	680	536	83	39	36	102
18	68	321	362	181	260	209	595	507	24	38	33	139
19	57	290	350	198	282	212	591	488	73	42	33	198
20	52	263	337	181	294	209	516	447	172	50	39	195
21	48	248	310	178	263	182	474	421	181	36	43	192
22	52	241	294	178	245	172	455	395	178	32	44	181
23	64	234	275	171	234	192	440	391	17	35	136	142
24	136	252	263	139	220	152	430	526	17	33	*188	61
25	345	430	252	131	212	192	515	736	18	30	184	125
26	298	470	252	131	275	184	480	612	21	30	144	184
27	223	383	206	128	282	126	480	438	49	29	5.2	184
28	178	484	209	139	267	120	485	321	60	33	4.4	181
29	145	633	212	131	256	192	410	230	54	33	4.4	181
30	158	502	202	128	-------	240	415	275	90	67	4.4	150
31	209	-------	198	122	-------	405	-------	234	-------	87	4.6	-------
Total	3,666	8,813	10,773	6,561	7,624	6,434	22,326	13,697	4,242	1,345	1,718.2	3,452.8
Mean	118	294	348	212	263	208	744	442	141	43.3	55.4	115
(†)	+12	+2	-1	0	+19	+2	+64	-27	-16	-12	-9	-25

Adjusted for change in reservoir contents

Mean	130	296	347	212	282	210	808	415	125	31.3	46.4	90.0
Cfsm	1.24	2.82	3.30	2.02	2.69	2.00	7.70	2.95	1.19	0.298	0.442	0.857
In.	1.43	3.15	3.80	2.33	2.90	2.31	8.59	4.55	1.33	0.34	0.51	0.96

	Observed			Adjusted		
Calendar year 1959:	Max 1,220	Min 10	Mean 168	Mean 170	Cfsm 1.62	In. 21.95
Water year 1959-60:	Max 1,710	Min 4.4	Mean 248	Mean 249	Cfsm 2.37	In. 32.20

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Square Pond and Mousam Lake.

725. Salmon Falls River near South Lebanon, Maine

Location.--Lat 43°19'40", long 70°55'40", on left bank at Stair Falls, 1½ miles south of South Lebanon, York County, and 2½ miles upstream from Little River.

Drainage area.--147 sq mi.

Records available.--November 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 179.60 ft above mean sea level, datum of 1929.

Average discharge.--31 years (1929-60), 242 cfs (unadjusted).

Extremes.--Maximum discharge during year, about 3,000 cfs Apr. 6 (gage height, 9.90 ft, backwater from dam); minimum, 11 cfs Aug. 29 (gage height, 1.12 ft).
1928-60: Maximum discharge, 5,490 cfs Mar. 19, 1936 (gage height, 12.31 ft); minimum, 4.7 cfs Aug. 28, 1950.

Remarks.--Records good except those for periods of ice effect or backwater from dam, which are fair. Flow partly regulated by powerplants above station and by Great East and Lovell Lakes, and Horn, Wilson, and Milton Ponds (also controls Northeast and Town House Ponds), combined capacity, 1,280,000,000 cu ft.

Revisions (water years).--WSP 1231: 1930-31(M), 1933(M). WSP 1301: 1936-37.

Rating table, water year 1959-60, except periods of ice effect or backwater from dam (gage height, in feet, and discharge, in cubic feet per second)

1.1	9.2	2.5	422
1.3	25	3.0	680
1.5	54	4.0	1,100
1.7	105	6.0	1,860
2.0	206	8.0	2,750

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	156	567	378	265	275	802	494	336	120	124	86
2	83	221	525	380	265	275	705	468	280	93	*82	36
3	24	233	520	450	265	250	670	373	284	41	75	21
4	19	233	515	635	260	215	1,220	288	260	71	79	51
5	105	236	494	546	260	205	2,450	276	280	130	42	52
6	86	236	489	525	270	100	2,750	268	268	96	37	118
7	81	268	594	490	325	168	2,270	240	*229	106	49	95
8	97	195	620	468	365	170	*1,770	221	210	77	124	24
9	117	276	525	435	335	170	1,390	310	188	54	80	38
10	56	276	475	420	325	170	1,220	417	174	26	90	56
11	25	256	*440	415	412	168	1,020	530	124	47	58	51
12	130	233	425	390	588	162	730	856	118	59	24	205
13	89	244	856	*375	546	78	793	1,090	168	59	59	275
14	71	229	744	370	463	160	1,080	1,490	167	81	51	132
15	76	81	573	355	420	146	1,240	1,200	180	73	118	89
16	71	280	546	335	*375	127	1,210	965	425	59	77	69
17	83	272	536	330	345	130	1,160	710	552	39	80	27
18	18	323	515	325	325	174	1,020	695	489	106	70	61
19	73	314	504	325	325	210	775	655	494	78	82	132
20	76	332	489	325	310	210	784	552	385	88	39	122
21	78	301	468	325	295	236	715	430	214	60	26	146
22	*78	221	453	325	290	217	578	388	181	70	110	78
23	100	301	442	325	285	210	588	380	163	57	82	51
24	139	327	442	320	280	160	573	465	163	13	74	89
25	288	680	398	300	275	214	695	665	154	108	74	73
26	206	594	407	290	265	146	*710	685	88	82	76	138
27	195	509	402	290	260	150	705	744	139	69	76	99
28	163	700	402	285	260	181	784	620	106	78	12	100
29	170	820	412	280	265	188	660	536	120	69	97	44
30	130	640	388	270	-------	202	520	442	100	60	77	116
31	111	-------	393	265	-------	640	-------	323	-------	36	70	-------
Total	3,111	9,987	15,559	11,547	9,519	6,107	31,587	17,776	7,039	2,202	2,214	2,674
Mean	100	333	502	372	328	197	1,053	573	235	71.0	71.4	89.1
(†)	+39.4	+42.0	-41.2	-103	-21.0	+34.8	+218	+40.9	-24.4	-37.3	-69.6	+34.6

Adjusted for change in reservoir contents

Mean	139	375	461	269	307	232	1,271	614	211	33.7	1.8	124
Cfsm	0.946	2.55	3.14	1.83	2.09	1.58	8.65	4.18	1.44	0.229	0.012	0.844
In.	1.09	2.84	3.62	2.11	2.25	1.82	9.65	4.82	1.61	0.26	0.01	0.94

	Observed			Adjusted				
Calendar year 1959:	Max 1,720	Min 13	Mean 216	Mean 224	Cfsm 1.52	In. 20.68
Water year 1959-60:	Max 2,750	Min 12	Mean 326	Mean 335	Cfsm 2.28	In. 31.02

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Great East and Lovell Lakes, and Horn, Wilson, and Milton Ponds (also controls Northeast and Town House Ponds).
Note.--Stage-discharge relation affected by ice Dec. 10-12, Jan. 2, 3, 6, 7, Jan. 9 to Feb. 10, Feb. 15 to Mar. 5, Mar. 7-12, and by backwater from dam downstream from Apr. 4-10.

730. Oyster River near Durham, N. H.

Location.--Lat 43°08'55", long 70°58'00", on left bank 200 ft upstream from bridge on U. S. Highway 4, 2½ miles west of Durham, Strafford County, and 7 miles upstream from mouth.

Drainage area.--12.1 sq mi.

Records available.--October 1934 to September 1960. Monthly discharge only for October and November 1934, published in WSP 1301.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 70 ft (from topographic map).

Average discharge.--26 years, 19.6 cfs.

Extremes.--Maximum discharge during year, 423 cfs Apr. 5 (gage height, 3.525 ft); minimum, 0.92 cfs Sept. 9.
1934-60: Maximum discharge, 862 cfs Sept. 11, 1954 (gage height, 5.47 ft); maximum gage height, 7.45 ft Mar. 19, 1936; minimum discharge, 0.39 cfs Aug. 9-11, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-7		Oct. 8 to Sept. 30			
0.2	2.6	0.1	1.05	1.0	38
.3	4.1	.2	2.25	1.5	81
.4	6.2	.3	4.0	2.0	143
.6	12	.4	6.4	2.5	223
.8	22	.5	9.6	3.0	315
		.7	18	3.5	419

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	24	42	16	13	29	179	32	21	2.7	3.4	1.4
2	7.2	20	36	15	13	26	184	39	18	3.2	2.4	1.35
3	4.3	17	34	43	13	22	154	32	28	2.8	2.1	1.25
4	3.5	16	30	58	12	20	248	28	31	4.8	1.9	1.4
5	3.0	17	28	50	12	21	368	24	27	3.0	1.55	1.7
6	4.6	16	27	42	23	21	264	22	36	2.5	2.0	1.45
7	a15	36	60	38	39	20	146	20	23	2.4	1.65	1.3
8	a38	40	58	34	35	18	119	20	18	2.4	1.95	1.15
9	*a36	*30	47	26	35	18	105	*39	15	1.95	1.8	1.05
10	29	24	38	21	31	17	99	42	12	1.7	2.3	1.15
11	22	21	31	19	46	17	88	41	11	1.55	3.2	1.5
12	22	18	52	17	65	17	90	57	9.4	1.5	2.25	49
13	17	17	129	16	51	17	86	102	8.6	1.55	1.75	69
14	13	16	*98	16	45	17	75	92	7.3	9.2	1.55	35
15	11	18	66	16	40	16	64	67	8.5	7.4	1.8	21
16	9.6	16	54	16	34	17	56	58	12	3.6	3.0	15
17	8.6	21	45	15	30	17	49	47	8.9	2.7	1.7	10
18	8.6	30	38	14	29	18	*45	38	7.2	2.4	1.4	8.2
19	7.4	23	36	14	38	21	41	33	5.9	2.4	1.4	7.3
20	6.8	20	29	14	50	22	36	28	5.1	3.0	1.95	22
21	6.3	18	24	14	45	24	33	24	4.6	2.6	22	19
22	5.9	18	20	14	39	23	35	21	*4.0	1.95	19	14
23	7.9	17	17	13	34	21	32	21	3.5	1.75	7.4	11
24	33	22	15	13	30	21	31	61	3.6	1.55	*5.1	8.9
25	47	60	13	12	27	20	57	77	4.6	1.45	3.5	7.9
26	34	51	14	*12	32	17	51	58	3.6	1.4	2.8	6.8
27	27	41	14	13	44	18	52	42	3.0	*1.35	2.25	6.2
28	21	56	14	13	39	19	53	32	2.6	1.45	1.95	5.9
29	18	66	13	13	34	31	42	26	2.4	1.35	1.7	5.6
30	15	54	15	13	-------	44	34	21	2.25	8.0	1.55	24
31	17	-------	16	13	-------	108	-------	21	-------	8.7	1.5	-------
Total	501.3	843	1,153	643	978	737	2,916	1,265	347.05	94.30	109.80	360.50
Mean	16.2	28.1	37.2	20.7	33.7	23.8	97.2	40.8	11.6	3.04	3.54	12.0
Cfsm	1.34	2.32	3.07	1.71	2.79	1.97	8.03	3.37	0.959	0.251	0.283	0.992
In.	1.54	2.59	3.54	1.98	3.01	2.27	8.96	3.89	1.07	0.29	0.34	1.11

Calendar year 1959: Max 220 Min 1.25 Mean 18.8 Cfsm 1.55 In. 21.08
Water year 1959-60: Max 368 Min 1.05 Mean 27.2 Cfsm 2.25 In. 30.59

Peak discharge (base, 170 cfs).--Apr. 2 (12:30 a.m.) 199 cfs (2.36 ft); Apr. 5 (7 to 8 p.m.) 423 cfs (3.525 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Lamprey River near Newmarket.
Note.--Stage-discharge relation affected by ice Dec. 15, Jan. 2, 9-26, Mar. 10-13.

735. Lamprey River near Newmarket, N. H.

Location.--Lat 43°06'05", long 70°57'20", on right bank 200 ft upstream from Packers Falls, 2 miles northwest of Newmarket, Rockingham County, and 4.6 miles upstream from mouth.

Drainage.--183 sq mi.

Records available.--July 1934 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 40 ft (from topographic map).

Average discharge.--26 years, 282 cfs.

Extremes.--Maximum discharge during year, 4,470 cfs Apr. 6 (gage height, 11.46 ft); minimum daily, 13 cfs Oct. 1.
1934-60: Maximum discharge, 5,490 cfs Mar. 20, 1936 (gage height, 14.88 ft), from rating curve extended above 3,100 cfs on basis of computation of flow over dam at gage height 14.69 ft; minimum daily, 1 cfs Oct. 21, 1935.

Remarks.--Records excellent except those below 150 cfs, which are good, and those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Pawtuckaway and Mendums Ponds (combined capacity, about 600,000,000 cu ft).

Revisions (water years).--WSP 1231: 1936-37.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris Sept. 24-30)

0.7	13	3.0	361
.8	18	5.0	970
1.1	40	8.0	2,350
1.5	92	11.0	4,150
2.0	167	11.5	4,500

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	213	580	247	200	b340	1,610	475	247	40	65	18
2	30	209	520	232	195	b290	2,120	497	238	51	55	17
3	34	198	460	305	192	b270	2,490	472	251	43	43	17
4	26	181	430	548	188	b255	2,670	432	330	48	34	16
5	23	178	400	677	186	275	3,350	378	328	44	29	16
6	26	175	380	767	218	292	4,270	332	302	39	28	16
7	59	242	480	692	352	273	*4,160	294	265	36	25	16
8	172	337	570	478	402	261	2,900	279	220	33	23	15
9	*220	*335	560	472	452	242	1,990	*363	181	30	*20	24
10	261	324	470	378	440	b225	1,580	420	156	27	21	32
11	213	281	420	328	450	b215	1,360	400	138	24	35	31
12	192	246	440	296	b570	b215	1,270	468	121	22	35	134
13	154	220	1,000	286	b590	227	1,210	688	108	23	35	608
14	126	202	*1,150	277	b610	222	1,140	809	95	46	30	641
15	103	200	1,170	271	572	218	1,030	746	89	75	28	608
16	89	195	989	267	512	214	886	695	106	56	70	415
17	77	204	742	251	445	244	784	632	148	50	81	286
18	72	271	605	240	398	267	*695	533	169	40	78	218
19	64	273	536	232	435	286	641	452	153	35	59	177
20	58	269	462	234	551	288	557	388	140	38	50	202
21	54	246	b375	232	557	300	491	335	106	38	47	265
22	50	230	b330	227	497	294	468	290	*84	30	52	257
23	51	215	b305	223	430	279	438	261	74	25	65	234
24	126	230	b280	213	380	271	415	335	64	22	*56	202
25	267	400	b250	205	343	267	554	608	67	19	44	164
26	352	530	246	*205	346	244	647	626	67	18	36	138
27	400	480	b230	202	452	240	716	566	58	17	31	121
28	335	490	229	197	455	.246	750	450	51	17	28	106
29	263	580	218	198	422	302	653	359	44	17	23	98
30	213	600	246	205	-------	408	551	296	40	31	21	133
31	186	-------	265	204	-------	891	-------	263	-------	89	20	-------
Total	4,309	8,754	15,338	9,889	11,840	8,861	42,396	14,142	4,440	1,123	1,267	5,225
Mean	139	292	495	319	408	286	1,413	456	148	36.2	40.9	174
Cfsm	0.760	1.60	2.70	1.74	2.23	1.56	7.72	2.49	0.809	0.198	0.223	0.951
In.	0.88	1.78	3.12	2.01	2.41	1.80	8.62	2.87	0.90	0.23	0.26	1.06

Calendar year 1959: Max 3,130 Min 11 Mean 256 Cfsm 1.40 In. 19.01
Water year 1959-60: Max 4,270 Min 13 Mean 349 Cfsm 1.91 In. 25.94

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 22 to Dec. 14; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Oyster River near Durham and Suncook River at North Chichester. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

750. Pemigewasset River at Woodstock, N. H.

Location.--Lat 43°58'35", long 71°40'50", on right bank 0.2 mile east of Woodstock, Grafton County, and 0.7 mile upstream from Eastman Brook.

Drainage area.--193 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 615 ft (from topographic map).

Average discharge.--21 years, 519 cfs.

Extremes.--Maximum discharge during year, 47,000 cfs Oct. 24 (gage height, 16.13 ft), from rating curve extended above 14,000 cfs on basis of contracted-opening measurement of peak flow; minimum daily, 57 cfs Sept. 9.
1939-60: Maximum discharge, that of Oct. 24, 1959; minimum daily, 42 cfs Feb. 11, 1948.
Revisions.--The maximum discharge for the water year 1942 has been revised to 9,610 cfs June 15, 1942 (gage height, 8.98 ft), superseding figure published in WSP 951 and 1301.

Remarks.--Records good except those for periods of ice effect, which are fair. Some diurnal fluctuation caused by powerplant above station.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
2.4	104	6.0	2,750	2.2	55	4.0	720
2.7	185	7.0	4,380	2.5	112	5.0	1,550
3.0	295	8.0	6,570	3.0	250	6.0	2,750
3.5	520	10.0	13,200	3.5	450		
4.0	810	11.0	17,500				
5.0	1,570			Note.--Same as preceding table above 6.0 ft.			

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	184	1,180	1,230	230	150	150	3,600	1,440	405	162	364	71
2	446	909	958	220	150	150	2,020	1,360	410	140	236	66
3	202	666	811	1,450	150	150	1,430	1,060	360	148	168	66
4	144	570	708	1,130	145	170	3,510	1,250	344	398	162	60
5	116	595	618	580	145	165	5,220	1,370	320	218	148	68
6	212	648	570	418	150	160	2,800	1,320	352	178	168	69
7	440	1,300	1,000	*392	165	150	1,550	1,260	285	158	142	66
8	591	881	965	378	155	150	1,120	1,240	243	145	138	62
9	359	696	660	270	*150	140	895	2,000	229	145	128	57
10	323	606	570	210	150	135	755	2,220	222	130	*121	64
11	238	545	505	240	540	130	666	1,290	206	119	121	66
12	241	535	526	230	980	140	702	1,180	188	114	114	948
13	227	515	2,720	260	480	140	867	1,580	188	124	106	*1,700
14	220	897	1,300	250	370	135	937	1,460	165	232	98	520
15	192	3,100	840	240	305	*135	2,390	2,790	485	194	98	306
16	167	1,200	740	220	260	135	2,630	4,380	1,090	138	100	226
17	155	951	630	210	250	140	2,810	2,040	441	121	92	182
18	227	853	560	210	230	145	*4,530	1,380	328	121	86	168
19	220	684	510	210	230	145	3,060	1,050	296	224	84	160
20	*176	590	400	200	240	140	1,710	832	268	306	88	178
21	227	545	340	190	205	145	1,350	696	232	188	94	302
22	182	505	280	180	195	140	1,980	600	206	142	92	215
23	430	465	220	175	195	140	2,150	*545	182	128	88	178
24	*16,900	*749	220	170	185	140	1,910	694	185	117	82	160
25	*7,170	5,660	250	170	175	130	2,660	1,460	274	108	79	152
26	2,460	1,880	290	165	185	120	2,100	839	232	104	77	152
27	1,420	1,140	280	160	180	135	1,710	618	191	104	73	138
28	972	*8,740	270	160	170	135	1,670	525	*170	172	68	130
29	748	3,530	280	160	165	150	1,570	460	152	128	71	128
30	624	1,720	270	155	-------	250	1,420	418	152	272	68	160
31	740	-------	260	150	-------	4,800	-------	400	-------	1,220	73	-------
Total	36,953	42,855	19,781	9,383	7,050	9,190	61,722	39,757	8,801	6,198	3,647	6,818
Mean	1,192	1,428	638	303	243	296	2,057	1,282	293	200	118	227
Cfsm	6.18	7.40	3.31	1.57	1.26	1.53	10.66	6.64	1.52	1.04	0.611	1.18
In.	7.12	8.26	3.81	1.81	1.36	1.77	11.89	7.66	1.70	1.19	0.70	1.31

Calendar year 1959: Max 16,900 Min 66 Mean 578 Cfsm 2.99 In. 40.64
Water year 1959-60: Max 16,900 Min 57 Mean 689 Cfsm 3.57 In. 48.58

Peak discharge (base, 7,100 cfs).--Oct. 24 (7:30 p.m.) 47,000 cfs (16.13 ft); Nov. 25 (6 a.m.) 8,740 cfs (8.72 ft); Nov. 28 (12:30 p.m.) 16,000 cfs (10.71 ft); Mar. 31 (4 p.m.) 8,440 cfs (8.63 ft); May 16 (1 a.m.) 7,350 cfs (8.28 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15 to Jan. 3, Jan. 9 to Mar. 31.

760. Baker River near Rumney, N. H.

Location.--Lat 43°47'45", long 71°50'45", on right bank 0.3 mile upstream from Halls Brook and 1¾ miles southwest of Rumney, Grafton County.

Drainage area.--143 sq mi.

Records available.--October 1928 to September 1960. October 1928 monthly discharge only, published in WSP 1301.

Gage.--Water-stage recorder. Concrete control since Sept. 10, 1938. Altitude of gage is 495 ft (from topographic map).

Average discharge.--32 years, 260 cfs.

Extremes.--Maximum discharge during year, 18,000 cfs Oct. 24 (gage height, 14.00 ft), from rating curve extended above 3,800 cfs as described below; minimum, 18 cfs Sept. 10, 11.
1928-60: Maximum discharge, 21,400 cfs June 15, 1942 (gage height, 15.50 ft), from rating curve extended above 3,800 cfs on basis of slope-area measurements at gage heights 13.03, 14.49, and 15.50 ft; minimum, 6.5 cfs Dec. 4, 1947, caused by ice conditions upstream.
Maximum discharge known, 25,900 cfs Nov. 3, 1927 (gage height, 17.4 ft, from floodmarks), from rating curve extended above 3,800 cfs as described above.

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Revisions (water years).--WSP 726: Drainage area. WSP 781: 1934(M). WSP 1231: 1929-33(M), 1934.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31

2.5	46	5.0	1,620
2.7	87	6.0	2,670
3.0	175	7.0	3,900
3.5	395	9.0	7,200
4.0	720		

Apr. 1 to Sept. 30

2.27	18	2.7	88
2.3	21	3.0	175
2.4	33		

Note.--Same as preceding table above 3.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	734	678	152	122	110	2,410	498	179	50	166	23
2	251	636	531	139	122	115	1,570	580	172	48	100	21
3	124	468	456	550	116	128	1,180	439	162	47	78	20
4	80	370	412	1,000	113	136	2,370	390	165	139	65	21
5	65	375	370	610	113	133	3,700	359	136	84	58	22
6	77	370	344	*400	125	125	1,890	320	119	63	54	23
7	164	718	911	370	149	119	1,040	292	100	*56	50	21
8	270	545	999	315	130	116	783	270	86	50	45	20
9	201	412	573	250	*130	105	629	402	80	48	*42	19
10	205	339	444	230	125	98	552	814	78	45	41	19
11	145	296	375	205	300	94	524	517	71	42	41	18
12	122	278	378	190	700	108	699	434	65	39	39	352
13	103	274	1,520	190	450	108	1,070	559	61	36	36	860
14	*92	287	846	185	375	*105	1,190	524	58	59	33	252
15	80	1,250	530	180	301	100	2,420	829	306	61	33	*152
16	74	650	468	175	265	100	2,200	1,120	546	47	32	103
17	69	510	400	162	244	103	1,960	713	235	39	30	80
18	85	524	344	158	212	108	2,340	504	158	39	28	67
19	90	395	310	158	200	110	*1,620	417	125	54	26	60
20	78	330	244	152	205	108	968	334	100	189	28	83
21	78	301	210	149	179	108	783	278	88	83	29	139
22	78	278	170	142	165	100	1,130	236	78	63	33	103
23	131	261	140	142	165	105	1,040	216	69	56	39	82
24	6,490	*342	145	133	158	103	822	*448	71	50	39	69
25	*5,260	1,790	150	128	149	95	1,650	908	98	45	33	61
26	1,370	952	175	128	155	92	1,160	504	90	41	30	56
27	783	580	168	128	162	95	862	354	73	39	29	52
28	531	4,790	165	128	149	98	783	274	61	48	28	48
29	395	2,120	168	130	128	100	629	220	56	45	26	47
30	325	986	168	128	-------	180	510	186	52	90	26	67
31	357	-------	162	125	-------	2,000	-------	168	-------	573	25	-------
Total	18,226	22,161	12,954	7,232	5,907	5,305	40,484	14,107	3,738	2,345	1,360	2,960
Mean	588	739	418	233	204	171	1,349	455	125	75.6	43.9	98.7
Cfsm	4.11	5.17	2.92	1.63	1.43	1.20	9.43	3.18	0.874	0.529	0.307	0.690
In.	4.74	5.76	3.37	1.88	1.54	1.38	10.53	3.67	0.97	0.61	0.35	0.77

Calendar year 1959: Max 6,490 Min 15 Mean 296 Cfsm 2.07 In. 28.12
Water year 1959-60: Max 6,490 Min 18 Mean 374 Cfsm 2.62 In. 35.57

Peak discharge (base, 3,600 cfs).--Oct. 24 (11 p.m.) 18,000 cfs (14.00 ft); Nov. 28 (12:30 to 1 p.m.) 8,930 cfs (9.87 ft); Mar. 31 (5 p.m.) 3,770 cfs (6.90 ft); Apr. 5 (10 to 10:30 a.m.) 4,240 cfs (7.24 ft); Apr. 15 (9 p.m.) 3,850 cfs (6.96 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15, 21-25, Jan. 3-7, 9-16, Feb. 11-13, 19, 26, Mar. 1, 2, 10, 11, 26-31.

765. Pemigewasset River at Plymouth, N. H.

Location.--Lat 43°45'35", long 71°41'10", on right bank 150 ft downstream from bridge at Plymouth, Grafton County, and a third of a mile downstream from Baker River.
Drainage area.--622 sq mi.
Records available.--October 1903 to September 1960. Records for April 1886 to September 1903, published in WSP 124, have been found to be unreliable and should not be used.
Gage.--Water-stage recorder. Datum of gage is 457.07 ft above mean sea level, datum of 1929. Prior to Jan. 1, 1910, staff or chain gages at sites 150 and 200 ft upstream at present datum or datum 1.11 ft lower. Jan. 1, 1910, to Sept. 30, 1926, staff gage at site 200 ft upstream at present datum.
Average discharge.--57 years, 1,362 cfs.
Extremes.--Maximum discharge during year, 52,700 cfs Oct. 25; maximum gage height, 22.68 ft Oct. 25; minimum discharge, 129 cfs Sept. 10, 11; minimum daily, 129 cfs Sept. 10. 1903-60: Maximum discharge, 65,400 cfs Mar. 19, 1936 (gage height, 29.0 ft, from floodmarks), from rating curve extended above 43,000 cfs on basis of computations of flow over dam at gage heights 23.0, 27.4, and 29.0 ft; minimum, 39 cfs Oct. 1, 3, 4, 1948; minimum daily, 45 cfs Sept. 20, 1923.
Remarks.--Records excellent except those for period of shifting control, which are good, and those for periods of ice effect or no gage-height record, which are fair. Some diurnal fluctuation caused by powerplants above station.
Revisions (water years).--WSP 471: 1912-14. WSP 726: Drainage area. WSP 1231: 1904-11, 1913-14, 1917-18, 1919(M), 1920-25, 1926-27(M), 1929-31(M). See also Records available.

Rating tables, water year 1959-60, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second) (Rate of change in stage used as a factor Oct. 24, 25, Nov. 15, 25, 26, 28, 29, Dec. 13, Mar. 31 to Apr. 2, Apr. 4-6, 15-19, 25, 26, May 16)

Oct. 1-24				Oct. 25 to Sept. 30			
0.2	175	1.5	1,540	0.4	118	2.0	1,720
.5	345	2.0	2,150	.7	225	6.0	7,150
.9	720	6.0	7,150	1.0	460	12.0	18,600
1.2	1,110	12.0	18,600	1.5	1,070	19.0	35,700

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	218	3,070	3,640	840	*590	600	13,700	3,070	1,140	341	*1,230	146
2	917	2,630	2,800	750	580	560	7,540	3,500	1,110	325	772	143
3	600	2,010	2,410	1,500	570	620	5,320	2,650	1,030	309	515	138
4	382	1,670	2,160	4,200	550	670	9,890	2,490	1,020	753	412	138
5	312	1,670	1,990	2,600	540	670	17,400	2,590	888	570	349	140
6	306	1,660	1,850	1,800	600	640	11,300	2,460	927	412	333	143
7	681	3,330	3,050	1,500	700	600	5,490	2,300	762	357	325	143
8	1,370	2,700	4,120	1,350	640	540	4,040	2,160	654	317	285	138
9	1,030	2,030	2,480	1,100	610	510	3,120	2,880	582	301	273	135
10	984	1,730	2,080	820	600	500	2,650	4,620	548	285	261	129
11	709	1,540	1,840	940	900	530	2,390	2,970	504	267	255	135
12	610	1,430	1,780	860	3,200	580	2,740	2,800	460	243	249	296
13	560	1,410	6,630	860	2,300	590	3,840	3,550	432	237	231	4,650
14	474	1,400	4,600	900	1,600	560	4,420	3,530	394	364	216	1,450
15	456	6,840	2,700	900	1,350	520	7,870	3,800	809	493	212	888
16	398	3,390	2,390	850	1,200	520	9,700	8,810	3,610	333	212	570
17	368	2,380	2,080	800	1,150	540	7,860	5,700	1,540	267	204	432
18	390	2,350	1,880	760	1,050	570	10,200	3,800	1,080	249	195	357
19	483	1,850	1,750	760	950	580	9,390	2,600	849	309	186	325
20	412	1,600	1,350	740	1,000	580	5,140	2,200	726	888	191	357
21	447	1,460	1,150	710	910	570	3,890	1,800	618	559	212	678
22	375	1,360	950	680	830	520	4,850	1,500	537	384	208	548
23	450	1,260	750	660	810	540	5,400	1,400	471	317	199	412
24	18,000	1,470	800	640	780	540	4,720	1,850	441	285	191	349
25	*33,500	10,500	800	630	720	520	6,550	4,730	548	255	175	309
26	11,000	5,970	950	620	760	480	6,200	2,760	582	237	168	285
27	4,700	2,900	920	600	780	500	4,430	1,900	471	225	164	267
28	2,800	13,100	900	620	760	520	*4,280	1,550	*394	293	157	255
29	*2,100	13,300	920	620	*700	540	3,730	1,320	349	309	150	243
30	1,760	*5,320	920	610	-------	600	3,160	1,160	325	293	153	*285
31	1,710	-------	900	600	-------	6,000	-------	*1,070	-------	2,720	*146	-------
Total	88,502	103,330	63,540	31,820	27,730	22,810	191,210	89,520	23,781	13,497	8,759	14,484
Mean	2,855	3,444	2,050	1,026	956	736	6,374	2,888	793	435	283	483
Cfsm	4.59	5.54	3.30	1.65	1.54	1.18	10.25	4.64	1.27	0.699	0.455	0.777
In.	5.29	6.18	3.80	1.90	1.66	1.36	11.43	5.35	1.42	0.81	0.52	0.87

Calendar year 1959: Max 33,500 Min 132 Mean 1,494 Cfsm 2.40 In. 32.59
Water year 1959-60: Max 33,500 Min 129 Mean 1,855 Cfsm 2.98 In. 40.59

Peak discharge (base, 12,600 cfs).--Oct. 25 (3:30 a.m.) 52,700 cfs (22.68 ft at 5:30 a.m.); Nov. 25 (12 m.) 14,400 cfs (9.81 ft at 1 to 1:30 p.m.); Nov. 28 (10 p.m.) 24,200 cfs (14.05 ft at 12 p.m.); Mar. 31 (10 to 11 p.m.) 18,400 cfs (11.70 ft at 12 p.m.); Apr. 5 (5 to 7:30 p.m.) 19,100 cfs (12.17 ft at 8 p.m.); Apr. 19 (1 a.m.) 13,200 cfs (9.30 ft at 1:30 a.m.).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 26, 27, Dec. 22-29, Mar. 11-29, May 15, May 17-23; discharge estimated on basis of weather records, recorded range in stage when available, powerplant records, and records for Baker River near Rumney. Stage-discharge relation affected by ice Dec. 15, Dec. 20 to Mar. 31. Shifting-control method used Oct. 28 to Nov. 28.

770. Squam River at Ashland, N. H.

Location.--Lat 43°42'15", long 71°37'50", on right bank 200 ft upstream from bridge on U. S. Highway 3 and a third of a mile north of Ashland, Grafton County.

Drainage area.--57.6 sq mi.

Records available.--August 1939 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 545 ft (from topographic map).

Average discharge.--21 years, 91.2 cfs.

Extremes.--Maximum discharge during year, 466 cfs Apr. 15 (gage height, 11.82 ft); minimum daily, 34 cfs July 7-9.
1939-60: Maximum discharge, 498 cfs Apr. 11, 1951 (gage height, 11.93 ft); minimum daily, 14 cfs Feb. 4, 1940.

Remarks.--Records excellent. Flow completely regulated by Squam and Little Squam Lakes.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

10.1	30	11.0	199
10.3	57	11.8	458
10.5	89		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	62	75	102	103	149	131	123	125	91	73	68
2	59	62	75	102	103	149	131	121	138	91	73	68
3	59	62	75	103	103	149	131	121	147	56	73	68
4	59	62	75	103	117	149	138	119	145	37	73	68
5	59	62	75	103	123	149	140	119	145	37	71	68
6	59	62	75	*103	123	149	267	121	142	36	71	67
7	59	62	75	103	123	149	336	123	140	*34	71	67
8	57	62	75	103	123	149	239	123	134	34	71	68
9	57	62	75	103	*123	149	121	199	131	34	71	70
10	57	62	75	103	123	149	123	252	129	56	71	70
11	57	62	75	103	125	149	*123	252	127	70	71	70
12	57	62	75	103	127	149	264	302	123	70	71	71
13	56	62	78	103	127	149	380	363	119	70	71	68
14	56	62	78	103	127	*176	377	356	96	70	71	67
15	56	62	78	103	125	202	409	349	142	71	71	63
16	57	68	76	103	125	202	420	356	207	71	71	65
17	62	71	76	103	125	202	409	241	207	71	71	70
18	62	71	76	103	136	199	424	123	202	71	71	70
19	83	71	76	103	149	199	388	121	196	71	71	70
20	*67	71	76	103	151	199	342	121	189	73	71	70
21	62	71	76	103	151	199	214	121	186	73	70	70
22	62	71	76	103	151	163	119	119	126	73	70	70
23	62	*70	93	103	151	123	119	*119	93	73	70	70
24	65	70	100	103	151	123	121	163	93	73	70	70
25	65	73	102	103	151	123	125	342	93	73	68	70
26	65	73	102	103	149	123	127	388	93	73	68	70
27	65	73	102	103	149	125	131	260	93	73	68	70
28	63	75	102	103	149	125	238	125	91	73	68	70
29	63	75	102	103	149	125	219	123	91	71	68	70
30	63	75	102	103	-------	125	121	123	91	71	68	70
31	62	-------	102	103	-------	129	-------	125	-------	73	68	-------
Total	1,894	2,008	2,573	3,191	3,832	4,799	6,827	6,033	4,034	2,013	2,184	2,066
Mean	61.1	66.9	83.0	103	132	155	228	195	134	64.9	70.5	68.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 102 Min 45 Mean 67.9 Cfsm - In. -
Water year 1959-60: Max 424 Min 34 Mean 113 Cfsm - In. -

* Discharge measurement made on this day.

780. Smith River near Bristol, N. H.

Location.--Lat 43°34'00", long 71°44'50", on right bank in Hill, Merrimack County, 1.5 miles upstream from mouth and 1¾ miles southwest of Bristol, Grafton County.

Drainage area.--85.8 sq mi.

Records available.--May 1918 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 449.80 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Nov. 25, 1933, staff gage at site 1½ miles upstream at different datum.

Average discharge.--42 years, 144 cfs.

Extremes.--Maximum discharge during year, 2,630 cfs Oct. 24 (gage height, 8.16 ft); minimum, 9.0 cfs Sept. 10, 11; minimum daily, 10 cfs Sept. 9-11.
1918-60: Maximum discharge, 8,100 cfs Mar. 19, 1936 (gage height, 16.09 ft, from floodmarks), from rating curve extended above 2,700 cfs on basis of contracted-opening measurement of peak flow; minimum daily, 2.7 cfs Aug. 2, 1933.
Maximum stage known since at least 1885, that of Mar. 19, 1936.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Prior to 1954, some diurnal fluctuation caused by small mill above station; greater fluctuation prior to 1941.

Revisions (water years).--WSP 711: Drainage area. WSP 781: 1934. WSP 1231: 1919, 1920-21(M), 1922-31, 1932-33(M), 1941-43.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	8.6	3.5	196
2.0	12	4.0	345
2.3	29	6.0	1,360
2.6	54	8.0	2,530
3.0	102		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	325	405	91	87	b92	1,110	282	140	54	102	12
2	33	285	272	b90	85	b90	1,170	333	142	54	58	12
3	38	222	232	b230	84	91	1,020	272	147	50	44	12
4	35	185	210	b520	80	95	1,440	229	187	91	36	12
5	27	196	194	480	82	98	2,020	205	170	80	32	12
6	26	185	183	325	85	94	1,990	185	183	58	30	12
7	38	378	385	250	111	89	1,350	166	142	48	26	12
8	58	490	620	219	102	87	890	155	106	42	23	11
9	100	337	435	174	102	84	595	244	89	38	*21	10
10	124	250	275	b140	*94	82	455	505	80	34	25	10
11	85	208	224	b125	138	*82	410	440	73	32	28	10
12	62	187	208	119	b300	82	550	390	66	30	27	183
13	54	174	470	119	b325	82	790	518	60	28	23	530
14	45	170	525	117	b265	80	*940	530	54	37	21	259
15	*40	288	321	117	b215	80	1,240	376	144	42	20	120
16	36	305	261	111	185	80	1,440	350	415	38	19	79
17	34	258	226	105	164	82	1,280	309	363	32	18	58
18	35	266	203	102	145	83	1,240	258	198	29	16	49
19	33	224	183	101	136	87	1,180	226	136	33	16	*43
20	33	185	151	104	140	85	895	*192	110	33	18	103
21	32	166	120	101	b125	84	665	168	88	30	21	155
22	31	155	117	99	b115	b78	680	144	74	26	21	104
23	43	153	91	98	b115	83	690	136	65	25	21	74
24	983	185	84	94	b105	83	595	*291	67	22	19	60
25	2,400	*625	83	89	b100	76	870	560	239	21	18	51
26	1,490	640	94	91	b102	b70	885	415	192	19	17	44
27	781	420	95	87	112	79	710	247	*119	19	15	39
28	430	530	95	85	108	78	540	187	85	19	14	36
29	250	730	96	88	101	87	390	153	67	19	13	33
30	196	630	110	89	-------	b125	295	131	58	74	13	44
31	198	-------	104	88	-------	b380	-------	126	-------	185	13	-------
Total	7,786	9,352	7,072	4,648	3,908	2,948	28,325	8,723	4,059	1,342	788	2,189
Mean	251	312	228	150	135	95.1	944	281	135	43.3	25.4	73.0
Cfsm	2.93	3.64	2.66	1.75	1.57	1.11	11.0	3.28	1.57	0.505	0.296	0.851
In.	3.37	4.05	3.07	2.01	1.69	1.28	12.28	3.78	1.76	0.58	0.34	0.95

Calendar year 1959: Max 2,400 Min 6.3 Mean 157 Cfsm 1.83 In. 24.84
Water year 1959-60: Max 2,400 Min 10 Mean 222 Cfsm 2.59 In. 35.16

Peak discharge (base, 1,150 cfs).--Oct. 24 (8:30 p.m.) 2,630 cfs (8.16 ft); Apr. 5 (7:30 p.m.) 2,280 cfs (7.59 ft); Apr. 15 (9 p.m.) 1,560 cfs (6.37 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

800. Lake Winnipesaukee at The Weirs, N. H.

Location.--Lat 43°36'20", long 71°27'25", 800 ft north of highway bridge at The Weirs, Belknap County.

Drainage area.--363 sq mi at outlet at Lakeport.

Records available.--September 1933 to September 1960. Prior to November 1937 month-end contents only, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 500.02 ft above mean sea level, datum of 1929. Prior to November 1937, staff and float gage at lake outlet at Lakeport at datum 0.53 ft higher.

Extremes.--Maximum daily gage height during year, 4.80 ft May 15; minimum daily, 1.72 ft Mar. 28, 29.
1937-60: Maximum daily gage height, 5.86 ft May 22, 23, 1954; minimum daily, 0.63 ft Dec. 11, 1941.

Remarks.--Lake used for recreation and conservation for development of water power. Total usable capacity, 18,240,000,000 cu ft. Draft limited by law to an average of 250 cfs during the seven days in any week between June 1 and Oct. 15 of any year when gage reading is at or below 502.4 ft above mean sea level. Stage regulated at outlet and by Wentworth, Merrymeeting (see p. 110), and other lakes. Contents given herein are computed from gage heights at 12 p.m. on last day of month, eliminating the effect of seiche and wind action.

Capacity table, water year 1959-60 (gage height, in feet, and contents, in millions of cubic feet)

1.5	12,900
2.0	13,880
3.0	15,840
4.0	17,840
5.0	19,850

Mean gage height, in feet, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.20	3.24	4.05	3.76	3.36	2.73	2.08	4.67	4.46	4.43	4.11	3.56
2	3.24	3.25	4.06	3.77	3.32	2.68	2.22	4.65	4.43	4.42	4.09	3.51
3	3.21	3.24	4.07	3.85	3.28	2.65	2.35	4.66	4.41	4.40	4.08	3.47
4	3.20	3.25	4.08	3.93	3.24	2.63	2.59	4.65	4.38	4.43	4.08	3.43
5	3.18	3.27	4.08	3.94	3.20	2.59	2.93	4.65	4.36	4.39	4.05	3.40
6	3.19	3.28	4.08	3.95	3.19	2.55	3.23	4.64	4.34	4.35	4.03	3.37
7	3.22	3.34	4.13	3.95	3.17	2.51	3.38	4.64	4.31	4.32	4.02	3.34
8	3.22	3.40	4.14	3.94	g3.12	2.47	3.51	4.63	4.29	4.30	3.99	3.31
9	3.26	3.40	4.14	g3.92	g3.11	2.42	3.60	4.66	4.28	4.25	3.95	3.28
10	3.24	3.41	4.14	g3.93	3.07	2.37	3.68	4.66	4.27	4.24	3.98	3.23
11	3.26	3.42	4.15	g3.93	3.09	2.31	3.75	4.69	4.26	4.21	3.97	3.23
12	3.18	3.42	4.23	g3.91	3.10	2.27	3.83	4.73	4.24	4.20	3.95	3.40
13	3.17	3.43	4.30	g3.88	3.09	2.23	3.91	4.78	4.22	4.17	3.94	3.67
14	3.15	3.44	4.28	3.84	3.09	2.17	4.01	4.79	4.21	4.20	3.89	3.70
15	3.13	3.48	4.29	3.83	3.07	2.13	4.11	4.80	4.29	4.19	3.89	3.70
16	3.10	3.49	4.22	3.80	3.04	2.08	4.22	4.79	4.40	4.16	3.92	3.70
17	3.08	3.49	4.20	3.77	3.01	2.05	4.29	4.78	4.41	4.15	3.89	3.68
18	3.04	3.48	4.16	g3.76	2.98	2.04	4.35	4.75	4.42	4.15	3.87	3.66
19	2.99	3.51	4.12	g3.75	3.06	2.01	4.39	4.71	4.43	4.16	3.86	3.65
20	2.96	3.50	4.04	g3.75	3.04	1.96	4.43	4.67	4.40	4.20	3.84	3.70
21	2.95	3.51	4.01	g3.72	3.00	1.92	4.45	4.63	4.38	4.18	3.84	3.73
22	2.92	3.52	3.96	g3.71	2.98	1.88	4.51	4.56	4.38	4.17	3.84	3.72
23	2.95	3.53	3.90	3.67	2.94	1.84	4.55	4.51	4.38	4.16	3.80	3.70
24	3.12	3.57	3.86	3.64	2.90	1.81	4.58	4.57	4.41	4.13	3.77	3.70
25	3.22	3.69	3.83	3.60	2.87	1.76	4.66	4.63	4.50	4.12	3.74	3.67
26	3.22	3.73	3.78	3.56	2.90	1.75	4.71	4.62	4.51	4.10	3.70	3.65
27	3.22	3.80	3.75	3.52	2.87	1.73	4.74	4.58	4.51	4.09	3.67	3.63
28	3.20	3.89	3.77	3.52	2.83	1.72	4.74	4.55	4.51	4.09	3.64	3.61
29	3.18	3.98	3.82	3.48	2.79	1.72	4.72	4.53	4.48	4.09	3.62	3.60
30	3.19	4.02	3.80	3.45	-------	1.75	4.69	4.50	4.46	4.12	3.61	3.62
31	3.21	-------	3.78	3.40	-------	1.90	-------	4.48	-------	4.12	3.59	-------
(†)	16,320	17,920	17,380	16,600	15,370	13,880	19,190	18,780	18,720	18,080	17,000	17,060
(‡)	+52.3	+617	-202	-291	-491	-556	+2,049	-153	-23.1	-239	-403	+23.1

Calendar year 1959..... ‡ +90.1
Water year 1959-60..... ‡ +27.8

† Contents, in millions of cubic feet, at 12 p.m. on last day of month.
‡ Change in contents, equivalent in cubic feet per second.
g Computed from once-daily tape-gage readings.

805. Lake Winnipesaukee Outlet at Lakeport, N. H.

Location.--Lat 43°32'55", long 71°27'55", 100 ft upstream from highway bridge across Paugus Bay at Lakeport, Belknap County.

Drainage area.--363 sq mi.

Records available.--January 1860 to December 1911 (monthly gage heights only), June 1933 to September 1960.

Gage.--Water-stage recorder, Keeler deflection meter, and measuring flume. Datum of gage is 500.55 ft above mean sea level, datum of 1929. January 1860 to December 1911, staff gage at site 150 ft downstream at same datum. June 1, 1933, to Sept. 30, 1936, staff gage and continuous-recording current meter at same site and datum. Oct. 1, 1936, to May 23, 1944, discharge computed from flow over spillway and through gates and wheels at site 150 ft downstream.

Average discharge.--27 years, 544 cfs (adjusted for storage).

Extremes.--Maximum daily discharge during year, 2,020 cfs Dec. 16; minimum daily, 200 cfs June 11.
1933-60: Maximum daily discharge, 2,890 cfs Mar. 31, 1936; minimum daily, 5 cfs several days during April, May, and June 1957.

Remarks.--Records good except those for periods of indefinite deflection-velocity relation or no deflection record, which are fair. Flow completely regulated by Winnipesaukee (see preceding page), Wentworth, Merrymeeting (see p. 110), and other lakes. Daily discharge computed from relation between discharge, stage, and deflection of vane in measuring flume.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	295	735	610	1,480	1,750	255	1,780	1,220	605	260	520
2	260	270	735	595	1,450	1,770	260	1,330	1,220	600	260	515
3	290	255	730	600	1,440	1,740	315	975	1,200	555	260	530
4	325	310	755	800	1,430	1,760	320	965	1,200	570	260	520
5	310	280	715	940	1,430	1,680	270	985	1,190	625	260	515
6	270	265	715	940	1,380	1,680	265	980	1,020	*610	260	550
7	255	275	680	*930	1,380	1,680	270	950	570	*600	255	525
8	250	340	740	940	1,390	1,620	265	940	575	600	300	*510
9	250	325	735	910	*1,400	1,620	275	1,000	590	585	285	495
10	290	270	735	905	*1,400	1,620	280	970	490	560	285	510
11	330	265	755	*1,010	1,370	*1,610	305	980	200	620	*285	510
12	335	265	715	*1,100	1,360	1,600	265	1,140	540	600	285	485
13	310	265	e1,410	1,110	1,400	1,580	270	1,310	620	480	455	530
14	380	280	e1,750	1,100	1,470	1,570	265	1,290	500	285	530	500
15	*400	310	e1,970	1,100	1,420	1,560	355	1,390	280	280	560	505
16	*400	340	e2,020	1,070	1,420	1,550	555	1,510	285	280	530	490
17	410	310	e2,000	1,060	1,420	1,540	595	1,700	300	290	520	495
18	410	310	e1,990	1,100	1,450	1,520	870	1,690	285	320	525	495
19	455	*310	e1,810	1,080	1,460	1,510	1,100	*1,720	315	255	520	565
20	440	*310	e1,860	1,080	1,460	1,500	1,100	*1,740	340	275	510	545
21	440	310	e1,710	1,140	1,450	1,490	925	1,720	305	280	525	540
22	450	345	1,440	1,220	1,490	1,480	540	1,760	310	310	545	530
23	440	315	1,460	1,210	1,480	1,470	585	1,490	295	280	515	540
24	430	265	1,370	1,190	1,470	1,460	610	1,080	255	290	530	540
25	415	295	1,290	1,350	1,540	1,170	625	1,350	300	290	525	510
26	405	345	1,270	1,430	1,700	635	810	1,620	305	290	520	540
27	320	365	1,340	1,440	1,690	640	1,300	1,460	335	275	525	500
28	315	550	1,090	1,430	1,680	650	1,620	1,220	455	270	510	505
29	315	720	620	1,460	1,790	650	1,640	1,220	595	275	530	490
30	310	755	615	1,440	---------	650	1,760	1,210	610	260	510	485
31	305	---------	610	1,400	---------	515	---------	1,250	---------	260	515	---------
Total	10,785	10,115	36,370	33,690	42,700	43,270	18,870	40,705	16,705	12,675	13,115	15,490
Mean	348	337	1,173	1,087	1,472	1,396	629	1,313	557	409	424	516
(†)	+52.3	+617	-202	-291	-491	-556	+2,049	-153	-23.1	-239	-403	+23.1

Adjusted for change in contents in Lake Winnipesaukee

Mean	400	954	972	796	982	840	2,678	1,160	534	170	21.1	539
Cfsm	1.10	2.63	2.68	2.19	2.71	2.31	7.38	3.20	1.47	0.468	0.058	1.48
In.	1.27	2.93	3.09	2.53	2.92	2.67	8.23	3.68	1.64	0.54	0.07	1.66

	Observed			Adjusted				
Calendar year 1959:	Max 2,020	Min 240	Mean 449	Mean 540	Cfsm 1.49	In. 20.18
Water year 1959-60:	Max 2,020	Min 200	Mean 805	Mean 833	Cfsm 2.29	In. 31.23

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Lake Winnipesaukee.
e Deflection-velocity relation indefinite; discharge computed from deflection record adjusted on basis of appearance of deflection record and comparison with other periods of similar gate openings.
Note.--No deflection record Mar. 12-25. Aug. 26 (no gage-height record Mar. 20-25); discharge computed on basis of 1 discharge measurement, available gage heights, observer's record of gate operation, and comparison with other periods of similar gate openings.

810. Winnipesaukee River at Tilton, N. H.

Location.--Lat 43°26'30", long 71°35'15", on right bank at Tilton, Belknap County, 0.3 mile upstream from Packer Brook.

Drainage area.--471 sq mi.

Records available.--January 1937 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 441.87 ft above mean sea level, unadjusted.

Average discharge.--23 years, 709 cfs.

Extremes.--Maximum discharge during year, 3,390 cfs Apr. 5 (gage height, 7.37 ft); minimum daily, 287 cfs July 26, 27, Aug. 7.
1937-60: Maximum discharge, 3,810 cfs Sept. 21, 1938 (gage height, 7.90 ft); maximum gage height, 7.93 ft Mar. 27, 1953; minimum daily discharge, 48 cfs Aug. 31, 1941.

Remarks.--Records good. Flow regulated by powerplants and by Winnipesaukee (see p. 110), Winnisquam, Wentworth, Merrymeeting (see p. 110), and other lakes above station.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.1	287	6.0	2,000
4.0	660	7.1	3,090
5.0	1,250		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	294	410	1,190	1,070	1,540	b1,650	1,680	1,770	1,380	554	515	515
2	316	457	1,160	933	1,530	b1,650	1,900	1,920	1,370	563	457	515
3	330	591	1,140	745	1,530	b1,700	1,760	1,810	1,360	563	312	515
4	330	605	1,130	1,290	*1,510	1,790	1,980	1,460	1,370	577	291	515
5	334	625	1,120	*1,500	1,490	1,780	*2,910	1,300	1,380	572	291	515
6	390	601	1,110	1,350	1,510	1,750	3,020	1,080	1,470	630	291	515
7	550	519	1,150	b1,120	b1,520	1,730	2,250	1,060	1,310	*710	287	*511
8	582	591	1,170	b1,090	b1,520	1,720	1,720	1,060	982	568	*291	511
9	610	660	1,130	b1,070	1,520	1,700	1,590	1,080	730	559	291	465
10	541	630	1,100	b1,060	1,520	*b1,690	1,500	1,140	554	554	298	437
11	371	605	1,080	b1,070	1,570	b1,690	1,280	1,380	449	554	305	361
12	338	577	1,100	1,170	1,780	1,690	1,260	1,450	485	554	301	529
13	402	586	b1,250	1,180	1,750	1,680	1,300	1,570	532	554	298	1,320
14	550	591	b1,550	1,180	1,730	1,660	*1,280	1,750	537	568	386	1,360
15	*559	630	1,780	b1,170	b1,660	1,640	1,270	1,720	545	568	519	1,100
16	485	630	1,910	b1,170	b1,610	1,630	1,310	1,730	745	477	532	934
17	342	620	1,980	b1,170	1,550	1,630	1,260	1,750	766	323	528	725
18	400	650	2,010	b1,170	1,540	1,640	1,200	1,780	506	309	528	559
19	545	630	b2,080	b1,170	b1,590	1,630	1,160	1,850	345	316	528	532
20	375	*610	b2,060	b1,170	b1,680	1,620	1,130	*1,860	323	392	523	715
21	396	605	b2,010	1,200	1,660	1,590	1,120	1,860	323	519	528	844
22	532	605	b1,940	1,310	1,640	1,520	1,130	1,860	319	457	528	814
23	485	601	1,810	1,330	b1,590	1,480	1,130	1,860	327	309	523	680
24	534	620	1,540	1,320	1,530	1,390	1,110	1,850	334	294	519	559
25	1,040	844	1,510	1,330	1,530	b1,360	1,240	1,780	594	294	519	541
26	1,090	874	1,500	1,340	b1,640	b1,230	1,260	1,830	844	287	519	537
27	832	844	1,500	1,440	b1,650	874	1,250	1,820	740	287	515	537
28	630	994	1,520	1,500	b1,660	856	1,570	1,780	577	291	515	537
29	605	1,400	1,530	1,540	b1,660	1,020	1,700	1,660	554	291	515	537
30	453	1,310	1,370	1,540	-------	1,100	1,720	1,560	554	305	519	550
31	394	-------	1,090	1,540	-------	1,280	-------	1,470	-------	383	519	-------
Total	15,635	20,515	45,520	38,238	46,210	47,370	45,990	49,850	22,305	14,182	13,491	19,285
Mean	504	684	1,468	1,233	1,593	1,528	1,533	1,608	744	457	435	643
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 2,080 Min 255 Mean 635 Cfsm - In. -
Water year 1959-60: Max 3,020 Min 287 Mean 1,034 Cfsm - In. -

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

815. Merrimack River at Franklin Junction, N. H.

Location.--Lat 43°25'25", long 71°39'10", on right bank at Franklin Junction, Merrimack County, 1 mile downstream from confluence of Pemigewasset and Winnipesaukee Rivers.

Drainage area.--1,507 sq mi.

Records available.--July 1903 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 250.4 ft above mean sea level, unadjusted. Prior to Sept. 13, 1923, chain gage at bridge 350 ft downstream at same datum.

Average discharge.--55 years (1905-60), 2,794 cfs.

Extremes.--Maximum discharge during year, 21,800 cfs Apr. 5 (gage height, 16.02 ft); minimum daily, 447 cfs July 28.
1903-60: Maximum discharge, 83,000 cfs Mar. 19, 1936 (gage height, 36.4 ft, from floodmarks), from rating curve extended above 30,000 cfs on basis of slope-area measurement and computation of flow over dam at gage height 29.5 ft, and velocity-area study; minimum daily, 209 cfs Sept. 14, 1957.

Remarks.--Records excellent except those for periods of ice effect, no gage-height record, or backwater from aquatic vegetation, which are good. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Little Squam, Newfound, Winnipesaukee, Winnisquam, Wentworth, Merrymeeting, and other lakes. See pages 82,110, for description and month-end contents of many of these reservoirs.

Revisions (water years).--WSP 401: 1914. WSP 641: 1923(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1231: 1911-13, 1916-17(M), 1919(M), 1922(M).

Rating table, water year 1959-60, except periods of ice effect or backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

3.5	420	9.0	8,060
4.0	735	11.0	12,300
5.0	1,630	13.0	16,100
7.0	4,400	15.0	19,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	757	4,100	8,880	a2,700	2,910	3,100	14,700	6,200	3,210	1,450	3,050	946
2	1,050	4,820	6,500	a1,900	2,790	2,980	15,800	6,880	3,190	865	2,010	853
3	1,310	4,100	5,510	a3,900	2,770	2,970	12,400	6,360	3,250	1,200	1,340	850
4	1,120	3,460	4,990	a5,000	2,720	3,080	13,000	5,230	3,160	1,710	1,280	891
5	846	3,190	4,270	*a7,000	2,700	2,550	19,300	4,880	2,940	1,890	1,280	790
6	944	3,320	3,810	4,720	2,400	2,730	16,800	4,820	3,320	*1,610	978	969
7	1,330	4,610	4,590	3,810	2,880	3,000	*15,900	3,820	2,860	1,580	956	933
8	1,940	5,300	6,860	3,560	2,800	3,070	16,500	4,450	2,420	1,230	*1,470	950
9	2,350	4,610	5,980	b3,300	2,860	2,810	12,500	4,000	2,030	783	1,280	892
10	2,060	3,810	4,860	b2,850	*2,860	2,960	6,700	6,440	1,790	978	1,310	808
11	1,300	3,260	4,290	b2,550	3,110	2,900	6,130	6,840	1,160	1,260	1,180	766
12	1,210	3,040	3,970	b2,750	5,010	2,230	6,320	6,280	1,200	1,110	849	2,470
13	1,250	3,000	6,870	2,760	5,670	2,620	7,700	6,940	1,760	1,180	650	6,220
14	1,650	2,980	9,830	2,770	4,940	*2,680	9,060	7,760	1,370	1,250	782	6,380
15	1,090	5,740	7,200	2,740	4,300	2,740	10,400	7,340	1,840	1,190	1,400	3,830
16	*1,360	7,190	5,960	2,900	3,950	2,760	14,300	10,200	4,300	1,050	1,130	2,200
17	587	5,060	5,460	b2,850	3,450	b2,700	14,000	10,300	4,330	960	1,120	1,150
18	914	4,450	5,200	2,780	3,400	2,950	13,800	7,720	2,800	925	1,180	726
19	1,130	4,080	5,070	2,740	3,520	2,300	15,300	5,920	2,020	1,000	1,180	1,060
20	1,200	*3,540	4,800	2,760	3,580	2,900	12,600	5,200	1,720	1,300	737	1,800
21	1,130	3,070	4,430	2,740	3,350	2,730	8,840	4,670	1,440	1,440	729	1,940
22	1,360	3,000	a4,000	2,820	3,250	2,540	7,820	4,140	1,420	1,270	745	1,940
23	1,330	2,730	a3,650	2,840	3,210	2,510	9,060	*4,030	1,420	860	758	1,830
24	5,160	3,170	a3,300	2,610	3,150	2,440	8,680	4,640	1,410	856	729	763
25	16,400	9,120	a3,000	2,640	3,180	2,410	9,450	7,340	1,880	1,090	757	1,340
26	16,100	12,500	a3,200	2,870	3,280	b1,700	11,000	7,520	1,950	960	754	1,320
27	15,500	7,840	a3,200	2,790	3,290	1,510	9,490	5,790	1,880	905	730	1,280
28	15,500	9,280	a3,200	2,770	2,950	1,870	8,110	4,900	1,690	447	754	1,240
29	15,200	17,600	a3,300	2,770	2,960	2,440	7,820	4,430	1,610	742	771	1,280
30	6,500	*15,600	a3,200	2,350	--------	2,610	6,740	3,900	1,440	868	755	1,400
31	3,320	--------	a3,000	2,820	--------	5,070	--------	3,400	--------	2,300	871	--------
Total	122,898	167,570	152,380	96,360	97,240	83,860	340,220	182,360	66,810	36,259	33,445	49,817
Mean	3,964	5,586	4,915	3,108	3,353	2,705	11,340	5,883	2,227	1,170	1,079	1,661
Cfsm	2.63	3.71	3.26	2.06	2.22	1.79	7.52	3.90	1.48	0.776	0.716	1.10
In.	3.03	4.14	3.76	2.38	2.40	2.07	8.40	4.50	1.65	0.89	0.83	1.23

Calendar year 1959: Max 17,600 Min 288 Mean 2,786 Cfsm 1.85 In. 25.08
Water year 1959-60: Max 19,300 Min 447 Mean 3,905 Cfsm 2.59 In. 35.28

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, powerplant records, and records for other stations in the Merrimack River basin.
b Stage-discharge relation affected by ice.
Note.--Backwater from aquatic vegetation Oct. 1-24, May 30 to Sept. 12, Sept. 15-30. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

820. Contoocook River at Peterboro, N. H.

Location.--Lat 42°51'45", long 71°57'35", on left bank 1,100 ft downstream from milldam, 1 mile south of Peterboro, Hillsboro County, and 1½ miles upstream from Nubanusit Brook.

Drainage area.--68.1 sq mi.

Records available.--July 1945 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

Average discharge.--15 years, 125 cfs.

Extremes.--Maximum discharge during year, 2,260 cfs Sept. 12 (gage height, 5.93 ft); minimum daily, 13 cfs Sept. 11.

1945-60: Maximum discharge, 2,640 cfs Nov. 26, 1950 (gage height, 6.35 ft), from rating curve extended above 1,700 cfs by logarithmic plotting; minimum daily, 0.8 cfs Sept. 15, 16, 1953.

Flood in September 1938 reached a stage of about 15 ft, from information by local residents.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by mill and reservoirs above station.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.2	22	3.0	440	1.0	9.8	2.5	244
1.5	51	4.0	900	1.2	20	3.0	415
2.0	133	6.0	2,320	1.5	46	4.0	900
2.5	262			2.0	122	5.0	1,540

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	217	338	110	80	95	825	193	178	101	76	*42
2	85	228	290	115	50	92	700	241	169	54	49	41
3	37	228	276	361	*75	90	636	171	269	47	28	19
4	29	203	262	461	80	87	1,050	160	267	78	*44	14
5	59	217	202	374	70	76	1,650	186	164	57	73	15
6	62	206	177	308	83	74	1,370	151	160	41	65	14
7	136	289	401	253	91	105	888	112	142	36	27	21
8	250	272	419	217	105	74	685	78	136	33	52	35
9	232	253	331	160	96	*100	570	161	124	30	48	31
10	161	237	280	130	89	88	500	260	122	28	109	28
11	101	217	246	150	120	82	463	244	83	26	128	13
12	126	198	302	160	205	70	*605	244	43	25	79	632
13	131	217	730	160	150	67	745	302	76	23	41	796
14	124	151	519	150	140	80	765	270	106	47	32	384
15	*118	129	360	140	150	74	830	188	422	71	25	191
16	112	168	301	110	120	78	765	252	528	48	58	138
17	40	175	272	95	110	71	610	204	320	36	61	101
18	43	*198	253	110	105	73	560	*181	162	68	40	46
19	85	166	243	120	105	56	479	166	108	66	39	74
20	74	152	166	115	96	60	384	164	124	102	28	217
21	78	119	175	110	100	92	334	97	122	97	70	202
22	90	72	180	105	120	76	314	80	122	43	71	151
23	109	130	165	90	105	66	256	125	113	78	61	124
24	486	189	140	85	95	100	250	329	108	22	54	83
25	810	504	90	90	90	53	373	415	90	21	41	46
26	573	340	93	95	77	63	334	334	52	42	38	72
27	356	246	100	90	95	65	296	227	*83	85	24	104
28	259	545	*166	88	76	89	314	112	108	24	19	102
29	228	560	200	87	100	85	282	92	104	49	19	102
30	217	400	193	77	-------	145	204	86	102	40	31	*138
31	187	-------	170	70	-------	596	-------	137	-------	86	44	-------
Total	5,457	7,226	8,040	4,786	2,958	3,022	18,037	5,962	4,707	1,604	1,574	3,976
Mean	176	241	259	154	102	97.5	601	192	157	51.7	50.8	133
Cfsm	2.58	3.54	3.80	2.26	1.50	1.43	8.83	2.82	2.31	0.759	0.746	1.95
In.	2.98	3.95	4.39	2.61	1.62	1.65	9.85	3.26	2.57	0.88	0.86	2.17

Calendar year 1959: Max 1,300 Min 9.0 Mean 136 Cfsm 2.00 In. 27.15
Water year 1959-60: Max 1,650 Min 13 Mean 184 Cfsm 2.70 In. 36.79

Peak discharge (base, 700 cfs).--Oct. 24 (8:30 p.m.) 1,450 cfs (4.87 ft); Nov. 28 (6:30 to 7 p.m.) 936 cfs (4.06 ft); Dec. 13 (10:30 to 11 a.m.) 852 cfs (3.92 ft); Mar. 31 (8:30 to 9 p.m.) 918 cfs (4.03 ft); Apr. 5 (8 p.m.) 1,900 cfs (5.47 ft); Apr. 15 (8:30 to 9:30 p.m.) 900 cfs (4.00 ft); June 15 (7:30 to 8 p.m.) 1,150 cfs (4.41 ft); Sept. 12 (8:30 p.m.) 2,260 cfs (5.93 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 21-25, Dec. 31 to Jan. 2, Jan. 9 to Feb. 5, Feb. 8, 13-19, Feb. 21 to Mar. 4, Mar. 6-12, 14-16, 22-27.

830. Nubanusit Brook near Peterboro, N. H.

Location.--Lat 42°53'10", long 71°58'25", on left bank 1¼ miles downstream from Edward MacDowell Reservoir, 1.3 miles northwest of Peterboro, Hillsboro County, and 1½ miles upstream from mouth.

Drainage area.--46.9 sq ml.

Records available.--October 1920 to September 1931, July 1945 to September 1960. Monthly discharge only for October 1920, published in WSP 1301.

Gage.--Water-stage recorder. Altitude of gage is 790 ft (from topographic map). Prior to Oct. 1, 1931, at site 550 ft downstream at different datum.

Average discharge.--26 years, 86.3 cfs.

Extremes.--Maximum discharge during year, 699 cfs Apr. 12 (gage height, 4.54 ft); minimum daily, 6.3 cfs Sept. 10.
1920-31, 1945-60: Maximum discharge, 1,130 cfs Apr. 11, 1931 (gage height, 5.59 ft, site and datum then in use), from rating curve extended above 380 cfs; minimum daily, 0.5 cfs Aug. 1, 1926.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by mills and Nubanusit Lake, Edward MacDowell Reservoir since March 1950 (see p. 110), and other reservoirs above station.

Revisions (water years).--WSP 561: 1921(M). WSP 1051: Drainage area.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	4.5	2.0	108
.7	6.6	2.5	182
.9	13	3.0	281
1.2	29	4.0	535
1.5	54	4.5	685

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	180	331	92	71	75	511	120	142	53	*36	34
2	41	168	303	90	67	68	613	130	131	28	49	35
3	25	148	268	109	*64	70	607	118	124	19	48	8.6
4	12	137	217	233	64	72	279	104	119	28	47	9.5
5	36	133	160	319	61	76	170	70	114	44	48	9.5
6	39	131	152	294	59	82	169	53	116	40	20	34
7	45	151	180	258	75	83	481	40	104	35	11	32
8	90	168	213	191	84	75	*637	22	94	32	29	32
9	123	189	219	150	77	*70	685	69	83	26	45	32
10	116	182	200	130	72	69	670	137	72	22	50	6.3
11	108	162	186	120	85	67	673	167	59	44	48	8.2
12	98	143	172	110	137	64	685	180	50	53	48	80
13	75	119	157	98	150	68	664	204	66	54	22	146
14	61	98	292	90	146	72	649	217	60	58	12	250
15	*50	98	368	87	130	66	646	215	69	57	38	314
16	46	116	362	86	120	64	634	208	101	39	50	281
17	16	118	301	77	100	66	595	184	106	20	50	204
18	19	*119	252	82	92	74	541	*162	86	42	50	128
19	47	113	210	80	98	99	442	143	71	54	50	60
20	45	104	151	77	100	130	362	127	72	49	21	76
21	43	90	127	74	105	101	264	108	61	46	11	102
22	43	85	120	73	100	78	215	94	57	44	36	97
23	45	93	110	66	92	75	177	100	56	29	35	87
24	69	94	94	60	86	74	152	135	55	6.7	34	63
25	28	186	86	68	78	74	175	213	41	31	33	54
26	286	260	85	67	84	67	186	229	23	41	33	54
27	553	262	87	65	84	71	175	223	52	43	8.2	47
28	520	268	102	67	85	78	172	200	57	43	8.8	43
29	496	317	108	71	85	98	159	175	*56	46	34	43
30	417	345	*109	64	-------	124	128	154	54	24	32	*45
31	210	-------	100	60	-------	292	-------	143	-------	13	*33	-------
Total	3,841	4,777	5,822	3,508	2,651	2,642	12,516	4,444	2,351	1,163.7	1,070.0	2,415.1
Mean	124	159	188	113	91.4	85.2	417	143	78.4	37.5	34.5	80.5
Cfsm	2.64	3.39	4.01	2.41	1.95	1.82	8.89	3.05	1.67	0.800	0.736	1.72
In.	3.05	3.79	4.62	2.78	2.10	2.10	9.92	3.52	1.86	0.92	0.85	1.92

Calendar year 1959: Max 607 Min 5.6 Mean 101 Cfsm 2.15 In. 29.22
Water year 1959-60: Max 685 Min 6.3 Mean 129 Cfsm 2.75 In. 37.43

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23-25, Dec. 31 to Jan. 2, Jan. 9-14, 16-18, 20, 23-27, Jan. 30 to Feb. 1, Feb. 4, 5, 7, 8, 13, 15-17, 20-25, Feb. 28 to Mar. 12, Mar. 14-16, 20, 22-27, 29. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

840. North Branch Contoocook River near Antrim, N. H.

Location.--Lat 43°04'55", long 71°58'40", on right bank at North Branch, 4 miles northwest of Antrim, Hillsboro County, and 6 miles upstream from mouth.

Drainage area.--54.8 sq mi.

Records available.--August 1924 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 882.38 ft above mean sea level (levels by Corps of Engineers). Prior to Nov. 14, 1932, staff gage and Nov. 14, 1932, to Jan. 7, 1941, float gage, at same site and datum.

Average discharge.--36 years, 102 cfs.

Extremes.--Maximum discharge during year, 1,790 cfs Oct. 25 (gage height, 6.44 ft); minimum, 3.8 cfs Sept. 11.
1924-60: Maximum discharge, 5,000 cfs Mar. 19, 1936 (gage height, 9.30 ft, from floodmarks), from rating curve extended above 1,600 cfs on basis of slope-area measurements at gage heights 8.4 and 9.3 ft; minimum, 0.3 cfs Sept. 18, 1948, Aug. 5, 6, 1955.

Remarks.--Records good except those for period of ice effect, which are fair. Flow regulated by Highland Lake and several ponds above station.

Revisions (water years).--WSP 756: Drainage area. WSP 1231: 1925(M), 1926, 1927(M), 1928, 1929-30(M), 1933-36, 1938-40, 1944.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
0.3	6.3	3.0	304	0.2	3.0	2.5	189
.6	13	4.0	580	.4	6.6	3.0	267
1.0	28	5.0	985	.6	12	4.0	580
1.5	65	6.0	1,500	1.0	30	5.0	985
2.0	123	6.5	1,830	1.5	66	6.0	1,500
2.5	203			2.0	117	6.5	1,830

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	224	476	89	68	80	680	224	127	35	37	8.6
2	9.1	226	376	87	*66	82	590	213	124	32	29	7.8
3	8.2	203	306	215	64	78	556	192	117	29	*26	6.8
4	8.6	176	255	340	61	75	860	97	137	31	26	5.6
5	9.5	160	216	290	60	80	1,540	55	134	*27	23	5.6
6	16	155	190	250	68	70	1,600	46	121	24	22	5.0
7	31	187	233	220	82	64	1,110	39	117	22	19	4.4
8	50	241	255	195	79	*60	753	36	110	22	18	4.6
9	69	243	261	170	80	56	562	48	97	18	15	5.2
10	76	214	267	150	72	54	454	112	80	13	20	4.6
11	61	185	233	135	100	54	385	137	68	11	25	6.0
12	47	163	222	120	185	56	*385	179	60	11	24	140
13	36	144	340	115	185	56	445	220	52	10	20	632
14	30	136	386	105	180	54	524	234	42	33	18	615
15	*25	154	359	100	165	52	657	224	52	34	16	463
16	21	162	304	98	140	51	846	204	85	26	34	322
17	19	157	269	94	115	50	850	*181	69	20	33	217
18	19	158	232	90	105	58	773	155	88	18	24	148
19	18	*150	201	84	120	56	725	137	81	19	20	106
20	16	136	175	80	130	55	626	117	73	18	20	175
21	15	126	155	79	120	53	506	101	64	17	20	301
22	14	123	140	78	110	52	427	88	56	15	18	391
23	16	120	125	76	100	51	368	81	47	13	16	350
24	276	179	115	74	95	49	328	141	50	12	14	263
25	1,570	335	120	70	90	48	362	294	73	11	13	191
26	1,280	389	110	66	96	47	355	325	70	10	12	140
27	769	361	100	62	100	46	335	301	66	10	11	110
28	509	491	94	70	90	46	322	246	58	11	9.7	88
29	359	626	105	74	84	50	294	189	51	8.4	8.8	76
30	267	594	*110	71	-------	75	254	154	44	21	8.8	75
31	214	-------	98	69	-------	320	-------	133	-------	48	8.8	-------
Total	5,865.5	6,918	6,828	3,816	3,010	2,078	18,472	4,903	2,433	629.4	609.1	4,867.4
Mean	189	231	220	123	104	67.0	616	158	81.1	20.3	19.6	162
Cfsm	3.45	4.22	4.01	2.24	1.90	1.22	11.2	2.88	1.48	0.370	0.358	2.96
In.	3.98	4.69	4.63	2.59	2.04	1.41	12.54	3.33	1.65	0.43	0.41	3.30

Calendar year 1959: Max 1,570 Min 4.2 Mean 123 Cfsm 2.24 In. 30.53
Water year 1959-60: Max 1,600 Min 4.4 Mean 165 Cfsm 3.01 In. 41.00

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 21 to Apr. 2 (no gage-height record Dec. 22-30). Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

845. Beards Brook near Hillsboro, N. H.

Location.--Lat 43°06'50", long 71°55'35", on right bank 300 ft upstream from bridge on State Highway 9, 500 ft upstream from mouth, and 1½ miles west of Hillsboro, Hillsboro County.

Drainage area.--55.4 sq mi.

Records available.--October 1945 to September 1960. Monthly discharge only for October 1945, published in WSP 1301.

Gage.--Water-stage recorder. Altitude of gage is 595 ft (from topographic map).

Average discharge.--15 years, 98.9 cfs.

Extremes.--Maximum discharge during year, 2,190 cfs Oct. 25 (gage height, 6.53 ft); minimum, 2.0 cfs Oct. 1.
1945-60: Maximum discharge, that of Oct. 25, 1959; maximum gage height, 6.59 ft Nov. 26, 1950; minimum discharge, 1.1 cfs Oct. 3, 1948.

Remarks.--Records good except those for periods of ice effect and those below 5 cfs, which are fair.

Revisions (water years).--WSP 1231: 1948.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24, Sept. 13-30				Oct. 25 to Sept. 12			
1.1	1.7	2.2	72	1.3	3.0	2.5	159
1.2	2.9	2.5	137	1.4	5.0	3.0	330
1.4	6.0	3.0	308	1.5	8.2	5.0	1,300
1.6	12	3.5	500	1.6	13	6.0	1,870
1.8	25	4.0	705	1.8	28	6.5	2,170
2.0	44	5.0	1,180	2.1	68		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	133	283	74	46	76	860	174	107	20	65	6.2
2	3.8	131	220	62	*46	74	900	185	121	17	36	6.2
3	6.2	116	182	200	45	70	750	154	114	16	22	5.3
4	4.4	111	159	290	44	65	1,250	128	119	24	15	4.8
5	4.2	111	146	260	48	78	2,030	114	96	*20	*12	5.0
6	6.6	109	131	215	60	76	*1,420	100	226	14	10	4.8
7	17	143	233	190	89	72	790	91	168	12	9.4	4.0
8	36	204	346	175	86	*68	549	81	107	9.8	7.4	3.8
9	62	174	258	145	78	62	410	136	81	9.4	7.1	3.8
10	93	143	201	130	66	60	374	272	66	9.0	9.8	3.2
11	67	121	159	110	87	60	354	230	55	18	15	3.8
12	48	107	162	105	200	60	*438	244	46	13	15	299
13	*37	94	459	100	190	60	685	272	40	9.4	12	970
14	29	89	438	94	175	57	755	283	35	26	9.4	428
15	22	116	290	88	160	55	905	238	65	36	7.8	239
16	18	*121	238	84	145	52	935	*198	182	24	11	137
17	16	*116	198	78	130	55	665	171	119	36	13	87
18	14	131	171	74	115	58	590	143	91	19	9.8	66
19	14	119	151	68	110	63	540	131	74	20	8.2	54
20	13	109	136	66	135	65	366	109	65	26	10	430
21	13	91	125	62	120	64	290	91	58	18	27	556
22	12	85	110	60	110	63	283	81	47	14	65	301
23	16	81	98	58	96	62	272	74	40	11	48	197
24	328	94	92	55	90	58	244	208	46	9.4	30	132
25	1,570	434	80	53	86	57	366	576	89	7.1	19	100
26	725	430	78	52	81	55	394	362	78	5.6	13	80
27	366	269	74	51	92	54	306	241	54	5.0	10	64
28	230	454	68	48	87	54	290	179	40	5.3	9.0	*57
29	165	720	62	48	83	78	238	138	30	20	7.4	52
30	126	406	*81	49	-------	110	191	105	25	37	6.6	62
31	98	-------	78	48	-------	340	-------	96	-------	102	6.6	-------
Total	4,162.4	5,562	5,507	3,192	2,900	2,281	18,440	5,605	2,484	613.0	546.9	4,361.9
Mean	134	185	178	103	100	73.6	615	181	82.8	19.8	17.6	145
Cfsm	2.42	3.34	3.21	1.86	1.81	1.33	11.1	3.27	1.49	0.357	0.318	2.62
In.	2.79	3.73	3.70	2.14	1.95	1.53	12.38	3.76	1.67	0.41	0.37	2.93

Calendar year 1959: Max 1,570 Min 1.6 Mean 99.2 Cfsm 1.79 In. 24.31
Water year 1959-60: Max 2,030 Min 2.2 Mean 152 Cfsm 2.74 In. 37.36

Peak discharge (base, 910 cfs).--Oct. 25 (1:30 to 2:30 a.m.) 2,190 cfs (6.53 ft); Apr. 1 (time unknown) about 1,000 cfs; Apr. 5 (4 to 4:30 p.m.) 2,150 cfs (6.46 ft); Apr. 16 (3 a.m.) 1,100 cfs (4.64 ft); Sept. 13 (4 a.m.) 1,300 cfs (5.24 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21 to Feb. 5, Feb. 8 to Mar. 12, Mar. 14-16, Mar. 21 to Apr. 4.

850. Contoocook River near Henniker, N. H.

Location.--Lat 43°09'10", long 71°51'25", on right bank 1.6 miles downstream from Sand Brook and 2.2 miles southwest of Henniker, Merrimack County.

Drainage area.--368 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 475 ft (from topographic map). Prior to Dec. 18, 1939, staff gage at same site and datum.

Average discharge.--21 years, 648 cfs.

Extremes.--Maximum discharge during year, 9,440 cfs Apr. 6 (gage height, 13.12 ft); minimum daily, 66 cfs July 8.

1939-60: Maximum discharge, 9,460 cfs (revised) June 26, 1944 (gage height, 13.13 ft); minimum daily, 19 cfs Oct. 29, 1940.

Revisions.--The maximum discharge for the water year 1944 has been revised to 9,460 cfs June 26, 1944 (gage height, 13.13 ft), superseding figure published in WSP 1001.

Maximum discharge known, 22,200 cfs Sept. 21, 1938 (gage height, 21.3 ft, from flood-marks), from rating curve extended above 7,500 cfs on basis of computations of flow over dams at gage heights 12.72 and 21.3 ft.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by powerplants and by Nubanusit Lake, Edward MacDowell Reservoir (see p. 110) since March 1950, Highland Lake, Jackman Reservoir, and other reservoirs above station.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.4	58	8.0	1,320
4.5	87	9.0	2,270
5.0	129	11.0	5,360
5.5	220	13.0	9,200
6.0	340	13.2	9,600
7.0	700		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	1,230	2,370	567	513	600	3,260	1,230	968	406	308	114
2	211	1,160	1,930	488	*550	591	4,230	1,250	1,090	320	254	118
3	140	1,080	1,620	640	526	612	4,380	1,220	1,050	178	*210	114
4	143	895	1,420	1,740	516	584	5,110	1,070	1,170	117	180	98
5	145	675	1,260	2,060	512	472	8,120	992	1,100	*84	162	85
6	220	860	1,090	1,890	532	406	*9,240	818	1,080	70	167	79
7	220	974	1,320	1,580	456	516	*8,940	554	980	67	167	116
8	444	1,300	2,010	1,340	569	524	4,760	470	830	66	148	114
9	720	1,210	1,850	1,140	635	*418	3,740	684	745	86	145	111
10	785	1,190	1,520	888	614	b400	3,340	1,340	690	116	159	111
11	610	1,090	1,300	b1,000	648	b380	3,120	1,420	650	126	258	113
12	467	1,020	1,140	b1,050	958	b360	*3,150	1,500	602	171	325	726
13	*454	944	2,040	b950	1,100	338	4,170	1,610	446	162	242	3,690
14	446	914	2,880	b850	1,030	436	4,350	1,770	275	216	199	3,750
15	400	908	2,400	b800	932	454	4,510	1,580	349	232	159	2,460
16	366	902	1,950	b750	728	406	4,900	1,340	988	230	157	1,540
17	268	*908	1,730	b540	602	435	4,460	1,200	1,220	238	159	1,140
18	216	980	1,520	b620	566	379	3,850	*1,090	785	190	164	908
19	222	980	1,360	b660	578	373	3,520	1,010	512	171	166	740
20	279	770	1,200	639	737	421	2,980	932	400	203	171	1,160
21	290	683	1,010	616	748	460	2,430	836	370	218	176	1,850
22	260	502	944	608	700	476	2,050	720	338	220	210	1,400
23	260	551	b880	609	686	427	1,700	705	315	195	218	1,080
24	599	642	b780	444	656	370	1,530	799	318	167	199	908
25	3,580	1,460	b500	576	615	358	1,770	1,850	481	159	176	651
26	3,870	2,120	602	610	599	335	2,140	1,930	424	154	162	720
27	3,210	1,730	598	580	644	328	1,840	1,580	332	145	148	675
28	2,390	1,860	614	564	639	438	1,780	1,180	305	145	143	*646
29	1,900	3,100	622	564	596	542	1,620	932	346	147	140	622
30	1,550	3,050	*765	565	-------	698	1,420	790	502	180	129	642
31	1,350	-------	746	416	-------	1,500	-------	750	-------	295	122	-------
Total	26,211	35,688	41,971	26,344	19,185	15,037	110,410	35,152	19,661	5,584	5,723	26,481
Mean	846	1,190	1,354	850	662	485	3,680	1,134	655	180	185	883
Cfsm	2.30	3.23	3.68	2.31	1.80	1.32	10.0	3.08	1.78	0.489	0.503	2.40
In.	2.65	3.61	4.24	2.66	1.94	1.52	11.16	3.55	1.99	0.56	0.58	2.68

Calendar year 1959: Max 5,830 Min 49 Mean 703 Cfsm 1.91 In. 25.96
Water year 1959-60: Max 9,240 Min 66 Mean 1,004 Cfsm 2.73 In. 37.14

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

860. Warner River at Davisville, N. H.

Location.--Lat 43°15'05", long 71°43'50", on left bank 60 ft downstream from highway bridge at Davisville, Merrimack County, 2¼ miles northwest of Contoocook, and 2.4 miles upstream from mouth.

Drainage area.--146 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to Dec. 22, 1939, chain gage at bridge 60 ft upstream at same datum.

Average discharge.--21 years, 240 cfs.

Extremes.--Maximum discharge during year, 4,380 cfs Apr. 5, 6 (gage height, 9.78 ft); minimum, 10 cfs Sept. 10.
1939-60: Maximum discharge, 4,510 cfs Mar. 27, 1953 (gage height, 9.88 ft); minimum, 4.4 cfs Aug. 27-29, 1949.
Flood in September 1938 reached a stage of 12.8 ft, from information by local residents.

Remarks.--Records good except those for period of no gage-height record, which are fair. Prior to 1948, slight diurnal fluctuation at low flow caused by mill above station.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-25				Oct. 26 to Sept. 30			
3.4	18	5.0	300	3.2	10	5.0	340
3.5	24	5.5	505	3.3	14	5.5	530
3.8	51	6.0	775	3.5	26	6.0	775
4.1	90	7.0	1,460	3.7	44	7.0	1,460
4.5	163			4.0	84	9.0	3,420
				4.5	185	9.5	4,020

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	540	764	214	159	b205	1,320	522	316	89	127	22
2	41	470	630	190	157	b205	1,470	526	322	81	83	20
3	39	410	544	276	152	b195	1,520	494	308	82	61	19
4	37	370	482	606	150	183	2,050	438	389	108	*59	20
5	37	350	430	650	148	198	3,740	392	486	103	49	20
6	34	360	392	544	161	190	*3,890	354	498	*82	38	18
7	30	500	442	498	223	175	2,760	319	422	68	32	16
8	42	800	781	450	*b215	173	2,010	288	330	59	29	16
9	80	600	685	389	211	*b165	1,500	347	271	51	23	14
10	121	470	575	316	188	b160	1,250	640	234	46	25	11
11	95	400	502	*302	225	159	1,090	680	208	42	30	12
12	71	360	450	285	b425	163	1,090	695	188	38	32	138
13	52	330	741	274	b470	161	1,320	787	171	34	27	1,180
14	42	320	962	265	426	154	*1,500	895	150	36	25	838
15	36	400	758	252	b380	150	1,640	758	192	44	23	518
16	31	450	635	240	358	b140	1,840	665	406	38	23	372
17	28	400	557	223	322	150	1,720	570	389	32	23	278
18	27	400	502	214	302	154	1,500	*498	308	29	25	228
19	*26	*315	454	206	256	163	1,360	474	246	34	27	188
20	24	274	b390	203	298	163	1,160	430	203	40	22	358
21	20	249	b360	198	b295	163	943	375	173	40	31	758
22	20	237	b315	190	265	159	823	322	148	34	49	*598
23	21	231	b290	188	256	b160	770	295	129	29	44	462
24	163	237	b270	178	240	152	695	338	119	29	33	368
25	1,260	500	223	173	b225	150	823	752	176	25	31	305
26	1,210	811	223	171	211	137	981	764	203	20	23	256
27	847	625	211	163	246	150	865	611	168	18	22	217
28	625	683	201	161	237	146	799	506	137	20	19	195
29	482	1,200	180	163	223	178	685	418	115	18	18	175
30	378	968	231	166	-------	b250	588	350	101	25	21	178
31	350	-------	231	157	-------	b530	-------	312	-------	136	25	-------
Total	6,305	14,260	14,411	8,505	7,424	5,581	43,702	15,815	7,506	1,530	1,09[illegible]	7,798
Mean	203	475	465	274	256	180	1,457	510	250	49.4	35.2	260
Cfsm	1.39	3.25	3.18	1.88	1.75	1.23	9.98	3.49	1.71	0.338	0.241	1.78
In.	1.61	3.63	3.67	2.17	1.89	1.42	11.13	4.03	1.91	0.39	0.2[illegible]	1.99

Calendar year 1959: Max 2,380 Min 5.9 Mean 251 Cfsm 1.72 In. 23.32
Water year 1959-60: Max 3,890 Min 11 Mean 366 Cfsm 2.51 In. 34.12

Peak discharge (base, 1,200 cfs).--Oct. 25 (5 to 8 p.m.) 1,610 cfs (7.18 ft); Nov. 29 (7 to 11 a.m.) 1,260 cfs (6.74 ft); Apr. 5 (10 p.m.) to Apr. 6 (1 a.m.) 4,380 cfs (9.78 ft); Apr. 16 (10 a.m. to 2 p.m.) 1,860 cfs (7.47 ft); Sept. 13 (9 to 10 a.m.) 1,360 cfs (6.87 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 31 to Nov. 19; discharge estimated on basis of 1 discharge measurement, weather records, and records for Blackwater River near Webster and Smith River near Bristol.

870. Blackwater River near Webster, N. H.

Location.--Lat 43°17'50", long 71°41'40", on left bank 0.2 mile west of Dimmit Corner, 2½ miles southeast of Webster, Merrimack County, and 6½ miles upstream from mouth.

Drainage area.--129 sq mi.

Records available.--May 1918 to September 1920, February 1927 to September 1960. Published as "near Contoocook" 1918-20, 1927-35. Records published for both sites October 1934 to September 1935.

Gage.--Water-stage recorder at present site since Oct. 1, 1934. Altitude of gage is 430 ft (from topographic map). Prior to Oct. 1, 1935, chain gage at site 5 miles downstream at different datum.

Average discharge.--35 years, 216 cfs (adjusted to present site).

Extremes.--Maximum discharge during year, 2,220 cfs Apr. 9 (gage height, 7.06 ft); minimum, 21 cfs Oct. 1; minimum daily, 23 cfs Oct. 1.
1918-20, 1927-60: Maximum discharge, 11,000 cfs Mar. 19, 1936 (gage height, 11.78 ft, from floodmarks), from rating curve extended above 6,700 cfs on basis of slope-area and critical-depth measurements of peak flow; minimum, 3 cfs Sept. 17, 1941 (gage height, 1.20 ft); minimum daily, 10 cfs Aug. 14, 1950.

Remarks.--Records excellent except those for period of ice effect, which are good. High flow regulated by Blackwater Reservoir since 1941 (see p. 110). Some regulation at low flow prior to 1953 by mill above station.

Revisions (water years).--WSP 696: Drainage area. WSP 821: 1936(M). WSP 851: 1936. WSP 867: 1936 (flood-report data). WSP 1231: 1919-20, 1927, 1928(M), 1929-32, 1933-34(M), 1936 (calendar year summaries).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.0	22	4.0	381
2.2	36	4.5	550
2.5	63	5.0	785
3.0	135	6.0	1,370
3.5	241	7.0	2,170

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	281	765	b150	130	148	695	494	212	118	170	32
2	28	359	529	b135	128	143	1,000	490	265	119	132	30
3	29	337	423	b200	126	150	1,170	498	281	103	90	29
4	29	268	375	381	126	150	752	448	328	119	*72	29
5	29	248	340	494	123	152	121	381	387	103	60	28
6	30	251	313	504	128	152	85	322	368	97	53	28
7	35	286	365	435	162	154	323	278	371	86	49	28
8	45	419	536	368	*183	154	1,410	251	319	77	48	28
9	63	515	690	294	185	148	2,040	278	258	71	45	28
10	103	442	582	239	166	148	2,080	484	218	63	46	33
11	116	337	432	223	174	144	2,120	680	198	59	48	40
12	96	278	375	*205	278	148	2,120	705	181	58	48	75
13	77	246	480	205	381	146	2,060	665	170	53	47	398
14	63	230	604	196	410	144	*2,000	770	144	56	44	818
15	52	255	640	185	375	*144	1,930	807	152	63	42	696
16	48	328	515	181	311	143	1,880	680	319	64	40	346
17	43	343	426	170	265	144	1,870	554	456	61	39	230
18	42	331	381	164	232	158	1,790	*476	387	54	37	176
19	40	*331	343	158	205	174	1,660	426	255	58	35	152
20	*40	291	297	158	214	174	1,470	375	192	62	37	242
21	39	246	214	154	223	170	1,000	322	156	61	40	397
22	36	223	b210	150	198	168	770	278	141	56	45	413
23	39	211	b165	146	187	164	740	255	128	52	44	*299
24	123	214	b155	143	183	162	790	305	115	48	42	225
25	332	375	b180	139	170	158	807	554	183	43	41	178
26	609	594	b175	137	168	144	1,030	735	381	41	39	148
27	1,640	725	b160	133	181	156	1,130	680	346	41	36	132
28	1,770	650	b155	132	176	154	862	462	259	40	34	120
29	843	740	b155	135	164	164	700	334	183	37	32	109
30	305	900	b175	137	-------	209	566	275	141	41	35	108
31	241	-------	b165	132	-------	372	-------	246	-------	96	32	-------
Total	7,008	11,254	11,320	6,583	5,952	5,039	36,971	14,508	7,474	2,082	1,602	5,595
Mean	226	375	365	212	205	163	1,232	468	249	67.2	51.7	186
Cfsm	1.75	2.91	2.83	1.64	1.59	1.26	9.55	3.63	1.93	0.521	0.401	1.44
In.	2.02	3.24	3.26	1.90	1.72	1.45	10.66	4.18	2.15	0.60	0.46	1.61

Calendar year 1959: Max 2,120 Min 18 Mean 209 Cfsm 1.62 In. 22.00
Water year 1959-60: Max 2,120 Min 23 Mean 315 Cfsm 2.44 In. 33.25

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

880. Contoocook River at Penacook, N. H.

Location.--Lat 43°17'10", long 71°36'00", on right bank at Penacook, Merrimack County, half a mile upstream from mouth.

Drainage area.--766 sq mi.

Records available.--October 1928 to September 1960. Monthly discharge only for October 1928, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 273.09 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 1,280 cfs.

Extremes.--Maximum discharge during year, 15,300 cfs Apr. 6 (gage height, 7.87 ft); minimum, 150 cfs Sept. 2; minimum daily, 168 cfs Sept. 8.
1928-60: Maximum discharge, 46,800 cfs Mar. 20, 1936 (gage height, 14.26 ft, from floodmarks); minimum, 44 cfs Oct. 20, 1950; minimum daily, 81 cfs Aug. 19, 1950.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Nubanusit Lake, Edward MacDowell Reservoir since March 1950, and by Highland Lake, Jackman Reservoir, Blackwater Reservoir since 1941 (see p. 110), and other reservoirs above station.

Revisions (water years).--WSP 756: 1933(M), drainage area. WSP 1231: 1929, 1931.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 5)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.8	252	4.0	3,400	1.6	150	3.0	1,480
2.1	450	5.0	5,820	1.8	235	4.0	3,240
2.5	840	7.0	12,700	2.1	430	6.0	8,400
3.0	1,540			2.5	820	8.0	15,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	2,180	4,660	1,200	900	1,200	4,860	2,680	1,660	796	650	201
2	299	2,120	3,770	1,000	980	1,150	6,850	2,620	1,700	640	630	192
3	305	2,030	3,190	1,230	1,000	1,150	7,980	2,570	1,910	555	484	187
4	287	1,830	2,780	2,460	*980	1,100	8,470	2,340	1,910	470	*469	176
5	258	1,490	2,500	*3,500	940	1,000	12,100	2,070	2,160	446	347	176
6	258	1,510	2,250	3,400	1,000	960	*15,000	1,820	2,170	334	314	172
7	318	1,740	2,360	3,050	1,210	880	13,300	1,580	2,060	302	308	172
8	421	2,320	3,510	2,650	1,100	1,000	9,910	1,300	1,740	283	314	168
9	797	2,550	3,730	2,200	1,300	940	8,130	1,370	1,470	259	271	172
10	1,110	2,370	3,300	1,700	1,250	*900	7,350	2,500	1,330	253	265	187
11	1,100	2,120	2,760	1,800	1,270	840	6,840	3,020	1,210	259	302	180
12	*876	1,910	2,450	1,800	1,800	840	6,750	3,220	1,130	277	438	499
13	700	1,740	3,340	1,700	2,200	820	7,410	3,400	1,020	302	416	4,660
14	660	1,640	4,680	1,550	2,250	800	8,040	3,730	748	360	361	5,530
15	602	1,660	4,470	1,500	2,000	940	*8,130	3,590	760	454	321	4,530
16	548	1,760	3,770	1,400	1,800	840	8,490	3,160	1,540	478	302	2,920
17	506	1,800	3,270	1,150	1,550	860	8,370	2,730	2,280	430	271	2,010
18	414	*1,880	2,940	1,200	1,380	912	7,560	*2,410	1,900	381	259	1,610
19	357	1,910	2,650	1,250	1,320	876	6,840	2,190	1,370	354	265	1,350
20	351	1,690	2,370	1,200	1,370	900	6,080	2,020	1,010	354	271	1,560
21	370	1,460	1,850	1,150	1,450	920	5,010	1,780	856	367	295	3,060
22	406	1,340	1,700	1,160	1,400	960	4,080	1,590	748	367	347	*2,840
23	384	1,130	1,550	1,120	1,350	940	3,570	1,440	680	360	367	2,210
24	640	1,250	1,400	960	1,300	900	3,340	1,560	650	314	347	a1,700
25	3,550	2,020	1,150	950	1,200	840	3,680	3,140	856	289	302	a1,300
26	5,770	3,690	1,200	1,050	1,240	780	4,360	3,700	1,120	265	277	a1,250
27	5,710	3,710	1,250	1,050	1,300	780	4,290	3,320	1,040	253	271	a1,150
28	5,340	3,470	1,230	1,060	1,300	780	3,950	2,640	856	253	197	a1,050
29	4,210	5,110	1,180	1,040	1,250	1,020	3,440	2,070	724	247	261	a1,000
30	2,760	5,370	1,340	1,050	----	1,350	3,040	1,700	760	289	253	a1,020
31	2,300	-------	1,400	860	-------	2,400	-------	1,540	-------	546	235	-------
Total	41,877	66,800	80,000	48,390	39,390	30,578	207,220	74,800	39,368	11,537	10,360	43,232
Mean	1,351	2,227	2,581	1,561	1,358	986	6,907	2,413	1,312	372	334	1,441
Cfsm	1.76	2.91	3.37	2.04	1.77	1.29	9.02	3.15	1.71	0.486	0.436	1.88
In.	2.03	3.24	3.88	2.35	1.91	1.48	10.06	3.63	1.91	0.56	0.50	2.10

Calendar year 1959: Max 10,000 Min 129 Mean 1,345 Cfsm 1.76 In. 23.80
Water year 1959-60: Max 15,000 Min 168 Mean 1,895 Cfsm 2.47 In. 33.65

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for Contoocook River near Henniker, Blackwater River near Webster, and Warner River at Davisville.
Note.--Stage-discharge relation affected by ice Dec. 21-27, Dec. 31 to Jan. 2, Jan. 5-21, 23-27, Jan. 30 to Feb. 5, Feb. 8, 9, 12-17, 21-25, Feb. 27 to Mar. 17, Mar. 20-27, 29, 31.

890. Soucook River near Concord, N. H.

Location.--Lat 43°14'22", long 71°27'44", on left bank 500 ft upstream from U. S. Highway 4, 0.9 mile upstream from Cemetery Brook, and 4.4 miles northeast of State Capitol at Concord, Merrimack County.

Drainage area.--76.8 sq mi.

Records available.--October 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 290 ft (from topographic map).

Average discharge.--9 years, 121 cfs.

Extremes.--Maximum discharge during year, 2,880 cfs Apr. 6 (gage height, 13.34 ft); minimum, 6.0 cfs Sept. 9, 10.
1951-60: Maximum discharge, that of Apr. 6, 1960; minimum, 3.3 cfs Sept. 22-24, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1331: 1952(M).

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from rocks July 10 to Aug. 5)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
4.4	6.2	7.0	260	6.0	105	9.0	780
4.6	11	8.0	475	7.0	267	11.0	1,590
4.8	18	10.0	1,100	8.0	490	13.0	2,680
5.2	38	12.0	2,020				
5.6	64	12.4	2,220				
6.0	105						

Note.--Same as preceding table below 6.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	156	285	93	76	95	900	208	81	29	25	8.9
2	24	150	245	88	75	90	800	258	86	30	19	8.4
3	23	119	217	160	*74	88	750	216	81	30	17	7.6
4	20	101	201	378	71	90	1,000	186	91	44	15	8.1
5	19	116	182	336	70	91	2,200	167	86	35	*14	8.6
6	20	122	170	260	b77	89	*2,260	148	196	27	13	8.1
7	27	160	204	231	b130	85	1,060	137	161	23	12	7.4
8	52	239	271	207	b125	82	765	122	106	22	12	6.9
9	66	199	217	164	b115	*81	621	144	83	20	13	*6.2
10	86	162	185	132	b95	77	618	158	71	18	13	6.4
11	63	138	164	134	b130	76	540	148	63	17	16	8.1
12	*51	125	169	*125	b280	77	528	243	56	17	15	103
13	43	111	458	120	b250	77	*582	271	52	15	13	535
14	39	102	473	111	b210	76	532	300	46	22	13	250
15	34	140	320	108	b190	75	488	235	103	26	14	150
16	34	*143	270	106	b170	75	450	230	376	20	19	93
17	30	134	240	98	156	76	376	194	204	17	17	66
18	29	188	210	91	146	77	334	166	142	14	13	54
19	28	160	190	92	142	86	312	*149	101	15	12	47
20	27	131	170	93	162	89	263	126	76	17	12	95
21	28	115	155	91	148	90	232	109	65	16	13	164
22	26	109	140	89	130	85	239	92	55	14	13	106
23	27	106	125	86	125	80	239	86	46	13	12	78
24	107	111	115	81	116	76	220	133	44	12	11	64
25	371	288	108	81	108	74	402	267	60	12	9.1	54
26	269	378	105	81	111	72	458	196	56	11	8.6	48
27	191	260	98	77	128	74	345	146	50	10	8.1	43
28	148	300	94	77	119	72	347	113	42	12	7.6	39
29	113	522	97	78	108	90	275	93	*39	12	7.4	37
30	95	375	111	79	-------	150	229	80	32	16	10	45
31	88	-------	102	76	-------	300	-------	74	-------	30	10	-------
Total	2,192	5,460	6,091	4,023	3,837	2,815	18,365	5,195	2,750	616	406.8	2,155.7
Mean	70.7	182	196	130	132	90.8	612	168	91.7	19.9	13.1	71.9
Cfsm	0.921	2.37	2.55	1.69	1.72	1.18	7.97	2.19	1.19	0.259	0.171	0.936
In.	1.06	2.64	2.95	1.95	1.86	1.36	8.89	2.52	1.33	0.30	0.20	1.04

Calendar year 1959: Max 1,620 Min 5.1 Mean 110 Cfsm 1.43 In. 19.37
Water year 1959-60: Max 2,260 Min 6.2 Mean 147 Cfsm 1.91 In. 26.10

Peak discharge (base, 700 cfs).--Apr. 1 (time and discharge unknown); Apr. 6 (12:30 a.m.) 2,880 cfs (13.34 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 27, 28, Dec. 1, 2, 15-28, Mar. 23 to Apr. 5, June 22-28; discharge estimated on basis of 1 discharge measurement, weather records, and records for Souhegan River at Merrimack, Suncook River at North Chichester, and Warner River at Davisville.

895. Suncook River at North Chichester, N. H.

Location.--Lat 43°15'25", long 71°22'10", on left bank at North Chichester, Merrimack County, 3.1 miles upstream from Little Suncook River.

Drainage area.--157 sq mi.

Records available.--May 1918 to September 1920, June 1921 to November 1927, November 1928 to September 1960.

Gage.--Water-stage recorder. Concrete control since Sept. 14, 1937. Datum of gage is 329.35 ft above mean sea level, adjustment of 1912.

Average discharge.--39 years (1918-20, 1921-27, 1929-60), 243 cfs.

Extremes.--Maximum discharge during year, 5,200 cfs Apr. 5 (gage height, 12.40 ft); minimum, 13 cfs Sept. 7-9; minimum daily, 13 cfs Sept. 7, 8.
1918-60: Maximum discharge, 12,900 cfs Mar. 19, 1936 (gage height, 15.27 ft, from floodmarks), from rating curve extended above 4,800 cfs on basis of slope-area and contracted-opening measurements of peak flow; minimum, 0.4 cfs Sept. 4, 1926; minimum daily, 1.4 cfs Sept. 4, 1926.

Remarks.--Records good except those for period of ice effect, which are fair. Flow regulated by mills and reservoirs above station; regulation greater prior to 1949.

Revisions (water years).--WSP 781: 1923(M). WSP 1231: 1919(M), 1920, 1922, 1924(M), 1933-34(M).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	11	5.0	700
2.8	23	6.0	950
3.1	56	8.0	1,540
3.4	113	9.0	1,960
3.7	195	10.0	2,560
4.0	290	11.0	3,380
4.5	515	12.0	4,600

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	272	768	195	165	220	2,220	460	207	91	76	20
2	27	286	624	190	165	200	2,020	556	216	98	55	18
3	23	252	538	350	160	190	1,810	485	210	91	46	16
4	28	219	475	700	160	185	2,410	402	210	126	40	15
5	32	266	415	680	155	200	4,200	346	233	102	34	16
6	31	255	388	600	165	185	*4,320	302	772	80	27	14
7	43	322	538	550	290	175	2,460	266	636	67	25	13
8	87	450	728	475	280	170	1,800	243	420	59	29	13
9	128	370	607	375	250	165	1,460	298	294	52	*29	14
10	162	310	490	325	215	160	1,310	406	237	47	29	16
11	138	266	397	305	250	155	1,160	402	198	43	34	16
12	*118	240	440	290	600	160	1,140	592	171	36	39	323
13	93	222	994	275	520	160	*1,260	708	152	35	28	1,170
14	74	207	1,080	265	460	155	1,240	768	136	44	27	822
15	62	286	860	250	410	145	1,180	722	306	58	31	504
16	53	*286	685	240	370	140	1,140	*700	898	44	32	*290
17	43	280	588	230	330	145	1,050	584	691	40	29	216
18	44	379	495	220	290	150	935	470	470	39	27	165
19	44	338	450	210	300	160	870	392	334	36	24	138
20	39	283	400	205	330	165	742	330	262	47	22	230
21	35	252	355	200	300	165	642	276	219	41	23	290
22	31	237	315	200	280	160	435	237	177	31	31	231
23	35	231	290	190	260	155	450	219	149	25	27	189
24	260	249	225	180	240	150	460	305	141	23	23	154
25	778	625	250	175	230	145	784	614	180	23	20	138
26	740	792	230	175	260	140	902	546	174	23	19	120
27	533	685	215	170	300	155	788	406	162	21	18	118
28	350	818	200	170	270	150	760	306	138	24	15	116
29	258	1,150	220	175	240	185	632	252	123	23	15	111
30	210	1,000	230	175	-------	289	500	219	*106	31	16	141
31	189	-------	215	170	-------	1,140	-------	198	-------	80	19	---------
Total	4,708	11,828	14,705	8,910	8,245	6,219	41,080	13,010	8,622	1,580	910	5,638
Mean	152	394	474	287	284	201	1,369	420	287	51.0	29.4	188
Cfsm	0.968	2.51	3.02	1.83	1.81	1.28	8.72	2.68	1.83	0.325	0.187	1.20
In.	1.12	2.80	3.48	2.11	1.95	1.47	9.73	3.08	2.04	0.37	0.22	1.34

Calendar year 1959: Max 2,860 Min 9.8 Mean 227 Cfsm 1.45 In. 19.62
Water year 1959-60: Max 4,320 Min 13 Mean 343 Cfsm 2.18 In. 29.71

Peak discharge (base, 1,500 cfs).--Apr. 1 (5 p.m.) 2,300 cfs (9.62 ft); Apr. 5 (11:30 to 12 p.m.) 5,200 cfs (12.40 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20 to Mar. 29.

910. South Branch Piscataquog River near Goffstown, N. H.

Location.--Lat 43°00'50", long 71°38'30", on right bank 20 ft upstream from highway bridge, 1.4 miles upstream from mouth, and 2.2 miles west of Goffstown, Hillsboro County.

Drainage area.--104 sq mi.

Records available.--July 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 310 ft (from topographic map).

Average discharge.--20 years, 169 cfs.

Extremes.--Maximum discharge during year, 3,820 cfs Apr. 5 (gage height, 9.23 ft); minimum, 11 cfs Oct. 1.
1940-60: Maximum discharge, 4,100 cfs June 25, 1944 (gage height, 9.47 ft); maximum gage height, 11.18 ft Mar. 20, 1948 (ice jam); minimum discharge, 3.0 cfs Sept. 22, 1941.

Remarks.--Records good except those for period of ice effect, which are fair. Prior to 1954, some regulation at low flow by mill above station.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5

3.0	11	4.5	247
3.1	16	5.0	425
3.3	29	6.0	950
3.6	59	8.0	2,500
4.0	120	9.0	3,550

Apr. 6 to Sept. 30

3.1	14	3.7	71
3.4	35	4.0	120

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	149	306	135	90	145	1,550	229	244	47	94	19
2	39	140	257	120	100	140	1,440	269	273	45	57	18
3	32	124	229	165	*97	115	1,250	232	247	49	*43	16
4	25	111	206	770	96	105	2,020	200	273	63	37	29
5	20	109	186	520	95	130	3,370	179	200	*67	33	32
6	23	111	173	340	130	130	2,530	161	154	49	33	23
7	53	169	378	280	210	130	1,330	147	122	47	27	18
8	203	238	510	250	185	*135	1,030	136	102	39	25	17
9	176	189	341	205	200	130	836	222	86	39	23	15
10	163	154	266	150	170	120	794	465	77	44	46	14
11	109	132	226	140	180	105	740	370	71	63	104	27
12	97	120	271	145	500	110	*836	457	65	64	72	544
13	*78	111	848	170	375	100	986	501	60	51	50	1,990
14	64	107	708	155	300	105	902	525	55	83	39	657
15	55	120	441	145	260	105	854	393	218	146	34	296
16	48	128	355	155	240	105	758	310	794	82	35	173
17	44	*124	310	120	210	110	600	*253	300	55	38	120
18	42	154	266	105	200	115	510	217	173	42	33	118
19	40	138	241	125	220	135	453	200	124	37	30	109
20	38	124	205	125	270	115	363	200	100	39	31	250
21	35	109	155	120	205	110	306	163	84	34	35	330
22	34	106	165	120	190	115	293	136	68	30	39	203
23	39	106	140	110	200	110	276	126	60	27	39	147
24	317	114	130	95	175	115	276	310	57	26	32	120
25	1,160	400	120	95	160	115	472	722	100	27	27	109
26	595	421	115	110	165	110	483	470	96	22	23	94
27	341	276	115	110	205	105	393	316	72	19	23	82
28	232	418	120	110	170	100	405	223	57	19	23	82
29	171	645	145	110	145	170	320	179	47	20	20	78
30	140	421	160	110	-------	240	250	152	42	40	20	112
31	126	-------	*145	87	-------	850	-------	138	-------	171	20	-------
Total	4,553	5,768	8,233	5,497	5,743	4,525	26,626	8,601	4,421	1,571	1,185	5,842
Mean	147	192	266	177	198	146	888	277	147	50.7	38.2	195
Cfsm	1.41	1.85	2.56	1.70	1.90	1.40	8.54	2.66	1.41	0.488	0.367	1.88
In.	1.63	2.06	2.94	1.97	2.05	1.62	9.52	3.08	1.58	0.56	0.42	2.09

Calendar year 1959: Max 2,410 Min 8.6 Mean 168 Cfsm 1.62 In. 21.89
Water year 1959-60: Max 3,370 Min 14 Mean 226 Cfsm 2.17 In. 29.52

Peak discharge (base, 1,000 cfs).--Oct. 25 (4 to 5 a.m.) 1,350 cfs (6.62 ft); Apr. 1 (5 to 7 p.m.) 1,660 cfs (7.02 ft); Apr. 5 (9 p.m.) 3,820 cfs (9.23 ft); Apr. 13 (3 to 6 a.m.) 1,030 cfs (6.14 ft); June 16 (2 to 3 a.m.) 1,030 cfs (6.13 ft); Sept. 13 (2:30 a.m.) 2,970 cfs (8.47 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20 to Apr. 1.

915. Piscataquog River near Goffstown, N. H.

Location.--Lat 43°01'00", long 71°33'00", on left bank 300 ft upstream from highway bridge, 0.2 mile upstream from Harry Brook, 0.4 mile southwest of Grasmere, and 2.5 miles east of Goffstown, Hillsboro County.

Drainage area.--202 sq mi.

Records available.--October 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 185 ft (from topographic map). Prior to Dec. 22, 1939, staff gage at same site and datum.

Average discharge.--21 years, 311 cfs.

Extremes.--Maximum discharge during year, 6,840 cfs Apr. 5 (gage height, 10.85 ft); minimum daily, 9.6 cfs Oct. 17, 18.

1939-60: Maximum discharge, that of Apr. 5, 1960; minimum daily, 4.6 cfs July 19, 23, 1957.

Maximum discharge known, 21,900 cfs Sept. 21, 1938 (gage height, 17.52 ft, from floodmarks), by computation of flow over dam. Flood of Mar. 19, 1936, reached a discharge of 19,900 cfs, by computation of flow over dam.

Remarks.--Records excellent except those below 100 cfs and those for periods of ice effect, which are good. Flow regulated by powerplant above station.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.9	9.6	5.0	496
3.0	14	5.5	745
3.3	36	6.0	1,090
3.6	73	8.0	2,940
4.0	150	11.0	7,100
4.5	296		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	282	696	225	187	395	2,640	349	481	11	191	42
2	96	215	540	190	197	365	2,540	452	464	17	98	38
3	10	210	514	439	185	350	2,440	467	484	64	87	10
4	10	310	397	844	185	250	3,350	349	353	135	69	74
5	11	288	324	891	195	117	6,000	352	285	114	26	10
6	40	281	356	718	291	75	*5,210	345	326	96	65	11
7	218	460	519	670	363	338	2,780	147	250	64	38	41
8	438	343	870	546	400	*333	2,030	178	216	*94	39	68
9	291	200	718	460	372	365	1,680	451	175	10	39	36
10	137	261	582	235	341	340	1,580	634	54	11	101	10
11	148	306	446	383	455	155	1,460	665	65	123	128	10
12	122	188	461	290	690	80	1,490	781	85	88	121	592
13	120	194	1,190	280	690	120	1,680	870	161	96	68	2,990
14	175	170	1,260	270	627	332	1,610	985	143	104	56	1,790
15	123	235	844	320	515	331	1,520	787	286	266	54	1,040
16	50	247	723	195	470	255	1,440	734	1,010	237	48	763
17	9.6	*364	706	210	385	230	1,210	*555	738	11	52	368
18	9.6	250	567	270	410	220	1,040	388	380	108	49	134
19	94	287	458	225	415	201	891	346	151	68	52	197
20	11	364	384	270	395	235	781	371	170	83	60	471
21	78	226	328	215	425	278	712	338	183	68	61	550
22	87	202	411	215	185	209	530	214	205	63	151	477
23	50	234	229	215	445	250	580	301	177	10	86	463
24	407	326	166	151	410	160	581	459	10	10	83	198
25	1,470	696	147	276	345	100	687	1,150	104	49	52	101
26	1,110	690	243	151	355	160	912	1,010	185	30	50	188
27	715	529	251	184	185	44	769	745	154	28	19	224
28	447	701	252	192	190	418	781	626	152	28	29	159
29	374	885	290	175	280	377	740	267	146	28	74	174
30	164	805	272	170	------	445	477	288	33	78	10	289
31	326	------	333	215	------	794	------	292	------	261	42	------
Total	7,375.2	10,749	15,477	10,090	10,588	8,322	50,141	15,896	7,676	2,453	2,098	11,518
Mean	238	358	499	325	365	268	1,671	513	256	79.1	67.7	384
Cfsm	1.18	1.77	2.47	1.61	1.81	1.33	8.27	2.54	1.27	0.392	0.335	1.90
In.	1.36	1.98	2.85	1.86	1.95	1.53	9.23	2.93	1.41	0.45	0.39	2.12

Calendar year 1959: Max 3,920 Min 7.6 Mean 291 Cfsm 1.44 In. 19.54
Water year 1959-60: Max 6,000 Min 9.6 Mean 416 Cfsm 2.06 In. 28.06

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 1, 2, 9, 10, 12-21, 23, 29, 30, Feb. 3-5, 8, Feb. 15 to Mar. 4, Mar. 6, 9-12, 16, 23, 24.

920. Merrimack River near Goffs Falls, below Manchester, N. H.

Location.--Lat 42°46'55", long 71°27'45", on right bank 0.8 mile downstream from Bowman Brook, 1.3 miles north of Goffs Falls, Hillsboro County, and 2.3 miles downstream from Piscataquog River.

Drainage area.--3,092 sq mi.

Records available.--October 1936 to September 1960. Monthly discharge only for October 1936, published in WSP 1301.

Gage.--Water-stage recorder. Altitude of gage is 105 ft (from topographic map).

Average discharge.--24 years, 5,374 cfs.

Extremes.--Maximum discharge during year, about 59,000 cfs Apr. 6 (gage height, 17.42 ft, backwater from bridge construction); minimum daily, 503 cfs Sept. 5.
1936-60: Maximum discharge, 102,500 cfs Sept. 23, 1938 (gage height, 25.87 ft), from rating curve extended above 48,000 cfs on basis of computations of flow over dam at gage heights 25.87 and 35.19 ft; minimum daily, 147 cfs Sept. 2, 1957.
Maximum discharge known, 150,000 cfs Mar. 20, 1936 (gage height, 35.19 ft, from floodmarks), from rating curve extended above 48,000 cfs by method explained above.

Remarks.--Records good. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs above station. See pages 82,110, for description and month-end contents of many of these reservoirs.

Revisions (water years).--WSP 1231: 1937. WSP 1271: 1937(M,m).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,250	7,120	23,000	5,000	4,300	4,500	25,500	11,500	6,580	2,660	3,650	1,320
2	1,750	8,120	16,000	4,400	4,400	4,600	34,500	11,500	6,580	2,500	3,700	1,510
3	1,800	8,680	13,000	5,000	4,400	5,400	33,000	11,500	6,650	1,990	2,820	1,320
4	1,300	7,800	11,500	8,400	4,500	5,100	32,500	10,500	6,550	2,430	1,960	1,250
5	1,350	6,400	10,000	13,000	4,300	4,500	46,500	9,100	6,410	3,060	1,910	503
6	1,450	5,200	8,900	12,500	4,500	4,700	57,000	8,200	7,080	2,640	1,690	1,150
7	1,950	6,600	8,800	10,000	4,700	4,900	46,000	7,300	7,400	2,420	1,380	1,270
8	3,050	8,800	12,500	8,800	5,800	4,700	37,000	6,500	6,040	2,430	1,760	1,320
9	3,300	9,200	15,000	7,200	5,000	5,300	31,500	6,800	5,310	1,380	1,850	1,460
10	3,700	7,600	13,000	5,800	5,200	4,700	24,000	8,300	4,660	662	2,130	1,000
11	3,150	6,700	10,500	5,500	5,400	3,900	19,500	12,000	3,780	1,830	2,200	770
12	2,500	5,900	9,600	5,100	7,300	3,900	18,500	13,000	2,900	1,920	2,020	4,180
13	2,750	5,600	13,000	5,400	10,000	4,600	20,000	13,500	3,150	1,890	1,420	12,500
14	2,550	5,100	20,500	5,500	9,800	4,300	22,000	16,000	3,060	2,040	831	17,200
15	2,400	6,000	20,000	5,200	9,000	4,400	23,500	16,300	3,560	2,430	1,540	14,000
16	2,150	10,500	15,500	5,200	7,700	4,400	25,000	15,800	6,860	2,030	1,810	9,670
17	1,620	9,800	13,500	4,900	7,100	4,500	28,000	17,900	9,630	1,530	1,750	5,810
18	1,210	7,800	12,000	5,400	6,200	4,600	26,000	15,200	7,860	1,810	1,490	3,760
19	2,050	7,000	11,000	5,000	6,900	4,700	25,500	12,000	6,040	1,730	1,680	2,950
20	1,850	6,800	10,000	5,000	6,300	4,100	24,500	9,860	3,950	2,110	1,630	4,220
21	1,700	5,600	8,500	4,800	6,900	4,700	20,000	9,130	3,370	2,210	928	5,560
22	1,700	5,200	8,000	4,800	6,000	4,400	15,500	8,050	3,160	1,970	1,370	6,380
23	1,900	4,900	6,300	4,800	5,900	4,500	15,000	6,790	3,070	1,640	1,410	6,310
24	3,400	5,000	5,200	4,600	5,300	3,800	15,000	7,740	2,560	1,030	1,530	4,780
25	15,500	7,600	5,100	4,600	5,600	4,300	15,500	11,700	3,180	1,460	1,230	3,200
26	26,200	19,000	5,400	4,200	5,800	3,500	19,000	15,400	3,970	1,660	1,260	3,530
27	25,400	18,500	5,100	4,600	5,200	3,300	19,500	13,800	3,450	1,500	826	3,050
28	24,000	14,500	5,200	4,400	5,400	3,600	17,500	11,200	3,170	1,360	836	3,120
29	23,600	23,000	5,200	4,400	5,000	4,000	15,000	9,040	3,140	1,270	1,650	2,910
30	18,000	27,500	5,300	4,600	-------	5,300	13,500	7,900	2,800	1,250	1,020	3,490
31	9,840	-------	5,400	4,500	-------	9,200	-------	6,410	-------	2,770	1,150	-------
Total	194,370	277,520	332,000	182,600	173,900	142,400	765,500	339,920	145,920	59,722	52,431	129,493
Mean	6,270	9,251	10,710	5,890	5,997	4,594	25,520	10,970	4,864	1,927	1,691	4,316
Cfsm	2.03	2.99	3.46	1.90	1.94	1.49	8.25	3.55	1.57	0.623	0.547	1.40
In.	2.34	3.34	3.99	2.20	2.09	1.71	9.21	4.09	1.76	0.72	0.63	1.56

Calendar year 1959: Max 36,200 Min 248 Mean 5,453 Cfsm 1.76 In. 23.93
Water year 1959-60: Max 57,000 Min 503 Mean 7,639 Cfsm 2.47 In. 33.64

Peak discharge (base, 22,000 cfs).--Oct. 26 (2:30 p.m.) 27,200 cfs (10.07 ft); Nov. 30 (7 to 10 a.m.) about 28,000 cfs (10.75 ft); Apr. 2 (11:30 p.m.) about 35,000 cfs (12.21 ft); Apr. 6 (8:30 a.m.) about 59,000 cfs (17.42 ft); Apr. 17 (8 to 10 a.m.) about 28,000 cfs (11.25 ft).

Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

930. Sucker Brook at Auburn, N. H.

Location.--Lat 43°00'20", long 71°20'55", on left bank at Auburn, Rockingham County, 0.4 mile upstream from Massabesic Lake.

Drainage area.--27.8 sq mi.

Records available.--January 1938 to September 1960. Prior to October 1958, published as Clark Brook at Auburn.

Gage.--Water-stage recorder and concrete control. Datum of gage is 252.60 ft above mean sea level (city of Manchester bench mark).

Average discharge.--22 years, 40.8 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 561 cfs Apr. 6 (gage height, 2.43 ft); minimum, 1.2 cfs July 29, 30.
1938-60: Maximum discharge, 602 cfs Sept. 12, 1954 (gage height, 2.55 ft); no flow for all or part of each day Oct. 5-8, 1939, Dec. 4, 1941, Aug. 12, 1955, caused by unusual regulation.

Remarks.--Records good. Flow regulated by Tower Hill Pond (see p. 110). Some diurnal fluctuation prior to 1951 caused by mill above station.

Revisions (water years).--WSP 891: 1939. WSP 921: Drainage area. WSP 1301: 1939(M).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13		Dec. 14 to Sept. 30			
0.7	21	0.2	0.9	0.9	38
.9	40	.3	2.2	1.2	80
1.2	80	.4	4.5	1.6	182
1.6	182	.5	8.2	2.0	333
		.7	20	2.4	540

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	38	101	45	28	53	307	42	28	5.1	4.5	2.3
2	46	39	90	43	28	49	316	44	28	5.1	5.1	2.2
3	40	39	82	53	*27	45	303	44	32	4.8	4.2	2.0
4	39	38	60	82	27	44	333	38	48	6.2	3.2	2.0
5	39	39	60	108	27	43	470	34	48	5.4	*2.7	1.8
6	40	39	67	103	42	42	*510	30	41	4.5	3.0	1.7
7	42	48	70	97	57	*40	400	27	34	3.7	2.2	1.7
8	45	58	101	86	67	38	324	24	27	3.0	2.0	1.7
9	56	60	103	77	70	36	290	26	21	2.2	1.5	1.7
10	59	55	93	69	66	36	274	36	19	1.8	3.0	1.7
11	58	50	88	63	67	34	255	43	17	1.7	4.2	1.8
12	52	45	111	56	84	34	244	48	16	1.5	5.4	19
13	*49	42	170	51	97	32	*237	57	16	1.4	5.4	155
14	45	41	192	49	93	32	222	66	14	2.0	4.5	155
15	42	42	170	47	82	32	198	66	16	2.5	5.1	103
16	41	41	149	44	77	32	185	*70	24	3.0	10	70
17	39	43	136	42	69	32	173	67	27	2.7	14	49
18	37	*60	123	40	64	34	144	60	22	2.5	12	36
19	36	63	118	40	66	36	80	54	18	2.3	9.4	*30
20	35	60	108	38	66	36	61	42	16	2.7	7.8	43
21	34	56	99	36	69	38	50	32	14	2.2	8.6	58
22	33	54	90	36	66	38	45	32	12	2.0	11	57
23	32	51	82	34	60	38	42	28	11	1.8	12	44
24	42	66	77	34	54	36	40	36	10	1.7	9.9	38
25	59	84	70	32	51	36	47	64	12	1.5	7.4	30
26	66	95	66	30	53	34	60	72	13	1.3	5.8	26
27	58	93	60	30	58	34	60	60	9.9	1.3	4.5	22
28	49	106	*58	30	61	34	63	48	8.2	1.3	3.4	20
29	42	123	57	30	58	40	57	38	*6.6	1.2	2.7	18
30	38	118	51	28	-------	56	48	32	6.2	1.8	2.7	27
31	37	-------	49	28	-------	132	-------	28	-------	3.0	2.3	-------
Total	1,357	1,786	2,951	1,581	1,734	1,276	5,838	1,388	614.9	83.2	179.5	1,020.6
Mean	43.8	59.5	95.2	51.0	59.8	41.2	195	44.8	20.5	2.68	5.79	34.0
(†)	-24.5	0	-21.6	-0.20	-0.48	+6.69	+37.0	+9.28	-1.70	-1.70	0	+0.36
Adjusted for change in contents in Tower Hill Pond												
Mean	19.3	59.5	73.6	50.8	59.3	47.8	232	54.1	18.8	0.974	5.79	34.4
Cfsm	0.694	2.14	2.65	1.83	2.13	1.72	8.35	1.95	0.676	0.035	0.208	1.24
In.	0.80	2.39	3.05	2.11	2.30	1.98	9.29	2.24	0.75	0.04	0.24	1.38

	Observed			Adjusted			
Calendar year 1959:	Max 379	Min 0.6	Mean 40.5	Mean 41.9	Cfsm 1.51	In. 20.45
Water year 1959-60:	Max 510	Min 1.2	Mean 54.1	Mean 54.3	Cfsm 1.95	In. 26.57

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Tower Hill Pond.

940. Souhegan River at Merrimack, N. H.

Location.--Lat 42°51'25", long 71°30'30", on left bank at head of Atherton Falls, at Merrimack, Hillsboro County, 1½ miles upstream from mouth.

Drainage area.--171 sq mi.

Records available.--July 1909 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 160.58 ft above mean sea level, unadjusted (levels by Corps of Engineers). Prior to Apr. 12, 1911, staff gage at site 300 ft downstream at datum 0.38 ft lower. Apr. 12, 1911, to Oct. 14, 1913, chain gage at present site and datum.

Average discharge.--51 years, 287 cfs.

Extremes.--Maximum discharge during year, about 6,000 cfs Apr. 6; minimum, 27 cfs Oct. 1.
1909-60: Maximum discharge, 16,900 cfs Mar. 19, 1936 (gage height, 16.2 ft), from rating curve extended above 7,300 cfs on basis of velocity-area studies and computation of flow over dam at gage height 12.78 ft; minimum, 13 cfs Sept. 9, 1926.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some diurnal fluctuation caused by mill above station.

Revisions (water years).--WSP 431: 1909-14. WSP 726: Drainage area. WSP 781: 1924(M). WSP 1231: 1914-15(M), 1917(M), 1919-23(M), 1927-28(M), 1929, 1930-34(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	27	4.0	535
2.4	46	5.0	1,100
2.7	94	6.0	1,830
3.0	165	8.0	3,780
3.5	325	10.0	6,320

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	262	590	245	155	b250	a3,000	352	303	90	208	37
2	52	282	481	176	176	b240	a2,650	458	379	94	147	36
3	81	289	432	291	168	b195	2,210	428	479	92	*111	35
4	55	252	407	1,370	165	162	a2,350	363	830	107	75	35
5	37	223	363	925	165	226	a4,800	321	535	125	69	35
6	39	236	300	610	219	220	a5,000	300	403	75	69	33
7	63	304	539	494	359	220	a2,250	236	321	67	54	33
8	221	476	1,140	450	311	252	1,590	199	275	64	47	32
9	302	424	655	363	336	214	1,300	275	226	58	43	30
10	411	352	494	245	289	202	1,220	773	187	55	47	30
11	239	293	424	217	308	179	1,170	635	182	52	160	31
12	*190	262	432	249	849	193	1,250	*872	152	64	165	88
13	179	242	1,310	300	645	176	1,550	854	134	52	137	a2,500
14	139	236	1,390	279	490	176	*1,380	926	134	50	86	1,300
15	111	185	800	255	450	185	1,290	670	152	110	59	600
16	104	190	*615	279	411	182	1,160	585	1,230	137	67	387
17	98	236	535	217	333	193	896	490	616	90	98	311
18	66	303	481	187	311	196	764	432	387	56	70	226
19	59	*286	432	211	371	233	696	424	255	55	69	171
20	62	252	363	214	458	196	570	375	185	67	70	a258
21	61	217	b270	208	344	185	512	325	171	62	155	a490
22	65	155	b290	208	293	202	504	265	149	61	157	379
23	64	155	b240	b200	333	187	486	223	137	56	134	293
24	272	208	b225	b165	296	196	391	432	125	45	98	242
25	2,360	574	b215	165	252	193	635	1,090	139	41	104	190
26	1,280	758	202	187	269	185	665	775	115	40	98	142
27	665	486	205	182	348	182	575	535	*111	44	61	132
28	454	664	211	185	289	168	707	407	109	46	54	129
29	355	1,370	258	182	b250	297	555	314	96	46	46	117
30	300	848	289	b185	-------	424	468	265	94	54	43	a155
31	275	-------	272	b150	-------	a1,150	-------	249	-------	284	*40	-------
Total	8,689	11,020	14,860	9,594	9,643	7,459	42,594	14,848	8,611	2,341	2,841	8,477
Mean	280	367	479	309	333	241	1,420	479	287	75.5	91.6	283
Cfsm	1.64	2.15	2.80	1.81	1.95	1.41	8.30	2.80	1.68	0.442	0.536	1.65
In.	1.89	2.40	3.23	2.09	2.10	1.62	9.26	3.23	1.87	0.51	0.62	1.84

Calendar year 1959: Max 3,230 Min 23 Mean 276 Cfsm 1.61 In. 21.93
Water year 1959-60: Max 5,000 Min 30 Mean 385 Cfsm 2.25 In. 30.66

Peak discharge (base, 2,250 cfs).--Oct. 25 (12:30 p.m.) 2,800 cfs (7.07 ft); Apr. 1 (time unknown) about 3,200 cfs; Apr. 6 (time unknown) about 6,000 cfs; Sept. 13 (about 4 p.m.) about 2,900 cfs.

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for South Branch Piscataquog River near Goffstown and Squannacook River near West Groton, Mass.
b Stage-discharge relation affected by ice.

945. North Nashua River near Leominster, Mass.

Location.--Lat 42°30'06", long 71°43'23", on right bank 1 1/3 miles upstream from Wekepeke Brook, 2½ miles southeast of Leominster, Worcester County, and 6.1 miles upstream from confluence with South Branch Nashua River.

Drainage area.--107 sq mi.

Records available.--September 1935 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 270.04 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 198 cfs.

Extremes.--Maximum discharge during year, 3,260 cfs Apr. 5 (gage height, 7.64 ft); minimum not determined; minimum daily, 50 cfs Sept. 7.
1935-60: Maximum discharge, 16,300 cfs Mar. 18, 1936 (gage height, 20.50 ft, from floodmarks), by computation of flow over dam; minimum, 11 cfs Aug. 29, 1948; minimum daily, 22 cfs Sept. 27, 1936, Sept. 2, 1957.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by mills above station. Discharge includes flow diverted from 2.1 sq mi in Squannacook River basin to North Nashua River basin for municipal supply of Fitchburg.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
1.5	59	4.0	760	1.3	41	3.0	375
2.0	133	5.0	1,260	1.5	64	4.0	760
2.5	235	5.5	1,560	2.0	138	6.0	1,890
3.0	375			2.5	240	8.0	3,620

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	278	378	162	135	*158	2,300	260	225	96	128	*75
2	119	260	315	157	138	136	1,500	300	258	102	102	72
3	81	222	285	860	136	142	1,100	250	307	90	90	69
4	68	200	255	870	138	140	1,500	220	375	113	83	65
5	61	198	225	527	138	170	2,700	200	345	77	76	60
6	86	194	202	375	254	165	1,880	180	240	69	72	55
7	*172	438	810	308	298	150	1,040	170	179	62	66	50
8	216	472	671	268	224	150	841	180	145	59	*72	54
9	392	354	440	222	197	135	751	300	130	56	79	62
10	215	275	351	173	183	125	627	520	118	57	207	70
11	140	228	294	197	439	130	575	400	110	59	179	85
12	131	210	452	177	623	130	*683	650	107	69	136	300
13	113	190	1,280	177	378	135	671	500	107	68	108	1,300
14	110	180	792	175	298	135	579	520	108	169	89	500
15	105	210	535	179	280	130	495	430	158	158	97	250
16	98	200	440	164	224	130	461	*360	238	92	129	160
17	91	212	369	152	199	140	416	285	173	72	98	120
18	88	240	321	154	195	140	416	248	147	94	86	100
19	86	*198	297	171	338	170	350	240	111	102	87	120
20	88	172	245	162	318	165	310	199	105	136	87	350
21	84	160	225	160	222	170	280	175	*99	94	74	320
22	84	147	200	154	197	155	280	154	90	79	89	210
23	92	160	184	147	183	140	280	179	86	71	118	160
24	944	188	159	140	167	135	460	568	96	63	96	130
25	1,490	599	159	*140	158	135	430	567	104	58	84	110
26	691	475	168	143	252	125	400	396	84	77	80	100
27	436	366	164	138	250	130	350	282	69	64	74	93
28	321	632	200	149	191	150	500	213	72	80	65	88
29	252	792	235	151	177	230	360	175	71	70	72	*111
30	202	507	202	142	-------	310	290	158	82	314	72	180
31	218	-------	184	133	-------	1,100	-------	169	-------	239	74	-------
Total	7,368	8,957	11,037	7,227	6,930	5,656	22,825	9,448	4,539	3,009	2,969	5,419
Mean	238	299	356	233	239	182	761	305	151	97.1	95.8	181
Cfsm	2.22	2.79	3.33	2.18	2.23	1.70	7.11	2.85	1.41	0.907	0.895	1.69
In.	2.56	3.11	3.84	2.51	2.41	1.97	7.93	3.28	1.58	1.05	1.03	1.88

Calendar year 1959: Max 2,560 Min 36 Mean 215 Cfsm 2.01 In. 27.24
Water year 1959-60: Max 2,700 Min 50 Mean 261 Cfsm 2.44 In. 33.15

Peak discharge (base, 1,000 cfs).--Oct. 24 (11:30 p.m.) 2,380 cfs (6.65 ft); Dec. 7 (1:30 p.m.) 1,130 cfs (4.76 ft); Dec. 13 (8:30 a.m.) 1,430 cfs (5.28 ft); Jan. 3 (2 p.m.) 1,580 cfs (5.54 ft); Mar. 31 (time unknown) about 2,600 cfs; Apr. 5 (8:30 p.m.) 3,260 cfs (7.64 ft); Sept. 13 (time unknown) about 1,800 cfs.

* Discharge measurement made on this day.

Note.--No gage-height record Mar. 4 to Apr. 5, Apr. 19 to May 16, Sept. 3-28; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for Squannacook River near West Groton and Nashua River at East Pepperell.

950. Rocky Brook near Sterling, Mass.

Location.--Lat 42°26'57", long 71°48'10", on right bank 150 ft downstream from bridge on Beaman Road, 0.7 mile upstream from mouth, and 2¼ miles west of Sterling, Worcester County.

Drainage area.--2.28 sq mi.

Records available.--October 1946 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 505 ft (from topographic map).

Average discharge.--14 years, 3.78 cfs.

Extremes.--Maximum discharge during year, about 86 cfs Mar. 31 (occurred during period of ice effect); maximum gage height, 3.63 ft Mar. 31 (backwater from ice); minimum discharge, 0.05 cfs July 12-14, 25-27.
1946-60: Maximum discharge, 470 cfs July 20, 1959 (gage height, 4.74 ft), from rating curve extended above 35 cfs; minimum, 0.003 cfs Aug. 24, 27, 1957.

Remarks.--Records fair. Flow regulated by reservoir from 1949 to 1955.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.40	4.2	5.4	4.1	3.0	*3.7	39	4.6	4.4	0.12	0.87	0.22
2	.92	3.6	4.8	3.7	2.8	3.6	28	5.8	3.6	.44	.64	.22
3	.64	3.4	4.6	23	2.8	3.4	19.8	4.2	5.6	.44	.52	.22
4	.52	3.2	4.2	14.0	2.7	4.1	41	3.6	9.5	.72	.48	.22
5	.44	3.6	3.9	8.6	2.7	5.0	*50	3.1	7.2	.56	.40	.24
6	.52	3.6	3.9	6.8	6.5	3.9	29	2.7	4.6	.36	.36	.22
7	*2.6	11.0	22	5.6	7.5	3.4	18.8	2.6	3.0	.24	.30	.22
8	4.3	8.0	11.7	5.4	5.6	3.0	15.6	2.45	2.1	.22	.27	.19
9	7.8	6.0	8.6	4.2	4.4	3.0	14.8	11.1	1.55	.12	.27	.19
10	4.1	4.8	7.2	3.7	4.2	2.6	12.4	11.8	1.16	.12	.94	.19
11	2.8	4.1	6.0	3.9	10.8	2.6	11.1	13.0	1.04	.08	.98	.19
12	3.6	3.9	12.5	3.7	9.7	2.45	13.1	11.4	.98	.05	.68	13.6
13	2.45	3.6	24	3.6	6.2	2.45	10.4	12.1	.98	.05	.48	7.9
14	2.2	3.6	12.4	3.6	5.2	2.45	8.9	9.1	.87	3.5	.44	3.9
15	1.8	4.8	9.4	3.6	5.2	2.35	7.7	8.6	1.55	1.85	.40	3.2
16	1.55	*4.1	8.6	3.6	4.2	2.35	7.2	*6.9	2.2	.72	.68	2.0
17	1.45	5.0	7.2	3.1	3.9	2.35	6.7	5.4	1.3	.36	.44	1.3
18	1.23	5.6	*6.7	3.0	4.1	3.0	6.9	4.6	1.3	.30	.36	.87
19	1.10	4.4	6.4	3.6	7.8	3.4	6.4	4.4	1.04	.24	.30	.72
20	1.10	3.7	5.4	3.7	7.7	3.2	5.4	3.6	.82	.72	.36	8.5
21	.92	3.6	4.6	3.2	5.4	3.2	4.6	3.0	*.64	.56	.33	4.1
22	.92	3.4	4.4	3.2	4.8	3.0	5.4	2.6	.56	.30	.30	2.7
23	1.04	3.2	3.9	3.0	4.1	2.6	5.2	3.0	.44	.24	.27	1.9
24	16.3	4.5	3.6	3.0	3.6	2.45	8.9	14.5	.36	.12	.27	1.45
25	11.2	11.7	3.6	*2.8	3.4	2.45	11.4	9.7	.36	.08	.24	1.4
26	7.2	6.7	3.7	2.8	6.2	2.45	7.5	7.5	.44	.05	.22	1.23
27	5.6	5.6	3.7	2.7	6.2	2.45	6.9	5.4	.36	.05	.22	.98
28	4.1	9.1	4.4	2.8	4.8	4.4	6.4	4.2	.24	*.17	.19	.92
29	2.8	8.9	5.4	3.6	4.2	5.8	5.4	3.4	.12	.22	*.19	*1.04
30	2.3	6.2	5.8	3.1	-------	9.2	4.2	2.6	.12	2.6	.22	1.9
31	3.2	-------	4.6	3.0	-------	56	-------	3.6	-------	1.9	.22	-------
Total	97.10	157.1	222.6	147.7	149.7	156.30	418.1	190.55	58.43	17.50	12.84	61.93
Mean	3.13	5.24	7.18	4.76	5.16	5.04	13.9	6.15	1.95	0.565	0.414	2.06
Cfsm	1.37	2.30	3.15	2.09	2.26	2.21	6.10	2.70	0.855	0.248	0.182	0.904
In.	1.58	2.56	3.63	2.41	2.44	2.55	6.82	3.11	0.95	0.29	0.21	1.01

Calendar year 1959: Max 46 Min 0.14 Mean 4.07 Cfsm 1.79 In. 24.19
Water year 1959-60: Max 56 Min 0.05 Mean 4.62 Cfsm 2.03 In. 27.56

Peak discharge (base, 45 cfs).--Dec. 7 (9 a.m.) 47 cfs (3.03 ft); Jan. 3 (1:30 p.m.) 51 cfs (3.08 ft); Mar. 31 (time unknown) about 86 cfs; Apr. 5 (1:30 to 2 p.m.) 68 cfs (3.25 ft); Sept. 12 (5:30 to 6 p.m.) 51 cfs (3.61 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23, Jan. 2, 5, 6, 9, 10, Feb. 7, 8, 13-15, 21, 23-25, Mar. 1-4, 31.

955. South Branch Nashua River at Clinton, Mass.

Location.--Lat 42°24'15", long 71°41'25", at Wachusett Dam, 1 mile south of Clinton, Worcester County.

Drainage area.--107.69 sq mi since July 1937.

Records available.--July 1896 to September 1960.

Average discharge.--64 years, 190 cfs (adjusted to present drainage area).

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.

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

Revisions (water years).--WSP 1051: 1928.

Monthly discharge and rainfall, water year October 1959 to September 1960

Month	Runoff (millions of gallons)	Discharge per square mile		Runoff (inches)	Rainfall (inches)
		Millions of gallons per day	Cubic feet per second		
October	4,217.2	1.263	1.95	2.25	8.20
November	6,205.5	1.921	2.97	3.32	4.68
December	7,528.9	2.255	3.49	4.02	5.10
Calendar year 1959	57,126.5	1.453	2.25	30.52	57.13
January	5,219.5	1.563	2.42	2.79	3.51
February	5,593.5	1.791	2.77	2.99	4.91
March	6,078.8	1.821	2.82	3.25	3.76
April	13,986.1	4.329	6.70	7.47	4.02
May	6,736.9	2.018	3.12	3.60	5.66
June	3,873.1	1.199	1.86	2.07	2.42
July	2,551.1	.764	1.18	1.36	6.93
August	1,240.3	.372	.58	.66	2.58
September	2,881.3	.892	1.38	1.54	6.95
Water year 1959-60	66,112.2	1.677	2.60	35.32	58.72

960. Squannacook River near West Groton, Mass.

Location.--Lat 42°38'03", long 71°39'30", on left bank 0.7 mile downstream from Trout Brook and 2.7 miles northwest of West Groton, Middlesex County.

Drainage area.--62.8 sq mi, excludes 2.10 sq mi above outlet of Fitchburg Reservoir.

Records available.--October 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 244.27 ft above mean sea level, datum of 1929.

Average discharge.--11 years, 118 cfs.

Extremes.--Maximum discharge during year, 2,120 cfs Apr. 6 (gage height, 6.70 ft); minimum daily, 8.4 cfs Sept. 2.
1949-60: Maximum discharge, 4,010 cfs Oct. 16, 1955 (gage height, 8.04 ft), from rating curve extended above 2,200 cfs by logarithmic plotting; minimum daily, 4.3 cfs Aug. 14, 1950.

Remarks.--Records excellent except those for periods of ice effect, which are good, and those for periods of no gage-height record, which are fair. Flow regulated by mill above station. Entire flow from 2.10 sq mi above outlet of Fitchburg Reservoir diverted for municipal supply of Fitchburg during most years.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5

1.8	16	4.0	366
2.0	27	5.0	760
2.4	61	6.0	1,440
2.8	112	6.5	1,920
3.2	182		

Apr. 6 to Sept. 30

1.6	8.4	2.4	64
1.8	16	3.2	185
2.1	35	4.0	366

Note.--Same as preceding table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	115	250	b93	71	b90	1,560	169	140	29	*106	16
2	33	125	200	b88	70	*b87	1,050	183	147	36	58	8.4
3	36	100	165	152	69	92	791	164	137	39	41	16
4	27	92	150	512	69	90	857	147	185	41	36	16
5	22	88	130	370	68	100	1,750	136	211	40	32	16
6	25	84	120	245	88	97	1,610	125	148	32	28	15
7	50	125	200	186	178	90	748	116	112	28	24	14
8	90	241	440	158	167	89	563	112	91	26	24	16
9	130	190	260	b140	138	b78	507	143	77	24	25	16
10	160	150	210	b120	114	b74	463	291	70	23	39	20
11	85	120	180	b105	127	b78	432	268	70	20	128	21
12	*68	100	220	98	319	b79	*435	361	59	20	89	61
13	55	*92	500	98	b260	82	503	325	59	19	57	757
14	49	87	650	97	194	82	425	325	56	36	43	385
15	44	93	*322	96	b180	79	366	255	65	94	36	177
16	39	96	243	100	147	78	320	217	171	61	37	113
17	36	90	204	90	128	82	280	178	137	40	40	84
18	33	120	176	84	118	84	250	158	94	32	33	70
19	31	114	163	87	158	96	238	*164	74	39	28	61
20	29	94	149	87	210	94	209	142	60	52	29	107
21	27	84	122	84	169	96	187	124	51	51	34	201
22	27	82	114	82	158	92	189	114	46	35	30	134
23	29	78	b96	80	125	85	187	112	*40	28	65	103
24	86	79	92	b74	114	83	191	204	40	25	67	82
25	372	199	88	b74	106	83	277	422	44	23	43	71
26	350	310	96	74	118	72	266	320	43	21	33	*82
27	270	190	98	*72	163	78	221	225	37	20	29	56
28	200	230	103	73	143	87	293	165	33	21	24	52
29	150	350	109	74	122	135	231	137	30	20	*24	51
30	110	400	112	74	-------	184	187	118	29	34	22	69
31	110	-------	106	b69	-------	605	-------	113	-------	181	20	-------
Total	2,790	4,318	6,068	3,836	4,071	3,321	15,586	6,033	2,556	1,192	1,324	2,870.4
Mean	90.0	144	196	124	140	107	520	195	85.2	38.5	42.7	95.7
Cfsm	1.43	2.29	3.12	1.97	2.23	1.70	8.28	3.11	1.36	0.613	0.680	1.52
In.	1.65	2.56	3.59	2.27	2.41	1.97	9.23	3.57	1.51	0.71	0.78	1.70

Calendar year 1959: Max 1,370 Min 11 Mean 108 Cfsm 1.72 In. 23.24
Water year 1959-60: Max 1,750 Min 8.4 Mean 147 Cfsm 2.34 In. 31.95

Peak discharge (base, 700 cfs).--Dec. 13 or 14 (time unknown) 701 cfs (4.88 ft); Apr. 1 (7 a.m.) 1,750 cfs (6.33 ft); Apr. 6 (2 a.m.) 2,120 cfs (6.70 ft); Sept. 13 (2:30 p.m.) 1,060 cfs (5.50 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 6-11, 13-20, Oct. 26 to Nov. 6, Nov. 10-12, Nov. 26 to Dec. 14; discharge estimated on basis of weather records, recorded range in stage, and records for North Nashua River near Leominster.

965. Nashua River at East Pepperell, Mass.

Location.--Lat 42°40'03", long 71°34'32", on right bank 200 ft downstream from powerplant of St. Regis Paper Co. at East Pepperell, Middlesex County, and 0.8 mile upstream from Nissitissit River.
Drainage area.--Total above gage, 433 sq mi; net above gage, 316 sq mi (flow diverted from 117 sq mi for use of Boston metropolitan district and city of Worcester).
Records available.--October 1935 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 169.04 ft above mean sea level, datum of 1929.
Average discharge.--25 years, 541 cfs (adjusted for wastage into Nashua River).
Extremes.--Maximum discharge during year, 5,640 cfs Apr. 6 (gage height, 10.75 ft); minimum daily, 10 cfs Dec. 25.
1935-60: Maximum discharge, 20,900 cfs Mar. 20, 1936 (gage height, 19.1 ft, from floodmarks), from rating curve extended above 12,000 cfs on basis of velocity-area studies; minimum daily, 1.1 cfs Aug. 13, 1939.
Remarks.--Records good except those for periods of no gage-height record or backwater from aquatic vegetation, which are fair. Extremes and daily discharge include water wasted in diverting drainage from basin of South Branch Nashua River for use of Boston metropolitan district and water diverted around station through plant of St. Regis Paper Co. Flow regulated by powerplant above station.
Revisions.--WSP 801: Drainage area.

Rating table, water year 1959-60, except periods of backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

0.4	8.7	2.0	321
.6	18	3.0	775
.8	32	6.0	2,410
1.0	52	10.0	4,980
1.2	82	10.5	5,410
1.5	152		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	181	318	1,230	31	245	930	3,540	382	957	216	957	206
2	256	1,000	1,010	372	349	*790	4,510	957	820	218	498	289
3	132	825	974	605	353	645	3,900	962	962	73	305	363
4	33	735	962	1,750	357	449	3,630	886	974	13	275	67
5	321	720	340	1,940	361	516	4,120	650	860	159	197	17
6	259	462	352	1,480	723	232	5,340	323	1,350	194	200	237
7	245	429	1,080	1,100	384	693	5,120	184	1,070	183	*58	241
8	380	713	1,560	979	880	735	3,830	148	996	170	123	283
9	957	1,220	1,500	520	924	650	a3,100	803	825	169	156	248
10	446	1,000	1,120	516	730	645	a2,600	880	660	103	231	242
11	408	968	974	852	650	640	a2,200	1,130	660	150	404	80
12	779	770	520	852	913	640	a1,900	1,330	158	196	891	853
13	436	562	1,270	675	1,280	196	a2,250	*1,430	574	168	436	1,620
14	221	160	2,140	670	756	262	*2,080	1,470	562	186	47	2,360
15	252	193	1,880	518	930	630	1,900	1,030	387	481	127	1,690
16	*342	879	1,420	306	935	685	1,710	1,300	630	364	179	1,170
17	128	805	1,140	78	918	660	1,250	1,040	745	251	295	568
18	56	530	996	602	715	655	1,490	957	745	648	368	291
19	481	620	600	690	790	650	1,330	940	194	428	239	826
20	345	590	685	675	935	207	1,180	847	277	392	251	1,020
21	252	526	946	660	680	527	1,070	650	363	392	56	1,080
22	249	173	946	441	946	690	996	203	367	280	164	847
23	249	518	790	287	935	670	974	818	363	161	187	444
24	116	705	362	66	918	655	560	946	490	31	203	210
25	993	880	10	318	725	635	1,250	1,210	445	117	254	233
26	1,990	595	287	381	775	354	1,250	1,580	76	153	*166	727
27	1,640	1,210	449	*511	902	115	1,150	1,370	*238	153	220	557
28	1,190	1,010	847	680	365	491	1,110	1,120	305	153	*61	387
29	1,000	945	946	660	826	847	1,090	561	309	156	343	387
30	957	1,580	800	409	-------	946	996	566	305	321	184	660
31	369	-------	367	206	-------	1,750	-------	908	-------	392	223	-------
Total	15,663	21,641	28,503	19,828	21,200	19,190	67,426	27,581	17,647	7,071	8,298	18,203
Mean	505	721	919	640	731	619	2,248	890	588	228	268	607
(†)	-8.05	-7.65	-6.41	-21.3	-46.1	-35.8	-202	-66.0	-96.3	-7.12	-16.6	-55.8

Adjusted for wastage (figures represent discharge from net drainage area)

Mean	497	714	913	618	685	583	2,046	824	492	221	251	551
Cfsm	1.57	2.26	2.89	1.96	2.17	1.84	6.47	2.61	1.56	0.699	0.794	1.74
In.	1.81	2.52	3.33	2.26	2.34	2.13	7.22	3.01	1.74	0.81	0.92	1.95

	Observed				Adjusted			
Calendar year 1959:	Max 3,830	Min 8.3	Mean 575		Mean 566	Cfsm 1.79	In. 24.30	
Water year 1959-60:	Max 5,340	Min 10	Mean 744		Mean 697	Cfsm 2.21	In. 30.04	

* Discharge measurement made on this day.
† Water wasted in diverting drainage from basin of South Branch Nashua River for use of Boston metropolitan district, equivalent in cubic feet per second. Records furnished by Water Division of Metropolitan District Commission.
a No gage-height record; discharge estimated on basis of weather records and records for North Nashua River near Leominster and Squannacook River near West Groton.
Note.--Backwater from aquatic vegetation Oct. 1-8, 10-25, 31, Nov. 1, 14, 15, 22, 23, 26, Dec. 5, 6, 12, 19, 24-26, 31, Jan. 1, 9, 17, 24, 25, 31, Feb. 1, 7, 28, Mar. 6, 7, 13, 14, 20, 21, 27, 28, Apr. 24, May 1, 8, 21-23, 29, 30, June 5, June 10 to July 31, Aug. 2-11, Aug. 13 to Sept. 12, Sept. 17-19, 23-30.

970. Assabet River at Maynard, Mass.

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

Drainage area.--116 sq mi.

Records available.--July 1941 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 145 ft (from topographic map).

Average discharge.--19 years, 183 cfs.

Extremes.--Maximum discharge during year, 1,300 cfs Apr. 1, 2 (gage height, 5.35 ft); minimum daily, 2.9 cfs July 13, 29.
1941-60: Maximum discharge, 4,250 cfs Aug. 20, 1955 (gage height, 8.94 ft); maximum gage height, 8.96 ft Aug. 20, 1955 (backwater from debris); minimum daily discharge, 0.8 cfs Oct. 4, 1953.

Remarks.--Records fair. Low flow regulated by mills above station; greater regulation prior to 1953.

Revisions (water years).--WSP 1231: 1945-46.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used or backwater from aquatic vegetation or both Aug. 10 to Sept. 12, Sept. 18, 19, 25-30)

Oct. 1 to Mar. 31

1.5	18	3.0	305
1.8	44	4.0	630
2.1	82	5.0	1,100
2.5	159		

Apr. 1 to Sept. 30

1.1	1.2	2.5	154
1.2	3.2	3.0	270
1.3	6.5	4.0	610
1.5	18	5.0	1,100
1.8	44	6.0	1,700
2.1	82		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	150	362	227	159	*401	1,160	218	177	41	136	*28
2	67	162	308	206	147	329	1,210	222	202	24	110	30
3	65	157	263	314	140	290	930	220	197	25	84	28
4	64	145	242	544	133	206	845	211	244	46	74	28
5	22	137	227	642	131	233	1,010	197	378	80	68	28
6	21	133	215	524	173	272	1,210	182	442	62	67	50
7	*42	167	311	410	293	272	*1,080	164	351	55	67	50
8	58	260	452	344	332	278	830	154	255	*36	64	50
9	66	317	513	287	329	248	722	184	195	55	63	50
10	144	293	440	242	293	233	648	245	162	55	68	37
11	162	236	362	209	326	218	566	294	146	56	64	26
12	133	195	344	198	482	203	509	312	136	23	64	60
13	96	*170	470	195	499	215	467	315	128	2.9	71	318
14	81	164	598	181	443	206	428	333	119	7.3	78	330
15	75	212	*580	181	344	198	387	330	121	108	71	312
16	71	260	488	183	335	186	360	*297	130	146	71	213
17	65	266	422	181	287	192	345	258	130	112	71	140
18	60	248	383	172	272	218	333	232	115	82	71	96
19	55	224	359	170	492	239	318	213	101	58	71	72
20	55	200	332	167	774	260	300	204	90	54	69	146
21	55	172	290	167	715	281	273	184	*79	62	69	186
22	55	162	260	162	576	272	255	169	69	63	67	195
23	55	154	215	157	470	242	250	160	63	64	67	169
24	58	157	200	149	410	227	250	211	58	62	67	123
25	202	257	181	*147	368	227	294	315	62	65	38	96
26	335	377	175	142	410	203	330	363	60	43	*3.4	*84
27	335	410	181	137	524	195	318	294	54	33	3.7	71
28	254	386	215	147	558	248	282	232	53	13	4.0	64
29	186	380	254	164	482	338	255	193	53	2.9	6.9	60
30	152	383	269	181	-------	413	232	162	52	49	24	58
31	133	-------	257	165	-------	594	-------	154	-------	128	25	-------
Total	3,290	6,934	10,168	7,295	10,897	8,137	16,395	7,222	4,422	1,733.1	1,877.0	3,198
Mean	106	231	328	235	376	262	546	233	147	55.9	60.5	107
Cfsm	0.914	1.99	2.83	2.03	3.24	2.26	4.71	2.01	1.27	0.482	0.522	0.922
In.	1.05	2.22	3.26	2.34	3.49	2.61	5.26	2.32	1.42	0.56	0.60	1.03

Calendar year 1959: Max 1,170 Min 3.7 Mean 217 Cfsm 1.87 In. 25.39
Water year 1959-60: Max 1,210 Min 2.9 Mean 223 Cfsm 1.92 In. 26.16

* Discharge measurement made on this day.

975. Sudbury River at Framingham Center, Mass.

Location.--Lat 42°17'30", long 71°26'40", at dam of Framingham Reservoir No. 1, half a mile upstream from outlet of Farm Pond and three-quarters of a mile southwest of Framingham Center, Middlesex County.

Drainage area.--75.2 sq mi since January 1881.

Records available.--January 1875 to September 1960.

Average discharge.--85 years, 113 cfs (adjusted to present drainage area).

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.

Revisions (water years).--WSP 1051: 1937.

Monthly discharge and rainfall, water year October 1959 to September 1960

Month	Runoff (millions of gallons)	Discharge per square mile		Runoff (inches)	Rainfall (inches)
		Millions of gallons per day	Cubic feet per second		
October	1,176.3	0.505	0.781	0.9C	5.85
November	2,279.0	1.010	1.56	1.74	4.37
December	3,845.0	1.649	2.55	2.94	4.75
Calendar year 1959	30,423.6	1.108	1.72	23.2E	48.56
January	3,014.7	1.293	2.00	2.31	3.30
February	5,276.1	2.419	3.74	4.04	4.73
March	3,833.3	1.644	2.54	2.93	3.55
April	6,006.5	2.662	4.12	4.6C	3.45
May	2,445.2	1.049	1.62	1.87	3.42
June	469.8	.208	.322	.3E	2.15
July	86.8	.037	.058	.07	7.04
August	-143.1	-.061	-.095	-.11	1.61
September	586.6	.260	.402	.4E	6.03
Water year 1959-60	28,876.2	1.049	1.62	22.1O	50.25

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

985. Lake Cochituate Outlet at Cochituate, Mass.

Note.--Records for the 1960 water year withheld because of uncertainties regarding accuracy. Records since 1938 may be considerably in error and should not be used.

995. Concord River below River Meadow Brook, at Lowell, Mass.

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

Drainage area.--Total above gage, 405 sq mi; net above gage, 312 sq mi (diversion as needed from 92.6 sq mi for use of Boston metropolitan district).

Records available.--October 1936 to September 1960. Monthly discharge only for October, November 1936, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 67.41 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 467 cfs (adjusted to net drainage area).

Extremes.--Maximum discharge during year, 2,510 cfs Apr. 8 (gage height, 7.41 ft); minimum daily, 56 cfs Sept. 3.
1936-60: Maximum discharge, 4,540 cfs Aug. 23, 1955 (gage height, 8.97 ft); minimum daily, 4.0 cfs Sept. 29, 1957.

Remarks.--Records excellent except those for periods of backwater from aquatic vegetation, which are good. Daily discharge includes water wasted from 92.6 sq mi in basins of Sudbury River and Lake Cochituate. Water diverted above station for use of city of Lowell. Flow regulated by mills above station.

Rating table, water year 1959-60, except periods of backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 10-12)

3.8	47	6.0	1,100
4.1	98	7.0	2,040
4.5	204	8.0	3,270
5.0	430		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	146	569	995	875	716	1,550	1,440	942	631	165	297	87
2	196	545	988	868	696	1,450	1,720	920	638	138	297	84
3	236	515	972	928	670	1,350	1,920	890	670	176	271	56
4	279	503	942	1,090	664	1,090	*2,060	854	696	176	239	58
5	279	485	890	1,200	664	1,110	2,180	798	784	173	208	79
6	247	485	868	1,260	709	1,170	2,370	749	847	173	179	109
7	247	458	958	1,300	854	*1,170	2,460	696	868	173	211	86
8	255	509	1,020	1,290	928	1,160	2,460	650	854	179	251	73
9	320	581	1,080	1,170	958	1,050	2,390	644	798	167	259	80
10	390	618	1,110	1,100	988	1,090	2,270	657	742	162	*279	65
11	450	650	1,110	1,000	1,080	1,050	2,160	676	683	192	284	111
12	*458	*657	1,110	940	1,210	1,020	2,050	*716	638	151	302	229
13	436	638	1,200	920	1,260	1,000	1,900	763	593	115	297	424
14	414	618	1,290	890	1,320	988	1,800	819	539	179	297	515
15	380	650	1,370	868	1,190	965	1,700	854	509	211	307	599
16	350	664	*1,400	854	1,260	935	1,590	882	491	247	288	612
17	302	709	1,380	820	1,220	912	1,490	854	468	302	271	593
18	284	742	1,340	805	1,180	905	1,420	833	424	320	251	545
19	284	749	1,300	735	1,380	905	1,330	791	414	284	232	515
20	259	756	1,260	716	1,560	920	1,270	749	386	271	173	551
21	243	728	1,200	728	1,690	942	1,200	702	335	251	185	581
22	247	709	1,120	722	1,760	942	1,130	676	297	232	198	599
23	239	696	1,050	702	1,700	928	1,070	644	293	182	153	612
24	258	670	1,040	690	1,620	928	1,030	644	*263	188	145	587
25	355	728	972	676	1,530	905	1,020	696	228	228	145	563
26	452	777	942	650	1,520	898	1,010	756	228	208	148	533
27	521	861	898	618	1,590	882	1,020	805	225	211	113	491
28	575	935	882	631	1,640	868	1,010	819	192	225	125	458
29	587	965	840	*657	1,630	890	995	742	173	218	156	414
30	581	1,000	875	690	--------	965	965	690	165	218	109	386
31	557	--------	890	709	--------	1,160	--------	657	--------	255	*97	--------
Total	10,827	20,170	33,292	27,102	35,187	32,098	48,430	23,568	15,072	6 370	6,767	10,695
Mean	349	672	1,074	874	1,213	1,035	1,614	760	502	205	218	356
(†)	110	191	308	251	312	294	392	205	113	49.7	92.2	157

Adjusted for wastage and diversion (figures represent net discharge from net drainage area)

Mean	239	481	766	624	901	741	1,222	555	390	156	126	199
Cfsm	0.766	1.54	2.46	2.00	2.89	2.38	3.92	1.78	1.25	0.500	0.404	0.638
In.	0.88	1.72	2.83	2.30	3.11	2.74	4.37	2.05	1.39	0.58	0.47	0.71

	Observed			Adjusted		
Calendar year 1959:	Max 2,010	Min 116	Mean 684	Mean 485	Cfsm 1.55	In. 21.12
Water year 1959-60:	Max 2,460	Min 56	Mean 737	Mean 531	Cfsm 1.70	In. 23.15

* Discharge measurement made on this day.
† Water wasted from 92.6 sq mi in basins of Sudbury River and Lake Cochituate and diversion for use of city of Lowell, equivalent in cubic feet per second. Records furnished by Water Division of Metropolitan District Commission and by city of Lowell.
Note.--Backwater from aquatic vegetation Oct. 1 to Dec. 12, May 13 to Sept. 30.

1000. Merrimack River below Concord River, at Lowell, Mass.

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

Drainage area.--Total above gage, 4,635 sq mi; net above gage, 4,425 sq mi (diversions as needed from 210 sq mi for use of Boston metropolitan district and city of Worcester).

Records available.--June 1923 to September 1960.

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

Average discharge.--37 years, 7,271 cfs (adjusted for wastage into Merrimack River).

Extremes.--Maximum discharge during year, 79,000 cfs Apr. 6 (gage height, 56.00 ft); minimum daily, 859 cfs Sept. 11.

1923-60: Maximum discharge, 173,000 cfs Mar. 20, 1936 (gage height, 68.4 ft, from floodmarks); minimum daily, 199 cfs Sept. 23, 1923.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record and those below 1,000 cfs, which are good. Daily discharge includes water wasted from 210 sq mi in basins of Sudbury and South Branch Nashua Rivers and Lake Cochituate. Flow regulated by powerplants, by Franklin Falls Reservoir since 1942, and by Squam, Newfound, Winnipesaukee, Winnisquam, and other lakes and reservoirs above station. See pages 82,110 for description and month-end usable contents of many of these reservoirs.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

41.6	830	44.0	7,820
41.7	977	46.0	16,400
42.0	1,520	48.0	26,400
42.5	2,470	50.0	37,500
43.0	4,270	56.0	79,000

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,500	8,420	27,700	7,380	6,300	8,700	30,500	15,200	8,830	3,120	4,590	1,740
2	1,870	9,460	19,800	b6,400	6,340	7,500	44,900	14,300	9,460	2,740	5,290	1,590
3	1,580	10,200	15,900	7,780	6,340	8,380	46,200	15,000	9,420	2,470	4,210	1,060
4	1,170	9,170	a14,000	12,400	6,340	7,310	43,900	14,100	10,200	2,710	3,240	1,010
5	2,140	8,420	a12,500	17,900	6,260	7,270	57,500	12,200	10,000	3,390	2,810	1,120
6	2,350	7,270	10,800	17,600	6,810	8,260	77,200	11,500	10,300	3,330	2,040	1,860
7	2,600	8,260	11,300	15,100	7,860	8,060	*66,100	9,710	10,700	2,940	1,500	1,820
8	4,370	9,920	14,700	13,400	8,700	8,700	52,400	8,910	9,540	2,970	2,850	1,790
9	5,500	12,100	17,600	11,900	8,790	8,220	44,900	9,500	8,140	2,740	2,860	2,000
10	5,190	11,100	a15,500	9,210	8,830	b7,400	36,600	11,000	7,000	1,560	2,910	1,410
11	4,920	9,840	a13,500	8,910	9,380	b6,800	29,600	14,600	5,910	2,380	2,990	859
12	4,940	*8,750	a12,000	b8,300	11,600	6,660	27,100	16,300	4,890	2,220	2,880	3,940
13	4,550	8,100	a14,500	8,340	14,500	b7,100	27,400	17,200	4,760	2,210	2,500	14,600
14	4,370	7,380	a25,000	8,540	14,500	6,740	28,900	18,800	4,890	2,510	2,080	22,100
15	3,520	7,040	a26,000	8,220	13,000	6,960	29,700	18,900	4,560	2,660	2,600	19,000
16	2,830	10,600	a20,000	7,940	12,800	7,340	30,400	18,000	7,340	2,960	2,650	13,400
17	2,500	12,100	17,000	b7,000	a12,000	7,340	32,700	19,400	11,300	2,280	2,700	9,250
18	1,770	10,700	15,200	7,190	a11,000	7,270	31,700	18,100	10,600	3,090	2,630	5,400
19	2,760	9,750	13,900	7,540	11,600	7,420	30,100	15,100	8,180	2,920	2,620	5,230
20	3,100	9,460	a12,500	7,340	a12,500	b6,700	29,400	13,100	6,340	2,760	1,640	5,740
21	3,020	8,420	a11,000	7,270	a12,000	7,120	25,000	11,800	4,890	2,900	1,120	8,180
22	2,660	7,340	a10,000	7,230	a11,500	7,420	20,400	10,300	4,300	2,840	2,450	8,790
23	2,640	7,000	b9,000	6,930	a10,500	7,270	18,000	9,460	4,110	1,840	2,470	8,380
24	3,230	7,040	b8,000	b6,400	a10,200	7,000	18,000	9,670	*3,950	1,690	2,400	6,700
25	13,000	9,460	7,190	6,550	a9,900	6,850	18,300	13,700	3,270	2,430	2,320	4,660
26	26,900	16,900	7,980	6,480	9,840	6,300	21,300	18,400	4,110	2,400	*2,220	5,160
27	27,300	21,100	7,820	6,520	10,100	5,770	22,700	17,700	4,720	2,410	1,540	4,950
28	25,300	18,000	7,900	6,740	9,920	5,500	21,400	14,900	4,140	2,420	948	4,460
29	24,000	22,900	7,900	*6,740	9,250	7,120	19,400	12,100	3,950	1,810	1,780	4,590
30	21,400	31,200	8,620	6,700	---------	8,750	17,500	10,300	3,800	1,380	1,770	4,430
31	12,800	--------	8,540	6,590	---------	13,400	--------	9,460	--------	1,390	1,730	--------
Total	225,760	337,400	423,350	272,540	288,660	232,630	999,200	428,710	203,600	77,470	78,338	175,219
Mean	7,283	11,250	13,660	8,792	9,954	7,504	33,310	13,830	6,787	2,499	2,527	5,841
(†)	121	202	318	275	362	332	595	272	210	58.3	110	214

Adjusted for wastage (figures represent net discharge from net drainage area)

Mean	7,162	11,040	13,340	8,517	9,592	7,172	32,710	13,560	6,576	2,441	2,417	5,626
Cfsm	1.62	2.49	3.01	1.92	2.17	1.62	7.39	3.06	1.49	0.552	0.546	1.27
In.	1.87	2.78	3.48	2.22	2.34	1.87	8.25	3.53	1.66	0.64	0.63	1.42

	Observed			Adjusted		
Calendar year 1959:	Max 46,700	Min 671	Mean 7,534	Mean 7,323	Cfsm 1.65	In. 22.46
Water year 1959-60:	Max 77,200	Min 859	Mean 10,230	Mean 9,972	Cfsm 2.25	In. 30.69

* Discharge measurement made on this day.

† Water wasted from 210 sq mi in basins of Sudbury and South Branch Nashua Rivers and Lake Cochituate, equivalent in cubic feet per second. Records furnished by Water Division of Metropolitan District Commission.

a No gage-height record; discharge estimated on basis of weather records and records for Merrimack River near Goffs Falls, below Manchester, N. H.

b Stage-discharge relation affected by ice.

Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation

Reservoirs in Merrimack River basin

775. Newfound Lake on Newfound River, 1 2/3 miles north of Bristol, N. H., used for recreation and for storage of water for power, has usable capacity of 1,690,000,000 cu ft. Records furnished by Public Service Co. of New Hampshire.

785. Franklin Falls Reservoir on Pemigewasset River, 2 miles north of Franklin, N. H., completed in 1942, used for flood control, has usable capacity of 6,640,000,000 cu ft. Records furnished by Corps of Engineers.

790. Merrymeeting Lake on Merrymeeting River, 2½ miles northeast of Alton, N. H., used for recreation and for storage of water for power, has usable capacity of 368,000,000 cu ft. Records furnished by Public Service Co. of New Hampshire.

795. Lake Wentworth above Lake Winnipesaukee, at Wolfeboro Falls, N. H., used for recreation and for storage of water for power, has usable capacity of 854,000,000 cu ft. Records furnished by O. P. Berry Co.

800. Lake Winnipesaukee on Winnipesaukee River (see p.82).

825. Edward MacDowell Reservoir on Nubanusit Brook, at West Peterboro, 2 miles northwest of Peterboro, N. H., completed in 1950, used for flood control, has usable capacity of 558,000,000 cu ft. Records furnished by Corps of Engineers.

865. Blackwater Reservoir on Blackwater River, at Swett's Mills, 1 mile south of Webster, N. H., completed in 1941, used for flood control, has usable capacity of 2,004,000,000 cu ft. Records furnished by Corps of Engineers.

925. Tower Hill Pond on Maple Falls Brook, 2¼ miles north of Auburn, N. H., completed in 1939, used for storage of water for municipal supply and for power, has usable capacity of 182,000,000 cu ft. Records furnished by Manchester Water Works.

935. Massabesic Lake on Cohas Brook, 2½ miles southeast of Manchester, N. H., used for storage of water for municipal supply, has usable capacity of 724,000,000 cu ft. Records furnished by Manchester Water Works.

Month-end usable contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Newfound Lake	Franklin Falls Reservoir	Merrymeeting Lake	Lake Wentworth	Edward MacDowell Reservoir	Blackwater Reservoir	Tower Hill Pond	Massabesic Lake
Sept.30, 1959..	965	120	287	628	10.1	0.2	169.1	457
Oct. 31.....	1,476	151	303	585	24.9	2.6	103.5	450
Nov. 30.....	1,655	387	255	713	53.7	23.1	103.5	450
Dec. 31.....	1,331	139	233	847	19.9	1.0	45.6	526
Jan. 31, 1960..	987	105	244	585	17.5	.9	45.1	438
Feb. 29.....	802	124	265	335	18.3	1.3	43.8	452
Mar. 31.....	795	386	196	467	25.8	5.9	61.8	385
Apr. 30.....	1,633	227	336	*940	4.9	5.9	157.6	906
May 31.....	1,620	139	346	928	24.9	1.7	182.5	884
June 30.....	1,675	118	341	859	10.8	.8	178.1	810
July 31.....	1,426	167	330	724	13.7	1.3	173.5	650
Aug. 31.....	1,161	113	316	615	7.3	.3	173.5	550
Sept.30.....	1,085	118	316	672	13.7	.7	174.5	428

* Estimated.

1010. Parker River at Byfield, Mass.

Location.--Lat 42°45'10", long 70°56'46", on left bank 1,400 ft downstream from dam, half a mile south of Byfield, Essex County, 0.7 mile upstream from Wheeler Brook, and 5½ miles southwest of Newburyport.

Drainage area.--21.6 sq mi.

Records available.--October 1945 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 23.46 ft above mean sea level, datum of 1929 (levels by Massachusetts Department of Public Works).

Average discharge.--15 years, 35.5 cfs.

Extremes.--Maximum discharge during year, 196 cfs Apr. 6 (gage height, 3.63 ft); minimum daily, 1.9 cfs Sept. 6, 7, 10.
1945-60: Maximum discharge, 479 cfs Jan. 27, 1958 (gage height, 5.49 ft); minimum daily, 0.09 cfs Sept. 25-30, Oct. 3-6, 1957.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Diurnal fluctuation caused by mill above station. Some regulation at low flow by ponds above station.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.3	1.3	2.0	24
1.4	2.7	2.5	62
1.5	4.5	3.0	115
1.6	7.2	4.0	248
1.8	14		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	17	41	30	33	105	120	51	34	4.6	5.0	2.5
2	4.6	17	40	28	35	100	130	49	32	5.2	5.0	2.2
3	6.0	17	38	37	36	90	140	47	33	5.5	4.5	2.1
4	5.2	17	37	44	37	65	150	43	34	5.5	3.9	2.1
5	5.2	17	35	49	40	55	160	40	35	5.3	3.3	2.1
6	6.0	17	34	57	45	60	180	40	35	5.0	3.0	1.9
7	8.0	19	41	58	55	*62	180	37	34	4.7	3.0	1.9
8	*9.5	20	47	57	60	62	170	36	31	4.5	4.9	2.1
9	14	*22	55	51	65	60	155	36	28	4.1	3.2	2.1
10	17	22	53	47	70	56	140	*36	24	3.8	3.7	1.9
11	19	22	48	42	80	52	130	36	22	3.5	2.2	2.1
12	20	22	49	39	90	52	115	38	21	3.3	3.1	5.1
13	19	21	65	37	95	50	100	39	19	3.0	3.7	7.1
14	19	20	81	36	100	48	95	40	17	4.0	3.5	13
15	18	22	86	34	100	47	*90	41	17	6.0	3.9	17
16	17	22	81	34	95	48	84	40	16	6.0	4.3	18
17	16	23	*76	32	85	49	77	39	14	5.5	3.9	17
18	15	25	71	30	80	50	72	36	14	5.0	3.9	15
19	14	25	70	29	130	54	65	34	12	4.5	4.1	14
20	14	25	63	29	160	58	57	32	11	4.5	4.1	16
21	12	24	55	29	160	62	51	30	10	*5.0	4.1	19
22	12	24	49	28	150	64	53	28	9.8	4.5	3.9	18
23	12	23	43	28	140	64	51	27	*8.8	4.1	3.9	18
24	13	24	38	27	125	64	51	32	8.2	3.5	*3.5	18
25	15	30	34	26	110	60	53	42	7.9	3.3	3.0	16
26	18	32	33	26	120	58	53	58	7.2	3.0	2.5	15
27	17	35	31	25	125	58	56	59	6.6	2.8	2.5	14
28	17	37	29	*26	120	58	58	53	6.0	2.8	2.5	14
29	17	40	29	27	115	64	58	45	5.4	2.7	2.4	12
30	16	41	30	30	-------	72	55	39	5.0	4.8	2.5	12
31	16	-------	30	32	-------	90	-------	36	-------	5.0	2.4	-------
Total	413.8	722	1,512	1,104	2,656	1,937	2,949	1,239	557.9	135.0	109.4	301.2
Mean	13.3	24.1	48.8	35.6	91.6	62.5	98.3	40.0	18.6	4.35	3.53	10.0
Cfsm	0.616	1.12	2.26	1.65	4.24	2.89	4.55	1.85	0.861	0.201	0.163	0.463
In.	0.71	1.24	2.60	1.90	4.57	3.34	5.08	2.13	0.96	0.23	0.19	0.52

Calendar year 1959: Max 196 Min 4.0 Mean 33.0 Cfsm 1.53 In. 20.72
Water year 1959-60: Max 180 Min 1.9 Mean 37.3 Cfsm 1.73 In. 23.47

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-7, Jan. 29 to Mar. 6, Mar. 8 to Apr. 14, July 1-20; discharge estimated on basis of weather records, recorded range in stage, and records for Ipswich River near Ipswich and at South Middleton.

1015. Ipswich River at South Middleton, Mass.

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

Drainage area.--43.4 sq mi.

Records available.--June 1938 to September 1960.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 45 ft (from topographic map).

Average discharge.--22 years, 69.8 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 334 cfs Apr. 6 (gage height, 4.58 ft); minimum, 1.15 cfs July 25.
1938-60: Maximum discharge, 682 cfs Jan. 27, 1958 (gage height, 6.49 ft); minimum, 0.1 cfs Sept. 24, Oct. 1, 1957.

Remarks.--Records good. Water diverted above station for municipal supplies of Reading, Lynn, and Peabody. Occasional regulation by mill above station.

Revisions (water years).--WSP 1301: 1942(M). WSP 1621: 1938-58 (monthly runoff).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 19				Feb. 20 to Sept. 30			
0.25	2.0	1.0	54	0.21	1.5	1.0	54
.3	3.5	2.0	93	.3	3.6	2.0	112
.4	7.4	3.0	170	.4	7.4	3.0	181
.5	12	4.0	265	.5	12	4.0	266
.7	27			.7	27	5.0	395

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	25	74	55	63	181	248	92	48	9.5	9.0	2.1
2	7.9	24	*72	b53	62	163	250	95	44	9.8	12	*2.2
3	11	22	69	71	62	*150	197	91	58	10	9.0	2.0
4	9.7	20	65	107	*82	b135	252	84	91	12	7.8	2.3
5	10	19	60	104	61	114	286	78	113	*12	*7.1	2.7
6	*12	*18	55	105	71	111	329	*72	*104	11	6.6	2.45
7	18	22	70	106	101	b107	297	67	94	10	6.0	2.2
8	30	31	82	*106	b105	106	273	63	84	9.8	6.4	2.0
9	39	30	77	b105	109	b102	261	72	74	9.5	6.2	1.5
10	44	29	75	90	115	b103	243	73	66	9.0	9.4	1.5
11	44	29	73	b79	145	b100	*215	68	58	8.2	13	1.6
12	45	27	77	75	206	95	199	70	52	7.6	12	21
13	45	24	115	b71	b185	91	184	71	48	6.6	11	55
14	44	22	131	b67	b185	91	168	74	42	7.2	10	46
15	42	28	133	b64	b185	89	157	76	39	10	8.8	44
16	37	28	131	b62	165	88	148	80	37	13	8.5	47
17	33	29	129	b60	147	92	138	86	33	12	9.0	48
18	30	37	116	57	133	100	129	86	29	12	8.0	47
19	27	36	109	b54	282	108	125	82	26	9.8	8.2	43
20	26	33	99	52	314	114	117	75	24	8.5	8.5	54
21	18	32	86	52	280	126	110	68	21	11	7.8	62
22	3.6	31	79	52	271	128	98	61	18	8.2	7.2	55
23	2.2	28	b72	51	248	122	100	57	17	7.6	6.4	52
24	9.5	29	68	b51	218	123	98	61	16	6.0	5.2	51
25	18	49	60	51	192	120	102	84	15	3.9	4.5	48
26	21	59	55	49	207	112	100	76	14	4.4	3.8	44
27	21	58	51	48	225	106	98	58	13	3.3	3.5	41
28	22	64	50	51	210	111	99	55	13	7.8	2.9	36
29	22	74	52	59	199	124	98	52	11	4.1	2.45	32
30	21	76	53	62	---	130	95	49	10	10	2.2	29
31	20	---	54	b64	---	187	---	48	---	15	2.1	---
Total	742.9	1,033	2,492	2,133	4,788	3,629	5,214	2,224	1,312	278.8	224.55	877.55
Mean	24.0	34.4	80.4	68.8	165	117	174	71.7	43.7	8.99	7.24	29.3
(†)	8.09	20.5	12.8	1.96	1.89	1.91	2.00	3.69	7.50	2.72	2.52	2.16

	Observed			Adjusted for diversion			
Calendar year 1959:	Max 344	Min 1.0	Mean 57.9	Mean 67.6	Cfsm 1.56	In. 21.14
Water year 1959-60:	Max 329	Min 1.5	Mean 68.2	Mean 73.8	Cfsm 1.70	In. 23.15

* Discharge measurement made on this day.
† Diversions for municipal supplies of Reading, Lynn, and Peabody, equivalent in cubic feet per second; records furnished by municipalities.
b Stage-discharge relation affected by ice.

1020. Ipswich River near Ipswich, Mass.

Location.--Lat 42°39'35", long 70°53'39", on left bank 200 ft downstream from Willowdale Dam, 1½ miles downstream from Howlett Brook, and 4 miles upstream from Ipswich, Essex County.

Drainage area.--124 sq mi.

Records available.--June 1930 to September 1960. Prior to October 1930, published as "at Willowdale."

Gage.--Water-stage recorder and concrete control. Datum of gage is 20.63 ft above mean sea level, datum of 1929.

Average discharge.--30 years, 200 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 953 cfs Apr. 6, 7 (gage height, 5.22 ft); minimum, 4.0 cfs Sept. 11.
1930-60: Maximum discharge, 2,610 cfs Mar. 15, 1936 (gage height, 7.70 ft); minimum, 1.0 cfs Oct. 5-7, 1957.

Remarks.--Records excellent except those for periods of ice effect, which are good. Diversions above station for municipal supplies of Reading, Lynn, Peabody, Danvers, Salem, and Beverly. Some regulation by reservoirs.

Revisions (water years).--WSP 781: Drainage area. WSP 1621: 1930-58 (monthly runoff).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.5	5.3	3.6	122
2.6	8.2	4.0	240
2.8	17	4.5	490
3.0	32	5.0	810
3.3	68	5.5	1,130

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	74	208	152	146	b580	582	260	168	27	39	7.8
2	21	76	212	152	157	b520	745	252	160	32	33	9.8
3	24	76	208	180	160	b480	764	244	160	35	28	9.0
4	22	76	205	212	166	b285	764	233	174	34	24	8.2
5	22	76	199	252	168	b265	830	226	199	33	22	9.0
6	*23	76	193	284	183	312	927	219	216	29	19	8.6
7	36	78	199	307	222	355	940	202	226	27	17	7.8
8	55	85	208	320	268	350	888	193	226	24	16	7.2
9	71	90	222	b300	294	b330	823	186	219	22	16	6.3
10	80	*94	236	b265	325	b315	758	*180	202	20	19	5.6
11	88	96	240	b245	402	b295	693	180	180	19	28	5.6
12	92	96	248	b230	502	280	628	180	168	18	32	22
13	92	97	284	212	520	272	576	183	157	16	32	57
14	96	96	312	190	550	268	532	190	144	25	28	76
15	96	97	335	168	556	264	*490	193	136	46	24	80
16	96	96	365	160	550	252	448	199	127	46	24	80
17	94	97	*365	152	520	252	419	202	118	39	22	80
18	90	103	365	141	484	256	392	199	107	34	19	78
19	85	103	345	129	602	268	360	193	97	39	19	77
20	78	105	312	127	745	284	335	186	*90	45	20	87
21	71	107	b285	124	836	302	312	180	80	*46	20	94
22	63	107	260	120	882	312	294	171	70	41	18	96
23	52	107	b230	118	816	312	276	166	56	34	16	96
24	48	109	216	116	745	316	268	171	47	28	14	96
25	58	118	196	112	667	312	272	186	42	24	*14	94
26	68	132	183	109	654	302	276	205	39	19	12	92
27	72	141	171	107	686	294	280	212	34	17	11	88
28	76	166	154	*109	693	289	284	219	30	17	9.8	85
29	76	186	b135	116	*667	302	276	208	30	16	8.6	80
30	72	199	152	127	---	330	268	196	28	22	7.8	77
31	71	---	157	136	---	414	---	183	---	36	7.5	---
Total	2,006	3,159	7,400	5,472	14,166	9,968	15,700	6,197	3,730	910	619.7	1,619.9
Mean	64.7	105	239	177	488	322	523	200	124	29.4	20.0	54.0
(†)	10.8	23.3	15.4	25.7	4.70	4.62	4.71	6.65	11.3	5.99	5.93	5.32

	Observed			Adjusted for diversion		
Calendar year 1959:	Max 816	Min 18	Mean 171	Mean 186	Cfsm 1.50	In. 20.37
Water year 1959-60:	Max 940	Min 5.6	Mean 194	Mean 204	Cfsm 1.65	In. 22.42

* Discharge measurement made on this day.
† Diversions for municipal supplies of Reading, Lynn, Peabody, Danvers, Salem, and Beverly, equivalent in cubic feet per second. Records furnished by various municipalities.
b Stage-discharge relation affected by ice.

1025. Aberjona River at Winchester, Mass.

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

Drainage area.--23.3 sq mi (excludes 1.4 sq mi drained by Winchester Reservoirs).

Records available.--April 1939 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is at mean sea level, datum of 1929.

Average discharge.--21 years, 27.4 cfs.

Extremes.--Maximum discharge during year, 194 cfs Feb. 20 (gage height, 12.05 ft); minimum, 1.0 cfs Sept. 6; minimum daily, 1.1 cfs Sept. 6.
1939-60: Maximum discharge, 835 cfs Aug. 19, 1955 (gage height, 13.64 ft), from rating curve extended above 330 cfs by logarithmic plotting; maximum gage height, 13.72 ft Aug. 20, 1955 (backwater from Mystic Lake); no flow for part of Oct. 10, 12, 1950, caused by pumpage from gage pool; minimum daily discharge, 0.25 cfs Oct. 10, 1950.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow affected by diversions for industrial use and for municipal supply of Woburn and Winchester, and by wastage and leakage from Winchester Reservoirs. Occasional regulation by Winchester at dam above station.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

10.3	1.05	11.0	25
10.4	2.2	11.2	42
10.5	4.0	11.4	65
10.6	6.5	11.7	113
10.8	14	12.0	180

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	11	21	23	*24	58	106	27	25	4.2	5.3	1.7
2	2.7	9.5	20	23	23	45	84	29	24	9.6	3.9	2.7
3	2.6	8.5	24	115	27	40	71	28	27	6.1	3.5	1.4
4	2.5	7.6	22	151	18	35	87	26	55	8.4	3.4	1.3
5	2.5	7.2	20	96	23	b37	132	22	59	4.9	3.1	1.35
6	*2.7	7.0	18	67	71	b40	146	14	54	4.0	3.0	1.1
7	4.6	15	55	46	106	b42	113	18	35	3.5	2.5	1.25
8	9.4	22	55	41	79	b43	99	18	26	3.4	6.0	1.3
9	37	15	43	32	63	b37	92	25	19	3.4	5.4	1.3
10	25	*13	33	26	56	b37	78	*24	17	3.4	11	1.2
11	16	11	28	26	72	32	*89	26	12	3.6	6.0	1.65
12	11	10	39	25	85	31	100	24	12	3.8	6.2	89
13	8.0	9.5	84	25	75	33	72	27	11	3.8	4.9	60
14	8.4	9.9	76	25	71	31	35	27	9.9	24	3.8	40
15	6.0	14	66	24	62	29	29	25	11	13	3.0	20
16	4.5	13	54	25	54	39	28	24	9.5	11	2.9	13
17	4.0	17	*44	23	45	38	26	20	9.9	7.4	3.2	8.1
18	4.0	19	35	19	41	48	24	16	8.8	5.8	4.0	4.3
19	3.5	15	35	b22	164	58	31	20	7.2	5.0	5.1	4.2
20	3.0	12	32	b22	159	58	33	17	*6.2	*5.8	3.2	38
21	2.8	11	29	b21	100	60	32	14	5.2	4.5	2.4	30
22	2.6	11	27	b20	79	54	26	15	4.6	4.2	2.5	21
23	2.7	11	19	19	65	50	27	11	4.5	3.6	2.8	12
24	15	16	19	18	60	47	32	31	5.0	3.2	1.65	11
25	20	34	19	17	52	45	48	38	4.6	3.1	*1.45	7.4
26	15	28	19	17	94	43	42	33	4.4	3.2	1.65	7.1
27	12	22	20	17	104	40	37	27	4.1	3.3	1.6	5.0
28	9.5	26	26	36	79	31	33	19	3.8	4.3	1.45	5.6
29	8.0	28	33	44	67	42	31	14	3.6	3.3	1.55	4.6
30	6.5	25	b31	38	-------	45	27	15	3.8	15	1.45	6.3
31	8.0	-------	b28	33	-------	83	-------	25	-------	11	1.6	-------
Total	262.1	458.2	1,074	1,136	2,018	1,351	1,810	699	482.1	192.8	109.30	402.85
Mean	8.45	15.3	34.6	36.6	69.6	43.6	60.3	22.5	16.1	6.22	3.53	13.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 131 Min 2.5 Mean 27.0 Cfsm - In. -
Water year 1959-60: Max 164 Min 1.1 Mean 27.3 Cfsm - In. -

Peak discharge (base, 170 cfs).--Jan. 3 (3:30 p.m.) 185 cfs (12.02 ft); Feb. 20 (1 a.m.) 194 cfs (12.05 ft); Sept. 12 (2 p.m.) 185 cfs (12.02 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 10 to Nov. 10; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for stations on nearby streams.

1035. Charles River at Charles River Village, Mass.

Location.--Lat 42°15'23", long 71°15'42", on right bank 0.25 mile downstream from highway bridge at Charles River Village, Norfolk County, 0.8 mile downstream from Ncanet Brook, and 1.3 miles northeast of Dover.

Drainage area.--184 sq mi.

Records available.--October 1937 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 89.76 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 303 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 1,100 cfs Apr. 8, 9 (gage height, 4.26 ft); minimum, 29 cfs Sept. 10, 11.
1937-60: Maximum discharge, 3,220 cfs Aug. 23, 1955 (gage height, 9.24 ft); minimum, 0.5 cfs Oct. 24, 1952.
Flood in March 1936 reached a discharge of 3,170 cfs, by computation of flow over dam at site a quarter of a mile above station.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Diversion above station for municipal supply of Wellesley and Needham. Occasional diversion since 1951 from Sudbury River basin to Charles River.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	29	2.0	420
.7	44	3.0	720
.8	65	4.0	1,020
1.0	126	5.0	1,350
1.5	282		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	240	513	b400	400	792	*702	435	*273	59	*129	40
2	77	220	510	b385	379	747	765	409	294	85	126	34
3	82	200	486	549	356	b690	822	384	303	94	126	31
4	74	185	453	618	334	b495	903	361	358	116	113	32
5	59	175	414	654	312	b435	990	337	403	120	107	35
6	54	195	374	678	376	582	1,060	309	409	113	110	34
7	71	215	432	720	489	b575	1,070	282	414	104	113	31
8	94	235	432	708	534	543	1,090	255	387	88	100	31
9	153	260	453	b630	573	489	1,080	294	337	80	82	31
10	163	270	468	b575	591	b475	1,030	315	264	65	91	30
11	173	270	468	b455	639	b430	*960	340	219	57	97	31
12	186	260	492	b470	672	420	909	356	198	54	104	206
13	170	235	576	438	672	409	837	409	179	65	104	334
14	170	210	588	b400	696	400	783	432	163	146	97	366
15	153	190	636	374	b610	389	720	456	153	173	88	371
16	140	180	672	353	654	379	669	459	150	182	88	363
17	126	190	681	334	627	379	630	450	143	173	82	329
18	120	198	669	323	594	398	594	417	136	163	74	267
19	107	207	636	303	774	417	549	376	123	143	71	207
20	100	207	585	306	801	441	513	334	113	143	71	273
21	88	201	534	300	867	465	480	288	100	140	63	323
22	88	186	b470	291	918	477	447	255	85	126	63	343
23	91	176	b390	285	918	474	417	234	68	116	71	348
24	157	186	b365	270	876	471	412	279	65	110	74	329
25	222	303	329	261	816	b460	447	318	68	94	65	288
26	276	366	297	252	849	453	468	345	68	82	59	234
27	306	403	279	246	828	441	489	353	63	77	57	192
28	312	462	294	297	810	453	492	343	65	80	50	160
29	*300	501	340	*343	*813	486	*477	306	61	80	46	140
30	285	*504	*389	392	---	525	456	261	*60	104	42	*140
31	260	---	412	409	---	630	---	249	---	126	*40	---
Total	4,731	7,630	14,637	13,019	18,778	15,220	21,261	10,641	5,722	3,358	2,603	5,573
Mean	153	254	472	420	648	491	709	343	191	108	84.0	186
(†)	5.46	5.36	4.90	4.62	4.27	4.49	3.54	4.18	6.81	6.80	6.79	5.85

Adjusted for diversions

Mean	158	260	477	425	652	495	712	347	198	115	90.8	192
Cfsm	0.859	1.41	2.59	2.31	3.54	2.69	3.87	1.89	1.08	0.625	0.493	1.04
In.	0.99	1.57	2.99	2.66	3.82	3.10	4.32	2.18	1.20	0.72	0.57	1.16

	Observed			Adjusted		
Calendar year 1959:	Max 975	Min 48	Mean 315	Mean 321	Cfsm 1.74	In. 23.66
Water year 1959-60:	Max 1,090	Min 30	Mean 337	Mean 342	Cfsm 1.86	In. 25.28

* Discharge measurement made on this day.
† Diversions for municipal supply of Wellesley and Needham, equivalent in cubic feet per second; records furnished by municipalities and Water Division of Metropolitan District Commission.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 30 to Nov. 17; discharge estimated on basis of weather records and records for station at Waltham.

1040. Mother Brook at Dedham, Mass.

Location.--Lat 42°15'18", long 71°09'53", on right bank 100 ft upstream from Washington Street Bridge at Dedham, Norfolk County, 0.4 mile downstream from point of diversion from Charles River. Prior to June 10, 1960, at site 200 ft upstream.

Records available.--October 1931 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 0.00 ft below mean sea level, datum of 1929. Prior to Dec. 9, 1931, water-stage recorder, and Dec. 9, 1931, to June 9, 1960, float gage at site 200 ft upstream at same datum.

Average discharge.--29 years, 83.2 cfs.

Extremes.--Maximum discharge during year, 293 cfs Feb. 16 (gage height, 86.32 ft, from graph based on gage readings); no flow Apr. 14 to June 2, caused by construction work.
1931-60: Maximum discharge, 970 cfs Aug. 24, 1955 (gage height, 92.90 ft, from graph based on gage readings); no flow at times.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Mother Brook is a diversion from Charles River to Neponset River through Dedham and Hyde Park.

Revisions (water years).--WSP 1301: 1932(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2	3	1	4	19	96	53		0	6.6	12	*4.4
2	1	3	1	4	15	86	67		0	11	12	4.7
3	2	1	1	4.5	12	75	74		30	10	13	3.7
4	2	1	1	18	11	87	*81		92	21	10	3.6
5	1	1	3	38	8.9	110	108		90	20	8.0	3.7
6	1	1	3	39	12	115	138		87	19	7.3	3.7
7	1	3	1	50	22	103	154		85	17	7.0	3.4
8	1	3	1	53	25	76	166		81	14	6.6	3.0
9	1	1	1	87	24	55	166		73	12	6.6	3.0
10	3	1	1	36	26	36	148		61	9.5	7.0	3.4
11	3	1	1	24	30	27	110		46	8.0	13	3.4
12	3	1	3	21	38	22	83		35	6.4	14	14
13	1	1	3	22	38	19	45		28	6.6	14	10
14	1	3	1	20	39	16	0		21	32	14	9.5
15	1	3	1	*15	50	12	0		23	41	12	11
16	1	1	1	14	138	9.8	0		24	29	12	12
17	3	1	1	11	269	8.0	0		*20	25	10	8.8
18	3	1	1	9.8	192	7.5	0		24	21	9.8	4.8
19	1	1	3	8.9	120	8.8	0		18	17	9.1	4.3
20	1	1	3	8.0	90	14	0		16	16	8.8	21
21	1	2	1	8.0	104	24	0		16	14	8.4	28
22	1	2	1	7.7	122	29	0		11	11	7.7	30
23	1	1	1	7.1	122	30	0		8.4	9.5	8.4	31
24	2	1	1	5.9	92	27	0		6.6	8.4	9.5	24
25	2	1	3	5.0	103	26	0		8.4	7.0	8.4	19
26	1	1	3	4.5	*110	25	0		8.0	5.8	7.3	15
27	1	1	3	4.5	108	25	0		7.3	5.0	6.6	15
28	1	3	4	7.7	100	23	0		6.3	5.5	6.3	9.5
29	1	3	4	12	98	22	0		5.8	5.5	5.2	6.6
30	1	1	4	16	-------	27	0		6.3	7.4	4.7	5.0
31	3	-------	4	19	-------	36	-------		-------	14	4.4	-------
Total	48	48	61	584.6	2,137.9	1,277.1	1,393	0	938.1	435.2	283.1	318.5
Mean	1.55	1.60	1.97	18.9	73.7	41.2	46.4	0	31.3	14.0	9.13	10.6
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 288 Min 0 Mean 45.2 Cfsm - In. -
Water year 1959-60: Max 269 Min 0 Mean 20.6 Cfsm - In. -

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1 to Jan. 2, Feb. 25 to Apr. 13, June 3-9; discharge estimated on basis of 2 discharge measurements, engineer's notes, observer's notes, resident construction engineer's notes, and records for station at Charles River Village.

1042. Charles River at Wellesley, Mass.

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

Drainage area.--211 sq mi.

Records available.--August 1959 to September 1960.

Gage.--Water-stage recorder and concrete dam. Datum of gage is 67.92 ft above mean sea level, datum of 1929.

Extremes.--1959: Maximum discharge during period August to September, 365 cfs Sept. 3 (gage height, 3.66 ft); no flow Sept. 15 (caused by closing of gates at dam); minimum daily discharge, 51 cfs Sept. 22.
1959-60: Maximum discharge during water year, 1,470 cfs Apr. 5 (gage height, 5.16 ft); no flow Oct. 6 (caused by closing of gates at dam); minimum daily discharge, 22 cfs Sept. 10.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Flow affected by diversions for municipal supply of Wellesley, Needham, and Dedham, by diversion to Mother Brook, and at times by diversion from Sudbury River basin. Occasional regulation by Metropolitan District Commission at dam 0.2 mile above station.

Rating table, Aug. 26, 1959, to Sept. 30, 1960 (gage height, in feet, and discharge, in cubic feet per second)

2.6	11	4.0	500
2.7	25	4.5	850
3.0	91	5.0	1,300
3.5	260	5.2	1,510

Discharge, in cubic feet per second, 1959

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	237	7	-	241	13	-	97	19	-	81	25	‡6C.9	64
2	-	288	8	-	200	14	-	105	20	-	88	26	74	66
3	-	345	9	-	174	15	-	90	21	-	88	27	76	57
4	-	355	10	-	*134	16	-	71	22	-	51	28	76	55
5	-	322	11	-	113	17	-	84	23	-	62	29	78	57
6	-	280	12	-	97	18	-	76	24	-	68	30	122	62
												31	178	-
Total													-	4,108
Mean													-	137
(†)													-	17.3

Adjusted for diversion

Mean	-	154
Cubic feet per second per square mile	-	0.730
Runoff in inches	-	0.82

* Discharge measurement made on this day.
† Diversions for municipal supply of Wellesley, Needham, and Dedham, diversion to Mother Brook, and at times from Sudbury River basin, equivalent in cubic feet per second.
‡ Result of discharge measurement.

1042. Charles River at Wellesley, Mass.--Continued

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	139	285	560	435	430	810	688	472	336	66	140	*32
2	128	260	560	415	410	770	732	430	322	84	135	25
3	94	235	560	592	385	740	778	410	314	d100	130	24
4	88	215	542	710	365	436	*874	385	d300	d130	120	25
5	76	200	500	732	350	440	1,120	318	d360	d125	110	25
6	25	230	450	691	410	548	1,430	272	336	d120	115	27
7	49	245	500	748	512	625	1,290	272	327	d110	120	25
8	93	260	512	770	548	599	1,160	272	322	d100	*d95	25
9	148	280	506	646	573	508	1,180	206	296	d82	d84	27
10	182	285	506	606	586	470	1,150	122	268	d70	d95	22
11	189	290	506	489	653	450	1,100	307	230	62	d105	27
12	174	290	542	462	695	440	1,010	*322	200	55	d115	325
13	178	280	632	456	710	430	978	385	174	71	d110	385
14	164	265	667	456	732	420	946	430	141	182	d100	365
15	164	250	681	440	649	410	866	462	131	200	d90	355
16	*157	*230	710	405	702	410	802	478	141	189	91	360
17	144	211	740	375	702	410	732	478	138	189	88	340
18	128	222	740	360	667	420	667	467	128	178	78	304
19	119	233	732	336	850	430	632	445	125	157	76	215
20	113	230	695	332	906	460	510	405	111	154	74	288
21	113	230	639	332	914	480	518	360	105	138	68	318
22	141	226	500	314	946	500	530	309	97	131	64	327
23	196	200	420	314	946	520	484	288	76	113	62	336
24	196	211	415	300	946	520	456	309	*68	110	64	327
25	200	318	400	292	906	510	467	340	66	100	62	309
26	230	380	355	280	*922	500	489	355	66	90	59	252
27	268	415	322	*268	914	480	506	370	64	80	55	215
28	300	472	318	327	890	490	506	375	62	82	51	182
29	310	548	385	380	850	520	494	355	66	86	46	157
30	310	560	410	405	-------	540	489	322	62	110	38	154
31	305	-------	430	430	-------	600	-------	309	-------	130	34	-------
Total	5,121	8,556	16,435	14,098	20,069	15,886	23,584	11,030	5,432	3,594	2,674	5,798
Mean	165	285	530	455	692	512	786	356	181	116	86.3	193
(†)	12.3	11.9	11.9	28.6	83.4	50.9	56.2	10.8	46.1	27.1	21.0	22.3

Adjusted for diversions

Mean	177	297	542	483	775	563	842	367	227	143	107	216
Cfsm	0.839	1.41	2.57	2.29	3.67	2.67	3.99	1.74	1.08	0.678	0.507	1.02
In.	0.97	1.57	2.96	2.64	3.96	3.08	4.45	2.00	1.20	0.78	0.59	1.14

	Observed	Adjusted
Calendar year 1959:	Max - Min - Mean -	Mean - Cfsm - In. -
Water year 1959-60:	Max 1,430 Min 22 Mean 361	Mean 393 Cfsm 1.86 In. 25.34

* Discharge measurement made on this day.

† Diversion to Mother Brook and diversions for municipal supply of Wellesley, Needham, and Dedham, equivalent in cubic feet per second. Records furnished by Water Division of Metropolitan District Commission and by municipalities.

d Doubtful gage-height record; discharge computed on basis of recorder graph, weather records, and records for Charles River at Charles River Village and Mother Brook at Dedham.

Note.--No gage-height record Oct. 28 to Nov. 16, Mar. 10-31, July 24 to Aug. 7; discharge estimated on basis of 1 discharge measurement, weather records, and records for station at Charles River Village.

1045. Charles River at Waltham, Mass.

Location.--Lat 42°22'20", long 71°14'03", on right bank 800 ft downstream from Moody Street Bridge in Waltham, Middlesex County, and a third of a mile upstream from Beaver Brook.

Drainage area.--227 sq mi, excludes 23.6 sq mi drained by Stony Brook from which flow is diverted for municipal supply of Cambridge.

Records available.--October 1903 to October 1909 (figures of average weekly discharge, equivalent to records of unadjusted discharge at present site), August 1931 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 20.02 ft above mean sea level, datum of 1929. Prior to July 10, 1904, at dam 700 ft upstream and July 10, 1904, to Oct. 2, 1909, at dam 0.7 mile downstream at different datums; discharge computed from flow over dam and through wheels and gates of Boston Manufacturing Co. and Waltham Bleachery, respectively.

Average discharge.--29 years (1931-60), 377 cfs (adjusted for diversions, wastage, and leakage).

Extremes.--Maximum discharge during year, 1,510 cfs Apr. 4 (gage height, 4.33 ft); minimum, 24 cfs Sept. 11; minimum daily, 27 cfs Sept. 11.

1931-60: Maximum discharge, 2,540 cfs Mar. 19, 1936 (gage height, 4.79 ft); maximum gage height, 5.35 ft Aug. 19, 1955; minimum discharge, 0.1 cfs Oct. 1, 12, 1943; minimum daily, 0.2 cfs Oct. 4, 1943.

Remarks.--Records fair. Flow affected by wastage from Stony Brook Reservoir, wastage and leakage from Norumbega Reservoir, diversion at times from Lake Cochituate and also at times since 1951 from Sudbury River basin, diversion to Mother Brook, and diversions for municipal supply of Wellesley, Needham, and Dedham, all above station. Some regulation by mills upstream. Low flow completely regulated by Boston Edison Co. powerplant above station prior to 1954.

Revisions (water years).--WSP 781: 1933(M). WSP 851: Drainage area. WSP 971: 1942.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	275	546	515	450	1,080	925	530	400	67	138	40
2	130	253	552	490	440	897	980	492	380	116	140	35
3	110	241	574	684	404	855	1,020	530	370	130	135	31
4	100	223	535	897	399	618	1,220	370	360	170	133	32
5	110	214	505	869	422	495	1,450	399	405	152	84	33
6	45	223	475	736	475	600	1,450	374	410	148	83	33
7	70	232	552	802	579	740	1,350	366	400	142	102	35
8	*110	256	557	802	612	802	1,300	330	390	133	113	33
9	213	269	557	672	656	656	1,200	423	360	116	104	33
10	197	*278	540	672	672	*689	1,150	318	340	102	178	29
11	208	300	546	562	724	568	1,100	*430	290	91	124	27
12	206	296	601	500	834	525	1,050	475	255	77	104	332
13	197	275	706	495	827	500	1,000	456	230	138	111	485
14	192	278	724	490	848	475	950	540	210	353	111	408
15	176	253	*742	470	781	445	*890	540	195	199	104	374
16	168	241	760	440	808	440	848	560	189	206	100	358
17	155	260	784	390	790	470	778	560	189	194	93	346
18	140	256	820	374	778	490	678	550	183	178	89	314
19	128	260	784	358	1,050	495	662	520	158	*160	87	238
20	123	256	760	342	1,120	510	600	480	148	163	91	334
21	99	253	706	338	1,090	515	580	430	130	140	83	350
22	62	253	640	330	1,090	460	520	370	123	133	77	358
23	98	238	525	322	1,090	530	500	340	*107	118	69	362
24	182	263	505	310	1,080	490	520	365	66	100	71	362
25	211	404	455	300	1,030	535	560	405	62	91	*75	350
26	244	435	408	289	1,120	562	562	430	67	81	71	306
27	272	460	374	*312	1,140	535	546	440	73	75	62	241
28	292	495	382	366	1,090	535	618	450	50	79	57	200
29	296	552	470	426	1,050	574	557	420	62	69	44	170
30	292	562	505	435	--------	623	546	380	69	127	44	165
31	286	--------	520	465	--------	784	--------	360	--------	145	43	--------
Total	5,262	9,054	18,110	15,453	23,449	18,493	26,090	13,633	6,671	4,193	2,926	6,414
Mean	170	302	584	498	809	597	870	440	222	135	94.4	214
(†)	12.2	11.7	9.89	24.0	63.8	45.7	56.0	10.5	45.8	26.9	20.8	22.1

Adjusted for diversions, wastage, and leakage

Mean	182	313	594	522	872	642	926	450	268	162	115	236
Cfsm	0.802	1.38	2.62	2.30	3.84	2.83	4.08	1.98	1.18	0.714	0.507	1.04
In.	0.92	1.54	3.02	2.65	4.14	3.26	4.55	2.29	1.32	0.82	0.58	1.16

	Observed			Adjusted		
Calendar year 1959:	Max 1,180	Min 20	Mean 355	Mean 406	Cfsm 1.79	In. 24.30
Water year 1959-60:	Max 1,450	Min 27	Mean 409	Mean 438	Cfsm 1.93	In. 26.25

* Discharge measurement made on this day.

† Diversion to Mother Brook, diversions for municipal supply of Wellesley, Needham, and Dedham, wastage from Stony Brook Reservoir, diversion from Lake Cochituate, diversion from Sudbury River basin, and wastage and leakage from Norumbega Reservoir, equivalent in cubic feet per second. Records furnished by Water Division of Metropolitan District Commission and by municipalities.

Note.--No gage-height record Oct. 1-8, Apr. 5-15, 20-25, May 30 to June 5, June 13, 14; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage, and records for stations at Charles River Village and Wellesley.

1050. Neponset River at Norwood, Mass.

Location.--Lat 42°10'39", long 71°12'05", on left bank 200 ft upstream from Pleasant Street Bridge, 200 ft downstream from New York, New Haven and Hartford Railroad bridge, 0.45 mile downstream from Hawes Brook, and 0.5 mile south of Norwood, Norfolk County.

Drainage area.--35.2 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for October 1939, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 44.04 ft above mean sea level, unadjusted.

Average discharge.--21 years, 51.8 cfs.

Extremes.--Maximum discharge during year, 247 cfs Feb. 20 (gage height, 9.66 ft); minimum daily, 6.0 cfs Sept. 11.
1939-60: Maximum discharge, 1,490 cfs Aug. 19, 1955 (gage height, 14.65 ft, from floodmarks); minimum daily, 1.8 cfs Sept. 1, 1957.
Flood of July 24, 1938, reached a stage of 11.05 ft, from floodmarks.

Remarks.--Records good except those for periods of doubtful or no gage-height record or indefinite stage-discharge relation, which are fair. Flow regulated by mills and reservoirs above station. Several diversions above station for municipal and industrial use.

Rating table, water year 1959-60, except period of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 18 to Aug. 12)

6.9	4.2	7.5	33
7.0	6.9	8.0	76
7.1	10	9.0	175
7.2	15	10.0	288

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	38	88	72	55	110	202	67	47	11	16	*8.0
2	19	36	80	66	54	92	186	*79	53	15	14	8.0
3	16	30	65	150	50	84	157	71	51	6.6	12	8.0
4	17	27	62	228	45	76	164	64	60	9.6	12	6.5
5	*19	26	48	183	48	84	207	59	81	*29	12	8.0
6	19	25	49	138	88	90	240	52	74	14	17	8.4
7	25	35	86	109	123	92	212	44	60	13	7.5	8.6
8	28	52	*101	99	111	94	182	42	50	12	8.1	8.0
9	54	49	93	87	93	94	169	66	40	10	9.3	7.5
10	45	46	73	78	77	90	158	67	36	9.0	14	7.0
11	48	40	72	72	104	82	141	69	28	9.7	12	6.0
12	38	*33	85	68	141	80	126	72	18	10	16	55
13	29	28	159	*64	129	82	118	72	24	10	13	70
14	27	24	166	59	120	82	111	81	20	21	6.9	45
15	25	26	140	61	105	79	103	75	20	33	12	35
16	21	25	117	72	102	80	95	65	17	27	17	30
17	15	26	105	62	*86	90	97	55	19	19	18	28
18	10	30	92	59	75	98	90	44	15	16	16	25
19	13	30	85	56	201	102	86	52	13	15	13	30
20	12	27	77	62	238	100	80	50	12	14	11	90
21	10	24	71	56	185	96	75	47	15	13	10	100
22	12	21	65	53	149	100	74	40	10	13	14	80
23	13	23	60	51	130	*96	70	22	11	12	15	70
24	50	31	54	47	111	96	78	80	24	8.9	14	60
25	53	83	53	47	99	94	108	80	23	8.1	13	50
26	64	93	52	46	161	90	101	74	14	*12	11	45
27	51	76	51	43	198	88	89	61	9.7	12	9.0	40
28	38	90	57	68	171	90	83	44	11	12	8.0	36
29	39	111	98	100	140	93	77	42	10	13	9.0	35
30	23	104	105	80	-------	101	69	36	11	15	10	37
31	22	-------	85	70	-------	152	-------	36	-------	11	9.0	-------
Total	875	1,309	2,594	2,506	3,389	2,877	3,748	1,808	876.7	424.9	378.8	1,045.0
Mean	28.2	43.6	83.7	80.8	117	92.8	125	58.3	29.2	13.7	12.2	34.8
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 311 Min 10 Mean 61.3 Cfsm - In. -
Water year 1959-60: Max 240 Min 6.0 Mean 59.6 Cfsm - In. -

* Discharge measurement made on this day.
Note.--Doubtful or no gage-height record Oct. 20-23, Dec. 31 to Jan. 3, Jan. 10-12, Jan. 29 to Feb. 6, Mar. 1-28, May 8, Aug. 28 to Sept. 4, Sept. 6-11, 18, 19, 30; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage when available, and records for East Branch Neponset River at Canton. Stage-discharge relation indefinite Aug. 13 to Sept. 30; discharge estimated on basis of 1 discharge measurement, engineer's notes, appearance of recorder chart, weather records, and record for East Branch Neponset River at Canton.

1055. East Branch Neponset River at Canton, Mass.

Location.--Lat 42°09'16", long 71°08'47", on right bank 100 ft downstream from Washington Street Bridge at Canton, Norfolk County, 200 ft downstream from Forge Pond Dam, and 900 ft downstream from Massapoag Brook.

Drainage area.--26.7 sq mi.

Records available.--October 1952 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 85 ft (from topographic map).

Average discharge.--8 years, 58.3 cfs.

Extremes.--Maximum discharge during year, 221 cfs Feb. 19 (gage height, 3.04 ft); minimum daily, 7.2 cfs Sept. 4-6, 11.
1952-60: Maximum discharge, 1,790 cfs Aug. 19, 1955 (gage height, 8.18 ft), from rating curve extended above 690 cfs by logarithmic plotting; minimum daily, 0.6 cfs July 7, Sept. 1, 1957.

Remarks.--Records good. Flow regulated by Forge, Bolivar, Massapoag, Reservoir, and other ponds above station. Diversions above station for municipal supply of Canton and Stoughton.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 11		Nov. 12 to Sept. 30			
1.0	11	0.9	6.6	2.0	79
1.2	21	1.0	9.7	2.5	136
1.6	49	1.2	18	3.0	214
		1.6	44		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	28	72	61	69	77	146	56	38	9.7	18	*8.5
2	12	27	64	55	61	75	122	*64	56	13	14	8.2
3	12	21	59	104	54	72	108	60	43	18	13	7.5
4	12	18	56	160	51	59	128	54	48	26	12	7.2
5	*12	19	52	119	52	72	165	52	59	21	11	7.2
6	11	19	47	97	72	82	186	48	48	16	10	7.2
7	11	28	75	89	108	86	140	24	38	14	9.7	7.5
8	13	44	*86	85	87	83	126	34	34	12	9.4	7.5
9	27	37	71	80	73	78	130	52	29	11	9.4	7.5
10	48	31	74	71	71	73	122	55	26	11	12	7.5
11	35	27	93	68	102	68	111	52	24	9.1	16	7.2
12	42	*23	110	64	133	64	106	53	22	8.8	13	77
13	36	22	187	*63	108	65	103	55	22	9.7	12	85
14	33	22	165	60	109	66	94	58	19	19	11	52
15	30	22	121	58	111	64	88	51	18	43	12	30
16	26	20	103	67	102	64	90	46	18	30	15	26
17	22	21	96	62	*92	66	87	43	17	21	14	27
18	20	26	88	55	88	76	84	39	16	18	13	25
19	17	26	85	58	182	81	80	36	16	16	12	25
20	16	23	81	58	178	81	76	34	*15	16	12	105
21	15	22	72	55	130	82	69	32	14	14	12	118
22	15	21	61	54	115	78	65	29	12	14	14	77
23	14	20	59	51	107	*71	63	28	12	13	13	58
24	26	25	54	49	100	70	66	45	12	13	13	40
25	45	82	51	48	94	73	93	57	12	12	12	39
26	36	81	40	46	149	68	88	48	12	*11	11	37
27	31	59	37	45	140	67	76	40	11	10	11	34
28	30	66	47	60	106	78	69	35	10	12	11	33
29	27	111	86	88	66	84	62	31	9.7	12	10	32
30	23	90	88	77	-------	86	58	28	9.7	17	9.4	34
31	22	-------	73	67	-------	125	-------	31	-------	25	9.4	-------
Total	730	1,081	2,453	2,174	2,910	2,334	3,001	1,370	720.4	495.3	374.3	1,037.0
Mean	23.5	36.0	79.1	70.1	100	75.3	100	44.2	24.0	16.0	12.1	34.6
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 235 Min 9.8 Mean 51.2 Cfsm - In. -
Water year 1959-60: Max 187 Min 7.2 Mean 51.0 Cfsm - In. -

* Discharge measurement made on this day.

1057. Indian Head Brook near Hanson, Mass.

Location.--Lat 42°05'13", long 70°51'26", on right bank 40 ft upstream from bridge on Washington Street, 0.3 mile upstream from mouth, and 1½ miles northeast of Hanson, Plymouth County.

Drainage area.--4.39 sq mi.

Records available.--July 1958 to September 1960 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 50 ft (from topographic map).

Extremes.--Maximum discharge during year, 38 cfs Apr. 5 (gage height, 2.755 ft), from rating curve extended above 15 cfs; minimum, 0.40 cfs Sept. 9, 10; minimum daily, 0.45 cfs Sept. 3, 9-11.
1958-60: Maximum discharge, that of Apr. 5, 1960; minimum, 0.30 cfs Aug. 28, 1959; minimum daily, that of Sept. 3, 9-11, 1960.

Remarks.--Records good. Some regulation by ponds above station.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-5		Oct. 6 to Sept. 30			
1.1	0.55	0.9	0.35	1.5	9.4
1.2	1.2	1.0	.70	2.0	21
		1.1	1.2	2.6	35
		1.2	2.0		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	6.1	9.7	b9.0	8.6	b13	21	8.0	5.6	0.80	0.95	0.50
2	.85	5.4	8.5	b8.2	8.1	b12	18	9.0	7.4	4.6	.90	.50
3	.85	4.4	7.8	16	7.8	b10	16	8.4	6.8	2.8	.85	.45
4	.90	3.8	6.8	19	7.9	b16	21	8.0	7.1	3.1	.80	.50
5	.85	3.4	6.4	14	7.6	23	30	7.4	7.0	2.2	.75	.50
6	1.50	*3.3	5.4	11	12	22	33	6.8	6.0	1.80	.70	.50
7	3.3	3.8	11	9.7	14	14	25	6.1	4.6	1.50	.65	*.50
8	1.65	6.1	11	9.2	11	11	21	6.6	3.3	1.35	.75	.50
9	6.7	5.6	*8.7	b8.4	9.3	11	20	7.1	2.3	1.25	.70	.45
10	6.0	4.8	7.8	b7.6	8.7	b11	17	6.8	1.80	1.10	.80	.45
11	3.7	4.0	7.0	b7.2	12	b11	15	6.8	1.65	1.05	.90	.45
12	3.8	3.6	8.9	*b7.0	14	b11	14	6.5	1.65	.95	.80	2.3
13	3.2	3.2	20	6.8	11	11	14	11	1.65	.90	.80	2.6
14	3.7	3.1	16	6.6	16	11	13	11	1.55	3.4	.70	1.20
15	3.1	2.9	12	7.4	b16	11	11	8.7	1.70	6.1	.70	.90
16	2.6	2.6	10	9.4	*13	b11	11	7.6	1.65	3.4	1.10	.80
17	2.3	2.8	8.2	b8.2	11	12	11	6.8	1.60	2.6	.90	.80
18	2.0	3.3	6.4	7.6	10	15	11	6.1	1.65	1.90	.80	.75
19	1.80	3.0	6.4	9.9	27	15	9.3	4.9	1.60	1.60	.90	.95
20	1.65	2.7	6.6	9.3	24	15	8.0	4.2	1.40	1.55	.90	23
21	*1.80	2.6	5.8	8.5	17	*15	7.6	4.0	1.30	1.35	.85	17
22	1.50	2.6	5.0	8.2	14	13	7.4	3.6	1.20	1.20	.85	12
23	1.35	2.6	4.2	7.8	13	12	7.1	3.3	1.10	1.20	.80	8.8
24	4.4	4.0	3.6	7.4	12	12	8.0	6.2	1.10	1.10	.70	7.1
25	8.5	17	3.8	7.1	11	13	11	7.6	1.10	*1.00	.60	5.8
26	7.6	14	4.0	7.1	24	b11	*10	6.5	1.10	.90	.60	4.9
27	7.0	10	4.1	6.5	23	11	9.3	5.2	1.00	.90	.55	4.1
28	7.4	11	6.4	10	18	13	8.9	4.1	.90	.85	.55	4.0
29	6.1	14	17	15	15	16	8.5	3.6	.90	.80	.55	4.0
30	4.8	12	14	11	-------	18	7.4	3.2	.90	1.05	.55	4.8
31	4.6	-------	11	9.5	-------	20	-------	4.1	-------	1.15	.55	-------
Total	106.40	167.7	263.5	287.6	396.0	420	424.5	199.2	78.60	55.45	23.50	111.10
Mean	3.43	5.59	8.50	9.28	13.7	13.5	14.2	6.43	2.62	1.79	0.758	3.70
Cfsm	0.781	1.27	1.94	2.11	3.12	3.08	3.23	1.46	0.597	0.408	0.173	0.843
In.	0.90	1.42	2.23	2.44	3.35	3.56	3.60	1.69	0.67	0.47	0.20	0.94

Calendar year 1959: Max 22 Min 0.50 Mean 6.48 Cfsm 1.48 In. 20.03
Water year 1959-60: Max 33 Min 0.45 Mean 6.92 Cfsm 1.58 In. 21.47

Peak discharge (base, 22 cfs).--Jan. 3 (6 to 8 p.m.) 23 cfs (2.10 ft); Feb. 19 (11:30 a.m. to 1 p.m.) 30 cfs (2.41 ft); Feb. 26 (1:30 to 3 p.m.) 29 cfs (2.35 ft); Mar. 6 (3 a.m.) 26 cfs (2.20 ft); Apr. 1 (9 to 11 a.m.) 23 cfs (2.08 ft); Apr. 5 (8 p.m.) 38 cfs (2.755 ft); Sept. 20 (10 a.m.) 31 cfs (2.45 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1058. Pudding Brook at East Pembroke, Mass.

Location.--Lat 42°05'13", long 70°45'28", on left bank 300 ft upstream from Spring Street, 500 ft downstream from Randall Pond, 0.6 mile northeast of East Pembroke, Plymouth County, and 3 miles northeast of Pembroke.

Drainage area.--1.38 sq mi.

Records available.--July 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 45 ft (from topographic map).

Extremes.--Maximum discharge during year, 11.3 cfs Sept. 20 (gage height, 1.15 ft), from rating curve extended above 4.4 cfs; minimum daily, 1.13 cfs Sept. 10.
1958-60: Maximum discharge, that of Sept. 20, 1960; minimum daily, 0.57 cfs Aug. 9, 1958.

Remarks.--Records fair. Flow regulated by Randall Pond.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-5)

0.5	1.05
.6	2.05
.8	4.8
.9	6.6
1.0	8.5

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.5	2.45	2.35	2.35	2.9	4.2	2.9	2.4	1.4	1.85	1.65
2	1.75	2.1	2.2	2.2	2.25	2.3	3.5	3.4	2.8	3.3	1.5	1.4
3	1.55	1.9	2.15	3.9	2.25	2.9	3.0	2.8	2.45	2.45	1.55	1.3
4	1.45	1.75	2.1	3.5	2.35	3.4	4.4	2.6	2.7	2.35	1.5	1.65
5	1.4	1.7	2.1	2.6	2.35	3.4	6.0	2.45	2.5	1.85	1.5	1.65
6	1.75	*1.8	2.05	2.4	3.6	3.1	5.0	2.45	2.0	*1.6	1.5	1.5
7	3.2	2.1	3.3	2.25	3.5	3.0	3.7	2.4	1.8	1.5	1.21	*1.5
8	2.35	2.6	2.6	2.2	2.8	2.9	3.5	3.0	1.8	1.45	1.65	1.35
9	3.7	2.25	*2.2	2.1	2.7	2.8	3.4	3.3	1.7	1.3	1.45	1.25
10	2.9	2.0	2.0	2.2	2.6	2.8	3.3	2.7	1.65	1.3	1.85	1.13
11	2.1	1.8	1.9	2.35	3.5	2.8	3.2	2.8	1.6	1.21	2.25	1.21
12	2.2	1.8	2.5	*2.2	3.5	2.7	3.2	2.6	1.75	1.25	1.85	3.6
13	1.85	1.7	4.7	2.15	2.7	2.8	3.0	2.8	1.7	1.3	1.55	4.5
14	2.2	1.7	3.2	2.1	4.2	2.8	3.0	2.7	1.7	2.7	1.55	2.6
15	2.05	1.75	2.5	2.35	3.7	2.8	3.0	2.45	1.9	3.8	1.5	2.15
16	1.8	1.7	2.35	2.8	*2.9	2.8	3.1	2.35	1.8	2.35	1.85	2.05
17	1.75	1.8	2.15	2.35	2.7	3.1	3.0	2.25	1.7	1.85	1.65	1.85
18	1.65	2.35	2.1	2.2	2.6	3.9	3.1	2.2	1.9	1.75	1.65	1.85
19	1.45	2.0	2.6	3.0	5.7	3.5	2.9	2.05	1.8	1.8	1.9	2.3
20	1.6	1.75	2.5	2.6	3.8	3.4	2.8	1.9	1.6	1.75	1.85	8.5
21	1.45	1.7	2.15	2.35	3.1	*3.2	2.8	2.0	1.4	1.65	1.75	4.5
22	1.45	1.7	2.25	2.25	3.0	3.0	3.0	2.05	1.4	1.65	1.75	2.6
23	1.5	1.6	2.1	2.2	2.8	2.9	3.0	2.05	1.3	1.75	1.55	2.15
24	2.9	2.15	2.0	2.15	2.8	3.0	3.1	2.7	1.55	1.75	1.5	2.0
25	4.5	6.2	2.0	2.15	2.7	3.0	3.5	2.8	1.85	*1.65	1.4	2.0
26	2.9	3.8	2.0	2.15	5.5	2.8	*3.1	2.35	1.6	1.55	1.5	1.9
27	2.6	2.7	2.0	2.1	4.0	2.9	2.9	2.15	1.4	1.65	1.5	1.8
28	2.7	2.9	2.8	3.3	3.2	3.2	2.9	2.0	1.5	1.75	1.45	2.4
29	2.1	3.5	4.8	3.3	3.0	3.4	2.8	1.9	1.4	1.6	1.5	2.6
30	1.9	2.8	3.3	2.7	-------	3.7	2.6	1.8	1.5	2.3	1.5	2.8
31	.2.05	-------	2.6	2.45	-------	4.2	-------	2.1	-------	2.5	1.5	-------
Total	66.35	68.10	77.65	76.90	92.15	95.4	100.0	76.00	54.15	58.06	50.06	69.74
Mean	2.14	2.27	2.50	2.48	3.18	3.08	3.33	2.45	1.80	1.87	1.61	2.32
Cfsm	1.55	1.64	1.81	1.80	2.30	2.23	2.41	1.78	1.30	1.36	1.17	1.68
In.	1.79	1.84	2.09	2.07	2.48	2.57	2.69	2.05	1.46	1.56	1.35	1.88

Calendar year 1959: Max 6.2 Min 1.3 Mean 2.35 Cfsm 1.70 In. 23.14
Water year 1959-60: Max 8.5 Min 1.13 Mean 2.42 Cfsm 1.75 In. 23.83

* Discharge measurement made on this day.
Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1060. Adamsville Brook at Adamsville, R. I.

Location.--Lat 41°33'30", long 71°07'47", on right bank 0.2 mile upstream from milldam at Adamsville, Newport County, and 0.7 mile upstream from mouth.

Drainage area.--8.6 sq mi, approximately.

Records available.--October 1940 to September 1960.

Gage.--Water-stage recorder. Concrete control since Sept. 16, 1942. Altitude of gage is 15 ft (from topographic map).

Average discharge.--20 years, 13.8 cfs.

Extremes.--Maximum discharge during year, 273 cfs Sept. 20 (gage height, 7.135 ft); minimum, 0.12 cfs Sept. 8-10.
1940-60: Maximum discharge, that of Sept. 20, 1960; minimum, 0.03 cfs Sept. 23, 24, Oct. 3, 4, 1950.
Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1381	1955	Aug. 20, 1955	87	4.46
1431	1956	Oct. 17, 1955	132	5.04
1501	1957	Apr. 6, 1957	182	5.76
1551	1958	Apr. 7, 1958	217	6.265
1621	1959	Mar. 7, 1959	119	4.86

Remarks.--Records good.

Revisions.--Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1955-59, superseding those published in WSP 1381, 1431 1501, 1551, and 1621, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1955		1958		1958-Con.	
Aug. 20	80	Jan. 15	89	May 8	9[illegible]
Oct. 17	123	16	126	9	81
18	82	Feb. 28	85		
Nov. 5	100	Mar. 1	160	1959	
6	108	2	80	Mar. 7	10[illegible]
		22	95	July 15	8[illegible]
1957		Apr. 7	201	16	8[illegible]
Jan. 24	101	8	148		
Apr. 6	146	29	88		
7	126	30	114		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
August 1955	537.72	80	0.26	17.3	2.01	2.33
Water year 1954-55	-	80	.26	15.5	1.80	24.39
October 1955	719.3	123	6.9	23.2	2.70	3.11
November	1,026	108	17	34.2	3.98	4.44
Calendar year 1955	-	123	.26	15.8	1.84	24.94
Water year 1955-56	-	123	.16	17.7	2.06	28.07
January 1957	537.4	101	5.8	17.3	2.01	2.32
April	929	146	11	31.0	3.60	4.02
Water year 1956-57	-	146	.06	10.4	1.21	16.42
Calendar year 1957	-	146	.06	9.16	1.07	14.45
January 1958	1,247.1	126	8.1	40.2	4.67	5.39
February	489.7	85	8.7	17.5	2.03	2.12
March	1,449	160	15	46.7	5.43	6.27
April	1,549	201	17	51.6	6.00	6.70
May	1,051	98	15	33.9	3.94	4.54
Water year 1957-58	-	201	.07	19.8	2.30	31.27
Calendar year 1958	-	201	.91	21.5	2.50	33.97
March 1959	1,210	106	20	39.0	4.53	5.23
July	514.9	84	2.9	16.6	1.93	2.23
Water year 1958-59	-	106	.22	14.6	1.70	23.07

Revised peak discharge.--1955-56: Oct. 17 (8 a.m.) 132 cfs (5.04 ft); Nov. 5 (10:30 to 12 p.m.) 129 cfs (5.00 ft).
1956-57: Jan. 24 (9:30 a.m.) 143 cfs (5.20 ft); Apr. 6 (2 to 4 p.m.) 182 cfs (5.76 ft).
1957-58: Jan. 16 (3 to 4 a.m.) 147 cfs (5.265 ft); Mar. 1 (1:30 to 4 a.m.) 185 cfs (5.80 ft); Apr. 7 (1 to 3 p.m.) 217 cfs (6.265 ft); Apr. 30 (4:30 to 7 a.m.) 123 cfs (4.92 ft); May 8 (4:30 to 5:30 p.m.) 110 cfs (4.75 ft).
1958-59: Mar. 7 (4:30 to 5 a.m.) 119 cfs (4.86 ft); July 15 (4:30 p.m.) 104 cfs (4.68 ft).

1060. Adamsville Brook at Adamsville, R. I.--Continued

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.28	4.8	26	21	19	25	36	11	8.0	1.45	0.85	0.28
2	.39	4.3	19	16	17	19	34	18	7.3	7.3	.71	.36
3	.46	4.0	15	23	15	16	28	17	8.6	8.0	*.74	.28
4	.46	3.8	13	37	14	12	34	15	11	12	.80	.33
5	.42	3.7	11	34	13	11	106	12	14	9.0	.76	.26
6	.39	3.4	10	26	22	11	*151	10	15	6.3	.71	.24
7	.42	3.8	*17	19	37	14	*84	9.3	12	4.4	.59	.22
8	.46	6.0	21	16	34	18	48	8.8	8.6	3.7	.85	.20
9	1.15	*6.5	19	14	26	19	38	10	6.5	2.7	.90	.16
10	.78	6.2	16	11	21	18	31	10	5.7	2.05	1.00	.13
11	.63	5.8	13	*10	25	16	27	12	5.0	1.5	1.06	.23
12	.79	5.6	19	10	40	14	23	14	4.3	1.24	.95	.54
13	.74	5.1	84	10	40	14	21	17	4.0	1.06	.90	1.20
14	.85	4.8	92	9.4	37	15	20	18	3.6	2.2	.85	1.00
15	.74	4.6	50	10	47	16	17	15	3.2	5.1	.78	.76
16	*.60	4.3	32	13	39	17	17	12	3.1	4.3	.67	.71
17	.68	4.6	24	13	28	21	16	10	2.8	3.8	.55	.63
18	.58	5.3	19	12	23	31	15	9.6	3.2	3.2	.45	.55
19	.54	5.1	17	17	60	37	14	8.8	2.8	2.6	.48	.92
20	.50	4.9	16	18	85	42	13	7.8	2.5	2.05	.39	188
21	.42	4.9	13	17	50	40	12	6.9	2.15	1.5	.39	*214
22	.39	5.1	12	15	33	36	12	6.1	1.85	*1.23	.39	96
23	.56	4.8	11	13	26	29	11	5.7	1.65	1.06	*.34	41
24	1.9	7.0	10	11	21	*26	12	23	2.5	.90	.26	23
25	5.1	49	9.7	11	19	25	15	48	2.8	.80	.22	15
26	3.8	60	10	10	43	22	16	39	2.7	.63	.20	12
27	4.0	42	11	9.7	82	21	*15	23	2.45	.55	.26	11
28	4.3	29	13	16	50	21	13	15	1.95	.71	.24	12
29	3.6	33	25	26	*34	23	12	11	1.7	.80	.20	14
30	3.2	32	21	29	-------	25	11	9.0	1.45	1.00	.28	19
31	3.2	-------	28	24	-------	31	-------	8.6	-------	1.00	.26	-------
Total	42.33	363.4	706.7	521.1	1,000	685	902	440.6	152.40	94.13	18.01	654.00
Mean	1.37	12.1	22.8	16.8	34.5	22.1	30.1	14.2	5.08	3.04	0.581	21.8
Cfsm	0.159	1.41	2.65	1.95	4.01	2.57	3.50	1.65	0.591	0.353	0.068	2.53
In.	0.18	1.57	3.06	2.25	4.32	2.96	3.90	1.91	0.66	0.41	0.08	2.83

Calendar year 1959: Max 106 Min 0.22 Mean 14.6 Cfsm 1.70 In. 23.05
Water year 1959-60: Max 214 Min 0.13 Mean 15.2 Cfsm 1.77 In. 24.13

Peak discharge (base, 120 cfs).--Apr. 5 (11:30 p.m.) 168 cfs (6.145 ft); Sept. 20 (1 p.m.) 273 cfs (7.135 ft).

* Discharge measurement made on this day.

1065. Matfield River at Elmwood, Mass.

Location.--Lat 42°00'55 , long 70°57'42", on right bank 20 ft upstream from bridge on State Highway 18 at Elmwood, Plymouth County, 0.6 mile upstream from Satucket River, and 1.2 miles south of East Bridgewater.

Drainage area.--40.6 sq mi.

Records available.--July 1958 to September 1960 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 30 ft (from topographic map).

Extremes.--Maximum discharge during year, 598 cfs Apr. 5 (gage height, 6.90 ft); minimum daily, 7.5 cfs Sept. 8.
1958-60: Maximum discharge, that of Apr. 5, 1960; minimum daily, that of Sept. 8, 1960.

Remarks.--Records fair. Some diurnal fluctuation at low flow by powerplant above station. Slight regulation by ponds above station. Small diversions to basin for water supply of several towns supplied by Brockton.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	43	199	139	87	168	346	56	46	*13	13	11
2	*11	37	165	111	70	125	337	86	89	60	12	11
3	9.9	33	129	216	61	107	294	67	71	25	12	9.9
4	8.8	30	106	340	55	74	352	58	82	28	12	9.5
5	9.7	30	85	242	53	83	*485	52	96	18	11	9.0
6	11	30	71	194	121	63	*544	44	71	16	9.9	9.9
7	30	37	159	166	191	68	*355	38	55	15	9.5	*8.1
8	19	58	172	138	135	73	277	37	42	13	11	7.5
9	121	71	128	111	117	73	243	51	35	12	11	7.7
10	79	48	102	87	107	80	201	48	30	11	15	7.7
11	38	37	80	*77	147	72	168	51	28	12	17	7.7
12	66	29	97	66	244	66	151	53	26	12	15	43
13	32	28	330	58	171	66	130	68	26	12	16	85
14	30	28	279	54	193	64	116	93	24	52	15	30
15	23	29	212	58	234	64	104	81	23	74	17	24
16	19	30	176	99	*187	67	96	69	24	29	64	22
17	15	*30	143	75	151	87	92	55	23	22	26	17
18	13	43	*121	74	128	132	86	48	22	19	19	16
19	14	38	103	90	342	157	76	43	22	19	23	20
20	11	32	95	86	359	165	69	36	20	20	19	346
21	12	26	77	77	265	*177	63	34	19	17	18	356
22	14	27	64	67	217	174	58	32	18	15	22	159
23	14	26	56	58	179	151	50	32	18	18	18	135
24	29	40	52	52	143	159	64	72	18	18	16	95
25	63	281	44	48	118	182	146	76	14	*13	14	70
26	52	260	43	43	297	152	*118	62	12	12	15	52
27	45	199	45	39	349	145	96	48	11	12	13	40
28	49	201	70	108	268	173	84	40	11	18	12	37
29	37	304	230	174	213	196	72	34	11	14	11	35
30	32	239	227	127	-------	209	80	31	12	20	11	40
31	27	-------	181	100	-------	300	-------	39	-------	20	11	-------
Total	944.4	2,344	4,041	3,374	5,202	3,872	5,333	1,634	999	659	508.4	1,721.0
Mean	30.5	78.1	130	109	179	125	178	52.7	33.3	21.3	16.4	57.4
Cfsm	0.751	1.92	3.20	2.68	4.41	3.08	4.38	1.30	0.820	0.525	0.404	1.41
In.	0.87	2.15	3.70	3.09	4.77	3.55	4.89	1.50	0.92	0.60	0.47	1.58

Calendar year 1959: Max 421 Min 8.8 Mean 84.8 Cfsm 2.09 Ir. 28.34
Water year 1959-60: Max 544 Min 7.5 Mean 83.7 Cfsm 2.06 Ir. 28.09

Peak discharge (base, 410 cfs).--Feb. 19 (2 to 3 p.m.) 440 cfs (6.42 ft); Feb. 26 (4 to 5 p.m.) 446 cfs (6.48 ft); Apr. 5 (10 to 12 p.m.) 598 cfs (6.90 ft); Sept. 20 (4 to 5 p.m.) 516 cfs (6.63 ft).

* Discharge measurement made on this day.

1069. Poor Meadow Brook at South Hanson, Mass.

Location.--Lat 42°02'32", long 70°53'56", on right bank 20 ft downstream from bridge on State Highway 27, 0.9 mile west of South Hanson, Plymouth County, and 2½ miles south of Hanson.

Drainage area.--14.8 sq mi.

Records available.--July 1958 to September 1960 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 50 ft (from topographic map).

Extremes.--Maximum discharge during year, 144 cfs Apr. 6 (gage height, 5.19 ft); minimum not determined; minimum daily, 2.2 cfs Sept. 9-11.
1958-60: Maximum discharge, that of Apr. 6, 1960; minimum not determined; minimum daily, that of Sept. 9-11, 1960.

Remarks.--Records good except those for periods of backwater from temporary dams, which are fair. Small diversion to basin for Whitman water supply.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	22	55	54	42	56	92	20	19	5.0	6.0	2.9
2	4.5	24	45	40	34	38	96	27	30	20	5.2	2.8
3	4.6	20	36	50	28	33	79	24	28	12	4.6	2.7
4	4.0	15	30	80	26	26	81	21	30	11	4.3	2.6
5	3.5	12	26	75	25	18	116	18	29	9.0	4.0	2.8
6	5.0	11	22	60	40	19	137	16	25	7.0	3.8	2.5
7	15	12	30	50	77	20	115	15	20	6.0	3.6	2.4
8	10	25	50	44	73	23	92	14	14	5.4	4.2	2.3
9	28	27	45	35	63	26	72	18	10	5.0	4.3	2.2
10	30	21	39	28	50	33	60	19	8.0	4.5	4.1	2.2
11	20	17	29	22	49	34	47	20	7.0	4.1	5.0	2.2
12	15	14	28	*20	79	31	41	21	7.0	3.9	4.5	17
13	13	12	66	20	73	29	36	29	7.0	3.9	4.0	19
14	16	11	88	19	70	28	32	47	6.6	7.0	3.7	14
15	13	10	80	20	88	29	30	37	7.0	22	3.5	8.0
16	10	10	62	32	*80	31	28	28	6.5	24	7.5	6.0
17	8.0	11	47	31	62	36	28	20	6.0	15	6.6	5.0
18	7.0	17	35	27	47	48	26	17	5.6	10	5.8	4.0
19	6.0	16	30	31	98	62	26	15	5.4	8.0	5.2	4.0
20	5.5	13	32	36	123	68	23	14	5.1	8.5	6.0	35
21	5.0	11	27	32	106	*74	22	13	5.0	6.0	5.0	70
22	4.7	10	22	28	80	70	20	12	5.0	6.5	7.0	60
23	4.4	10	20	26	60	58	20	12	4.8	5.5	5.6	35
24	13	11	18	23	44	52	22	19	5.3	5.0	5.0	25
25	30	40	15	21	36	54	42	29	6.0	4.5	4.5	20
26	35	75	15	20	76	46	*42	27	6.0	4.2	4.0	16
27	25	64	16	19	120	41	34	22	5.0	4.2	3.7	14
28	27	40	23	29	106	46	30	18	4.2	4.0	3.4	13
29	17	58	60	64	80	54	26	15	3.7	4.1	3.2	13
30	12	65	75	64	-------	58	22	14	3.7	4.5	3.1	15
31	11	-------	68	60	-------	75	-------	15	-------	7.0	3.0	-------
Total	406.5	704	1,234	1,160	1,935	1,314	1,537	636	324.9	246.8	143.4	420.6
Mean	13.1	23.5	39.8	37.4	66.7	42.4	51.2	20.5	10.8	7.96	4.63	14.0
Cfsm	0.885	1.59	2.69	2.53	4.51	2.86	3.46	1.39	0.730	0.538	0.313	0.946
In.	1.02	1.77	3.10	2.91	4.86	3.30	3.86	1.60	0.82	0.62	0.36	1.06

Calendar year 1959: Max 128 Min 3.5 Mean 28.3 Cfsm 1.91 In. 25.91
Water year 1959-60: Max 137 Min 2.2 Mean 27.5 Cfsm 1.86 In. 25.28

* Discharge measurement made on this day.
Note.--Backwater from temporary dams Oct. 1 to Jan. 7, June 1 to Sept. 30.

1080. Taunton River at State Farm, Mass.

Location.--Lat 41°56'05", long 70°57'18", on right bank at State Farm, Plymouth County, 1 mile upstream from Saw Mill Brook and 3½ miles northwest of Middleboro.

Drainage area.--260 sq mi.

Records available.--October 1929 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 9.61 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1931, inverted staff gage at site 40 ft downstream with zero of gage at 10.02 ft on present gage. Oct. 1, 1931, to June 8, 1934, staff gage and June 9, 1934, to Oct. 12, 1939, water-stage recorder, at site 40 ft downstream at present datum.

Average discharge.--31 years, 479 cfs (adjusted for diversions).

Extremes.--Maximum discharge during year, 2,240 cfs Apr. 6, 7 (gage height, 8.29 ft); minimum, 37 cfs Sept. 11; minimum daily, 37 cfs Sept. 11.
1929-60: Maximum discharge, 4,010 cfs Aug. 21, 1955 (gage height, 13.02 ft); minimum, 8 cfs Sept. 10, 1944; minimum daily, 9 cfs Sept. 9-12, 1944.

Remarks.--Records excellent. Water diverted above station from Nemasket River for municipal supply of Taunton and New Bedford; water diverted from Silver Lake by pumpage into Taunton River basin above station for municipal supply of Brockton and several towns. Flow regulated by reservoirs and small powerplants above station.

Revisions (water years).--WSP 756: Drainage area. WSP 781: 1934. WSP 1051: 1933. WSP 1201: 1931. WSP 1301: 1930(M), 1933(M), 1935(M).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
3.2	55	4.0	275	3.0	37	4.0	300
3.4	86	6.0	1,310	3.2	64	6.0	1,280
3.6	130	8.1	2,160	3.4	100	8.2	2,200
				3.6	150		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	263	886	892	760	1,240	1,320	539	330	125	107	50
2	76	283	766	766	712	1,080	1,360	587	400	147	98	55
3	76	263	676	838	640	975	1,290	575	414	300	90	50
4	69	239	586	1,210	592	840	1,290	547	422	200	*85	48
5	63	227	520	1,210	562	718	1,630	508	454	168	76	48
6	69	223	475	1,080	670	772	2,140	468	432	134	74	50
7	106	227	545	975	965	820	2,170	418	395	118	71	55
8	123	287	730	886	960	844	1,880	400	345	109	71	47
9	174	351	682	754	910	856	1,580	414	291	107	72	43
10	324	369	616	646	856	880	1,380	409	250	98	58	41
11	255	303	550	*574	880	838	1,190	422	230	90	*64	37
12	259	243	520	545	1,140	796	1,050	440	207	88	72	254
13	247	*207	470	520	1,140	784	988	476	197	79	74	274
14	227	199	1,320	480	1,120	766	910	555	183	106	76	159
15	215	215	1,200	480	1,210	760	855	551	174	244	83	150
16	*178	231	1,060	568	1,180	760	810	517	177	305	122	139
17	148	219	945	580	1,100	802	785	472	171	200	147	118
18	133	251	856	574	995	940	755	445	159	165	107	92
19	123	259	742	616	1,320	1,040	700	432	159	154	100	94
20	104	247	700	670	1,650	1,110	670	409	150	220	102	490
21	74	215	622	640	1,620	1,140	633	370	139	94	94	993
22	86	203	556	598	1,420	1,130	611	355	131	105	*116	840
23	94	203	490	556	1,240	1,040	571	350	126	90	100	642
24	118	211	450	525	1,120	990	559	404	123	79	89	563
25	267	630	405	515	1,010	1,000	651	490	139	79	79	472
26	338	1,020	392	505	1,200	940	700	486	165	92	74	390
27	342	950	396	475	1,600	862	*665	454	145	90	66	300
28	374	826	428	556	1,570	880	633	414	134	89	56	263
29	307	965	796	898	1,420	960	599	385	105	90	50	242
30	263	985	1,030	886	-------	1,020	563	325	112	92	50	238
31	227	-------	995	826	-------	*1,160	-------	315	-------	109	49	-------
Total	5,533	11,314	21,405	21,844	31,562	28,543	30,958	13,912	6,859	4,166	2,572	7,237
Mean	178	377	690	705	1,088	921	1,032	449	229	134	83.0	241
(†)	27.4	24.8	25.4	25.3	27.6	26.5	26.5	27.2	27.6	25.0	31.0	28.9

Adjusted for diversions

Mean	206	402	716	730	1,116	947	1,058	476	256	159	114	270
Cfsm	0.792	1.55	2.75	2.81	4.29	3.64	4.07	1.83	0.985	0.612	0.438	1.04
In.	0.91	1.72	3.17	3.24	4.63	4.20	4.54	2.11	1.10	0.71	0.51	1.16

	Observed			Adjusted		
Calendar year 1959:	Max 1,680	Min 59	Mean 518	Mean 545	Cfsm 2.10	In. 28.43
Water year 1959-60:	Max 2,170	Min 37	Mean 508	Mean 535	Cfsm 2.06	In. 28.00

* Discharge measurement made on this day.
† Diversions, equivalent in cubic feet per second, from Nemasket River for municipal supply of Taunton and New Bedford and from Silver Lake into Taunton River basin for municipal supply of Brockton and several towns. Records furnished by various municipalities.

1085. Wading River at West Mansfield, Mass.

Location.--Lat 42°00'00", long 71°15'38", on right bank 200 ft downstream from Falcolm Street Bridge at West Mansfield, Bristol County, 2 miles upstream from Hodges Brook, and 3 miles southwest of Mansfield.

Drainage area.--19.2 sq mi.

Records available.--October 1953 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 120.85 ft above mean sea level, datum of 1929.

Average discharge.--7 years, 38.6 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 145 cfs Mar. 4 (gage height, 4.91 ft), from rating curve extended above 52 cfs by logarithmic plotting; minimum daily, 0.7 cfs Oct. 1, 5.
1953-60: Maximum discharge, 519 cfs Aug. 20, 1955 (gage height, 6.22 ft); no flow Oct. 22-24, 1957 (caused by temporary storage upstream).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Lake Mirimichi. Diversion above station for municipal supply of Attleboro.

Revisions (water years).--WSP 1621: 1953-58 (monthly runoff).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 19, Sept. 15-30)

Oct. 1 to Feb. 19				Feb. 20 to Sept. 30			
2.3	0.5	3.3	15	2.3	0.5	3.0	12
2.4	1.1	3.5	22	2.4	1.1	3.5	30
2.5	1.9	4.0	46	2.5	2.0	4.0	58
3.0	9.0	4.7	96	2.6	3.2	4.8	132

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	a12	70	b53	39	87	86	45	26	4.3	9.4	2.0
2	1.1	a14	67	b48	36	b76	88	46	23	14	8.2	1.6
3	2.6	a15	61	57	33	b68	86	43	21	17	6.2	1.4
4	1.3	a13	56	75	30	b115	94	38	22	16	4.5	1.2
5	*.7	10	51	76	28	105	111	35	25	14	3.6	1.2
6	.8	10	46	78	36	b81	127	32	28	13	3.8	1.1
7	3.9	12	54	73	51	b76	124	30	24	13	4.0	1.2
8	4.6	16	59	68	53	b68	116	29	20	10	4.4	1.3
9	7.2	*16	61	b60	52	b64	109	32	19	8.2	4.0	1.2
10	7.6	17	*62	b56	50	b59	102	36	17	8.2	5.1	1.0
11	8.6	17	57	b53	56	b54	94	38	16	7.8	6.6	1.0
12	11	16	57	b52	64	b51	93	39	15	7.8	6.2	12
13	11	14	78	*b46	62	47	88	42	13	6.9	5.8	17
14	10	14	85	b43	66	45	73	45	12	9.0	5.5	30
15	10	14	81	44	65	44	64	42	11	14	5.3	18
16	11	14	78	43	57	42	61	40	11	9.9	9.1	14
17	8.6	14	73	b40	*50	43	55	36	9.6	12	9.6	11
18	8.7	13	68	38	49	47	53	32	10	10	7.8	9.6
19	7.2	12	65	40	89	50	50	28	9.1	9.6	5.3	9.2
20	a7.0	12	58	40	107	52	44	25	7.8	9.1	4.2	30
21	a6.8	11	b52	37	99	53	38	23	7.3	8.4	6.1	51
22	a6.8	11	b48	35	98	51	38	20	6.4	7.1	*12	44
23	a7.0	10	b46	33	90	*48	36	20	5.8	6.4	11	35
24	a8.0	11	b43	30	80	46	43	28	6.0	6.0	8.7	32
25	a13	22	b38	28	74	44	54	34	5.8	5.3	6.2	29
26	a17	36	34	28	94	40	53	34	5.5	4.0	4.7	24
27	a20	40	36	26	108	40	*54	30	5.1	*4.0	3.0	18
28	a19	46	42	31	102	41	50	29	4.0	5.8	2.1	15
29	a17	70	56	41	95	45	48	26	2.2	5.1	2.0	14
30	a14	76	60	42	--------	47	47	24	2.7	7.5	2.2	14
31	a12	--------	57	40	--------	63	--------	25	--------	9.9	2.8	--------
Total	264.2	608	1,799	1,454	1,913	1,792	2,179	1,026	390.3	283.3	179.4	441.0
Mean	8.52	20.3	58.0	46.9	66.0	57.8	72.6	33.1	13.0	9.14	5.79	14.7
(†)	3.61	3.22	2.58	2.64	2.68	2.57	2.68	2.93	2.67	2.35	2.71	3.33

	Observed			Adjusted for diversion			
Calendar year 1959:	Max 129	Min 0.6	Mean 31.0	Mean 34.4	Cfsm 1.79	In. 24.34
Water year 1959-60:	Max 127	Min 0.7	Mean 33.7	Mean 36.5	Cfsm 1.90	In. 25.89

* Discharge measurement made on this day.
† Diversion, equivalent in cubic feet per second, for municipal supply of Attleboro. Records furnished by city of Attleboro.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for station near Norton.
b Stage-discharge relation affected by ice.

1090. Wading River near Norton, Mass.

Location.--Lat 41°56'51", long 71°10'38", on left bank 200 ft downstream from bridge on State Highway 140, 0.9 mile upstream from confluence with Rumford River, and 1½ miles southeast of Norton, Bristol County.

Drainage area.--42.4 sq mi.

Records available.--June 1925 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 49.63 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1930, staff gage at same site at datum 0.62 ft higher. Oct. 1, 1930, to May 4, 1933, staff gage at present site and datum.

Average discharge.--35 years, 72.2 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 354 cfs Apr. 6 (gage height, 7.90 ft); minimum, 3.0 cfs Aug. 6; minimum daily, 3.5 cfs Oct. 4.
1925-60: Maximum discharge, 1,170 cfs Aug. 20, 1955 (gage height, 10.98 ft); minimum, 0.3 cfs Sept. 10, 1926.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by powerplants and ponds above station. Diversion above station for municipal supply of Attleboro.

Revisions (water years).--WSP 871: 1938. WSP 1301: 1929-33(M). WSP 1621: 1925-58 (monthly runoff).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
4.7	2.2	5.5	36	4.7	2.8	5.5	33
4.8	3.7	6.0	81	4.8	4.2	6.0	78
4.9	5.8	7.0	200	4.9	6.4	7.0	200
5.1	12	8.0	374	5.2	16	8.0	374
5.3	22						

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	29	163	143	106	178	*234	91	50	4.7	*12	5.5
2	4.2	32	136	124	83	b120	229	92	50	18	9.0	4.9
3	3.7	55	107	149	75	121	192	90	*43	25	12	4.1
4	3.5	28	96	197	69	164	204	85	39	28	16	3.8
5	3.7	25	90	174	67	130	280	66	50	22	12	3.8
6	4.2	22	83	155	84	134	348	57	81	18	4.1	3.8
7	5.3	23	105	173	126	138	287	55	58	16	3.8	4.2
8	5.1	32	130	149	136	134	252	52	52	15	4.5	4.2
9	12	37	155	132	152	b120	236	60	34	13	4.7	4.2
10	34	63	136	116	132	101	212	72	25	10	5.3	4.0
11	23	34	120	b105	140	b91	193	102	22	9.0	6.0	3.6
12	25	31	104	b100	181	89	178	106	22	8.7	7.4	26
13	25	28	185	84	169	92	166	98	22	8.2	7.7	36
14	25	26	236	b76	160	88	156	82	20	13	7.7	26
15	24	25	212	78	155	95	138	78	17	28	8.2	35
16	21	24	202	86	159	114	108	75	16	23	12	29
17	20	25	168	84	133	110	101	69	15	16	14	21
18	17	33	154	81	107	117	81	63	14	15	13	18
19	15	54	143	101	220	126	107	69	15	14	12	18
20	13	28	135	116	234	132	98	81	13	13	12	131
21	12	23	118	98	242	130	91	54	12	11	11	a115
22	12	22	94	85	208	113	77	49	10	10	12	a100
23	13	22	83	72	187	104	79	27	8.7	8.7	16	a85
24	20	23	82	b65	156	99	91	40	8.5	8.7	16	a80
25	34	85	77	65	132	104	134	73	8.7	8.2	12	a70
26	43	125	74	62	228	126	135	81	8.5	7.4	10	a60
27	77	121	73	b62	278	117	119	122	8.5	6.4	7.7	a45
28	66	123	88	101	245	111	107	61	7.7	6.9	6.4	a37
29	*37	163	148	*113	*209	96	*100	30	6.0	7.4	5.5	a35
30	31	*181	*135	117	---	103	97	32	*5.1	8.5	6.0	*34
31	28	---	140	113	---	142	---	*43	---	16	*6.2	---
Total	661.3	1,542	3,972	3,376	4,633	3,639	4,830	2,155	741.7	416.8	292.2	1,047.1
Mean	21.3	51.4	128	109	160	117	161	69.5	24.7	13.4	9.43	34.9
(†)	3.61	3.22	2.58	2.64	2.68	2.57	2.68	2.93	2.67	2.35	2.71	3.33

	Observed			Adjusted for diversion		
Calendar year 1959:	Max 370	Min 3.5	Mean 72.5	Mean 76.0	Cfsm 1.79	In. 24.32
Water year 1959-60:	Max 348	Min 3.5	Mean 74.6	Mean 77.4	Cfsm 1.83	In. 25.11

Peak discharge (base, 280 cfs).--Feb. 20 (11 a.m.) 305 cfs (7.64 ft); Feb. 27 (1 to 4 p.m.) 284 cfs (7.52 ft); Apr. 6 (4 p.m.) 354 cfs (7.90 ft).

* Discharge measurement made on this day.
† Diversion, equivalent in cubic feet per second, for municipal supply of Attleboro. Records furnished by city of Attleboro.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for station at West Mansfield.
b Stage-discharge relation affected by ice.

1095. Kettle Brook at Worcester, Mass.

Location.--Lat 42°13'55", long 71°50'07", on right bank 75 ft downstream from Webster Street Bridge at Worcester, Worcester County, 1 mile upstream from Beaver Brook.

Drainage area.--31.3 sq mi.

Records available.--August 1923 to September 1960. Prior to October 1950, published as Blackstone River at Worcester.

Gage.--Water-stage recorder. Concrete control since Oct. 28, 1937. Datum of gage is 472.86 ft above mean sea level, datum of 1929.

Average discharge.--37 years, 54.2 cfs (adjusted for diversion).

Extremes.--Maximum daily discharge during year, 580 cfs Apr. 1; minimum discharge, 9.0 cfs Oct. 7.
1923-60: Maximum discharge, 3,970 cfs Aug. 19, 1955 (gage height, 12.78 ft, from floodmark), from rating curve extended above 1,700 cfs on basis of computation of peak flow over dam; minimum, 0.2 cfs May 17, 1940.

Remarks.--Records excellent except those for periods of no gage-height record or periods of bypass flow through diversion tunnel, which are fair. City of Worcester diverts flow for municipal use from about 7.0 sq mi of drainage area above station. Since October 1959, city diverts flow through diversion tunnel during periods of high flow; this flow included in daily discharge. Flow regulated by reservoirs above station.

Revisions (water years).--WSP 1301: 1927(M). WSP 1621: 1923-58 monthly runoff).

Rating tables, water year 1959-60, except periods of flow through diversion tunnel (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 16				Dec. 17 to Sept. 30			
2.5	15	3.2	89	2.3	9.8	3.0	59
2.7	24	3.5	155	2.5	18	3.3	110
2.9	43			2.7	30	3.7	210

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*34	66	110	55	46	76	e580	65	48	16	40	19
2	34	60	90	52	45	67	e400	69	44	22	33	17
3	32	*51	78	e140	44	63	e260	59	48	19	30	16
4	32	43	70	e200	43	70	e270	52	72	22	25	16
5	23	40	64	148	43	69	e370	46	121	19	19	17
6	17	37	58	106	62	70	e430	44	100	18	17	17
7	20	70	125	85	85	70	e300	42	70	18	17	17
8	32	112	140	76	76	65	e210	41	51	16	20	17
9	55	93	121	67	63	57	186	47	40	14	22	17
10	50	65	100	60	55	54	172	72	35	11	39	15
11	36	53	80	59	82	49	150	76	31	11	41	17
12	32	48	100	55	153	47	144	119	28	11	33	e120
13	25	44	130	58	110	44	137	134	28	12	28	e190
14	27	48	150	57	90	42	106	132	26	35	23	e85
15	25	73	125	54	70	41	88	112	28	36	17	46
16	23	80	105	55	62	40	85	98	29	26	16	34
17	23	66	*94	52	60	42	88	87	26	21	18	25
18	22	64	88	51	64	47	87	78	23	*20	16	23
19	19	58	87	57	150	49	87	63	22	19	14	19
20	19	50	78	*53	165	52	75	• 55	19	27	13	37
21	18	44	69	51	130	58	69	49	18	21	14	38
22	17	44	53	49	95	54	66	46	17	19	17	35
23	17	44	70	48	80	52	65	47	23	18	24	33
24	e85	51	62	47	70	52	85	92	28	16	24	28
25	e180	120	57	45	*65	53	126	106	28	15	18	23
26	109	134	57	46	108	46	*120	92	26	14	15	20
27	55	110	59	44	144	48	94	73	24	20	12	16
28	68	104	62	48	117	*59	83	59	22	30	22	*14
29	58	130	72	53	94	88	73	49	20	21	28	*16
30	44	120	65	52	---	100	69	42	19	45	22	17
31	47	---	60	48	---	e460	---	47	---	55	19	---
Total	1,278	2,122	2,679	2,071	2,471	2,184	5,075	2,193	1,114	667	696	1,004
Mean	41.2	70.7	86.4	66.8	85.2	70.5	169	70.7	37.1	21.5	22.5	33.5
(†)	7.75	8.12	8.42	8.21	6.15	5.29	7.14	9.01	9.55	8.99	9.89	9.48

	Observed			Adjusted				
Calendar year 1959:	Max 595	Min 10	Mean 58.3	Mean 67.0	Cfsm 2.14	In. 29.04		
Water year 1959-60:	Max 580	Min 11	Mean 64.4	Mean 72.5	Cfsm 2.32	In. 31.54		

* Discharge measurement made on this day.
† Diversion, equivalent in cubic feet per second, for municipal supply of Worcester. Records furnished by city of Worcester.
e Discharge includes flow through diversion tunnel; bypass flow computed on basis of available gage heights at diversion weir and records of gate operations.
Note.--No gage-height record Nov. 30 to Dec. 8, Dec. 10-16, Feb. 13-23; discharge estimated on basis of weather records, recorded range in stage, and records for Blackstone River at Northbridge.

1100. Quinsigamond River at North Grafton, Mass.

Location.--Lat 42°13'49", long 71°42'41", on right bank 800 ft downstream from dam at outlet of Flint Pond at North Grafton, Worcester County, and 0.3 mile upstream from Bummett Brook.

Drainage area.--25.5 sq mi.

Records available.--October 1939 to September 1960.

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

Average discharge.--21 years, 43.0 cfs.

Extremes.--Maximum discharge during year, 258 cfs Apr. 6 (gage height, 3.73 ft); minimum daily, 0.4 cfs Sept. 10, 11.
1939-60: Maximum discharge, 820 cfs Aug. 20, 1955 (gage height, 5.15 ft); minimum daily, 0.3 cfs Oct. 14-17, 1942.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Some regulation by Lake Quinsigamond and ponds above station.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*17	74	122	57	45	96	143	63	55	23	26	20
2	17	73	128	56	45	87	173	65	39	27	25	20
3	17	60	110	80	44	86	163	59	44	26	24	20
4	17	*50	100	96	44	91	177	55	63	28	23	20
5	16	20	94	94	44	86	211	64	70	25	23	17
6	17	11	88	90	48	81	254	*65	70	23	24	*4.5
7	19	17	101	86	52	76	236	61	65	20	23	1.5
8	21	18	105	82	50	72	213	57	57	20	23	.9
9	32	18	99	78	50	70	190	64	50	20	23	.7
10	30	31	95	75	50	65	177	76	46	22	28	.4
11	28	57	90	72	52	63	152	78	43	20	30	.4
12	26	111	96	69	60	60	140	84	41	19	30	61
13	24	101	107	66	57	59	130	94	37	22	30	86
14	25	96	105	64	59	56	79	98	35	32	28	29
15	25	100	101	62	53	56	41	94	34	33	26	30
16	25	92	101	60	56	54	47	84	34	29	30	30
17	25	87	*99	59	54	55	46	74	32	28	26	30
18	25	79	95	58	54	56	47	67	33	*26	26	28
19	23	77	94	58	99	56	47	64	30	25	26	25
20	21	74	91	*57	108	56	40	59	29	28	26	37
21	20	72	87	56	101	55	38	55	28	25	28	35
22	19	70	83	55	98	54	39	51	26	24	26	32
23	19	64	79	53	95	54	40	50	25	24	26	30
24	65	23	74	51	90	53	48	66	30	23	25	30
25	142	25	68	50	*87	54	65	79	34	23	23	26
26	122	25	62	48	101	52	70	115	32	22	23	25
27	110	25	54	46	115	52	69	101	29	22	23	23
28	99	48	50	50	108	*53	67	91	26	22	23	*21
29	81	110	54	48	100	52	66	83	23	22	22	20
30	68	108	56	48	-------	39	62	75	23	28	22	20
31	65	-------	58	47	-------	80	-------	69	-------	30	21	-------
Total	1,260	1,816	2,746	1,971	2,019	1,979	3,270	2,260	1,183	761	782	723.4
Mean	40.6	60.5	88.6	63.6	69.6	63.8	109	72.9	39.4	24.5	25.2	24.1
Cfsm	1.59	2.37	3.47	2.49	2.73	2.50	4.27	2.86	1.55	0.961	0.988	0.945
In.	1.84	2.65	4.00	2.87	2.94	2.89	4.77	3.30	1.73	1.11	1.14	1.06

Calendar year 1959: Max 262 Min 11 Mean 53.4 Cfsm 2.09 In. 28.40
Water year 1959-60: Max 254 Min 0.4 Mean 56.7 Cfsm 2.22 In. 30.30

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 23-26, Jan. 10-28; discharge estimated on basis of 1 discharge measurement, weather records, and records for Kettle Brook at Worcester. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1105. Blackstone River at Northbridge, Mass.

Location.--Lat 42°09'13", long 71°39'09", on left bank 800 ft downstream from Paul Whitin Co. dam at Northbridge, Worcester County, and 3 miles downstream from Quinsigamond River.

Drainage area.--139 sq mi.

Records available.--October 1939 to September 1960. October and November 1939 monthly discharge only, published in WSP 1301.

Gage.--Water-stage recorder. Atltiude of gage is 260 ft (from topographic map).

Average discharge.--21 years, 246 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 2,520 cfs Sept. 13 (gage height, 7.66 ft); minimum daily, 71 cfs Oct. 6, Aug. 6.

1939-60: Maximum discharge, 16,900 cfs Aug. 20, 1955 (gage height, 16.74 ft), from rating curve extended above 3,800 cfs on basis of computation of flow over dam at gage height 13.7 ft and slope-area measurement at gage height 16.74 ft; maximum gage height, 17.53 ft Aug. 20, 1955 (backwater from debris); minimum daily discharge, 2 cfs Aug. 29, 1941, Sept. 5, 1942, Aug. 28, 1957.

Flood of Mar. 19, 1936, reached a stage of 13.7 ft, from floodmarks (discharge, 7,510 cfs, by computation of flow over dam 800 ft above station).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by mills and reservoirs above station. Daily discharge includes flow diverted from Nashua River basin to Blackstone River basin for municipal supply of Worcester.

Revisions (water years).--WSP 1301: 1940(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation Oct. 1-23, 29-31, Nov. 3-6, 10, 12, May 23, May 29 to June 3, June 6 to Sept. 12, Sept. 14-30)

3.1	186	5.0	970
3.5	300	6.0	1,570
4.0	480	7.0	2,130

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*241	484	520	309	233	*440	2,040	303	321	124	318	120
2	186	344	529	285	221	382	1,490	368	344	230	202	89
3	109	273	488	1,110	213	358	1,140	318	321	134	181	120
4	73	*258	440	1,290	213	382	1,310	282	624	208	173	100
5	77	219	452	760	216	408	1,770	247	765	148	148	91
6	71	173	424	534	432	368	1,930	*244	570	124	71	106
7	176	514	949	472	484	351	1,430	244	408	115	115	89
8	127	601	865	428	365	348	1,130	235	382	138	109	101
9	454	452	650	440	327	315	1,050	324	306	a120	138	117
10	267	285	556	365	312	276	870	560	267	104	420	100
11	170	318	480	315	539	241	765	506	300	a150	331	124
12	170	306	678	306	765	267	775	625	279	a120	205	840
13	109	321	1,170	315	570	273	680	650	233	a100	158	1,510
14	160	365	890	312	456	279	610	596	200	a300	158	561
15	148	557	675	306	358	230	424	512	213	a450	146	358
16	143	460	606	340	315	241	408	460	219	a350	194	267
17	146	376	*534	300	318	256	376	404	200	a210	131	235
18	131	432	512	279	330	315	400	330	191	a150	120	208
19	111	382	574	282	1,160	330	376	368	181	a140	118	205
20	100	288	504	267	1,040	321	315	250	168	a170	113	451
21	79	337	436	*256	715	330	315	297	145	*a155	124	358
22	73	312	379	247	556	300	312	256	136	141	189	294
23	73	288	348	247	468	288	285	247	136	104	148	241
24	881	319	348	233	416	300	424	603	155	106	134	216
25	1,160	820	285	227	396	324	635	516	158	136	127	233
26	760	665	309	235	732	267	529	492	153	126	127	205
27	484	476	300	208	825	261	440	412	150	144	95	176
28	365	640	330	247	665	312	412	436	143	153	122	*150
29	337	690	379	264	520	*393	372	358	131	125	136	160
30	270	596	337	279	-------	464	318	315	150	401	*127	136
31	290	-------	315	247	-------	1,560	-------	324	-------	469	122	-------
Total	7,941	12,551	16,262	11,705	14,160	11,180	23,331	12,082	7,949	5,645	5,000	7,961
Mean	256	418	525	378	488	361	778	390	265	182	161	265
(†)	19.0	19.7	12.0	14.9	14.9	24.4	15.6	22.4	20.7	22.7	28.2	32.5
Adjusted for diversion												
Mean	237	399	513	363	473	336	762	367	244	159	133	233
Cfsm	1.71	2.87	3.69	2.61	3.40	2.42	5.48	2.64	1.76	1.14	0.957	1.68
In.	1.97	3.20	4.25	3.01	3.67	2.79	6.12	3.05	1.96	1.32	1.10	1.87

	Observed			Adjusted		
Calendar year 1959:	Max 2,220	Min 61	Mean 332	Mean 315	Cfsm 2.27	In. 30.78
Water year 1959-60:	Max 2,040	Min 71	Mean 371	Mean 350	Cfsm 2.52	In. 34.31

* Discharge measurement made on this day.

† Diversion from Nashua River basin to Blackstone River basin for municipal supply of Worcester, equivalent in cubic feet per second. Records furnished by city of Worcester.

a No gage-height record; discharge estimated on basis of weather records and records for Kettle Brook at Worcester and Blackstone River at Woonsocket, R. I. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1115. Branch River at Forestdale, R. I.

Location.--Lat 41°59'47", long 71°33'47", on left bank 20 ft upstream from abandoned bridge, 400 ft downstream from milldam at Forestdale, Providence County, 1 mile east of Slatersville, and 1.6 miles upstream from mouth.

Drainage area.--93.3 sq mi.

Records available.--September to December 1909 and January 1912 to July 1913 (gage heights only), January 1940 to September 1960. Published as "at Branch Village" 1909, 1912-13.

Gage.--Water-stage recorder. Altitude of gage is 180 ft (from topographic map). Prior to July 28, 1913, staff gage at site 1 mile downstream at different datum.

Average discharge.--20 years, 165 cfs.

Extremes.--Maximum discharge during year, 1,470 cfs Feb. 19 (gage height, 6.34 ft); minimum daily, 18 cfs Sept. 10.

1940-60: Maximum discharge, 4,240 cfs Aug. 19, 1955 (gage height, 10.52 ft), from rating curve extended above 2,100 cfs on basis of computation of peak flow over dam 400 ft above station; minimum daily, 5.2 cfs Oct. 7, 1948.

Maximum discharge known since at least 1886, about 5,800 cfs Mar. 19, 1936, by computation of flow over dam 1 mile above station.

Remarks.--Records excellent. Flow regulated by mills and reservoirs above station.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.7	15	3.0	198
1.8	22	4.0	490
2.0	38	6.0	1,300
2.4	82		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	128	369	233	205	341	892	133	135	48	55	30
2	50	128	299	200	189	296	612	162	133	65	55	30
3	47	115	263	546	180	285	456	153	119	53	54	30
4	47	105	243	1,000	171	285	536	135	126	51	53	30
5	47	101	231	536	168	277	775	126	164	50	53	30
6	49	98	228	397	287	274	975	117	129	49	49	29
7	56	122	460	338	483	268	674	110	106	54	24	28
8	49	198	567	308	363	261	518	108	92	69	46	21
9	75	175	376	279	277	248	504	159	81	54	75	19
10	122	143	305	250	255	240	440	314	74	53	82	18
11	93	133	268	238	335	228	376	258	68	54	75	19
12	92	124	324	231	570	221	332	258	65	55	72	58
13	85	115	1,020	238	410	221	314	314	64	54	71	276
14	87	115	866	231	354	216	288	311	62	72	68	236
15	*81	124	581	233	314	200	263	245	62	64	66	119
16	68	124	459	243	277	191	253	221	62	62	59	84
17	65	124	385	226	255	203	248	205	54	75	43	68
18	57	141	341	212	248	212	228	184	51	64	35	62
19	50	129	332	221	993	223	216	180	52	58	35	67
20	51	117	317	210	1,010	231	200	168	50	57	38	280
21	48	112	*282	191	620	235	191	149	51	55	36	338
22	49	110	268	*180	476	223	186	135	51	55	36	216
23	50	108	253	173	394	207	180	131	50	62	35	162
24	169	127	243	164	335	198	196	220	51	90	*35	126
25	459	427	238	162	299	214	223	266	51	98	34	105
26	293	500	235	160	559	191	198	210	49	100	33	90
27	196	351	235	155	726	184	168	171	48	39	33	81
28	149	357	268	204	508	212	157	145	48	58	33	75
29	124	642	388	320	407	285	145	129	48	56	32	*74
30	108	487	348	277	-------	*308	135	119	48	68	*34	76
31	105	-------	285	228	-------	612	-------	122	-------	61	29	-------
Total	3,068	5,780	11,277	8,584	11,668	7,790	10,879	5,658	2,244	1,903	1,478	2,877
Mean	99.0	193	364	277	402	251	363	183	74.8	61.4	47.7	95.9
Cfsm	1.06	2.07	3.90	2.97	4.31	2.69	3.89	1.96	0.802	0.658	0.511	1.03
In.	1.22	2.30	4.50	3.42	4.65	3.11	4.34	2.26	0.89	0.76	0.59	1.15

Calendar year 1959: Max 1,270 Min 34 Mean 186 Cfsm 1.99 In. 27.11
Water year 1959-60: Max 1,020 Min 18 Mean 200 Cfsm 2.14 In. 29.19

Peak discharge (base, 880 cfs).--Dec. 13 (3:30 to 5 p.m.) 1,190 cfs (5.76 ft); Jan. 4 (2 to 3 a.m.) 1,270 cfs (5.93 ft); Feb. 19 (7 p.m.) 1,470 cfs (6.34 ft); Apr. 1 (2 to 2:30 a.m.) 1,060 cfs (5.46 ft); Apr. 6 (7 a.m.) 1,100 cfs (5.56 ft).

* Discharge measurement made on this day.

Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1125. Blackstone River at Woonsocket, R. I.

Location.--Lat 42°00'22", long 71°30'13", on right bank at Woonsocket, Providence County, 50 ft downstream from Peters River.
Drainage area.--416 sq mi.
Records available.--February 1929 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 107.42 ft above mean sea level, datum of 1929.
Average discharge.--31 years, 727 cfs (adjusted for diversion).
Extremes.--Maximum discharge during year, 5,550 cfs Jan. 4 (gage height, 7.68 ft), affected by unusual regulation; maximum discharge unaffected by regulation, 4,780 cfs Apr. 1 (gage height, 7.04 ft); minimum daily, 105 cfs Sept. 11.
1929-60: Maximum discharge, 32,900 cfs Aug. 19, 1955 (gage height, 21.8 ft, from floodmarks), from rating curve extended above 15,000 cfs on basis of slope-area measurement of peak flow, affected by failure of Horseshoe Dam on Mill River; minimum daily, 21 cfs Aug. 11, 1934, flow diverted around station in Hamlet Trench not included.
Maximum stage known since at least 1645, that of Aug. 19, 1955.
Remarks.--Records good. Flow regulated by powerplants and reservoirs above station. Extremes and figures of daily discharge include flow diverted from Nashua River basin to Blackstone River basin for supply of city of Worcester, Mass., and flow diverted around station in Hamlet Trench.
Revisions (water years).--WSP 756: Drainage area. WSP 781: 1931(M). WSP 1051: 1931.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 13)

Oct. 1 to Dec. 13				Dec. 14 to Sept. 30			
1.7	190	3.0	755	1.3	97	3.0	815
2.0	284	4.0	1,460	1.5	143	4.0	1,580
2.5	488	6.0	3,350	2.0	296	5.0	2,520
				2.5	520	7.0	4,720

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	326	756	1,420	1,020	877	1,630	4,590	933	837	270	623	196
2	381	721	1,240	905	858	1,440	3,570	1,020	811	411	439	193
3	344	661	1,170	1,840	780	1,250	2,740	898	687	355	343	178
4	222	618	1,090	3,770	730	1,240	2,740	865	759	313	316	147
5	210	593	989	2,730	786	1,280	3,640	807	1,240	312	298	160
6	257	538	1,000	1,980	1,170	1,230	4,430	712	1,200	248	280	152
7	338	618	1,520	1,530	2,000	1,270	3,580	664	938	226	184	178
8	373	1,120	2,340	1,470	1,640	1,210	2,810	640	723	306	195	142
9	498	1,050	1,840	1,290	1,520	1,130	2,520	812	639	223	253	157
10	767	811	1,440	1,200	1,230	1,070	2,270	*1,450	562	217	313	187
11	522	697	1,260	1,070	1,430	948	1,990	1,310	484	194	577	105
12	423	692	1,420	1,020	2,310	886	1,900	1,560	444	248	469	567
13	381	644	3,120	996	2,090	976	1,820	1,640	434	243	351	1,960
14	398	644	3,270	996	1,680	927	1,580	1,650	434	393	298	1,560
15	*423	770	2,540	1,040	1,490	892	1,480	1,390	429	862	291	796
16	381	794	1,990	1,000	1,240	890	1,290	1,220	434	570	292	551
17	357	758	1,810	1,010	1,190	926	1,300	1,100	402	443	288	439
18	357	794	1,540	932	1,170	1,020	1,270	953	351	308	237	359
19	309	770	1,550	946	3,140	1,040	1,210	851	316	*268	228	375
20	371	662	1,460	904	4,140	1,100	1,140	786	328	370	244	963
21	281	619	*1,350	851	2,870	1,190	1,030	700	347	406	216	1,250
22	248	680	1,310	*832	2,140	1,120	997	724	309	350	257	875
23	264	589	945	748	1,790	1,010	892	602	287	300	292	668
24	675	688	1,050	780	1,600	964	1,110	1,050	280	255	*244	544
25	2,070	1,420	879	742	1,410	1,050	1,500	1,450	291	252	222	438
26	1,690	1,840	948	760	2,020	922	1,600	1,260	256	282	216	414
27	1,230	1,410	962	712	2,930	881	1,380	1,030	249	229	210	392
28	929	1,350	1,120	947	2,390	1,000	1,230	851	280	297	185	396
29	732	1,940	1,450	1,300	1,900	1,360	1,070	711	256	293	182	*388
30	666	1,740	1,350	1,120	---	*1,520	940	711	249	405	219	383
31	622	---	1,170	1,030	---	2,390	---	669	---	699	199	---
Total	17,045	26,987	46,543	37,471	50,321	35,762	59,619	31,019	15,256	10,548	8,961	15,113
Mean	550	900	1,501	1,209	1,735	1,154	1,987	1,001	509	340	289	504
(†)	-19.0	-19.7	-12.0	-14.9	-14.9	-24.4	-15.6	-22.4	-20.7	-22.7	-28.2	-32.5
Adjusted for diversion												
Mean	531	880	1,489	1,194	1,720	1,129	1,972	978	488	318	261	471
Cfsm	1.28	2.12	3.58	2.87	4.13	2.71	4.74	2.35	1.17	0.764	0.627	1.13
In.	1.47	2.36	4.13	3.31	4.46	3.13	5.29	2.71	1.31	0.88	0.72	1.26

	Observed			Adjusted		
Calendar year 1959:	Max 4,730	Min 182	Mean 858	Mean 841	Cfsm 2.02	In. 27.46
Water year 1959-60:	Max 4,590	Min 105	Mean 969	Mean 948	Cfsm 2.28	In. 31.03

Peak discharge (base, 3,400 cfs).--Dec. 13 (9 to 11 p.m.) 3,720 cfs (6.12 ft); Jan. 4 (9:30 a.m.) 4,210 cfs (6.56 ft); Jan. 4 (11 a.m.) 5,550 cfs (7.68 ft), regulated; Feb. 20 (2 a.m.) 4,690 cfs (6.97 ft); Apr. 1 (10 a.m.) 4,780 cfs (7.04 ft); Apr. 6 (9 a.m.) 4,750 cfs (7.01 ft).

* Discharge measurement made on this day.
† Diversion, equivalent in cubic feet per second, from Nashua River basin for municipal supply of Worcester, Mass. Records furnished by city of Worcester.

1145. Woonasquatucket River at Centerdale, R. I.

Location.--Lat 41°51'32", long 71°29'16", on right bank 75 ft downstream from bridge on U. S. Highway 44, at Centerdale, Providence County, and 6½ miles upstream from mouth.

Drainage area.--38.3 sq mi.

Records available.--July 1941 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 95 ft (from topographic map).

Average discharge.--19 years, 70.2 cfs.

Extremes.--Maximum discharge during year, 443 cfs Feb. 19 (gage height, 4.50 ft); minimum daily, 18 cfs several days in June, July, August, and September.
1941-60: Maximum discharge, 1,100 cfs Sept. 11, 1954 (gage height, 7.03 ft); minimum daily, 3.4 cfs Oct. 13, 19, 1941.
Flood in March 1936 reached a discharge of 1,000 cfs, by computation of flow over dam three-quarters of a mile below station.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by mills and reservoirs above station. Discharge includes leakage through bypass canal.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	44	167	130	98	168	197	69	70	22	33	32
2	29	43	146	113	90	145	182	81	62	30	33	*30
3	27	41	131	215	84	131	162	79	58	18	28	21
4	24	40	113	280	76	139	200	59	52	18	*28	18
5	42	38	97	254	74	134	275	62	52	30	27	18
6	61	38	94	211	145	123	309	74	52	29	24	21
7	41	43	189	177	189	119	261	75	50	27	18	27
8	23	45	198	151	174	111	223	74	44	27	23	28
9	34	41	171	132	151	105	207	89	43	a23	28	27
10	25	40	*145	118	139	99	185	96	41	a21	31	23
11	25	39	120	111	153	92	166	105	41	a26	28	20
12	27	39	146	102	178	88	153	130	41	a31	28	141
13	30	*38	325	98	161	88	135	162	41	a31	24	93
14	35	39	332	95	161	88	128	153	36	a50	18	46
15	*33	41	274	99	154	86	120	147	29	a40	22	40
16	33	40	227	105	133	83	113	135	27	a36	35	37
17	31	41	184	101	124	86	112	116	26	a35	31	28
18	27	40	164	96	*117	94	109	99	26	a34	27	24
19	26	39	152	100	340	97	101	104	26	*a33	26	41
20	26	38	138	94	339	105	95	102	26	32	24	125
21	26	38	125	87	274	111	90	90	25	30	18	73
22	26	38	117	*82	225	103	87	84	25	28	23	53
23	28	37	109	74	188	98	80	80	25	27	27	*48
24	59	50	97	71	165	94	88	95	25	22	*26	34
25	73	72	91	72	146	99	91	91	25	29	26	34
26	57	62	88	64	257	89	90	89	25	29	26	48
27	45	79	87	63	267	88	90	86	22	29	24	43
28	47	156	111	90	236	96	*84	83	20	31	18	43
29	48	223	176	118	203	99	75	80	*18	27	18	41
30	44	196	170	114	-------	*107	66	76	18	35	25	44
31	44	-------	153	106	-------	171	-------	75	-------	29	29	-------
Total	1,125	1,760	4,857	3,723	5,041	3,336	4,274	2,940	1,071	909	796	1,301
Mean	36.3	58.7	156	120	174	108	142	94.8	35.7	29.3	25.7	43.4
Cfsm	0.948	1.53	4.07	3.13	4.54	2.82	3.71	2.48	0.932	0.765	0.671	1.13
In.	1.09	1.71	4.70	3.62	4.89	3.24	4.15	2.85	1.04	0.88	0.77	1.26

Calendar year 1959: Max 405 Min 21 Mean 79.5 Cfsm 2.08 In. 28.15
Water year 1959-60: Max 340 Min 18 Mean 85.0 Cfsm 2.22 In. 30.20

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Branch River at Forestdale.
Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1160. South Branch Pawtuxet River at Washington, R. I.

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

Drainage area.--63.8 sq mi.

Records available.--October 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 230 ft (from topographic map).

Average discharge.--20 years, 130 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 382 cfs Feb. 27, 28 (gage height, 2.35 ft); minimum daily, 6.2 cfs Aug. 28, Sept. 4.
1940-60: Maximum discharge, 1,320 cfs Sept. 12, 1954 (gage height, 4.11 ft); minimum daily, 2.8 cfs Aug. 27, 1944.
Flood in March 1936 reached a discharge of 1,810 cfs, by computation of flow over dam just above gage.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Flat River Reservoir (usable capacity, 250,000,000 cu ft) and smaller reservoirs. Diversion above station from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation May 23 to Sept. 30)

1.2	6.2	1.8	96
1.3	12	2.0	175
1.4	20	2.5	505
1.6	49		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	34	213	261	197	a340	267	36	119	90	96	72
2	57	119	218	255	202	334	267	198	88	31	73	74
3	12	94	213	274	202	334	261	124	104	18	71	8.9
4	10	85	167	280	197	334	300	a100	30	52	*61	6.2
5	61	85	26	274	148	327	327	a180	52	75	70	7.7
6	68	79	51	267	42	327	341	a50	125	80	12	87
7	71	23	186	261	51	320	327	a45	84	83	9.4	66
8	77	28	186	261	144	313	320	a180	70	81	54	67
9	87	161	186	255	153	307	320	a195	67	15	66	62
10	20	*158	180	255	229	175	313	a195	69	11	66	8.0
11	15	29	*191	255	248	149	300	*197	12	109	66	7.4
12	20	177	255	248	218	63	300	197	17	101	69	158
13	*71	151	287	248	135	80	293	191	79	84	11	134
14	68	19	320	248	135	186	235	191	79	91	11	93
15	73	24	320	248	133	191	224	180	100	88	64	92
16	69	112	327	a240	131	191	58	120	112	23	65	80
17	14	119	313	a175	149	261	46	92	82	16	62	15
18	104	118	313	a175	235	256	196	107	13	135	65	12
19	79	104	300	*171	293	56	178	137	10	97	67	106
20	59	81	293	171	280	53	140	115	49	95	11	129
21	58	17	248	171	267	119	97	30	80	140	8.4	123
22	60	55	248	162	313	144	182	58	73	118	62	106
23	58	97	242	52	313	144	51	165	*79	17	69	*94
24	36	92	180	54	307	*144	44	139	87	15	72	19
25	38	110	166	162	300	149	182	119	15	118	*69	18
26	88	39	166	166	341	144	208	122	9.6	76	70	119
27	84	80	166	166	375	144	196	131	111	74	9.4	61
28	121	48	171	180	a365	144	177	38	79	79	6.2	147
29	102	149	255	180	a350	144	128	55	90	73	61	97
30	110	207	267	64	---	149	23	63	84	23	76	107
31	24	---	261	73	---	180	---	99	---	18	77	---
Total	1,852	2,694	6,915	6,252	6,453	6,202	6,301	3,849	2,068.6	2,126	1,649.4	2,176.2
Mean	59.7	89.8	223	202	223	200	210	124	69.0	68.6	53.2	72.5
(†)	+18.6	+11.9	-14.9	-10.3	+45.8	-31.4	+29.2	+11.5	-19.9	-8.85	-21.5	+13.3

Adjusted for diversion and change in reservoir contents

Mean	78.3	102	208	191	268	169	239	136	49.0	59.8	31.7	85.9
Cfsm	1.23	1.60	3.26	2.99	4.20	2.65	3.75	2.13	0.768	0.937	0.497	1.35
In.	1.41	1.78	3.76	3.46	4.54	3.05	4.18	2.45	0.86	1.08	0.57	1.50

	Observed			Adjusted			
Calendar year 1959:	Max 551	Min 9.4	Mean 133	Mean 135	Cfsm 2.12	In. 28.68
Water year 1959-60:	Max 375	Min 6.2	Mean 133	Mean 134	Cfsm 2.10	In. 28.64

* Discharge measurement made on this day.
† Diversion above station from Carr Pond for municipal supply of Coventry, Warwick, and West Warwick, and change in contents in Flat River Reservoir, equivalent in cubic feet per second. Records furnished by Kent County Water Authority and Quidnick Reservoir Co.
a No gage-height record; discharge computed on basis of weather records, recorded range in stage, and records for Pawtuxet River at Cranston.

1165. Pawtuxet River at Cranston, R. I.

Location.--Lat 41°45'03", long 71°26'44", on left bank at Cranston, Providence County, 0.7 mile upstream from Pocasset River.

Drainage area.--200 sq mi.

Records available.--December 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

Average discharge.--20 years (1940-60), 404 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 1,520 cfs Feb. 19 (gage height, 6.97 ft); minimum daily, 60 cfs Sept. 5, 11.
1939-60: Maximum discharge, 2,090 cfs Nov. 6, 1955 (gage height, 9.10 ft); minimum daily, 22 cfs Sept. 4, 1944.

Remarks.--Records good. Flow regulated by powerplants and by Scituate, Flat River, and other reservoirs (combined usable capacity, about 6 billion cubic feet, revised). Diversion above station from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, and Warwick.

Revisions (water years). WSP 971: 1940-42. WSP 1381: 1940-41(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	185	98	575	650	381	890	755	167	256	220	102	170
2	201	183	550	635	645	850	680	322	272	220	185	*167
3	131	234	540	775	640	840	545	364	242	110	*170	131
4	68	214	530	885	625	845	735	332	182	131	158	72
5	82	218	239	920	625	815	1,050	294	116	146	170	60
6	170	201	116	855	670	540	1,280	299	224	164	140	78
7	182	155	598	820	442	600	1,080	170	273	182	75	170
8	207	113	655	795	418	780	1,010	107	229	179	96	167
9	270	202	500	750	630	770	947	*301	205	170	155	152
10	184	*316	450	480	665	685	880	401	209	82	155	122
11	88	171	*430	555	795	590	860	415	140	80	173	60
12	107	214	475	830	860	520	840	430	82	179	179	597
13	*139	328	1,020	795	650	268	800	475	162	185	131	816
14	217	177	865	780	396	372	750	324	*205	228	70	262
15	204	82	880	785	430	595	690	292	221	281	68	231
16	195	161	830	800	600	600	585	377	262	143	155	198
17	155	248	795	490	590	660	263	318	251	78	149	140
18	90	255	760	510	655	740	368	314	143	85	155	62
19	205	266	730	700	1,300	635	565	296	92	201	161	110
20	182	207	620	645	1,140	287	445	296	142	173	134	845
21	170	125	545	620	640	372	437	164	224	182	75	630
22	158	88	635	595	635	570	433	113	212	224	84	320
23	167	187	620	550	835	570	424	274	208	138	158	284
24	237	261	560	248	805	570	210	425	224	66	146	178
25	244	445	328	352	795	590	387	358	182	78	155	92
26	214	260	292	590	1,230	555	409	316	85	167	158	170
27	241	224	292	590	1,160	332	475	290	111	143	122	277
28	247	241	445	685	710	382	388	188	207	182	72	243
29	222	420	725	765	700	485	379	122	217	155	66	304
30	220	520	765	640	-------	490	270	131	224	152	137	227
31	164	-------	680	290	-------	667	-------	251	-------	104	214	-------
Total	5,546	6,814	18,045	20,380	20,667	18,465	18,940	8,926	5,802	4,828	4,168	7,335
Mean	179	227	582	657	713	596	631	288	193	156	134	244
(†)	+75.0	+150	+212	+20.6	+237	-16.4	+151	+104	-54.3	-12.3	-51.4	+108
Adjusted for diversion and change in reservoir contents												
Mean	254	377	794	678	950	579	782	392	139	143	83.0	352
Cfsm	1.27	1.88	3.97	3.39	4.75	2.90	3.91	1.96	0.695	0.715	0.415	1.76
In.	1.46	2.10	4.58	3.91	5.12	3.34	4.36	2.26	0.78	0.83	0.48	1.96

	Observed			Adjusted		
Calendar year 1959:	Max 1,390	Min 58	Mean 354	Mean 445	Cfsm 2.22	In. 30.19
Water year 1959-60:	Max 1,300	Min 60	Mean 382	Mean 458	Cfsm 2.29	In. 31.18

* Discharge measurement made on this day.
† Diversion above station from Scituate Reservoir for municipal supply of Providence, North Providence, Cranston, Johnston, Smithfield, and Warwick, and change in contents in Scituate Reservoir, 5 smaller reservoirs in Scituate watershed, and Flat River Reservoir, equivalent in cubic feet per second. Records furnished by Providence Water Supply Board and Quidnick Reservoir Co.

1170. Potowomut River near East Greenwich, R. I.

Location.--Lat 41°38'28", long 71°26'45", on right bank 45 ft upstream from Old Forge Dam in North Kingstown, Washington County, 1½ miles south of village of East Greenwich, Kent County, and 2½ miles upstream from mouth.

Drainage area.--23.0 sq mi.

Records available.--August 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 10 ft (from topographic map).

Average discharge.--20 years, 43.4 cfs (unadjusted).

Extremes.--Maximum discharge during year, 276 cfs Feb. 26 (gage height, 2.14 ft); no flow Aug. 28-30 (due to closing of gate at Old Forge Dam).
1940-60: Maximum discharge, 450 cfs Sept. 12, 1954 (gage height, 2.63 ft); maximum gage height, 6.78 ft Aug. 31, 1954 (backwater from hurricane tidal wave); no flow Oct. 24-26, 1947, Aug. 28-30, 1960 (due to closing of gate at Old Forge Dam).
Maximum stage known, about 8.5 ft Sept. 21, 1938, from information by local resident (backwater from hurricane tidal wave).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Diversions above station for supply of East Greenwich, North Kingstown, Warwick, and U. S. Naval establishments.

Revisions (water years).--WSP 1621: 1957-58.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 12		Dec. 13 to Sept. 30			
1.1	4.3	1.02	0	1.5	73
1.2	15	1.1	4.3	1.8	158
1.4	47	1.2	15	2.0	226
1.6	93	1.3	31		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	26	40	52	48	94	137	58	40	18	13	4.3
2	7.0	24	34	48	46	*86	105	73	40	49	*10	*5.6
3	9.0	22	31	86	43	78	89	83	38	42	9.6	5.1
4	8.6	21	29	122	42	73	128	56	42	36	9.2	4.7
5	7.6	20	28	89	42	81	188	52	53	28	9.0	4.7
6	7.0	19	27	70	78	78	210	49	43	21	9.0	4.7
7	7.5	24	64	60	108	78	152	47	35	23	8.6	4.3
8	8.0	27	73	56	76	76	128	47	30	21	8.4	3.9
9	19	20	50	51	64	72	114	72	28	15	*9.1	3.5
10	19	*17	40	45	60	68	105	99	26	15	12	3.5
11	14	16	*34	44	78	64	94	*94	26	13	*11	4.0
12	14	15	55	43	108	62	94	91	25	13	10	20
13	*12	14	171	45	81	63	89	83	26	12	9.1	43
14	12	15	128	44	78	64	83	73	26	23	8.8	21
15	12	14	89	47	78	64	81	63	*24	51	8.0	12
16	10	13	73	56	67	63	78	55	24	38	7.5	8.0
17	9.0	14	65	50	62	71	78	50	21	25	7.0	7.0
18	9.0	17	59	46	59	96	73	48	22	21	6.8	6.4
19	7.4	16	56	*55	168	94	70	47	22	17	6.2	11
20	7.0	14	51	52	165	94	68	43	20	15	6.2	100
21	6.4	14	47	46	114	86	64	40	18	13	6.2	*86
22	6.4	14	45	44	94	78	64	39	18	11	6.2	47
23	7.0	8.5	42	42	83	71	63	40	17	10	5.8	30
24	35	18	41	40	73	*68	66	74	21	9.5	5.0	22
25	50	60	40	40	68	68	73	78	24	9.0	4.4	17
26	40	60	43	39	204	64	68	68	20	8.6	4.0	15
27	41	40	45	38	208	62	64	56	18	8.2	2.0	13
28	34	40	49	56	140	63	60	48	17	9.2	0	14
29	29	67	83	78	111	65	58	41	15	10	0	15
30	28	51	81	65	-------	68	55	40	17	12	0	16
31	24	-------	64	53	-------	116	-------	40	-------	15	1.0	-------
Total	503.9	740.5	1,777	1,700	2,642	2,324	2,797	1,825	798	611.5	212.7	551.7
Mean	16.3	24.7	57.3	54.8	91.1	75.0	93.2	58.9	26.5	19.7	6.86	18.4
(†)	5.29	4.73	4.45	4.49	4.57	4.24	4.30	4.99	5.42	5.58	6.02	5.27

Calendar year 1959: Max 291 Min 4.5 Mean 42.8 † 5.05
Water year 1959-60: Max 210 Min 0 Mean 45.0 † 4.95

Peak discharge (base, 190 cfs).--Dec. 13 (12:30 p.m.) 191 cfs (1.905 ft); Feb. 19 (8 p.m.) 212 cfs (1.965 ft); Feb. 28 (5:30 p.m.) 278 cfs (2.14 ft); Apr. 5 (11:30 p.m.) 244 cfs (2.05 ft).

* Discharge measurement made on this day.
† Diversions, equivalent in cubic feet per second, for supply of East Greenwich, North Kingstown, Warwick, and U. S. Naval establishments. Records furnished by U. S. Navy and Kent County Water Authority.
Note.--No gage-height record Oct. 1-8, Oct. 24 to Nov. 9, July 17 to Aug. 30, Sept. 10-13, 23-30; discharge estimated on basis of 3 discharge measurements, weather records, recorded range in stage when available, operations of waste gate, flow through waste gate, and records for Adamsville Brook at Adamsville and Wood River at Hope Valley.

1175. Pawcatuck River at Wood River Junction, R. I.

Location.--Lat 41°26'42", long 71°40'53", on right bank at downstream side of bridge on Alton-Carolina road, 0.8 mile northeast of Wood River Junction, 1½ miles southwest of Carolina, Washington County, and 2.9 miles upstream from Wood River.

Drainage area.--100 sq mi.

Records available.--October 1940 to September 1960. Monthly discharge only for October and November 1940, published in WSP 1301. Prior to October 1943, published as Charles River at Wood River Junction.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 40 ft (from topographic map).

Average discharge.--20 years, 187 cfs.

Extremes.--Maximum discharge during year, 607 cfs Feb. 28 (gage height, 4.75 ft); minimum, 22 cfs Sept. 3; minimum daily, 27 cfs Sept. 3.
1940-60: Maximum discharge, 1,040 cfs Mar. 17, 1953 (gage height, 5.83 ft); maximum gage height, 6.23 ft Sept. 13, 14, 1954; minimum discharge, 7.4 cfs Oct. 10, 1947; minimum daily, 15 cfs Oct. 11, 1947.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Flow regulated by powerplant and mills above station.

Revisions (water years).--WSP 1051: Drainage area. WSP 1201: 1948.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.7	21	3.0	272
1.8	30	4.0	461
2.1	66	5.0	664
2.5	141		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a44	102	165	235	211	519	366	224	173	82	82	40
2	a44	99	155	216	200	452	396	241	168	107	69	40
3	a46	97	141	230	189	412	391	243	170	126	63	27
4	a46	91	134	277	181	335	398	238	168	143	62	34
5	a44	*90	119	284	178	325	461	222	178	128	61	35
6	a44	80	121	286	203	347	569	211	184	110	47	42
7	a44	85	161	272	246	366	600	203	173	96	56	30
8	a49	98	184	251	259	373	583	197	155	89	76	35
9	a65	105	192	227	259	347	532	206	143	82	59	35
10	a75	95	189	208	251	331	481	224	139	80	65	35
11	a82	77	178	195	249	306	441	249	121	79	66	34
12	a82	91	184	187	281	295	415	269	123	79	66	73
13	a78	89	264	187	286	295	391	274	134	77	63	69
14	a74	86	313	181	293	284	373	272	121	79	60	78
15	70	68	345	184	279	277	355	256	126	104	59	73
16	63	86	337	200	281	269	337	241	117	115	67	64
17	52	72	304	203	274	272	325	222	117	110	54	44
18	59	82	279	*203	264	295	315	214	108	100	53	48
19	65	81	259	206	347	506	304	214	117	82	54	59
20	55	78	246	206	408	315	293	208	123	78	44	148
21	55	68	227	203	437	317	281	203	*108	72	52	178
22	52	76	211	195	434	*310	274	192	96	70	61	178
23	54	85	192	189	395	304	264	184	93	54	*49	165
24	74	81	187	181	355	290	259	203	92	65	44	137
25	121	126	178	173	329	284	254	232	91	75	44	111
26	132	153	178	168	465	272	256	238	95	58	43	100
27	132	165	181	165	581	264	254	235	98	60	31	79
28	126	155	192	178	605	259	251	214	83	62	39	74
29	115	170	227	211	583	259	241	195	83	64	49	75
30	91	176	238	230	-------	264	230	181	82	65	40	77
31	87	-------	241	227	-------	310	-------	176	-------	82	40	-------
Total	2,220	3,007	6,522	6,558	9,323	9,854	10,890	6,881	3,779	2,673	1,718	2,217
Mean	71.6	100	210	212	321	318	363	222	126	86.2	55.4	73.9
Cfsm	0.716	1.00	2.10	2.12	3.21	3.18	3.63	2.22	1.26	0.862	0.554	0.739
In.	0.83	1.12	2.43	2.44	3.47	3.66	4.05	2.56	1.41	0.99	0.64	0.82

Calendar year 1959: Max 590 Min 44 Mean 188 Cfsm 1.88 In. 25.47
Water year 1959-60: Max 605 Min 27 Mean 179 Cfsm 1.79 In. 24.42

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for Wood River at Hope Valley and Pawcatuck River at Westerly.

1180. Wood River at Hope Valley, R. I.

Location.--Lat 41°29'58", long 71°42'57", on right bank 0.2 mile downstream from highway bridge at Hope Valley, Washington County, and 6.6 miles upstream from mouth.

Drainage area.--72.4 sq mi.

Records available.--August to December 1909 (gage heights only), March 1941 to September 1960. Records of daily discharge for August to December 1909, published in WSP 261, have been found to be unreliable and should not be used.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 65 ft (from topographic map). August to December 1909, staff gage at site 1,000 ft upstream at different datum.

Average discharge.--19 years, 150 cfs.

Extremes.--Maximum discharge during year, 693 cfs Apr. 6 (gage height, 4.77 ft); minimum, 21 cfs Sept. 11, 12; minimum daily, 21 cfs Sept. 11.
1941-60: Maximum discharge, 1,470 cfs Sept. 12, 1954 (gage height, 7.45 ft); minimum, 4.4 cfs Oct. 18, 1941; minimum daily, 10 cfs Oct. 13, 1941.
Maximum stage known since 1711, at least 12.4 ft in February 1886.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Some regulation at low flow by mills and ponds above station; regulation greater prior to 1948.

Revisions (water years).--WSP 1201: 1948(P). See also Records available.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.7	16	3.0	265
1.8	23	4.0	512
2.1	56	5.0	750
2.4	105		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	86	229	201	173	330	429	165	105	59	70	23
2	28	88	198	181	165	298	378	192	112	102	56	23
3	29	81	173	243	154	285	333	*170	107	114	51	23
4	29	76	160	409	146	268	405	159	114	99	46	23
5	28	73	145	364	141	262	567	151	126	86	42	23
6	28	72	145	306	201	251	662	144	112	69	40	23
7	28	80	210	268	301	240	553	136	96	62	38	22
8	32	96	270	240	271	229	475	133	84	55	37	22
9	60	97	240	220	243	220	412	178	78	50	40	22
10	88	92	220	198	229	212	366	251	75	47	52	22
11	70	83	210	189	243	201	328	237	70	44	50	21
12	64	78	210	178	312	198	312	226	69	43	46	86
13	59	73	400	178	285	195	293	226	72	42	42	217
14	*56	70	*599	173	268	192	271	226	70	55	40	128
15	55	70	471	176	257	189	259	203	69	131	38	94
16	51	67	383	189	240	181	251	187	67	105	36	78
17	46	67	323	184	220	195	237	170	64	75	34	86
18	43	70	282	173	215	223	231	168	66	62	33	62
19	42	69	262	181	426	229	223	176	69	55	32	66
20	41	63	237	181	558	231	212	162	63	*51	32	245
21	40	62	215	168	433	231	203	149	59	48	34	287
22	38	62	203	159	361	226	198	136	*53	43	35	*206
23	39	62	189	151	315	209	192	131	51	41	34	162
24	73	72	178	144	*285	201	192	154	57	40	31	131
25	195	182	173	141	259	203	201	168	66	39	29	116
26	178	217	165	136	441	195	195	146	59	36	28	88
27	144	184	168	131	556	189	192	133	56	35	26	81
28	126	189	181	159	436	195	184	121	51	39	23	78
29	105	285	237	217	371	209	170	110	50	44	22	72
30	90	262	257	209	------	223	159	105	51	50	22	78
31	81	------	229	187	------	330	------	103	------	75	22	------
Total	2,014	3,128	7,562	6,234	8,505	7,040	9,083	5,116	2,241	1,896	1,161	2,588
Mean	65.0	104	244	201	293	227	303	165	74.7	61.2	37.5	86.3
Cfsm	0.898	1.44	3.37	2.78	4.05	3.14	4.19	2.28	1.03	0.845	0.518	1.19
In.	1.03	1.61	3.88	3.20	4.37	3.62	4.67	2.63	1.15	0.97	0.60	1.33

Calendar year 1959: Max 789 Min 28 Mean 156 Cfsm 2.15 In. 29.15
Water year 1959-60: Max 662 Min 21 Mean 155 Cfsm 2.14 In. 29.06

Peak discharge (base, 550 cfs).--Dec. 14 (about 2 a.m.) 688 cfs (4.75 ft); Feb. 20 (4 a.m.) 599 cfs (4.38 ft); Feb. 27 (6 a.m.) 597 cfs (4.37 ft); Apr. 6 (9 a.m.) 693 cfs (4.77 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 3-13, Aug. 4-22; discharge estimated on basis of weather records, recorded range in stage, and records for Pawcatuck River at Wood River Junction.

1183. Pendleton Hill Brook near Clarks Falls, Conn.

Location.--Lat 41°28'29", long 71°50'05", on left bank just upstream from twin culverts on Grindstone Hill Road, 0.1 mile west of State Highway 49 in township of North Stonington, New London County, 1.6 miles northwest of Clarks Falls, and 3.4 miles northeast of village of North Stonington.

Drainage area.--4.20 sq mi.

Records available.--July 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 152.90 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 120 cfs Dec. 13 (gage height, 3.68 ft); minimum, 0.07 cfs Sept. 10, 11 (gage height, 0.67 ft).
1958-60: Maximum discharge, that of Dec. 13, 1959; minimum, that of Sept. 10, 11, 1960.

Remarks.--Records excellent except those for periods of ice effect, which are good, and those for period of no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5

0.7	0.11	1.6	13
.8	.54	2.2	32
.9	1.2	2.8	60
1.1	3.2	3.3	91
1.4	8.3		

Apr. 6 to Sept. 30

0.65	0.03	0.9	1.1
.7	.12	1.1	3.2
.8	.48		

Note.--Same as preceding table above 1.1 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.21	5.1	12	10	8.1	14	26	8.9	4.6	1.4	2.4	0.24
2	.29	4.8	9.6	9.0	7.7	10	19	12	4.2	6.5	1.3	.24
3	.29	3.9	9.0	37	6.9	9.8	15	9.4	3.8	3.5	*.96	.21
4	.29	3.2	8.1	33	6.7	9.4	*34	7.9	4.5	4.8	.76	.15
5	.25	*3.1	7.5	21	6.7	10	56	7.3	5.3	2.6	.70	.15
6	.25	3.0	7.3	17	18	11	43	*6.1	4.2	1.5	.76	.15
7	.25	4.7	23	14	18	11	30	5.6	*3.1	1.1	.65	.12
8	.60	7.1	20	12	12	10	25	5.4	2.6	.96	.96	.12
9	6.6	5.8	14	11	10	*10	21	12	2.2	.76	1.1	.10
10	4.1	4.5	11	9.4	10	9.0	18	14	2.0	.65	.96	.08
11	2.4	3.8	9.4	9.4	15	7.9	16	12	1.8	.59	1.4	.07
12	3.0	3.5	30	9.4	20	7.3	16	11	1.9	.48	1.1	12
13	2.5	3.1	86	9.4	14	7.3	14	15	2.4	.48	.96	13
14	2.8	3.0	42	9.4	12	7.5	13	13	2.0	4.3	.83	5.8
15	2.6	3.0	27	9.6	12	7.9	12	10	2.0	*5.4	.76	2.5
16	2.1	2.9	23	9.8	11	7.3	12	8.5	2.0	4.2	.76	1.5
17	1.6	3.1	19	9.0	11	8.7	11	7.3	2.0	2.4	.65	1.1
18	1.5	3.8	17	8.6	10	13	10	10	2.7	1.5	.48	.90
19	1.2	3.2	15	9.0	48	13	10	11	2.1	1.1	.48	1.6
20	1.0	2.9	13	8.6	32	13	9.4	8.5	1.6	.96	.48	*27
21	.98	2.8	*11	7.6	22	12	9.2	7.1	1.3	.76	.48	16
22	.98	2.8	10	7.4	18	12	8.7	6.1	1.2	.65	.48	9.0
23	.91	2.8	9.0	6.4	15	9.8	8.3	6.5	1.1	.54	.44	5.6
24	12	6.2	8.1	5.6	13	9.6	9.6	8.7	2.8	.48	.40	3.8
25	19	20	7.7	5.0	12	10	9.4	8.7	2.6	.48	.31	2.7
26	12	16	8.5	4.6	53	8.3	9.0	7.1	1.7	.44	.27	2.8
27	8.1	10	9.2	4.6	34	8.3	9.0	6.0	1.3	.35	.24	2.6
28	6.3	14	12	*14	24	9.4	8.7	5.1	.96	.83	.24	2.0
29	4.6	23	20	14	18	9.8	7.9	4.5	.90	1.1	.21	1.9
30	3.8	15	16	11	-------	10	7.3	4.2	.90	2.9	.18	3.1
31	3.6	-------	13	9.2	-------	30	-------	4.5	-------	4.9	.18	-------
Total	106.10	190.1	527.4	355.0	498.1	326.3	497.5	263.4	71.76	61.61	21.88	116.53
Mean	3.42	6.34	17.0	11.5	17.2	10.5	16.6	8.50	2.39	1.99	0.706	3.88
Cfsm	0.814	1.51	4.05	2.74	4.10	2.50	3.95	2.02	0.569	0.474	0.168	0.924
In.	0.94	1.68	4.67	3.16	4.41	2.88	4.41	2.33	0.64	0.55	0.19	1.03

Calendar year 1959: Max 86 Min 0.21 Mean 8.93 Cfsm 2.13 In. 28.86
Water year 1959-60: Max 86 Min 0.07 Mean 8.29 Cfsm 1.97 In. 26.89

Peak discharge (base, 70 cfs).--Dec. 13 (4 a.m.) 120 cfs (3.68 ft); Feb. 25 (12 m.) 75 cfs (3.05 ft); Apr. 5 (4 p.m.) 75 cfs (3.06 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 30 to Jan. 27; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams. Stage-discharge relation affected by ice Dec. 23-25, Feb. 14, 15, Feb. 29 to Mar. 5, Mar. 8-17.

1185. Pawcatuck River at Westerly, R. I.

Location.--Lat 41°23'01", long 71°50'01", on left bank at Westerly, Washington County, 2.1 miles downstream from Shunock River.

Drainage area.--295 sq mi.

Records available.--November 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is at mean sea level (from topographic map).

Average discharge.--20 years, 562 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 2,010 cfs Apr. 6 (gage height, 7.03 ft); maximum gage height, 8.72 ft Sept. 12 (backwater from tide); minimum daily discharge, 85 cfs Sept. 2, 11.

1940-60: Maximum discharge, 3,510 cfs Mar. 16, 1953 (gage height, 8.83 ft); maximum gage height, 12.16 ft Aug. 31, 1954 (backwater from tide); minimum daily discharge, 25 cfs Aug. 17, 1941.

Flood in March 1936 reached a discharge of 3,150 cfs, by computation of flow over dam 1½ miles upstream from station. Maximum discharge known since 1886 occurred in November 1927 and was possibly more than twice that of March 1936. Maximum stage known since at least 1635, 15.0 ft Sept. 21, 1938 (due to hurricane tidal wave).

Remarks.--Records good. Regulation at low flow by mills above station. Diversion above station for municipal supply of Westerly.

Revisions.--WSP 1051: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	310	705	731	634	1,560	1,270	604	424	179	218	94
2	97	320	607	660	598	1,400	1,290	698	418	318	213	85
3	97	320	546	770	562	1,260	1,220	*686	418	362	195	100
4	100	285	492	1,060	538	1,130	1,310	634	424	436	183	100
5	100	*260	438	1,090	508	1,060	1,660	592	424	412	151	103
6	94	245	396	1,020	628	992	2,000	550	442	356	147	106
7	94	290	582	936	855	978	1,950	508	442	301	135	106
8	100	290	747	840	878	971	1,860	508	406	226	143	97
9	162	325	733	750	826	943	1,720	556	356	231	175	91
10	206	320	656	660	777	885	1,550	660	296	195	159	88
11	225	290	594	598	798	812	1,400	738	306	200	179	85
12	220	250	670	586	936	770	1,270	757	285	171	183	222
13	210	265	1,450	580	971	750	1,180	764	323	175	183	389
14	*235	255	*1,620	562	957	744	1,060	764	301	218	183	508
15	194	225	1,490	556	929	712	1,010	718	280	318	155	384
16	166	206	1,350	610	870	705	950	653	*312	378	143	275
17	178	210	1,210	616	819	718	908	592	280	362	143	195
18	154	215	1,060	*598	777	826	878	580	275	306	139	167
19	138	210	950	628	1,210	885	826	610	285	236	135	162
20	124	206	855	628	1,560	915	784	574	270	*204	143	792
21	130	215	757	598	1,530	915	738	526	275	191	139	1,020
22	124	198	698	562	1,420	*900	738	484	255	179	127	*833
23	121	194	640	538	1,300	840	777	472	231	159	127	622
24	226	210	598	514	*1,150	791	757	502	240	143	127	496
25	426	414	562	496	1,020	750	724	622	245	135	*123	400
26	534	635	550	472	1,540	724	698	616	245	135	123	340
27	498	600	568	460	1,880	692	679	562	236	131	123	270
28	462	582	598	526	1,820	686	666	508	222	135	119	231
29	390	719	731	679	1,700	686	640	460	208	143	112	208
30	350	768	833	712	-------	712	604	424	213	175	109	231
31	305	-------	791	679	-------	971	-------	430	-------	255	103	-------
Total	6,572	9,832	24,477	20,715	29,991	27,683	33,117	18,352	9,337	7,365	4,637	8,800
Mean	212	328	790	668	1,034	893	1,104	592	311	238	150	293
(†)	2.65	2.42	2.56	2.60	2.62	2.80	2.64	2.83	3.38	3.76	3.46	2.95
Adjusted for diversion												
Mean	215	330	792	671	1,037	896	1,107	595	315	241	153	296
Cfsm	0.729	1.12	2.68	2.27	3.52	3.04	3.75	2.02	1.07	0.817	0.519	1.00
In.	0.84	1.25	3.10	2.62	3.79	3.50	4.19	2.32	1.19	0.94	0.60	1.12

	Observed			Adjusted		
Calendar year 1959:	Max 1,990	Min 82	Mean 581	Mean 583	Cfsm 1.98	In. 26.85
Water year 1959-60:	Max 2,000	Min 85	Mean 549	Mean 552	Cfsm 1.87	In. 25.46

* Discharge measurement made on this day.

† Diversion, equivalent in cubic feet per second, for municipal supply of Westerly. Records furnished by Westerly Department of Public Works.

1190. Great Brook at Poquonock Bridge, Conn.

Location.--Lat 41°20'57", long 72°02'17", in midchannel on upstream side of weir-gate structure, 800 ft downstream from Groton Reservoir dam, a quarter of a mile upstream from bridge on U. S. Highway 1 at head of Poquonock River, a quarter of a mile northwest of Poquonock Bridge, New London County, and 2.3 miles east of Groton.

Drainage area.--14.3 sq mi.

Records available.--January 1946 to September 1960.

Gage.--Point gage above three sharp-crested weirs; gage read three times daily. Venturi meters at filter plant to measure diversion and wash water. Staff gages on Groton, Pohegnut, and Ledyard Reservoirs and Smith Lake to determine changes in contents. Datum of point gage is 2.78 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 26.8 cfs.

Extremes.--1946-60: Maximum discharge, 464 cfs (300 mgd) 1 a.m. Sept. 12, 1954 (gage height, 5.1 ft, from floodmarks), unadjusted for storage and diversion.

Remarks.--Records adjusted for change in contents in Groton, Pohegnut, and Ledyard Reservoirs and Smith Lake, and for diversion for water supply of the Borough of Groton.

Cooperation.--Venturi-meter records and gage readings furnished by the Borough of Groton, Department of Utilities.

Monthly discharge, water year October 1959 to September 1960

Month	Runoff (millions of gallons)	Mean		Discharge per square mile		Runoff in inches
		Millions of gallons per day	Cubic feet per second	Millions of gallons per day	Cubic feet per second	
October	216.9	6.97	10.8	0.487	0.755	0.87
November	326.0	10.9	16.9	.762	1.18	1.32
December	788.6	25.4	39.3	1.78	2.75	3.17
Calendar year 1959	6,097.8	16.7	25.8	1.17	1.80	24.51
January	676.8	21.8	33.7	1.52	2.36	2.72
February	1,092.5	37.7	58.3	2.64	4.08	4.40
March	767.3	24.8	38.4	1.73	2.69	3.10
April	852.6	28.4	43.9	1.99	3.07	3.42
May	573.8	18.5	28.6	1.29	2.00	2.31
June	189.3	6.31	9.76	.441	.683	.76
July	169.4	5.46	8.45	.382	.591	.68
August	73.4	2.37	3.67	.166	.257	.30
September	283.9	9.46	14.6	.662	1.02	1.14
Water year 1959-60	6,010.5	16.4	25.4	1.15	1.78	24.19

1195. Willimantic River near South Coventry, Conn.

Location.--Lat 41°45'02", long 72°15'58", on left bank 700 ft upstream from bridge on State Highway 31, 1 mile downstream from Mill Brook, 2.4 miles southeast of South Coventry, Tolland County, 2.8 miles upstream from Hop River, and 6.3 miles upstream from mouth.

Drainage area.--121 sq mi.

Records available.--September 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 239.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--29 years, 215 cfs.

Extremes.--Maximum discharge during year, 2,950 cfs Apr. 1 (gage height, 9.34 ft); minimum, 30 cfs Aug. 29 (gage height, 3.35 ft); minimum daily, 30 cfs Aug. 29.
1931-60: Maximum discharge, 24,200 cfs Aug. 19, 1955 (gage height, 18.66 ft, from floodmark), from rating curve extended above 3,600 cfs on basis of computation of flow over dam at gage height 12.2 ft and contracted-opening measurement of peak flow; minimum, 2.0 cfs Aug. 21, 22, 1949 (gage height, 1.60 ft); minimum daily, 2.5 cfs Sept. 18, 1949.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by mills and reservoirs upstream.

Revisions (water years).--WSP 781: 1934(m), drainage area. WSP 851: 1935-36. WSP 1201: 1932(M,m), 1933-34, 1937, 1939-42.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 19, Sept. 13-30				Feb. 20 to Sept. 12			
3.4	35	5.0	385	3.3	24	6.0	745
3.6	62	6.0	725	3.6	66	7.0	1,170
4.0	131	7.0	1,110	4.0	140	8.0	1,750
4.5	243	8.0	1,730	4.5	255	9.0	2,630
				5.0	400		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	285	409	243	185	325	2,150	220	225	103	242	83
2	62	291	361	223	178	279	1,040	313	194	211	146	61
3	55	228	328	900	167	252	710	*271	204	120	114	47
4	43	204	310	1,210	165	225	900	232	434	110	96	36
5	40	189	280	690	171	282	1,170	213	1,020	90	94	37
6	64	185	272	*484	306	268	*1,320	197	*552	76	97	39
7	156	499	654	403	415	250	860	183	322	61	76	50
8	146	638	672	364	346	240	692	172	240	56	71	50
9	230	466	470	308	291	225	728	324	204	50	90	55
10	272	349	373	256	272	225	622	588	172	43	139	49
11	171	288	322	243	542	213	524	421	155	*37	274	36
12	173	259	455	236	920	199	507	394	138	43	188	382
13	123	*240	1,110	238	568	206	476	434	153	47	130	1,090
14	118	228	848	240	430	*208	415	400	163	192	101	514
15	118	529	595	248	349	206	382	337	138	334	96	233
16	122	459	473	264	308	194	355	293	150	186	109	158
17	94	367	415	243	291	201	355	252	140	106	105	125
18	77	385	370	238	305	211	352	285	124	76	90	103
19	72	325	364	238	868	220	382	358	101	73	81	*140
20	77	272	328	223	745	220	331	282	96	85	76	349
21	77	243	282	213	535	242	296	230	96	90	58	310
22	74	236	269	201	440	230	288	208	90	74	55	208
23	82	230	240	192	382	208	288	208	78	66	71	154
24	649	259	230	176	334	206	322	230	88	50	64	123
25	1,270	747	213	185	304	220	361	230	101	43	55	103
26	655	725	226	180	692	188	296	211	66	50	52	98
27	403	504	243	169	675	183	268	190	68	58	52	96
28	328	470	313	218	482	241	250	161	76	226	36	101
29	261	672	439	*240	397	346	250	142	74	*163	30	101
30	218	532	367	213	------	400	213	140	97	308	57	112
31	204	------	291	182	------	1,580	------	164	------	427	103	------
Total	6,488	11,304	12,512	9,661	12,063	8,693	17,083	8,283	5,759	3,654	3,048	5,043
Mean	209	377	404	312	416	280	569	267	192	118	98.3	168
Cfsm	1.73	3.12	3.34	2.58	3.44	2.31	4.70	2.21	1.59	0.975	0.812	1.39
In.	1.99	3.47	3.84	2.96	3.70	2.67	5.24	2.54	1.77	1.12	0.94	1.55

Calendar year 1959: Max 2,430 Min 36 Mean 247 Cfsm 2.04 In. 27.75
Water year 1959-60: Max 2,150 Min 30 Mean 283 Cfsm 2.34 In. 31.79

Peak discharge (base, 1,100 cfs).--Oct. 24 (10:30 p.m.) 1,560 cfs (7.74 ft); Dec. 13 (8 a.m.) 1,160 cfs (7.12 ft); Jan. 3 (10 p.m.) 1,590 cfs (7.81 ft); Apr. 1 (12:30 a.m.) 2,950 cfs (9.34 ft); June 5 (7 a.m.) 1,140 cfs (6.95 ft); Sept. 13 (1:30 a.m.) 1,520 cfs (7.71 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 22-25, 31, Jan. 1, 10-17, 19-27, Feb. 2-4, 15, 16, Mar. 3, 6-9.

1200. Hop River near Columbia, Conn.

Location.--Lat 41°43'39", long 72°18'10", on right bank 1,500 ft downstream from abandoned dam at village of Hop River, 2 miles north of Columbia, Tolland County, and 4.2 miles upstream from mouth.

Drainage area.--76.2 sq mi.

Records available.--September 1932 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 249.25 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--28 years, 131 cfs.

Extremes.--Maximum discharge during year, 1,760 cfs Jan. 3 (gage height, 9.51 ft); minimum, 8.7 cfs Aug. 30 (gage height, 3.07 ft); minimum daily, 9.6 cfs Aug. 30.
1932-60: Maximum discharge, 6,450 cfs Sept. 21, 1938 (gage height, 16.25 ft, from floodmarks), by computation of peak flow over dam a quarter of a mile upstream; minimum, 1.4 cfs Oct. 4, 1957 (gage height, 3.00 ft); minimum daily, 2.0 cfs July 26, Aug. 13, 19, 1957; minimum gage height, 2.49 ft Aug. 3, 1936.

Remarks.--Records excellent except those for periods of ice effect, which are good. Occasional regulation at low flow.

Revisions (water years).--WSP 781: 1933(M), drainage area. WSP 1111: 1947(m). WSP 1301: 1935-36(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.1	9.6	4.0	93
3.3	17	5.0	271
3.5	28	7.0	800
3.7	48	8.0	1,120

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	229	242	b143	116	207	932	117	82	20	112	18
2	34	155	214	b128	119	162	560	176	66	148	75	17
3	26	128	191	737	112	b126	385	131	71	66	53	16
4	15	114	178	944	109	b123	610	*111	188	57	41	15
5	13	*107	162	460	109	146	770	99	169	37	34	13
6	21	106	155	322	282	b138	800	90	*133	26	34	13
7	104	390	529	263	372	b129	498	82	104	21	28	11
8	66	500	450	225	262	b119	*398	75	77	19	25	11
9	115	290	300	192	207	124	448	114	58	18	26	11
10	104	224	244	b158	205	114	322	148	47	14	42	15
11	64	183	214	b143	430	b104	285	124	40	*13	72	20
12	136	160	335	b141	575	104	254	133	35	12	52	256
13	77	143	921	b136	348	103	224	155	36	12	42	820
14	67	136	546	b129	280	103	201	143	33	36	35	300
15	61	331	372	b123	233	101	187	138	33	85	30	187
16	48	252	300	140	198	101	173	114	33	48	32	126
17	42	222	258	b128	183	109	164	98	29	35	29	93
18	38	252	227	118	187	119	164	133	28	28	23	67
19	41	194	227	128	823	136	171	178	26	22	20	*109
20	53	169	196	121	650	143	146	128	23	22	20	322
21	53	150	*158	112	385	158	134	106	20	19	18	203
22	49	143	155	107	300	148	133	90	*20	16	17	134
23	49	133	b138	104	248	128	124	85	16	15	16	104
24	406	155	b126	b96	209	126	165	96	19	14	15	83
25	682	658	b116	b91	183	145	167	90	20	12	13	72
26	336	482	b114	b87	528	116	143	79	17	11	12	64
27	256	310	123	85	509	118	131	69	16	11	12	56
28	229	358	152	121	322	171	121	58	15	108	11	61
29	171	416	263	*155	*263	229	109	51	14	*57	11	69
30	138	300	212	136	-------	246	98	58	15	183	9.6	75
31	129	-------	174	118	-------	960	-------	53	-------	257	14	-------
Total	3,654	7,390	7,992	6,091	8,747	5,056	8,997	3,322	1,483	1,440	973.6	3,361
Mean	118	246	258	196	302	163	300	107	49.4	46.5	31.4	112
Cfsm	1.55	3.23	3.39	2.57	3.96	2.14	3.94	1.40	0.648	0.610	0.412	1.47
In.	1.79	3.60	3.91	2.96	4.27	2.47	4.40	1.61	0.72	0.70	0.48	1.64

Calendar year 1959: Max 1,820 Min 12 Mean 152 Cfsm 1.99 In. 27.02
Water year 1959-60: Max 960 Min 9.6 Mean 160 Cfsm 2.10 In. 28.55

Peak discharge (base, 900 cfs).--Oct. 25 (2:15 a.m.) 1,020 cfs (7.67 ft); Dec. 13 (12 m.) 1,080 cfs (7.93 ft); Jan. 3 (10:30 p.m.) 1,760 cfs (9.51 ft); Feb. 19 (5:30 p.m.) 1,120 cfs (7.98 ft); Mar. 31 (7:30 p.m.) 1,660 cfs (9.29 ft); Apr. 5 (12 p.m.) 1,020 cfs (7.70 ft); Sept. 13 (4 a.m.) 1,270 cfs (8.40 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1205. Safford Brook near Woodstock Valley, Conn.

Location.--Lat 41°55'35", long 72°03'37", on right bank on downstream side of town road bridge, 0.3 mile downstream from Bradford Brook, 0.3 mile upstream from mouth, 1.2 mile southeast of Woodstock Valley, Windham County, and 2 miles southwest of West Woodstock.

Drainage area.--4.08 sq mi.

Records available.--June 1950 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 552.92 ft above mean sea level, datum of 1929.

Average discharge.--10 years, 8.97 cfs.

Extremes.--Maximum discharge during year, 308 cfs Mar. 31 (gage height, 4.89 ft); minimum, 0.1 cfs Oct. 1 (gage height, 1.40 ft).
1950-60: Maximum discharge, 1,000 cfs Aug. 19, 1955 (gage height, 6.68 ft), from rating curve extended above 270 cfs on basis of contracted-opening and flow-over-road measurement of peak flow; practically no flow Aug. 17, 1957; minimum gage height, 1.17 ft Sept. 4-12, 1953.

Remarks.--Records good except those for periods of ice effect, which are fair. Occasional regulation at extreme low flow from unknown source upstream.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	0.1	2.1	10
1.5	.4	2.5	24
1.6	.9	3.0	53
1.7	1.8	3.5	94
1.8	3.1	4.0	155
1.9	4.9		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	11	10	b5.4	5.1	b7.5	54	4.9	3.8	0.9	3.8	0.5
2	.3	7.5	8.9	b5.1	4.9	b6.2	24	6.4	*3.1	6.7	*2.3	.3
3	.2	5.6	8.3	105	b4.6	b5.9	16	4.6	3.1	2.4	1.8	.2
4	.2	4.6	7.5	37	b4.2	b6.4	52	*3.8	17	2.8	1.4	.2
5	.2	4.2	7.0	15	*b4.2	b5.6	*69	3.3	16	1.5	1.3	.3
6	.5	*4.4	6.7	10	b16	5.6	38	3.1	6.4	.9	1.3	.3
7	.9	38	61	*8.1	b24	4.9	18	2.9	3.6	.7	1.0	.5
8	.9	30	23	7.5	b17	*4.9	16	2.8	2.8	.5	.9	.2
9	3.0	13	12	b6.2	10	b4.4	19	17	2.4	.4	.9	.2
10	2.7	9.1	9.7	b5.6	9.7	b4.0	14	23	2.0	.3	4.9	.2
11	2.0	7.5	8.3	4.9	61	b4.0	11	21	1.8	.3	5.1	.2
12	3.1	6.4	30	4.9	39	4.2	13	11	1.7	.2	2.9	62
13	2.0	5.9	71	4.9	b15	4.2	11	25	1.9	*.2	2.0	31
14	2.3	6.5	21	4.9	9.7	4.0	9.1	15	1.7	16	1.6	7.2
15	1.9	20	12	5.4	b7.8	b4.0	8.6	10	1.6	11	1.3	3.5
16	1.5	12	11	6.2	7.5	b4.0	8.6	7.5	1.7	3.2	1.8	2.3
17	1.3	11	9.4	5.9	6.7	4.0	8.6	5.9	1.3	1.8	1.1	1.5
18	1.1	12	8.6	4.9	7.5	4.6	8.6	7.0	1.2	1.2	.8	1.1
19	.9	8.6	9.1	4.9	61	5.1	8.3	7.5	.9	.9	.7	3.7
20	.8	7.0	7.5	4.9	23	b5.9	6.7	5.1	.7	3.6	.8	14
21	.7	6.2	b6.2	4.4	14	b6.2	6.2	3.8	.6	1.7	.6	*8.9
22	.7	6.2	5.6	4.2	10	b5.6	6.2	3.5	*.5	.9	.5	4.9
23	.7	5.9	b5.1	4.2	9.1	b4.9	5.6	4.2	.4	.7	.5	3.3
24	70	12	4.9	4.2	b7.5	b4.9	6.4	12	.6	.6	.4	2.4
25	40	68	4.6	4.0	b6.7	b5.6	7.0	8.3	.7	.4	.3	1.8
26	14	24	4.6	3.8	b38	b4.9	5.6	5.6	.5	.3	.3	1.5
27	8.9	12	5.1	3.8	24	b4.9	5.6	3.8	.4	.7	.2	1.2
28	8.1	27	9.4	5.9	12	10	5.1	3.2	.3	2.8	.2	1.1
29	5.6	27	11	8.1	9.4	18	4.4	2.8	.4	1.3	.2	1.1
30	4.2	13	8.3	6.7	-------	27	3.8	2.5	1.1	1.8	.4	1.8
31	5.4	-------	b6.2	b6.2	-------	150	-------	3.6	-------	14	.7	-------
Total	184.2	425.6	413.0	312.2	468.6	341.4	469.4	240.1	80.2	80.7	42.0	157.4
Mean	5.94	14.2	13.3	10.1	16.2	11.0	15.6	7.75	2.67	2.60	1.35	5.25
Cfsm	1.46	3.48	3.26	2.48	3.97	2.70	3.82	1.90	0.654	0.637	0.331	1.29
In.	1.68	3.88	3.76	2.85	4.27	3.11	4.28	2.19	0.73	0.74	0.38	1.43

Calendar year 1959: Max 142 Min 0.1 Mean 9.30 Cfsm 2.28 In. 30.95
Water year 1959-60: Max 150 Min 0.1 Mean 8.78 Cfsm 2.15 In. 29.30

Peak discharge (base, 150 cfs).--Oct. 24 (5 p.m.) 197 cfs (4.28 ft); Jan. 3 (1:30 p.m.) 276 cfs (4.73 ft); Mar. 31 (10 a.m.) 308 (4.89 ft); Sept. 12 (4:15 p.m.) 182 cfs (4.19 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1210. Mount Hope River near Warrenville, Conn.

Location.--Lat 41°50'37", long 72°10'10", on left bank 250 ft downstream from Knowlton Brook, 700 ft upstream from bridge on State Highway 89, 1¾ miles south of Warrenville, Windham County, and 3¼ miles southwest of Ashford.
Drainage area.--29.1 sq mi.
Records available.--July 1940 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 335.57 ft above mean sea level, datum of 1929.
Average discharge.--20 years, 50.8 cfs.
Extremes.--Maximum discharge during year, 1,140 cfs Mar. 31 (gage height, 7.05 ft); minimum daily, 2.1 cfs Aug. 30.
1940-60: Maximum discharge, 5,590 cfs Aug. 19, 1955 (gage height, 10.41 ft), from rating curve extended above 890 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.15 cfs Aug. 25, 1957; minimum gage height, 0.99 ft Aug. 26-29, 1949.
Flood in September 1938 reached a stage of about 14.5 ft, from floodmarks.
Remarks.--Records excellent except those for periods of no gage-height record or indefinite stage-discharge relation, which are fair. Occasional regulation from ponds upstream.
Revisions (water years).--WSP 1331: 1941(M), 1951-53(M).

Rating tables, water year 1959-60, except periods of ice effect or indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 5-6)

Oct. 1 to Feb. 7				Feb. 8 to Sept. 30			
1.4	3.1	2.6	101	1.3	1.2	3.0	137
1.5	6.3	3.0	160	1.4	3.3	3.5	200
1.7	16	3.5	225	1.6	9.1	4.0	260
2.0	34	4.0	275	2.0	27	5.0	440
2.3	63	5.0	430	2.5	73	6.0	730

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	• 70	79	b46	43	b79	431	51	39	12	29	a4.1
2	9.7	47	68	b47	41	b77	222	70	29	69	*16	a3.8
3	8.0	40	62	392	40	b72	158	50	29	25	13	a3.6
4	6.3	36	59	258	40	b81	279	*40	112	24	11	a3.3
5	5.6	31	53	139	*41	79	*376	36	98	13	9.9	a2.9
6	12	*32	53	b96	132	65	279	32	*48	9.1	11	a2.7
7	25	174	211	80	163	b59	188	30	30	7.2	8.2	a2.5
8	19	165	148	*71	102	b52	162	31	23	6.0	7.6	a2.5
9	42	89	92	b64	77	b49	177	152	19	5.2	6.9	a2.7
10	32	61	71	b56	77	b46	136	175	16	4.6	26	a3.4
11	19	48	61	b50	222	b45	110	141	15	4.3	30	a5.4
12	41	42	158	49	227	45	124	137	14	3.6	18	a30
13	21	37	430	48	129	44	102	138	15	*3.1	13	a230
14	22	39	200	47	97	*b44	87	104	13	73	11	a90
15	18	132	127	50	b85	43	81	87	14	65	9.5	a50
16	14	73	108	54	b75	42	78	71	15	23	12	a32
17	12	69	92	47	b68	42	77	60	13	12	8.5	a24
18	11	79	80	43	b73	49	78	79	13	8.8	6.9	a17
19	14	56	83	47	340	58	77	79	11	7.6	5.7	*29
20	24	47	b64	45	201	60	64	58	8.8	19	6.0	103
21	29	41	b55	40	131	62	59	46	7.9	11	5.4	62
22	23	41	b55	38	106	b56	59	39	7.2	8.2	4.9	34
23	21	38	b48	37	91	b49	53	45	6.3	8.5	4.6	24
24	269	70	b46	35	b78	b42	72	73	7.9	6.0	3.8	20
25	235	273	48	34	b68	b39	75	59	9.1	4.6	3.1	16
26	78	162	50	33	238	b42	62	45	7.6	4.1	2.6	15
27	59	97	49	33	188	b52	54	36	6.0	7.2	2.4	13
28	52	148	74	43	119	75	50	30	5.2	50	2.2	14
29	36	168	92	56	95	96	53	26	5.2	29	a2.2	15
30	31	102	69	50	-------	111	39	25	12	83	a2.1	20
31	38	-------	b49	46	-------	651	-------	33	-------	77	a3.1	-------
Total	1,233.8	2,507	2,934	2,174	3,387	2,406	3,862	2,078	649.2	677.1	295.6	874.9
Mean	39.8	83.6	94.6	70.1	117	77.6	129	67.0	21.6	21.8	9.54	29.2
Cfsm	1.37	2.87	3.25	2.26	4.02	2.67	4.43	2.30	0.742	0.749	0.327	1.00
In.	1.58	3.20	3.75	2.78	4.33	3.07	4.94	2.66	0.83	0.87	0.38	1.12

Calendar year 1959: Max 799 Min 2.2 Mean 58.0 Cfsm 1.99 In. 27.06
Water year 1959-60: Max 651 Min 2.1 Mean 63.1 Cfsm 2.17 In. 29.51

Peak discharge (base, 400 cfs).--Oct. 24 (6:30 p.m.) 602 cfs (5.77 ft); Dec. 13 (3:30 a.m.) 630 cfs (5.86 ft); Jan. 3 (2:30 p.m.) 840 cfs (6.46 ft); Feb. 19 (2:30 p.m.) 430 cfs (4.95 ft); Mar. 31 (1:30 p.m.) 1,140 cfs (7.05 ft); Apr. 5 (4:30 p.m.) 505 cfs (5.27 ft); Sept. 12 (time unknown) 730 cfs (6.00 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for other stations in Shetucket River basin.
b Stage-discharge relation affected by ice.
Note.--Stage-discharge relation indefinite Jan. 12 to Feb. 4; discharge estimated on basis of records for other stations in Shetucket River basin.

1220. Natchaug River at Willimantic, Conn.

Location.--Lat 41°43'14", long 72°11'52", on right bank 200 ft downstream from New York, New Haven and Hartford Railroad bridge, 500 ft upstream from bridge on U. S. Highway 6, 1 mile northeast of Willimantic, Windham County, 1.7 miles upstream from mouth, and 4 miles downstream from Mount Hope River.
Drainage area.--169 sq mi.
Records available.--October 1930 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 150.31 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Average discharge.--30 years, 305 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 2,210 cfs Apr. 2 (gage height, 6.98 ft); minimum, 2.9 cfs Oct. 1 (gage height, 2.02 ft); minimum daily, 4.0 cfs Oct. 1.
1930-60: Maximum discharge, 32,000 cfs Sept. 21, 1938 (gage height, 16.39 ft, from floodmarks), by computation of peak flow over dam 2 miles upstream from station; minimum, about 0.3 cfs Aug. 6, 1937; minimum daily, 2.3 cfs Sept. 11, 12, 1943.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. City of Willimantic diverts an average of about 1,000,000 gal of water a day for municipal supply from reservoir 2 miles upstream from station. Operation of water wheels at this location causes diurnal fluctuation at low flow. Since March 1952, flow regulated by Mansfield Hollow Reservoir 3 miles upstream from station (see p. 161).
Revisions (water years).--WSP 1301: 1934-35(M), 1937(M).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 4				Jan. 5 to Sept. 30			
2.0	1.8	3.0	198	2.6	90	4.0	650
2.1	8.3	4.0	600	3.0	205	7.0	2,210
2.2	18	6.0	1,600	3.5	400		
2.4	48	6.5	1,850				
2.6	90						

Note.--Same as preceding table below 2.6 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	316	625	b316	300	*475	*1,970	272	a230	*93	430	54
2	8.3	336	488	b286	260	376	2,150	*405	205	316	*225	*74
3	8.3	251	434	770	230	324	1,780	340	198	254	142	30
4	8.3	234	396	*1,700	230	256	1,450	280	272	168	104	60
5	21	217	348	1,610	244	415	a1,940	256	575	141	93	7.6
6	19	*198	320	775	453	b384	a2,090	226	500	98	40	26
7	169	408	647	590	825	b352	a1,710	208	304	88	101	32
8	141	950	1,020	500	650	340	1,150	198	198	29	64	19
9	176	775	775	400	500	b272	1,080	340	159	71	92	29
10	255	510	555	308	445	b276	975	900	138	45	52	6.8
11	143	380	442	b324	608	b202	775	800	125	24	205	30
12	186	320	537	b328	1,180	b212	725	825	109	43	166	164
13	168	293	1,080	b332	990	b272	700	775	124	22	124	392
14	127	276	1,590	b344	700	264	615	725	114	100	84	1,150
15	132	447	1,500	356	b535	252	560	555	98	425	102	1,120
16	110	519	800	396	b440	240	510	465	105	245	105	623
17	90	396	625	360	400	268	490	384	106	131	119	205
18	67	424	546	324	388	284	465	392	99	104	53	150
19	82	364	510	332	1,040	316	475	500	88	92	66	157
20	32	300	456	328	1,450	328	425	392	89	78	56	497
21	91	268	368	304	1,100	352	368	320	52	a90	52	554
22	78	254	356	296	775	316	364	268	85	a60	50	323
23	64	251	b328	276	585	272	352	260	16	a20	40	206
24	328	268	b320	b230	480	264	396	a312	96	a75	a51	160
25	868	825	308	b230	420	b264	455	a332	35	43	a52	128
26	1,500	1,120	325	b230	765	b219	384	a300	87	34	a36	128
27	750	850	326	b222	1,200	b226	340	256	19	22	a36	107
28	412	650	373	284	950	316	328	216	51	220	a36	104
29	300	950	549	*445	675	415	296	185	40	210	a39	109
30	237	825	485	380	-------	500	264	168	46	202	a18	132
31	211	-------	378	300	-------	1,110	-------	*188	-------	513	a83	-------
Total	6,785.9	14,175	17,810	13,876	18,818	10,362	25,582	12,043	4,363	4,056	2,916	6,777.4
Mean	219	472	575	448	649	334	853	388	145	131	94.1	226
(†)	+0.4	+3.3	-2.9	-0.1	+1.3	+38.1	-40.9	0	-0.3	+4.7	-4.7	-0.2

Adjusted for change in reservoir contents

Mean	219	475	572	448	650	372	812	388	145	136	89.4	226
Cfsm	1.30	2.81	3.38	2.65	3.85	2.20	4.80	2.30	0.858	0.805	0.529	1.34
In.	1.50	3.14	3.90	3.06	4.15	2.54	5.36	2.65	0.96	0.93	0.61	1.50

	Observed			Adjusted			
Calendar year 1959:	Max 2,300	Min 3.5	Mean 333	Mean 333	Cfsm 1.97	In. 26.79	
Water year 1959-60:	Max 2,150	Min 4.0	Mean 376	Mean 376	Cfsm 2.22	In. 30.30	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Mansfield Hollow Reservoir; furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of records for other stations in the Shetucket River basin.
b Stage-discharge relation affected by ice.

1225. Shetucket River near Willimantic, Conn.

Location.--Lat 41°42'01", long 72°10'57", on right bank at downstream side of Bingham Bridge, 500 ft upstream from New York, New Haven and Hartford Railroad bridge, 500 ft downstream from Potash Brook, 1.3 miles downstream from confluence of Willimantic and Natchaug Rivers, 1½ miles southeast of Willimantic, Windham County, and at mile 16.5.

Drainage area.--401 sq mi.

Records available.--April 1904 to December 1905, October 1919 to September 1921, September 1928 to September 1960. Published as "at South Windham" October 1919 to September 1921, September 1928 to September 1933. Monthly discharge only for some periods, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 131.40 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Apr. 4, 1904, to Dec. 31, 1905, chain gage at same site and about the same datum. October 1919 to Sept. 30, 1921, and Sept. 1, 1928, to Sept. 30, 1933, water-stage recorder at site 1½ miles downstream at different datum.

Average discharge.--35 years, 711 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 6,140 cfs Apr. 1 (gage height, 9.31 ft); minimum, 50 cfs June 29 (gage height, 1.56 ft); minimum daily, 75 cfs Sept. 5.
1904-5, 1919-21, 1928-60: Maximum discharge, 52,200 cfs Sept. 21, 1938 (gage height, 27.6 ft, from floodmarks), from rating curve extended above 11,000 cfs on basis of computation of peak flow over Scotland and Baltic Dams, 5 and 9 miles downstream, respectively, adjusted for flow from intervening area; minimum, 15 cfs Aug. 29, 1949 (gage height, 1.34 ft); minimum daily, 19 cfs Aug. 22, Oct. 24, 1949; minimum gage height, 1.32 ft Oct. 20, 1935.

Remarks.--Records excellent. Flow regulated by mills on Willimantic River, on Natchaug River by pumping for municipal supply of city of Willimantic, and by Mansfield Hollow Reservoir (see p. 161).

Revisions (water years).--WSP 781: 1934(m). WSP 801: 1935. WSP 1201: 1905(M), 1920-21, 1931-32, 1934-35(M), 1937(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.7	73	4.0	990
1.8	92	6.0	2,410
2.0	140	8.0	4,500
2.5	300	9.0	5,750

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	840	1,330	790	*690	1,040	5,750	640	575	239	*830	172
2	113	865	1,120	705	655	890	4,030	965	512	692	493	170
3	104	680	1,020	2,170	590	790	2,870	*815	504	493	344	110
4	79	610	940	4,500	580	655	2,970	690	828	380	274	123
5	78	560	865	2,970	595	890	3,920	615	1,640	304	249	75
6	106	528	815	*1,680	1,040	865	*4,620	565	1,200	229	208	87
7	450	1,210	1,790	1,300	1,680	*815	4,380	516	765	191	231	100
8	396	2,190	2,360	1,120	1,300	790	2,280	496	545	124	188	85
9	554	1,610	1,640	990	1,060	700	2,280	825	452	153	228	111
10	668	1,120	1,240	790	990	700	1,950	1,720	389	115	235	79
11	444	915	1,040	790	1,460	635	1,580	1,360	338	92	590	102
12	537	815	1,340	765	2,770	625	1,470	1,360	306	*110	460	562
13	420	*765	3,370	815	2,030	665	1,400	1,330	333	91	340	2,500
14	354	695	3,370	765	1,440	645	1,210	1,240	335	264	255	2,070
15	356	1,240	2,590	815	1,120	625	1,120	1,040	294	830	265	1,500
16	312	1,300	1,680	865	1,040	600	1,040	915	314	525	290	940
17	244	1,040	1,360	790	940	645	1,020	790	302	300	279	470
18	206	1,120	1,210	765	940	685	990	865	285	223	204	380
19	200	965	1,150	790	2,770	740	1,040	1,090	242	202	195	419
20	177	840	1,040	740	3,170	765	940	890	226	194	163	1,190
21	224	735	890	700	2,110	840	865	715	180	216	148	*1,120
22	213	700	865	680	1,540	790	840	615	208	187	142	765
23	204	690	740	635	1,240	690	790	615	131	117	138	536
24	1,150	730	735	555	1,060	665	915	715	205	153	142	430
25	3,170	2,100	735	580	965	740	1,020	740	179	113	123	353
26	2,680	2,410	765	565	1,860	600	890	655	181	105	109	334
27	1,490	1,750	765	532	2,590	605	790	565	119	102	104	309
28	1,040	1,610	890	698	1,790	790	765	488	153	526	101	308
29	815	2,150	1,330	940	1,360	1,040	710	428	136	471	86	328
30	670	1,750	1,150	815	-------	1,150	620	404	164	617	86	367
31	605	-------	940	685	-------	3,220	-------	*444	-------	1,240	202	-------
Total	18,160	34,533	41,075	32,300	41,375	25,895	55,065	25,111	12,039	9,598	7,702	16,095
Mean	586	1,151	1,325	1,042	1,427	835	1,836	810	401	310	248	536
(†)	+0.4	+3.3	-2.9	-0.1	+1.3	+38.1	-40.9	0	-0.3	+4.7	-4.7	-0.2
Adjusted for change in contents in Mansfield Hollow Reservoir												
Mean	586	1,154	1,322	1,042	1,428	873	1,795	810	401	315	243	536
Cfsm	1.46	2.88	3.30	2.60	3.56	2.18	4.48	2.02	1.00	0.783	0.603	1.34
In.	1.68	3.21	3.80	3.00	3.84	2.51	5.00	2.33	1.12	0.90	0.70	1.50

	Observed				Adjusted			
Calendar year 1959:	Max	4,680	Min	78	Mean	795	Mean	795	Cfsm	1.98	In.	26.92
Water year 1959-60:	Max	5,750	Min	75	Mean	871	Mean	871	Cfsm	2.17	In.	29.59

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Mansfield Hollow Reservoir; furnished by Corps of Engineers.

1230. Little River near Hanover, Conn.

Location.--Lat 41°40'18", long 72°03'10", in Windham County, on left bank 800 ft upstream from bridge on town road, 0.7 mile downstream from Peck Brook, 2.3 miles northeast of Hanover, New London County, and 6.5 miles upstream from mouth.

Drainage area.--29.8 sq mi.

Records available.--July 1951 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 221.19 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 64.1 cfs.

Extremes.--Maximum discharge during year, 590 cfs Dec. 13, Jan. 3; maximum gage height, 4.27 ft Dec. 13; minimum discharge, 5.6 cfs Oct. 1 (gage height, 1.11 ft).
1951-60: Maximum discharge, 1,400 cfs Aug. 19, 1955 (gage height, 6.48 ft), from rating curve extended above 820 cfs by logarithmic plotting; minimum, 3.2 cfs Aug. 16, 1959 (gage height, 1.00 ft), caused by a minor and temporary regulation from an unknown source upstream.

Remarks.--Records excellent except those for periods of ice effect, which are good.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
1.1	5.3	2.5	156	1.1	6.1	2.5	134
1.3	12	3.0	255	1.3	13	3.0	220
1.5	23	4.1	545	1.5	24	4.0	460
2.0	75			2.0	70		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	60	96	68	67	78	298	56	40	18	42	13
2	7.1	51	79	b62	59	b66	160	79	*35	71	27	11
3	7.7	39	70	291	49	58	120	*61	36	37	*22	9.3
4	7.1	34	65	358	46	57	*210	53	37	35	19	8.3
5	6.5	31	58	157	49	68	303	48	42	24	17	8.3
6	8.0	29	56	113	131	b62	306	44	34	18	18	8.3
7	32	60	190	91	172	*59	172	42	28	16	15	8.0
8	21	127	182	81	106	59	137	42	25	14	14	7.7
9	44	79	112	72	85	55	146	108	23	13	15	7.7
10	41	58	88	b63	85	54	121	176	21	12	18	7.7
11	26	48	72	b57	133	b52	101	117	20	*12	30	7.7
12	34	42	174	*b59	162	b56	98	130	20	11	20	72
13	21	*35	536	59	102	54	89	144	21	*11	16	180
14	20	34	272	b62	87	52	81	126	20	16	15	60
15	20	48	160	60	b80	51	77	96	19	33	14	36
16	16	44	129	73	70	49	74	79	20	18	30	25
17	14	46	109	b64	64	51	71	68	18	14	23	22
18	12	56	94	b59	67	59	70	74	18	12	16	19
19	11	44	92	63	325	64	70	78	18	12	14	28
20	10	37	79	59	234	68	62	82	16	14	14	*128
21	10	34	b65	55	127	72	59	54	16	14	13	91
22	10	33	63	54	101	67	59	48	15	11	12	52
23	10	30	b62	52	86	58	57	50	14	10	12	37
24	133	52	b58	45	76	59	73	69	15	11	11	29
25	313	262	b50	b46	67	66	74	61	16	10	9.7	25
26	132	188	54	45	216	55	66	53	14	9.3	9.3	23
27	81	107	56	44	196	56	60	45	14	10	9.0	21
28	68	162	70	75	123	70	57	40	13	40	8.7	23
29	49	250	129	*97	97	86	53	36	12	25	8.3	22
30	39	138	100	78	------	88	48	32	15	61	8.0	25
31	34	------	79	66	------	289	------	34	------	106	12	------
Total	1,243.3	2,258	3,499	2,626	3,262	2,138	3,372	2,205	655	718.3	512.0	1,015.0
Mean	40.1	75.3	113	84.7	112	69.0	112	71.1	21.8	23.2	16.5	33.8
Cfsm	1.35	2.53	3.79	2.84	3.76	2.32	3.76	2.39	0.732	0.779	0.554	1.13
In.	1.55	2.82	4.37	3.28	4.07	2.67	4.21	2.75	0.82	0.90	0.64	1.27

Calendar year 1959: Max 857 Min 5.3 Mean 65.2 Cfsm 2.19 In. 29.69
Water year 1959-60: Max 536 Min 5.9 Mean 64.2 Cfsm 2.15 In. 29.35

Peak discharge (base, 400 cfs).--Dec. 13 (10 a.m.) 590 cfs (4.27 ft); Jan. 3 (11:30 p.m.) 590 cfs (4.25 ft); Feb. 19 (6:30 p.m.) 418 cfs (3.87 ft); Mar. 31 (10:30 p.m.) 460 cfs (3.98 ft); Apr. 6 (2 a.m.) 405 cfs (3.79 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1235. Quinebaug River at Westville, Mass.

Location.--Lat 42°04'23", long 72°04'28", on right bank 350 ft upstream from highway bridge, 0.45 mile downstream from Breakneck Brook, 0.6 mile west of Westville, Worcester County, and 1¾ miles west of Southbridge.

Drainage area.--93.8 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 537.66 ft above mean sea level, unadjusted (levels by Corps of Engineers).

Average discharge.--21 years, 166 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,130 cfs Apr. 2 (gage height, 6.14 ft); minimum daily, 27 cfs Sept. 5.
1939-60: Maximum discharge, 17,500 cfs Aug. 19, 1955 (gage height, 16.11 ft, from floodmarks), from rating curve extended above 1,300 cfs on basis of slope-area measurement of peak flow; minimum daily, 2.2 cfs June 26, 1949.
Flood in September 1938 reached a discharge of 8,400 cfs, by slope-area measurement.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Medium and low flows regulated by mills and reservoirs above station. Flow affected by East Brimfield Reservoir, constructed by Corps of Engineers during 1959 and 1960 (see p. 161).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-25				Oct. 26 to Sept. 30					
2.4	40	3.5	220	2.2	26	3.0	131	5.0	660
2.7	77	4.0	340	2.3	34	3.5	234	6.0	1,060
3.0	123	4.5	485	2.5	55	4.0	360	6.5	1,320

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	201	430	b185	131	b255	1,020	182	158	45	87	34
2	54	*210	360	b180	128	b200	1,120	203	156	52	108	31
3	49	206	300	359	122	b185	988	203	163	52	109	30
4	51	180	260	562	121	b180	889	188	242	55	98	28
5	50	161	230	583	117	206	897	*171	344	55	82	27
6	*55	152	220	505	142	197	957	169	350	53	75	*38
7	65	221	300	405	206	186	885	167	292	49	65	36
8	73	312	420	341	b180	175	751	163	212	44	59	34
9	135	349	410	b270	229	165	664	199	169	40	55	34
10	154	325	320	b280	199	159	589	307	143	36	78	33
11	154	275	260	b250	279	b155	520	363	129	36	90	34
12	130	236	330	b230	457	b155	475	377	117	31	72	186
13	106	205	500	212	b460	152	430	394	111	28	60	256
14	94	230	600	b205	422	146	385	374	101	125	67	275
15	90	260	580	201	b340	141	349	344	98	112	69	422
16	82	245	*535	195	b290	138	333	294	104	63	81	511
17	74	230	478	b160	251	138	320	253	91	68	77	380
18	67	220	430	186	232	143	317	232	56	*93	69	210
19	60	215	380	175	346	150	317	234	65	108	64	122
20	55	205	282	*b165	399	150	302	220	67	128	56	146
21	50	195	b240	161	377	150	280	195	68	92	53	184
22	48	185	b210	156	330	146	268	173	67	50	53	188
23	48	175	b190	150	290	138	256	169	64	48	50	167
24	167	190	b180	b145	258	136	258	222	63	46	47	140
25	375	350	b170	b135	*234	134	258	246	58	45	45	116
26	496	430	171	133	304	128	248	229	56	44	45	*101
27	454	380	180	129	374	129	234	199	53	44	42	90
28	360	360	212	133	360	*158	220	173	49	47	38	82
29	277	500	290	145	315	222	203	152	48	42	34	80
30	220	480	310	145	-------	290	186	136	46	79	32	82
31	188	-------	251	138	-------	660	-------	143	-------	81	34	-------
Total	4,341	7,883	10,029	7,219	7,893	5,667	14,919	7,074	3,738	1,891	1,994	4,097
Mean	140	263	324	233	272	183	497	228	125	61.0	64.3	137
(†)	0	0	0	0	0	0	0	0	0	0	+2.69	+5.32

Adjusted for change in contents in East Brimfield Reservoir

Mean	140	263	324	233	272	183	497	228	125	61.0	67.0	142
Cfsm	1.49	2.80	3.45	2.48	2.90	1.95	5.30	2.43	1.33	0.650	0.714	1.51
In.	1.72	3.13	3.98	2.86	3.13	2.25	5.92	2.80	1.48	0.75	0.82	1.69

	Observed			Adjusted			
Calendar year 1959:	Max 1,100	Min 17	Mean 185	Mean 185	Cfsm 1.97	In. 26.73	
Water year 1959-60:	Max 1,120	Min 27	Mean 210	Mean 213	Cfsm 2.27	In. 30.53	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in East Brimfield Reservoir.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 13 to Dec. 15; discharge estimated on basis of weather records, recorded range in stage, and records for Kettle Brook at Worcester and French River at Webster. Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1240. Quinebaug River at Quinebaug, Conn.

Location.--Lat 42°01'20", long 71°57'22", on right bank at Quinebaug, Windham County, 500 ft upstream from bridge on State Highway 197, 0.25 mile downstream from Massachusetts-Connecticut State line, 7.8 miles upstream from French River, and at mile 46.
Drainage area.--157 sq mi.
Records available.--September 1931 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 341.52 ft above mean sea level, datum of 1929.
Average discharge.--29 years, 279 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 2,170 cfs Mar. 31 (gage height, 5.82 ft); minimum, 3.2 cfs July 13 (gage height, 1.77 ft); minimum daily, 4.6 cfs July 13.
1931-60: Maximum discharge, 49,300 cfs Aug. 19, 1955 (gage height, 18.96 ft, from floodmarks), from rating curve extended above 5,100 cfs on basis of slope-area measurement of peak flow; minimum, about 1 cfs Sept. 9, 1943, July 12, 1949, Sept. 17, 18, 1950, July 9, 1951, Sept. 4, Oct. 29, 1956; minimum daily, about 1 cfs Sept. 4, 1956; minimum gage height, 1.74 ft Aug. 20, 1940.
Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Medium and low flow regulated by mills and reservoirs upstream. Flow affected by East Brimfield Reservoir, constructed by Corps of Engineers during 1959 and 1960 (see p. 161). Records of chemical analyses and water temperatures for the water year 1960 are given in WSP 1741.
Revisions (water years).--WSP 851: 1936(M). WSP 1201: 1939-43, 1947, 1949. WSP 1381: 1938(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	4.0	3.0	240
1.9	7.7	3.5	480
2.0	13	4.0	790
2.2	29	5.0	1,530
2.4	62	6.0	2,330
2.7	128		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	316	672	285	196	405	2,050	262	236	57	147	41
2	72	308	576	280	184	330	1,810	303	224	82	*138	35
3	40	290	510	835	180	290	1,490	290	*236	72	131	30
4	27	254	455	1,040	172	280	1,490	272	357	80	116	29
5	51	228	410	a890	*160	308	*1,730	*236	570	76	102	29
6	64	*216	390	a750	278	298	1,730	220	510	66	93	35
7	78	452	777	a612	385	285	1,410	212	415	62	82	41
8	89	630	790	*492	341	*262	1,180	204	316	58	80	40
9	196	540	690	b385	360	244	1,040	310	240	53	70	36
10	200	475	606	b321	316	b224	890	480	200	44	149	34
11	188	400	534	b308	616	b208	755	540	184	112	164	36
12	160	345	632	b308	860	216	714	588	154	34	123	426
13	128	303	1,180	312	b708	216	642	660	134	*4.6	93	584
14	118	285	1,040	b298	630	212	570	600	116	172	93	*435
15	111	410	895	308	b516	204	510	528	123	208	93	504
16	100	395	790	298	b430	196	480	455	126	121	131	606
17	93	400	696	b240	380	196	465	390	118	89	114	486
18	86	400	618	b254	360	212	455	355	78	100	95	294
19	78	365	564	267	749	220	455	355	84	97	84	200
20	72	330	445	254	720	224	430	330	84	172	80	242
21	68	298	b375	236	618	228	400	285	82	131	72	285
22	62	276	b370	228	534	220	385	249	*78	76	78	280
23	62	262	b375	220	455	200	360	249	74	57	74	240
24	406	297	b335	b204	405	b184	380	350	76	48	66	196
25	769	690	b276	b188	360	b160	380	380	74	55	58	160
26	741	696	262	188	619	b138	355	350	70	49	55	134
27	624	642	272	180	660	b144	335	303	66	55	53	116
28	498	755	330	212	570	262	312	249	62	74	49	104
29	380	860	405	228	480	380	294	208	58	64	44	97
30	303	769	415	224	-------	486	262	192	62	168	40	100
31	272	-------	360	212	-------	1,690	-------	220	-------	208	41	-------
Total	6,260	12,887	17,045	11,057	13,242	9,122	23,759	10,625	5,207	2,744.6	2,808	5,875
Mean	202	430	550	357	457	294	792	343	174	88.5	90.6	196
(†)	0	0	0	0	0	0	0	0	0	0	+2.69	+5.32

Adjusted for change in reservoir contents

Mean	202	430	550	357	457	294	792	343	174	88.5	93.3	201
Cfsm	1.29	2.74	3.50	2.27	2.91	1.87	5.04	2.18	1.11	0.564	0.594	1.28
In.	1.48	3.05	4.03	2.61	3.13	2.16	5.62	2.51	1.23	0.65	0.68	1.43

	Observed			Adjusted		
Calendar year 1959:	Max 2,580	Min 21	Mean 296	Mean 296	Cfsm 1.89	In. 25.57
Water year 1959-60:	Max 2,050	Min 4.6	Mean 330	Mean 333	Cfsm 2.12	In. 28.58

Peak discharge (base, 1,000 cfs).--Oct. 24 (8 p.m.) 1,070 cfs (4.40 ft); Dec. 12 (4 a.m.) 1,290 cfs (4.69 ft); Jan. 4 (1:30 p.m.) 1,490 cfs (4.95 ft); Mar. 31 (6 p.m.) 2,170 cfs (5.82 ft); Sept. 12 (7:30 p.m.) 1,180 cfs (4.55 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in East Brimfield Reservoir; furnished by Corps of Engineers.
a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

1245. Little River at Buffumville, Mass.

Location.--Lat 42°06'57", long 71°53'26", on left bank 0.6 mile upstream from mouth, 0.8 mile east of Buffumville, Worcester County, 1.1 miles downstream from Buffumville Reservoir, and 1.5 miles west of Oxford.

Drainage area.--27.7 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 457.00 ft above mean sea level, unadjusted (levels by Corps of Engineers).

Average discharge.--21 years, 48.5 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 382 cfs Apr. 6 (gage height, 4.84 ft); minimum, 3.2 cfs Sept. 7, 8; minimum daily, 3.6 cfs Sept. 7.
1939-60: Maximum discharge, 8,340 cfs Aug. 19, 1955 (gage height, 15.53 ft), from rating curve extended above 1,200 cfs on basis of computation of peak flow over dam; minimum, 0.1 cfs Sept. 25, 26, 1957; minimum daily, 0.1 cfs Sept. 25, 1957.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Buffumville Reservoir (see p. 161). Prior to 1958, flow regulated by mill above station.

Revisions (water years).--WSP 1201: 1940, 1948.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 4				Jan. 5 to Sept. 30			
2.2	3.0	3.0	37	2.2	3.0	3.2	64
2.4	6.2	3.2	61	2.4	6.2	3.5	114
2.6	11	3.5	108	2.6	11	4.0	202
2.8	21	4.0	197	2.8	20	5.0	419
				3.0	39		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	47	114	51	37	*99	202	a55	41	7.9	37	6.4
2	5.2	53	111	46	35	82	334	a62	41	9.9	34	5.8
3	4.8	*54	91	84	34	69	322	a58	39	9.3	26	5.2
4	4.4	58	53	189	32	69	198	a52	58	10	20	4.4
5	4.2	58	52	202	25	64	338	*46	99	10	16	4.4
6	*4.2	58	52	158	12	60	378	41	109	9.6	14	3.8
7	5.2	79	45	124	53	56	359	37	88	9.1	12	3.6
8	6.2	111	22	97	94	52	297	35	64	8.6	11	14
9	11	142	20	57	82	50	223	39	49	7.9	9.9	35
10	20	158	20	50	72	47	178	67	38	7.0	12	36
11	30	142	32	83	78	44	151	94	29	6.4	17	36
12	28	147	64	63	134	43	136	112	25	5.8	22	43
13	24	183	132	55	155	41	126	124	22	5.5	22	66
14	22	151	197	52	138	41	114	128	19	10	19	134
15	19	111	171	50	111	40	106	117	18	8.1	17	167
16	18	110	*138	50	88	39	97	99	17	9.6	17	198
17	17	110	116	49	74	39	94	82	17	12	18	112
18	15	106	100	46	64	39	91	70	16	12	16	35
19	15	99	90	47	117	41	90	61	15	12	14	38
20	13	85	82	46	153	43	83	56	14	16	13	43
21	13	63	71	*44	153	45	64	50	12	*17	12	41
22	11	54	63	43	133	46	55	44	11	15	12	64
23	11	33	56	40	112	45	51	40	10	14	12	90
24	22	24	51	39	94	44	56	51	9.9	12	12	87
25	99	93	47	37	80	43	69	72	9.3	11	11	67
26	154	96	45	36	100	39	74	78	9.1	9.3	9.6	*53
27	133	106	45	34	133	39	70	67	8.6	8.3	8.6	20
28	102	116	47	34	134	43	63	55	8.1	9.6	8.1	18
29	75	117	56	36	117	*60	56	45	7.7	9.6	7.5	20
30	56	116	57	37	---------	87	50	38	8.1	14	*7.2	25
31	46	--------	54	37	--------	165	--------	38	--------	26	7.2	--------
Total	992.8	2,880	2,294	2,016	2,644	1,714	4,525	2,013	911.8	332.5	474.1	1,475.6
Mean	32.0	96.0	74.0	65.0	91.2	55.3	151	64.9	30.4	10.7	15.3	49.2
(†)	+2.61	-9.14	+9.48	-0.97	+2.43	+11.6	-10.3	-3.92	-1.66	+3.25	-1.64	-16.6

Adjusted for change in contents in Buffumville Reservoir

Mean	34.6	86.9	83.5	64.1	93.6	66.9	141	61.0	28.7	14.0	13.7	32.6
Cfsm	1.25	3.14	3.01	2.31	3.38	2.42	5.09	2.20	1.04	0.505	0.495	1.18
In.	1.44	3.50	3.47	2.67	3.65	2.78	5.66	2.54	1.16	0.58	0.57	1.31

	Observed			Adjusted			
Calendar year 1959:	Max 401	Min 3.8	Mean 54.9	Mean 56.8	Cfsm 2.05	In. 27.82	
Water year 1959-60:	Max 378	Min 3.6	Mean 60.9	Mean 59.7	Cfsm 2.16	In. 29.33	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Buffumville Reservoir.
a No gage-height record; discharge estimated on basis of weather records and records for French River at Webster.

1250. French River at Webster, Mass.

Location.--Lat 42°03'03", long 71°53'08", on right bank 50 ft upstream from Pleasant Street Bridge at Webster, Worcester County, and 1.1 miles upstream from Potash Brook.

Drainage area.--85.3 sq mi.

Records available.--December 1948 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 406.74 ft above mean sea level, datum of 1929.

Average discharge.--11 years (1949-60), 172 cfs (adjusted for storage in flood-control reservoirs).

Extremes.--Maximum discharge during year, 1,020 cfs Apr. 2 (gage height, 7.56 ft); minimum daily, 3.6 cfs Sept. 4, 5.

1948-60: Maximum discharge, 14,400 cfs Aug. 19, 1955 (gage height, 26.05 ft, from floodmarks), from rating curve extended above 2,400 cfs on basis of computation of peak flow over dam; minimum daily, 2.9 cfs Sept. 30, 1951.

Flood of Mar. 19, 1936, reached a discharge of 4,700 cfs, by computation of flow over dam about half a mile upstream.

Remarks.--Records good. Flow regulated by mills, by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft), smaller reservoirs above station, and by Buffumville Reservoir on Little River (see p. 161). Flow affected by Hodges Village Reservoir, constructed by Corps of Engineers during 1959 and 1960 (see p. 161).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 4		Jan. 5 to Sept. 30			
4.7	20	4.38	3.6	5.0	59
4.9	43	4.4	4.1	5.2	103
5.2	98	4.5	7.3	5.5	200
5.5	192	4.6	12	6.0	425
6.0	400	4.7	20	7.0	800
7.0	755	4.8	30	7.5	1,000

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	119	336	214	103	*322	716	173	130	74	94	54
2	63	*154	296	205	96	250	984	194	125	57	91	32
3	40	159	258	296	108	240	932	186	124	43	80	8.2
4	67	150	194	517	116	225	728	182	235	43	71	3.6
5	98	144	170	567	158	215	652	*156	365	40	69	3.6
6	*98	139	166	437	125	200	864	134	385	28	64	*57
7	83	190	248	309	52	195	828	117	327	20	4.1	27
8	73	292	336	230	230	188	772	79	265	16	64	52
9	78	352	336	220	210	180	792	129	209	5.8	66	53
10	83	360	284	200	192	177	780	187	143	4.3	72	23
11	94	316	231	210	238	169	720	260	120	68	68	4.3
12	106	266	280	195	417	161	740	314	71	44	68	160
13	88	284	436	192	465	161	652	357	112	26	63	214
14	87	304	549	180	417	161	477	353	99	69	8.8	327
15	76	276	531	180	332	164	385	322	93	66	77	413
16	70	266	*458	164	290	114	353	290	88	64	66	437
17	29	258	392	165	235	108	304	245	87	8.0	58	314
18	43	248	372	158	215	127	285	213	76	73	70	155
19	78	235	364	169	373	146	290	195	5.5	70	68	180
20	69	204	344	155	437	106	260	192	84	65	63	162
21	65	170	316	*152	425	105	235	141	81	*62	27	168
22	61	149	288	149	373	149	220	133	92	60	86	157
23	61	137	240	127	285	139	204	119	83	57	76	159
24	32	123	212	96	245	136	196	198	76	3.8	128	201
25	275	254	231	91	230	135	215	275	69	60	91	169
26	432	364	231	91	322	116	245	275	4.9	58	30	*138
27	400	364	231	91	401	116	255	270	70	32	54	71
28	320	360	253	111	397	143	240	250	66	35	4.3	61
29	218	372	292	122	353	*210	205	155	65	55	53	61
30	159	380	262	119	--------	255	189	98	63	50	31	61
31	121	--------	210	106	--------	563	--------	111	--------	4.6	58	--------
Total	3,627	7,389	9,347	6,218	7,840	5,676	14,718	6,303	3,813.4	1,361.5	1,933.2	3,925.7
Mean	117	246	302	201	270	183	491	203	127	43.9	62.0	131
(†)	+2.61	-9.14	+9.48	-.97	+2.43	+24.6	-23.9	-3.99	-1.74	+3.36	-1.72	-16.6

Adjusted for change in reservoir contents

Mean	120	237	311	200	273	208	467	199	125	47.3	60.3	114
Cfsm	1.41	2.78	3.65	2.34	3.20	2.44	5.47	2.33	1.47	0.555	0.707	1.34
In.	1.62	3.10	4.20	2.70	3.45	2.81	6.10	2.69	1.64	0.64	0.82	1.49

	Observed			Adjusted		
Calendar year 1959:	Max 906	Min 4.6	Mean 188	Mean 189	Cfsm 2.22	In. 30.17
Water year 1959-60:	Max 984	Min 3.6	Mean 197	Mean 196	Cfsm 2.30	In. 31.26

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Buffumville Reservoir and, from March, in Hodges Village Reservoir.

Note.--Discharge in cubic feet per second per square mile and runoff in inches may not represent natural flow because of regulation.

1255. Quinebaug River at Putnam, Conn.

Location.--Lat 41°54'34", long 71°54'48", on right bank at Putnam, Windham County, 0.15 mile downstream from Little River, 0.3 mile upstream from New York, New Haven and Hartford Railroad bridge, 2.8 miles downstream from French River, and at mile 35.7.
Drainage area.--331 sq mi.
Records available.--December 1929 to September 1960. Monthly discharge only for October and November 1929, published in WSP 1301.
Gage.--Water-stage recorder. Datum of gage is 216.76 ft above mean sea level, datum of 1929. Prior to Aug. 1, 1958, at same site on left bank at same datum.
Average discharge.--31 years, 575 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 3,940 cfs Mar. 31 (gage height, 8.55 ft); minimum, 38 cfs July 13 (gage height, 1.93 ft); minimum daily, 76 cfs July 13.
1929-60: Maximum discharge, 48,000 cfs Aug. 19, 1955 (gage height, 26.5 ft, from floodmarks), from rating curve extended above 2,500 cfs on basis of computation of flow over dam at gage heights 17.28 and 19.45 ft and slope-area measurement of peak flow; minimum, 8.0 cfs Aug. 9, 1953 (gage height, 1.54 ft); minimum daily, 11 cfs Oct. 5, 12, 1930.
Remarks.--Records excellent except those for period of no gage-height record or once-daily Telemark readings, which are good. City of Putnam diverts an average of less than 1 mgd from Little River for municipal supply. Flow regulated by many mills, by Buffumville Reservoir (see p. 161), by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft), and by smaller reservoirs above station. High flow affected by East Brimfield and Hodges Village Reservoirs (see p. 161).
Revisions (water years).--WSP 781: Drainage area, 1934(M). WSP 1301: 1931-33(M), 1935(M).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30			
2.2	74	5.0	1,120	2.2	74	4.0	630
2.5	128	7.0	2,570	2.5	129	5.0	1,160
3.0	250	9.0	4,340	3.0	270	8.0	3,390
4.0	600						

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	157	520	1,330	662	434	940	3,660	590	470	127	348	119
2	112	532	1,090	620	417	755	3,390	675	460	189	*344	112
3	87	504	940	1,460	*403	708	2,880	652	*456	213	315	92
4	84	480	830	a2,420	400	662	2,840	550	632	201	279	82
5	156	456	708	a1,990	420	662	*2,930	*526	1,100	169	246	82
6	192	428	685	a1,620	588	662	3,390	486	1,070	134	225	80
7	225	647	1,240	*a1,260	780	620	2,960	452	845	116	195	88
8	232	1,030	1,580	a880	750	*600	2,570	428	675	110	153	94
9	356	1,060	1,410	a730	780	576	2,280	483	550	101	161	118
10	336	970	1,160	a640	730	552	2,130	870	442	88	253	129
11	268	830	970	a600	992	528	1,850	980	382	120	351	116
12	331	*708	1,120	a600	1,700	508	1,780	1,160	321	*152	300	467
13	310	640	2,290	a600	1,550	512	1,680	1,260	334	76	252	1,270
14	295	620	2,280	a600	1,330	512	1,430	1,190	321	330	222	*870
15	280	781	1,990	600	1,060	504	1,190	1,070	321	530	192	920
16	122	755	1,660	620	910	476	1,070	920	300	376	285	1,100
17	146	755	1,410	552	780	445	1,010	795	201	264	261	870
18	137	755	1,220	564	730	476	980	698	166	225	225	550
19	139	708	1,160	564	1,780	520	950	675	180	255	207	470
20	162	640	1,000	544	1,860	524	870	626	175	348	195	558
21	152	572	855	470	1,500	520	820	566	243	315	164	610
22	182	536	805	476	1,220	520	795	494	240	228	175	558
23	200	520	755	470	1,030	500	720	486	234	186	192	506
24	435	566	662	431	855	484	745	652	170	146	175	463
25	1,220	1,160	620	410	755	500	770	770	118	121	225	435
26	1,440	1,440	620	403	1,270	456	770	745	110	129	153	365
27	1,220	1,300	620	389	1,580	428	745	652	108	148	114	303
28	970	1,400	734	440	1,370	540	675	594	175	195	116	258
29	730	1,700	880	512	1,120	730	675	478	204	161	92	243
30	592	1,520	880	500	---------	910	630	414	216	276	101	252
31	520	--------	755	459	---------	2,580	--------	438	--------	463	99	--------
Total	11,788	24,533	34,259	23,086	29,094	19,910	49,185	21,375	11,219	6,492	6,615	12,180
Mean	380	818	1,105	745	1,003	642	1,640	690	374	209	213	406
(†)	+2.6	-9.1	+9.5	-1.0	+2.4	+24.6	-23.9	-4.0	-1.7	+3.4	+1.0	-11.3
Adjusted for change in reservoir contents												
Mean	383	809	1,114	744	1,005	667	1,616	686	372	212	214	395
Cfsm	1.16	2.44	3.37	2.25	3.04	2.02	4.88	2.07	1.12	0.640	0.647	1.19
In.	1.34	2.72	3.88	2.59	3.28	2.33	5.44	2.39	1.25	0.74	0.75	1.33

	Observed				Adjusted			
Calendar year 1959:	Max 4,730	Min 40	Mean 631		Mean 633	Cfsm 1.91	In. 25.88	
Water year 1959-60:	Max 3,660	Min 76	Mean 682		Mean 684	Cfsm 2.07	In. 28.04	

Peak discharge (base, 2,000 cfs).--Dec. 13 (11 a.m.) 2,420 cfs (6.85 ft); Jan. 3 (9 p.m.) 2,720 cfs (7.20 ft); Feb. 19 (4 p.m.) 2,130 cfs (6.44 ft); Mar. 31 (11 p.m.) 3,940 cfs (8.55 ft); Apr. 6 (3 a.m.) 3,570 cfs (8.20 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in East Brimfield, Hodges Village, and Buffumville Reservoirs; furnished by Corps of Engineers.
a No gage-height record; discharge estimated on basis of weather records and records for Quinebaug River at Quinebaug and Jewett City.
Note.--No gage-height record Apr. 7 to May 5; gage heights obtained from graph based on once-daily Telemark readings.

1260. Five Mile River at Killingly, Conn.

Location.--Lat 41°50'14", long 71°53'09", at upstream left abutment of New York, New Haven and Hartford Railroad bridge, 0.5 mile upstream from Whetstone Brook, 0.6 mile south of Killingly, Windham County, and 3.2 miles upstream from mouth.

Drainage area.--58.2 sq mi.

Records available.--October 1937 to September 1960. Monthly discharge only for October 1937, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 222.22 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 106 cfs.

Extremes.--Maximum discharge during year, 615 cfs Apr. 1 (gage height, 4.10 ft); minimum, 5.0 cfs Sept. 3 (gage height, 0.74 ft); minimum daily, 5.2 cfs Sept. 3.
1937-60: Maximum discharge, 2,480 cfs July 24, 1938 (gage height, 8.52 ft); minimum, 3.8 cfs Aug. 24, 1941 (gage height, 0.44 ft); minimum daily, that of Sept. 3, 1960.
Flood of Mar. 12, 1936, reached a discharge of 1,600 cfs, by computation of flow over dam at Danielson.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Flow regulated by dams and reservoirs upstream.

Revisions (water years).--WSP 921: 1938-40. WSP 951: 1938-41.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 6				Aug. 6 to Sept. 30			
0.8	7.0	2.0	145	0.7	4.1	1.5	50
1.0	15	2.5	260	.8	6.4	1.8	92
1.2	29	3.0	360	1.0	13	2.2	175
1.5	62	4.0	585	1.2	24		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	94	184	150	110	209	510	105	62	28	70	*6.4
2	43	91	156	140	105	184	410	119	*50	51	57	30
3	30	72	151	400	*104	169	340	105	47	54	51	5.2
4	37	70	146	*500	103	159	360	98	34	52	*48	6.2
5	45	69	139	400	101	169	430	*91	70	42	42	7.0
6	43	67	141	340	127	163	*498	85	82	37	22	38
7	66	72	208	280	183	157	420	69	73	34	30	7.6
8	56	121	243	220	176	165	360	82	67	29	46	7.9
9	71	111	204	180	162	155	330	101	62	25	23	28
10	82	*89	171	155	153	148	300	114	52	23	29	6.7
11	61	71	165	150	178	143	280	115	30	19	43	7.9
12	62	68	203	150	245	139	260	138	42	*19	43	67
13	52	65	430	155	222	141	240	143	61	18	21	167
14	51	52	420	150	202	*136	222	136	36	35	31	*122
15	52	72	307	150	185	131	202	126	42	70	49	95
16	48	81	228	140	164	126	188	118	33	65	35	77
17	27	67	212	120	153	121	181	106	39	58	44	63
18	45	72	202	125	148	118	171	94	17	56	33	56
19	51	72	192	130	340	113	168	96	34	44	34	54
20	26	67	183	120	380	119	158	89	48	43	12	138
21	57	52	167	115	310	122	148	72	28	35	26	158
22	57	65	160	110	270	117	141	79	25	37	47	124
23	57	75	147	105	245	112	132	89	23	13	20	105
24	92	68	156	100	214	110	134	101	27	29	24	87
25	172	191	175	90	194	113	140	110	11	46	18	79
26	161	205	167	90	260	100	136	103	22	25	17	67
27	115	149	163	86	300	105	128	90	44	10	6.4	63
28	95	156	173	105	270	119	125	72	18	46	6.7	64
29	78	255	200	140	240	136	118	78	21	37	33	62
30	70	226	183	135	-------	160	105	72	21	31	6.4	64
31	60	-------	167	120	-------	360	-------	84	-------	88	28	-------
Total	2,003	2,985	6,143	5,351	5,844	4,519	7,335	3,080	1,221	1,199	995.5	1,862.9
Mean	64.6	99.5	198	173	202	146	244	99.4	40.7	38.7	32.1	62.1
Cfsm	1.11	1.71	3.40	2.97	3.47	2.51	4.19	1.71	0.699	0.665	0.552	1.07
In.	1.28	1.91	3.92	3.42	3.74	2.89	4.68	1.97	0.78	0.77	0.64	1.19

Calendar year 1959: Max 724 Min 6.2 Mean 109 Cfsm 1.87 In. 25.53
Water year 1959-60: Max 510 Min 5.2 Mean 116 Cfsm 1.99 In. 27.19

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 1 to Feb. 2; discharge estimated on basis of weather records, engineer's notes, and records for nearby stations.

1265. Moosup River at Moosup, Conn.

Location.--Lat 41°42'37", long 71°53'11", on right bank at outlet of tailrace from Majestic Metal Specialties, Inc. (formerly Aldrich Bros.) mill at Moosup, Windham County, 100 ft upstream from New York, New Haven and Hartford Railroad bridge, 0.5 mile downstream from Ekonk Brook, and 3.8 miles upstream from mouth.

Drainage area.--83.5 sq mi.

Records available.--October 1932 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 196.64 ft above mean sea level, datum of 1929.

Average discharge.--28 years, 164 cfs.

Extremes.--Maximum discharge during year, 1,040 cfs Dec. 13 (gage height, 4.34 ft); minimum, 11 cfs Sept. 2 (gage height, 1.05 ft); minimum daily, 13 cfs Oct. 1, 4, 5.
1932-60: Maximum discharge, 4,260 cfs Mar. 12, 1936 (gage height, 8.35 ft), from sharp, short rise of unknown origin; maximum natural discharge, 4,100 cfs July 24, 1938 (gage height, 8.20 ft), from rating curve extended above 1,500 cfs on basis of computation of flow over dam a quarter of a mile upstream at gage heights 6.9 and 8.2 ft; minimum, 0.1 cfs Feb. 3, 1934; minimum gage height, 0.36 ft Oct. 17, 1947; minimum daily discharge, 1.1 cfs Aug. 24, 1949.

Remarks.--Records good. Low flow completely regulated by mills upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 851: 1933, 1934(M), 1935-37.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.1	13	2.5	255
1.2	18	3.0	435
1.5	44	4.0	875
2.0	117	5.0	1,410

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	82	346	228	181	286	808	124	83	33	96	*15
2	21	101	255	136	177	231	628	195	106	35	43	14
3	14	77	213	577	*138	225	431	153	126	71	15	14
4	13	75	186	808	130	187	582	128	68	69	46	15
5	13	69	151	632	128	201	875	*107	85	86	26	15
6	17	69	139	415	318	216	*920	138	105	65	16	40
7	43	54	434	318	467	172	718	49	86	17	14	15
8	16	119	471	266	395	183	515	85	78	60	44	15
9	57	136	392	231	322	*171	451	201	62	16	33	15
10	65	*107	283	210	308	165	403	232	50	15	30	15
11	58	96	216	128	358	153	328	225	18	26	44	17
12	109	85	376	*190	443	118	311	225	28	*24	33	123
13	58	77	995	165	378	139	269	278	83	25	16	264
14	59	43	920	134	304	148	252	300	44	32	15	216
15	65	68	614	184	262	145	204	252	47	52	61	122
16	57	101	431	192	237	140	207	189	42	22	52	96
17	15	85	353	186	219	159	195	155	34	35	47	31
18	22	82	304	160	185	166	209	150	71	61	46	42
19	43	83	269	157	815	196	178	156	16	54	39	71
20	19	91	240	160	875	164	165	145	47	26	16	381
21	46	49	201	118	628	228	171	101	40	15	15	360
22	14	38	195	160	414	207	148	88	22	25	39	272
23	16	78	165	139	336	173	112	147	26	16	30	195
24	146	140	122	72	276	205	152	124	29	14	28	66
25	262	440	148	153	237	198	178	178	16	37	30	70
26	249	455	161	75	547	144	185	190	16	15	15	85
27	162	359	141	125	646	166	160	107	31	22	14	78
28	105	382	177	190	503	192	172	151	36	18	14	70
29	97	560	312	280	378	228	139	48	42	30	14	35
30	91	479	318	255	-------	280	65	78	27	25	14	47
31	43	-------	272	210	-------	652	-------	108	-------	70	15	-------
Total	2,008	4,680	9,800	7,254	10,605	6,238	10,131	4,807	1,564	1,111	960	2,814
Mean	64.8	156	316	234	366	201	338	155	52.1	35.8	31.0	93.8
Cfsm	0.776	1.87	3.78	2.80	4.38	2.41	4.05	1.86	0.624	0.429	0.371	1.12
In.	0.89	2.09	4.36	3.23	4.72	2.78	4.52	2.14	0.70	0.49	0.43	1.25

Calendar year 1959: Max 1,230 Min 6.4 Mean 171 Cfsm 2.05 In. 27.80
Water year 1959-60: Max 920 Min 13 Mean 169 Cfsm 2.02 In. 27.60

Peak discharge (base, 800 cfs).--Dec. 13 (7 a.m.) 1,040 cfs (4.34 ft); Jan. 3 (7 p.m.) 920 cfs (4.11 ft); Feb. 19 (2 p.m.) 995 cfs (4.25 ft); Apr. 1 (7 a.m.) 898 cfs (4.05 ft); Apr. 5 (9 p.m.) 1,020 cfs (4.32 ft).

* Discharge measurement made on this day.

1270. Quinebaug River at Jewett City, Conn.

Location.--Lat 41°35'52", long 72°59'05", on left bank in rear of high school on Slater Avenue at Jewett City, New London County, 570 ft downstream from outlet of canal from Wedgewood Mills (formerly Fisk Mills, Inc.) at mouth of Pachaug River, 1,000 ft downstream from railroad bridge, and at mile 6.1.
Drainage area.--711 sq mi.
Records available.--July 1918 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 63.07 ft above mean sea level, datum of 1929.
Average discharge.--42 years, 1,258 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 7,300 cfs Apr. 6 (gage height, 12.78 ft); minimum, 145 cfs Sept. 8 (gage height, 4.30 ft); minimum daily, 147 cfs Sept. 8.
1918-60: Maximum discharge, 40,700 cfs Aug. 20, 1955 (gage height, 29.0 ft, from floodmarks), from rating curve extended above 11,000 cfs by computation of peak flows over three nearby dams at gage heights 21.7, 22.5, 24.0 and 29.0 ft; minimum daily, 18 cfs Aug. 28, Dec. 11, 1949.
Remarks.--Records excellent except those for period of no gage-height record, which are good. Flow regulated by Pachaug Pond, by Buffumville Reservoir (see p. 161) by Lake Chaubunagungamaug (estimated usable capacity, 207,000,000 cu ft), and by smaller reservoirs above station. High flow affected by East Brimfield and Hodges Village Reservoirs (see p. 161).
Revisions (water years).--WSP 781: Drainage area. WSP 1301: 1919-26(M).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31				Apr. 1 to Sept. 30			
4.7	241	7.0	1,370	4.3	145	9.0	3,060
5.0	337	9.0	3,060	5.0	360	11.0	5,160
6.0	790	12.0	6,330	6.0	860	13.0	7,560
				7.0	1,470		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	359	1,000	2,670	1,620	*1,300	*2,490	*6,690	1,250	*950	*315	*890	*214
2	384	1,030	2,220	1,370	1,180	2,010	6,090	*1,440	950	465	660	211
3	348	940	1,970	2,540	1,120	1,770	5,160	1,400	920	610	585	311
4	303	840	1,770	5,610	1,030	1,580	5,270	1,280	890	610	580	311
5	262	790	1,620	4,280	1,030	1,620	6,090	1,200	1,310	520	500	280
6	300	740	1,440	3,560	1,450	1,650	7,050	1,100	1,610	419	450	258
7	427	765	2,190	2,860	2,490	1,580	6,210	1,040	1,440	359	420	214
8	465	1,480	3,360	2,310	2,310	1,540	5,050	950	1,190	327	400	147
9	615	1,650	2,960	1,930	2,050	1,440	4,500	*1,310	1,010	315	380	178
10	840	*1,480	2,440	1,540	1,930	1,400	4,060	2,080	830	307	550	170
11	665	1,300	2,050	1,340	2,130	1,300	3,660	2,080	660	303	600	172
12	740	1,150	2,290	*1,440	3,360	1,240	3,260	2,360	585	291	550	272
13	640	1,030	5,460	1,480	3,260	1,270	3,060	2,360	635	287	500	2,110
14	640	915	5,850	1,400	2,860	1,270	2,790	2,440	610	307	450	1,890
15	615	1,030	4,610	1,400	2,490	1,210	2,440	2,200	585	517	500	1,470
16	565	1,180	3,660	1,540	2,130	1,180	2,200	1,960	585	770	600	1,440
17	482	1,150	3,060	1,440	1,890	1,180	2,080	1,680	*505	610	550	1,340
18	388	1,150	2,760	1,370	1,690	1,210	2,000	1,580	407	495	500	1,100
19	359	1,120	2,400	1,400	3,700	1,300	1,920	1,580	355	460	450	920
20	317	1,000	2,220	1,340	5,160	1,400	1,820	1,440	363	445	360	1,580
21	334	915	1,930	1,270	4,060	1,400	1,720	1,280	387	505	350	1,890
22	327	840	1,730	1,150	3,260	1,400	1,610	1,130	407	423	430	1,540
23	334	865	1,510	1,120	2,670	1,300	1,500	1,160	395	355	400	1,310
24	727	940	1,400	1,030	2,310	1,270	1,580	1,250	375	315	370	1,070
25	2,260	2,310	1,370	1,060	2,010	1,300	1,680	1,540	327	307	450	920
26	2,400	3,060	1,400	1,000	1,970	1,210	1,610	1,540	303	303	320	890
27	2,050	2,580	1,400	970	4,060	1,150	1,580	1,370	299	323	240	770
28	1,650	2,490	1,480	1,180	3,560	1,240	1,500	1,220	295	359	250	660
29	1,340	3,660	2,090	1,650	2,960	1,510	1,400	1,070	295	355	230	585
30	1,090	3,260	2,130	1,540	-------	1,810	1,220	920	307	426	220	610
31	915	-------	1,890	1,400	-------	3,270	-------	920	-------	950	230	-------
Total	23,141	42,660	75,330	55,140	71,420	46,500	96,800	46,130	19,780	13,353	13,965	24,833
Mean	746	1,422	2,430	1,779	2,463	1,500	3,227	1,488	659	431	450	828
(†)	+3	-9	+10	-1	+2	+25	-24	-4	-2	+3	+1	-11
Adjusted for change in reservoir contents												
Mean	749	1,413	2,440	1,778	2,465	1,525	3,203	1,484	657	434	451	817
Cfsm	1.05	1.99	3.43	2.50	3.47	2.14	4.50	2.09	0.924	0.610	0.634	1.15
In.	1.21	2.22	3.95	2.88	3.74	2.47	5.02	2.41	1.03	0.70	0.73	1.28

	Observed			Adjusted			
Calendar year 1959:	Max 8,620	Min 137	Mean 1,367	Mean 1,369	Cfsm 1.93	In. 26.04	
Water year 1959-60:	Max 7,050	Min 147	Mean 1,449	Mean 1,451	Cfsm 2.04	In. 27.64	

Peak discharge (base, 4,500 cfs).--Dec. 13 (9 to 11 p.m.) 6,330 cfs (12.00 ft); Jan. 4 (10 a.m.) 5,850 cfs (11.65 ft); Feb. 20 (2 to 3 a.m.) 5,610 cfs (11.40 ft); Apr. 1 (3 p.m.) 7,050 cfs (12.57 ft); Apr. 6 (1 to 2 p.m.) 7,300 cfs (12.78 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in East Brimfield, Hodges Village, and Buffumville Reservoirs; furnished by Corps of Engineers.
Note.--No gage-height record Aug. 4-31; discharge estimated on basis of recorded range in stage, weather records, and sum of records for Quinebaug River at Putnam, Five Mile River at Killingly, and Moosup River at Moosup.

1275. Yantic River at Yantic, Conn.

Location.--Lat 41°33'31", long 72°07'19", on left bank at Yantic, New London County, 700 ft downstream from stone-arch highway bridge, 1 mile downstream from Susquetonscut Brook, and 4.8 miles upstream from mouth.

Drainage area.--88.6 sq mi.

Records available.--October 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 94.46 ft above mean sea level, datum of 1929.

Average discharge.--30 years, 162 cfs.

Extremes.--Maximum discharge during year, 2,250 cfs Dec. 13 (gage height, 7.96 ft); minimum, 7.5 cfs Sept. 10 (gage height, 1.08 ft); minimum daily, 7.8 cfs Sept. 10.
1930-60: Maximum discharge, 13,500 cfs Sept. 21, 1938 (gage height, 14.66 ft, from floodmark), by computation of flow over two dams 2½ miles upstream and 3 miles downstream from station, respectively; minimum, 2.3 cfs sometime during period July 21 to Aug. 11, 1949; minimum gage height, 0.41 ft Oct. 13, 1930; minimum daily discharge, 3.3 cfs Oct. 13, 1930.

Remarks.--Records excellent. Low flow completely regulated by mills upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 1051: 1931-36. WSP 1301: 1934(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	141	297	255	*194	251	1,020	138	*68	11	98	28
2	60	150	239	213	181	198	552	224	61	126	50	28
3	51	118	207	1,010	160	184	370	186	61	114	*32	24
4	56	96	190	1,220	156	173	*829	145	62	96	25	18
5	43	*91	178	594	151	198	1,140	130	63	60	20	13
6	41	86	170	383	416	190	978	*112	48	42	20	10
7	39	127	605	311	538	186	590	108	44	26	18	11
8	37	255	582	275	346	182	458	101	34	*22	16	52
9	64	202	383	233	275	175	408	*221	31	18	15	8.9
10	71	146	289	196	261	168	358	370	28	15	24	7.8
11	46	107	239	187	370	157	294	300	26	13	36	9.5
12	71	86	624	178	485	163	280	290	25	11	34	208
13	78	82	1,840	184	346	184	254	280	28	10	27	470
14	59	85	966	180	277	186	236	240	27	21	22	284
15	82	121	530	187	245	178	216	196	26	64	21	131
16	72	138	408	211	213	175	200	156	27	41	109	76
17	62	118	335	198	205	187	188	134	25	25	70	50
18	47	135	299	186	205	219	180	191	25	19	38	39
19	35	119	285	198	1,300	233	176	274	24	16	27	44
20	22	98	255	192	941	239	164	214	22	18	24	*237
21	22	96	*211	181	468	247	145	158	20	23	21	220
22	24	91	205	170	345	225	145	128	18	24	18	146
23	24	83	190	163	285	198	146	132	41	22	16	92
24	335	150	180	141	241	190	166	160	11	17	22	68
25	658	730	175	135	215	209	174	154	18	13	26	52
26	370	561	180	127	772	181	160	134	17	10	28	46
27	196	338	190	127	689	172	160	109	14	15	26	35
28	150	474	240	226	420	198	146	96	13	25	20	32
29	113	680	476	313	*319	225	139	78	53	26	14	45
30	111	426	420	279	-------	235	127	69	9.5	79	16	63
31	102	-------	320	225	-------	886	-------	65	-------	157	24	-------
Total	3,187	6,110	11,708	8,678	11,019	6,792	10,399	5,293	969.5	1,179	957	2,548.2
Mean	103	204	378	280	380	219	347	171	32.3	38.0	30.9	84.9
Cfsm	1.16	2.30	4.27	3.16	4.29	2.47	3.92	1.93	0.365	0.429	0.349	0.958
In.	1.34	2.57	4.92	3.64	4.63	2.85	4.37	2.22	0.41	0.49	0.40	1.07

Calendar year 1959: Max 2,240 Min 12 Mean 176 Cfsm 1.99 In. 26.95
Water year 1959-60: Max 1,840 Min 7.8 Mean 188 Cfsm 2.12 In. 28.91

Peak discharge (base, 1,000 cfs).--Dec. 13 (4 a.m.) 2,250 cfs (7.96 ft); Jan. 3 (5 p.m.) 1,840 cfs (7.36 ft); Feb. 19 (2 p.m.) 1,600 cfs (6.96 ft); Feb. 26 (11 a.m.) 1,000 cfs (5.68 ft); Mar. 31 (3:30 p.m.) 1,290 cfs (6.40 ft); Apr. 4 (11:30 a.m.) 1,040 cfs (5.78 ft).

* Discharge measurement made on this day.

Reservoirs in Thames River basin

1215. Mansfield Hollow Reservoir on Natchaug River at Mansfield Hollow, Conn., 3½ miles northeast of Willimantic, completed in March 1952 for flood control, has usable capacity of 2,260,000,000 cu ft. Records furnished by Corps of Engineers.

1233.5. East Brimfield Reservoir on Quinebaug River, 0.7 mile southwest of Fiskdale, Mass., 1.2 miles east of East Brimfield, completed in 1960 for flood control and conservation, has usable capacity of 1,390,000,000 cu ft. Records furnished by Corps of Engineers.

1243. Hodges Village Reservoir on French River at Hodges Village, Mass., 0.8 mile west of Oxford, completed in 1960 for flood control, has usable capacity of 577,000,000 cu ft. Records furnished by Corps of Engineers.

1244. Buffumville Reservoir on Little River at Buffumville, Mass., 2¼ miles west of Oxford, completed in 1958 for flood control, has usable capacity of 492,000,000 cu ft. Records furnished by Corps of Engineers.

Month-end contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Mansfield Hollow Reservoir	East Brimfield Reservoir	Hodges Village Reservoir	Buffumville Reservoir
Sept. 30, 1959	0.3	-	-	56.6
Oct. 31	1.3	-	-	63.6
Nov. 30	9.9	-	-	39.9
Dec. 31	2.2	-	-	65.3
Jan. 31, 1960	1.9	-	-	62.7
Feb. 29	5.2	-	0.9	68.8
Mar. 31	107.2	-	35.9	99.8
Apr. 30	1.3	-	.5	73.2
May 31	1.2	-	.3	62.7
June 30	.4	-	.1	58.4
July 31	12.9	68.4	.4	67.1
Aug. 31	.4	75.6	.2	62.7
Sept. 30	.8	89.4	.2	19.6

1285. Connecticut River at First Connecticut Lake, near Pittsburg, N. H.

Location.--Lat 45°05'15", long 71°17'35", on right bank a quarter of a mile downstream from dam at First Connecticut Lake and 6 miles northeast of Pittsburg, Coos County.

Drainage area.--83.0 sq mi.

Records available.--April 1917 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,560 ft (from topographic map). Prior to Jan. 1, 1918, discharge computed from flow through gates at dam a quarter of a mile upstream. Jan. 1 to July 28, 1918, staff gage at present site and datum.

Average discharge.--43 years, 195 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,120 cfs Nov. 28 (gage height, 3.80 ft); minimum daily, 9.9 cfs Apr. 1.
1917-60: Maximum discharge, 7,200 cfs June 16, 1943 (gage height, 6.25 ft), from rating curve extended above 1,900 cfs on basis of computation of flow over dam at gage height 6.12 ft; maximum gage height, 6.35 ft May 5, 1925 (backwater from logging operations); minimum daily discharge, 3.1 cfs Mar. 17, 18, 1929.

Remarks.--Records good except those below 20 cfs, which are fair. Flow regulated by First Connecticut and Second Connecticut Lakes (see p. 247).

Revisions (water years).--WSP 756: Drainage area. WSP 1001: 1931-39. WSP 1231: 1921-23(M), 1925-26.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.4	8.1	2.6	275
1.5	15	3.0	480
1.7	37	3.4	750
2.0	89	3.8	1,120
2.2	138		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	152	17	492	259	438	333	9.9	14	17	18	213	213
2	152	17	345	417	432	271	11	14	17	20	213	213
3	152	16	289	417	426	g263	11	15	17	20	213	213
4	152	16	243	138	369	g263	11	15	18	20	213	213
5	315	16	484	141	267	g259	12	15	18	149	213	213
6	444	16	750	141	263	g255	11	15	18	*213	210	210
7	195	17	750	144	263	g259	11	15	18	213	210	210
8	17	18	743	320	263	g263	11	15	18	213	210	210
9	17	18	743	645	259	g263	11	15	18	213	210	206
10	17	20	590	645	255	g259	11	16	*18	213	210	206
11	17	20	259	638	255	g255	11	16	18	213	210	206
12	307	20	425	631	255	g251	11	16	18	210	210	88
13	444	20	392	631	255	g247	11	16	18	210	210	16
14	444	18	348	624	255	g247	11	16	18	210	210	16
15	438	18	743	631	255	g247	12	17	18	210	210	16
16	438	18	743	645	255	g239	12	17	20	210	210	16
17	438	18	743	638	g255	g239	13	17	20	210	210	16
18	438	20	750	624	g259	g282	15	17	20	253	206	16
19	432	20	750	702	g263	g306	14	17	18	213	206	17
20	432	22	750	758	g263	g306	14	17	18	213	206	18
21	*438	24	750	750	g263	g306	14	17	18	213	206	17
22	438	193	750	674	g263	g306	14	17	18	213	206	17
23	438	534	743	547	g263	g306	14	17	20	213	502	17
24	196	534	736	540	g263	g306	14	17	20	213	484	146
25	17	226	743	540	263	g302	14	17	20	213	*213	210
26	17	23	736	540	301	g271	14	17	20	213	213	139
27	17	25	736	540	375	235	*14	18	20	213	213	17
28	17	440	736	534	g375	203	14	18	20	213	213	17
29	17	1,090	743	499	370	170	14	18	20	213	213	17
30	17	941	592	444	---	137	14	18	20	213	213	18
31	17	---	259	438	---	72	---	17	---	213	213	---
Total	7,070	4,395	18,856	15,835	8,541	7,921	373.9	506	559	5,787	7,092	3,147
Mean	228	146	608	511	295	256	12.5	16.3	18.6	187	229	105
(†)	+21.8	+280	-472	-441	-221	-209	+821	+355	+192	-136	-206	-46.1
Adjusted for change in reservoir contents												
Mean	250	426	136	69.8	73.9	46.3	834	371	210	50.5	22.7	58.8
Cfsm	3.01	5.13	1.64	0.841	0.890	0.558	10.0	4.47	2.53	0.608	0.273	0.708
In.	3.47	5.73	1.89	0.97	0.96	0.64	11.21	5.15	2.83	0.70	0.32	0.79

	Observed			Adjusted		
Calendar year 1959:	Max 1,090	Min 8.1	Mean 174	Mean 217	Cfsm 2.61	In. 35.52
Water year 1959-60:	Max 1,090	Min 9.9	Mean 219	Mean 211	Cfsm 2.54	In. 34.66

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes.
g Computed from once-daily tape-gage readings and records of gate operation at First Connecticut Lake.

1292. Connecticut River below Indian Stream, near Pittsburg, N. H.

Location.--Lat 45°02'25", long 71°26'35", on right bank 1,200 ft downstream from Indian Stream and 2.5 miles west of Pittsburg, Coos County.

Drainage area.--254 sq mi.

Records available.--October 1956 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,150 ft (from topographic map).

Extremes.--Maximum discharge during year, 4,580 cfs Nov. 29 (gage height, 7.07 ft), from rating curve extended above 1,700 cfs by logarithmic plotting; minimum daily, 34 cfs Sept. 29.
1956-60: Maximum discharge, that of Nov. 29, 1959; minimum daily, that of Sept. 29, 1960.

Remarks.--Records good. Flow regulated by First Connecticut and Second Connecticut Lakes and Lake Francis (see p. 247).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Mar. 26)

1.6	24	3.0	470
1.8	48	3.5	760
2.0	84	4.0	1,130
2.3	161	5.0	2,050
2.5	234	7.0	4,470

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	330	330	2,210	569	1,050	872	1,070	498	72	88	465	420
2	355	360	1,960	856	1,050	700	1,080	476	74	82	450	420
3	360	293	1,340	1,010	1,050	694	774	370	64	74	445	420
4	345	246	754	465	944	694	1,060	340	58	68	440	420
5	568	426	1,160	486	688	694	1,500	330	58	66	435	420
6	823	610	1,710	450	682	694	952	284	111	*70	435	420
7	566	935	1,730	435	688	694	586	238	93	66	435	420
8	558	514	1,780	771	688	688	445	207	68	61	435	420
9	311	360	1,730	1,600	688	694	345	182	59	58	435	415
10	204	280	1,410	1,590	664	688	288	175	*56	56	435	415
11	152	230	664	1,490	646	688	246	158	51	51	435	415
12	649	215	922	*1,600	664	682	280	140	50	48	435	273
13	949	207	1,200	1,580	688	682	335	131	48	45	430	289
14	914	209	1,010	1,580	*700	551	345	143	44	45	425	203
15	893	969	1,740	1,590	706	320	512	273	53	44	430	114
16	879	530	1,750	1,580	786	320	1,220	661	82	42	425	76
17	872	390	1,700	1,580	886	320	1,600	370	74	42	425	61
18	893	370	1,680	1,580	872	355	2,930	271	170	268	425	53
19	907	284	1,680	1,570	872	395	2,630	215	151	440	425	50
20	900	235	1,640	1,570	872	395	918	175	106	455	420	*47
21	*914	232	1,600	1,570	865	395	652	146	158	460	420	47
22	900	434	1,600	1,420	865	400	928	128	116	445	420	45
23	921	1,150	1,610	1,060	865	400	900	116	82	450	900	44
24	877	1,190	1,600	1,050	865	395	809	108	117	476	966	280
25	1,030	*1,190	1,590	1,080	858	395	928	104	640	455	*415	430
26	558	770	1,600	1,060	879	395	830	95	425	445	415	325
27	395	430	1,600	1,050	963	395	*652	84	226	445	415	38
28	320	1,610	1,590	1,050	963	*345	530	78	146	440	415	35
29	246	3,660	1,590	1,050	956	260	558	74	114	435	420	34
30	207	2,510	1,300	1,050	---	238	520	68	97	440	420	36
31	200	---	574	1,050	---	406	---	64	---	450	420	---
Total	18,996	21,169	46,044	36,422	23,963	15,844	26,423	6,702	3,664	7,110	14,311	7,085
Mean	613	706	1,485	1,175	826	511	881	216	122	229	462	236
(†)	+71.3	+621	-961	-928	-601	-336	+1,685	+558	+344	-92.0	-394	-80.1
Adjusted for change in reservoir contents												
Mean	684	1,327	524	247	225	175	2,566	775	466	137	67.6	156
Cfsm	2.69	5.22	2.06	0.972	0.886	0.689	10.1	3.05	1.83	0.539	0.266	0.614
In.	3.10	5.83	2.38	1.12	0.95	0.80	11.27	3.52	2.05	0.62	0.31	0.69

	Observed			Adjusted			
Calendar year 1959:	Max 3,660	Min 49	Mean 553	Mean 637	Cfsm 2.51	In. 34.03
Water year 1959-60:	Max 3,660	Min 34	Mean 622	Mean 609	Cfsm 2.40	In. 32.64

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes and Lake Francis.

1295. Connecticut River at North Stratford, N. H.

Location.--Lat 44°44'55", long 71°37'55", on left bank at North Stratford, Coos County, 400 ft downstream from Nulhegan River.

Drainage area.--799 sq mi.

Records available.--August 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 880.17 ft above mean sea level, datum of 1929.

Average discharge.--30 years, 1,563 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 19,700 cfs Apr. 19 (gage height, 12.07 ft); minimum daily, 108 cfs Sept. 29.
1930-60: Maximum discharge, 28,700 cfs June 16, 1943 (gage height, 14.67 ft), from rating curve extended above 15,000 cfs; maximum gage height, 16.66 ft Mar. 13, 1936 (ice jam); minimum daily discharge, that of Sept. 29, 1960.

Remarks.--Records excellent except those computed from twice-daily tape-gage readings, which are good, and those for period of ice effect, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes and Lake Francis (see p. 247).

Revisions (water years).--WSP 781: 1934(M). WSP 891: Drainage area.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	85	5.0	2,390
2.9	176	6.0	4,170
3.3	368	9.0	10,600
3.6	570	12.0	19,500
4.0	945		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	548	2,170	5,570	1,200	1,250	1,200	7,880	2,460	464	548	712	484
2	720	2,290	4,300	1,300	1,300	1,100	6,830	2,640	526	526	644	477
3	668	1,950	3,610	2,200	1,300	1,000	5,450	2,070	534	504	596	470
4	578	1,580	2,410	2,200	1,250	1,050	7,740	1,860	464	457	578	470
5	534	1,740	2,120	1,600	1,100	1,100	10,600	1,720	405	405	555	477
6	1,430	2,220	2,880	1,500	1,150	1,050	8,100	1,580	905	*424	578	477
7	2,560	4,080	3,110	1,500	1,100	1,050	4,790	1,370	767	430	578	477
8	4,830	2,950	3,560	1,450	1,000	1,050	3,470	1,220	519	368	578	470
9	2,580	2,020	3,120	2,000	1,000	1,000	2,780	1,120	430	334	594	464
10	1,600	1,590	2,870	2,200	1,100	1,000	2,320	1,090	*374	312	578	477
11	1,120	1,320	1,860	2,000	1,000	1,000	1,950	1,020	340	276	563	477
12	1,190	1,230	1,530	1,900	1,800	1,050	2,290	880	307	186	534	740
13	1,800	1,280	3,880	1,950	1,750	1,000	2,980	858	271	361	519	2,440
14	1,600	1,140	3,050	1,950	1,700	1,000	3,040	981	252	648	504	1,310
15	1,480	3,560	2,870	2,000	1,550	800	5,370	1,800	316	387	504	720
16	1,370	3,040	3,140	2,000	1,500	720	8,360	4,750	923	277	504	490
17	1,320	2,030	2,920	1,900	1,500	700	10,300	2,950	610	248	504	362
18	1,450	2,220	2,680	1,900	1,400	650	15,500	2,020	1,150	232	497	302
19	1,550	1,710	2,500	1,800	1,400	700	16,800	1,530	1,100	547	497	266
20	1,440	1,380	2,300	1,800	1,400	700	7,770	1,200	712	826	490	*248
21	1,680	1,270	1,900	1,800	1,350	700	4,730	969	618	668	497	234
22	*1,590	1,160	2,000	1,800	1,300	680	4,950	836	563	642	604	216
23	1,660	1,560	2,100	1,450	1,300	700	4,990	748	437	650	676	147
24	4,240	*2,200	2,000	1,400	1,300	680	4,550	703	557	659	1,230	148
25	7,810	6,610	2,100	1,450	1,250	650	5,010	767	4,970	634	756	432
26	4,830	5,590	2,200	1,400	1,200	600	*4,810	676	3,140	578	*512	484
27	3,430	2,880	2,200	1,400	1,250	700	3,650	594	1,720	563	490	368
28	2,640	7,970	2,100	1,400	1,250	*680	3,020	519	1,080	578	484	225
29	1,950	14,400	2,000	1,400	1,300	600	2,820	497	748	570	484	108
30	1,460	8,430	2,000	1,300	-------	750	2,580	578	676	570	490	170
31	1,320	-------	1,300	1,250	-------	4,200	-------	504	-------	847	497	-------
Total	62,978	93,570	82,180	52,400	38,050	29,860	175,430	42,510	25,878	15,255	17,827	14,630
Mean	2,032	3,119	2,651	1,690	1,312	963	5,848	1,371	863	492	575	488
(†)	+71.3	+621	-961	-928	-601	-336	+1,685	+558	+344	-92.0	-394	-80.1
Adjusted for change in reservoir contents												
Mean	2,103	3,740	1,690	762	711	627	7,533	1,930	1,207	400	181	408
Cfsm	2.63	4.68	2.12	0.954	0.890	0.785	9.43	2.42	1.51	0.501	0.227	0.511
In.	3.03	5.22	2.44	1.10	0.96	0.91	10.52	2.78	1.69	0.58	0.26	0.57

	Observed				Adjusted			
Calendar year 1959:	Max 14,400	Min 169	Mean 1,723		Mean 1,806	Cfsm 2.26	In. 30.68	
Water year 1959-60:	Max 16,800	Min 108	Mean 1,778		Mean 1,764	Cfsm 2.21	In. 30.06	

Peak discharge (base, 10,000 cfs).--Nov. 29 (6 a.m.) 15,100 cfs (10.54 ft); Apr. 5 (9:30 a.m.) 11,100 cfs (9.19 ft); Apr. 19 (4 a.m.) 19,700 cfs (12.07 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes and Lake Francis.
Note.--Stage-discharge relation affected by ice Dec. 19 to Mar. 31. Discharge for Oct. 17-21, Oct. 29 to Dec. 1 computed from twice-daily tape-gage readings.

1300. Upper Ammonoosuc River near Groveton, N. H.

Location.--Lat 44°37'30", long 71°28'10", on left bank 75 ft upstream from highway bridge, 0.2 mile downstream from Nash Stream, and 2¾ miles northeast of Groveton, Coos County.

Drainage area.--232 sq mi.

Records available.--August 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 920 ft (from topographic map).

Average discharge.--20 years, 481 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 6,400 cfs Apr. 18 (gage height, 8.00 ft); maximum gage height, 10.14 ft Mar. 31 (ice jam); minimum discharge, 49 cfs Sept. 9, 10. 1940-60: Maximum discharge, 9,950 cfs Mar. 27, 1953 (gage height, 9.44 ft), from rating curve extended above 5,800 cfs by logarithmic plotting; maximum gage height, that of Mar. 31, 1960; minimum discharge, 32 cfs Sept. 14, 1948.
Flood in March 1936 reached a stage of about 10.6 ft, from information by local residents.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Some regulation by pond on Nash Stream. Small diversion above station for municipal supply of Berlin.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31		Apr. 1 to Sept. 30			
2.8	89	2.6	52	5.0	1,480
3.2	211	2.9	118	6.0	2,610
Note.--Same as following table above 3.2 ft.		3.2	211	7.0	4,250
		3.5	345	8.0	6,400
		4.0	645		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	860	1,450	240	185	165	1,840	1,410	310	295	227	62
2	154	956	1,100	260	180	160	2,140	1,350	335	242	157	58
3	144	778	940	800	175	160	1,840	1,130	310	227	129	52
4	107	666	815	870	165	165	2,010	*1,010	272	422	113	52
5	99	652	715	550	170	160	2,760	1,040	238	350	113	54
6	182	743	645	470	175	155	2,880	972	215	330	154	54
7	499	1,220	722	440	185	155	2,200	884	204	277	142	56
8	1,020	1,000	900	410	170	150	1,530	808	186	230	123	54
9	638	743	701	350	175	150	1,150	757	*176	208	113	52
10	385	610	596	290	165	145	948	948	170	*186	106	56
11	282	568	504	310	195	145	785	845	160	170	101	52
12	268	575	450	305	350	145	884	743	154	164	94	251
13	259	582	1,000	300	*420	145	1,230	743	145	154	90	1,340
14	215	462	972	295	340	140	1,260	1,030	134	230	85	784
15	186	1,070	701	280	260	140	1,880	1,120	288	197	83	345
16	170	884	660	270	240	140	2,900	1,800	988	157	83	211
17	171	673	610	255	230	140	3,300	1,400	530	140	79	164
18	350	659	516	250	215	140	5,000	1,000	390	134	76	140
19	330	549	486	245	220	140	5,250	808	355	232	70	137
20	*242	456	380	235	210	140	3,040	659	268	375	72	137
21	250	439	310	230	205	140	2,130	549	230	238	74	140
22	264	422	270	220	195	135	2,110	444	197	176	79	137
23	277	385	240	210	185	135	2,170	434	176	167	79	123
24	952	*434	255	205	180	140	2,160	444	173	151	74	111
25	2,710	1,690	270	200	175	140	2,340	743	964	132	68	106
26	2,020	2,030	300	195	170	130	2,460	652	980	123	*74	99
27	996	1,310	270	190	180	135	2,040	480	492	113	70	94
28	701	2,800	265	195	175	140	1,710	406	335	116	62	94
29	556	3,940	260	195	170	150	1,620	360	264	123	60	99
30	492	2,270	250	195	------	250	1,480	325	264	126	68	101
31	480	------	245	190	------	900	------	295	------	277	62	------
Total	15,496	30,426	17,798	9,650	6,060	5,375	65,047	25,589	9,903	6,462	2,980	5,215
Mean	500	1,014	574	311	209	173	2,168	825	330	208	96.1	174
(†)	2.55	2.64	2.79	2.86	2.62	2.87	2.71	2.69	2.86	2.41	2.99	3.36
Adjusted for diversion												
Mean	502	1,017	577	314	212	176	2,171	828	333	211	99.1	177
Cfsm	2.16	4.38	2.49	1.35	0.914	0.759	9.36	3.57	1.44	0.909	0.427	0.763
In.	2.50	4.89	2.87	1.56	0.98	0.88	10.44	4.12	1.60	1.05	0.49	0.85

	Observed			Adjusted				
Calendar year 1959:	Max 3,940	Min 54	Mean 508	Mean 510	Cfsm 2.20	In. 29.85
Water year 1959-60:	Max 5,250	Min 52	Mean 546	Mean 549	Cfsm 2.37	In. 32.23

Peak discharge (base, 2,900 cfs).--Oct. 25 (7 to 8 p.m.) 3,190 cfs (6.42 ft); Nov. 29 (6:30 to 8:30 a.m.) 4,450 cfs (7.10 ft); Apr. 5 (9 p.m.) to Apr. 6 (2:30 a.m.) 3,040 cfs (6.32 ft); Apr. 18 (8:30 p.m.) 6,400 cfs (8.00 ft).

* Discharge measurement made on this day.
† Diversion, equivalent in cubic feet per second, for municipal supply of Berlin. Records furnished by city of Berlin.
Note.--Stage-discharge relation affected by ice Dec. 12, 16, Dec. 20 to Mar. 31.

1315. Connecticut River near Dalton, N. H.

Location.--Lat 44°24'35", long 71°43'00", on left bank 250 ft upstream from highway bridge, 1,200 ft downstream from dam of Gilman Paper Co., and 1¼ miles downstream from Dalton, Coos County.

Drainage area.--1,514 sq mi.

Records available.--March 1927 to September 1960. Published as "at Waterford, Vt." 1927-35. Records published for both sites January to September 1935.

Gage.--Water-stage recorder. Datum of gage is 799.89 ft above mean sea level, datum of 1929. Prior to Sept. 30, 1935, chain gage at bridge 10½ miles downstream at mean sea level. Jan. 1, 1935, to June 29, 1937, chain gage at bridge 250 ft downstream at present datum.

Average discharge.--33 years, 2,896 cfs (adjusted to drainage area at present site and for storage).

Extremes.--Maximum discharge during year, 27,400 cfs Apr. 20 (gage height, 20.26 ft); minimum daily, 351 cfs Aug. 29.
1927-60: Maximum discharge, 48,300 cfs Mar. 20, 1936 (gage height, 25.6 ft); minimum daily, 115 cfs Oct. 3, 1937.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis (see p. 247), and other reservoirs. These reservoirs have a combined usable capacity of about 8 1/3 billion cubic feet.

Revisions (water years).--WSP 891: Drainage area. WSP 1231: 1935. WSP 1301: 1928-35(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	730	3,480	14,500	2,300	1,800	1,850	9,210	5,630	1,440	1,680	1,310	626
2	958	4,710	9,630	1,800	1,850	1,850	12,500	5,510	1,400	1,340	1,280	633
3	1,610	4,240	7,280	2,000	1,850	1,700	13,700	5,190	1,510	907	1,110	598
4	1,000	3,510	5,990	4,240	1,800	1,550	14,000	4,400	1,300	1,260	938	584
5	490	3,320	4,790	4,770	1,800	1,650	18,400	*4,130	986	1,410	863	565
6	1,410	3,700	4,300	3,790	1,750	1,600	20,400	3,930	1,240	1,310	872	643
7	2,270	5,860	4,670	2,900	1,700	1,600	16,800	3,700	1,460	1,150	1,210	693
8	4,370	6,700	5,710	*2,400	1,700	1,550	11,100	3,100	1,440	1,120	1,110	577
9	5,860	4,850	5,370	2,100	1,650	1,500	7,540	2,920	*1,010	969	757	507
10	3,800	3,710	4,710	2,200	1,600	1,400	5,960	3,060	824	916	870	542
11	2,680	3,200	4,260	2,650	*1,750	1,450	5,010	3,110	918	*945	907	514
12	2,260	2,890	3,360	2,700	2,410	1,400	5,000	2,870	666	870	860	1,450
13	2,150	2,820	4,700	2,600	3,260	1,400	6,320	2,650	657	716	752	2,920
14	2,370	2,740	6,920	2,650	3,020	1,400	7,090	2,900	760	690	830	3,960
15	2,280	3,530	5,000	2,650	2,600	1,450	10,300	3,350	849	1,180	644	2,590
16	2,030	5,760	4,980	2,650	2,200	1,300	12,800	8,260	2,090	926	745	1,720
17	1,970	4,580	5,320	2,700	2,100	1,150	15,500	8,660	2,220	693	715	1,090
18	1,910	4,300	4,700	2,600	2,160	1,100	18,700	6,090	2,370	659	655	768
19	2,290	3,960	4,240	2,550	2,100	1,100	24,400	4,500	2,230	1,140	655	520
20	2,370	3,280	3,890	2,600	2,000	1,150	25,500	3,640	1,800	1,530	640	445
21	2,190	2,900	2,600	2,550	2,000	1,200	18,100	3,010	1,440	1,550	745	601
22	2,270	2,580	2,300	2,500	1,950	1,200	11,800	2,530	952	1,210	708	584
23	2,380	2,390	2,500	2,400	1,950	1,150	10,300	2,230	1,150	1,120	965	547
24	3,240	2,580	2,600	2,200	1,950	1,150	9,870	1,840	1,110	1,060	1,090	589
25	11,100	6,630	2,700	2,050	1,850	1,100	9,960	1,840	3,040	1,020	1,620	466
26	*11,800	10,500	2,800	2,000	1,850	1,100	10,800	2,420	6,390	814	1,370	672
27	*8,800	8,530	3,000	1,950	1,850	1,000	9,700	1,930	4,460	818	*916	854
28	*5,860	8,960	3,050	1,900	1,900	1,150	7,930	2,060	2,860	818	614	664
29	4,360	16,400	3,000	1,900	1,850	1,150	6,800	1,120	2,010	809	351	500
30	3,390	18,000	2,900	1,900	--------	1,200	6,170	1,050	1,760	819	431	428
31	2,860	--------	2,900	1,900	--------	2,300	--------	1,580	--------	1,400	619	--------
Total	103,058	160,610	144,670	78,100	58,240	42,850	361,660	109,210	52,342	32,849	27,152	27,850
Mean	3,324	5,354	4,667	2,519	2,008	1,382	12,060	3,523	1,745	1,060	876	928
(†)	+71.3	+621	-961	-928	-601	-336	+1,685	+558	+344	-92.0	-394	-80.1

Adjusted for change in reservoir contents

Mean	3,396	5,975	3,706	1,591	1,407	1,047	13,740	4,081	2,089	968	482	848
Cfsm	2.24	3.95	2.45	1.05	0.929	0.692	9.08	2.70	1.38	0.639	0.318	0.560
In.	2.59	4.40	2.82	1.21	1.00	0.80	10.13	3.11	1.54	0.74	0.37	0.63

	Observed			Adjusted			
Calendar year 1959:	Max 18,000	Min 431	Mean 3,044	Mean 3,128	Cfsm 2.07	In. 28.04	
Water year 1959-60:	Max 25,500	Min 351	Mean 3,275	Mean 3,262	Cfsm 2.15	In. 29.34	

Peak discharge (base, 16,500 cfs).--Nov. 30 (9:30 a.m.) 18,400 cfs; Apr. 6 (1 a.m.) 20,700 cfs (18.07 ft); Apr. 20 (2:30 a.m.) 27,400 cfs (20.26 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes and Lake Francis.
Note.--Stage-discharge relation affected by ice Dec. 21 to Jan. 3, Jan. 7 to Feb. 10, Feb. 15 to Mar. 31.

1330. East Branch Passumpsic River near East Haven, Vt.

Location.--Lat 44°38'02", long 71°53'53", on right bank in Burke, Caledonia County, 2.1 miles south of East Haven, Essex County.

Drainage area.--53.8 sq mi.

Records available.--July 1939 to October 1945, October 1948 to September 1960. Prior to October 1951, published as Passumpsic River near East Haven.

Gage.--Water-stage recorder. Datum of gage is 945.88 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--18 years, 102 cfs.

Extremes.--Maximum discharge during year, 2,200 cfs Apr. 18 (gage height, 6.28 ft), from rating curve extended above 1,200 cfs by logarithmic plotting; minimum, 17 cfs Sept. 9, 10.
1939-45, 1948-60: Maximum discharge, that of Apr. 18, 1960; minimum, 13 cfs Sept. 1-5, 1953.
Maximum stage known, about 12.6 ft sometime in November 1927, from information by local resident.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions.--WSP 1141: Drainage area.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 15				Nov. 16 to Sept. 30			
1.0	29	2.0	160	0.7	14	2.0	172
1.2	43	3.0	415	.9	24	3.0	425
1.6	87	4.0	780	1.2	47	4.0	780
				1.5	81	5.0	1,280

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	260	242	60	50	49	482	258	130	73	57	20
2	58	230	207	60	49	47	320	270	176	62	42	21
3	38	180	189	250	48	46	262	*218	108	59	37	19
4	34	160	176	210	48	44	533	198	*87	64	32	20
5	32	140	164	140	51	46	580	180	78	59	36	24
6	90	160	162	110	52	47	355	166	205	65	55	21
7	247	250	216	98	58	45	240	152	110	56	37	19
8	364	180	216	92	56	43	193	142	84	50	42	18
9	166	160	170	84	54	42	172	142	72	50	37	17
10	111	150	156	*84	51	40	156	154	66	44	32	28
11	86	130	142	84	*140	40	150	142	62	*41	29	23
12	113	125	176	82	230	42	189	130	57	39	27	121
13	90	120	365	80	150	43	245	138	53	43	25	275
14	73	120	216	78	110	41	265	140	50	41	25	105
15	63	210	189	74	90	40	549	438	105	36	25	59
16	59	*190	170	72	78	42	620	732	124	33	27	43
17	63	170	150	68	70	40	830	325	81	32	*23	36
18	93	168	138	64	64	39	1,220	242	147	33	22	32
19	77	138	130	60	68	39	755	195	98	76	21	*32
20	67	122	110	58	66	39	434	164	74	65	24	32
21	80	117	90	56	62	39	386	144	67	47	29	32
22	67	115	85	56	60	39	476	130	58	39	34	31
23	116	111	76	54	58	39	419	122	52	78	42	29
24	482	187	74	52	54	39	419	122	160	50	34	27
25	625	540	73	52	54	39	548	122	437	40	27	26
26	361	322	72	52	53	40	422	108	272	34	24	25
27	280	223	72	51	51	42	340	98	144	32	23	25
28	188	1,100	70	51	50	44	308	90	96	40	21	23
29	*144	582	67	51	50	*51	280	82	78	33	21	23
30	130	315	64	50	------	72	252	77	92	47	23	37
31	150	------	60	49	------	390	------	76	------	119	20	------
Total	4,589	6,975	4,487	2,482	2,075	1,688	12,400	5,697	3,423	1,580	953	1,243
Mean	148	232	145	80.1	71.6	54.5	413	184	114	51.0	30.7	41.4
Cfsm	2.75	4.31	2.70	1.49	1.33	1.01	7.68	3.42	2.12	0.948	0.571	0.770
In.	3.17	4.82	3.10	1.72	1.43	1.17	8.57	3.94	2.37	1.09	0.66	0.86

Calendar year 1959: Max 1,100 Min 20 Mean 118 Cfsm 2.19 In. 29.68
Water year 1959-60: Max 1,220 Min 17 Mean 130 Cfsm 2.42 In. 32.90

Peak discharge (base, 800 cfs).--Oct. 24 (11 to 11:30 p.m.) 1,260 cfs (4.97 ft); Nov. 28 (4 p.m.) 2,080 cfs (6.13 ft); Apr. 18 (7 to 8 p.m.) 2,200 cfs (6.28 ft); May 16 (1 a.m.) 1,230 cfs (4.92 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 30 to Nov. 16, Jan. 6-10; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for stations on nearby streams. Stage-discharge relation affected by ice Dec. 21 to Mar. 28, Mar. 31.

1345. Moose River at Victory, Vt.

Location.--Lat 44°30'40", long 71°50'15", on right bank at Victory, Essex County, 2.7 miles upstream from highway bridge.

Drainage area.--75.2 sq mi.

Records available.--January 1947 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,103.99 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--13 years, 142 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Nov. 29 (gage height, 10.21 ft); minimum, 4.8 cfs Sept. 3.
1947-60: Maximum discharge, 2,940 cfs Apr. 21, 1950 (gage height, 10.89 ft), from rating curve extended above 1,600 cfs by logarithmic plotting; minimum, 3.7 cfs Sept. 16, 17, 1948.

Remarks.--Records good except those for period of ice effect, which are fair.

Revisions.--WSP 1381: Drainage area.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28				Nov. 29 to Sept. 30			
2.9	16	5.0	225	2.5	5.5	5.0	216
3.0	20	6.0	443	2.7	10	6.0	432
3.5	50	7.0	765	3.0	21	7.0	790
4.0	92	9.0	1,750	3.5	51	8.0	1,280
4.5	150			4.0	92	10.0	2,610
				4.5	145		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	344	419	64	52	54	1,020	256	65	54	49	7.0
2	46	358	272	68	52	53	1,300	321	231	41	27	8.5
3	36	252	219	110	51	51	835	243	135	38	20	5.5
4	26	184	194	340	51	50	804	206	89	87	15	5.5
5	22	192	173	280	51	49	1,380	*185	65	65	14	6.6
6	46	213	161	175	51	50	1,200	162	58	68	58	7.0
7	164	494	172	125	54	48	750	143	50	54	40	7.0
8	427	425	229	105	56	46	484	128	39	41	25	6.6
9	273	244	173	92	53	45	321	125	*35	36	20	6.1
10	142	184	149	84	51	44	256	145	32	29	17	6.1
11	91	151	134	*79	70	43	219	135	29	*25	15	6.6
12	88	145	128	77	270	44	258	118	27	23	13	27
13	88	146	374	74	250	45	385	131	24	22	11	336
14	67	131	520	72	160	43	427	143	22	23	10	165
15	55	348	307	70	120	41	679	197	51	21	9.8	83
16	49	320	218	67	100	42	1,410	1,230	222	18	9.8	48
17	46	223	185	64	88	41	1,390	795	114	16	9.8	*31
18	110	263	161	63	78	40	1,910	375	190	15	8.6	26
19	102	194	144	62	80	40	2,060	239	146	23	7.0	23
20	*76	155	130	61	76	39	894	179	79	58	7.2	22
21	84	137	90	60	72	39	558	146	59	38	9.8	22
22	71	130	75	59	69	39	576	122	45	25	16	21
23	106	120	66	58	66	39	598	111	36	21	21	19
24	403	150	68	57	63	39	562	107	33	19	18	17
25	1,220	574	70	56	62	39	622	119	321	15	14	16
26	841	935	80	55	60	39	730	99	383	13	11	15
27	505	474	72	54	58	40	487	83	164	12	9.4	14
28	313	899	70	53	57	40	370	71	85	12	8.4	13
29	206	*2,100	68	52	56	*41	330	61	57	13	7.8	12
30	156	795	66	52	-------	58	276	52	52	13	8.8	13
31	158	-------	64	52	-------	320	-------	48	-------	73	7.6	-------
Total	6,033	11,280	5,251	2,740	2,377	1,641	23,091	6,475	2,938	1,011	518.0	994.5
Mean	195	376	169	88.4	82.0	52.9	770	209	97.9	32.6	16.7	33.2
Cfsm	2.59	5.00	2.25	1.18	1.09	0.703	10.0	2.78	1.30	0.434	0.222	0.441
In.	2.98	5.58	2.60	1.36	1.18	0.81	11.42	3.20	1.45	0.50	0.26	0.49

Calendar year 1959: Max 2,100 Min 6.3 Mean 161 Cfsm 2.14 In. 29.10
Water year 1959-60: Max 2,100 Min 5.5 Mean 176 Cfsm 2.34 In. 31.83

Peak discharge (base, 1,000 cfs).--Oct. 25 (11 a.m. to 12 m.) 1,520 cfs (8.61 ft); Nov. 26 (3 to 4:30 a.m.) 1,100 cfs (7.77 ft); Nov. 29 (2 to 3 a.m.) 2,780 cfs (10.21 ft); Apr. 1 (11 p.m.) 1,590 cfs (8.52 ft); Apr. 5 (3:30 p.m.) 1,460 cfs (8.30 ft); Apr. 19 (3 a.m.) 2,670 cfs (10.08 ft); May 16 (12:30 to 1:30 p.m.) 1,610 cfs (8.55 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21 to Mar. 31 (no gage-height record Feb. 12 to Mar. 29; discharge estimated on basis of 1 discharge measurement, weather records, and records for Moose River at St. Johnsbury, East Branch Passumpsic River near East Haven, Ammonoosuc River near Bethlehem Junction, N. H., and stations on other nearby streams)

1350. Moose River at St. Johnsbury, Vt.

Location.--Lat 44°25'20", long 72°00'05", on left bank at St. Johnsbury, Caledonia County, half a mile upstream from mouth.
Drainage area.--128 sq mi.
Records available.--August 1928 to September 1960.
Gage.--Water-stage recorder. Altitude of gage is 585 ft (from topographic map). Prior to Nov. 16, 1934, chain gage at site a quarter of a mile upstream at different datum.
Average discharge.--32 years, 222 cfs.
Extremes.--Maximum discharge during year, 3,430 cfs Nov. 29 (gage height, 3.99 ft); maximum gage height, 7.40 ft Mar. 31 (ice jam); minimum discharge, 8.3 cfs Sept. 3 or 4 (occurred during period of no gage-height record).
1928-60: Maximum discharge, 5,800 cfs Apr. 30, 1929 (gage height, 8.3 ft, from graph based on gage readings, site and datum then in use), from rating curve extended above 3,400 cfs; minimum, 6.2 cfs Sept. 17, 18, 1948, Aug. 27, 28, 1949.
Revisions.--The maximum discharge for the water year 1959 has been revised to 2,170 cfs Apr. 4, 1959 (gage height, 3.81 ft), superseding figure published in WSP 1621.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.
Revisions (water years).--WSP 1231: 1929-30, 1931-34(M). WSP 1381: Drainage area.
Revised figures of discharge for the water year 1959, superseding those published in WSP 1621, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1959		1959-Con.		1959-Con.	
Apr. 4	1,400	Apr. 10	1,230	Apr. 16	964
5	1,450	11	1,230	17	1,290
6	1,400	12	1,400	18	1,340
7	1,230	13	1,020	19	1,290
8	1,290	14	1,070	20	1,180
9	1,180	15	964	21	1,180

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
April 1959.....	30,266	1,450	170	1,009	7.88	8.79
Water year 1958-59.....	-	1,450	8.7	183	1.43	19.34

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	499	846	100	86	96	1,900	414	80	83	82	12
2	60	635	545	105	86	93	2,400	514	214	64	45	13
3	60	441	454	200	85	90	1,500	427	192	59	33	8.5
4	43	281	355	500	84	87	1,350	*316	126	113	25	8.5
5	35	274	297	430	84	85	2,500	258	96	102	23	10
6	69	390	274	290	84	86	2,200	218	78	92	90	11
7	253	814	297	200	90	84	1,400	190	*73	83	65	11
8	681	750	389	165	92	82	820	176	55	64	40	10
9	499	483	281	145	88	80	550	172	52	*55	32	9.5
10	217	289	246	135	85	77	430	182	49	48	27	9.5
11	140	227	205	*125	115	76	380	185	44	41	23	10
12	123	205	202	120	470	76	400	167	40	38	20	40
13	127	202	704	115	450	80	650	169	37	36	17	370
14	100	195	814	115	300	76	750	190	32	38	15	268
15	82	499	530	110	230	72	1,150	295	60	36	14	133
16	73	499	389	110	180	73	2,300	1,860	250	30	14	80
17	71	400	297	105	150	72	2,300	1,810	170	26	14	52
18	136	468	239	105	140	70	3,200	624	210	24	13	42
19	150	316	214	100	145	70	3,300	343	180	32	11	37
20	115	214	185	100	135	70	1,600	251	115	70	11	36
21	113	202	135	98	125	68	940	200	90	61	16	36
22	105	195	115	97	120	68	970	174	68	44	25	34
23	167	*188	100	95	115	68	1,000	160	56	34	33	31
24	692	246	105	94	110	68	950	160	55	30	29	28
25	1,400	910	110	93	105	68	1,050	168	262	25	22	26
26	1,100	964	125	92	105	70	1,230	150	390	21	18	24
27	878	846	110	90	100	72	846	125	205	19	15	23
28	599	2,120	110	88	100	74	635	107	116	19	14	21
29	325	*3,050	105	87	100	*78	563	93	82	20	*14	19
30	*227	*1,450	100	86	-------	105	468	82	91	21	14	21
31	240	-------	100	86	-------	600	-------	76	-------	120	14	-------
Total	8,908	18,252	8,978	4,381	4,159	2,934	39,732	10,256	3,568	1,548	828	1,434.0
Mean	287	608	290	141	143	94.6	1,324	331	119	49.9	26.7	47.8
Cfsm	2.24	4.75	2.27	1.10	1.12	0.739	10.3	2.59	0.930	0.390	0.209	0.373
In.	2.59	5.30	2.61	1.27	1.21	0.85	11.54	2.98	1.04	0.45	0.24	0.42

Calendar year 1959: Max 3,050 Min 8.7 Mean 247 Cfsm 1.93 In. 26.18
Water year 1959-60: Max 3,300 Min 8.5 Mean 287 Cfsm 2.24 In. 30.50

Peak discharge (base, 1,700 cfs).--Oct. 25 (6:30 p.m.) 2,450 cfs (3.85 ft); Nov. 29 (3:30 p.m.) 3,430 cfs (3.99 ft); Apr. 2 (time unknown) about 2,800 cfs; Apr. 5 (time unknown) about 2,700 cfs; Apr. 19 (time unknown) about 3,400 cfs; May 16 (6:30 to 9:30 p.m.) 2,310 cfs (3.94 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 24, 28-30, Jan. 5-10, Mar. 27-29, Apr. 2-25, June 15-21, July 25 to Aug. 28, Sept. 1-13, 16-30; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for station at Victory. Stage-discharge relation affected by ice Dec. 21 to Apr. 1.

1355. Passumpsic River at Passumpsic, Vt.

Location.--Lat 44°21'55", long 72°02'20", on right bank 0.7 mile upstream from Andrick Brook and 1 mile downstream from dam and village of Passumpsic, Caledonia County.

Drainage area.--436 sq mi.

Records available.--October 1928 to September 1960. Monthly discharge only for October 1928, published in WSP 1301.

Gage.--Water-stage recorder. Altitude of gage is 490 ft (from topographic map).

Average discharge.--32 years, 732 cfs.

Extremes.--Maximum discharge during year, 9,080 cfs Nov. 28 (gage height, 13.75 ft); minimum daily, 65 cfs Sept. 3.
1928-60: Maximum discharge, 16,000 cfs Mar. 18, 1936 (gage height, 21.23 ft), from rating curve extended above 9,200 cfs on basis of computation of peak flow over dam; minimum daily, 18 cfs Sept. 12, 1948.
Maximum stage known, about 31.5 ft in November 1927, from information by local resident.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by powerplants above station.

Revisions (water years).--WSP 781: 1933(M). WSP 871: Drainage area. WSP 1231: 1929, 1930-31(M).

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
1.9	132	3.0	535	1.4	55	5.0	1,820
2.2	193	5.0	1,880	2.0	152	8.0	4,130
2.5	292	7.0	3,330	2.5	302	12.0	7,500
				3.0	525		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	1,500	2,080	430	350	350	5,000	1,500	476	427	435	104
2	335	1,480	1,600	430	350	340	4,000	1,600	934	346	248	111
3	230	1,470	1,440	1,800	340	330	3,420	*1,300	706	289	207	65
4	192	959	1,340	1,500	340	310	4,890	1,110	534	450	167	83
5	192	931	1,220	1,000	360	320	6,150	994	462	378	182	99
6	301	1,130	1,180	800	370	340	4,510	910	644	356	350	119
7	1,040	2,240	1,320	700	380	320	2,840	802	536	340	274	94
8	2,310	1,580	1,600	650	400	310	2,170	742	406	287	221	93
9	1,290	1,140	1,210	580	380	300	1,810	736	381	270	201	103
10	759	917	1,060	*560	360	290	1,610	924	328	204	165	87
11	530	814	973	560	600	290	1,410	814	*315	242	179	67
12	513	772	892	540	1,600	300	1,840	730	294	216	153	315
13	535	778	2,510	540	1,100	310	2,420	754	271	218	151	1,610
14	435	730	2,020	520	800	300	2,420	868	241	210	101	820
15	357	1,500	1,340	500	650	290	3,600	1,230	342	206	154	463
16	317	1,260	1,320	500	550	300	4,840	5,030	796	156	137	301
17	285	1,070	1,150	480	500	290	5,080	2,950	565	139	130	237
18	513	1,270	966	460	460	280	6,750	1,720	1,110	210	131	177
19	557	938	917	430	490	280	6,890	1,260	766	178	113	205
20	435	784	802	410	470	280	4,000	994	502	426	68	200
21	445	754	650	400	450	280	2,500	826	405	285	110	190
22	425	*724	600	400	430	280	3,000	718	340	224	230	200
23	566	712	540	380	410	280	2,800	682	301	195	242	168
24	3,010	952	540	370	390	280	2,700	706	288	209	187	140
25	5,930	3,080	520	370	370	280	3,500	856	1,890	203	158	166
26	3,370	3,080	520	370	380	290	2,600	665	1,490	170	145	174
27	2,210	1,760	520	360	360	300	2,300	575	816	121	88	137
28	*1,440	5,710	500	360	360	320	2,000	520	522	160	100	126
29	1,070	6,820	480	360	350	360	1,700	471	410	165	148	146
30	892	3,160	460	350	------	500	1,500	430	412	211	*105	156
31	898	------	430	340	------	3,000	------	417	------	722	103	------
Total	31,526	50,015	32,700	17,450	14,350	12,300	100,250	33,834	17,483	8,211	5,383	6,956
Mean	1,017	1,667	1,055	563	495	397	3,342	1,091	583	265	174	232
Cfsm	2.33	3.82	2.42	1.29	1.14	0.911	7.67	2.50	1.34	0.608	0.399	0.532
In.	2.69	4.27	2.79	1.49	1.22	1.05	8.55	2.89	1.49	0.70	0.46	0.59

Calendar year 1959: Max 6,820 Min 79 Mean 833 Cfsm 1.91 In. 25.94
Water year 1959-60: Max 6,890 Min 65 Mean 903 Cfsm 2.07 In. 28.19

Peak discharge (base, 5,000 cfs).--Oct. 25 (4 to 4:30 a.m.) 7,390 cfs (11.88 ft); Nov. 28 (9 to 9:30 p.m.) 9,080 cfs (13.75 ft); Apr. 1 (time unknown) about 5,500 cfs; Apr. 5 (3:30 to 4 p.m.) 6,560 cfs (10.95 ft); Apr. 19 (2 to 3:30 a.m.) 8,630 cfs (13.26 ft); May 16 (8:30 to 10 a.m.) 5,850 cfs (10.15 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 24 to Jan. 10, Apr. 20 to May 3, Aug. 21; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage when available, and records for stations on nearby streams. Stage-discharge relation affected by ice Dec. 21 to Apr. 2.

1375. Ammonoosuc River at Bethlehem Junction, N. H.

Location.--Lat 44°16'10", long 71°37'50", on left bank 0.25 mile upstream from Pierce Bridge and Bethlehem Junction, 0.8 mile upstream from unnamed tributary entering from left, 3 miles east of Bethlehem, Grafton County, and 3.4 miles downstream from Little River.

Drainage area.--87.6 sq mi.

Records available.--August 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 1,180.74 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--21 years, 212 cfs.

Extremes.--Maximum discharge during year, 10,800 cfs Oct. 24 (gage height, 12.09 ft), from rating curve extended above 4,100 cfs on basis of slope-area measurement of peak flow; minimum, 22 cfs Sept. 9, 10.

1939-60: Maximum discharge, that of Oct. 24, 1959; minimum, 16 cfs Nov. 14, 1952 (caused by anchor ice upstream).

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1301	1951	Nov. 26, 1950	8,690	10.86
1371	1953	Mar. 27, 1953	9,270	11.22
1331	1954	Sept.11, 1954	8,300	10.62

Remarks.--Records excellent except those for periods of ice effect, which are fair.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	21	2.5	255	7.0	3,220
1.0	27	3.0	400	8.0	4,500
1.2	42	4.0	785	9.0	5,830
1.5	75	5.0	1,310		
2.0	150	6.0	2,110		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	502	456	90	69	65	1,370	536	168	73	94	26
2	143	397	367	100	67	64	785	494	181	63	64	25
3	80	276	319	660	65	66	588	393	150	65	53	25
4	59	229	286	*500	62	66	1,500	*460	154	106	49	25
5	51	243	255	250	62	64	2,050	508	130	*78	48	28
6	141	260	238	175	65	63	955	498	130	74	64	26
7	170	668	659	160	70	62	536	488	108	65	51	25
8	166	377	586	155	*66	61	390	519	99	61	46	23
9	112	278	322	120	66	60	325	881	92	59	45	23
10	95	236	260	110	63	59	278	1,050	88	52	42	23
11	80	206	220	115	150	59	245	536	*82	48	44	24
12	105	206	224	115	470	59	328	484	76	46	40	249
13	98	198	1,010	110	250	58	421	602	71	59	37	865
14	80	332	486	110	160	57	414	608	67	63	36	248
15	71	1,060	319	105	110	56	1,200	2,000	132	59	36	145
16	67	424	286	100	100	56	1,150	2,490	296	46	40	104
17	67	348	245	94	95	57	1,710	977	136	42	36	84
18	101	339	210	92	*90	57	2,600	632	108	42	33	76
19	*91	263	190	90	80	57	1,240	470	99	47	32	74
20	75	220	160	87	85	57	672	377	85	55	32	82
21	102	202	120	84	85	57	556	316	82	51	34	101
22	82	189	100	82	80	54	862	268	73	42	33	83
23	115	*178	90	79	77	55	862	243	67	40	35	71
24	*4,730	285	93	76	74	*56	770	267	70	39	35	65
25	2,660	1,810	100	74	72	55	1,100	608	174	36	31	61
26	830	761	110	73	67	54	816	342	155	34	29	56
27	516	410	100	72	75	55	652	265	99	33	*28	55
28	364	2,840	98	72	71	56	648	224	79	40	26	53
29	276	1,330	96	72	68	58	588	198	67	36	26	50
30	229	640	93	71	-------	120	522	176	73	42	28	59
31	266	-------	90	70	-------	*1,850	-------	163	-------	239	28	-------
Total	12,104	15,707	8,188	4,163	2,914	3,673	26,133	18,073	3,391	1,835	1,255	2,854
Mean	390	524	264	134	100	118	871	583	113	59.2	40.5	95.1
Cfsm	4.45	5.98	3.01	1.53	1.14	1.35	9.94	6.66	1.29	0.676	0.462	1.09
In.	5.14	6.67	3.48	1.77	1.24	1.56	11.09	7.67	1.44	0.78	0.53	1.21

Calendar year 1959: Max 4,730 Min 28 Mean 228 Cfsm 2.60 In. 35.35
Water year 1959-60: Max 4,730 Min 23 Mean 274 Cfsm 3.13 In. 42.58

Peak discharge (base, 2,700 cfs).--Oct. 24 (9 p.m.) 10,800 cfs (12.09 ft); Nov. 28 (1:30 p.m.) 4,990 cfs (8.38 ft); Mar. 31 (4 p.m.) 2,790 cfs (6.64 ft); Apr. 18 (6:30 p.m.) 3,220 cfs (7.00 ft); May 15 (11 p.m.) 5,290 cfs (8.61 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 11, Dec. 18 to Mar. 31.

1380. Ammonoosuc River near Bath, N. H.

Location.--Lat 44°09'15", long 71°59'10", on left bank 0.4 mile downstream from Wild Ammonoosuc River and 1½ miles downstream from Bath, Grafton County.

Drainage area.--395 sq mi.

Records available.--September 1935 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 454.14 ft above mean sea level, datum of 1929 (levels by Connecticut River Power Co.).

Average discharge.--25 years, 674 cfs.

Extremes.--Maximum discharge during year, 23,500 cfs Oct. 25 (gage height, 14.28 ft), from rating curve extended above 13,000 cfs as explained below; minimum daily, 63 cfs Sept. 8-10.
1935-60: Maximum discharge, 27,900 cfs Mar. 18, 1936 (gage height, 15.40 ft), from rating curve extended above 13,000 cfs on basis of slope-area measurement at gage height 14.28 ft; minimum daily, 35 cfs Sept. 15, 1957.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diurnal fluctuation at low flow caused by small powerplants above station.

Revisions.--WSP 871: Drainage area.

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 3-27, 29, 30, Dec. 1-19)

Oct. 1-24				Oct. 25 to Sept. 30			
1.5	163	5.0	2,230	0.9	61	5.0	1,900
2.0	309	7.0	4,690	1.4	158	7.0	4,600
3.0	770	8.0	6,380	2.0	322	9.0	8,360
4.0	1,400			3.0	645	10.0	10,700
				4.0	1,100		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	1,470	1,520	370	280	275	7,180	1,170	422	270	422	70
2	550	1,430	1,180	410	270	270	4,300	*1,250	500	216	232	68
3	362	1,010	1,070	1,500	260	260	3,180	1,030	454	187	170	68
4	220	824	975	2,000	255	265	6,260	975	409	414	147	70
5	178	784	895	850	255	260	8,580	1,060	383	339	145	77
6	267	816	836	600	265	260	4,500	1,020	383	273	160	71
7	690	1,730	1,190	600	280	255	2,440	975	319	208	158	68
8	803	1,300	1,770	550	270	250	1,840	980	*270	192	186	63
9	545	975	1,050	*470	260	250	1,510	1,210	235	180	123	63
10	401	828	860	450	*245	240	1,330	1,910	230	168	130	63
11	339	744	768	470	700	240	1,170	1,150	219	149	130	70
12	272	712	764	470	1,600	240	1,410	975	195	*136	120	412
13	320	704	3,280	460	800	235	1,880	1,050	190	187	110	1,740
14	256	688	1,880	450	600	235	1,800	1,180	170	284	100	724
15	218	2,240	1,080	430	450	235	3,160	1,740	307	230	95	528
16	186	1,230	998	400	410	235	3,500	6,180	776	170	100	292
17	170	*980	872	380	390	235	3,620	2,540	513	134	*95	247
18	190	1,110	792	370	370	230	5,440	1,580	480	138	91	221
19	247	856	736	360	350	230	3,780	1,210	406	151	88	*150
20	210	752	600	350	330	230	1,900	975	313	205	90	185
21	221	684	500	340	320	230	1,430	832	267	195	92	262
22	230	666	430	330	310	230	1,620	736	213	145	88	258
23	265	642	380	320	315	230	1,730	670	198	134	95	208
24	6,380	794	400	310	305	230	1,670	704	203	132	95	180
25	*10,200	4,310	420	305	300	230	2,400	1,030	717	128	82	172
26	2,940	2,560	460	300	290	210	2,240	848	530	120	80	154
27	1,760	1,280	420	300	305	230	1,580	676	390	115	76	149
28	*1,250	7,080	410	300	290	230	1,540	590	267	130	72	143
29	980	5,590	400	300	280	250	1,360	520	219	120	70	136
30	832	2,210	380	300	-------	*520	1,200	474	205	140	77	145
31	842	-------	370	290	-------	6,200	-------	474	-------	659	77	-------
Total	32,528	46,999	27,686	15,335	11,355	13,720	85,550	37,714	10,383	6,249	3,796	7,057
Mean	1,049	1,567	893	495	392	443	2,852	1,217	346	202	122	235
Cfsm	2.66	3.97	2.26	1.25	0.992	1.12	7.22	3.08	0.876	0.511	0.309	0.595
In.	3.06	4.43	2.61	1.44	1.07	1.29	8.05	3.55	0.98	0.59	0.36	0.66

Calendar year 1959: Max 10,200 Min 80 Mean 678 Cfsm 1.72 In. 23.31
Water year 1959-60: Max 10,200 Min 63 Mean 815 Cfsm 2.06 In. 28.09

Peak discharge (base, 6,500 cfs).--Oct. 25 (1 a.m.) 23,500 cfs (14.28 ft); Nov. 28 (7 to 8 p.m.) 13,400 cfs (11.11 ft); Mar. 31 (9 p.m.) 10,700 cfs (10.02 ft); Apr. 5 (10 a.m.) 9,460 cfs (9.49 ft); May 16 (5:30 a.m.) 8,760 cfs (9.18 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 29 to Jan. 5, Jan. 20, 21, July 26-30, Aug. 11 to Sept. 11, Sept. 19; discharge estimated on basis of 2 discharge measurements, weather records, and records for Ammonoosuc River at Bethlehem Junction, N. H., and Wells River at Wells River, Vt. Stage-discharge relation affected by ice Dec. 20 to Mar. 31.

1385. Connecticut River at Wells River, Vt.

Location.--Lat 44°09'15", long 72°02'35", on right bank 200 ft downstream from bridge on U. S. Highway 302, at Wells River, Orange County, 400 ft upstream from Wells River, and 1,200 ft downstream from Ammonoosuc River.
Drainage area.--2,644 sq mi.
Records available.--October 1949 to September 1960. Monthly discharge only for October and November 1949, published in WSP 1301.
Gage.--Water-stage recorder. Datum of gage is 399.75 ft above mean sea level, datum of 1929.
Average discharge.--11 years, 4,905 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 37,000 cfs Apr. 5 (gage height, 11.82 ft); minimum daily, 152 cfs Aug. 28.
1949-60: Maximum discharge, 54,000 cfs Mar. 27, 1953 (gage height, 15.93 ft); minimum daily, that of Aug. 28, 1960.
Remarks.--Records good. Flow regulated by powerplants, by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir, and Comerford Station Pond (see p. 247), and other reservoirs (combined usable capacity, about $14\frac{3}{4}$ billion cubic feet).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	130	3.0	2,920
.7	257	4.0	5,100
1.0	447	6.0	11,900
1.5	880	9.0	24,300
2.0	1,450	12.0	37,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,180	6,770	20,600	1,800	3,490	5,000	20,700	6,520	3,190	2,710	1,500	1,740
2	2,120	9,400	15,300	1,400	5,200	4,000	19,800	*8,170	3,100	2,380	1,940	1,390
3	2,140	8,060	12,800	4,860	4,360	4,600	17,200	9,320	4,510	1,170	2,070	441
4	1,530	6,980	12,100	8,870	3,800	3,200	21,200	7,470	2,840	850	1,930	418
5	1,020	6,840	7,690	9,040	2,900	2,600	34,000	7,190	1,340	1,850	1,830	370
6	2,410	7,050	4,340	7,890	2,500	1,300	27,700	7,300	2,200	2,460	1,740	473
7	3,480	12,600	7,960	7,750	1,500	2,300	18,400	5,440	2,570	2,440	573	980
8	9,100	8,420	10,700	*7,400	2,400	3,200	16,500	3,320	*2,400	2,410	1,390	830
9	12,100	7,440	10,400	5,750	4,200	3,200	10,800	7,170	2,300	2,230	2,260	780
10	5,330	7,750	9,010	3,000	4,500	3,500	6,520	8,100	1,810	1,100	2,140	619
11	2,250	5,720	7,750	6,800	4,700	4,100	8,420	7,330	1,520	1,090	2,040	207
12	2,190	5,950	6,160	7,300	6,400	2,600	10,600	6,460	840	*1,620	1,650	1,700
13	3,220	6,640	10,500	7,200	3,800	1,400	12,500	5,600	1,520	2,010	1,090	5,820
14	3,520	3,820	13,400	5,600	3,000	1,950	13,100	3,990	1,530	1,900	463	4,700
15	3,700	6,370	12,300	5,900	6,200	3,200	14,500	4,120	1,940	1,930	610	3,280
16	3,080	10,700	10,400	2,800	5,400	3,200	17,400	16,700	3,520	1,510	1,410	2,810
17	2,050	8,420	10,100	2,200	6,310	3,800	18,300	16,000	2,860	833	1,500	1,940
18	1,060	8,140	9,660	5,860	6,460	3,300	21,900	11,400	2,840	1,140	1,400	889
19	3,320	8,030	5,960	6,020	5,650	2,400	30,900	9,260	1,800	1,740	1,290	1,100
20	4,310	7,400	3,100	6,280	3,100	1,200	31,800	7,400	2,580	1,940	665	2,150
21	4,240	*3,170	5,000	6,000	1,700	2,800	23,800	4,320	3,230	1,690	186	2,280
22	3,750	2,730	6,300	5,000	3,100	3,700	17,100	2,990	3,060	1,790	1,120	2,140
23	3,460	5,500	5,800	3,000	5,450	3,700	15,300	5,470	2,990	1,420	1,360	1,490
24	11,300	6,940	2,400	2,620	5,720	3,300	12,900	5,100	2,550	654	1,450	1,050
25	28,700	13,900	1,600	4,150	5,800	2,500	14,900	6,220	4,930	1,260	1,530	581
26	19,300	16,600	1,550	5,080	4,300	2,300	16,300	5,500	6,190	1,670	1,260	960
27	*15,600	13,600	1,800	5,650	2,800	1,200	14,700	3,190	6,910	1,800	551	1,510
28	11,000	22,300	6,170	5,820	1,400	1,900	12,500	2,860	4,900	1,730	*152	1,400
29	6,910	32,000	6,100	4,600	3,100	3,320	12,000	1,850	4,190	1,520	1,120	1,490
30	6,220	25,200	5,700	2,200	-------	*3,720	8,660	940	3,770	1,380	1,590	1,450
31	3,700	-------	5,000	1,380	-------	12,700	-------	2,880	-------	2,010	1,760	-------
Total	183,290	294,440	247,650	159,220	119,040	101,190	520,400	199,580	89,930	52,237	41,570	46,988
Mean	5,913	9,815	7,989	5,136	4,105	3,264	17,350	6,438	2,998	1,685	1,341	1,566
(†)	+169	+696	-1,065	-1,590	-1,004	-944	+3,326	+655	+317	-128	-487	-90.3

Adjusted for change in reservoir contents

Mean	6,082	10,510	6,924	3,546	3,101	2,320	20,670	7,093	3,315	1,557	854	1,476
Cfsm	2.30	3.98	2.62	1.34	1.17	0.877	7.82	2.68	1.25	0.589	0.323	0.558
In.	2.65	4.44	3.02	1.55	1.26	1.01	8.72	3.09	1.40	0.68	0.37	0.62

	Observed			Adjusted			
Calendar year 1959:	Max 32,000	Min 390	Mean 5,129	Mean 5,224	Cfsm 1.98	In. 26.83
Water year 1959-60:	Max 34,000	Min 152	Mean 5,616	Mean 5,598	Cfsm 2.12	In. 28.81

Peak discharge (base, 23,000 cfs).--Oct. 25 (4 a.m.) 36,700 cfs (11.75 ft); Nov. 28 (11 p.m.) 36,900 cfs (11.79 ft); Apr. 5 (7 p.m.) 37,000 cfs (11.82 ft); Apr. 19 (7:30 p.m.) 34,100 cfs (11.17 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir, and Comerford Station Pond.
Note.--Stage-discharge relation affected by ice Dec. 20-27, Dec. 29 to Jan. 2, Jan. 10-17, 21-23, 29, 30, Feb. 4-16, 20-22, Feb. 26 to Mar. 28.

1390. Wells River at Wells River, Vt.

Location.--Lat 44°09'05", long 72°04'00", on right bank 800 ft upstream from railroad bridge, 0.8 mile west of village of Wells River, Orange County, and 1.5 miles upstream from mouth.

Drainage area.--98.4 sq mi.

Records available.--August 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 505.53 ft above mean sea level, datum of 1929 (levels by Connecticut River Power Co.).

Average discharge.--20 years, 141 cfs.

Extremes.--Maximum discharge during year, 1,980 cfs Nov. 28 (gage height, 5.95 ft); minimum, 10 cfs Sept. 27; minimum daily, 16 cfs Sept. 9-11.
1940-60: Maximum discharge, 3,230 cfs June 2, 1952 (gage height, 8.12 ft), from rating curve extended above 1,300 cfs on basis of computation of peak flow over dam; minimum, 5.1 cfs Oct. 6, 1948; minimum daily, 8.3 cfs Sept. 5, 1953.

Remarks.--Records good except those for period of ice effect, which are fair. Some diurnal fluctuation at low flow caused by small powerplant above station. Flow partly regulated by Groton and Ricker Ponds.

Revisions (water years).--WSP 1171: Drainage area. WSP 1201: 1942(P), 1944-45(M), 1946-47(P), 1948(M), 1950.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	12	3.0	311
1.6	30	3.5	517
1.8	50	4.0	780
2.0	77	5.0	1,400
2.5	175		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	311	415	83	70	74	*1,130	238	106	47	81	18
2	188	255	325	90	71	72	756	*284	129	42	48	17
3	74	202	287	220	70	70	610	236	125	39	38	17
4	47	170	264	320	68	68	948	207	119	65	32	17
5	35	161	241	200	70	70	1,400	189	104	54	30	20
6	73	173	233	150	79	70	1,010	175	93	49	56	19
7	170	284	284	140	105	70	635	159	77	43	40	18
8	251	209	325	125	95	68	490	148	*66	43	34	17
9	131	175	252	*120	*86	65	403	170	62	44	31	16
10	97	152	220	110	82	62	366	362	56	39	28	16
11	83	137	197	120	150	62	332	281	53	37	29	16
12	80	129	197	120	300	64	414	230	50	*34	27	114
13	77	123	511	115	220	64	610	258	48	33	26	420
14	66	123	364	110	170	63	625	269	43	43	25	120
15	58	215	247	105	140	62	804	261	75	38	25	66
16	56	161	244	100	125	62	942	302	152	31	29	46
17	49	159	222	95	110	61	900	284	91	29	26	35
18	58	187	202	90	100	61	1,030	238	169	28	*24	31
19	62	150	189	88	105	60	927	207	109	31	23	*31
20	54	129	155	85	100	60	580	173	82	34	23	33
21	55	127	130	82	96	60	463	150	70	31	24	38
22	50	125	120	80	92	60	415	129	58	26	24	34
23	86	123	110	78	90	60	370	121	50	25	26	31
24	601	159	110	77	84	60	339	175	75	24	25	29
25	1,100	569	110	76	80	60	531	296	276	23	22	28
26	565	426	110	75	82	61	459	202	128	22	21	30
27	*424	284	105	74	80	64	374	157	85	21	20	22
28	278	1,180	100	73	77	66	339	129	66	22	19	25
29	204	1,100	95	78	76	71	281	109	55	23	19	25
30	168	565	90	77	-------	*132	249	95	48	40	19	26
31	197	-------	87	73	-------	728	-------	91	-------	284	19	-------
Total	5,495	8,263	6,541	3,429	3,073	2,730	18,732	6,325	2,720	1,344	913	1,375
Mean	177	275	211	111	106	88.1	624	204	90.7	43.4	29.5	45.8
Cfsm	1.80	2.79	2.14	1.13	1.08	0.895	6.34	2.07	0.922	0.441	0.300	0.465
In.	2.08	3.12	2.47	1.30	1.16	1.03	7.08	2.39	1.03	0.51	0.35	0.52

Calendar year 1959: Max 1,180 Min 12 Mean 145 Cfsm 1.47 In. 19.99
Water year 1959-60: Max 1,400 Min 16 Mean 167 Cfsm 1.70 In. 23.04

Peak discharge (base, 980 cfs).--Oct. 25 (12:30 to 1 a.m.) 1,680 cfs (5.45 ft); Nov. 28 (6 to 6:30 p.m.) 1,980 cfs (5.95 ft); Mar. 31 (12 p.m.) 1,380 cfs (4.97 ft); Apr. 5 (11:30 a.m. to 2:30 p.m.) 1,500 cfs (5.16 ft); Apr. 18 (10 to 11 p.m.) 1,320 cfs (4.87 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20 to Mar. 27.

1398. East Orange Branch at East Orange, Vt.

Location.--Lat 44°05'35", long 72°20'10", on left bank 0.3 mile east of East Orange, Orange County, 1.6 miles upstream from mouth, and 5 miles southwest of Orange.

Drainage area.--8.95 sq mi.

Records available.--June 1958 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 1,180 ft (from topographic map).

Extremes.--Maximum discharge during year, 412 cfs Oct. 24 (gage height, 4.02 ft), from rating curve extended above 60 cfs by logarithmic plotting; maximum gage height, 4.93 ft Jan. 3 (ice jam); minimum discharge, 0.5 cfs Sept. 2, 3, 4, 8, 9.
1958-60: Maximum discharge, that of Oct. 24, 1959; maximum gage height, 6.35 ft Jan. 22, 1959 (ice jam); minimum discharge, that of Sept. 2, 3, 4, 8, 9, 1960.

Remarks.--Records fair. Occasional diurnal fluctuation at low flow caused by mill upstream.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 26-30, Nov. 1-5, 7-10, 15, 17, 26, 27, Dec. 1-6, 8-11, 14-20, 30, 31, Jan. 5, 6, 12, Feb. 14)

Oct. 1 to Mar. 31				Mar. 31 to Sept. 30			
1.7	4.0	2.3	40	1.6	0.5	2.2	20
1.8	7.0	2.6	74	1.7	1.3	2.5	45
2.0	16	3.1	160	1.8	3.2	2.8	85
				2.0	10	3.2	165

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	39	42	8.6	7.0	7.7	46	44	19	4.4	6.0	0.6
2	15	30	41	10	7.0	7.6	35	40	17	4.2	4.2	.6
3	6.6	26	40	54	7.0	7.4	33	35	16	9.2	4.2	.6
4	5.0	24	*38	25	7.0	7.3	69	32	14	11	3.6	1.3
5	4.4	25	36	20	7.0	7.4	100	30	14	6.7	*1.0	1.2
6	14	37	33	17	7.4	7.6	50	26	12	5.4	5.0	.9
7	25	35	55	15	8.0	7.7	46	24	10	4.8	3.2	.7
8	19	27	36	13	7.6	7.5	*43	24	9.6	*4.4	3.0	.6
9	11	23	30	12	7.5	7.4	44	40	9.3	4.4	3.0	*.6
10	8.6	22	27	12	7.5	7.4	42	40	8.5	7.3	3.0	.6
11	7.4	20	26	*13	50	7.3	43	28	7.8	4.8	2.7	.9
12	7.4	21	33	11	*26	7.2	65	24	7.4	3.0	2.0	57
13	7.0	20	54	10	15	7.5	74	30	7.0	6.5	1.7	18
14	5.9	26	30	9.5	12	7.5	79	24	6.3	7.5	1.6	6.3
15	5.9	29	26	9.0	11	7.5	116	27	18	3.8	1.9	3.2
16	5.9	21	25	8.5	10	7.2	92	30	14	2.7	2.4	1.6
17	6.3	24	25	8.0	9.6	7.2	111	26	13	2.4	1.4	1.3
18	7.8	22	23	8.0	9.2	*8.1	147	22	21	3.0	1.2	1.4
19	7.4	20	22	8.0	9.2	8.1	105	18	10	3.0	1.1	1.4
20	7.8	18	16	8.0	9.0	8.0	96	16	8.2	3.0	1.4	2.7
21	7.8	17	14	8.0	8.8	8.0	85	15	7.4	2.7	1.6	2.2
22	7.0	17	12	7.6	8.6	8.0	79	14	6.0	1.9	1.7	2.2
23	23	17	11	7.5	8.5	8.0	66	15	6.0	2.0	2.2	1.9
24	139	38	11	7.5	8.4	8.0	86	46	15	1.9	1.7	1.7
25	45	61	11	7.3	8.2	8.0	103	31	16	1.6	1.2	1.9
26	27	28	11	7.0	8.1	8.0	62	*20	9.6	1.4	.9	1.9
27	26	27	11	7.0	8.1	8.0	*61	15	6.7	1.6	.8	1.7
28	25	152	10	7.2	8.0	8.0	55	14	6.0	*2.0	.8	2.0
29	*25	47	9.5	7.2	7.8	8.5	47	12	5.0	1.6	.6	2.0
30	24	42	9.2	7.2	-------	15	40	12	4.8	41	.6	4.7
31	36	-------	9.0	7.0	-------	80	-------	15	-------	15	.6	-------
Total	610.2	955	776.7	360.1	308.5	318.1	2,120	789	324.6	174.2	69.3	123.7
Mean	19.7	31.8	25.1	11.6	10.6	10.3	70.7	25.5	10.8	5.62	2.24	4.12
Cfsm	2.20	3.55	2.80	1.30	1.18	1.15	7.90	2.85	1.21	0.628	0.250	0.460
In.	2.54	3.97	3.23	1.50	1.28	1.32	8.81	3.28	1.35	0.72	0.29	0.51

Calendar year 1959: Max 152 Min 0.7 Mean 16.7 Cfsm 1.87 In. 25.31
Water year 1959-60: Max 152 Min 0.6 Mean 18.9 Cfsm 2.11 In. 28.80

Peak discharge (base, 140 cfs).--Oct. 1 (6:30 p.m.) 278 cfs (3.58 ft); Oct. 24 (4:30 p.m.) 412 cfs (4.02 ft); Nov. 28 (8 a.m.) 314 cfs (3.71 ft); Apr. 5 (5 a.m.) 163 cfs (3.19 ft); Apr. 15 (2:45 p.m.) 184 cfs (3.28 ft); Apr. 18 (3:30 p.m.) 352 cfs (3.85 ft); Apr. 24 (8:30 p.m.) 199 cfs (3.34 ft); July 30 (6:30 p.m.) 170 cfs (3.22 ft); Sept. 12 (7:30 p.m.) 184 cfs (3.28 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 20, 30, Dec. 15, Dec. 20 to Apr. 1, Apr. 11.

1415. Ompompanoosuc River at Union Village, Vt.

Location.--Lat 43°47'20", long 72°15'20", on right bank 100 ft upstream from covered bridge at Union Village, Orange County, a quarter of a mile downstream from Avery Brook, and 0.3 mile downstream from Union Village Reservoir.

Drainage area.--130 sq mi.

Records available.--September 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 435 ft (from topographic map).

Average discharge.--20 years, 202 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,940 cfs Apr. 1 (gage height, 7.36 ft); minimum, 10 cfs Aug. 8, 9; minimum daily, 18 cfs Sept. 6.
1940-60: Maximum discharge, 4,800 cfs June 3, 1947 (gage height, 9.65 ft), from rating curve extended above 2,400 cfs on basis of slope-area measurement of peak flow; minimum, 1.7 cfs Oct. 14, 1949; minimum daily, 2.0 cfs Oct. 20, 1949.
Maximum stage known, about 14.5 ft in November 1927, from information by local resident.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Union Village Reservoir (see p. 247) since October 1949. Some regulation by Lake Fairlee.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-26, Apr. 2 to Sept. 30				Oct. 27 to Apr. 1			
2.9	17	4.5	328	3.4	76	5.0	540
3.0	24	5.0	520	3.8	144	6.0	1,040
3.1	32	6.0	1,020	4.5	345	7.0	1,660
3.5	92	7.0	1,660				
4.0	187	7.5	2,050				

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	562	1,580	185	120	125	1,520	424	242	70	98	24
2	282	495	812	115	120	125	1,500	508	220	55	58	21
3	138	408	573	221	115	130	1,210	400	198	65	49	21
4	115	348	*576	401	110	140	1,170	349	205	222	42	19
5	100	310	428	394	115	138	720	308	176	125	39	19
6	120	317	384	380	116	138	1,040	280	167	92	52	18
7	195	384	419	356	118	130	1,580	252	140	76	42	19
8	273	408	455	283	120	131	1,690	235	120	66	*29	22
9	225	390	443	240	120	120	1,650	276	110	68	19	22
10	212	362	419	200	120	120	1,440	480	102	58	19	21
11	172	287	334	200	*144	115	1,000	374	94	49	53	22
12	169	258	277	190	538	115	855	312	86	43	40	80
13	152	252	514	180	608	120	1,070	385	79	39	26	447
14	133	252	648	*180	330	134	1,130	424	72	43	25	544
15	122	284	612	175	258	115	1,330	382	130	49	24	*150
16	118	294	554	170	235	115	1,380	367	261	37	25	118
17	115	290	491	170	213	110	1,260	356	161	32	24	102
18	122	303	346	165	210	111	1,190	312	190	31	23	87
19	123	300	238	155	210	113	1,090	295	157	40	22	78
20	113	287	246	150	210	110	828	250	120	*98	21	98
21	110	274	240	145	208	*108	664	218	103	64	20	94
22	105	265	238	135	165	106	628	194	90	43	114	78
23	155	252	215	135	170	105	560	189	81	43	128	68
24	796	258	187	130	173	100	520	326	82	39	58	64
25	745	625	178	125	170	98	*856	668	118	32	39	58
26	1,190	805	185	120	168	86	844	*436	108	29	32	52
27	1,190	549	190	120	168	96	686	318	82	28	30	43
28	586	673	187	115	166	100	632	261	68	28	28	43
29	*353	777	187	115	140	105	508	220	55	27	25	45
30	265	1,480	190	120	---------	190	428	194	61	50	29	70
31	375	--------	190	120	--------	822	--------	198	--------	202	26	--------
Total	8,961	12,749	12,536	5,890	5,658	4,371	30,979	10,191	3,878	1,943	1,259	2,547
Mean	289	425	404	190	195	141	1,033	329	129	62.7	40.6	84.9
(†)	+7.17	+38.5	-40.4	+0.37	-1.80	+18.3	-18.9	-0.63	-0.93	+1.01	-2.28	+0.42
Adjusted for change in contents in Union Village Reservoir												
Mean	296	463	364	190	193	159	1,014	328	128	63.7	38.3	85.3
Cfsm	2.28	3.56	2.80	1.46	1.48	1.22	7.80	2.52	0.985	0.490	0.295	0.656
In.	2.63	3.98	3.23	1.69	1.60	1.41	8.70	2.91	1.10	0.56	0.34	0.73

	Observed			Adjusted		
Calendar year 1959:	Max 1,840	Min 11	Mean 221	Mean 221	Cfsm 1.70	In. 23.05
Water year 1959-60:	Max 1,690	Min 18	Mean 276	Mean 276	Cfsm 2.12	In. 28.88

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Union Village Reservoir.
Note.--Stage-discharge relation affected by ice Jan. 1, 2, Jan. 9 to Feb. 5, Feb. 8, 16, 22, Feb. 29 to Mar. 4, Mar. 7, 9-12, 16, 23-27.

1425. Ayers Brook at Randolph, Vt.

Location.--Lat 43°56'05", long 72°39'30", on right bank 55 ft upstream from bridge on State Highway 12, just north of village limits of Randolph, Orange County, 0.4 mile upstream from Adams Brook, and 1.2 miles upstream from mouth.

Drainage area.--30.5 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 632.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--21 years, 47.0 cfs.

Extremes.--Maximum discharge during year, 1,330 cfs Nov. 28 (gage height, 5.10 ft), from rating curve extended above 500 cfs by logarithmic plotting; minimum, 2.2 cfs Sept. 10.
1939-60: Maximum discharge, 3,490 cfs June 1, 1952 (gage height, 7.58 ft), from rating curve extended above 500 cfs by logarithmic plotting; minimum, 1.2 cfs Aug. 27, 1949.
Maximum stage known, about 16 ft in November 1927, from information by local residents.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 28

0.9	27	1.5	78
1.0	34	2.0	134

Note.--Same as following table above 2.0 ft.

Nov. 29 to Sept. 30

0.1	2.2	1.5	79
.2	3.4	2.0	134
.4	7.5	2.5	212
.6	14	3.0	330
.8	24	3.5	490
1.0	37	4.0	700

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	122	134	37	27	30	220	90	100	18	22	3.6
2	110	111	*121	39	27	31	184	86	72	16	15	3.3
3	47	93	113	120	26	30	173	76	66	18	*12	3.0
4	38	86	104	110	29	33	360	70	67	46	10	3.3
5	32	88	97	62	28	34	530	66	57	26	9.6	4.5
6	65	97	91	*52	28	32	301	60	54	22	15	3.6
7	130	93	152	52	31	31	220	56	46	18	11	*3.2
8	139	80	120	50	30	30	188	52	41	17	9.6	2.8
9	102	74	98	43	30	26	170	67	37	19	9.0	2.5
10	87	70	90	44	*29	25	164	78	34	15	8.1	2.5
11	71	66	84	49	82	28	161	60	31	13	8.7	2.6
12	68	67	89	45	88	28	206	59	29	*11	7.3	66
13	58	62	167	48	54	28	242	74	28	10	6.8	85
14	53	61	111	45	50	28	250	72	25	12	6.6	29
15	48	76	92	45	52	*28	399	66	54	10	6.6	18
16	45	62	98	43	47	25	309	61	50	9.0	8.4	14
17	43	67	94	40	46	28	271	57	34	8.1	6.6	11
18	45	65	86	38	45	28	282	55	40	8.4	5.4	9.9
19	43	57	81	37	47	28	*202	52	31	9.4	4.8	9.6
20	40	54	70	38	45	27	160	45	27	21	4.7	12
21	40	54	63	36	41	27	138	40	24	11	5.2	13
22	38	54	53	35	35	21	138	37	22	8.7	11	11
23	86	53	47	34	41	23	121	40	20	12	13	9.6
24	217	57	47	33	39	26	122	*158	24	9.0	7.5	9.3
25	263	110	47	30	38	21	221	134	56	7.3	6.1	9.0
26	143	74	50	32	39	17	144	87	31	6.4	5.2	8.7
27	*115	71	45	30	38	26	130	71	24	6.4	4.7	8.4
28	98	646	45	31	37	28	115	62	20	7.8	4.2	8.1
29	87	242	44	31	30	34	102	55	17	6.4	4.0	7.8
30	79	157	44	30	-------	62	92	51	22	45	4.2	9.6
31	101	-------	42	28	-------	185	-------	59	-------	62	3.8	-------
Total	2,633	3,069	2,619	1,387	1,179	1,048	6,315	2,096	1,183	508.9	256.1	383.9
Mean	84.9	102	84.5	44.7	40.7	33.8	210	67.6	39.4	16.4	8.26	12.8
Cfsm	2.78	3.34	2.77	1.47	1.33	1.11	6.89	2.22	1.29	0.538	0.271	0.420
In.	3.21	3.74	3.19	1.69	1.44	1.28	7.70	2.56	1.44	0.62	0.31	0.47

Calendar year 1959: Max 646 Min 2.2 Mean 56.1 Cfsm 1.84 In. 24.97
Water year 1959-60: Max 646 Min 2.5 Mean 62.0 Cfsm 2.03 In. 27.65

Peak discharge (base, 350 cfs).--Oct. 1 (11 p.m.) 354 cfs (3.08 ft); Oct. 24 (11:30 p.m.) 498 cfs (3.52 ft); Nov. 28 (12:30 p.m.) 1,330 cfs (5.10 ft); Apr. 5 (10 to 11 a.m.) 619 cfs (3.82 ft); Apr. 15 (10 to 11 p.m.) 458 cfs (3.41 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 15, Dec. 20 to Feb. 8, Feb. 11 to Mar. 8, Mar. 10, 21-23, 25, 26.

1440. White River at West Hartford, Vt.

Location.--Lat 43°42'45", long 72°25'10", on left bank 500 ft upstream from highway bridge at West Hartford, Windsor County, and 7 miles upstream from mouth.

Drainage area.--690 sq mi.

Records available.--June 1915 to September 1960. Monthly discharge only for October 1927 to September 1928, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 374.53 ft above mean sea level, datum of 1929. Prior to Oct. 30, 1927, staff gage at same site and datum.

Average discharge.--45 years, 1,198 cfs.

Extremes.--Maximum discharge during year, 20,200 cfs Nov. 28 (gage height, 13.63 ft); minimum, 117 cfs Sept. 9, 10; minimum daily, 122 cfs Sept. 10.
1915-60: Maximum discharge, 120,000 cfs Nov. 4, 1927 (gage height, 29.3 ft, from floodmarks), from rating curve extended above 29,000 cfs on basis of slope-area measurement of peak flow; minimum observed, about 35 cfs Aug. 4, 1918; minimum daily, 64 cfs Aug. 4, 1918.

Remarks.--Records good except those for periods of ice effect, no gage-height record, and doubtful or no gage-height record, which are fair. Some diurnal fluctuation at low flow caused by powerplant above station.

Revisions (water years).--WSP 756: Drainage area. WSP 781: 1928(M). WSP 1031: 1916(m), 1923. WSP 1301: 1916-26(M), 1929(M).

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	117	6.0	2,440
3.0	203	8.0	5,630
3.5	378	10.0	9,600
4.0	620	11.0	12,400
5.0	1,390	12.0	15,200

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	396	2,680	3,290	860	620	740	9,320	2,400	1,980	525	832	158
2	2,470	2,510	3,000	820	610	750	6,350	2,400	2,780	434	515	144
3	1,000	2,000	2,930	2,800	580	750	6,010	2,100	1,890	422	399	136
4	656	1,720	2,660	3,400	560	780	9,190	1,900	1,750	1,250	351	130
5	505	1,700	2,420	2,200	580	750	14,000	1,700	1,420	761	317	144
6	606	1,810	2,240	1,800	620	730	*8,220	1,550	1,370	614	339	167
7	1,740	2,820	3,580	1,700	660	710	5,940	1,450	1,130	520	343	150
8	3,220	2,060	3,680	1,600	630	690	4,990	1,350	978	465	288	136
9	1,950	1,770	2,900	1,200	610	670	4,270	1,400	866	434	270	128
10	1,710	1,570	2,540	1,000	600	650	3,790	1,900	782	447	250	122
11	1,240	1,380	2,300	1,150	1,050	660	3,460	1,600	716	378	*247	130
12	1,140	1,330	2,200	1,100	3,000	670	4,220	1,500	656	339	234	1,000
13	978	1,270	4,690	*1,100	1,700	640	5,670	1,900	614	306	218	4,060
14	818	1,210	3,320	1,100	1,300	590	6,260	2,000	555	358	206	*1,300
15	716	1,600	2,820	1,050	*1,200	560	11,400	1,900	896	374	206	789
16	638	1,390	2,620	950	1,100	560	8,890	1,900	1,420	309	209	560
17	598	1,340	2,460	900	1,100	600	7,330	2,000	906	274	215	442
18	620	1,540	2,280	850	1,050	580	9,280	1,800	1,160	267	197	378
19	668	1,280	2,110	850	1,000	580	7,190	1,550	994	270	182	358
20	592	1,110	1,800	820	1,050	580	4,990	1,400	747	457	179	386
21	576	1,110	1,400	780	1,000	*610	4,050	1,200	662	378	173	438
22	560	1,070	1,200	750	840	590	4,510	1,100	576	*298	271	378
23	784	1,060	1,100	720	940	590	4,020	1,000	515	292	288	343
24	4,930	1,130	1,100	690	900	570	3,540	2,510	540	313	250	324
25	7,440	3,500	1,100	670	840	520	6,980	4,950	868	267	203	302
26	4,020	2,610	1,100	660	840	460	*5,010	2,570	803	237	185	298
27	2,640	1,940	1,000	650	850	490	3,860	*1,950	609	231	170	284
28	2,060	12,400	1,000	650	780	550	3,320	1,600	510	225	158	274
29	1,680	8,500	1,000	640	740	670	2,800	1,390	447	231	156	267
30	*1,480	*4,320	950	640	-------	1,200	2,600	1,210	438	421	164	295
31	1,450	-------	900	630	-------	6,800	-------	1,190	-------	2,010	182	-------
Total	49,881	71,730	67,690	34,730	27,350	26,290	181,460	56,370	29,578	14,107	8,197	14,021
Mean	1,609	2,391	2,184	1,120	943	848	6,049	1,818	986	455	264	467
Cfsm	2.33	3.47	3.17	1.62	1.37	1.23	8.77	2.63	1.43	0.659	0.383	0.677
In.	2.69	3.87	3.65	1.87	1.47	1.42	9.78	3.04	1.59	0.76	0.44	0.76

Calendar year 1959: Max 12,400 Min 85 Mean 1,289 Cfsm 1.87 In. 25.37
Water year 1959-60: Max 14,000 Min 122 Mean 1,589 Cfsm 2.30 In. 31.34

Peak discharge (base, 11,600 cfs).--Oct. 24 (11 p.m.) 11,700 cfs (10.76 ft); Nov. 28 (6:30 p.m.) 20,200 cfs (13.63 ft); Mar. 31 (8 p.m.) 14,100 cfs (11.64 ft); Apr. 5 (11 a.m. to 12 m.) 15,300 cfs (12.04 ft); Apr. 15 (11 p.m.) 12,800 cfs (11.15 ft); Apr. 18 (9 p.m.) 11,700 cfs (10.75 ft).

* Discharge measurement made on this day.

Note.--Doubtful or no gage-height record Apr. 29 to May 23; discharge estimated on basis of recorder graph, weather records, and records for Dog River at Northfield Falls and Ayers Brook at Randolph. Stage-discharge relation affected by ice Dec. 20 to Mar. 31. No gage-height record Jan. 14-16, Jan. 19 to Feb. 8, Mar. 3-12, 24-30; discharge estimated on basis of weather records and records for Dog River at Northfield Falls (Part 4), Ayers Brook at Randolph, and Ottauquechee River at North Hartland.

1445. Connecticut River at White River Junction, Vt.

Location.--Lat 43°38'50", long 72°18'45", on right bank 50 ft downstream from railroad bridge at White River Junction, Windsor County, and 500 ft downstream from White River.
Drainage area.--4,092 sq mi.
Records available.--October 1911 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 321.52 ft above mean sea level, datum of 1929. Prior to June 16, 1918, painted staff gage on downstream side of pier of railroad bridge 50 ft upstream at same datum. June 16, 1918, to Nov. 2, 1930, chain gage at various locations on upstream and downstream sides of railroad bridge at same datum.
Average discharge.--49 years, 7,200 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 57,000 cfs Apr. 5 (gage height, 21.24 ft, from graph based on several wire-weight-gage readings daily); minimum daily, 143 cfs Aug. 20. 1911-60: Maximum discharge, 136,000 cfs Nov. 4, 1927 (gage height, 35.0 ft, present site), from rating curve extended above 70,000 cfs by logarithmic plotting; minimum daily, 110 cfs Aug. 2, 1959.
Remarks.--Records fair. Flow regulated by powerplant and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond, Union Village Reservoir (see p. 247), and other reservoirs (combined usable capacity, about 17¼ billion cubic feet).
Cooperation.--Wire-weight-gage readings furnished by U. S. Weather Bureau.
Revisions (water years).--WSP 741: 1932 (adjusted monthly and yearly figures only). WSP 781: 1928(M). WSP 891: Drainage area. WSP 1301: 1922-26(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.5	123	5.0	2,150
2.7	183	6.0	3,730
3.0	301	8.0	8,180
3.5	585	12.0	20,000
4.0	990	21.0	55,800

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	10,700	*35,500	5,300	4,100	5,400	37,600	12,300	7,000	4,400	4,400	1,920
2	6,600	*11,600	26,900	3,500	5,400	6,200	31,800	12,000	7,000	820	3,500	1,940
3	3,000	12,400	18,800	9,000	5,300	6,800	35,000	13,500	7,500	900	2,800	685
4	1,600	11,500	16,400	13,000	5,400	4,400	40,200	12,500	5,400	2,400	2,300	170
5	2,800	10,500	14,600	12,000	5,500	4,000	54,300	11,500	2,700	4,400	2,600	190
6	3,900	10,500	10,000	12,000	3,900	2,600	50,500	11,500	6,200	4,200	1,300	1,070
7	6,000	15,100	13,400	10,000	3,100	4,300	39,900	9,600	4,500	3,700	410	1,180
8	10,000	14,400	15,000	10,800	3,800	4,600	31,600	5,600	3,800	4,100	2,600	1,850
9	14,900	11,900	15,800	9,200	4,500	4,700	24,300	9,000	3,200	2,000	2,700	1,600
10	11,100	9,750	14,300	5,000	5,500	4,800	17,800	11,500	3,700	1,500	*2,720	160
11	3,720	10,200	12,600	7,400	6,600	4,700	14,000	11,500	2,700	2,400	2,040	170
12	3,150	8,040	12,600	7,800	12,000	4,000	17,800	10,500	1,500	2,700	1,860	5,850
13	5,030	8,840	16,100	7,000	9,600	2,100	22,400	9,600	2,600	2,500	1,140	12,000
14	4,890	6,100	19,900	8,300	4,400	4,300	24,400	8,200	2,500	2,900	197	*6,050
15	4,870	8,900	17,400	10,000	8,200	4,500	32,100	7,200	4,100	3,300	1,700	4,940
16	4,670	11,500	16,400	7,200	8,000	4,800	32,200	16,800	7,200	380	1,940	4,270
17	2,800	11,100	14,600	3,800	8,500	5,200	32,000	23,600	6,200	340	1,910	1,770
18	1,050	11,200	14,300	6,400	9,200	5,000	36,100	17,600	4,600	2,800	1,630	1,100
19	4,750	10,900	12,700	7,100	8,600	4,000	39,000	13,000	1,550	2,800	1,370	2,550
20	4,840	10,900	7,200	7,200	6,800	2,200	40,400	11,000	5,000	3,400	143	2,780
21	4,640	7,760	7,200	7,100	4,200	5,100	38,800	8,200	4,000	3,100	496	2,620
22	4,110	2,480	8,000	6,600	5,200	4,800	32,100	4,800	4,500	2,800	1,740	2,850
23	4,540	7,600	6,600	4,700	5,800	5,300	25,300	10,000	4,000	360	2,070	2,810
24	13,800	9,520	5,200	4,400	5,500	5,400	22,000	9,400	3,900	380	1,680	660
25	38,000	17,200	4,000	7,000	5,300	4,200	25,400	14,000	5,800	2,500	1,770	330
26	34,600	25,000	4,500	6,600	5,100	3,800	*27,100	10,000	6,800	2,700	1,470	1,890
27	26,600	19,700	3,400	6,400	5,200	720	24,800	7,200	8,600	2,700	200	2,290
28	16,100	36,800	7,000	7,000	5,100	4,200	20,700	5,400	6,100	2,500	940	1,990
29	11,500	44,600	7,800	6,600	5,300	4,800	17,700	3,100	5,600	2,100	1,980	1,670
30	9,870	40,600	7,600	4,500	-------	6,400	15,200	3,000	5,100	2,100	1,750	2,600
31	7,730	-------	6,400	3,100	-------	20,700	-------	*4,600	-------	3,200	1,670	-------
Total	272,760	427,290	392,200	226,000	175,100	154,020	902,500	317,700	143,350	76,380	55,026	71,955
Mean	8,799	14,240	12,650	7,290	6,038	4,968	30,080	10,250	4,778	2,464	1,775	2,398
(†)	+176	+734	-1,105	-1,590	-1,006	-926	+3,308	+654	+316	-127	-489	-89.9

Adjusted for change in reservoir contents

Mean	8,975	14,980	11,550	5,700	5,032	4,043	33,390	10,900	5,094	2,337	1,286	2,309
Cfsm	2.19	3.66	2.82	1.39	1.23	0.988	8.16	2.66	1.24	0.571	0.314	0.564
In.	2.53	4.08	3.25	1.61	1.33	1.14	9.10	3.07	1.39	0.66	0.36	0.63

	Observed			Adjusted			
Calendar year 1959:	Max 44,600	Min 110	Mean 7,460	Mean 7,555	Cfsm 1.85	In. 25.07
Water year 1959-60:	Max 54,300	Min 143	Mean 8,782	Mean 8,764	Cfsm 2.14	In. 29.15

Peak discharge (base, 34,000 cfs).--Oct. 25 (8 to 9 p.m.) 39,300 cfs (17.23 ft); Nov. 28 (7 to 8 p.m.) 51,500 cfs (20.07 ft); Apr. 2 (4:30 a.m.) 38,500 cfs (17.05 ft); Apr. 5 (3 to 5 p.m.) 57,000 cfs (21.24 ft); Apr. 20 (9 p.m.) 41,200 cfs (17.70 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond, and Union Village Reservoir.

Note.--No gage-height record Dec. 6, Apr. 3, 17, 19, May 2-15, Aug. 27, Sept. 4, 5, 10, 11, 13, 18, 25, 30; discharge estimated on basis of weather records, recorded range in stage when available, powerplant records, and records for White River at West Hartford. Doubtful or no gage-height record Oct. 1-8, Dec. 20 to Mar. 31, May 19 to Aug. 9; discharge estimated on basis of recorder graph, weather records, powerplant records, and records for White River at West Hartford. Discharge for periods Oct. 9, 10, 25-27, Nov. 26 to Dec. 5, Dec. 7-19, Apr. 4-16, 18, Apr. 20 to May 1, May 16-18, Aug. 10, 14, 20, 21, 28, Sept. 24 computed from one or more readings daily of wire-weight gage.

1450. Mascoma River at West Canaan, N. H.

Location.--Lat 43°39'00", long 72°04'50", on right bank 45 ft downstream from Boston and Maine Railroad bridge, 0.9 mile east of West Canaan, Grafton County, 1.2 miles downstream from Indian River, and 3½ miles west of Canaan.

Drainage area.--80.5 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 835 ft (from topographic map).

Average discharge.--21 years, 122 cfs.

Extremes.--Maximum discharge during year, 1,950 cfs Nov. 28 (gage height, 6.44 ft); minimum, 4.7 cfs Sept. 11.
1939-60: Maximum discharge, 3,780 cfs Mar. 27, 1953 (gage height, 8.94 ft), from rating curve extended above 1,900 cfs on basis of slope-area measurement at gage height 9.6 ft; minimum, 3.3 cfs Aug. 3, 4, 1953.
Flood in September 1938 reached a stage of 9.6 ft, from floodmarks (discharge, 4,310 cfs, from rating curve extended above 1,900 cfs as explained above).

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 4, 5)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.0	24	3.0	338	0.4	4.7	2.0	122
1.2	36	4.0	635	.5	6.0	2.5	205
1.6	74	5.0	1,070	.7	10	3.0	315
2.0	130	6.0	1,640	.9	18	4.0	610
2.5	225			1.2	34	5.0	1,020
				1.5	58	6.0	1,520

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	324	391	84	70	70	1,000	254	82	29	57	6.5
2	94	270	302	72	68	66	980	315	82	25	*37	6.0
3	59	225	257	300	66	68	826	227	76	25	28	5.5
4	40	174	233	450	64	70	1,010	173	86	94	22	5.6
5	32	182	210	290	64	70	1,590	154	68	48	18	7.1
6	29	167	196	225	68	66	1,350	140	58	35	17	*6.9
7	57	323	*356	200	88	62	787	125	46	29	15	6.4
8	91	291	638	*155	*80	60	544	115	39	24	13	5.7
9	78	214	348	140	74	59	399	167	35	22	12	5.5
10	98	174	250	130	68	58	328	365	32	18	12	5.2
11	67	149	212	115	145	54	310	358	29	17	14	5.0
12	59	138	206	110	370	57	352	201	26	15	12	65
13	54	132	559	110	250	55	498	227	25	14	10	537
14	46	133	484	105	200	*53	617	232	22	17	9.6	186
15	38	405	291	105	155	51	843	362	71	24	9.1	94
16	36	336	253	100	135	49	1,150	382	373	17	9.4	62
17	33	250	219	92	115	51	908	297	146	14	9.1	46
18	33	280	190	90	100	54	*1,030	223	95	14	7.8	38
19	38	208	173	90	105	56	957	186	71	19	7.3	35
20	35	169	135	86	110	55	575	152	55	40	7.3	58
21	33	152	115	84	94	54	435	131	46	*27	10	79
22	33	142	100	81	86	51	519	111	38	18	17	56
23	45	137	72	81	86	52	531	*102	34	16	19	42
24	424	169	74	76	82	51	429	146	105	15	18	35
25	1,500	520	76	74	76	50	704	304	152	12	13	31
26	*764	490	96	73	80	48	669	203	91	11	10	28
27	388	291	92	73	84	50	450	146	59	9.9	8.8	25
28	253	1,080	88	72	76	51	405	116	46	12	7.6	22
29	186	1,320	94	74	72	52	306	97	36	12	6.9	21
30	152	607	94	72	-------	100	251	86	34	22	7.1	32
31	164	-------	92	70	-------	400	-------	77	-------	165	7.1	-------
Total	4,984	9,452	6,896	3,879	3,131	2,143	20,753	6,174	2,158	859.9	451.1	1,557.4
Mean	161	315	222	125	108	69.1	692	199	71.9	27.7	14.6	51.9
Cfsm	2.00	3.91	2.76	1.55	1.34	0.858	8.60	2.47	0.893	0.344	0.181	0.645
In.	2.30	4.37	3.19	1.79	1.45	0.99	9.59	2.85	1.00	0.40	0.21	0.72

Calendar year 1959: Max 1,500 Min 5.6 Mean 124 Cfsm 1.54 In. 20.94
Water year 1959-60: Max 1,590 Min 5.0 Mean 171 Cfsm 2.12 In. 28.86

Peak discharge (base, 950 cfs).--Oct. 25 (6 to 7 a.m.) 1,780 cfs (6.20 ft); Nov. 28 (10 p.m.) 1,950 cfs (6.44 ft); Apr. 1 (time unknown) about 1,150 cfs; Apr. 5 (7 to 8 p.m.) 1,760 cfs (6.37 ft); Apr. 16 (6 to 7 a.m.) 1,290 cfs (5.58 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20 to Feb. 5, Feb. 11 to Apr. 2.

1505. Mascoma River at Mascoma, N. H.

Location.--Lat 43°39'00", long 72°11'05", on left bank at Mascoma, Grafton County, 250 ft downstream from railroad bridge and 1,000 ft downstream from outlet of Mascoma Lake.

Drainage area.--153 sq mi.

Records available.--August 1923 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 740 ft (from topographic map).

Average discharge.--37 years, 218 cfs (adjusted for storage since October 1928).

Extremes.--Maximum discharge during year, 2,320 cfs Apr. 6 (gage height, 4.69 ft); minimum daily, 35 cfs July 24.
1923-60: Maximum discharge, 5,480 cfs Mar. 19, 1936 (gage height, 7.50 ft), from rating curve extended above 2,500 cfs on basis of computations of flow over dams at gage heights 6.85 and 7.50 ft; minimum daily, 2 cfs Feb. 3, 1929, Sept. 1, 1940.

Remarks.--Records excellent except those for periods of fragmentary or no gage-height record, which are good. Flow regulated by Mascoma and Crystal Lakes and Goose and Grafton Ponds (see p. 247).

Revisions (water years).--WSP 726: Drainage area. WSP 801: 1925(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

0.4	34	2.5	620
.7	68	3.0	900
1.0	118	4.0	1,660
1.5	241	4.7	2,330
2.0	412		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	155	379	1,470	272	266	241	427	405	187	153	87	110
2	147	382	1,080	272	269	244	780	408	148	128	*112	85
3	81	382	616	275	269	247	1,100	412	159	112	131	38
4	81	298	502	339	266	241	1,350	277	131	99	131	38
5	103	269	530	*474	269	235	1,760	235	137	99	128	52
6	120	269	506	486	272	226	2,190	247	155	97	101	*105
7	118	372	*502	420	272	232	2,000	244	153	96	99	110
8	118	416	648	350	*269	238	*1,640	241	150	92	122	110
9	118	382	640	308	272	226	1,310	238	150	81	120	114
10	118	312	526	288	269	224	1,040	308	127	64	118	89
11	118	272	382	263	275	212	840	416	71	62	118	f62
12	118	269	364	247	295	207	534	408	76	59	93	f93
13	116	269	513	253	295	199	539	405	99	59	55	174
14	116	266	725	256	275	*157	681	323	99	59	70	224
15	114	497	742	256	269	128	907	349	120	58	99	94
16	112	544	708	256	279	139	1,350	498	181	58	99	74
17	110	361	546	266	292	160	1,420	548	224	59	99	58
18	120	226	346	263	295	153	*1,410	514	160	59	99	56
19	137	241	266	260	295	139	1,470	357	193	59	81	55
20	133	256	250	256	295	135	1,160	292	241	*60	54	55
21	133	256	253	260	292	133	658	285	212	71	62	55
22	131	266	253	266	292	131	518	285	176	87	96	55
23	131	263	263	266	288	114	742	*285	174	80	99	55
24	104	322	269	263	288	94	708	279	141	a35	87	55
25	308	768	272	269	279	90	931	312	74	90	78	55
26	929	858	272	282	272	90	1,270	322	104	89	66	55
27	1,170	816	272	275	266	90	933	292	179	68	40	55
28	586	1,050	272	275	256	89	620	282	176	59	46	55
29	266	1,700	272	272	250	99	544	279	176	58	78	55
30	*272	1,860	272	272	---	155	408	272	174	60	89	55
31	272	---	272	269	---	256	---	* 269	---	72	97	---
Total	6,657	14,821	14,804	9,029	8,041	5,324	31,240	10,287	4,547	2,382	2,854	2,346
Mean	215	494	478	291	277	172	1,041	332	152	76.8	92.1	78.2
(†)	+83.4	+82.5	-78.8	-104	-105	-44.7	+307	+17.5	-42.4	-40.0	-93.2	+6.60

Adjusted for change in reservoir contents

Mean	298	577	399	187	172	127	1,348	349	109	36.8	8.87	84.8
Cfsm	1.95	3.77	2.61	1.22	1.12	0.830	8.81	2.28	0.712	0.241	0.058	0.554
In.	2.25	4.20	3.00	1.41	1.21	0.96	9.83	2.63	0.80	0.28	0.07	0.62

	Observed			Adjusted			
Calendar year 1959:	Max 1,860	Min 31	Mean 213	Mean 231	Cfsm 1.51	In. 20.54
Water year 1959-60:	Max 2,190	Min 35	Mean 307	Mean 306	Cfsm 2.00	In. 27.26

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Mascoma and Crystal Lakes and Goose and Grafton Ponds.
a No gage-height record; discharge estimated on basis of weather records, records of gate operation and pond elevations at Mascoma Lake.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

1515. Ottauquechee River at North Hartland, Vt.

Location.--Lat 43°36'05", long 72°21'20", on left bank 300 ft upstream from highway bridge at North Hartland, Windsor County, and 1 mile upstream from mouth.

Drainage area.--221 sq mi.

Records available.--October 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 336.77 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--30 years, 401 cfs.

Extremes.--Maximum discharge during year, 6,720 cfs Apr. 5 (gage height, 9.01 ft); minimum, 16 cfs Sept. 9; minimum daily, 39 cfs Aug. 27.
1930-60: Maximum discharge, 24,400 cfs Sept. 21, 1938 (gage height, 17.68 ft), from rating curve extended above 6,200 cfs on basis of computations of flow over dams at gage heights 15.58, 17.68, and 21.5 ft; minimum, 2.9 cfs July 31, 1933; minimum daily, 3.8 cfs July 3, 1933.
Maximum stage known, 21.5 ft in November 1927, from floodmarks (discharge, 30,400 cfs, by computation of peak flow over dam).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by powerplants above station. Small seasonal storage in reservoir at Plymouth. Some effect on high flow by North Hartland Reservoir (flood-control reservoir under construction by Corps of Engineers).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	39	4.5	970
2.2	75	5.0	1,360
2.5	123	6.0	2,420
3.0	256	9.0	6,700
4.0	695		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	828	*1,060	275	195	235	3,530	755	635	170	185	57
2	554	*785	898	260	190	240	2,420	760	868	149	120	48
3	222	620	817	950	185	245	2,170	655	670	143	99	47
4	156	518	750	1,300	170	235	4,610	595	745	242	85	44
5	123	532	685	856	180	230	6,380	536	575	177	80	57
6	127	550	645	605	190	230	4,830	496	491	143	81	60
7	227	690	1,320	570	200	220	a2,500	451	415	130	75	56
8	331	625	1,430	*545	190	215	a1,600	423	363	123	*73	49
9	291	527	934	450	*185	210	a1,300	496	323	111	61	43
10	323	464	790	330	190	205	a1,200	839	268	98	64	43
11	225	431	700	370	330	210	a1,150	625	253	92	69	44
12	198	415	690	360	1,000	215	a1,400	545	239	88	63	*398
13	180	407	1,490	350	550	210	a2,200	700	236	162	57	1,270
14	158	399	1,180	360	420	200	a2,500	655	201	126	53	486
15	147	665	844	340	390	190	4,240	585	394	132	60	225
16	141	518	795	320	370	185	3,960	565	651	93	67	149
17	132	496	750	290	350	*190	a2,700	527	380	80	55	123
18	134	514	685	280	350	190	a2,900	478	395	84	52	111
19	145	435	635	270	330	190	2,710	451	343	86	47	103
20	136	391	514	260	335	190	1,600	419	272	94	41	149
21	134	383	403	250	310	190	1,250	355	239	86	63	163
22	134	379	360	240	280	175	1,710	315	210	75	80	129
23	215	363	320	230	300	180	1,530	355	192	63	83	124
24	1,890	411	350	220	290	180	1,250	1,100	182	81	68	109
25	3,400	1,120	360	210	265	170	*2,250	2,000	319	63	56	105
26	1,330	856	355	210	265	165	1,690	1,170	236	58	57	103
27	828	640	330	200	270	180	1,330	806	187	*53	39	99
28	635	3,570	315	200	245	175	1,190	650	163	63	48	97
29	545	3,730	305	200	240	240	934	550	147	63	58	94
30	468	1,480	315	200	-------	350	806	482	192	144	54	136
31	455	-------	300	200	-------	1,730	-------	504	-------	546	64	-------
Total	14,095	23,742	21,325	11,701	8,765	7,970	69,840	19,843	10,784	3,818	2,157	4,701
Mean	455	791	688	377	302	257	2,328	640	359	123	69.6	157
Cfsm	2.06	3.58	3.11	1.71	1.37	1.16	10.5	2.90	1.62	0.557	0.315	0.710
In.	2.37	4.00	3.59	1.97	1.47	1.34	11.75	3.34	1.81	0.64	0.36	0.79

Calendar year 1959: Max 5,000 Min 30 Mean 433 Cfsm 1.96 In. 26.59
Water year 1959-60: Max 6,380 Min 39 Mean 543 Cfsm 2.46 In. 33.43

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for White River at West Hartford and Black River at North Springfield.
Note.--Stage-discharge relation affected by ice Dec. 22 to Jan. 4, Jan. 9 to Mar. 30.

1525. Sugar River at West Claremont, N. H.

Location.--Lat 43°23'15", long 72°21'45", on right bank 0.2 mile downstream from Redwater Brook at West Claremont, Sullivan County.

Drainage area.--269 sq mi.

Records available.--May 1928 to September 1960. Published as "at Claremont" prior to October 1928.

Gage.--Water-stage recorder. Datum of gage is 358.78 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1928, chain gage at site 0.8 mile upstream at different datum.

Average discharge.--32 years, 403 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 7,760 cfs Apr. 5 (gage height, 7.64 ft); minimum daily, 61 cfs Aug. 28.

1928-60: Maximum discharge, 14,000 cfs Mar. 19, 1936 (gage height, 10.92 ft), from rating curve extended above 6,700 cfs on basis of computations of flow over dam at gage heights 10.49 and 10.92 ft; maximum gage height, 11.80 ft Mar. 21, 1936 (ice jam); minimum daily discharge, 21 cfs Sept. 1, 1957.

Remarks.--Records excellent except those for period of ice effect, which are fair. Flow regulated by mills above station and by Sunapee Lake (see p. 247).

Revisions (water years).--WSP 711: 1930(M). WSP 756: Drainage area.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	45	4.0	1,750
1.3	86	5.0	3,020
1.6	175	6.0	4,660
2.0	325	7.0	6,540
2.5	565	8.0	8,440
3.0	885		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	547	1,220	240	205	280	3,680	1,030	524	261	273	77
2	113	480	998	220	195	270	3,100	1,100	*589	192	185	74
3	122	*394	878	510	195	270	2,880	998	621	213	149	72
4	108	341	789	1,300	190	250	5,440	857	2,130	265	131	72
5	97	382	724	940	200	250	7,400	718	1,440	234	116	79
6	94	382	679	740	190	260	5,210	583	1,750	198	108	74
7	110	893	1,030	640	200	260	3,160	512	1,090	192	105	77
8	143	1,020	1,360	580	215	250	2,420	430	782	175	102	72
9	240	763	1,030	430	215	250	1,870	474	631	159	94	68
10	321	613	*857	360	210	240	1,620	871	524	149	113	63
11	223	506	730	380	430	230	1,540	744	458	149	128	63
12	178	453	718	370	1,000	220	1,750	737	416	128	113	723
13	137	435	1,930	370	870	230	2,430	750	399	113	97	2,240
14	122	439	1,580	350	700	230	2,820	750	337	151	91	915
15	108	1,030	1,120	*340	550	220	3,540	673	704	189	94	530
16	97	878	968	310	*470	220	3,650	625	1,730	137	89	353
17	86	744	850	290	400	220	2,940	571	1,060	122	*81	253
18	91	815	763	310	370	220	3,030	530	815	119	77	216
19	97	655	698	280	350	225	2,960	506	631	162	77	195
20	84	547	607	270	360	230	*2,100	448	506	162	77	521
21	81	495	512	270	380	230	1,690	399	416	125	86	619
22	81	458	474	260	360	235	1,640	369	345	110	194	*394
23	102	444	361	250	360	*234	1,610	361	297	131	226	305
24	1,030	469	360	240	340	234	1,440	850	355	116	128	245
25	3,160	1,620	380	220	310	231	2,200	1,870	1,180	108	100	216
26	1,400	1,510	400	220	300	209	2,210	1,190	643	97	86	199
27	922	1,040	300	210	310	234	1,720	843	453	91	74	169
28	613	2,170	250	205	305	234	1,600	673	365	94	61	156
29	430	2,750	220	205	300	297	1,360	553	*313	91	74	143
30	349	1,660	250	215	--------	490	1,140	469	273	143	86	178
31	337	--------	260	210	--------	2,280	--------	439	--------	386	81	--------
Total	11,150	24,933	23,296	11,735	10,480	9,733	80,150	21,923	21,777	4,963	3,496	9,361
Mean	360	831	751	379	361	314	2,672	707	726	160	113	312
(†)	+23.9	+36.7	-34.3	-19.0	+20.4	0	+119	-13.4	-24.7	-31.0	-39.6	+18.5

Adjusted for change in contents in Sunapee Lake

Mean	384	868	717	360	382	314	2,791	694	701	129	73.2	331
Cfsm	1.43	3.23	2.67	1.34	1.42	1.17	10.4	2.58	2.61	0.480	0.272	1.23
In.	1.64	3.60	3.07	1.54	1.53	1.35	11.58	2.97	2.91	0.55	0.31	1.37

	Observed			Adjusted		
Calendar year 1959:	Max 4,250	Min 42	Mean 394	Mean 401	Cfsm 1.49	In. 20.10
Water year 1959-60:	Max 7,400	Min 61	Mean 637	Mean 644	Cfsm 2.39	In. 32.42

Peak discharge (base, 3,000 cfs).--Oct. 25 (2:30 to 3:30 a.m.) 4,700 cfs (6.02 ft); Nov. 29 (1 to 2:30 a.m.) 3,430 cfs (5.28 ft); Apr. 1 (4 to 5:30 a.m.) 3,930 cfs (5.59 ft); Apr. 5 (3:30 p.m.) 7,760 cfs (7.64 ft); Apr. 16 (2:30 to 4 a.m.) 4,250 cfs (5.77 ft); Sept. 13 (5 to 6 a.m.) 3,460 cfs (5.30 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Sunapee Lake.
Note.--Stage-discharge relation affected by ice Dec. 24 to Mar. 22.

1530. Black River at North Springfield, Vt.

Location.--Lat 43°20'00", long 72°30'55", on right bank at North Springfield, Windsor County, 1,300 ft upstream from Great Brook.

Drainage area.--158 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for October 1929, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 445.79 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--31 years, 286 cfs.

Extremes.--Maximum discharge during year, 6,300 cfs June 4 (gage height, 7.70 ft), from rating curve extended above 2,400 cfs by logarithmic plotting; minimum daily, 28 cfs Sept. 8.
1929-60: Maximum discharge, 15,500 cfs Sept. 22, 1938 (gage height, 17.68 ft), from rating curve extended above 3,200 cfs on basis of computations of flow over dams at gage heights 16.41 and 17.68 ft; minimum daily, 10 cfs Oct. 17, 1937.

Remarks.--Records good except those for period of ice effect, which are fair. Flow regulated by mills above station. Some effect on high flow by North Springfield Reservoir (flood-control reservoir under construction by Corps of Engineers).

Revisions (water years).--WSP 756: Drainage area. WSP 781: 1931(M), 1934(M).

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 11		Feb. 12 to Sept. 30			
1.9	54	1.6	26	4.0	1,170
2.2	113	1.8	46	5.0	2,140
2.5	192	2.2	115	6.0	3,350
3.0	405	2.6	234	7.0	4,950
4.0	1,100	3.0	425	7.5	5,900
6.0	3,260	3.5	750		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	163	514	741	180	125	175	2,200	498	442	131	329	45
2	336	502	598	170	120	175	1,730	522	*534	120	165	42
3	162	472	514	750	115	175	1,520	442	779	117	133	40
4	124	365	466	950	110	180	3,010	350	3,850	141	115	38
5	103	380	422	640	115	170	5,570	282	1,400	136	99	39
6	98	405	395	420	125	165	4,420	263	766	117	91	50
7	140	502	913	390	130	160	1,790	259	534	105	84	35
8	202	472	1,160	330	125	155	1,140	250	414	107	75	28
9	220	375	720	290	120	150	886	331	320	82	68	30
10	232	303	*552	220	120	145	822	668	288	82	72	34
11	161	277	454	240	250	150	790	510	254	77	99	36
12	172	261	460	230	900	150	982	442	223	74	86	228
13	150	250	1,080	220	600	145	1,480	540	201	68	59	926
14	144	246	818	230	450	145	1,680	540	162	92	63	966
15	135	444	592	*200	360	145	2,420	486	237	124	60	698
16	124	365	520	190	*325	140	3,030	458	436	107	74	402
17	114	350	490	180	290	140	1,930	430	302	91	70	242
18	111	342	438	170	260	135	1,990	376	298	79	63	175
19	103	288	390	165	250	135	1,910	340	232	84	*52	140
20	72	250	319	160	250	130	*1,250	275	187	93	57	238
21	59	233	270	155	230	130	926	250	175	84	62	288
22	58	223	240	150	210	130	1,150	223	152	75	99	*204
23	94	216	210	145	220	*130	1,260	230	136	97	135	165
24	1,230	233	220	140	220	130	958	641	134	105	88	146
25	2,880	970	230	135	200	125	1,470	1,510	687	82	70	131
26	*1,680	720	200	135	200	115	1,350	982	451	70	59	122
27	762	502	190	130	210	125	934	661	297	60	54	107
28	502	2,450	190	130	200	135	822	469	208	65	52	105
29	350	2,800	180	130	190	230	654	376	*165	65	46	88
30	306	1,240	190	130	-------	345	560	302	143	105	53	116
31	292	-------	185	125	-------	1,240	-------	320	-------	664	53	-------
Total	11,259	16,950	14,347	7,830	7,020	5,900	50,634	14,226	14,407	3,499	2,685	5,904
Mean	363	565	463	253	242	190	1,688	459	480	113	86.6	197
Cfsm	2.30	3.58	2.93	1.60	1.53	1.20	10.7	2.91	3.04	C.715	0.548	1.25
In.	2.65	3.99	3.38	1.84	1.65	1.39	11.92	3.35	3.39	0.82	0.63	1.39

Calendar year 1959: Max 3,500 Min 18 Mean 302 Cfsm 1.91 In. 25.97
Water year 1959-60: Max 5,570 Min 28 Mean 423 Cfsm 2.68 In. 36.40

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21 to Mar. 29 (no gage-height record Jan. 9-15).

1535. Williams River at Brockways Mills, Vt.

Location.--Lat 43°12'30", long 72°31'05", on left bank 25 ft upstream from highway bridge at Brockways Mills, Windham County, 4 miles downstream from Hall Brook, 4.6 miles upstream from mouth, and 6 miles northwest of Bellows Falls.

Drainage area.--103 sq mi.

Records available.--June 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 430 ft (from topographic map).

Average discharge.--20 years, 169 cfs.

Extremes.--Maximum discharge during year, 5,270 cfs Apr. 5 (gage height, 9.97 ft); minimum, 13 cfs Sept. 9, 11.
1940-60: Maximum discharge, 8,910 cfs June 1, 1952 (gage height, 13.39 ft), from rating curve extended above 3,300 cfs on basis of slope-area measurement at gage height 13.31 ft; minimum not determined, occurred Dec. 11, 1941, during period of ice effect; minimum daily, 3.6 cfs Aug. 27, 1949.
Flood in September 1938 reached a stage of 22.7 ft, from floodmarks.

Remarks.--Records excellent except those for periods of shifting control, which are good, and those for period of ice effect, which are fair.

Revisions (water years).--WSP 1031: 1943-44(P). WSP 1301: 1941-42(M).

Rating table, water year 1959-60, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.0	12	3.0	381
1.2	20	4.0	770
1.5	39	5.0	1,280
1.7	56	7.0	2,610
2.0	99	9.0	4,300
2.5	225		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	331	421	120	82	100	1,660	278	562	44	76	21
2	240	*240	350	115	78	105	1,260	278	*381	43	47	18
3	74	219	312	350	76	105	1,100	228	389	49	39	16
4	52	196	287	430	74	110	3,650	199	1,180	138	44	16
5	43	278	257	300	80	105	3,960	185	439	62	37	18
6	52	237	242	220	82	105	1,460	171	334	47	35	17
7	99	406	1,100	180	90	100	865	155	248	*41	29	15
8	121	306	632	150	86	97	*702	145	205	38	27	15
9	316	254	*413	135	*88	94	581	289	174	34	25	14
10	202	213	337	120	80	92	555	350	150	30	48	14
11	115	185	290	155	340	92	573	210	126	29	58	16
12	94	171	346	150	450	94	902	208	115	27	38	1,110
13	75	155	925	150	310	91	1,230	364	107	25	31	718
14	64	221	496	135	250	92	1,320	281	90	40	28	333
15	57	439	361	120	200	91	2,000	231	258	48	48	163
16	52	257	341	*110	180	91	1,470	193	258	33	63	107
17	50	251	325	105	160	90	970	158	152	27	37	81
18	52	237	284	105	150	91	1,020	142	176	26	29	72
19	51	185	250	100	145	91	*676	140	128	34	26	64
20	46	158	190	96	140	90	489	111	105	33	37	338
21	44	150	150	95	135	90	413	99	92	26	39	208
22	41	145	170	94	125	88	529	87	76	22	*38	142
23	93	135	145	92	130	91	406	92	66	25	37	109
24	2,250	204	125	90	130	89	406	792	64	26	28	90
25	1,250	881	145	88	120	*85	955	714	249	22	24	81
26	547	428	145	87	120	69	507	367	124	20	21	72
27	350	300	145	86	125	85	431	240	87	19	20	63
28	257	2,230	140	85	115	113	357	179	*64	24	19	57
29	202	920	135	85	105	*182	296	145	55	23	18	*54
30	171	540	130	84	-------	347	257	128	50	230	28	116
31	206	-------	125	83	-------	1,500	-------	300	-------	260	25	-------
Total	7,342	10,872	9,714	4,315	4,246	4,665	31,000	7,459	6,504	1,545	1,099	4,158
Mean	237	362	313	139	146	150	1,033	241	217	49.8	35.5	139
Cfsm	2.30	3.51	3.04	1.35	1.42	1.46	10.0	2.34	2.11	0.483	0.345	1.35
In.	2.65	3.93	3.51	1.56	1.53	1.68	11.19	2.69	2.35	0.56	0.40	1.50

Calendar year 1959: Max 2,310 Min 9.4 Mean 188 Cfsm 1.83 In. 24.82
Water year 1959-60: Max 3,960 Min 14 Mean 254 Cfsm 2.47 In. 33.55

Peak discharge (base, 2,600 cfs).--Oct. 24 (6 p.m.) 5,010 cfs (9.71 ft); Nov. 28 (7:30 to 8 a.m.) 3,660 cfs (8.29 ft); Apr. 5 (5 a.m.) 5,270 cfs (9.97 ft); Apr. 15 (5:30 to 6 p.m.) 2,660 cfs (7.06 ft); June 4 (2 a.m.) 3,410 cfs (8.00 ft); Sept. 12 (9 p.m.) 4,710 cfs (9.41 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 19 to Mar. 24. Shifting-control method used Feb. 11 to Mar. 31, Apr. 2, 3, Apr. 26 to June 3, June 6 to Sept. 30.

1540. Saxtons River at Saxtons River, Vt.

Location.--Lat 43°08'15", long 72°29'15", on right bank 130 ft upstream from highway bridge, 0.8 mile east of Saxtons River, Windham County, 1.4 miles upstream from Bund Brook, and 3.9 miles upstream from mouth.

Drainage area.--72.2 sq mi.

Records available.--June 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 390 ft (from topographic map).

Average discharge.--20 years, 119 cfs.

Extremes.--Maximum discharge during year, 5,610 cfs Sept. 12 (gage height, 11.57 ft), from rating curve extended above 1,800 cfs on basis of slope-area measurements at gage heights 10.51 and 11.37 ft; minimum, 12 cfs Oct. 1, Sept. 8, 9; minimum daily, 12 cfs Sept. 8, 9.
1940-60: Maximum discharge, that of Sept. 12, 1960; minimum, 1.9 cfs July 25, 1949; minimum daily, 2.4 cfs Aug. 6, 1955.
Flood in September 1938 reached a stage of 17.9 ft, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Occasional diurnal fluctuation at low flow caused by sawmill above station; fluctuation more frequent prior to 1946.

Revisions (water years).--WSP 1301: 1948-49(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	12	5.0	620
2.6	29	6.0	1,100
3.0	68	7.0	1,750
3.5	155	8.0	2,500
4.0	276	9.0	3,300

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	198	268	85	60	76	1,120	184	*a230	28	50	20
2	152	*153	232	82	58	76	812	177	164	27	33	17
3	53	133	208	260	57	77	676	147	178	26	28	14
4	38	124	186	301	54	80	2,510	129	225	56	31	14
5	31	173	173	195	56	77	2,620	116	177	33	26	15
6	37	157	162	147	59	75	933	105	177	26	24	14
7	83	414	662	a120	64	72	596	93	118	23	20	13
8	116	276	416	a100	60	70	480	87	93	22	18	12
9	230	215	*271	93	*58	68	418	166	81	20	16	12
10	147	179	225	82	56	66	386	210	71	18	34	13
11	87	155	193	115	230	67	393	147	63	18	42	18
12	69	149	274	105	310	68	568	157	58	17	28	1,390
13	56	135	676	*105	200	66	667	258	56	16	22	742
14	49	268	369	105	160	60	833	200	49	24	20	330
15	45	554	263	96	130	59	1,200	166	166	31	73	175
16	42	279	250	91	120	58	840	143	155	20	*109	129
17	42	253	228	85	115	61	620	122	84	16	48	100
18	43	212	200	78	105	61	660	126	96	16	34	95
19	41	175	180	76	100	61	*449	131	68	28	28	84
20	38	149	135	74	105	61	325	100	60	23	43	494
21	35	139	120	72	100	61	284	88	54	18	38	254
22	33	131	129	70	90	56	344	78	45	16	47	166
23	60	122	107	67	93	62	279	81	42	18	42	129
24	1,710	166	90	66	95	58	302	475	47	23	29	111
25	851	602	105	65	87	*55	560	461	88	17	23	100
26	375	328	105	64	86	50	337	273	53	14	20	90
27	248	232	100	62	88	64	293	a175	40	14	18	*81
28	184	1,070	98	60	80	76	253	a130	*33	19	18	74
29	147	569	95	62	75	114	205	a110	29	16	16	68
30	127	334	92	60	-------	208	175	a90	30	199	31	119
31	149	-------	89	60	-------	1,030	-------	a140	-------	164	26	-------
Total	5,373	8,044	6,701	3,103	2,951	3,193	20,138	5,065	2,830	1,006	1,035	4,893
Mean	173	268	216	100	102	103	671	163	94.3	32.5	33.4	163
Cfsm	2.40	3.71	2.99	1.39	1.41	1.43	9.29	2.26	1.31	0.450	0.463	2.26
In.	2.77	4.14	3.45	1.60	1.52	1.64	10.37	2.61	1.46	0.52	0.53	2.52

Calendar year 1959: Max 1,710 Min 5.0 Mean 127 Cfsm 1.76 In. 23.87
Water year 1959-60: Max 2,620 Min 12 Mean 176 Cfsm 2.44 In. 33.13

Peak discharge (base, 1,750 cfs).--Oct. 24 (4:30 p.m.) 4,060 cfs (9.84 ft); Apr. 4 (6:30 a.m.) 3,490 cfs (9.21 ft); Sept. 12 (8:30 p.m.) 5,610 cfs (11.57 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Williams River at Brockways Mills.
Note.--Stage-discharge relation affected by ice Dec. 19-21, 24-27, Dec. 30 to Jan. 3, Jan. 9 to Mar. 12, Mar. 14-16.

1545. Connecticut River at North Walpole, N. H.

Location.--Lat 43°07'35", long 72°26'15", on left bank at North Walpole, Cheshire County, 100 ft upstream from Saxtons River and 0.7 mile downstream from Vilas Bridge between Bellows Falls, Vt., and North Walpole, N. H. Records include flow of Saxtons River.

Drainage area.--5,493 sq mi, includes that of Saxtons River.

Records available.--March 1942 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 218.63 ft above mean sea level, datum of 1929.

Average discharge.--18 years, 9,424 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 94,400 cfs Apr. 5 (gage height, 29.85 ft); minimum daily, 188 cfs Sept. 4, 5.
1942-60: Maximum discharge, 97,000 cfs Mar. 27, 1953 (gage height, 30.37 ft); minimum daily, 115 cfs Aug. 31, 1952, Sept. 2, 1957.
Maximum stage known, 43.8 ft Mar. 19, 1936, from floodmarks.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond (see p. 247), and other reservoirs (combined usable capacity, about 19½ billion cubic feet).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.9	156	7.0	4,230
4.0	202	10.0	11,700
4.5	488	15.0	28,500
5.0	930	20.0	48,700
5.5	1,510	29.0	90,200
6.0	2,270		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,030	12,000	44,000	8,000	6,400	6,800	55,800	16,800	7,780	6,330	6,740	1,950
2	6,000	15,100	37,200	5,800	5,900	6,100	54,700	16,200	10,400	2,310	3,980	2,050
3	6,450	15,500	27,800	6,800	6,500	7,200	54,400	16,900	10,000	887	3,380	260
4	1,460	13,900	22,000	20,500	5,700	6,400	63,500	16,600	18,000	2,860	3,230	188
5	2,840	13,200	18,000	17,000	6,400	5,500	87,900	14,300	9,720	6,000	3,460	188
6	5,350	13,100	10,100	14,000	5,100	4,200	82,000	14,100	*9,390	5,030	1,730	1,540
7	5,820	18,000	17,900	12,500	4,300	4,800	61,900	13,100	8,510	4,770	566	1,660
8	8,000	20,100	22,300	12,500	5,400	5,400	46,600	8,130	7,450	*5,330	3,230	2,070
9	15,100	15,600	20,600	12,500	6,000	5,700	37,000	10,600	5,130	1,770	3,480	2,010
10	14,700	13,100	18,800	10,000	6,600	5,400	28,600	15,600	6,150	1,520	3,660	557
11	7,820	12,600	16,700	7,100	*8,000	5,200	22,400	15,500	4,310	3,130	3,650	638
12	4,670	12,500	15,800	8,400	14,000	5,000	20,700	14,700	2,380	3,340	2,260	8,430
13	4,770	10,200	23,800	*9,000	14,500	2,400	30,600	13,200	4,090	3,110	797	21,300
14	5,270	10,100	27,300	9,200	11,000	5,100	35,200	13,400	4,110	3,670	222	11,700
15	6,520	12,600	23,800	10,000	7,400	5,500	43,500	12,000	6,200	4,120	2,300	8,720
16	5,960	14,700	*21,400	9,800	10,000	5,700	50,600	13,400	10,600	1,200	3.030	7,490
17	2,990	14,900	19,000	4,100	11,500	5,800	44,200	25,800	8,510	222	2,700	2,570
18	1,390	14,700	17,100	8,400	11,000	5,800	46,100	21,600	8,200	3,230	2,240	860
19	5,170	13,700	16,100	8,200	10,500	5,600	*51,900	15,100	2,980	3,360	2,450	3,520
20	5,270	13,300	12,200	8,800	9,400	3,100	48,500	13,900	7,020	3,640	825	5,510
21	5,240	12,600	10,000	9,000	7,800	5,690	46,900	12,000	6,660	3,680	*660	5,320
22	5,200	5,670	8,960	8,000	6,600	5,700	42,100	7,890	5,090	4,260	1,990	4,680
23	5,490	8,290	8,200	6,600	7,000	5,600	35,300	9,200	5,290	778	3.160	5,260
24	16,100	11,400	6,100	6,600	6,700	5,800	29,200	13,100	4,550	207	2,560	1,810
25	50,500	20,600	4,900	6,700	7,200	5,800	32,500	25,300	8,640	2,940	2,180	292
26	45,500	30,800	5,600	7,800	7,200	3,500	37,500	17,600	8,680	2,980	2,310	3,030
27	34,600	25,800	4,900	7,600	6,800	2,500	32,300	12,600	8,490	2,860	1,190	3,120
28	23,000	41,300	7,400	8,000	5,400	4,690	29,100	10,800	9,810	3,100	207	3,010
29	14,400	64,000	8,200	8,000	7,800	*5,260	23,100	7,520	7,380	2,700	3.180	2,760
30	12,800	52,300	8,800	6,400	---------	8,020	21,300	5,280	5,660	4,110	3.040	*4,140
31	11,100	--------	9,400	4,400	--------	22,200	--------	6,450	--------	4,130	3,180	--------
Total	341,510	552,460	514,360	281,700	228,100	181,460	‡1,295.4	428,670	221,180	97,584	77,587	116,633
Mean	11,020	18,420	16,590	9,087	7,866	5,854	43,180	13,830	7,373	3,148	2,503	3,888
(†)	+321	+854	-1,218	-1,713	-1,091	-971	+3,734	+658	+249	-198	-612	-64.7

Adjusted for change in reservoir contents

Mean	11,340	19,270	15,370	7,374	6,775	4,883	46,910	14,490	7,622	2,950	1,891	3,823
Cfsm	2.06	3.51	2.80	1.34	1.23	0.889	8.54	2.64	1.39	0.537	0.344	0.696
In.	2.38	3.91	3.23	1.55	1.33	1.02	9.53	3.04	1.55	0.62	0.40	0.78

	Observed			Adjusted		
Calendar year 1959:	Max 68,100	Min 226	Mean 9,782	Mean 9,903 Cfsm 1.80	In. 24.47	
Water year 1959-60:	Max 87,900	Min 188	Mean 11,850	Mean 11,840 Cfsm 2.16	In. 29.34	

Peak discharge (base, 44,000 cfs).--Oct. 25 (10:45 a.m.) 53,700 cfs (21.11 ft); Nov. 29 (2 a.m.) 70,900 cfs (24.94 ft); Apr. 3 (5 to 5:30 a.m.) 65,800 cfs (23.81 ft); Apr. 5 (7 to 8 p.m.) 94,400 cfs (29.85 ft); Apr. 19 (8 to 8:30 a.m.) 54,200 cfs (21.22 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, and Sunapee Lake.
‡ Expressed in thousands.
Note.--Stage-discharge relation affected by ice Dec. 23 to Mar. 20, Mar. 22-27.

1550. Cold River at Drewsville, N. H.

Location.--Lat 43°07'55", long 72°23'25", on left bank 50 ft upstream from bridge on State Highway 101 at Drewsville, Cheshire County, 1.0 mile upstream from Great Brook, 2.7 miles east of Bellows Falls, Vt., and 3.4 miles upstream from mouth.

Drainage area.--82.7 sq mi.

Records available.--June 1940 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 375 ft (from topographic map).

Average discharge.--20 years, 118 cfs.

Extremes.--Maximum discharge during year, 3,190 cfs Oct. 24 (gage height, 8.03 ft); minimum, 8.4 cfs Sept. 9, 10.
1940-60: Maximum discharge, 8,160 cfs Nov. 26, 1950 (gage height, 10.29 ft), from rating curve extended above 3,400 cfs by logarithmic plotting; minimum, 1.3 cfs Sept. 23, 1940.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Occasional diurnal fluctuation at low flow caused by sawmill above station; fluctuation more frequent prior to 1945.

Revisions (water years).--WSP 1431: 1952(P).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 11				Feb. 12 to Mar. 30		Mar. 31 to Sept. 30					
1.9	15	4.0	248	2.5	48	1.4	7.0	3.0	100	6.0	1,220
2.3	30	4.5	395	3.0	91	1.6	11	3.5	160	7.0	2,000
2.8	66	5.0	605	3.5	155	1.9	20	4.0	248	8.0	3,160
3.4	140	6.0	1,220	4.0	248	2.2	36	4.5	385		
						2.5	57	5.0	605		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	189	350	65	48	69	1,500	221	134	38	42	13
2	29	*146	277	62	47	72	1,170	227	147	37	26	12
3	22	130	233	330	45	69	947	181	148	33	22	10
4	18	115	208	430	47	71	2,410	157	186	61	20	9.9
5	16	158	182	307	46	78	2,770	142	323	47	18	11
6	17	156	169	233	48	75	1,520	128	452	35	17	10
7	24	585	329	190	61	72	834	115	221	30	15	9.5
8	40	475	347	170	59	67	623	106	147	28	14	9.0
9	80	312	238	100	*58	64	507	123	114	24	14	8.8
10	74	235	*195	92	53	62	471	205	95	21	21	9.0
11	43	191	162	92	250	63	447	157	81	26	28	20
12	35	167	243	74	350	65	569	200	69	20	21	505
13	30	146	864	88	250	61	804	203	64	18	17	658
14	26	156	529	*84	215	60	905	178	56	27	15	a400
15	23	463	330	81	180	59	1,140	156	219	42	19	a200
16	21	301	272	78	160	56	954	134	398	27	25	a120
17	20	262	231	68	135	59	710	114	198	20	*18	a80
18	23	253	198	62	125	60	740	115	175	18	15	a65
19	23	198	170	65	120	62	695	124	120	52	14	a55
20	20	158	130	65	125	61	447	99	96	46	13	a100
21	19	143	93	62	110	61	347	85	79	28	18	a280
22	18	134	90	60	96	58	*350	76	66	20	21	*a190
23	25	122	60	58	100	*61	301	78	58	23	26	126
24	970	185	56	56	95	57	282	791	59	18	20	96
25	1,140	866	64	54	88	54	615	926	193	16	16	86
26	471	561	77	53	90	51	499	*475	102	14	14	73
27	280	347	73	51	89	59	388	275	72	14	13	64
28	187	1,040	71	49	82	61	344	191	*58	15	12	58
29	134	922	72	51	78	85	265	144	*49	14	11	52
30	107	515	75	49	-------	193	221	115	44	43	18	79
31	121	-------	68	51	-------	1,160	-------	116	-------	91	16	-------
Total	4,077	9,631	6,456	3,330	3,250	3,205	23,775	6,358	4,223	946	579	3,409.2
Mean	132	321	208	107	112	103	792	205	141	30.5	18.7	114
Cfsm	1.60	3.88	2.52	1.29	1.35	1.25	9.58	2.48	1.70	0.369	0.226	1.38
In.	1.83	4.33	2.90	1.50	1.46	1.44	10.69	2.86	1.90	0.43	0.26	1.53

Calendar year 1959: Max 1,650 Min 5.5 Mean 124 Cfsm 1.50 In. 20.27
Water year 1959-60: Max 2,770 Min 8.8 Mean 189 Cfsm 2.29 In. 31.13

Peak discharge (base, 1,100 cfs, revised).--Oct. 24 (7 p.m.) 3,190 cfs (8.03 ft); Nov. 28 (6 p.m.) 1,790 cfs (6.72 ft); Mar. 31 (8 to 8:30 p.m.) 1,740 cfs (6.71 ft); Apr. 4 (7:30 a.m.) 3,100 cfs (7.95 ft); Apr. 15 (7 to 9 p.m.) 1,270 cfs (6.07 ft); May 24 (7 p.m.) 1,520 cfs (6.43 ft); Sept. 12 (8 p.m.) 1,660 cfs (6.61 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Warner River at Davisville.
Note.--Stage-discharge relation affected by ice Dec. 19 to Jan. 4, Jan. 7 to Feb. 8, Feb. 11 to Mar. 13, Mar. 16.

1555. West River at Jamaica, Vt.

Location.--Lat 43°06'30", long 72°46'30", on left bank a quarter of a mile upstream from highway bridge at Jamaica, Windham County, and 0.4 mile upstream from Ball Mountain Brook.

Drainage area.--179 sq mi.

Records available.--October 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 640 ft (from topographic map).

Average discharge.--14 years, 366 cfs.

Extremes.--Maximum discharge during year, 6,480 cfs Nov. 28 (gage height, 9.60 ft); minimum, 19 cfs Sept. 11.
1946-60: Maximum discharge, 29,500 cfs Dec. 31, 1948 (gage height, 14.87 ft), from rating curve extended above 9,800 cfs by logarithmic plotting, verified by slope-area measurement of peak flow; minimum, 5.0 cfs Aug. 28, 1949.

Remarks.--Records good except those for periods of ice effect, which are fair. Some effect on high flow by Ball Mountain Reservoir (flood-control reservoir under construction by Corps of Engineers).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.8	20	6.0	750
4.0	36	7.0	1,680
4.2	58	8.0	3,060
4.5	104	9.0	5,010
5.0	225	10.0	7,600
5.5	440		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	892	680	150	120	135	3,550	430	405	70	168	43
2	589	580	540	145	115	135	2,180	480	292	64	93	35
3	171	435	445	500	110	135	1,750	358	*321	64	76	32
4	108	345	395	700	105	140	4,650	292	1,780	180	104	28
5	80	548	358	450	110	135	5,820	250	583	113	83	30
6	123	485	332	320	120	135	3,120	216	381	80	71	30
7	280	568	1,600	260	150	130	1,420	190	246	*68	63	26
8	295	455	1,220	220	185	125	1,060	178	185	59	57	24
9	640	358	645	190	155	120	778	568	152	52	50	21
10	481	292	480	170	*140	115	673	794	141	47	66	21
11	228	253	381	210	400	115	701	435	117	48	141	22
12	185	250	508	180	820	120	1,250	376	104	46	91	1,350
13	148	242	2,110	175	460	115	2,170	452	95	41	70	2,700
14	123	239	1,070	*170	350	110	2,580	659	83	682	71	933
15	102	390	*824	165	300	110	4,530	638	344	117	62	367
16	90	304	538	160	260	110	3,800	502	554	77	58	212
17	88	292	470	155	220	110	2,460	376	219	59	44	143
18	95	350	405	150	200	110	3,500	314	285	50	38	119
19	106	260	350	145	180	110	2,410	296	206	48	34	108
20	90	213	240	140	200	110	1,260	228	152	52	36	564
21	84	204	210	135	180	110	1,070	192	132	47	41	399
22	82	195	190	135	170	*115	1,960	170	108	41	51	222
23	186	190	180	130	165	115	1,490	204	91	42	*51	165
24	2,400	280	170	130	170	110	1,360	585	84	57	41	134
25	2,980	2,160	190	125	160	105	2,600	980	532	56	35	119
26	*1,080	945	190	120	150	100	*1,440	645	231	46	32	106
27	598	556	185	120	150	110	1,020	376	138	41	30	*97
28	400	4,680	180	120	145	130	836	256	100	40	28	88
29	292	2,890	170	125	140	290	574	198	83	40	26	83
30	236	1,020	165	120	-------	490	445	182	76	132	65	212
31	304	-------	160	120	-------	2,700	-------	238	-------	700	58	-------
Total	12,736	20,871	15,381	6,135	6,130	6,800	62,457	12,058	8,220	3,259	1,934	8,433
Mean	411	696	496	198	211	219	2,082	389	274	105	62.4	281
Cfsm	2.30	3.89	2.77	1.11	1.18	1.22	11.6	2.17	1.53	0.587	0.349	1.57
In.	2.65	4.34	3.20	1.27	1.27	1.41	12.98	2.51	1.71	0.68	0.40	1.75

Calendar year 1959: Max 4,680 Min 12 Mean 358 Cfsm 2.00 In. 27.12
Water year 1959-60: Max 5,820 Min 21 Mean 449 Cfsm 2.51 In. 34.17

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 2, Dec. 20 to Mar. 31.

1560. West River at Newfane, Vt.

Location.--Lat 42°59'45", long 72°38'20", on right bank 600 ft downstream from highway bridge and 1 mile northeast of Newfane, Windham County.

Drainage area.--308 sq mi.

Records available.--September 1919 to September 1923, October 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 384.21 ft above mean sea level, datum of 1929. Prior to June 27, 1931, chain gage at site 600 ft upstream at same datum.

Average discharge.--36 years, 620 cfs.

Extremes.--Maximum discharge during year, 13,300 cfs Apr. 5 (gage height, 11.01 ft); minimum, 31 cfs Oct. 1.

1919-23, 1928-60: Maximum discharge, 52,300 cfs Sept. 21, 1938 (gage height, 22.81 ft, from floodmarks), from rating curve extended above 20,000 cfs on basis of contracted-opening measurement at gage height 19.3 ft and slope-area measurements at gage heights 19.46 and 22.81 ft; minimum, 13 cfs Sept. 17, 18, 1948, Aug. 27, 28, 1949.

Flood of Nov. 3, 1927, reached a stage of 23.0 ft, from floodmarks, at chain-gage site (discharge, 45,000 cfs, from rating curve extended by logarithmic plotting and on basis of computation of flow over dam at West Dummerston).

Remarks.--Records excellent except those for period of ice effect, which are fair. Some effect on high flow by Ball Mountain and Townshend Reservoirs (flood-control reservoirs under construction by the Corps of Engineers).

Revisions (water years).--WSP 756: Drainage area. WSP 1231: 1922-23, 1929-31(M).

Rating tables, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
3.9	42	5.5	910	3.8	30	5.5	970
4.0	62	6.0	1,410	4.0	71	6.0	1,490
4.2	118	7.0	2,710	4.3	165	7.0	2,870
4.5	240	8.0	4,550	4.7	357	9.0	7,200
5.0	530			5.0	550	11.0	13,300

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	1,310	1,320	300	240	270	7,070	794	777	124	373	76
2	684	1,040	1,070	290	240	270	4,200	904	618	120	186	62
3	295	777	884	1,200	220	270	3,250	697	*563	114	134	57
4	174	618	785	1,500	210	280	9,330	588	2,310	236	127	53
5	129	875	697	1,000	220	270	12,400	508	1,110	217	137	48
6	194	839	657	750	230	270	6,960	442	745	144	111	50
7	488	1,140	2,400	650	250	260	2,810	381	515	*114	98	46
8	544	970	2,650	550	270	250	2,140	357	387	104	90	43
9	837	753	1,340	450	280	240	1,620	1,000	313	93	76	39
10	903	625	990	350	*260	230	1,390	1,720	268	82	82	37
11	424	536	785	450	760	230	1,380	980	239	82	187	41
12	301	501	942	400	2,000	240	2,060	848	207	79	165	2,440
13	240	494	3,720	400	1,300	230	3,760	1,000	190	69	120	6,390
14	195	507	2,220	*400	800	220	4,560	1,280	165	79	101	1,730
15	166	1,340	*1,260	380	660	220	8,100	1,220	403	157	98	752
16	143	839	1,110	350	550	220	7,460	990	960	130	134	498
17	129	689	960	320	500	220	4,380	777	455	95	98	324
18	136	745	830	310	460	220	5,650	665	448	79	76	253
19	147	572	729	300	440	220	4,630	689	399	90	66	225
20	147	467	529	290	410	220	2,300	522	297	82	71	1,060
21	122	448	411	280	390	220	1,770	436	258	76	82	1,000
22	118	417	380	280	340	*230	2,570	363	212	66	87	550
23	173	399	350	270	360	230	2,590	393	178	66	95	393
24	3,760	457	320	260	350	220	2,190	822	165	66	76	313
25	6,080	3,280	360	250	320	210	3,890	1,660	657	82	*64	263
26	*2,220	1,980	360	250	300	200	*2,900	1,280	423	71	57	239
27	1,150	1,130	350	240	300	240	1,800	794	263	62	53	*212
28	803	6,460	350	240	290	278	1,490	565	190	66	50	194
29	602	6,070	340	240	280	522	1,090	436	151	64	46	178
30	480	1,990	330	240	-------	848	857	381	137	119	68	278
31	474	-------	310	240	-------	4,490	-------	406	-------	1,050	101	-------
Total	22,305	38,268	29,739	13,430	13,230	12,538	116,597	23,898	14,003	4,078	3,309	17,844
Mean	720	1,276	959	433	456	404	3,887	771	467	132	107	595
Cfsm	2.34	4.14	3.11	1.41	1.48	1.31	12.6	2.50	1.52	0.429	0.347	1.93
In.	2.69	4.62	3.59	1.62	1.60	1.51	14.08	2.89	1.69	0.49	0.40	2.15

Calendar year 1959: Max 6,460 Min 21 Mean 618 Cfsm 2.01 In. 27.22
Water year 1959-60: Max 12,400 Min 37 Mean 845 Cfsm 2.74 In. 37.33

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 22 to Mar. 27 (no gage-height record Dec. 23 to Jan. 14, Mar. 2-22; discharge estimated on basis of 4 discharge measurements, weather records, recorded range in stage when available, and records for West River at Jamaica, Saxtons River at Saxtons River, Williams River at Brockways Mills, Walloomsac River near North Bennington (Part 1-B), and stations on other nearby streams).

1565. Connecticut River at Vernon, Vt.

Location.--Lat 42°46'10", long 72°30'50", on right bank just downstream from Vernon Dam at Vernon, Windham County, 2 miles upstream from Ashuelot River.

Drainage area.--6,266 sq mi.

Records available.--February to April 1936 (in WSP 798), September and October 1938 (in WSP 867), October 1944 to September 1960.

Gage.--Water-stage recorder. Datum of gage is at mean sea level, datum of 1929. Prior to Jan. 20, 1948, at datum 94.13 ft higher.

Average discharge.--16 years (1944-60), 10,830 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 107,000 cfs Apr. 5, 6 (gage height, 209.64 ft); minimum daily, 182 cfs July 24.
1936, 1938, 1944-60: Maximum discharge, 176,000 cfs Mar. 19, 20, 1936 (gage height, 128.8 ft, datum then in use), from rating curve extended above 86,000 cfs; minimum daily, 99 cfs Oct. 8, 1944.

Remarks.--Records good except those below 1,000 cfs, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond (see p. 247), and other reservoirs (combined usable capacity, about 20 billion cubic feet).

Revisions.--WSP 1031: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,530	10,800	50,900	11,600	8,000	8,400	59,000	20,100	8,650	6,590	6,370	2,770
2	7,310	15,100	41,900	7,470	7,400	8,200	67,500	14,900	11,600	4,480	5,060	2,760
3	8,120	*14,600	34,400	9,120	6,600	7,600	64,600	16,100	11,500	836	4,450	213
4	1,140	16,100	26,700	24,500	7,500	8,600	73,100	17,500	19,200	2,230	4,130	469
5	3,390	14,600	22,500	23,700	6,800	6,400	98,200	15,500	13,200	7,530	4,000	434
6	6,000	14,900	12,700	18,400	7,200	5,500	98,900	15,000	11,100	6,730	1,460	1,670
7	6,720	21,700	17,100	15,500	4,860	7,000	*75,400	14,300	11,200	5,550	898	2,010
8	8,840	23,600	24,700	14,500	7,000	6,300	57,200	12,600	*9,700	5,900	3,990	1,790
9	15,200	16,600	22,500	14,500	7,200	6,300	45,400	11,500	6,520	*1,890	3,720	2,560
10	16,100	15,600	20,800	13,000	7,200	6,800	36,800	15,800	6,510	1,090	6,130	633
11	10,200	14,300	18,000	9,800	10,500	6,600	29,100	17,200	5,220	3,920	4,910	1,290
12	5,640	14,300	17,000	9,500	17,500	6,400	25,600	16,600	3,120	4,240	3,490	13,800
13	6,170	13,700	28,100	10,500	19,500	3,200	34,700	15,300	5,450	3,910	727	30,700
14	6,360	10,800	*31,400	11,000	15,000	6,400	43,400	16,000	5,000	4,940	209	15,600
15	7,030	15,400	26,200	11,500	11,500	6,000	53,400	14,600	6,590	4,630	2,420	12,300
16	7,080	15,800	22,800	12,000	10,500	6,800	61,600	15,000	11,500	710	3,620	10,000
17	1,820	16,400	21,100	6,110	*13,000	7,400	53,600	24,700	11,600	201	3,240	3,920
18	511	15,900	18,200	8,500	13,000	7,400	53,800	23,500	9,770	4,110	2,520	194
19	5,590	15,300	18,000	10,000	12,500	7,600	59,500	15,600	4,950	3,990	4,560	4,030
20	5,290	14,700	15,300	10,500	13,000	4,500	53,800	14,800	7,700	4,180	*1,200	13,800
21	5,190	14,400	13,000	10,500	10,500	6,400	51,900	13,600	7,610	4,290	201	9,250
22	5,450	9,630	9,460	10,000	9,500	6,200	48,100	11,000	7,740	4,010	2,220	5,790
23	6,780	8,140	7,350	8,000	7,600	6,700	42,700	9,630	6,430	1,340	2,900	6,890
24	18,300	12,900	7,770	6,700	8,000	6,900	35,600	13,800	5,820	182	2,760	2,310
25	57,100	23,500	7,160	9,400	8,400	6,700	37,200	26,400	6,490	3,740	3,300	201
26	55,000	31,800	6,250	8,600	8,700	4,100	44,200	20,500	10,400	4,500	2,700	4,300
27	40,400	31,000	6,600	8,600	10,000	2,980	38,700	15,000	7,090	4,140	209	4,420
28	30,500	37,400	8,360	9,400	5,490	6,550	34,800	13,600	10,100	3,970	201	3,810
29	18,500	73,200	10,600	9,400	8,400	*7,380	27,300	10,200	9,560	2,210	3,120	3,410
30	16,300	61,400	10,600	8,800	-------	9,300	24,700	6,570	6,500	5,870	3,510	5,780
31	14,300	-------	11,200	5,400	-------	21,900	-------	7,400	-------	4,490	3,070	-------
Total	398,861	613,570	588,650	346,500	282,350	218,510	1,529,800	474,300	257,820	116,399	91,295	167,104
Mean	12,870	20,450	18,990	11,180	9,736	7,049	50,990	15,300	8,594	3,755	2,945	5,570
(†)	+321	+854	-1,218	-1,713	-1,091	-971	+3,734	+658	+249	-198	-612	-64.7
Adjusted for change in reservoir contents												
Mean	13,190	21,310	17,770	9,465	8,645	6,078	54,730	15,960	8,843	3,557	2,333	5,505
Cfsm	2.11	3.40	2.84	1.51	1.38	0.970	8.73	2.55	1.41	0.568	0.372	0.879
In.	2.43	3.79	3.27	1.74	1.49	1.12	9.74	2.94	1.57	0.65	0.43	0.98

	Observed			Adjusted		
Calendar year 1959:	Max 74,800	Min 230	Mean 11,150	Mean 11,270	Cfsm 1.80	In. 24.41
Water year 1959-60:	Max 98,900	Min 182	Mean 13,890	Mean 13,880	Cfsm 2.22	In. 30.15

Peak discharge (base, 50,000 cfs).--Oct. 25 (6:30 to 7:30 p.m.) 62,000 cfs (198.74 ft); Nov. 29 (10 to 11 a.m.) 76,400 cfs (202.36 ft); Apr. 1 (7:30 to 8 p.m.) 78,200 cfs (202.79 ft); Apr. 5 (12 p.m.) to Apr. 6 (1 a.m.) 107,000 cfs (209.64 ft); Apr. 16 (11 a.m. to 12 m.) 63,000 cfs (199.00 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, and Sunapee Lake.
Note.--Stage-discharge relation affected by ice Jan. 7-16, 18-23, 25-30, Feb. 1-6, 8-27, Feb. 29 to Mar. 26.

1570. Ashuelot River near Gilsum, N. H.

Location.--Lat 43°02'20", long 72°16'15", on right bank 50 ft downstream from White Brook, 60 ft upstream from stone-arch bridge just off Keene-Newport road, and 0.7 mile downstream from Gilsum, Cheshire County.

Drainage area.--71.1 sq mi.

Records available.--August 1922 to September 1960.

Gage.--Water-stage recorder. Concrete control since Oct. 13, 1942. Datum of gage is 773.86 ft above mean sea level (levels by Corps of Engineers).

Average discharge.--38 years, 126 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Apr. 5 (gage height, 9.07 ft); minimum, 9.8 cfs Sept. 9-11.
1922-60: Maximum discharge, 5,220 cfs Sept. 21, 1938 (gage height, 11.24 ft in gage well), from rating curve extended above 2,000 cfs on basis of float measurements at gage heights 10.66 and 10.72 ft and slope-area measurement at gage height 11.24 ft; maximum gage height, 12.80 ft Mar. 19, 1936; minimum discharge, about 1 cfs Oct. 6, 1922, July 10, 1923, Nov. 14, 1952.

Remarks.--Records good except those for periods of ice effect, doubtful or no gage-height record, which are fair. Flow regulated by reservoir above station. Diurnal fluctuation caused by powerplant above station prior to 1938.

Revisions (water years).--WSP 661: Drainage area. WSP 781: 1934(M). WSP 1231: 1923-27(M), 1928, 1929-30(M), 1931, 1932(M).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.5	11	4.0	394	1.3	8.3	1.7	22
1.7	20	5.0	715	1.5	14	2.0	42
2.0	42	6.0	1,060				
2.5	98	7.0	1,530	Note.--Same as preceding table above 2.0 ft.			
3.0	173	9.0	2,730				

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	232	417	56	43	60	1,300	216	*110	30	26	13
2	12	200	325	52	42	56	1,140	216	122	29	20	13
3	12	178	251	260	41	52	974	182	131	29	18	12
4	11	163	206	480	40	56	1,470	154	138	43	16	11
5	11	177	184	410	39	60	2,450	134	130	33	15	11
6	22	180	166	340	42	58	1,780	117	214	27	14	11
7	32	342	260	280	53	56	995	102	189	24	14	10
8	42	442	407	210	56	53	*666	94	124	*23	13	10
9	70	352	349	150	53	51	499	101	89	21	13	9.8
10	83	269	266	100	50	46	436	150	70	20	21	9.8
11	66	199	*200	93	140	43	415	182	55	21	23	15
12	60	164	250	*93	350	47	458	212	47	19	19	318
13	49	140	600	90	320	48	624	230	40	18	16	764
14	40	134	650	84	250	45	810	230	35	26	15	603
15	34	214	400	76	200	43	1,090	204	80	31	17	407
16	30	222	310	70	150	43	1,190	175	232	24	21	250
17	28	210	240	67	115	43	967	150	180	20	16	154
18	29	222	195	64	97	46	876	130	142	18	14	103
19	30	189	171	62	91	50	883	117	117	25	13	75
20	29	159	135	58	100	50	634	102	94	31	13	350
21	27	142	105	56	90	49	*461	85	72	24	14	700
22	23	130	95	54	82	48	402	70	55	18	16	400
23	26	119	80	52	73	47	392	64	42	16	17	250
24	d990	141	75	50	68	45	384	306	58	16	*15	150
25	*d2,000	709	80	47	66	*44	478	648	143	15	14	110
26	1,070	687	70	46	68	42	505	484	101	14	13	90
27	572	453	65	45	72	42	455	362	65	13	12	80
28	356	681	60	43	68	44	407	236	48	14	12	*74
29	224	951	66	47	66	68	334	159	37	14	12	65
30	163	585	70	47	-------	127	255	124	34	22	15	75
31	159	-------	60	45	-------	820	-------	107	-------	37	14	-------
Total	6,311	8,990	6,808	3,627	2,925	2,382	23,730	5,845	2,994	715	491	5,143.6
Mean	204	300	220	117	101	76.8	791	189	99.8	23.1	15.8	171
Cfsm	2.87	4.22	3.09	1.65	1.42	1.08	11.1	2.66	1.40	0.325	0.222	2.41
In.	3.30	4.70	3.56	1.90	1.53	1.25	12.41	3.06	1.57	0.37	0.26	2.69

Calendar year 1959: Max 2,000 Min 7.6 Mean 144 Cfsm 2.03 Ir. 27.41
Water year 1959-60: Max 2,450 Min 9.8 Mean 191 Cfsm 2.69 Ir. 36.60

Peak discharge (base, 1,000 cfs).--Oct. 25 (10:30 p.m.) 2,700 cfs (8.95 ft); Nov. 29 (3:30 a.m.) 1,120 cfs (6.15 ft); Apr. 1 (2:30 a.m.) 1,420 cfs (6.79 ft); Apr. 5 (1:30 p.m.) 2,780 cfs (9.07 ft); Apr. 16 (2:30 a.m.) 1,260 cfs (6.45 ft); Sept. 20 (time unknown) about 1,300 cfs.

* Discharge measurement made on this day.
d Doubtful-gage height record; discharge computed from reconstructed gage-height graph based on 1 discharge measurement, appearance of recorder chart, weather records, and records for stations on nearby streams.
Note.--No gage-height record Dec. 11-16, Jan. 10-12, Sept. 19-30; discharge estimated on basis of 3 discharge measurements, weather records, recorded range in stage when available, and records for South Branch Ashuelot River at Webb, near Marlboro, and other nearby streams. Stage-discharge relation affected by ice Dec. 20 to Mar. 18, Mar. 26, 31.

1580. Ashuelot River below Surry Mountain Dam, near Keene, N. H.

Location.--Lat 42°59'45", long 72°18'40", on right bank 600 ft downstream from Surry Mountain Dam, 2½ miles upstream from Sturtevant Brook, and 4½ miles north of Keene, Cheshire County.

Drainage area.--101 sq mi.

Records available.--September 1945 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 480.00 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Average discharge.--15 years, 177 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,320 cfs Oct. 28 (gage height, 9.60 ft); minimum daily, 2.5 cfs June 15-19.
1945-60: Maximum discharge, that of Oct. 28, 1959; minimum daily, 0.8 cfs Dec. 4-7, 1948.

Remarks.--Records excellent except those for periods of indefinite stage-discharge relation, which are good, and those for period of no gage-height record, which are fair. Flow regulated by Surry Mountain Reservoir (see p. 247).

Rating tables, water year 1959-60, except periods of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 20				June 21 to Sept. 30			
4.4	10	7.0	402	4.3	1.5	5.1	42
4.7	20	7.5	579	4.4	3.1	5.5	91
5.0	36	8.0	760	4.5	5.7	6.0	187
5.5	82	8.5	935	4.6	9.1	7.0	490
6.0	154	9.0	1,110	4.7	14	7.5	700
6.5	257	9.5	1,280	4.9	26		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	935	984	114	80	108	855	1,000	*321	*138	78	17
2	15	868	942	99	80	102	946	946	230	24	31	17
3	14	742	886	94	80	100	1,000	786	225	24	31	16
4	13	390	820	359	80	100	316	579	225	24	31	16
5	13	257	661	624	80	100	167	486	225	41	24	9.6
6	13	244	304	624	80	100	570	390	268	*43	22	5.4
7	18	324	276	544	80	100	1,030	262	e210	42	21	4.9
8	22	500	*383	362	*80	100	1,150	225	e265	49	20	4.7
9	143	560	514	82	81	100	1,140	172	e380	49	20	5.2
10	205	602	424	155	81	99	1,120	157	e175	49	*33	5.4
11	127	486	255	108	83	87	1,090	201	a5	49	50	5.4
12	90	332	181	*108	192	74	1,090	257	a5	50	40	3.6
13	61	234	533	121	448	74	1,100	290	a4	32	25	167
14	61	207	665	128	486	94	1,110	321	a3	26	16	457
15	60	230	760	128	468	197	998	321	a2.5	198	16	598
16	60	279	774	128	380	195	1,050	338	a2.5	298	54	578
17	44	321	602	118	244	128	1,090	341	a2.5	74	42	554
18	37	353	347	105	199	100	*1,120	252	a2.5	38	22	506
19	36	321	270	105	182	96	1,110	205	e2.5	22	13	310
20	37	279	183	105	180	95	1,180	141	e145	54	13	296
21	36	209	143	105	180	*94	1,180	116	168	64	13	448
22	36	178	144	105	148	92	1,180	116	490	40	31	558
23	37	178	114	91	122	67	1,190	104	514	30	42	*598
24	40	180	95	83	124	60	1,180	108	424	24	19	594
25	37	292	95	83	124	62	1,080	276	257	17	14	586
26	576	383	95	83	125	62	1,130	486	214	17	14	334
27	1,140	637	95	83	125	86	1,180	540	162	17	14	153
28	*988	595	96	80	125	96	1,150	525	97	17	14	46
29	1,080	747	96	80	125	99	1,110	507	64	17	15	46
30	1,060	935	98	80	-------	181	1,060	478	36	18	16	46
31	998	-------	116	80	-------	370	-------	478	-------	108	17	-------
Total	7,114	12,798	11,951	5,164	4,862	3,418	30,672	11,404	5,124.5	1,693	811	6,985.2
Mean	229	427	386	167	168	110	1,022	368	171	54.6	26.2	233
(†)	+56.2	+23.5	-76.7	-0.86	+2.4	+19.8	+76.1	-88.3	-8.6	-13.4	-1.6	+49.0
Adjusted for change in contents in Surry Mountain Reservoir												
Mean	286	450	309	166	170	130	1,099	280	162	41.3	24.6	282
Cfsm	2.83	4.46	3.06	1.64	1.68	1.29	10.9	2.77	1.60	0.409	0.244	2.79
In.	3.26	4.97	3.52	1.89	1.82	1.48	12.14	3.19	1.79	0.47	0.28	3.11

	Observed			Adjusted		
Calendar year 1959:	Max 1,150	Min 7.8	Mean 198	Mean 199	Cfsm 1.97	In. 26.75
Water year 1959-60:	Max 1,190	Min 2.5	Mean 279	Mean 281	Cfsm 2.78	In. 37.92

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Surry Mountain Reservoir.
a No gage-height record; discharge estimated on basis of weather records, engineer's notes, and records of gate operation at Surry Mountain Reservoir.
e Stage-discharge relation indefinite; discharge estimated on basis of gage heights, engineer's notes, appearance of recorder chart, weather records, and records of gate operation at Surry Mountain Reservoir.

1586. Otter Brook below Otter Brook Dam, near Keene, N. H.

Location.--Lat 42°56'45", long 72°14'15", on right bank 450 ft downstream from Otter Brook Dam, 2 miles northeast of Keene, Cheshire County, and 2.4 miles upstream from Minnewawa Brook.

Drainage area.--47.2 sq mi.

Records available.--May 1958 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 658.65 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Extremes.--Maximum discharge during year, 682 cfs May 2 (gage height, 8.56 ft); minimum, 0.1 cfs Nov. 28; minimum daily, 0.4 cfs Oct. 25.
1958-60: Maximum discharge, 685 cfs Apr. 20, 1959 (gage height, 8.59 ft); minimum, that of Nov. 28, 1959; minimum daily, that of Oct. 25, 1959.

Remarks.--Records good. Flow regulated by Otter Brook Reservoir (see p. 247).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-31						Nov. 1 to Sept. 30			
5.4	0.4	5.9	10	7.5	268	5.6	2.7	7.0	143
5.5	1.0	6.2	28	8.0	435	5.7	5.1	7.5	268
5.6	2.0	6.5	56	8.5	655	5.9	13	8.0	435
5.7	3.8	6.9	117			6.1	25	8.5	655
5.8	6.4	7.2	183			6.5	64		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a5.5	516	388	62	44	55	244	610	77	24	5.4	7.6
2	a6.3	488	407	47	44	47	227	637	76	22	5.4	5.8
3	a6.9	459	463	43	44	43	249	628	74	22	5.4	5.8
4	a6.7	415	516	200	37	43	52	556	86	27	11	5.8
5	a6.7	289	417	357	34	49	12	360	80	36	13	5.8
6	a11	196	116	354	34	53	136	138	89	23	12	5.8
7	38	208	252	289	52	53	316	82	77	20	9.0	5.8
8	56	331	408	*148	49	50	395	61	61	17	7.8	5.1
9	75	216	170	101	43	47	471	63	51	14	7.6	4.9
10	83	137	112	82	46	43	520	95	44	13	17	4.9
11	61	114	*30	76	53	41	420	92	38	10	*42	4.9
12	53	114	60	69	*140	35	511	106	33	13	23	3.2
13	42	101	208	67	202	41	511	112	31	16	19	100
14	36	84	286	67	210	47	511	109	27	16	14	195
15	31	117	286	67	134	82	511	102	47	16	12	391
16	26	132	283	67	92	112	516	95	119	9.9	32	435
17	24	114	268	68	83	100	520	84	86	9.9	34	354
18	24	114	212	51	76	55	520	76	70	9.9	18	150
19	23	114	147	50	69	30	520	72	56	10	12	52
20	21	109	100	51	74	34	511	63	45	11	12	63
21	19	86	72	58	82	38	*506	55	37	11	12	128
22	18	78	69	54	70	31	506	49	30	11	12	243
23	*19	78	70	43	61	31	502	47	25	11	19	*289
24	36	78	58	44	58	*39	493	192	104	11	17	280
25	.4	239	48	43	58	38	484	325	151	11	12	99
26	53	360	57	42	58	29	475	277	39	7.6	7.9	62
27	386	395	62	43	60	27	547	*155	87	6.2	5.8	54
28	*326	189	57	43	60	37	578	114	81	6.2	5.8	41
29	403	165	54	43	60	46	583	92	49	4.9	5.1	49
30	493	326	60	43	---	71	620	76	31	4.9	5.1	53
31	516	---	63	43	---	141	---	69	---	5.1	9.0	---
Total	2,905.5	6,362	5,799	2,805	2,127	1,588	12,967	5,572	1,901	429.6	422.1	3,103.4
Mean	93.7	212	187	90.5	73.3	51.2	432	180	63.4	13.9	13.6	103
(†)	+44.2	-6.87	-35.4	0	-0.16	+13.4	+54.7	-67.2	-7.60	+5.90	+1.98	+0.27

Adjusted for change in contents in Otter Brook Reservoir

Mean	138	205	152	90.5	73.2	64.7	487	113	55.8	19.8	15.6	104
Cfsm	2.92	4.34	3.22	1.92	1.55	1.37	10.3	2.39	1.18	0.419	0.331	2.20
In.	3.37	4.85	3.70	2.21	1.67	1.58	11.51	2.75	1.32	0.48	0.38	2.45

	Observed			Adjusted			
Calendar year 1959:	Max 650	Min 0.4	Mean 93.7	Mean 93.8	Cfsm 1.99	In. 26.95	
Water year 1959-60:	Max 637	Min 0.4	Mean 126	Mean 126	Cfsm 2.67	In. 36.27	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Otter Brook Reservoir.
a No gage-height record; discharge estimated on basis of weather records and records of gate operations at Otter Brook Reservoir.

1600. South Branch Ashuelot River at Webb, near Marlboro, N. H.

Location.--Lat 42°52'20", long 72°12'55", on right bank 15 ft downstream from bridge, 800 ft southwest of Webb station on Boston & Maine Railroad, and 2½ miles south of Marlboro, Cheshire County.

Drainage area.--36.0 sq mi.

Records available.--October 1920 to September 1960. October 1920 monthly discharge only, published in WSP 1301.

Gage.--Water-stage recorder. Concrete control since July 18, 1938. Datum of gage is 667.11 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--40 years, 60.4 cfs.

Extremes.--Maximum discharge during year, 4,350 cfs Oct. 24 (gage height, 7.40 ft); minimum, 1.0 cfs Sept. 6; minimum daily, 1.4 cfs Sept. 5.
1920-60: Maximum discharge, 5,960 cfs Sept. 21, 1938 (gage height, 7.89 ft), from rating curve extended above 3,300 cfs on basis of contracted-opening and slope-area measurements of peak flow; maximum gage height, 9.70 ft Mar. 12, 1936 (ice jam); practically no flow Mar. 22, 1931; minimum daily discharge, 0.4 cfs Sept. 15-17, 1926.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by powerplant and several small reservoirs above station.

Revisions (water years).--WSP 641: 1925(M). WSP 871: Drainage area. WSP 1231: 1921-24(M), 1926(M), 1929, 1933-34(M), 1939.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30			
2.0	7.7	4.0	122	1.6	1.3	3.8	86
2.2	13	4.4	255	1.7	2.6	4.0	122
2.5	22	5.0	555	1.9	6.4	4.4	260
3.0	40	5.5	920	2.1	11	5.0	570
3.5	60	6.0	1,470	2.5	24	5.5	950
3.8	86			3.0	41	6.0	1,510
				3.5	60	6.5	2,270

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	138	177	29	22	36	758	82	72	13	34	6.2
2	21	125	136	25	21	33	579	94	61	53	20	5.8
3	23	96	116	170	21	31	455	74	64	34	15	5.0
4	14	77	98	320	21	33	919	64	73	66	13	2.6
5	12	94	90	185	20	36	1,830	56	56	*36	11	1.4
6	15	90	85	120	22	35	796	51	56	21	9.2	1.7
7	49	198	167	94	29	33	430	53	42	16	8.2	3.2
8	177	208	184	*82	31	32	335	37	34	14	7.3	2.8
9	141	138	122	64	28	30	282	64	31	13	6.6	3.5
10	62	103	93	44	27	27	243	127	25	13	35	3.5
11	66	92	*75	41	150	25	230	88	19	11	73	5.0
12	58	73	124	41	*300	26	292	107	16	9.2	36	175
13	46	61	462	42	170	28	355	118	16	8.2	21	451
14	35	60	287	41	125	27	340	101	23	12	16	119
15	30	109	171	39	90	26	355	85	43	28	14	60
16	25	105	141	36	67	26	300	79	92	21	13	40
17	21	94	116	34	53	26	213	65	47	14	13	29
18	24	104	94	33	48	29	202	60	35	13	*11	24
19	27	82	80	32	53	31	198	64	26	12	9.2	20
20	23	69	69	31	56	29	141	50	21	13	8.5	94
21	20	56	59	29	51	*30	116	a44	18	13	8.5	94
22	18	48	51	28	46	29	*109	a39	16	12	9.8	58
23	*20	48	47	27	41	28	95	a35	15	10	12	42
24	1,280	76	45	26	39	27	118	a100	15	8.7	13	33
25	*953	471	50	25	39	26	217	a250	32	7.6	11	26
26	353	318	45	25	43	25	155	a170	27	6.9	9.2	20
27	215	168	33	24	46	25	138	*a125	19	7.1	7.8	17
28	133	404	30	24	42	30	141	85	15	8.0	7.1	*16
29	95	503	30	25	40	52	101	56	13	7.8	6.4	15
30	76	268	32	25	-------	108	92	48	12	12	6.4	20
31	83	-------	33	23	-------	753	-------	50	-------	57	6.6	-------
Total	4,124.2	4,476	3,342	1,784	1,741	1,734	10,535	2,521	1,034	570.5	471.8	1,393.7
Mean	133	149	108	57.5	60.0	55.9	351	81.3	34.5	18.4	15.2	46.5
Cfsm	3.69	4.14	3.00	1.60	1.67	1.55	9.75	2.26	0.958	0.511	0.422	1.29
In.	4.26	4.62	3.45	1.84	1.80	1.79	10.88	2.60	1.07	0.59	0.49	1.44

Calendar year 1959: Max 1,280 Min 6.2 Mean 75.8 Cfsm 2.11 In. 28.58
Water year 1959-60: Max 1,830 Min 1.4 Mean 92.2 Cfsm 2.56 In. 34.83

Peak discharge (base, 550 cfs).--Oct. 24 (8 p.m.) 4,350 cfs (7.40 ft); Nov. 25 (1 p.m.) 585 cfs (5.05 ft); Nov. 28 (9 to 10 p.m.) 722 cfs (5.26 ft); Mar. 31 (7 p.m.) 1,180 cfs (5.76 ft); Apr. 5 (5:30 p.m.) 2,290 cfs (6.51 ft); Sept. 12 (11:30 p.m.) 765 cfs (5.28 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for Ashuelot River near Gilsum and stations on other nearby streams.

Note.--Stage-discharge relation affected by ice Dec. 19 to Jan. 7, Jan. 9 to Feb. 11, Feb. 13 to Mar. 17, Mar. 22-27.

1610. Ashuelot River at Hinsdale, N. H.

Location.--Lat 42°47'05", long 72°29'10", on left bank 40 ft upstream from highway bridge at Hinsdale, Cheshire County, a quarter of a mile downstream from dam, and 1¼ miles upstream from mouth.
Drainage area.--420 sq mi.
Records available.--March 1907 to December 1911, July 1914 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 201.32 ft above mean sea level (levels by Corps of Engineers). Prior to Sept. 29, 1933, chain gage on highway bridge at same datum.
Average discharge.--50 years, 662 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 8,800 cfs Apr. 5 (gage height, 8.90 ft); minimum, 54 cfs Aug. 21, Sept. 4; minimum daily, 79 cfs Oct. 1, Sept. 7.
1907-11, 1914-60: Maximum discharge, 16,600 cfs Mar. 19, 1936, by computation of peak flow over dam (previously published maximum has been revised); maximum gage height, 20.2 ft Mar. 19, 1936, from floodmarks (backwater from Connecticut River); minimum discharge, 10 cfs Sept. 9, 1953; minimum daily, 12 cfs Sept. 15, 1929.
Revisions.--The maximum discharge and gage height for the water year 1920 have been revised to 9,550 cfs Mar. 29, 1920 (gage height, 8.06 ft, from graph based on gage readings), superseding figures published in WSP 1301 and 1331.
Remarks.--Records good except those for periods of ice effect or intake drawdown, which are fair. Flow regulated by mills above station. High flow affected by Surry Mountain Reservoir since 1942 and by Otter Brook Reservoir since 1958 (see p. 247).
Revisions (water years).--WSP 661: Drainage area. WSP 781: 1907-10, 1914-34. WSP 1301: 1915(M), 1917-19(M), 1921-33(M). Revised figures of discharge, in cubic feet per second, for high-water period in water year 1920, superseding those published in WSP 781 and 1301, are given herewith:

Mar. 29, 1920..... 8,940
Mar. 30, 1920..... 6,000

Month	Maximum	Minimum	Mean	Per square mile	Runoff in inches
March 1920.....	8,940	205	1,979	4.71	5.43
Water year 1919-20.....	8,940	32	854	2.03	27.67
Calendar year 1920.....	8,940	117	965	2.30	31.29

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	2,200	3,060	550	380	560	5,460	2,480	1,160	212	415	128
2	103	2,180	2,780	560	365	490	5,390	2,430	982	433	292	133
3	101	*2,010	2,580	1,060	350	480	4,510	2,360	915	358	198	114
4	97	1,750	2,460	2,030	350	451	5,640	2,090	1,020	397	169	88
5	95	1,390	2,320	2,400	340	538	8,240	1,750	938	409	156	88
6	92	1,140	1,850	2,240	370	557	7,920	1,430	892	321	155	92
7	140	1,320	1,530	1,990	450	524	6,930	1,060	885	238	113	79
8	391	1,890	2,050	1,620	480	518	4,110	855	*714	202	114	84
9	583	1,900	1,950	1,040	450	469	3,420	840	707	*192	118	93
10	756	1,610	1,680	800	410	463	3,230	945	728	163	232	97
11	635	1,410	1,310	730	950	445	3,110	1,010	484	158	550	93
12	487	1,200	1,130	640	2,230	445	3,050	1,110	306	172	475	552
13	391	1,020	2,420	660	2,100	457	3,180	1,200	288	169	297	2,070
14	311	878	*3,220	680	1,850	439	3,250	1,200	231	198	198	1,750
15	271	1,030	2,820	640	1,600	457	3,160	1,130	344	306	179	1,460
16	242	1,150	2,440	620	1,420	602	3,060	1,070	819	475	205	1,440
17	224	1,110	2,210	580	*1,150	661	2,970	1,040	763	420	297	1,320
18	205	1,150	1,840	530	1,010	570	2,860	998	512	216	228	1,120
19	205	1,100	1,440	520	945	481	2,860	870	363	195	195	826
20	195	982	1,130	530	998	427	2,740	798	283	216	160	1,040
21	202	900	892	520	968	433	2,670	668	409	231	135	1,620
22	192	777	812	520	855	445	2,580	576	445	212	161	1,440
23	192	728	700	480	735	421	2,520	570	707	188	242	1,400
24	1,120	777	630	450	687	403	2,580	917	756	130	235	1,320
25	4,910	1,760	570	420	668	385	2,760	1,960	915	114	163	1,160
26	3,900	2,640	557	400	714	346	2,820	2,120	707	114	136	975
27	2,520	2,300	622	420	721	330	*2,720	1,810	499	116	114	661
28	2,520	2,670	668	420	687	*409	2,760	1,480	487	128	99	474
29	2,210	3,700	661	415	642	564	2,680	1,280	316	136	95	352
30	2,140	3,460	661	400	--------	805	2,520	1,150	258	177	103	*380
31	2,140	--------	610	360	--------	2,800	--------	1,110	--------	358	*128	--------
Total	27,649	48,132	49,603	25,225	24,875	17,375	111,700	40,307	18,833	7,354	6,357	22,449
Mean	892	1,604	1,600	814	858	560	3,723	1,300	628	237	205	748
(†)	+100	+16.6	-112	-0.86	+2.20	+33.2	+131	-155	-16.2	-7.47	+0.41	+49.3

Adjusted for change in reservoir contents

Mean	992	1,621	1,488	813	860	594	3,854	1,145	612	230	205	798
Cfsm	2.36	3.86	3.54	1.94	2.05	1.41	9.18	2.73	1.46	0.548	0.488	1.90
In.	2.72	4.31	4.08	2.23	2.21	1.63	10.24	3.14	1.62	0.63	0.56	2.12

	Observed			Adjusted		
Calendar year 1959:	Max 4,910	Min 73	Mean 784	Mean 785	Cfsm 1.87	In. 25.37
Water year 1959-60:	Max 8,240	Min 79	Mean 1,093	Mean 1,095	Cfsm 2.61	In. 35.49

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Surry Mountain and Otter Brook Reservoirs.
Note.--Stage-discharge relation affected by ice Dec. 20, 23-25, Dec. 31 to Jan. 2, Jan. 9 to Feb. 11, Mar. 1-3. Intake drawdown Apr. 1 to July 7; recorder graph adjusted on basis of differences between engineer's inside and outside gage readings and on observer's outside gage readings.

1615. Tarbell Brook near Winchendon, Mass.

Location.--Lat 42°42'45", long 72°05'09", on left bank 0.1 mile downstream from Spud Brook, 0.3 mile downstream from Massachusetts-New Hampshire State line, and 2¾ miles northwest of Winchendon, Worcester County.

Drainage area.--18.2 sq mi.

Records available.--May 1916 to September 1960. Prior to October 1950, published as Sip Pond Brook near Winchendon.

Gage.--Water-stage recorder. Datum of gage is 872.82 ft above mean sea level, datum of 1929. May 29 to June 29, 1916, staff gage; June 30 to Dec. 12, 1916, water-stage recorder; and Dec. 13, 1916, to June 26, 1917, staff gage, all at site 450 ft downstream at same datum.

Average discharge.--44 years, 30.1 cfs.

Extremes.--Maximum discharge during year, 647 cfs Apr. 5 (gage height, 10.69 ft); minimum, 1.4 cfs July 22.
1916-60: Maximum discharge, 2,630 cfs Sept. 21, 1938 (gage height, 13.72 ft), from rating curve extended above 1,200 cfs on basis of critical-depth study at control section; minimum, 0.1 cfs Aug. 25, 1924.

Remarks.--Records fair. Flow regulated by Pearly and Sip Ponds, Damon Reservoirs, and small mill above station.

Revisions (water years).--WSP 781: 1934. WSP 871: Drainage area. WSP 1051: 1928(M), 1933-34. WSP 1301: 1917(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	43	110	24	16	21	177	50	40	18	10	8.9
2	36	46	78	23	*18	20	231	50	42	12	11	7.4
3	24	44	69	60	15	18	233	44	44	12	14	4.2
4	25	38	62	115	15	18	305	39	60	19	*10	3.0
5	31	38	56	112	15	18	567	33	62	23	12	3.0
6	38	32	50	90	15	17	561	29	52	16	8.4	7.3
7	40	43	60	69	16	19	338	23	37	11	8.6	5.4
8	50	55	66	58	19	15	220	22	32	10	16	9.0
9	63	49	62	53	20	*15	174	29	26	11	12	4.5
10	58	43	51	46	18	16	148	33	22	8.2	22	2.9
11	47	38	45	43	28	17	123	40	16	12	18	4.6
12	33	34	53	37	37	16	131	42	15	11	18	44
13	28	24	133	34	37	11	163	57	18	11	14	147
14	23	28	171	30	36	13	167	62	19	17	11	126
15	*19	34	120	29	34	14	163	53	40	14	15	72
16	17	35	91	29	29	15	157	47	111	9.3	16	52
17	13	*36	73	23	25	14	131	*42	82	7.0	11	40
18	14	36	66	23	24	13	112	37	54	9.7	11	35
19	16	31	58	24	31	14	103	36	40	5.2	11	34
20	13	31	51	22	33	11	90	32	28	8.4	6.6	56
21	12	25	44	22	29	16	72	27	22	8.9	7.0	75
22	11	25	40	21	29	14	68	24	21	5.7	12	62
23	10	25	33	17	24	13	62	25	16	2.8	17	46
24	43	30	29	18	21	14	63	50	16	4.2	12	42
25	131	76	24	20	20	13	75	95	12	9.0	11	37
26	115	116	25	20	20	11	75	87	11	8.2	9.8	36
27	78	100	25	17	24	9.9	72	67	14	12	5.6	31
28	62	142	30	18	21	16	72	49	*11	11	4.8	*29
29	52	195	30	16	24	16	64	40	12	10	8.0	26
30	42	146	*25	15	-------	32	54	33	19	12	8.4	34
31	38	-------	28	13	-------	95	-------	33	-------	12	*3.4	-------
Total	1,219	1,638	1,858	1,141	693	564.9	4,971	1,330	994	340.6	360.6	1,084.2
Mean	39.3	54.6	59.9	36.8	23.9	18.2	166	42.9	33.1	11.0	11.6	36.1
Cfsm	2.16	3.00	3.29	2.02	1.31	1.00	9.12	2.36	1.82	0.604	0.637	1.98
In.	2.49	3.35	3.80	2.33	1.42	1.15	10.16	2.72	2.03	0.70	0.74	2.22

Calendar year 1959: Max 354 Min 2.8 Mean 32.8 Cfsm 1.80 In. 24.47
Water year 1959-60: Max 567 Min 2.8 Mean 44.2 Cfsm 2.43 In. 33.11

Peak discharge (base, 150 cfs).--Nov. 29 (9 a.m. to 1 p.m.) 201 cfs (8.53 ft); Dec. 14 (1 to 5 a.m.) 178 cfs (8.33 ft); Apr. 5 (10 to 11 p.m.) 647 cfs (10.69 ft); Apr. 14 (1 p.m.) 173 cfs (8.28 ft); Sept. 13 (6 to 7 p.m.) 173 cfs (8.28 ft).

* Discharge measurement made on this day.

1620. Millers River near Winchendon, Mass.

Location.--Lat 42°41'03", long 72°05'02", on right bank 10 ft downstream from Nolan Bridge, a third of a mile downstream from Tarbell Brook, and 2 miles west of Winchendon, Worcester County.

Drainage area.--83.0 sq mi.

Records available.--June 1916 to September 1960. Monthly discharge only for March to May 1917, published in WSP 1301.

Gage.--Water-stage recorder. Concrete control since Oct. 6, 1933. Datum of gage is 826.66 ft above mean sea level, datum of 1929. Prior to July 27, 1916, chain gage at bridge at same datum.

Average discharge.--44 years, 144 cfs.

Extremes.--Maximum discharge during year, about 2,200 cfs Apr. 5 (occurred during period of backwater from Birch Hill Reservoir); maximum gage height, about 13.5 ft Apr. 7 or 8 (backwater from Birch Hill Reservoir); minimum daily discharge, 24 cfs Sept. 10.
1916-60: Maximum discharge, 8,500 cfs Sept. 22, 1938 (gage height, 21.55 ft, from floodmarks), from rating curve extended above 2,900 cfs on basis of computation of peak flow over dam; practically no flow because of regulation Sept. 20, 1918, Jan. 14, 1925.

Remarks.--Records good except those for periods of ice effect, no gage-height record, or backwater from Birch Hill Reservoir, which are fair. Flow regulated by Lake Monomonac and other reservoirs and, prior to 1957, by powerplant.

Revisions (water years).--WSP 451: 1916. WSP 871: Drainage area. WSP 1051: 1919, 1920-21(M), 1922-24, 1928(M), 1933-34.

Rating table, water year 1959-60, except periods of ice effect or backwater from Birch Hill Reservoir (gage height, in feet, and discharge, in cubic feet per second)

3.8	20	6.0	480
4.0	43	7.0	740
4.2	73	8.0	1,100
4.5	140	8.5	1,320
5.0	290		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	319	486	105	94	100	784	242	167	42	112	36
2	65	310	412	100	*92	95	882	212	173	68	*79	34
3	50	298	376	300	88	90	882	194	216	68	63	28
4	42	278	355	450	86	100	1,180	179	284	84	53	25
5	36	272	331	400	86	105	2,000	158	284	82	43	25
6	42	266	315	380	92	105	*1,900	137	227	67	39	25
7	56	338	387	310	110	150	1,500	119	173	54	33	25
8	117	381	420	251	110	*145	1,200	114	137	47	33	26
9	230	349	399	220	110	135	950	135	112	44	31	27
10	287	310	361	195	103	130	800	194	88	40	122	24
11	302	275	337	170	159	125	700	262	62	40	236	26
12	242	251	357	160	287	120	750	325	54	39	161	348
13	212	224	500	150	270	115	850	355	56	40	99	836
14	194	227	600	150	230	110	950	331	54	92	73	654
15	*182	245	550	143	160	110	1,000	305	306	200	65	584
16	176	239	450	143	130	105	900	272	650	144	73	388
17	167	*239	370	130	120	105	800	242	494	88	63	278
18	161	227	320	127	114	105	700	*209	360	67	51	215
19	158	152	300	132	120	105	600	206	256	54	60	185
20	143	132	270	124	140	105	520	188	182	84	81	302
21	135	119	240	122	130	105	432	164	146	90	54	351
22	130	117	190	119	120	75	405	146	127	71	58	295
23	127	112	150	114	110	65	388	127	96	53	136	227
24	337	133	130	107	105	60	388	287	96	42	107	194
25	630	373	110	110	95	58	381	375	119	40	77	170
26	645	404	110	103	105	56	388	321	65	*36	62	140
27	565	353	115	101	110	56	388	263	54	35	47	132
28	442	509	115	101	105	66	330	218	47	42	42	99
29	359	707	*119	101	100	82	347	188	*40	51	38	*79
30	298	598	117	94	-------	130	300	164	42	71	*38	148
31	284	-------	110	90	-------	569	-------	149	-------	176	39	-------
Total	6,859	8,757	9,402	5,302	3,681	3,582	23,655	6,781	5,167	2,151	2,268	6,126
Mean	221	292	303	171	127	116	788	219	172	69.4	73.2	204
Cfsm	2.66	3.52	3.65	2.06	1.53	1.40	9.49	2.64	2.07	0.836	0.882	2.46
In.	3.07	3.92	4.21	2.38	1.65	1.60	10.60	3.04	2.32	0.96	1.02	2.74

Calendar year 1959: Max 1,270 Min 8.2 Mean 163 Cfsm 1.96 Ir. 26.59
Water year 1959-60: Max 2,000 Min 24 Mean 229 Cfsm 2.76 Ir. 37.51

Peak discharge (base, 690 cfs).--Nov. 29 (2 to 3 a.m.) 737 cfs (6.99 ft); Apr. 5 (time unknown) about 2,200 cfs; June 15 (11 p.m.) 752 cfs (7.04 ft); Sept. 12 (10 to 11 p.m.) 938 cfs (7.58 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 13-28, Apr. 6-9; discharge estimated on basis of weather records, recorded range in stage when available, records of inflow into Birch Hill Reservoir, and records for North Nashua River near Leominster, Priest Brook near Winchendon, Contoocook River at Peterboro, N. H., and stations on other nearby streams. Stage-discharge relation affected by ice Jan. 2-7, 9-14, Feb. 8, 13-17, Feb. 19 to Mar. 30. Backwater from Birch Hill Reservoir Apr. 5-19.

1625. Priest Brook near Winchendon, Mass.

Location.--Lat 42°40'57", long 72°06'56", on right bank 100 ft downstream from highway bridge, 3 miles upstream from mouth, and 3½ miles west of Winchendon, Worcester County.

Drainage area.--19.4 sq mi.

Records available.--May 1916 to September 1960. Monthly discharge only for October 1917 to July 1918 (published in WSP 1301), September 1935 to September 1936.

Gage.--Water-stage recorder. Concrete control since September 1936. Datum of gage is 849.67 ft above mean sea level, datum of 1929. Prior to Mar. 22, 1933, staff gage and Mar. 22, 1933, to Sept. 11, 1936, float gage, on left bank at same datum.

Average discharge.--44 years, 33.5 cfs.

Extremes.--Maximum discharge during year, 744 cfs Apr. 6 (gage height, 6.26 ft); minimum, 1.7 cfs Oct. 1.
1916-60: Maximum discharge, 3,000 cfs Sept. 21, 1938 (gage height, 9.90 ft), from rating curve extended above 620 cfs on basis of contracted-opening measurements at gage heights 8.4 and 9.90 ft; minimum, 0.08 cfs several times in September 1929.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Occasional diurnal fluctuation at low flow by mill above station; prior to 1953, regulation at low flow by mill and ponds.

Revisions (water years).--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).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-25				Oct. 26 to Sept. 30			
2.3	2.4	3.5	76	2.3	2.4	3.5	86
2.4	4.2	4.0	143	2.4	4.2	4.0	159
2.6	9.8	5.0	346	2.6	9.8	5.0	358
2.8	19	6.0	625	2.8	19	6.0	650
3.0	31			3.0	33		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	55	117	18	15	17	327	52	38	8.1	10	3.6
2	14	63	103	15	*14	16	351	52	28	21	6.2	3.0
3	9.5	60	90	80	14	16	314	45	40	14	5.4	2.7
4	6.4	53	67	140	15	16	369	40	79	16	5.2	2.7
5	5.0	50	48	110	16	18	598	35	73	12	4.7	3.2
6	4.4	50	31	90	18	18	*598	30	47	9.2	4.4	2.9
7	9.4	64	52	70	20	16	340	25	22	8.9	4.0	2.7
8	43	100	99	62	22	*15	215	23	19	9.0	3.8	2.6
9	67	99	90	54	17	14	180	30	18	7.0	3.2	2.6
10	90	82	65	48	15	14	150	35	16	4.0	22	2.7
11	72	63	35	43	28	14	130	43	14	3.4	39	3.7
12	52	36	46	38	50	13	140	45	13	3.0	23	38
13	25	30	166	35	55	13	170	60	12	3.0	16	230
14	18	28	217	31	45	13	180	65	11	10	12	90
15	*18	39	170	30	40	12	170	56	44	16	13	55
16	16	43	114	28	33	12	160	50	137	10	22	35
17	9.8	*44	84	27	28	12	140	46	72	7.3	13	25
18	9.5	52	73	25	24	13	120	*44	49	6.0	8.6	20
19	9.8	47	64	26	25	18	110	41	27	7.2	7.6	16
20	14	42	55	24	28	22	90	32	18	11	7.0	35
21	8.6	34	45	23	25	20	75	27	16	8.2	9.4	45
22	8.2	29	23	22	23	18	70	23	14	6.7	12	35
23	13	33	20	19	21	16	66	20	11	5.7	21	28
24	47	38	17	20	19	14	68	62	11	4.7	13	23
25	432	119	16	19	18	13	80	116	14	4.0	8.2	20
26	332	190	15	18	19	13	80	119	11	*3.8	6.4	18
27	186	162	16	16	22	13	75	91	9.2	3.8	5.4	17
28	126	186	20	16	20	14	75	64	*8.4	6.0	4.7	15
29	95	240	*23	17	19	23	66	45	8.2	4.2	*4.0	*13
30	60	184	20	17	-------	38	56	27	7.3	10	*5.2	28
31	38	-------	21	16	-------	162	-------	23	-------	35	3.8	-------
Total	1,842.4	2,315	2,022	1,197	708	646	5,563	1,466	887.1	278.2	323.2	818.4
Mean	59.4	77.2	65.2	38.6	24.4	20.8	185	47.3	29.6	8.97	10.4	27.4
Cfsm	3.06	3.98	3.36	1.99	1.26	1.07	9.54	2.44	1.53	0.462	0.536	1.41
In.	3.53	4.44	3.88	2.29	1.36	1.24	10.66	2.81	1.70	0.53	0.62	1.57

Calendar year 1959: Max 517 Min 0.9 Mean 41.5 Cfsm 2.14 In. 29.07
Water year 1959-60: Max 598 Min 2.6 Mean 49.4 Cfsm 2.55 In. 34.63

Peak discharge (base, 150 cfs).--Oct. 25 (6 to 7:30 p.m.) 479 cfs (5.47 ft); Nov. 29 (3 to 5 a.m.) 264 cfs (4.57 ft); Dec. 14 (5 to 7 a.m.) 230 cfs (4.40 ft); Jan. 4 (time unknown) about 170 cfs; Apr. 2 (2:30 p.m.) 390 cfs (5.13 ft); Apr. 6 (9:30 to 10 a.m.) 744 cfs (6.26 ft); June 16 (6 to 8:30 a.m.) 157 cfs (4.00 ft); Sept. 13 (8 to 9 a.m.) 294 cfs (4.74 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 1 to Feb. 2, Apr. 9 to May 17, Sept. 13-29; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage, and records for Tarbell Brook near Winchendon and South Branch Ashuelot River at Webb, near Marlboro, N. H. Stage-discharge relation affected by ice Dec. 15, Dec. 20 to Mar. 30.

1640. Millers River at South Royalston, Mass.

Location.--Lat 42°37'47", long 72°09'03", on right bank 500 ft downstream from bridge in South Royalston, Worcester County, 0.4 mile downstream from Beaver Brook, and 1.7 miles downstream from Birch Hill Dam.

Drainage area.--187 sq mi.

Records available.--July 1939 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 792.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--21 years, 322 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,280 cfs Apr. 7 (gage height, 7.41 ft); minimum daily, 81 cfs Sept. 4, 5, 8-10.

1939-60: Maximum discharge, 4,400 cfs Apr. 13, 1940 (gage height, 8.40 ft); maximum gage height, 9.42 ft Jan. 24, 1959 (backwater from ice); minimum daily discharge, 9.3 cfs Aug. 4, 1956.

Maximum stage known, 15.9 ft Sept. 21 or 22, 1938, from floodmarks.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Lake Monomonac and other reservoirs, by mills and powerplants prior to 1955, and at high flow by Birch Hill Reservoir (see p. 247).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.1	79	6.0	880
4.5	163	7.0	1,790
5.0	333	7.5	2,390
5.5	570		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	535	1,530	255	195	220	1,530	581	406	123	388	104
2	139	545	1,230	250	190	215	1,900	535	411	200	282	98
3	125	525	1,020	491	185	260	1,960	490	445	197	222	88
4	100	490	902	940	175	260	1,170	435	598	225	185	81
5	91	465	771	1,020	175	255	540	384	667	219	156	81
6	89	445	631	980	195	225	1,040	341	614	180	140	82
7	107	515	631	865	260	245	2,160	317	470	146	125	84
8	261	655	758	720	*250	255	2,070	286	350	129	114	81
9	435	685	797	600	240	250	2,100	301	278	116	110	81
10	525	631	764	450	210	250	2,110	440	229	104	239	81
11	540	540	673	*350	280	255	2,110	505	191	*93	535	93
12	465	465	631	330	550	235	2,080	598	166	94	500	223
13	375	402	873	320	598	232	2,170	661	158	94	367	801
14	289	380	1,060	310	555	*225	2,190	703	148	202	263	1,370
15	222	406	1,100	310	495	225	2,070	679	325	420	213	1,550
16	282	420	1,090	300	430	216	2,050	620	767	380	267	1,450
17	298	411	1,010	290	335	225	2,090	540	1,020	260	242	1,150
18	207	440	895	290	293	222	*2,020	480	985	183	139	752
19	*153	375	784	280	224	229	1,900	460	771	157	189	498
20	163	317	643	260	325	232	1,760	416	513	360	200	545
21	166	286	520	250	370	239	1,610	362	333	362	166	*727
22	318	260	410	250	310	206	1,450	321	271	267	156	721
23	213	249	340	250	280	171	1,270	*297	225	194	308	592
24	356	267	300	235	255	166	1,110	474	216	146	317	480
25	171	586	270	225	235	160	1,020	771	271	118	229	406
26	685	845	260	220	242	147	948	804	200	110	177	346
27	1,610	895	256	215	285	150	873	739	163	102	146	301
28	1,590	955	263	220	267	169	852	603	138	125	129	260
29	1,200	707	271	215	249	260	778	485	120	131	118	222
30	752	*1,030	286	215	-------	374	685	388	112	170	112	321
31	545	-------	265	205	-------	1,000	-------	333	-------	425	108	-------
Total	12,554	15,727	21,234	12,111	8,653	7,773	47,616	15,349	11,561	6,032	6,842	13,669
Mean	405	524	685	391	298	251	1,587	495	385	195	221	456
(†)	+2.50	+41.9	-42.2	-0.34	+0.36	+20.0	-17.7	-2.17	-1.43	+1.75	-1.87	+1.74
Adjusted for change in contents in Birch Hill Reservoir												
Mean	407	566	643	390	299	271	1,570	493	384	196	219	457
Cfsm	2.18	3.03	3.44	2.09	1.60	1.45	8.40	2.64	2.05	1.05	1.17	2.44
In.	2.51	3.38	3.96	2.41	1.72	1.67	9.36	3.04	2.29	1.21	1.35	2.73

	Observed			Adjusted			
Calendar year 1959:	Max 2,020	Min 30	Mean 348	Mean 348	Cfsm 1.86	In. 25.28	
Water year 1959-60:	Max 2,190	Min 81	Mean 489	Mean 490	Cfsm 2.62	In. 35.63	

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Birch Hill Reservoir.

Note.--Stage-discharge relation affected by ice Dec. 22-25, Dec. 31 to Jan. 2, Jan. 5 to Feb. 12, Feb. 16, 17, 20-25, 27, Mar. 1-12.

1650. East Branch Tully River near Athol, Mass.

Location.--Lat 42°38'32", long 72°13'34", on right bank 300 ft downstream from Tully Dam, 1.3 miles downstream from Lawrence Brook, and 3½ miles north of Athol, Worcester County.

Drainage area.--50.4 sq mi.

Records available.--October 1915 to September 1960. Monthly discharge only for October 1915 to May 1916, published in WSP 1301.

Gage.--Water-stage recorder and concrete control. Datum of gage is 613.71 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Oct. 26, 1948, staff gage at site 0.2 mile upstream at datum 14.40 ft higher.

Average discharge.--45 years, 83.9 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 828 cfs Apr. 21 (gage height, 5.38 ft); minimum, 0.1 cfs Sept. 13; minimum daily, 0.2 cfs Oct. 25.
1915-60: Maximum discharge, 5,140 cfs Sept. 21, 1938 (gage height, 8.60 ft, from floodmarks, site and datum then in use), from rating curve extended above 1,500 cfs on basis of contracted-opening measurement and computation of peak flow over dam; minimum, 0.03 cfs Jan. 4, Mar. 3, 1949, Aug. 21, 22, 1955; minimum daily, 0.04 cfs Aug. 21, 1955.

Remarks.--Records excellent. Flow regulated by Tully Reservoir since 1948 (see p. 247).

Revisions (water years).--WSP 451: 1916. WSP 891: Drainage area. WSP 1051: 1916(M), 1928. WSP 1301: 1917-35(M), 1937(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.3	0.2	2.9	28
2.35	.5	3.1	50
2.4	1.1	3.5	118
2.5	2.9	4.0	238
2.55	4.2	4.5	400
2.6	6.2	5.0	620
2.7	12	5.4	840

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	263	436	g59	32	77	320	341	89	20	61	14
2	22	193	440	g42	34	75	211	249	91	57	32	12
3	25	159	420	g78	34	74	235	178	102	57	22	9.7
4	18	137	*366	g99	34	72	92	131	161	53	18	8.4
5	13	126	311	g201	34	58	.5	108	171	49	15	9.7
6	12	120	156	g252	34	53	83	94	146	34	14	*8.4
7	18	128	96	*255	56	53	280	84	112	30	12	7.2
8	63	148	177	235	70	53	280	77	82	36	10	6.7
9	106	166	201	211	74	42	301	78	64	31	9.0	6.7
10	128	166	193	118	72	48	311	128	50	22	36	6.7
11	116	163	168	85	72	34	311	146	42	13	126	8.4
12	94	163	159	85	75	29	311	139	37	10	106	27
13	80	126	163	84	80	37	311	146	34	*9.0	69	228
14	64	85	185	69	110	*60	311	150	30	18	46	370
15	50	87	246	44	126	42	311	143	29	43	40	314
16	42	116	269	79	122	32	311	135	45	32	104	241
17	35	122	266	91	118	32	311	120	157	21	96	152
18	33	94	252	74	106	33	370	104	222	15	58	96
19	*32	104	235	64	*84	33	428	98	188	14	36	75
20	29	126	g188	43	84	56	560	89	86	30	29	107
21	25	100	g124	33	85	66	756	75	56	28	26	*185
22	22	61	g77	51	84	43	792	64	43	19	33	183
23	21	46	g77	66	84	109	762	*57	36	15	100	141
24	22	74	g67	42	82	122	685	101	32	12	89	106
25	.2	96	g60	31	80	53	645	190	40	8.4	56	84
26	122	184	g44	31	80	39	595	203	36	6.2	34	66
27	365	295	g36	52	80	38	560	180	30	5.8	26	53
28	460	314	g36	63	80	40	*520	141	25	12	22	45
29	440	142	g84	61	77	56	480	106	21	12	18	42
30	436	252	g100	41	---	91	428	82	20	20	16	68
31	404	---	g91	30	---	220	---	72	---	78	15	---
Total	3,301.5	4,356	5,723	2,769	2,183	1,870	11,871.5	4,009	2,277	810.4	1,374.0	2,680.9
Mean	106	145	185	89.3	75.3	60.3	396	129	75.9	26.1	44.3	89.4
(†)	+3.70	+32.9	-28.5	+0.37	+2.39	-2.99	+1.35	-7.92	-0.08	+0.04	-0.04	+0.12
Adjusted for change in contents in Tully Reservoir												
Mean	110	178	156	89.7	77.7	57.3	397	121	75.8	26.2	44.3	89.5
Cfsm	2.18	3.53	3.10	1.78	1.54	1.14	7.88	2.40	1.50	0.520	0.879	1.78
In.	2.52	3.94	3.57	2.05	1.66	1.31	8.79	2.78	1.68	0.60	1.01	1.98

	Observed			Adjusted		
Calendar year 1959:	Max 460	Min 0.2	Mean 87.7	Mean 87.7	Cfsm 1.74	In. 23.61
Water year 1959-60:	Max 792	Min 0.2	Mean 118	Mean 118	Cfsm 2.34	In. 31.89

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Tully Reservoir.
g Computed from once-daily remote-registering stage-indicator readings and records of gate operation of Tully Reservoir.

1655. Moss Brook at Wendell Depot, Mass.

Location.--Lat 42°36'10", long 72°21'36", on left bank a quarter of a mile upstream from mouth and a quarter of a mile north of Wendell Depot, Franklin County.

Drainage area.--12.3 sq mi.

Records available.--June to October 1909, April to August 1910, June 1916 to September 1960. Published as "at Wendell" 1909-10.

Gage.--Staff gage read once or twice daily. Crest-stage indicator since July 11, 1958. Datum of gage is 508.9 ft above mean sea level, datum of 1929. Prior to April 1910, staff gage at site 1,200 ft downstream at different datum. April to August 1910 staff gage and sharp-crested weir at site 300 ft downstream at different datum.

Average discharge.--44 years (1916-60), 21.1 cfs.

Extremes.--Maximum discharge during year, 573 cfs Apr. 5 (gage height, 4.62 ft); minimum, 1.0 cfs Oct. 1.
1916-60: Maximum discharge, 1,540 cfs Mar. 19, 1936 (gage height, 6.30 ft, from floodmarks), from rating curve extended above 400 cfs on basis of slope-area measurements at gage heights 5.62 and 6.30 ft; minimum, 0.2 cfs Sept. 4, 5, 1929.

Remarks.--Records good except those for periods of ice effect, which are fair.

Revisions (water years).--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).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	0.8	2.2	40
1.1	1.4	2.5	67
1.2	2.4	3.0	137
1.4	5.2	3.5	235
1.7	13	4.0	364
1.9	21	5.0	735

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	31	47	26	10	14	288	31	18	5.0	35	3.8
2	6.6	34	39	55	10	13	209	34	15	80	16	3.4
3	4.8	24	32	116	10	13	164	29	21	45	10	3.0
4	4.8	21	*27	*79	10	14	295	26	37	28	8.6	3.0
5	2.8	21	27	58	10	15	540	23	28	18	7.6	3.2
6	2.1	20	27	*43	11	15	*288	18	22	11	6.3	3.0
7	4.4	41	41	36	14	14	136	18	15	6.6	5.8	2.4
8	14	61	56	28	20	13	107	16	12	6.6	5.4	2.4
9	28	42	42	24	14	12	82	22	9.3	5.6	4.6	2.4
10	29	32	31	20	13	11	71	36	8.8	4.8	24	3.0
11	15	25	28	18	40	11	68	32	7.8	4.5	55	4.2
12	12	20	34	18	90	11	68	31	7.6	4.2	28	69
13	9.0	18	123	17	70	12	79	36	6.6	3.6	15	209
14	7.8	19	87	16	55	11	71	36	6.0	6.3	11	86
15	5.2	25	45	15	45	11	60	36	25	15	11	42
16	5.1	25	43	14	32	11	52	32	49	11	32	23
17	4.2	26	35	13	29	11	44	25	30	6.3	30	17
18	5.4	27	29	13	23	*12	43	23	18	4.6	15	15
19	4.8	22	26	13	*21	12	42	22	14	4.5	12	14
20	*4.3	19	23	13	31	12	36	18	9.6	20	9.6	38
21	4.0	16	21	12	31	12	31	15	8.6	15	8.8	62
22	3.4	16	19	12	26	12	30	14	6.8	8.8	8.3	39
23	4.8	15	17	12	21	12	28	14	6.3	5.8	23	23
24	153	20	16	12	20	11	42	30	6.3	4.6	24	16
25	327	105	15	12	20	11	*72	61	7.0	3.6	12	15
26	109	118	15	11	21	11	76	40	6.0	3.0	*9.3	14
27	52	59	18	11	22	11	49	30	4.6	3.0	7.0	12
28	36	79	18	11	18	12	56	19	3.9	5.8	6.3	12
29	28	141	18	11	15	18	42	16	3.6	5.4	6.0	11
30	23	77	15	11	------	37	*35	14	3.3	26	4.6	18
31	21	------	16	10	------	220	------	*15	------	62	4.5	------
Total	931.8	1,199	1,030	760	752	615	3,204	812	416.1	437.6	455.7	768.8
Mean	30.1	40.0	33.2	24.5	25.9	19.8	107	26.2	13.9	14.1	14.7	25.6
Cfsm	2.45	3.25	2.70	1.99	2.11	1.61	8.70	2.13	1.13	1.15	1.20	2.08
In.	2.82	3.63	3.11	2.30	2.27	1.86	9.69	2.46	1.26	1.32	1.38	2.32

Calendar year 1959: Max 416 Min 0.7 Mean 23.2 Cfsm 1.89 In. 25.64
Water year 1959-60: Max 540 Min 1.3 Mean 31.1 Cfsm 2.53 In. 34.42

Peak discharge (base, 160 cfs).--Oct. 24 (12 p.m.) 548 cfs (4.55 ft); Nov. 25 (12 p.m.) 178 cfs (3.22 ft); Nov. 29 (4 a.m.) 163 cfs (3.14 ft); Jan. 2 (12 p.m.) 197 cfs (3.32 ft); Mar. 31 (10 p.m.) 370 cfs (4.02 ft); Apr. 5 (4 p.m.) 573 cfs (4.62 ft); Sept. 13 (7 a.m.) 249 cfs (3.56 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21-26, Jan. 8 to Feb. 15, Feb. 23-25, Feb. 29 to Mar. 12, Mar. 14-17, 24-27.

1665. Millers River at Erving, Mass.

Location.--Lat 42°35'51", long 72°26'19", on right bank 75 ft downstream from bridge at Farley, 0.6 mile upstream from Mormon Hollow Brook, 2.4 miles downstream from Erving, Franklin County, and 5.5 miles upstream from mouth.

Drainage area.--375 sq mi.

Records available.--August 1914 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 380 ft (from topographic map). Prior to June 30, 1915, staff gage, June 30, 1915, to Sept. 20, 1938, water-stage recorder, and Sept. 21 to Dec. 31, 1938, staff gage, at site 2.2 miles upstream at different datum. Jan. 1 to Mar. 29, 1939, staff gage and Mar. 30, 1939, to Sept. 12, 1941, water-stage recorder, at site 0.4 mile downstream at different datum.

Average discharge.--46 years, 634 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 5,020 cfs Apr. 5 (gage height, 6.91 ft), from rating curve extended above 2,200 cfs by logarithmic plotting; minimum daily, 100 cfs Oct. 1.

1914-60: Maximum discharge, 29,000 cfs Sept. 22, 1938 (gage height, 13.37 ft, from floodmarks, site and datum then in use), mean of two slope-area measurements; practically no flow at times during 1915 and 1916 because of regulation; minimum daily, 8 cfs Sept. 6, 1926.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by powerplants, Lake Monomonac and other reservoirs, and high flow, by Birch Hill and Tully Reservoirs (see p. 247).

Revisions (water years).--WSP 641: 1920(M). WSP 756: Drainage area. WSP 781: 1928(M), 1933(M). WSP 1301: 1915(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	86	4.0	1,120
2.2	145	5.0	2,080
2.5	221	6.0	3,420
3.0	430	7.0	5,200

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	1,240	2,580	490	360	460	4,160	1,390	729	305	638	156
2	180	1,060	2,300	420	360	440	4,120	1,230	729	568	454	146
3	180	918	1,820	1,300	340	430	3,800	988	806	526	345	125
4	159	834	*1,680	2,060	350	410	4,400	855	1,100	502	290	130
5	146	792	1,490	*1,820	340	460	4,440	764	1,200	448	247	127
6	131	778	1,260	1,690	380	450	3,270	680	1,120	349	221	137
7	164	984	1,220	1,540	470	450	3,790	624	890	286	204	107
8	318	1,200	1,400	1,370	480	450	3,660	580	680	288	165	119
9	663	1,190	1,400	1,090	540	430	3,420	638	*538	310	168	*120
10	806	1,100	1,320	860	460	400	3,260	876	436	218	352	132
11	785	976	1,170	600	1,000	380	3,240	946	363	201	862	160
12	701	862	1,220	580	1,470	370	3,260	1,060	331	178	806	913
13	568	792	1,990	600	1,170	380	3,240	1,160	302	170	604	1,700
14	461	694	1,940	540	1,120	390	3,320	1,200	283	275	442	2,420
15	365	764	1,880	540	848	400	3,090	1,190	682	574	380	2,250
16	290	771	1,850	510	869	360	3,020	1,090	1,580	431	556	2,010
17	407	799	1,720	490	750	377	2,970	953	1,800	404	532	1,580
18	323	806	1,550	500	*680	*377	3,010	855	1,820	294	449	1,130
19	245	736	1,410	480	687	388	3,020	764	1,310	275	192	663
20	*228	659	1,220	470	722	404	2,810	729	925	586	336	1,040
21	229	604	920	430	729	442	2,800	645	604	568	272	1,310
22	289	538	800	420	660	400	2,670	562	502	419	243	1,230
23	347	478	590	450	600	330	2,450	532	414	306	471	1,040
24	1,400	550	530	410	560	400	2,400	869	382	240	526	806
25	2,450	1,540	470	370	510	350	2,440	1,380	442	183	378	680
26	1,120	1,800	540	360	550	290	2,200	1,360	388	173	279	586
27	2,180	1,700	500	360	592	298	2,050	1,240	302	168	227	508
28	2,600	2,230	520	370	568	339	2,020	1,020	264	196	201	442
29	2,100	2,420	520	400	532	498	*1,820	820	240	199	184	377
30	1,570	1,420	600	400	---------	818	1,560	666	218	366	169	595
31	1,290	---------	560	350	---------	3,370	---------	583	---------	722	165	---------
Total	22,795	31,235	38,970	22,270	18,697	15,741	91,710	28,249	21,180	10,728	11,358	22,739
Mean	735	1,041	1,257	718	645	508	3,057	911	706	346	366	758
(†)	+6.20	+74.8	-70.7	+0.04	+2.75	+17.1	-16.3	-10.1	-1.50	+1.79	-1.90	+1.85

Adjusted for change in reservoir contents

Mean	742	1,116	1,186	718	647	525	3,041	901	704	348	364	760
Cfsm	1.98	2.98	3.16	1.91	1.73	1.40	8.11	2.40	1.88	0.928	0.971	2.03
In.	2.28	3.32	3.65	2.21	1.86	1.61	9.05	2.77	2.10	1.07	1.12	2.26

	Observed				Adjusted			
Calendar year 1959:	Max	4,350	Min	51	Mean	664	Mean	664	Cfsm	1.77	In.	24.03
Water year 1959-60:	Max	4,440	Min	100	Mean	917	Mean	917	Cfsm	2.45	In.	33.30

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Birch Hill and Tully Reservoirs.

Note.--Stage-discharge relation affected by ice Dec. 21 to Jan. 3, Jan. 9 to Feb. 11, Feb. 22-25, Mar. 1-16, 22-26.

1670. Connecticut River at Turners Falls, Mass.

Location.--Lat 42°36'40", long 72°33'20", at dam of Western Massachusetts Electric Co., at Turners Falls, Franklin County, 0.2 mile upstream from Falls River.

Drainage area.--7,163 sq mi.

Records available.--January 1915 to September 1960.

Average discharge.--45 years, 11,960 cfs (adjusted for storage).

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 Reservoir and Comerford Station Pond (see p. 247), and other reservoirs (combined usable capacity, about 25½ billion cubic feet).

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

Revisions (water years).--WSP 741: 1932. WSP 891: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,770	16,800	60,400	12,200	8,730	10,500	65,500	24,400	10,900	6,620	8,230	3,320
2	6,650	17,100	50,500	9,520	8,630	9,380	84,800	21,600	13,100	6,760	6,620	3,320
3	8,860	17,000	41,600	9,390	8,470	8,570	76,800	18,700	12,800	846	4,810	195
4	697	18,500	33,400	26,400	8,960	9,830	84,800	20,700	20,600	3,450	4,630	136
5	3,860	17,400	27,600	26,300	8,080	7,820	117,000	18,400	17,300	8,210	4,660	225
6	6,600	16,400	18,000	20,900	9,440	6,930	124,000	17,900	13,500	7,760	2,150	2,560
7	7,520	24,200	17,800	20,600	5,740	8,700	92,800	16,600	12,600	6,660	1,020	2,170
8	8,860	26,800	30,700	16,800	8,220	7,720	67,300	14,900	11,500	6,520	4,320	2,350
9	14,500	19,700	25,000	18,800	8,680	7,900	57,000	13,200	8,210	3,430	4,270	3,140
10	18,100	18,200	23,500	15,400	8,300	7,370	47,200	15,200	7,360	495	7,080	138
11	13,100	16,500	20,900	11,900	11,000	7,790	37,500	19,700	7,690	4,400	6,650	1,350
12	6,640	16,100	21,200	11,200	20,000	7,040	31,600	18,300	2,530	4,340	4,520	14,300
13	7,780	15,000	29,800	11,400	22,900	3,440	38,700	18,500	6,700	4,560	1,510	36,100
14	6,440	14,400	37,500	11,900	19,300	7,700	50,200	18,300	5,170	5,860	738	23,900
15	7,450	14,400	30,100	13,100	15,000	8,140	59,700	16,600	8,230	6,080	3,560	14,600
16	8,160	17,700	28,100	12,900	13,100	8,530	75,100	17,300	12,100	1,390	4,260	12,200
17	2,830	18,700	25,600	8,070	14,300	8,890	65,800	25,400	13,200	673	3,680	7,020
18	553	17,900	22,000	9,930	14,800	8,900	60,200	27,500	12,800	4,820	3,850	2,460
19	6,280	17,400	21,700	11,000	15,200	9,380	69,300	18,400	7,120	4,600	4,530	7,380
20	6,000	16,000	18,400	11,200	14,400	5,520	65,900	16,300	8,130	4,550	1,310	13,200
21	5,180	15,500	15,300	11,600	12,300	7,520	61,700	15,300	9,850	5,420	502	13,400
22	6,320	12,200	12,600	10,800	12,900	8,800	57,300	12,500	8,460	5,160	3,660	8,400
23	7,630	9,230	9,370	9,050	9,590	7,270	52,700	11,000	7,880	1,560	3,170	8,910
24	15,600	13,100	8,850	7,500	9,570	8,280	43,100	12,700	5,720	676	3,930	4,680
25	62,200	25,800	6,920	10,100	9,950	8,270	42,300	28,800	8,190	4,130	3,070	2,740
26	61,400	37,500	7,980	8,940	9,910	5,740	49,000	26,300	11,100	4,830	3,200	6,520
27	44,100	38,700	7,260	9,260	11,000	3,830	47,300	19,000	8,480	5,040	742	5,880
28	35,300	36,600	9,800	9,740	7,740	7,440	42,600	15,200	9,860	4,640	258	5,200
29	23,300	83,600	10,300	10,000	9,620	9,400	34,000	12,200	10,500	2,300	4,200	4,340
30	21,400	71,900	10,400	9,910	---------	11,600	28,800	10,400	7,300	5,360	3,820	6,960
31	17,500	--------	10,900	6,960	-- -----	25,200	--------	8,620	--------	6,240	3,710	--------
Total	444,580	700,330	693,480	392,770	335,810	263,200	‡1,830	549,920	298,880	137,380	112,670	217,096
Mean	14,340	23,340	22,370	12,670	11,580	8,490	61,000	17,740	9,963	4,432	3,635	7,237
(†)	+428	+945	-1,401	-1,714	-1,086	-920	+3,848	+493	+231	-204	-613	-14

Adjusted for change in reservoir contents

Mean	14,770	24,290	20,970	10,960	10,490	7,570	64,850	18,230	10,190	4,228	3,021	7,223
Cfsm	2.06	3.39	2.93	1.53	1.46	1.06	9.05	2.55	1.42	0.590	0.422	1.01
In.	2.38	3.78	3.38	1.76	1.58	1.22	10.10	2.93	1.59	0.68	0.49	1.13

	Observed			Adjusted			
Calendar year 1959:	Max 83,600	Min 138	Mean 12,840	Mean 12,970	Cfsm 1.81	In. 24.58	
Water year 1959-60:	Max 124,000	Min 138	Mean 16,330	Mean 16,320	Cfsm 2.28	In. 31.02	

† Change in contents, equivalent in cubic feet per second, in First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond, Union Village Reservoir, 4 reservoirs in Mascoma River basin, Sunapee Lake, and Surry Mountain, Otter Brook, Birch Hill and Tully Reservoirs.

‡ Expressed in thousands.

1685. Deerfield River at Charlemont, Mass.

Location.--Lat 42°37'33", long 72°51'20", on left bank 1 mile downstream from Charlemont, Franklin County, and 2.5 miles downstream from Chickley River.

Drainage area.--362 sq mi.

Records available.--June 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 517.36 ft above mean sea level, datum of 1929.

Average discharge.--47 years, 901 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 12,800 cfs Sept. 12 (gage height, 9.86 ft); minimum daily, 47 cfs Sept. 4.
1913-60: Maximum discharge, 56,300 cfs Sept. 21, 1938 (gage height, 20.17 ft, from floodmarks), from rating curve extended above 31,000 cfs on basis of slope-area and contracted-opening measurements at gage heights 17.75 and 20.17 ft; minimum daily, 5 cfs June 17, 1921.

Remarks.--Records good. Flow regulated by Somerset Reservoir, since 1924 by Harriman Reservoir (see p. 247), and by several powerplants above station.

Revisions (water years).--WSP 781: 1915(M). WSP 1301: 1918(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	32	3.0	910
1.5	72	4.0	1,980
1.7	122	5.0	3,430
2.0	234	6.0	5,210
2.5	500	8.0	9,380

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	438	2,000	1,900	1,090	1,000	1,100	3,480	808	801	193	500	509
2	268	1,400	1,300	1,080	1,050	1,300	2,320	762	890	270	846	180
3	71	1,200	*1,260	2,900	1,000	1,350	1,610	404	986	170	764	49
4	81	1,200	1,250	2,180	1,050	1,700	6,540	770	984	558	637	47
5	346	1,250	1,220	1,440	1,000	1,750	7,950	904	646	178	406	49
6	488	1,250	1,210	1,300	1,050	1,700	4,200	872	1,080	236	84	117
7	596	2,100	2,140	*1,180	1,100	1,700	2,950	348	1,070	182	70	*296
8	266	2,000	1,980	1,140	1,050	1,650	2,230	274	860	96	354	300
9	929	1,500	1,590	1,120	1,050	1,650	1,760	894	*888	91	432	298
10	379	1,200	1,370	1,130	1,000	1,650	1,570	1,320	732	92	908	110
11	145	1,200	1,320	1,130	2,350	1,600	1,690	1,300	480	108	786	141
12	130	1,200	1,680	1,130	2,700	1,650	2,320	1,420	680	106	610	4,790
13	431	1,150	4,270	1,130	1,720	1,700	2,800	1,430	689	*150	236	3,650
14	447	1,100	2,370	1,120	1,150	1,680	4,200	1,340	714	304	90	1,380
15	555	2,600	1,950	1,130	*1,150	1,640	6,300	960	827	296	584	1,070
16	625	2,100	1,850	809	1,250	1,630	4,810	902	808	142	712	1,120
17	180	1,300	1,750	1,120	1,250	*1,670	3,750	872	748	79	646	308
18	244	1,600	1,680	1,100	1,270	1,700	4,870	1,020	816	312	599	212
19	558	1,050	1,290	922	1,300	1,290	3,680	518	757	670	576	674
20	684	1,200	1,140	1,080	1,260	720	2,780	426	740	722	223	5,160
21	*728	1,150	1,120	1,090	1,200	682	2,210	313	723	445	92	2,210
22	715	1,150	1,160	1,080	1,200	1,100	2,240	232	698	490	540	1,700
23	776	1,100	1,100	1,080	1,200	1,000	2,040	692	698	509	677	1,440
24	3,510	1,250	1,100	1,050	1,150	1,000	2,210	1,100	748	100	518	1,210
25	3,340	3,200	1,110	1,050	1,150	750	2,380	1,130	893	330	318	1,110
26	1,870	2,500	1,130	1,050	1,200	480	2,080	1,200	757	536	382	1,040
27	1,100	1,600	1,100	1,050	1,150	140	2,070	820	723	844	86	1,130
28	1,210	4,500	1,160	1,050	1,150	644	1,900	367	714	774	66	1,130
29	1,160	5,500	1,160	1,050	1,100	1,240	*1,500	163	698	735	430	1,140
30	1,130	2,500	1,130	1,050	-------	1,280	775	213	670	595	492	1,270
31	1,280	-------	1,110	900	-------	3,680	-------	757	-------	400	512	-------
Total	24,680	54,050	46,900	36,731	36,250	42,826	91,215	24,531	23,518	10,713	14,176	33,840
Mean	796	1,802	1,513	1,185	1,250	1,381	3,040	791	784	346	457	1,128
(†)	+530	+213	-279	-401	-465	-645	+1,633	+135	-292	-36.4	-240	+192
Adjusted for change in reservoir contents												
Mean	1,326	2,015	1,234	784	785	737	4,673	927	492	309	217	1,320
Cfsm	3.66	5.57	3.41	2.17	2.17	2.04	12.9	2.56	1.36	0.854	0.599	3.65
In.	4.22	6.21	3.93	2.50	2.34	2.35	14.40	2.95	1.52	0.98	0.69	4.07

	Observed			Adjusted			
Calendar year 1959:	Max 5,500	Min 38	Mean 884	Mean 961	Cfsm 2.65	In. 36.02	
Water year 1959-60:	Max 7,950	Min 47	Mean 1,201	Mean 1,228	Cfsm 3.39	In. 46.16	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Somerset and Harriman Reservoirs.
Note.--No gage-height record Nov. 1 to Dec. 2; discharge estimated on basis of weather records, recorded range in stage, and powerplant records. Stage-discharge relation affected by ice Dec. 23, 24, Jan. 24 to Feb. 12, Feb. 14-17, Feb. 21 to Mar. 12, Mar. 22-27.

1690. North River at Shattuckville, Mass.

Location.--Lat 42°38'18", long 72°43'32", on right bank in Shattuckville, Franklin County, 1¼ miles south of Griswoldville and 1.3 miles upstream from mouth.

Drainage area.--88.4 sq mi.

Records available.--October 1939 to September 1960. Monthly discharge only for October, November 1939, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 458.36 ft above mean sea level, datum of 1929.

Average discharge.--21 years, 180 cfs.

Extremes.--Maximum discharge during year, 7,750 cfs Sept. 20 (gage height, 8.83 ft), from rating curve extended above 1,800 cfs on basis of computation of flow over dam at gage height 9.62 ft; minimum, 11 cfs Oct. 4; minimum daily, 18 cfs Oct. 5.
1939-60: Maximum discharge, 13,200 cfs Oct. 15, 1955 (gage height, 10.37 ft), from rating curve extended above 5,700 cfs by logarithmic plotting; minimum daily, 5.1 cfs Oct. 3, 1948.

Remarks.--Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Diurnal fluctuation at low flow caused by mill above station; prior to 1950, greater regulation by mill.

Revisions (water years).--WSP 1111: 1945(M).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
1.6	14	2.5	103	1.6	15	3.5	360
1.8	26	3.0	207	1.8	28	4.0	580
2.0	42	3.5	360	2.0	47	5.0	1,250
				2.5	110	6.0	2,380
Note.--Same as following table above 3.5 ft.				3.0	210	8.0	5,780

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	345	332	110	75	105	1,480	331	166	58	98	28
2	62	220	281	105	74	93	1,180	310	133	108	63	d25
3	30	172	*255	850	72	95	880	245	133	69	51	d22
4	22	156	237	540	70	97	3,810	212	125	232	47	d22
5	18	194	217	290	72	100	4,250	189	107	95	43	d23
6	19	183	208	230	77	98	1,570	172	144	64	41	d22
7	74	760	1,150	*200	94	93	877	156	101	54	36	d21
8	97	426	559	180	86	90	714	158	81	47	36	*d21
9	241	284	364	120	83	87	630	672	*70	42	33	19
10	112	232	294	110	78	84	618	558	64	39	299	22
11	62	196	256	150	750	82	618	376	60	41	181	42
12	52	181	452	135	700	87	1,070	536	57	43	100	2,250
13	40	162	1,090	130	350	83	1,260	516	55	35	70	929
14	35	231	496	125	260	86	1,320	404	50	58	59	368
15	32	581	342	120	*200	83	1,700	360	170	60	57	196
16	30	297	304	115	190	82	1,230	290	168	43	52	135
17	28	261	270	110	170	*83	828	242	92	35	46	108
18	29	224	245	105	155	87	958	229	122	32	40	102
19	28	183	220	100	150	88	666	208	83	54	38	91
20	26	164	170	95	145	85	472	176	65	98	50	2,580
21	*25	157	155	91	140	82	400	158	56	54	77	570
22	25	154	135	86	135	82	416	142	49	39	76	314
23	42	146	120	84	125	80	339	146	45	34	121	234
24	1,810	219	115	82	120	72	569	242	59	30	64	189
25	812	854	120	82	110	72	910	220	206	28	46	164
26	379	406	125	82	115	70	472	176	94	28	38	140
27	237	278	130	80	120	78	468	140	64	30	35	124
28	179	1,320	140	77	115	112	388	120	50	36	33	112
29	144	718	135	77	110	166	*300	104	44	31	28	104
30	127	424	125	76	-------	249	258	98	41	327	28	209
31	212	-------	115	76	-------	1,280	-------	129	-------	301	28	-------
Total	5,052	10,128	9,157	4,813	4,941	4,131	30,651	8,015	2,754	2,245	2,014	9,186
Mean	163	338	295	115	170	133	1,022	259	91.8	72.4	65.0	306
Cfsm	1.84	3.82	3.34	1.75	1.92	1.50	11.6	2.93	1.04	0.819	0.735	3.46
In.	2.13	4.26	3.85	2.02	2.08	1.74	12.89	3.37	1.16	0.94	0.85	3.86

Calendar year 1959: Max 2,030 Min 10 Mean 179 Cfsm 2.02 In. 27.49
Water year 1959-60: Max 4,250 Min 18 Mean 254 Cfsm 2.87 In. 39.15

Peak discharge (base, 1,880 cfs).--Oct. 24 (4 p.m.) 4,240 cfs (7.20 ft); Nov. 28 (4 p.m.) 2,320 cfs (5.96 ft); Dec. 7 (10 a.m.) 2,100 cfs (5.80 ft); Mar. 31 (4 p.m.) 1,950 cfs (5.68 ft); Apr. 5 (4 a.m.) 5,240 cfs (7.74 ft); Apr. 15 (5:30 p.m.) 2,090 cfs (5.79 ft); Sept. 12 (7:30 p.m.) 7,700 cfs (8.81 ft); Sept. 20 (7:30 a.m.) 7,750 cfs (8.83 ft).

* Discharge measurement made on this day.
d Doubtful-gage height record; discharge computed from adjusted gage-height graph, weather records, and records for West Branch Westfield River at Huntington.
Note.--Stage-discharge relation affected by ice Dec. 19 to Jan. 3, Jan. 5 to Mar. 16, Mar. 21, 23-27.

1700. Deerfield River near West Deerfield, Mass.

Location.--Lat 42°32'09", long 72°39'14", on right bank 0.4 mile downstream from South River, 1¼ miles west of West Deerfield, Franklin County, and 2½ miles west of Deerfield.

Drainage area.--558 sq mi.

Records available.--March 1904 to December 1905 (gage heights only), October 1940 to September 1960. Published as "at Deerfield" 1904-5.

Gage.--Water-stage recorder. Altitude of gage is 155 ft (from topographic map). Prior to Dec. 16, 1905, chain gage at site 1.5 miles downstream at different datum.

Average discharge.--20 years (1940-60), 1,306 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 24,700 cfs Sept. 12 (gage height, 10.58 ft); minimum daily, 75 cfs Sept. 6.
1940-60: Maximum discharge, 48,500 cfs Dec. 31, 1948 (gage height, 15.43 ft); minimum daily, 46 cfs Aug. 3, 1947, Oct. 4, 1953.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Somerset and Harriman Reservoirs (see p. 247) and by several powerplants above station.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	56	3.0	1,130
1.6	84	4.0	2,670
1.8	155	5.0	4,690
2.1	310	7.0	10,600
2.5	605	9.0	18,200

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	540	2,900	2,580	1,400	1,280	1,550	6,750	1,540	1,300	350	452	490
2	529	2,010	1,950	1,340	1,290	1,710	4,880	1,390	1,220	400	969	*331
3	190	1,620	*1,890	4,800	1,270	1,720	3,600	889	1,310	320	932	124
4	81	1,570	1,650	3,560	1,240	2,100	12,200	1,040	1,200	1,100	806	87
5	243	1,700	1,680	2,050	1,260	2,190	15,900	1,290	1,020	600	624	78
6	632	1,550	1,740	*1,700	1,530	2,050	7,530	1,400	1,260	350	216	75
7	804	3,420	4,620	1,690	1,440	1,900	4,860	806	1,350	250	112	326
8	820	2,940	3,260	1,600	1,380	2,050	3,870	669	972	90	356	386
9	1,450	2,090	2,450	1,430	1,400	2,030	3,300	1,850	1,180	150	442	428
10	1,040	1,710	1,900	1,400	1,400	1,990	2,960	2,450	812	170	1,210	87
11	317	1,600	1,900	1,500	4,250	1,930	2,940	2,020	760	250	1,330	300
12	300	1,480	2,810	1,500	4,370	1,980	4,110	2,520	774	220	702	7,870
13	411	1,630	6,160	1,550	2,800	1,970	4,830	2,420	792	212	578	6,090
14	496	1,540	3,610	1,400	1,850	1,950	5,860	2,190	888	439	115	2,140
15	514	3,750	2,800	1,500	1,500	1,870	8,590	1,700	1,240	420	771	1,310
16	836	2,800	2,570	1,050	1,650	*1,860	6,870	1,480	1,230	251	776	1,320
17	438	2,200	2,450	1,350	1,650	1,890	5,030	1,340	948	107	918	711
18	323	1,740	2,300	1,350	*1,600	1,950	6,080	1,540	1,040	425	729	359
19	460	1,450	2,020	1,210	1,750	1,780	5,220	1,130	918	670	604	661
20	918	1,550	1,550	1,400	1,600	1,010	3,650	809	1,060	946	386	8,130
21	802	1,600	1,300	1,370	1,550	829	3,090	559	726	605	186	3,400
22	*806	1,600	1,400	1,350	1,500	1,260	3,010	668	870	522	492	2,330
23	878	1,490	1,350	1,270	1,500	1,300	2,810	948	800	488	910	1,990
24	7,220	1,720	1,400	1,340	1,450	1,220	3,350	1,500	850	245	853	1,600
25	5,560	4,830	1,500	1,290	1,450	996	4,000	*1,630	1,300	339	402	1,470
26	2,810	3,330	1,500	1,330	1,550	880	3,030	1,630	980	534	369	1,230
27	1,710	2,330	1,350	1,350	1,500	348	3,160	1,240	940	888	241	1,300
28	1,450	5,880	1,600	1,350	1,500	772	2,830	728	820	957	90	1,290
29	1,610	7,540	1,550	1,330	1,490	1,800	2,310	416	800	838	386	1,240
30	1,290	3,300	1,470	1,300	-------	1,840	*1,480	448	600	1,320	755	1,510
31	1,800	-------	1,460	1,140	-------	6,280	-------	856	-------	1,150	603	-------
Total	37,278	74,870	67,770	49,200	50,000	55,005	148,100	41,098	29,960	15,606	18,315	48,663
Mean	1,203	2,496	2,186	1,587	1,724	1,774	4,937	1,326	999	503	591	1,622
(†)	+530	+213	-279	-401	-465	-645	+1,633	+135	-292	-36.4	-240	+192

Adjusted for change in reservoir contents

Mean	1,732	2,709	1,907	1,186	1,259	1,129	6,569	1,461	707	467	351	1,814
Cfsm	3.10	4.85	3.42	2.13	2.26	2.02	11.8	2.62	1.27	0.837	0.629	3.25
In.	3.58	5.42	3.94	2.45	2.43	2.33	13.14	3.02	1.41	0.96	0.73	3.63

	Observed			Adjusted		
Calendar year 1959:	Max 7,540	Min 56	Mean 1,289	Mean 1,365	Cfsm 2.45	In. 33.22
Water year 1959-60:	Max 15,900	Min 75	Mean 1,737	Mean 1,764	Cfsm 3.16	In. 43.04

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Somerset and Harriman Reservoirs.
Note.--No gage-height record June 22 to July 12; discharge estimated on basis of weather records and powerplant records. Stage-discharge relation affected by ice Dec. 20-29, Jan. 11-18, Feb. 14-28.

1705. Connecticut River at Montague City, Mass.

Location.--Lat 42°34'48", long 72°34'30", on left bank 75 ft downstream from New York, New Haven and Hartford Railroad bridge at Montague City, Franklin County, and 1,000 ft downstream from Deerfield River.
Drainage area.--7,865 sq mi.
Records available.--March 1904 to September 1960. Prior to October 1929, published as "at Sunderland." Records published for both sites October 1929 to September 1932.
Gage.--Water-stage recorder. Datum of gage is 99.87 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1917, chain gage; Oct. 1, 1917, to Oct. 8, 1921, water-stage recorder used for low stages, chain gage otherwise; and Oct. 9, 1921, to Sept. 30, 1929, water-stage recorder, at site 9 miles downstream at datum 1.00 ft lower. Gages at both sites in operation Oct. 1, 1929, to Sept. 30, 1932.
Average discharge.--56 years, 13,800 cfs (adjusted for storage since October 1923).
Extremes.--Maximum discharge during year, 142,000 cfs Apr. 6 (gage height, 38.13 ft); minimum daily, 270 cfs Sept. 4, 10.
1904-60: Maximum discharge, 236,000 cfs Mar. 19, 1936 (gage height, 49.8 ft, from floodmarks); minimum daily, 215 cfs Aug. 31, Sept. 1, 1958.
Remarks.--Records good except those for periods of ice effect or those below 1,500 cfs, which are fair. Flow regulated by powerplants and by First Connecticut and Second Connecticut Lakes, Lake Francis, Moore Reservoir and Comerford Station Pond (see p. 247), and other reservoirs (combined usable capacity, about 33½ billion cubic feet).
Revisions (water years).--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).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
4.5	695	6.0	2,200	3.8	225	12.0	14,800
5.0	1,110	8.0	5,300	4.0	325	20.0	43,800
				5.0	1,070	30.0	90,000
Note.--Same as following table above 8.0 ft.				6.0	2,190	40.0	157,000
				8.0	5,300		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,420	20,500	*64,800	13,700	10,500	12,400	66,800	27,800	12,800	7,400	9,010	3,730
2	7,490	19,200	53,200	11,600	11,000	11,500	86,400	24,500	15,400	7,420	7,590	3,780
3	9,010	19,400	44,700	14,500	10,000	10,800	81,300	19,700	15,300	1,510	6,050	a380
4	1,250	20,900	36,100	30,000	10,500	12,200	91,300	23,000	22,500	4,480	5,630	a270
5	3,860	20,400	30,900	30,500	10,000	10,000	130,000	20,700	19,800	9,230	5,380	a360
6	7,030	19,100	22,500	*25,000	11,000	9,000	135,000	19,900	15,600	8,360	2,590	2,490
7	8,120	28,800	23,000	23,000	7,700	10,700	*105,000	18,300	14,800	7,270	1,100	2,440
8	10,500	33,200	34,800	20,000	9,500	10,000	78,000	16,800	13,100	6,550	4,620	2,490
9	16,900	24,200	30,500	19,000	10,500	9,500	62,200	15,800	9,360	3,640	4,790	3,410
10	20,900	21,800	28,500	18,000	10,000	9,400	51,400	19,800	8,490	*772	8,130	a270
11	14,500	19,200	25,400	14,500	15,000	9,500	43,300	23,400	8,560	4,600	8,710	1,500
12	7,360	18,600	24,600	13,500	26,500	9,200	38,700	23,000	3,550	4,590	5,650	19,700
13	8,110	17,600	38,400	14,000	27,500	5,980	45,200	22,900	7,450	4,610	2,400	46,100
14	7,340	16,800	43,500	14,500	22,000	9,200	56,300	22,300	6,310	6,140	904	28,100
15	8,350	19,300	38,100	15,500	18,000	9,580	66,300	20,200	9,770	6,360	3,960	18,400
16	9,160	21,700	33,200	15,000	15,500	*10,100	77,200	20,600	14,200	1,910	5,590	15,800
17	3,600	22,000	30,400	10,000	16,500	10,900	70,200	28,100	15,400	917	4,760	7,900
18	1,020	21,100	25,800	12,000	*17,000	10,800	66,800	32,000	15,000	5,290	5,100	3,300
19	6,790	20,100	24,700	13,000	17,500	10,900	73,000	21,400	8,340	5,380	5,600	7,780
20	7,020	18,900	21,200	13,500	16,500	7,110	67,800	18,400	9,480	5,860	2,080	21,600
21	*6,120	18,000	17,400	14,000	14,800	8,040	64,000	17,100	11,200	6,270	832	20,000
22	7,160	15,000	15,000	13,000	15,100	9,950	60,000	14,200	9,770	5,630	4,210	11,400
23	8,340	11,200	11,800	11,000	11,500	8,610	54,900	12,100	8,960	2,030	4,180	11,600
24	23,000	15,500	11,000	9,500	11,400	9,620	47,900	5,070	6,560	1,040	4,820	6,450
25	64,400	31,300	9,000	12,000	11,600	9,210	47,700	*31,800	9,610	4,550	3,750	4,480
26	68,500	42,500	10,000	11,500	11,900	6,940	53,900	30,300	13,100	5,300	3,730	7,710
27	52,700	41,800	9,000	11,500	13,100	4,710	50,800	21,500	9,740	6,080	1,220	7,120
28	41,700	44,200	11,300	12,000	9,500	7,720	45,900	17,200	11,000	5,530	a452	6,600
29	28,800	83,900	12,500	12,500	11,100	11,000	38,700	13,600	11,800	3,170	4,120	5,650
30	22,000	76,000	12,500	12,000	--------	13,000	32,800	11,100	8,300	6,860	4,290	8,450
31	19,900	--------	13,000	8,700	--------	32,300	--------	9,940	--------	8,750	4,230	--------
Total	505,350	802,200	606,800	468,500	402,700	319,870	1,988,800	622,510	345,250	157,499	135,478	279,260
Mean	16,300	26,740	26,030	15,110	13,890	10,320	66,290	20,080	11,510	5,081	4,370	9,309
(†)	+957	+1,158	-1,680	-2,115	-1,551	-1,565	+5,481	+628	-60.3	-240	-853	+179
Adjusted for change in reservoir contents												
Mean	17,260	27,900	24,350	13,000	12,330	8,753	71,770	20,710	11,450	4,841	3,517	9,487
Cfsm	2.19	3.55	3.10	1.65	1.57	1.11	9.13	2.63	1.46	0.616	0.447	1.21
In.	2.53	3.96	3.57	1.91	1.69	1.28	10.18	3.04	1.62	0.71	0.52	1.35

	Observed			Adjusted		
Calendar year 1959:	Max 87,000	Min 250	Mean 14,630	Mean 14,820	Cfsm 1.88	In. 25.59
Water year 1959-60:	Max 135,000	Min 270	Mean 18,670	Mean 18,690	Cfsm 2.38	In. 32.36

Peak discharge (base, 61,000 cfs).--Oct. 25 (9:30 to 11:30 p.m.) 71,900 cfs (26.33 ft); Nov. 29 (2:30 p.m.) 89,100 cfs (29.82 ft); Apr. 6 (1 to 3 a.m.) 142,000 cfs (38.13 ft); Apr. 16 (4 to 5 p.m.) 78,000 cfs (27.60 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in all reservoirs from First Connecticut and Second Connecticut Lakes to 2 reservoirs in Deerfield River basin listed on page 247.
a No gage-height record; discharge estimated on basis of weather records, shape of normal recession graph, and records for Connecticut River at Turners Falls and Deerfield River near West Deerfield.
Note.--Stage-discharge relation affected by ice Dec. 24 to Feb. 20, Mar. 5-12, 14.

1715. Mill River at Northampton, Mass.

Location.--Lat 42°19'05", long 72°39'21", on right bank at Northampton, Hampshire County, 3½ miles upstream from mouth.

Drainage area.--52.8 sq mi.

Records available.--October 1938 to September 1960. Monthly discharge only for October 1938, published in WSP 1301.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 140 ft (from topographic map).

Average discharge.--22 years, 97.3 cfs.

Extremes.--Maximum discharge during year, 3,690 cfs Sept. 12 (gage height, 9.10 ft), from rating curve extended above 2,300 cfs on basis of computations of flow over dam at gage heights 7.58 and 9.38 ft; minimum, 8.8 cfs Oct. 1; minimum daily, 13 cfs Sept. 9. 1938-60: Maximum discharge, 6,300 cfs Aug. 19, 1955 (gage height, 11.78 ft), from rating curve extended above 3,700 cfs on basis of computation of peak flow over dam; minimum, 2.2 cfs Oct. 1, 1950; minimum daily, 4.2 cfs Aug. 21, 23, 24, 1957.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow regulated by mill above station prior to 1956.

Revisions (water years).--WSP 921: 1940. WSP 1231: 1940-42(M), 1944-45(M), 1948(M), 1949.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	13	3.5	470
1.8	25	4.0	710
2.1	56	5.0	1,290
2.5	131	6.0	1,920
3.0	272		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	158	170	92	50	74	815	140	172	30	54	19
2	39	110	154	83	48	74	655	152	102	46	36	17
3	26	85	145	461	48	76	461	116	132	38	29	15
4	23	64	133	287	47	90	1,270	102	258	68	28	14
5	21	64	123	170	45	81	*1,900	94	168	42	27	14
6	22	*64	120	133	82	72	701	86	110	31	26	16
7	32	199	563	125	92	65	457	81	81	26	24	15
8	*84	160	279	116	76	60	419	81	64	24	24	14
9	136	106	188	84	72	62	383	180	55	22	21	*13
10	81	88	159	77	69	59	343	184	50	21	82	30
11	46	79	*138	105	760	59	308	142	46	21	97	30
12	38	74	259	94	467	61	379	194	43	21	48	1,070
13	32	69	367	105	210	61	371	175	43	24	35	542
14	31	77	227	*100	170	60	328	140	40	30	30	181
15	27	123	172	105	145	58	320	125	262	52	77	116
16	22	88	162	95	131	58	279	106	197	32	193	96
17	19	85	147	81	120	61	233	94	94	24	72	83
18	19	92	136	77	118	66	246	120	76	20	46	79
19	17	74	129	83	174	70	230	127	59	21	36	77
20	16	66	112	76	152	69	186	94	49	24	36	426
21	16	62	105	72	125	70	172	81	45	23	35	200
22	15	61	100	70	112	66	180	72	40	19	36	133
23	18	59	90	70	104	59	162	81	37	17	64	110
24	796	88	94	67	*94	70	180	104	40	15	41	81
25	371	476	105	60	87	69	172	96	58	14	30	69
26	158	207	110	54	108	62	149	85	45	14	25	62
27	112	145	100	50	112	73	216	64	35	16	22	56
28	92	439	136	58	92	102	186	58	30	21	21	54
29	85	302	138	50	81	*145	*131	51	26	21	19	52
30	79	200	114	48	------	225	114	50	29	177	19	175
31	107	------	104	46	------	917	------	104	------	178	19	------
Total	2,594	3,964	5,079	3,194	3,991	3,194	11,946	3,379	2,486	1,132	1,352	3,859
Mean	83.7	132	164	103	138	103	398	109	82.9	36.5	43.6	129
Cfsm	1.59	2.50	3.11	1.95	2.61	1.95	7.54	2.06	1.57	0.691	0.826	2.44
In.	1.83	2.79	3.58	2.25	2.81	2.25	8.41	2.38	1.75	0.80	0.95	2.72

Calendar year 1959: Max 1,150 Min 8.3 Mean 93.0 Cfsm 1.76 In. 23.90
Water year 1959-60: Max 1,900 Min 13 Mean 126 Cfsm 2.39 In. 32.52

Peak discharge (base, 1,250 cfs).--Oct. 24 (4:30 p.m.) 1,780 cfs (5.77 ft); Feb. 11 (3:30 to 4 p.m.) 1,600 cfs (5.47 ft); Mar. 31 (about 2 p.m.) about 1,300 cfs; Apr. 5 (5 a.m.) 2,530 cfs (7.01 ft); Sept. 12 (8 p.m.) 3,690 cfs (9.10 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21-27, Jan. 1, 2, Jan. 9 to Feb. 11, Feb. 13-15, 17, Feb. 29 to Mar. 12, Mar. 26, 27.

1725. Ware River near Barre, Mass.

Location.--Lat 42°25'35", long 72°01'30", on left bank 700 ft downstream from Barre Falls Reservoir, 1.6 miles upstream from Burnshirt River, and 4 miles east of Barre, Worcester County.

Drainage area.--55.0 sq mi.

Records available.--July 1946 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 745 ft (from topographic map).

Average discharge.--14 years, 96.9 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,030 cfs Apr. 21 (gage height, 5.38 ft); minimum, 1.6 cfs Oct. 26; minimum daily, 2.1 cfs Oct. 25.
1946-60: Maximum discharge, 1,890 cfs Oct. 16, 1955 (gage height, 6.31 ft), from rating curve extended above 1,100 cfs by logarithmic plotting; minimum, 0.8 cfs July 1, 1958; minimum daily, 1.2 cfs Sept. 4-6, 12, 1953.

Remarks.--Records good except those for period of no gage-height record, which are fair. Prior to August 1955, slight regulation at low flow at times by Long Pond. Flow regulated by Barre Falls Reservoir (see p. 247) since 1958.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.8	1.9	2.6	18	4.0	286
2.0	3.7	2.8	32	4.5	485
2.2	6.6	3.1	65	5.0	760
2.4	11	3.5	142	5.5	1,120

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	154	230	100	61	110	118	142	110	24	a80	11
2	23	154	184	78	61	98	289	144	106	37	*a65	10
3	22	135	164	163	61	89	489	133	102	35	45	12
4	20	122	150	239	61	75	102	118	133	51	38	11
5	18	116	138	293	61	64	44	108	164	47	30	11
6	20	112	131	289	62	73	74	96	147	30	28	10
7	36	164	204	224	92	83	213	89	116	22	23	9.8
8	64	242	306	175	100	*87	490	81	90	19	20	9.5
9	104	224	273	133	100	81	575	90	75	17	18	9.2
10	133	178	210	83	100	73	602	142	64	14	41	10
11	104	152	173	96	133	71	624	152	53	13	89	14
12	76	133	178	110	170	64	618	178	47	13	71	20
13	*60	120	350	98	173	64	*682	195	45	12	48	267
14	56	112	436	87	175	64	688	210	40	45	37	480
15	50	122	252	85	175	64	730	181	50	102	30	216
16	42	*122	236	87	164	65	773	167	73	71	36	131
17	37	118	224	87	133	65	766	*144	52	44	34	87
18	36	129	181	78	131	65	799	131	52	30	26	65
19	31	120	164	68	118	73	780	122	50	29	22	53
20	28	106	140	83	110	76	748	110	41	64	21	89
21	25	96	124	79	124	71	*712	100	36	56	22	127
22	23	90	124	73	131	65	369	83	28	37	32	104
23	24	89	89	73	131	65	173	81	24	27	26	79
24	98	92	73	73	114	65	192	169	24	21	22	64
25	2.1	195	73	60	90	64	230	245	31	18	18	52
26	360	283	73	57	85	53	224	210	28	14	15	42
27	607	230	73	57	100	49	198	167	23	14	14	35
28	585	236	102	58	108	58	184	135	*20	22	13	*30
29	222	335	108	60	110	125	167	114	17	a23	12	28
30	150	303	98	60	---	170	152	94	17	a50	*11	38
31	133	---	100	61	---	130	---	90	---	a100	11	---
Total	3,204.1	4,784	5,361	3,367	3,234	2,419	12,805	4,221	1,858	1,101	998	2,124.5
Mean	103	159	173	109	112	78.0	427	136	61.9	35.5	32.2	70.8
(†)	+0.30	+0.31	+12.4	-0.34	+2.75	+17.5	-33.6	+0.07	-0.66	+0.71	-0.71	+0.58

Adjusted for change in contents in Barre Falls Reservoir

Mean	104	160	185	108	114	95.5	393	136	61.3	36.2	31.5	71.4
Cfsm	1.89	2.91	3.36	1.96	2.07	1.74	7.15	2.47	1.11	0.658	0.573	1.30
In.	2.17	3.24	3.88	2.27	2.24	2.00	7.98	2.86	1.24	0.76	0.66	1.45

	Observed				Adjusted			
Calendar year 1959:	Max 607	Min 2.1	Mean 106		Mean 107	Cfsm 1.95	In. 26.35	
Water year 1959-60:	Max 799	Min 2.1	Mean 124		Mean 124	Cfsm 2.25	In. 30.75	

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Barre Falls Reservoir.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for station at Coldbrook.

1730. Ware River at Coldbrook, Mass.

Location.--Lat 42°23'30", long 72°03'40", on right bank above diversion dam at Ware River intake works at Coldbrook, Worcester County, 2 miles east of South Barre and 2.7 miles downstream from Burnshirt River.

Drainage area.--96.8 sq mi.

Records available.--January 1928 to September 1960.

Gage.--Venturi meters and water-stage recorder. Datum of gage is 5.65 ft below mean sea level, datum of 1929. Prior to Feb. 1, 1936, water-stage recorder at site 0.2 mile downstream at datum 631.91 ft above mean sea level, unadjusted.

Average discharge.--32 years, 170 cfs.

Extremes.--Maximum daily discharge during year, 1,170 cfs Apr. 5; minimum daily, 17 cfs Sept. 7.
1928-60: Maximum discharge, 14,000 cfs Sept. 21, 1938 (gage height, 664.28 ft), by computation of flow over dam; minimum daily, 4.7 cfs Sept. 6, 1953.

Remarks.--Records good. Figures of discharge include diversion as needed for Boston metropolitan district during period Oct. 15 to June 14 of each year; diversion began in March 1931. Flow regulated by Barre Falls Reservoir (see p. 247) since 1958.

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

Revisions (water years).--WSP 781: Drainage area. WSP 1031: 1944.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	249	390	144	114	164	891	250	188	62	157	19
2	47	249	315	140	113	152	882	256	179	78	118	19
3	46	218	295	451	112	138	926	230	186	78	83	18
4	41	195	262	561	112	136	844	207	261	112	69	18
5	40	184	236	495	111	128	1,170	186	289	94	58	18
6	48	187	233	469	127	126	814	172	241	69	55	18
7	86	336	414	344	143	129	689	158	186	55	47	17
8	129	451	484	276	163	131	879	153	154	45	43	41
9	217	346	417	219	164	130	942	202	137	39	37	28
10	235	250	327	168	157	120	945	276	130	35	95	22
11	200	193	278	171	264	116	965	291	103	33	151	31
12	150	189	359	198	327	111	954	322	94	28	134	166
13	108	166	736	175	300	111	1,040	356	68	32	96	595
14	104	172	701	152	289	110	1,060	359	80	102	74	680
15	96	191	467	152	265	109	1,100	319	111	155	62	338
16	86	172	388	151	245	110	1,120	285	148	124	66	197
17	63	188	367	148	199	110	1,090	247	130	84	62	142
18	72	190	315	142	193	112	1,120	222	123	60	52	132
19	63	168	273	137	196	121	1,130	208	98	60	45	98
20	57	139	249	138	191	123	1,060	187	86	119	43	151
21	53	136	171	143	187	117	961	166	75	110	50	202
22	53	138	170	137	187	110	508	148	64	79	58	173
23	56	138	176	134	184	110	304	145	57	59	53	143
24	308	244	134	134	175	110	370	338	61	48	43	132
25	253	431	136	127	157	101	430	412	75	38	39	98
26	643	489	138	108	164	97	411	344	59	36	32	79
27	854	420	143	114	177	95	373	265	64	36	28	69
28	739	507	196	116	176	115	340	214	47	55	26	64
29	323	613	164	116	167	167	297	176	42	51	24	59
30	226	527	145	116	------	381	259	159	42	99	23	99
31	211	------	146	115	------	843	------	162	------	188	28	------
Total	5,645	8,076	9,225	6,191	5,359	4,733	23,874	7,415	3,578	2,263	1,951	3,866
Mean	182	269	298	200	185	153	796	239	119	73.0	62.9	129
(†)	+0.30	+0.31	+12.4	-0.34	+2.75	+17.5	-33.6	+0.07	-0.66	+0.71	-0.71	+0.58

Adjusted for change in contents in Barre Falls Reservoir

Mean	182	270	310	199	188	170	762	239	119	73.7	62.2	129
Cfsm	1.88	2.79	3.20	2.06	1.94	1.76	7.87	2.47	1.23	0.761	0.643	1.33
In.	2.17	3.11	3.69	2.37	2.09	2.03	8.78	2.85	1.37	0.88	0.74	1.49

	Observed			Adjusted		
Calendar year 1959:	Max 1,260	Min 19	Mean 191	Mean 192	Cfsm 1.98	In. 26.95
Water year 1959-60:	Max 1,170	Min 17	Mean 225	Mean 225	Cfsm 2.32	In. 31.57

† Change in contents, equivalent in cubic feet per second, in Barre Falls Reservoir.

1735. Ware River at Gibbs Crossing, Mass.

Location.--Lat 42°14'07", long 72°16'45", on right bank half a mile upstream from Gibbs Crossing, Hampshire County, 1.8 miles upstream from Beaver Book, and 2½ miles southwest of Ware.
Drainage area.--199 sq mi.
Records available.--August 1912 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 379.79 ft above mean sea level, datum of 1929. Prior to Mar. 1, 1930, at site half a mile downstream at different datum.
Average discharge.--48 years, 326 cfs (adjusted for diversion).
Extremes.--Maximum discharge during year, 4,000 cfs Mar. 31 (gage height, 7.03 ft); minimum, 28 cfs July 10, Sept. 3, 4; minimum daily, 28 cfs Sept. 3.
1912-60: Maximum discharge, 22,700 cfs Sept. 21, 1938 (gage height, 18.2 ft, from floodmarks), from rating curve extended above 4,600 cfs on basis of contracted-opening measurement at gage height 12.83 ft and slope-area measurement at gage height 18.2 ft; minimum, 5.0 cfs Oct. 26, 1914; minimum daily, 6.0 cfs Oct. 4, 1914.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by mills above station. Diversion at times since March 1931 from 97 sq mi in Ware River basin for supply of Boston metropolitan district. Regulation by Barre Falls Reservoir since 1958.
Revisions (water years).--WSP 661: Drainage area. WSP 1031: 1944. WSP 1301: 1914(M).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from aquatic vegetation Oct. 1-7, 16-23, June 28 to July 1, July 7, 9-13, 24-28, Aug. 5, 7-9, 19-21, Aug. 24 to Sept. 11)

1.7	25	3.0	420
1.8	34	3.5	760
2.0	62	4.0	1,180
2.2	105	6.0	2,980
2.6	235		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	516	504	270	221	298	*2,660	504	414	83	366	52
2	72	480	438	260	221	280	1,860	522	396	118	*246	57
3	74	384	414	900	214	265	1,680	480	384	139	179	28
4	56	335	390	1,000	210	242	2,020	414	718	200	147	36
5	69	315	360	560	215	260	2,710	360	800	193	92	42
6	*74	*310	350	475	256	260	1,980	330	582	153	129	72
7	112	580	541	400	340	260	1,320	306	426	94	81	*31
8	181	824	638	360	320	249	1,330	294	325	114	95	32
9	332	514	510	335	325	245	1,450	330	278	68	84	68
10	390	355	426	320	302	235	1,360	554	252	29	185	57
11	315	340	402	295	650	205	1,300	540	235	31	360	59
12	287	278	426	290	940	240	1,300	603	196	55	306	398
13	215	270	1,120	320	675	218	1,290	720	200	46	249	1,160
14	162	260	*816	300	550	224	1,320	720	150	155	117	952
15	159	286	561	*290	460	210	1,320	673	190	330	147	776
16	144	345	498	285	450	196	1,350	589	302	266	177	438
17	95	298	462	280	420	207	1,340	498	263	165	163	270
18	100	340	426	275	390	207	1,320	438	228	171	141	214
19	132	287	414	270	480	224	1,390	402	218	123	100	258
20	82	294	372	245	492	238	1,310	360	241	189	91	301
21	99	260	350	270	420	242	1,220	330	163	190	51	a370
22	84	260	310	260	408	218	1,130	294	114	175	160	a300
23	81	260	285	249	*355	210	696	282	*111	124	138	a260
24	404	303	250	240	335	207	638	437	200	60	105	a220
25	1,170	787	235	225	302	210	*880	704	141	106	91	a180
26	728	784	294	215	384	190	824	652	114	68	75	a150
27	984	561	282	210	432	204	720	522	152	62	57	a130
28	984	645	345	225	378	238	673	414	96	105	45	a125
29	800	888	330	225	345	390	610	330	94	114	78	a115
30	438	645	315	230	-------	547	540	294	82	154	64	a180
31	384	-------	305	220	-------	2,870	-------	310	-------	388	39	-------
Total	9,258	13,004	13,369	10,299	11,490	10,289	39,541	14,206	8,065	4,268	4,359	7,331
Mean	299	433	431	332	396	332	1,318	458	269	138	141	244
(†)	+0.30	+106	+170	+53.2	+2.75	+17.5	+1.52	+0.07	-0.65	+0.71	-0.71	+0.58

Adjusted for diversion and change in contents

Mean	299	540	601	385	399	349	1,320	458	268	138	140	245
Cfsm	1.50	2.71	3.02	1.93	2.01	1.75	6.63	2.30	1.35	0.693	0.704	1.23
In.	1.73	3.03	3.48	2.23	2.16	2.02	7.40	2.66	1.50	0.80	0.81	1.37

	Observed			Adjusted		
Calendar year 1959:	Max 2,030	Min 48	Mean 302	Mean 372	Cfsm 1.87	In. 25.36
Water year 1959-60:	Max 2,870	Min 28	Mean 397	Mean 427	Cfsm 2.15	In. 29.19

Peak discharge (base, 1,300 cfs).--Oct. 25 (9 to 10 a.m.) 1,330 cfs (4.17 ft); Dec. 13 (5 to 7 p.m.) 1,320 cfs (4.15 ft); Jan. 3 (time unknown) about 1,500 cfs; Mar. 31 (12:30 p.m.) 4,000 cfs (7.03 ft); Apr. 5 (8:30 p.m.) 3,230 cfs (6.27 ft); Sept. 13 (7 to 8 a.m.) 1,330 cfs (4.17 ft).

* Discharge measurement made on this day.
† Diversion from 97 sq mi in Ware River basin for supply of Boston metropolitan district and change in contents in Barre Falls Reservoir, equivalent in cubic feet per second. Diversion records furnished by Metropolitan District Commission.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and records for station at Coldbrook.
Note.--Stage-discharge relation affected by ice Dec. 23-25, Dec. 31 to Jan. 7, Jan. 9-18, 20, 24-31, Feb. 4, 5, 8, 11-17, Mar. 2, 3, 6, 7, 9-12.

1740. Hop Brook near New Salem, Mass.

Location.--Lat 42°28'42", long 72°20'05", on right bank 1.5 miles upstream from mouth and 1½ miles south of New Salem, Franklin County.

Drainage area.--3.39 sq mi.

Records available.--October 1947 to September 1960. Monthly discharge only for October 1947, published in WSP 1301.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 725 ft (from topographic map).

Average discharge.--13 years, 6.41 cfs.

Extremes.--Maximum discharge during year, 289 cfs Oct. 24 (gage height, 3.17 ft), from rating curve extended above 130 cfs by logarithmic plotting; minimum, 0.34 cfs Sept. 9. 1947-60: Maximum discharge, that of Oct. 24, 1959; minimum, 0.004 cfs Aug. 3, 9, 10, 1955.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 30				Mar. 31 to Sept. 30			
0.6	0.37	1.4	8.4	0.6	0.37	1.4	8.7
.7	.71	1.6	15.4	.7	.71	1.6	16.5
.8	1.20	1.8	26	.8	1.20	1.9	35
1.0	2.6	2.1	51	1.0	2.6	2.2	65
1.2	4.5	2.3	75	1.1	3.4	2.6	134
				1.2	4.7		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	12.3	13.8	4.7	4.0	4.7	60	9.7	10.6	7.6	2.5	0.79
2	2.25	8.4	*12.2	4.5	3.8	4.5	44	8.7	6.4	7.0	1.7	.55
3	.79	7.0	11.4	55	3.8	4.5	32	7.6	23	7.9	1.8	.43
4	.63	6.6	10.5	18.2	3.7	5.0	92	6.9	28	9.7	1.6	.59
5	.52	6.8	9.6	*11.8	3.6	4.7	*119	6.2	15.4	4.3	1.7	.71
6	.61	7.6	9.3	10	5.3	4.3	*48	5.9	11.0	3.1	1.7	.52
7	5.3	15.9	23	8.4	6.1	4.2	32	5.4	7.8	2.8	1.10	.43
8	4.1	10.8	13.8	7.8	5.0	4.1	27	5.4	6.4	2.4	1.20	.40
9	9.2	8.2	10.8	6.1	4.3	4.0	24	13.1	5.7	2.15	*.89	.37
10	3.1	7.5	9.9	6.0	4.2	3.9	21	10.6	5.0	1.8	10.7	1.09
11	2.0	6.8	9.0	5.8	36	3.8	18.2	8.0	4.6	1.8	4.5	2.8
12	1.7	6.3	24	5.6	18.3	3.6	24	8.8	4.4	1.5	2.8	50
13	1.4	6.1	38	6.1	11	3.7	17.6	10.7	3.9	1.45	2.05	14.6
14	2.0	7.0	16.4	5.6	9.4	3.6	15.2	8.0	4.2	16.5	1.85	5.8
15	1.4	9.8	13.4	5.5	7.7	*3.4	13.8	11.3	61	6.1	10.5	3.8
16	1.15	7.0	12.6	5.1	6.6	3.5	13.8	8.0	22	2.9	11.5	3.0
17	1.15	9.3	11.1	5.0	6.1	3.5	11.7	6.9	12.0	2.2	3.6	2.6
18	1.55	7.9	10.2	4.7	5.8	3.7	13.4	6.9	11.3	2.0	2.25	2.6
19	1.15	6.6	9.6	5.0	*8.8	4.0	11.7	6.2	8.0	2.15	2.15	2.6
20	*1.05	5.8	7.6	4.8	7.2	3.8	10.0	5.0	6.9	2.9	2.25	39
21	.89	5.8	7.0	4.8	6.3	3.8	9.0	4.6	5.9	1.65	2.25	9.4
22	.84	5.8	6.0	4.5	6.2	3.5	10.0	4.4	5.2	1.3	2.35	6.4
23	1.6	5.5	5.4	4.5	5.7	3.3	8.7	4.7	4.6	1.20	2.35	5.2
24	65	14.4	5.0	4.1	5.6	3.2	17.3	17.3	6.9	.99	1.65	4.4
25	26	40	4.6	3.9	5.4	3.0	*18.8	9.0	6.2	.89	1.25	3.8
26	13.0	15.6	5.1	4.0	8.6	2.9	11.0	6.9	4.3	.79	3.2	*3.4
27	9.6	12.6	6.0	3.8	6.8	3.2	15.4	5.4	3.4	1.8	1.05	3.2
28	7.9	38	7.2	4.0	6.1	5.8	11.3	4.4	3.0	2.9	.84	3.0
29	6.8	23	6.8	3.9	5.6	6.8	9.0	3.8	2.6	1.4	.67	3.0
30	6.3	15.9	6.1	3.8	-------	20	8.2	17.6	3.9	16.2	.79	24
31	12.0	-------	5.6	3.7	-------	110	-------	*12.5	-------	6.7	1.05	-------
Total	192.98	340.3	341.0	230.7	217.0	246.0	767.1	250.9	303.6	124.07	85.79	198.48
Mean	6.23	11.3	11.0	7.44	7.48	7.94	25.6	8.09	10.1	4.00	2.77	6.62
Cfsm	1.84	3.33	3.24	2.19	2.21	2.34	7.55	2.39	2.98	1.18	0.817	1.95
In.	2.12	3.73	3.74	2.53	2.38	2.70	8.42	2.75	3.33	1.36	0.94	2.18

Calendar year 1959: Max 65 Min 0.05 Mean 6.37 Cfsm 1.88 In. 25.50
Water year 1959-60: Max 119 Min 0.37 Mean 9.01 Cfsm 2.66 In. 36.18

Peak discharge (base, 100 cfs, revised).--Oct. 24 (3:30 p.m.) 289 cfs (3.17 ft); Jan. 3 (11:30 a.m.) 157 cfs (2.73 ft); Mar. 31 (10 a.m.) 171 cfs (2.76 ft); Apr. 4 (6 a.m.) 152 cfs (2.68 ft); June 15 (3:30 p.m.) 269 cfs (3.07 ft); Sept. 12 (6 p.m.) 193 cfs (2.84 ft); Sept. 20 (8 a.m.) 136 cfs (2.61 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 20-28, Jan. 1, 2, 6-20, 24-31, Feb. 5, 8, 13-19, 21-26, Mar. 1-15, 22-24, 26, 27.

1745. East Branch Swift River near Hardwick, Mass.

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

Drainage area.--43.7 sq mi.

Records available.--January 1937 to September 1960. Published as "near Dana" January 1937 to September 1939.

Gage.--Water-stage recorder. Concrete spillway since Mar. 12, 1940. Datum of gage is 504.70 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 71.7 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Apr. 5 (gage height, 21.39 ft); minimum, 3.2 cfs Sept. 9.
1937-60: Maximum discharge, 6,780 cfs Sept. 21, 1938, average of slope-area and contracted-opening measurements; maximum gage height, 22.49 ft June 25, 1944; no flow at times in 1939, 1949, 1953, 1957.

Remarks.--Records good except those for period of backwater from Quabbin Reservoir, which are fair.

Rating table, water year 1959-60, except period of backwater from Quabbin Reservoir (gage height, in feet, and discharge, in cubic feet per second)

19.25	3.8	19.6	67
19.3	7.2	20.0	239
19.35	12	20.5	540
19.4	18	21.0	900
19.5	36	21.2	1,060

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	107	200	73	59	73	901	91	69	19	96	8.0
2	12	109	164	67	59	65	652	93	77	25	61	7.2
3	9.8	94	144	267	57	65	498	85	89	29	40	5.7
4	8.8	80	134	464	56	73	645	74	158	55	30	5.0
5	8.4	75	123	282	54	75	1,040	63	195	50	23	5.0
6	9.3	71	113	186	62	a69	883	55	135	36	21	5.0
7	14	145	170	146	84	a64	474	50	91	29	18	4.4
8	36	205	229	126	84	a61	351	44	69	23	18	4.1
9	96	170	181	105	84	58	292	50	47	19	16	3.8
10	117	130	144	90	75	a57	257	110	39	16	35	11
11	88	103	126	82	124	a56	222	114	33	15	80	14
12	61	90	144	75	266	a55	220	120	31	13	73	125
13	44	80	408	75	200	a54	220	144	30	14	53	484
14	39	78	a375	75	168	a54	199	155	28	44	39	271
15	35	90	a235	76	130	a54	169	136	51	54	33	153
16	30	84	186	78	105	54	150	119	153	86	40	103
17	28	86	161	71	90	a54	136	99	125	51	33	64
18	28	94	144	69	84	a56	130	84	84	33	27	45
19	24	90	134	78	121	59	136	77	56	27	23	35
20	27	80	121	70	126	59	120	68	45	48	19	74
21	27	73	117	71	105	59	103	58	45	57	21	119
22	24	67	101	67	90	56	102	47	41	40	26	107
23	25	64	76	65	82	56	92	44	32	30	27	82
24	132	75	67	62	76	56	110	85	31	24	23	62
25	470	288	67	59	73	57	181	151	38	19	19	50
26	286	344	71	59	96	a51	162	127	36	16	15	38
27	172	229	76	57	101	a56	170	93	29	16	12	32
28	121	253	92	69	92	a56	122	71	25	21	11	29
29	92	416	105	67	82	80	102	54	20	21	9.8	28
30	78	288	94	62	-------	123	106	46	19	42	9.8	36
31	78	-------	84	59	-------	654	-------	49	-------	109	8.8	-------
Total	2,230.3	4,158	4,586	3,253	2,885	2,519	8,905	2,656	1,921	1,081	960.4	2,010.2
Mean	71.9	139	148	105	99.5	81.3	297	85.7	64.0	34.9	31.0	67.0
Cfsm	1.65	3.18	3.39	2.40	2.28	1.86	6.80	1.96	1.46	0.799	0.709	1.53
In.	1.90	3.54	3.90	2.77	2.46	2.14	7.58	2.26	1.63	0.92	0.82	1.71

Calendar year 1959: Max 799 Min 4.7 Mean 81.4 Cfsm 1.86 In. 25.29
Water year 1959-60: Max 1,040 Min 3.8 Mean 102 Cfsm 2.33 In. 31.63

Peak discharge (base, 350 cfs).--Oct. 25 (6:30 to 8:30 a.m.) 526 cfs (20.475 ft); Nov. 26 (12:30 to 2 a.m.) 398 cfs (20.275 ft); Nov. 29 (6 to 9 a.m.) 440 cfs (20.35 ft); Dec. 13 (4 to 9 p.m.) 470 cfs (20.40 ft); Jan. 4 (1 to 4 a.m.) 540 cfs (20.505 ft); Mar. 31 (11 p.m.) to Apr. 1 (1 a.m.) 1,090 cfs (21.24 ft); Apr. 5 (8 to 10 p.m.) 1,220 cfs (21.39 ft); Sept. 13 (5:30 to 7:30 a.m.) 568 cfs (20.535 ft).

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, observer's readings, and records for Ware River at Coldbrook.
Note.--Backwater from Quabbin Reservoir Apr. 7 to July 6.

1755. Swift River at West Ware, Mass.

Location.--Lat 42°16'04", long 72°19'59", on left bank at West Ware, Hampshire County, 1.4 miles downstream from Quabbin Reservoir and 3½ miles east of Belchertown.

Drainage area.--188 sq mi, includes 1.6 sq mi drained by Beaver Brook, flow of which is diverted from Ware River basin. Prior to January 1937, 186 sq mi.

Records available.--July 1910 to September 1912 (twice-daily gage heights and corresponding discharges), October 1912 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 365.18 ft above mean sea level, datum of 1929. Prior to Aug. 25, 1913, chain gage at site 400 ft upstream at same datum.

Average discharge.--48 years (1912-60), 309 cfs (adjusted for storage and diversions).

Extremes.--Maximum discharge during year, 845 cfs Apr. 27 (gage height, 5.40 ft); minimum daily, 34 cfs Nov. 11, Jan. 1.
1910-60: Maximum discharge, 7,590 cfs Mar. 19, 1936 (gage height, 15.00 ft); minimum, 2.5 cfs Sept. 20, 1940; minimum daily, 15 cfs Sept. 20, 1940.

Remarks.--Records good. Flow regulated since August 1939 by Quabbin Reservoir (see p. 247). Diversion from Ware River to Quabbin Reservoir since 1940, from Quabbin Reservoir to Wachusett Reservoir since 1941, and from Quabbin Reservoir to Chicopee Valley aqueduct since 1950.

Revisions (water years).--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).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.0	32	3.0	174
2.2	50	4.0	425
2.6	104	6.0	1,040

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	46	97	34	108	102	109	533	257	100	113	*121
2	*120	107	97	62	99	103	64	635	233	61	92	124
3	95	99	98	54	100	101	51	581	249	51	96	102
4	118	98	96	109	99	101	124	542	292	74	95	122
5	128	99	55	100	100	57	136	508	357	116	95	122
6	97	*96	45	94	58	45	188	476	484	98	54	142
7	99	59	106	95	46	109	241	384	438	98	45	117
8	98	45	98	99	108	99	277	363	360	96	106	120
9	102	105	97	56	100	99	327	493	306	57	109	120
10	55	97	97	43	99	100	385	484	247	44	120	91
11	45	34	96	106	111	104	502	468	152	106	98	120
12	46	107	58	98	102	60	555	441	114	95	98	157
13	105	96	51	99	57	45	597	453	183	96	57	132
14	97	57	105	99	46	107	607	363	166	101	45	138
15	95	46	97	100	109	99	626	368	242	97	101	136
16	93	105	97	56	102	99	584	465	382	57	98	137
17	55	97	96	44	102	101	548	413	350	45	97	78
18	45	97	96	105	102	101	677	393	328	63	97	50
19	100	97	55	98	107	58	581	355	292	97	97	128
20	91	96	44	100	60	45	642	305	342	98	58	145
21	98	54	104	*98	46	110	607	221	281	96	45	143
22	96	44	96	98	46	100	617	184	*210	94	103	139
23	95	104	94	55	108	100	605	266	172	56	112	138
24	72	98	94	44	101	100	610	302	158	44	122	82
25	49	102	36	107	101	99	735	300	124	101	123	56
26	108	38	63	98	106	57	743	277	85	109	122	134
27	89	105	43	99	59	44	746	250	155	121	101	132
28	84	62	106	100	46	110	734	164	128	120	120	128
29	85	48	98	98	111	102	*701	132	108	111	143	125
30	98	104	98	56	-------	105	578	128	103	60	120	127
31	57	-------	98	44	-------	125	-------	235	-------	45	125	-------
Total	2,734	2,442	2,611	2,548	2,539	2,787	14,497	11,482	7,298	2,607	3,007	3,606
Mean	88.2	81.4	84.2	82.2	87.6	89.9	483	370	243	84.1	97.0	120
(†)	+341	+452	+459	+313	+369	+314	+735	+101	+148	+143	+9.3	+259

Adjusted for diversion and change in reservoir contents

Mean	429	534	543	396	457	404	1,218	471	391	227	106	379
Cfsm	2.28	2.84	2.89	2.11	2.43	2.15	6.48	2.51	2.08	1.21	0.564	2.02
In.	2.63	3.17	3.33	2.43	2.62	2.48	7.23	2.89	2.32	1.39	0.65	2.25

	Observed			Adjusted		
Calendar year 1959:	Max 154	Min 32	Mean 92.0	Mean 362	Cfsm 1.93	In. 26.14
Water year 1959-60:	Max 746	Min 34	Mean 159	Mean 461	Cfsm 2.45	In. 33.39

* Discharge measurement made on this day.
† Change in contents in Quabbin Reservoir (adjusted for diversions from Ware River), diversion to Wachusett Reservoir, and diversion to Chicopee Valley aqueduct, equivalent in cubic feet per second.

1760. Quaboag River at West Brimfield, Mass.

Location.--Lat 42°10'56", long 72°15'51", on right bank 10 ft upstream from abandoned highway bridge at West Brimfield, Hampden County, 0.9 mile upstream from Blodgett Mill Brook, and 3½ miles northeast of Palmer.

Drainage area.--151 sq mi.

Records available.--August 1909 to August 1912 (twice-daily gage heights and corresponding discharges), September 1912 to September 1960.

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

Average discharge.--48 years (1912-60), 245 cfs.

Extremes.--Maximum discharge during year, 1,910 cfs Apr. 5 (gage height, 6.93 ft), from rating curve extended above 1,100 cfs on basis of slope-area measurement at gage height 15.36 ft; minimum daily, 36 cfs Oct. 1, 5.

1909-60: Maximum discharge, 12,800 cfs Aug. 19, 1955 (gage height, 15.36 ft, from floodmarks, present site and datum), from rating curve extended above 2,700 cfs on basis of slope-area measurement of peak flow; minimum daily, 6.6 cfs Sept. 28, 29, 1957.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Slight diurnal fluctuation at low flow caused by mill above station prior to 1956; regulation much greater prior to 1938.

Revisions (water years).--WSP 451: 1916. WSP 711: Drainage area. WSP 1301: 1918(M).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 31)

Oct. 1 to Mar. 31				Apr. 1 to Sept. 30			
2.5	36	4.0	339	2.5	40	4.0	343
2.8	75	5.0	690	2.8	78	5.0	770
3.1	129	6.0	1,150	3.1	129	7.0	1,950
3.5	214	6.5	1,430	3.5	214		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	395	512	280	185	330	1,450	369	249	75	135	65
2	44	360	488	270	181	230	1,540	*356	242	86	127	56
3	40	340	468	563	162	330	1,530	331	235	78	120	50
4	37	320	438	606	153	295	1,620	316	371	80	112	48
5	36	300	412	598	172	286	1,790	294	474	74	107	47
6	*38	290	388	470	212	284	1,850	276	454	71	105	43
7	45	325	498	500	242	274	1,790	254	423	68	100	*42
8	50	370	498	492	210	254	1,670	242	383	67	92	41
9	95	364	492	338	254	220	1,550	256	343	64	54	46
10	110	359	478	304	266	220	1,400	308	308	61	125	44
11	108	*348	458	320	471	205	1,260	328	276	60	162	42
12	103	334	495	350	554	210	1,150	376	247	58	145	287
13	100	317	662	340	454	212	1,010	454	223	59	135	332
14	95	304	*650	335	509	205	906	462	203	98	127	254
15	90	336	654	*330	370	199	805	454	199	114	123	235
16	86	326	634	300	435	196	740	431	190	95	123	228
17	82	326	606	210	420	201	675	412	174	90	118	216
18	78	317	582	305	406	196	635	390	162	88	110	201
19	74	315	546	280	451	199	580	366	147	92	102	190
20	70	304	502	270	438	201	544	334	135	121	96	254
21	68	296	460	255	412	201	506	308	121	107	102	235
22	66	284	410	240	425	201	470	278	114	100	102	212
23	70	276	320	230	*382	190	439	264	107	98	96	199
24	250	278	390	220	339	194	439	297	*103	95	87	185
25	500	444	380	210	326	181	446	316	100	88	82	172
26	470	419	345	210	397	185	454	316	92	86	77	160
27	450	416	326	205	406	192	462	305	87	86	72	149
28	425	481	328	205	391	*242	450	286	84	92	68	139
29	400	523	334	201	388	317	420	259	80	87	63	131
30	380	520	320	194	-------	394	387	237	78	134	64	135
31	360	-------	304	194	-------	1,230	-------	237	-------	155	77	-------
Total	4,856	10,587	14,378	9,825	10,011	8,274	28,968	10,112	6,404	2,727	3,208	4,438
Mean	157	353	464	317	345	267	966	326	213	88.0	103	148
Cfsm	1.04	2.34	3.07	2.10	2.28	1.77	6.40	2.16	1.41	0.583	0.682	0.980
In.	1.20	2.61	3.54	2.42	2.47	2.04	7.13	2.49	1.58	0.67	0.79	1.09

Calendar year 1959: Max 1,010 Min 36 Mean 270 Cfsm 1.79 In. 24.32
Water year 1959-60: Max 1,850 Min 36 Mean 311 Cfsm 2.06 In. 28.03

Peak discharge (base, 840 cfs).--Jan. 3 (11:30 a.m. to 12 m.) 860 cfs (5.39 ft); Apr. 5 (7 to 9:30 p.m.) 1,910 cfs (6.93 ft); Sept. 12 (6 p.m.) 942 cfs (5.32 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 7 to Nov. 8; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage, and records for Quinebaug River at Westville and Ware River at Coldbrook. Stage-discharge relation affected by ice Dec. 21-25, Jan. 1, 2, 6, 7, 11-27, Feb. 16, 17, Mar. 1-4, 9-12.

1770. Chicopee River at Indian Orchard, Mass.

Location.--Lat 42°09'38", long 72°30'52", on left bank 1,000 ft downstream from West Street Bridge at Indian Orchard, Hampden County, and 1.1 miles upstream from Fuller Brook.

Drainage area.--688 sq mi.

Records available.--August 1928 to September 1960. Published as "at Bircham Bend" prior to November 1938.

Gage.--Water-stage recorder. Altitude of gage is 125 ft (from topographic map). Prior to Nov. 1, 1938, at site 1¼ miles downstream at different datum.

Average discharge.--32 years, 1,120 cfs (adjusted to present drainage area and for storage and diversions).

Extremes.--Maximum discharge during year, 7,560 cfs Mar. 31, Apr. 1 (gage height, 10.86 ft); minimum daily, 178 cfs Sept. 4.
1928-60: Maximum discharge, 45,200 cfs Sept. 21, 1938, by computation of flow over dam; minimum daily, 16 cfs several times in 1929-31.

Remarks.--Records excellent. Diversion since 1941 from 186 sq mi in Swift River basin and at times since 1931 from 97 sq mi in Ware River basin for Boston metropolitan district, since 1950, for city of Chicopee, and since 1952, for South Hadley. Diversion from Ludlow Reservoir for Springfield and, prior to 1952, for Chicopee. Flow regulated by powerplants above station, by Quabbin Reservoir on Swift River since 1939 (see p. 247), by Barre Falls Reservoir on Ware River since 1958, and by smaller reservoirs.

Revisions (water years).--WSP 711: Drainage area. WSP 1231: 1934.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-25				Oct. 26 to Sept. 30			
4.2	250	6.0	1,340	3.9	160	6.0	1,390
4.5	368	8.0	3,450	4.1	217	8.0	3,450
5.0	640			4.5	368	11.0	7,810
				5.0	640		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	322	1,220	1,720	854	824	1,320	*6,550	1,700	1,180	387	834	391
2	*332	1,320	1,540	832	840	846	4,790	*1,860	1,240	459	762	320
3	302	1,210	1,450	1,800	654	1,030	4,030	1,780	1,100	368	508	361
4	305	1,120	1,420	3,410	718	946	4,540	1,630	1,720	472	508	178
5	268	1,010	1,320	2,190	744	956	5,700	1,470	2,700	482	543	251
6	307	1,000	1,200	1,720	947	826	6,200	1,440	2,040	521	400	328
7	477	1,120	1,370	1,500	997	1,060	4,370	1,330	1,770	275	398	416
8	578	1,860	1,980	1,430	1,200	853	3,950	1,120	1,520	362	402	348
9	739	*1,560	1,670	1,300	943	888	4,080	1,280	1,300	356	384	248
10	930	1,330	1,450	944	968	822	3,790	1,830	1,150	310	534	277
11	742	1,250	1,340	1,080	1,610	827	3,490	1,790	986	198	948	313
12	643	1,100	1,410	1,170	2,990	764	3,450	1,820	630	316	916	946
13	746	962	2,660	1,060	2,050	680	3,400	2,020	902	262	718	2,770
14	495	999	2,640	1,130	1,730	914	3,280	2,030	730	761	401	*2,040
15	482	1,040	2,060	1,080	1,500	734	3,160	1,830	682	989	539	1,680
16	602	1,100	1,800	1,030	1,450	742	3,100	1,870	1,170	776	618	1,380
17	457	1,140	1,780	730	1,430	937	3,020	1,690	1,210	344	560	963
18	288	1,090	1,560	1,110	1,340	695	3,020	1,600	930	458	519	610
19	456	1,170	1,510	959	1,660	846	3,140	1,600	846	468	463	598
20	358	995	1,410	977	1,880	754	2,920	1,520	848	842	469	1,140
21	382	984	1,310	*904	1,510	876	2,750	1,270	845	545	256	1,190
22	370	782	1,220	898	1,400	790	2,640	1,020	622	562	453	1,050
23	452	954	1,140	890	1,330	810	2,290	1,140	582	453	511	944
24	816	986	922	672	*1,290	738	1,950	1,180	599	303	512	754
25	3,010	1,670	900	870	1,040	824	2,290	1,510	694	452	436	516
26	2,120	2,190	1,100	992	1,340	740	2,410	1,590	319	402	433	616
27	1,770	1,720	1,010	754	1,640	550	2,250	1,390	536	433	339	642
28	1,860	1,800	1,210	816	1,430	984	2,200	1,330	511	504	285	548
29	1,720	2,310	1,290	856	1,240	1,180	2,050	1,020	345	459	402	487
30	1,400	2,000	1,280	793	-------	1,390	1,890	790	446	728	370	560
31	1,120	-------	1,130	652	-------	4,490	-------	1,100	-------	1,000	434	-------
Total	24,849	38,992	45,802	35,403	38,695	30,812	102,700	46,550	30,153	15,247	15,855	22,865
Mean	802	1,300	1,477	1,142	1,334	994	3,423	1,502	1,005	492	511	762
(†)	+346	+559	+629	+368	+374	+335	+738	+101	+147	+144	+6.3	+263
Adjusted for diversion and change in reservoir contents												
Mean	1,148	1,859	2,106	1,511	1,709	1,329	4,161	1,603	1,152	635	518	1,025
Cfsm	1.67	2.70	3.06	2.20	2.48	1.93	6.05	2.33	1.67	0.923	0.753	1.49
In.	1.92	3.01	3.53	2.53	2.68	2.23	6.75	2.69	1.87	1.06	0.87	1.66

	Observed			Adjusted		
Calendar year 1959:	Max 4,490	Min 160	Mean 948	Mean 1,290	Cfsm 1.88	In. 25.45
Water year 1959-60:	Max 6,550	Min 178	Mean 1,224	Mean 1,557	Cfsm 2.26	In. 30.80

* Discharge measurement made on this day.
† Diversion from Ware River, change in contents in Quabbin Reservoir (adjusted for diversion from Ware River), diversion to Wachusett Reservoir and to Chicopee and South Hadley, change in contents in Barre Falls and Ludlow Reservoirs, and diversion from Ludlow Reservoir, equivalent in cubic feet per second.

1795. Westfield River at Knightville, Mass.

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

Drainage area.--162 sq mi.

Records available.--August 1909 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 461.25 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Jan. 11, 1935, chain gage at site 0.5 mile upstream at different datum. Jan. 11, 1935, to May 20, 1940, water-stage recorder at site 700 ft upstream at datum 10.57 ft higher. May 21 to Dec. 19, 1940, staff gage at site 700 ft upstream at datum 18.75 ft higher.

Average discharge.--51 years, 326 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 3,570 cfs Apr. 13 (gage height, 6.14 ft); minimum, 4.5 cfs Feb. 6; minimum daily, 14 cfs Oct. 25.
1909-60: Maximum discharge, 37,900 cfs Sept. 21, 1938 (gage height, 29.58 ft, from floodmarks, site and datum then in use), from rating curve extended above 3,800 cfs on basis of slope-area measurements at gage heights 24.07 and 29.58 ft; minimum, 0.6 cfs Aug. 11, 1941; minimum daily, 4 cfs Aug. 10, 1913.

Remarks.--Records excellent. Flow regulated by Knightville Reservoir since 1941 (see p. 247).

Revisions (water years).--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).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	11	4.0	765
1.9	18	4.5	1,220
2.2	46	5.0	1,810
2.5	93	6.0	3,310
3.0	225	7.0	5,470
3.5	440		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	845	1,350	215	141	b200	2,010	445	428	69	210	54
2	174	519	539	184	178	b175	2,500	531	284	72	114	44
3	95	390	495	350	164	b190	2,580	*395	243	75	86	39
4	62	321	440	1,840	161	b180	598	343	348	273	75	34
5	55	296	400	1,550	144	222	27	304	288	139	72	35
6	51	277	410	473	106	232	20	273	236	89	70	35
7	*122	1,080	1,190	415	350	199	613	254	181	72	62	32
8	495	978	1,340	420	300	196	1,920	243	143	62	55	*31
9	689	550	735	262	239	b155	2,560	341	121	56	51	27
10	441	440	537	195	212	b160	2,870	440	110	55	226	50
11	212	*366	446	229	443	b165	3,230	348	101	54	337	52
12	199	322	676	250	1,440	b160	2,310	615	95	58	168	256
13	148	309	1,850	261	1,910	184	3,360	607	93	51	106	1,020
14	124	340	1,290	236	1,110	178	3,310	468	89	74	84	2,190
15	110	1,130	*648	215	408	173	3,110	490	447	142	142	2,120
16	95	705	568	225	430	159	2,980	395	584	84	164	321
17	88	440	453	222	376	161	2,800	334	254	61	108	203
18	88	462	495	212	371	173	2,450	412	243	51	77	181
19	89	405	415	212	357	176	1,620	459	176	47	62	175
20	80	334	322	209	357	176	879	513	133	102	65	1,180
21	73	304	247	184	322	173	705	265	114	79	77	1,440
22	70	292	280	187	280	167	720	225	95	55	155	473
23	91	284	211	199	280	164	607	219	89	45	309	343
24	366	320	199	176	277	156	634	284	91	40	154	277
25	14	1,400	222	141	239	161	614	330	174	37	97	236
26	1,710	947	300	164	261	b135	495	326	125	34	73	209
27	2,690	555	300	181	284	184	687	239	91	33	62	184
28	2,230	902	322	178	247	193	740	193	*75	54	55	167
29	520	1,080	343	178	b225	343	501	164	69	55	50	156
30	296	1,460	296	178	-------	471	410	143	70	251	46	356
31	370	-------	236	159	-------	1,090	-------	200	-------	716	49	-------
Total	11,892	18,053	17,555	10,100	11,612	6,851	48,760	10,598	5,590	3,085	3,461	11,918
Mean	384	602	566	326	400	221	1,625	342	186	99.5	112	397
(†)	+1.38	+22.0	-18.6	-0.63	+0.44	+47.0	-52.2	+0.04	-0.35	+0.11	-0.15	+0.23

Adjusted for change in contents in Knightville Reservoir

Mean	385	624	548	325	401	268	1,573	342	186	99.6	111	398
Cfsm	2.38	3.85	3.38	2.01	2.48	1.65	9.71	2.11	1.15	0.615	0.685	2.46
In.	2.74	4.30	3.90	2.31	2.67	1.91	10.83	2.43	1.28	0.71	0.79	2.74

	Observed			Adjusted		
Calendar year 1959:	Max 2,690	Min 14	Mean 334	Mean 334	Cfsm 2.06	In. 28.01
Water year 1959-60:	Max 3,360	Min 14	Mean 436	Mean 436	Cfsm 2.69	In. 36.61

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Knightville Reservoir.
b Stage-discharge relation affected by ice.

1800. Sykes Brook at Knightville, Mass.

Location.--Lat 42°17'27", long 72°52'15", on right bank 200 ft downstream from bridge on State Highway 112 at Knightville, Hampshire County, 0.4 mile upstream from mouth, 0.4 mile west of Knightville Dam, and 3.5 miles north of Huntington.

Drainage area.--1.64 sq mi.

Records available.--June 1945 to September 1960.

Gage.--Water-stage recorder and concrete control. Datum of gage is 641.40 ft above mean sea level, datum of 1929.

Average discharge.--15 years, 2.76 cfs.

Extremes.--Maximum discharge during year, 88 cfs Apr. 4 (gage height, 2.595 ft); minimum, 0.14 cfs Oct. 1, July 26.
1945-60: Maximum discharge, 680 cfs Aug. 19, 1955 (gage height, 4.485 ft), from rating curve extended above 80 cfs; minimum, 0.03 cfs Aug. 31, Sept. 1, 1953.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from unknown source June 27, 28)

Oct. 1 to Apr. 4

1.2	0.17	1.8	6.4
1.3	.31	1.9	10.0
1.4	.55	2.0	15.0
1.5	1.11	2.2	31
1.6	2.2	2.5	71
1.7	3.8		

Apr. 5 to Sept. 30

1.15	0.12	1.5	0.93
1.2	.17	1.6	1.95
1.3	.32	1.7	3.8
1.4	.54		

Note.--Same as preceding table above 1.7 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.68	4.0	4.8	2.2	1.55	b2.2	22	4.3	2.2	0.40	a0.75	0.28
2	.45	2.8	4.2	b2.0	1.55	b2.1	21	3.8	1.88	.44	a.50	.24
3	.25	2.2	3.9	17.9	1.50	b2.1	16.0	*3.2	1.88	.44	a.37	.23
4	.20	2.2	3.5	8.2	b1.40	b2.1	44	2.9	5.6	.49	.34	.24
5	.24	2.2	3.2	b5.8	1.50	2.0	61	2.5	3.8	.36	.43	.25
6	.38	2.2	3.0	b4.6	b2.8	1.96	24	2.2	2.5	.31	.38	.20
7	*1.20	7.4	a12.0	b3.9	b2.9	1.90	17.8	2.1	1.80	.30	.32	.18
8	1.55	4.7	a7.0	3.6	b2.4	1.90	14.2	2.2	1.55	.29	.39	*.18
9	4.4	a3.5	a5.0	b3.0	2.3	1.78	12.4	3.5	1.23	.27	.29	.18
10	1.84	a3.0	a4.3	b2.7	2.2	1.72	11.5	2.9	1.02	.26	2.7	.21
11	1.23	*2.6	a3.8	b2.6	b16.0	1.66	10.8	4.1	.90	.33	1.52	.38
12	.88	2.4	a10.0	b2.4	b11.0	1.66	13.4	5.0	.93	.29	.83	22
13	.72	2.2	a14.0	b2.4	b7.2	1.66	12.9	4.3	.90	.25	.62	8.0
14	.82	3.2	a7.0	2.2	b5.8	1.55	11.7	4.4	.93	.66	.58	3.8
15	.80	3.8	*5.2	2.2	b4.8	1.55	11.2	3.9	10.8	.41	1.88	2.2
16	.62	2.8	5.0	2.2	b4.4	1.55	9.2	3.1	4.8	.28	2.2	1.50
17	.58	2.9	4.4	2.1	4.0	1.60	7.4	2.5	2.8	.25	.99	1.18
18	.55	2.7	4.0	2.0	3.8	1.66	7.6	5.2	2.2	.23	.73	1.10
19	.42	2.3	3.7	2.2	4.7	1.66	5.8	3.8	1.61	.25	.62	.99
20	.39	2.2	b3.0	1.96	3.9	1.66	4.8	2.9	1.28	.26	.60	11.4
21	.37	2.0	b2.7	1.90	3.4	1.66	4.4	2.7	1.06	.20	1.14	4.3
22	.30	1.96	b2.6	1.90	3.2	b1.65	4.4	2.2	.96	.19	1.10	2.7
23	.91	1.90	b2.3	1.78	b2.9	1.55	4.2	2.3	.90	.18	.96	2.0
24	23	3.7	b2.4	1.78	2.7	1.50	5.8	2.7	1.22	.18	.71	1.55
25	10.5	12.0	b2.3	1.66	b2.6	b1.50	4.6	3.1	1.18	.16	.50	1.38
26	5.1	5.6	2.2	1.66	3.2	b1.45	3.8	3.8	.90	.15	.42	1.18
27	3.7	5.1	2.2	1.60	2.8	1.55	5.9	2.3	.60	.22	.38	1.06
28	2.8	14.3	3.6	b1.70	2.6	2.3	4.7	1.88	.45	.24	.33	1.02
29	2.4	8.7	3.3	1.66	b2.4	2.8	3.8	1.55	.38	.20	.30	.99
30	2.1	5.8	2.7	1.66	-------	7.1	3.3	1.38	.42	a3.1	.30	4.4
31	3.7	-------	2.4	1.60	-------	25	-------	2.3	-------	a2.5	.31	-------
Total	73.08	122.36	139.7	95.06	111.50	84.03	383.6	95.01	58.68	14.09	23.49	75.32
Mean	2.36	4.08	4.51	3.07	3.84	2.71	12.8	3.06	1.96	0.455	0.758	2.51
Cfsm	1.44	2.49	2.75	1.87	2.34	1.65	7.80	1.87	1.20	0.277	0.462	1.53
In.	1.66	2.77	3.17	2.16	2.53	1.91	8.70	2.15	1.33	0.32	0.53	1.71

Calendar year 1959: Max 26 Min 0.10 Mean 2.52 Cfsm 1.54 In. 20.86
Water year 1959-60: Max 61 Min 0.15 Mean 3.49 Cfsm 2.13 In. 28.94

Peak discharge (base, 35 cfs).--Oct. 24 (1:45 p.m.) 45 cfs (2.315 ft); Jan. 3 (10 a.m.) 45 cfs (2.32 ft); Feb. 11 (about 1 p.m.) about 40 cfs; Apr. 4 (11:45 p.m.) 88 cfs (2.595 ft); June 15 (12:30 p.m.) 38 cfs (2.255 ft); Sept. 12 (4.45 p.m.) 85 cfs (2.575 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage when available, and records for Hoosic River at Adams (Part 1-B), and West Branch Westfield River at Huntington.
b Stage-discharge relation affected by ice.

1805. Middle Branch Westfield River at Goss Heights, Mass.

Location.--Lat 42°15'31", long 72°52'23", on right bank at upstream side of highway bridge at Goss Heights, Hampshire County, 0.35 mile upstream from mouth and 1.7 miles north of Huntington.

Drainage area.--52.6 sq mi.

Records available.--July 1910 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 400.30 ft above mean sea level, datum of 1929. Prior to Sept. 8, 1912, chain gage at same site. Prior to June 25, 1930, at datum 1.00 ft higher.

Average discharge.--50 years, 105 cfs.

Extremes.--Maximum discharge during year, 4,700 cfs Oct. 24 (gage height, 5.97 ft); minimum, 4.6 cfs Oct. 1.
1910-60: Maximum discharge, 19,900 cfs Sept. 21, 1938 (gage height, 10.61 ft), from rating curve extended above 3,200 cfs on basis of mean of two contracted-opening measurements of peak flow; maximum gage height, 13.87 ft Mar. 12, 1936 (ice jam); practically no flow Sept. 3, 22, Oct. 20, 1910, July 30, 1912, Oct. 26, 27, 1914.

Remarks.--Records good except those for periods of ice effect, which are fair. Some diurnal fluctuation at low flow prior to 1952 caused by mill above station.

Revisions (water years).--WSP 415: 1910-13. WSP 781: 1933(M), drainage area.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
0.2	7.4	1.5	185	0.1	4.4	1.5	196
.3	11	2.0	357	.2	7.4	2.0	360
.5	22	2.5	575	.3	11	2.5	575
.7	39	3.0	860	.4	16	3.0	860
1.0	77	4.0	1,770	.5	23	4.0	1,770
				.7	40	5.0	3,090
				1.0	83		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	261	188	76	46	64	944	g146	121	25	46	8.5
2	34	162	162	67	44	61	728	156	87	23	25	7.7
3	18	g113	146	950	44	61	544	*123	74	21	18	6.4
4	12	g93	137	446	43	71	1,730	104	137	41	*16	6.4
5	9.7	g97	126	240	44	70	2,160	92	94	29	16	6.4
6	10	g90	119	173	67	64	695	81	71	20	18	6.4
7	*26	417	*563	151	85	58	444	74	52	16	14	6.1
8	89	277	314	130	70	54	376	71	44	14	13	*5.8
9	191	175	193	85	62	54	345	113	38	13	11	5.2
10	102	*144	158	83	58	52	327	123	34	12	77	13
11	50	g115	135	82	700	51	330	108	30	19	87	13
12	44	g101	274	78	537	50	533	191	28	22	42	951
13	34	g90	723	82	275	48	570	188	26	14	27	466
14	30	g125	287	82	205	47	552	146	26	26	21	180
15	28	324	191	75	155	47	625	139	207	40	23	100
16	24	175	168	77	135	46	453	112	160	22	29	62
17	22	153	146	68	125	47	323	96	78	15	20	47
18	23	g137	135	63	110	48	367	158	96	12	15	45
19	24	g101	124	*61	120	49	306	165	63	12	13	42
20	21	g90	97	60	110	48	210	115	45	15	13	895
21	20	g81	84	58	100	47	175	96	38	15	17	222
22	18	g77	82	55	90	47	188	80	31	11	26	132
23	26	76	76	53	80	46	163	80	27	9.7	61	94
24	1,630	111	82	51	76	44	213	108	29	8.9	36	74
25	675	558	92	50	*72	41	175	108	61	8.1	21	60
26	287	266	92	50	82	37	g144	119	42	7.4	15	52
27	172	178	78	47	82	47	241	83	29	7.4	13	46
28	g126	782	115	47	72	65	213	63	23	11	11	42
29	g109	452	130	48	66	*114	156	53	20	10	9.7	40
30	g91	248	96	47	-------	189	g121	46	21	121	9.3	104
31	g144	-------	85	45	-------	1,090	-------	63	-------	161	8.9	-------
Total	4,101.7	6,069	5,398	3,680	3,755	2,857	14,351	3,400	1,832	781.5	771.9	3,738.9
Mean	132	202	174	119	129	92.2	478	110	61.1	25.2	24.9	125
Cfsm	2.51	3.84	3.31	2.26	2.45	1.75	9.09	2.09	1.16	0.479	0.473	2.38
In.	2.90	4.29	3.82	2.60	2.65	2.02	10.15	2.40	1.30	0.55	0.55	2.64

Calendar year 1959: Max 1,630 Min 4.4 Mean 106 Cfsm 2.02 Ir. 27.27
Water year 1959-60: Max 2,160 Min 5.2 Mean 139 Cfsm 2.64 Ir. 35.87

Peak discharge (base, 1,650 cfs).--Oct. 24 (3 p.m.) 4,700 cfs (5.97 ft); Jan. 3 (1 to 1:30 p.m.) 2,730 cfs (4.76 ft); Feb. 11 (3 p.m.) 1,690 cfs (3.93 ft); Apr. 5 (2 a.m.) 2,800 cfs (4.81 ft); Sept. 12 (6 p.m.) 3,660 cfs (5.36 ft).

* Discharge measurement made on this day.
g Computed from graph based on once-daily chain-gage readings.
Note.--Stage-discharge relation affected by ice Dec. 21 to Jan. 3, Jan. 9 to Feb. 11, Feb. 14 to Mar. 27.

1810. West Branch Westfield River at Huntington, Mass.

Location.--Lat 42°14'14", long 72°53'46", on left bank at Huntington, Hampshire County, 0.4 mile downstream from Roaring Brook and 1½ miles upstream from mouth.

Drainage area.--93.7 sq mi.

Records available.--September 1935 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 388.60 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 191 cfs.

Extremes.--Maximum discharge during year, 4,840 cfs Apr. 5 (gage height, 6.50 ft); minimum, 10 cfs Oct. 1.
1935-60: Maximum discharge, 26,100 cfs Aug. 19, 1955 (gage height, 15.27 ft), from rating curve extended above 9,500 cfs on basis of slope-area measurement of peak flow; minimum, 3.3 cfs Aug. 9, 1955, Nov. 27, 1957.

Remarks.--Records good. Prior to 1950, some diurnal fluctuation at low flow caused by small mill above station.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-24				Oct. 25 to Sept. 30			
0.8	21	1.7	140	0.6	11	2.0	250
1.1	44	2.0	245	.8	22	2.5	550
1.4	78	2.5	550	1.1	46	3.0	950
				1.4	86	4.0	1,780
Note.--Same as following table above 2.5 ft.				1.7	147	6.0	4,100

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	.456	362	140	95	125	1,710	263	167	65	82	18
2	60	285	300	125	90	125	1,260	295	147	57	52	16
3	36	213	275	1,670	90	120	974	*242	129	49	40	14
4	28	178	246	814	88	150	2,940	199	224	76	35	14
5	24	169	221	445	91	145	3,920	182	185	57	36	15
6	24	172	209	310	120	124	1,300	161	136	42	41	14
7	46	634	966	255	164	116	790	147	110	37	31	13
8	120	473	598	230	130	110	702	140	90	33	29	*13
9	252	315	380	155	126	110	654	204	76	29	26	11
10	148	*250	300	155	118	105	598	230	69	28	218	20
11	77	209	260	150	1,150	100	606	206	62	39	190	26
12	64	185	460	145	918	100	870	346	58	62	95	1,240
13	50	167	1,210	150	473	99	942	325	56	35	61	796
14	46	196	550	150	356	99	902	250	54	61	48	322
15	47	487	*368	142	270	95	966	225	591	92	46	176
16	42	305	320	147	234	93	766	189	322	47	57	126
17	38	250	280	136	209	95	558	164	158	34	43	104
18	39	250	250	126	192	97	630	327	168	27	34	95
19	44	195	230	*122	210	106	566	340	122	25	28	88
20	38	172	178	122	199	100	380	221	93	31	32	827
21	34	158	155	116	175	97	315	185	80	28	34	365
22	31	153	150	112	167	95	330	153	66	22	57	192
23	38	145	140	108	158	95	280	167	58	20	84	142
24	1,660	193	147	105	150	91	618	202	64	20	55	118
25	910	902	161	100	*145	88	410	175	115	20	37	104
26	438	494	161	105	161	75	315	209	81	18	28	93
27	280	330	142	100	164	86	457	153	61	17	25	83
28	206	1,180	205	99	145	122	410	122	50	23	22	76
29	161	822	221	100	131	*199	300	108	*48	24	19	72
30	138	459	175	97	-------	347	238	95	46	201	18	187
31	226	-------	158	93	-------	1,990	-------	114	-------	244	18	-------
Total	5,373	10,397	9,778	6,824	6,719	5,499	25,707	6,339	3,486	1,563	1,621	5,380
Mean	173	347	315	220	232	177	857	204	116	50.4	52.3	179
Cfsm	1.85	3.70	3.36	2.35	2.48	1.89	9.15	2.18	1.24	0.538	0.558	1.91
In.	2.13	4.13	3.88	2.71	2.67	2.18	10.20	2.52	1.38	0.62	0.64	2.14

Calendar year 1959: Max 1,800 Min 9.4 Mean 180 Cfsm 1.92 In. 26.11
Water year 1959-60: Max 3,920 Min 11 Mean 242 Cfsm 2.58 In. 35.20

Peak discharge (base, 2,700 cfs).--Oct. 24 (3:30 p.m.) 4,170 cfs (6.05 ft); Jan. 3 (2 p.m.) 4,230 cfs (6.09 ft); Mar. 31 (2:30 p.m.) 2,830 cfs (5.00 ft); Apr. 5 (6 a.m.) 4,840 cfs (6.50 ft); Sept. 12 (6 p.m.) 4,230 cfs (6.09 ft).

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 21, 22, Jan. 1, 2, 9-14, 24-26, Feb. 8, 11, 19, Mar. 1-4, 9-12, 25-27.

1830. Westfield Little River at outlet of Cobble Mountain Reservoir, near Westfield, Mass.

Location.--Lat 42°07'34", long 72°53'37", at Cobble Mountain Dam, 7½ miles west of Westfield, Hampden County.

Drainage area.--45.8 sq mi.

Records available.--July 1905 to September 1960. Published as "near Blandford" 1905-11 and as "near Westfield" 1912-35.

Gage.--Venturi meters at outlet tunnel at powerhouse 2.4 miles downstream. Prior to Mar. 1, 1910, staff or chain gages at site a quarter of a mile upstream and Mar. 1, 1910, to Sept. 30, 1935, water-stage recorder at diversion dam 2¾ miles downstream.

Average discharge.--50 years (1910-60), 91.4 cfs (adjusted to present drainage area).

Remarks.--Discharge computed on basis of flow through venturi meters and flow over reservoir spillway or through bypass tunnel. Flow regulated by Borden Brook Reservoir since 1910 and Cobble Mountain Reservoir since August 1931 (see p. 247); discharge adjusted for effect of this regulation. No flow over spillway or through bypass tunnel during year.

Cooperation.--Records furnished by Board of Water Commissioners, Springfield.

Revisions.--WSP 501: Drainage area.

Monthly discharge, in cubic feet per second, water year October 1959 to September 1960

Month	Mean	Per square mile	Runoff in inches
October	113	2.47	2.84
November	170	3.71	4.15
December	151	3.30	3.81
Calendar year 1959	87.0	1.90	25.79
January	103	2.25	2.59
February	132	2.88	3.11
March	94.8	2.07	2.39
April	416	9.08	10.13
May	91.5	2.00	2.30
June	39.9	.871	.97
July	31.7	.692	.80
August	58.2	1.27	1.46
September	129	2.82	3.14
Water year 1959-60	127	2.77	37.69

1835. Westfield River near Westfield, Mass.

Location.--Lat 42°06'24", long 72°41'58", on left bank 0.7 mile downstream from Great Brook and 3 miles east of Westfield, Hampden County.

Drainage area.--497 sq mi.

Records available.--June 1914 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 98.25 ft above mean sea level, datum of 1929. Prior to Nov. 3, 1933, on right bank at same datum.

Average discharge.--46 years, 956 cfs (adjusted for diversion and, since October 1931, for storage).

Extremes.--Maximum discharge during year, 10,300 cfs Apr. 5 (gage height, 12.47 ft); minimum, 97 cfs Sept. 6; minimum daily, 130 cfs Sept. 6.
1914-60: Maximum discharge, 70,300 cfs Aug. 19, 1955 (gage height, 34.2 ft, from floodmarks), from rating curve extended above 18,000 cfs on basis of computations of flow over dam at gage heights 27.20, 29.40, and 34.2 ft; minimum, 9 cfs Oct. 2, 1921.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow regulated by diversion from Westfield Little River for municipal supply of Springfield and by Borden Brook Reservoir, Cobble Mountain Reservoir since 1931, and Knightville Reservoir since 1941 (see p. 247).

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

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30			
3.1	133	6.0	1,690	3.0	115	6.0	1,770
3.5	233	8.0	3,720	3.5	254	8.0	3,720
4.0	420	10.0	6,440	4.0	445	10.0	6,440
4.5	645	12.0	9,570	5.0	1,000	12.0	9,570
5.0	945						

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	1,810	2,460	635	510	1,080	6,520	1,150	914	287	705	176
2	291	*1,280	1,440	572	593	864	5,920	1,490	826	298	404	168
3	243	952	1,230	3,300	570	974	5,200	1,170	649	321	312	165
4	195	796	1,120	3,870	596	802	7,330	*1,000	1,130	369	257	133
5	176	736	1,020	3,050	510	792	9,300	940	1,140	510	284	144
6	170	684	958	1,500	620	716	4,200	832	844	308	261	130
7	260	1,860	3,010	1,210	800	760	2,770	766	645	251	264	140
8	*774	2,280	3,170	1,120	820	772	3,660	712	535	137	254	186
9	1,080	1,400	1,890	900	740	1,050	4,240	880	454	160	219	*209
10	1,130	1,070	1,430	602	720	897	4,330	1,200	396	179	761	137
11	511	906	1,190	*700	3,400	722	4,610	1,010	372	165	1,230	158
12	476	808	1,410	733	4,290	600	5,090	1,410	312	206	647	2,670
13	375	730	4,500	808	4,480	520	5,450	1,510	376	232	409	4,390
14	321	736	3,030	775	2,430	720	5,300	1,230	315	420	326	3,420
15	292	1,880	1,780	744	*1,690	660	5,330	1,180	988	500	322	3,080
16	266	1,520	*1,500	689	1,360	500	4,800	1,040	1,780	364	500	1,480
17	227	1,120	1,250	600	1,540	540	4,120	892	892	277	368	689
18	210	1,070	1,290	650	1,350	540	4,080	1,070	712	210	287	535
19	258	900	1,110	679	1,860	530	3,150	1,510	645	188	251	708
20	234	814	920	702	1,740	520	2,100	1,030	515	225	228	3,050
21	212	718	754	658	1,180	700	1,700	868	409	254	235	3,120
22	196	650	754	653	1,410	620	1,670	736	349	210	440	1,640
23	212	684	684	590	1,420	700	1,520	874	330	168	518	1,210
24	3,730	700	559	500	1,330	520	1,940	1,110	341	165	454	868
25	2,860	3,110	625	562	1,280	500	1,820	982	476	154	298	667
26	2,240	2,510	694	598	1,390	430	1,510	1,060	445	154	232	762
27	3,300	1,430	778	616	1,220	488	1,690	850	*360	148	216	815
28	2,800	3,010	968	675	830	867	1,960	645	337	241	197	672
29	1,370	3,280	1,130	620	1,070	952	1,430	545	333	213	211	607
30	736	2,280	900	540	-------	*1,540	1,180	510	308	707	365	809
31	700	-------	748	450	-------	5,740	-------	643	-------	1,810	236	-------
Total	25,993	41,724	44,302	30,301	41,749	27,416	113,920	30,845	18,128	9,831	11,691	32,938
Mean	838	1,391	1,429	977	1,440	884	3,797	995	604	317	377	1,098
(†)	+116	+202	+141	+50.7	-123	-9.74	+360	+81.4	+37.2	+34.9	+48.2	+26.2

Adjusted for diversion and change in reservoir contents

Mean	954	1,592	1,570	1,028	1,317	875	4,158	1,076	641	352	425	1,124
Cfsm	1.92	3.20	3.16	2.07	2.65	1.76	8.37	2.16	1.29	0.708	0.855	2.26
In.	2.21	3.57	3.64	2.38	2.86	2.03	9.33	2.50	1.44	0.82	0.99	2.52

	Observed			Adjusted		
Calendar year 1959:	Max 6,030	Min 95	Mean 850	Mean 920	Cfsm 1.85	In. 25.13
Water year 1959-60:	Max 9,300	Min 130	Mean 1,172	Mean 1,252	Cfsm 2.52	In. 34.29

* Discharge measurement made on this day.
† Diversion from Westfield Little River and change in contents in Knightville, Borden Brook, and Cobble Mountain Reservoirs, equivalent in cubic feet per second.
Note.--Stage-discharge relation affected by ice Dec. 20, Jan. 3, 9, 17, 24, 29-31, Feb. 5-11, Mar. 12-26.

1840. Connecticut River at Thompsonville, Conn.

Location.--Lat 41°59'14", long 72°36'21", on right bank just upstream from Enfield Dam, 1 mile downstream from Thompsonville, Hartford County.

Drainage area.--9,661 sq mi.

Records available.--July 1928 to September 1960.

Gage.--Water-stage recorder on river and on canal of Connecticut Light and Power Co. Datum of gage is 38.48 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 16,630 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 156,000 cfs Apr. 6 (gage height, 10.01 ft); minimum daily, 1,180 cfs Sept. 5.
1928-60: Maximum discharge, 282,000 cfs Mar. 20, 1936 (gage height, 16.6 ft, from floodmarks); minimum daily, 1,060 cfs Aug. 28, 1949, Sept. 27, 1953.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Discharge includes water diverted around station by canal of Connecticut Light & Power Co. Flow regulated by powerplants, by diversion from Chicopee River basin, and by First Connecticut and Second Connecticut Lakes, Lake Francis, Comerford Station Pond and Moore Reservoir, Quabbin Reservoir (see p. 247), and other reservoirs (combined usable capacity, about 97½ billion cubic feet).

Revisions (water years).--WSP 741: 1932. WSP 891: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,550	26,000	77,700	b16,400	11,200	15,600	67,200	36,300	13,700	9,010	11,300	5,030
2	6,090	23,900	64,800	b15,900	12,600	14,900	95,600	31,600	17,000	9,700	10,400	4,470
3	8,570	23,800	53,900	b18,000	12,000	14,600	97,000	25,500	17,800	5,250	8,820	2,940
4	6,950	23,400	45,400	34,400	11,700	b14,600	98,900	*25,400	21,400	3,660	7,560	1,420
5	4,020	24,000	39,100	40,900	12,300	b14,000	129,000	25,700	29,400	8,340	7,110	a1,180
6	5,280	22,700	31,900	34,900	13,000	b12,400	154,000	23,400	22,800	9,370	5,050	2,090
7	8,360	26,600	26,600	28,500	13,700	b13,000	*139,000	22,500	18,500	8,460	2,550	2,840
8	*10,500	39,600	38,800	26,600	11,900	b14,600	107,000	20,200	17,700	7,750	4,260	3,150
9	16,500	34,000	38,300	b23,300	13,400	13,800	83,000	18,900	14,900	7,470	5,370	3,160
10	22,000	*27,700	33,900	b21,100	13,900	13,300	68,300	22,600	10,100	2,910	7,860	2,400
11	20,600	24,200	31,800	b18,600	b19,100	11,900	58,500	25,300	10,700	3,310	13,900	1,480
12	14,600	22,300	29,900	16,100	37,100	12,400	51,300	27,200	7,740	5,070	9,870	9,500
13	9,300	21,200	40,700	16,700	38,000	11,400	50,700	27,000	7,430	5,310	6,520	48,300
14	8,900	20,600	51,500	16,900	32,700	10,300	59,200	26,700	8,640	7,580	2,860	46,300
15	8,540	21,700	47,200	17,300	b25,100	12,900	68,100	25,600	9,570	8,560	3,710	29,600
16	9,410	24,700	*41,000	17,300	22,100	11,500	80,000	25,100	17,100	6,080	6,670	22,200
17	7,800	25,700	37,600	17,100	22,100	13,500	84,000	24,800	18,200	2,560	7,480	16,600
18	3,980	25,200	33,400	13,500	22,600	13,800	75,600	34,200	17,800	3,740	6,140	6,500
19	4,830	24,200	29,700	14,400	25,000	13,800	77,000	31,700	14,900	5,750	6,450	7,490
20	7,110	22,300	28,300	15,600	25,400	13,300	77,000	23,300	10,900	7,040	4,550	15,200
21	7,820	21,500	23,900	16,000	22,700	9,740	70,500	21,400	12,200	7,030	2,580	31,300
22	7,190	20,700	b19,900	15,900	20,500	12,200	66,900	19,100	11,700	7,030	3,910	20,800
23	8,080	15,000	b15,200	15,200	18,700	12,700	62,400	14,900	11,000	4,670	5,450	15,400
24	16,600	15,100	b13,700	13,700	15,900	11,500	55,800	15,700	9,180	2,480	5,680	13,300
25	57,800	26,500	b12,900	b12,600	15,800	12,500	52,400	23,800	8,890	3,490	5,310	7,520
26	74,700	47,000	b13,000	b13,500	16,700	b10,500	54,300	35,800	13,500	4,950	4,820	8,230
27	68,200	48,100	14,400	13,200	17,500	b7,500	57,100	29,100	13,400	6,310	3,190	9,850
28	54,100	47,400	14,700	13,700	16,800	9,580	53,800	22,500	10,700	7,080	1,690	9,290
29	42,200	70,900	16,500	14,100	14,500	12,700	47,900	19,200	12,400	5,410	3,220	8,200
30	29,900	89,000	16,000	14,500	--------	*16,700	40,100	15,300	*11,900	6,200	5,380	8,480
31	24,800	--------	17,500	13,700	--------	31,700	--------	12,800	--------	15,300	5,440	--------
Total	579,280	905,000	999,200	579,600	554,000	412,920	‡2,281.6	752,600	421,150	193,870	185,100	364,220
Mean	18,690	30,170	32,230	18,700	19,100	13,320	76,050	24,280	14,040	6,351	5,971	12,140
(†)	+1,346	+1,857	-969	-1,755	-1,361	-1,301	+6,522	+739	+43.2	-141	-880	+393

Adjusted for change in reservoir contents and diversion

Mean	20,030	32,020	31,260	16,940	17,740	12,020	82,580	25,020	14,080	6,209	5,091	12,530
Cfsm	2.07	3.31	3.24	1.75	1.84	1.24	8.55	2.59	1.46	0.643	0.527	1.30
In.	2.39	3.70	3.73	2.02	1.98	1.43	9.54	2.99	1.63	0.74	0.61	1.45

	Observed			Adjusted			
Calendar year 1959:	Max 98,000	Min 1,360	Mean 17,320	Mean 17,860	Cfsm 1.85	In. 25.10
Water year 1959-60:	Max 154,000	Min 1,180	Mean 22,490	Mean 22,850	Cfsm 2.37	In. 32.21

* Discharge measurement made on this day.
† Change in contents in all reservoirs from First Connecticut and Second Connecticut Lakes to Borden Brook and Cobble Mountain Reservoirs, listed on page 247, and diversion from Chicopee River basin, equivalent in cubic feet per second.
‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of weather records and weekly regulation pattern.
b Stage-discharge relation affected by ice.

1845. Scantic River at Broad Brook, Conn.

Location.--Lat 41°54'42", long 72°33'48", on left bank 300 ft upstream from bridge on State Highway 140, half a mile downstream from Broad Brook, 1 mile southwest of town of Broad Brook, Hartford County, and 8¼ miles upstream from mouth.

Drainage area.--98.4 sq mi.

Records available.--August 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 26.23 ft above mean sea level, datum of 1929.

Average discharge.--32 years, 145 cfs.

Extremes.--Maximum discharge during year, 1,540 cfs Apr. 1 (gage height, 9.07 ft); minimum, 29 cfs Aug. 10; minimum gage height, 0.83 ft Oct. 6; minimum daily discharge, 39 cfs Sept. 11.
1928-60: Maximum discharge, 13,300 cfs Aug. 19, 1955 (gage height, 19.9 ft, from floodmarks), from rating curve extended above 1,200 cfs on basis of computation of flow over dams, 7 and 9 miles above station, at gage heights 13.9 and 14.4 ft, adjusted for flow from intervening area on basis of computation of flow over dam on Broad Brook and by slope-area measurement of peak flow; minimum, 10 cfs Aug. 13, 14, 1944; minimum daily, 16 cfs Aug. 13, 1944.

Remarks.--Records good. Flow regulated by mills and small reservoirs upstream. Records of suspended sediment loads and water temperatures for the water year 1960 are given in WSP 1741.

Revisions (water years).--WSP 726: 1931. WSP 781: Drainage area. WSP 851: 1936(M). WSP 921: 1940. WSP 1201: 1929(M), 1934(M), 1938-39, 1948-49.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	178	*354	224	155	262	1,310	196	144	*87	*215	64
2	65	191	288	191	*148	217	837	239	168	110	140	53
3	66	184	256	661	140	204	547	*226	180	106	86	50
4	62	*160	236	1,220	140	165	583	200	612	95	*75	47
5	*56	139	224	746	142	198	864	174	708	86	73	50
6	56	138	210	451	250	204	1,160	161	560	73	77	52
7	75	321	329	334	399	*204	*765	152	339	69	62	51
8	121	386	399	288	373	204	581	147	212	*64	55	47
9	195	386	386	250	295	184	524	164	160	60	42	46
10	206	295	295	191	276	178	488	194	142	59	126	43
11	175	230	243	178	546	162	427	200	130	57	200	39
12	130	191	295	190	741	158	388	187	124	54	168	288
13	105	172	627	195	633	172	368	194	126	52	114	*648
14	102	161	797	191	399	172	342	194	118	162	96	524
15	108	256	556	184	308	165	316	180	119	245	96	300
16	96	262	399	198	282	165	302	162	137	212	97	135
17	86	250	334	184	262	178	295	145	130	134	92	98
18	86	236	295	178	256	198	295	168	116	90	82	90
19	82	217	288	178	771	224	309	220	106	78	74	98
20	75	*191	262	172	723	236	302	200	98	82	67	291
21	72	172	230	164	577	250	274	157	90	90	67	282
22	70	158	217	157	373	230	253	134	83	78	66	240
23	71	151	184	152	314	204	239	135	81	70	60	157
24	316	172	184	143	276	191	292	138	80	67	*56	113
25	706	438	184	125	250	204	288	143	84	63	56	100
26	758	503	178	130	412	178	267	130	82	59	51	92
27	408	503	176	130	451	172	239	117	75	62	50	85
28	262	438	217	164	425	204	226	106	69	106	44	85
29	204	451	314	204	321	243	213	99	67	88	*43	84
30	165	451	340	204	-------	288	194	96	94	178	82	85
31	147	-------	288	172	-------	642	-------	*105	---- ---	275	90	-------
Total	5,190	7,981	9,587	8,149	10,638	6,656	13,488	5,063	5,234	3,111	2,702	4,337
Mean	167	266	309	263	367	215	450	163	174	100	87.2	145
Cfsm	1.70	2.70	3.14	2.67	3.73	2.18	4.57	1.66	1.77	1.02	0.886	1.47
In.	1.96	3.02	3.62	3.08	4.03	2.52	5.10	1.91	1.98	1.18	1.02	1.64

Calendar year 1959: Max 977 Min 44 Mean 183 Cfsm 1.86 In. 25.26
Water year 1959-60: Max 1,310 Min 39 Mean 224 Cfsm 2.28 In. 31.06

Peak discharge (base, 550 cfs).--Oct. 26 (4 to 5 a.m.) 908 cfs (6.97 ft); Nov. 27 (1 to 3 a.m.) 556 cfs (4.98 ft); Dec. 14 (11 a.m. to 1 p.m.) 860 cfs (6.76 ft); Jan. 4 (1 to 2:30 p.m.) 1,250 cfs (8.22 ft); Feb. 12 (9 to 10 p.m.) 817 cfs (6.61 ft); Feb. 19 (11:30 a.m. to 1 p.m.) 908 cfs (7.00 ft); Apr. 1 (11 a.m. to 12 m.) 1,540 cfs (9.07 ft); Apr. 6 (11 a.m. to 1 p.m.) 1,220 cfs (8.08 ft); June 4 (9:30 p.m.) 1,340 cfs (8.46 ft); Sept. 13 (1 a.m.) 838 cfs (6.70 ft).

* Discharge measurement made on this day.

1855. West Branch Farmington River near New Boston, Mass.

Location.--Lat 42°04'45", long 73°04'24", on left bank 5 ft downstream from highway bridge, 0.3 mile downstream from Clam River, and 1 mile south of New Boston, Berkshire County.
Drainage area.--92.0 sq mi.
Records available.--May 1913 to September 1960. Prior to October 1948, published as Farmington River near New Boston.
Gage.--Water-stage recorder. Datum of gage is 758.21 ft above mean sea level, datum of 1929.
Average discharge.--47 years, 184 cfs (adjusted for storage).
Extremes.--Maximum discharge during year, 3,340 cfs Apr. 5 (gage height, 7.42 ft); minimum daily, 9.8 cfs Sept. 10.
1913-60: Maximum discharge, 34,300 cfs Aug. 19, 1955 (gage height, 14.06 ft), from rating curve extended above 9,600 cfs on basis of slope-area measurement of peak flow; minimum daily, 3.4 cfs Aug. 20, 21, 1957.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Otis Reservoir (see p. 248).
Revisions (water years).--WSP 641: 1924(M). WSP 756: Drainage area. WSP 781: 1928(M). WSP 1331: 1914.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4

2.4	24
2.5	32

Note.--Same as following table above 2.5 ft.

Apr. 5 to Sept. 30

2.1	8.3	3.1	112	5.0	840		
2.3	19	3.5	203	6.0	1,600		
2.5	32	4.0	360	7.0	2,640		
2.8	64	4.5	570	7.5	3,480		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*25	439	415	210	78	105	1,280	271	133	71	92	26
2	46	381	360	190	74	105	1,050	297	131	64	55	24
3	29	*314	332	1,100	78	100	852	259	133	53	39	22
4	75	268	311	872	76	125	1,970	227	240	139	36	a20
5	70	250	294	545	74	125	2,860	203	230	75	42	a21
6	75	271	287	407	95	105	1,460	171	178	57	43	a17
7	120	586	828	350	135	97	930	122	118	32	32	a14
8	147	488	655	280	120	92	822	116	71	27	33	*a12
9	192	374	451	190	104	92	705	146	58	27	31	11
10	146	325	370	190	100	88	605	166	50	26	740	9.8
11	137	287	332	180	800	86	585	148	43	23	495	27
12	108	262	492	*150	785	85	700	193	40	23	250	1,000
13	96	253	1,010	140	400	85	810	186	42	*19	173	972
14	98	284	615	130	300	83	792	162	36	103	133	451
15	87	427	*439	125	230	81	840	144	403	145	129	244
16	34	356	384	120	*200	80	792	131	392	37	188	172
17	35	339	350	150	180	81	650	112	227	25	116	94
18	101	322	322	170	160	82	640	166	203	21	58	81
19	116	281	300	165	175	84	570	196	136	19	47	78
20	91	262	265	165	165	84	381	148	88	21	77	864
21	83	244	240	160	150	83	300	140	68	22	43	580
22	73	236	230	155	135	81	278	142	52	19	38	356
23	31	230	220	150	130	80	250	151	42	19	62	257
24	788	282	210	150	125	77	495	171	58	28	47	131
25	802	798	230	140	120	74	411	160	84	19	37	103
26	475	585	210	145	130	64	*314	186	55	16	33	88
27	350	419	200	145	130	80	370	137	42	15	31	77
28	281	880	270	140	120	100	388	105	34	30	30	68
29	223	810	275	140	110	*155	297	88	29	21	28	63
30	101	530	240	105	-------	265	259	75	48	220	26	164
31	201	-------	220	84	-------	1,230	-------	107	-------	263	26	-------
Total	5,236	11,783	11,357	7,343	5,480	4,154	22,656	5,026	3,464	1,679	3,210	6,046.8
Mean	169	393	366	237	189	134	755	162	115	54.2	104	202
(†)	-19.8	-63.5	-47.2	-16.1	+23.1	+41.6	+81.0	+14.3	0	-4.3	+1.4	-2.9

Adjusted for change in contents in Otis Reservoir

Mean	149	329	319	221	212	176	836	176	115	49.9	105	199
Cfsm	1.62	3.58	3.47	2.40	2.30	1.91	9.09	1.91	1.25	0.542	1.14	2.16
In.	1.87	3.99	4.00	2.77	2.49	2.20	10.14	2.21	1.40	0.62	1.31	2.41

	Observed			Adjusted		
Calendar year 1959:	Max 1,300	Min 6.0	Mean 172	Mean 170	Cfsm 1.85	In. 25.03
Water year 1959-60:	Max 2,860	Min 9.8	Mean 239	Mean 239	Cfsm 2.60	In. 35.41

Peak discharge (base, 1,400 cfs).--Oct. 24 (2:30 p.m.) 1,650 cfs (6.06 ft); Jan. 3 (1 p.m.) 2,050 cfs (6.48 ft); Feb. 11 (2:30 p.m.) 1,510 cfs (5.90 ft); Mar. 31 (11 a.m.) 1,570 cfs (5.97 ft); Apr. 5 (5 a.m.) 3,340 cfs (7.42 ft); Aug. 10 (1:30 p.m.) 1,760 cfs (6.18 ft); Sept. 12 (6 p.m.) 2,510 cfs (6.90 ft); Sept. 20 (8 a.m.) 1,460 cfs (5.84 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Otis Reservoir.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for West Branch Westfield River at Huntington.
Note.--Stage-discharge relation affected by ice Dec. 21 to Jan. 3, Jan. 8 to Feb. 11, Feb. 13 to Mar. 27.

1860. West Branch Farmington River above Still River, at Riverton, Conn.

Location.--Lat 41°57'46", long 73°01'05", on right bank at downstream side of bridge on State Highway 20 at Riverton, Litchfield County, 0.3 mile upstream from Still River, 2.0 miles downstream from Hogback Dam, and at mile 52.0.

Drainage area.--130 sq mi.

Records available.--August 1955 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 485.60 ft above mean sea level, datum of 1929. Prior to Mar. 29, 1957, wire-weight gage at same site and datum.

Average discharge.--5 years, 258 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 3,110 cfs Apr. 5 (gage height, 8.22 ft); minimum, 0.9 cfs July 21 (gage height, 2.58 ft).

1955-60: Maximum discharge observed, 10,600 cfs Oct. 16, 1955 (gage height, 12.47 ft); minimum discharge, that of July 21, 1960; minimum gage height, 2.43 ft Sept. 16, 1957.

Flood of Aug. 18, 1955, reached a stage of 21.1 ft, from floodmarks (discharge, 57,200 cfs, by slope-area measurement 1.5 miles upstream).

Revisions.--Figures of minimum discharge for the water years 1958 and 1959 have been revised to 8.0 cfs Aug. 6, 1958 (gage height, 2.70 ft) and 4.2 cfs July 6, 1959 (gage height, 2.66 ft), superseding those published in WSP 1551 and 1621, respectively.

Remarks.--Records excellent except those for periods of ice effect, no gage-height record, or once-daily gage readings, which are good. Flow regulated by Otis Reservoir (see p. 248), and affected by Hogback Reservoir, constructed by the Water Bureau of Hartford Metropolitan District Commission during 1959 and 1960 (see p. 248).

Revisions (water years).--WSP 1501: 1956. WSP 1551: 1957. Revised figures of discharge, in cubic feet per second, for the water year 1958, superseding those published in WSP 1551, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1958		1958-Con.		1958-Con.		1958-Con.	
July 1	27	July 17	46	July 24	48	Aug. 8	18
2	24	18	43	25	48	9	17
3	22	19	33	Aug. 3	38	10	17
4	22	20	36	4	33	11	18
5	26	21	33	5	27	12	18
6	30	22	30	6	20	13	16
16	44	23	36	7	18	14	17

Month	Observed				Adjusted†		
	Cfs-days	Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches
July 1958	1,575	109	22	50.8	50.8	0.391	0.45
August	1,436	141	16	46.3	46.3	.356	.41
Water year 1957-58	-	2,160	13	248	256	1.97	26.70
Calendar year 1958	-	2,160	15	264	268	2.06	27.93

† Adjusted for change in contents in Otis Reservoir.

1860. West Branch Farmington River above Still River, at Riverton, Conn.--Continued

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	1.4	4.0	252
2.7	8.0	4.5	410
2.8	21	5.0	620
3.0	53	6.0	1,180
3.3	105	7.1	2,020
3.5	143		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	598	548	275	130	160	678	318	163	120	282	30
2	70	478	470	*270	*125	155	274	282	153	105	111	28
3	44	386	430	1,340	125	150	247	279	151	80	75	27
4	68	324	400	1,190	120	180	438	268	439	157	70	26
5	77	299	*364	720	120	180	1,180	257	474	112	111	26
6	75	300	358	552	150	160	1,990	244	*474	82	111	24
7	134	766	1,160	442	225	150	1,220	222	458	60	75	22
8	242	709	914	375	190	140	1,060	209	516	46	65	21
9	326	498	598	271	170	*132	970	190	552	43	62	20
10	220	406	478	252	150	130	798	222	548	43	440	17
11	183	358	422	250	1,310	128	745	198	539	48	825	21
12	151	324	635	225	1,240	126	*869	225	534	*44	659	497
13	124	299	1,440	220	670	126	1,030	*230	530	36	303	115
14	124	331	828	183	482	126	970	204	565	125	183	32
15	124	529	575	183	368	124	1,030	145	620	156	*149	*16
16	70	442	510	177	184	126	1,000	156	620	86	236	8.0
17	56	403	458	175	33	107	940	139	606	56	174	3.6
18	97	410	418	211	50	110	892	198	638	71	121	3.6
19	135	347	392	216	238	118	745	266	745	36	84	4.9
20	114	308	324	216	327	120	606	194	693	55	87	89
21	98	291	320	204	288	114	403	163	687	23	78	41
22	96	279	300	200	316	109	382	165	641	43	65	24
23	64	266	290	195	324	118	442	183	610	36	68	16
24	1,130	324	285	195	272	105	498	213	612	53	60	11
25	1,260	1,210	305	190	204	96	588	222	620	48	147	8.0
26	684	815	275	190	246	101	552	252	474	38	48	4.9
27	462	557	260	190	202	114	518	189	453	60	43	4.2
28	354	1,170	355	185	183	124	450	141	444	132	38	3.6
29	294	1,120	360	185	165	170	406	218	250	63	34	3.1
30	171	720	305	175	-------	294	382	198	126	271	32	5.8
31	200	-------	285	135	-------	883	-------	126	-------	522	30	-------
Total	7,293	15,267	15,062	9,787	8,607	4,976	22,303	6,516	14,935	2,850	4,866	1,152.7
Mean	235	509	486	316	297	161	743	210	498	91.9	157	38.4
(†)	-19.8	-63.5	-47.2	-16.1	+23.1	+41.6	+416.2	+14.3	-335.2	-4.3	+1.4	+203.4
Adjusted for change in contents in Otis and Hogback Reservoirs												
Mean	215	446	439	300	320	203	1,159	224	163	87.6	158	242
Cfsm	1.65	3.43	3.38	2.31	2.46	1.56	8.92	1.72	1.25	0.674	1.22	1.86
In.	1.90	3.83	3.90	2.66	2.65	1.80	9.95	1.98	1.40	0.78	1.41	2.08

	Observed			Adjusted		
Calendar year 1959:	Max 1,930	Min 14	Mean 244	Mean 242	Cfsm 1.86	In. 25.20
Water year 1959-60:	Max 1,990	Min 3.1	Mean 310	Mean 327	Cfsm 2.52	In. 34.34

Peak discharge (base, 1,800 cfs).--Oct. 24 (7 p.m.) 2,380 cfs (7.53 ft); Jan. 3 (4 p.m.) 2,480 cfs (7.55 ft); Feb. 11 (6 p.m.) 2,290 cfs (7.42 ft); Apr. 5 (10 p.m.) 3,110 cfs (8.22 ft).

* Discharge measurement made on this day.

† Change in contents, equivalent in cubic feet per second, in Otis and Hogback Reservoirs; records furnished by The Collins Co. and Hartford Metropolitan District Commission.

Note.--Stage-discharge relation affected by ice Jan. 22 to Feb. 10, Mar. 7-12. No gage-height record Dec. 21 to Jan. 2, Feb. 29 to Mar. 6; discharge estimated on basis of weather records and records for station at New Boston, Mass. Discharge for periods Apr. 16 to May 8, Aug. 19-23, computed from once-daily wire-weight-gage readings.

1861. Mad River at Winsted, Conn.

Location.--Lat 41°55'51", long 73°04'56", on left bank at Winsted, Litchfield County, by U. S. Highway 44, 0.2 mile upstream from Indian Meadow Brook, 0.2 mile downstream from Winsted city line, and 1.8 mile upstream from mouth.

Drainage area.--18.4 sq mi.

Records available.--October 1956 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 764.18 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 760 cfs Apr. 5 (gage height, 4.72 ft); maximum gage height, 4.81 ft Jan. 3 (ice jam); minimum discharge, 1.9 cfs Sept. 10, 11 (gage height, 0.59 ft).
1959-60: Maximum discharge, 1,420 cfs Mar. 6, 1959 (gage height, 6.25 ft); minimum, 0.3 cfs July 24-28, Sept. 15, 16, Oct. 6, 1957 (gage height, 0.46 ft).
Flood of Aug. 19, 1955, reached a stage of 11.8 ft, from floodmarks (discharge, 10,200 cfs, by slope-area measurement half a mile upstream).

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by storage and diversion for municipal water supply of city of Winsted.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
0.8	4.6	2.0	76	0.6	2.0	2.0	76
1.0	8.3	2.5	141	.7	3.2	2.5	141
1.2	14	3.0	230	.8	4.8	3.0	230
1.5	31			1.0	11	3.5	345
				1.2	19	4.0	510
				1.5	32	4.5	685

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	78	63	a25	8.3	b22	360	40	26	17	39	5.9
2	24	*53	55	a25	*b7.6	b20	270	47	22	15	23	3.1
3	9.9	40	48	b230	b7.0	b19	208	33	19	15	17	2.7
4	6.7	33	44	*172	7.6	b19	548	27	156	21	14	2.5
5	5.2	30	*40	92	b6.7	b24	*677	25	140	13	46	3.1
6	5.5	30	39	75	b13	b23	280	23	*89	8.3	45	2.7
7	30	94	191	59	b22	*b21	152	21	50	6.2	25	2.5
8	51	90	115	44	b13	b19	128	21	34	4.3	20	2.4
9	93	58	73	b35	11	*b17	120	41	26	3.5	16	2.2
10	51	44	57	b30	11	b17	100	41	22	3.0	104	2.0
11	26	37	48	b29	b236	b17	*88	34	19	3.2	88	2.5
12	21	28	110	b28	208	b17	94	30	17	3.2	43	232
13	13	12	232	b27	108	17	95	*32	20	3.0	28	216
14	16	21	108	b26	83	17	84	28	16	37	25	84
15	14	36	74	b26	b67	17	77	26	91	*40	*23	43
16	11	22	63	b25	b42	b16	72	22	104	19	65	26
17	9.6	22	55	b23	b36	17	63	19	49	8.6	36	20
18	9.6	23	50	b22	36	17	62	33	43	4.0	24	17
19	8.8	14	46	b22	40	20	60	36	30	3.6	19	23
20	7.7	12	b37	b21	37	b18	45	25	24	16	24	196
21	7.3	9.6	b32	b21	b32	18	40	20	20	11	20	110
22	6.9	9.4	b29	b20	*30	b16	40	17	17	4.3	15	*61
23	8.3	8.8	b26	b20	b27	b16	36	26	16	3.2	22	39
24	212	26	b24	b19	b25	b15	69	48	27	9.4	17	30
25	192	153	b25	b21	b23	b15	55	60	38	*5.6	12	25
26	89	80	b26	b20	30	b13	40	85	24	3.0	15	21
27	58	41	b29	b18	b32	b15	38	44	18	23	9.6	18
28	42	142	33	b19	b26	28	35	30	14	71	7.9	17
29	33	142	*36	b18	b24	46	30	24	18	26	6.2	16
30	27	83	30	b9.3	------	68	27	21	38	130	6.2	25
31	39	------	27	b8.6	------	*382	------	25	------	110	6.2	------
Total	1,137.5	1,471.8	1,865	1,229.9	1,249.2	1,006	3,993	1,004	1,227	640.4	861.1	1,250.6
Mean	36.7	49.1	60.2	39.7	43.1	32.5	133	32.4	40.9	20.7	27.8	41.7
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1959: Max 480 Min 2.0 Mean 37.1 Cfsm - In. -
Water year 1959-60: Max 677 Min 2.0 Mean 46.3 Cfsm - In. -

Peak discharge (base, 400 cfs).--Jan. 3 (4 p.m.) 430 cfs (3.80 ft); Mar. 31 (4 p.m.) 492 cfs (3.95 ft); Apr. 5 (5:30 a.m.) 760 cfs (4.72 ft); Sept. 12 (5 p.m.) 562 cfs (4.13 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

1865. Still River at Robertsville, Conn.

Location.--Lat 41°58'04", long 73°02'04", on left bank 1,500 ft downstream from Sandy Brook, 1 mile southeast of Robertsville, Litchfield County, 1 mile northwest of Riverton, and 1 mile upstream from mouth.

Drainage area.--84.4 sq mi.

Records available.--July 1948 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 510.24 ft above mean sea level, datum of 1929.

Average discharge.--12 years, 187 cfs.

Extremes.--Maximum discharge during year, 3,410 cfs Apr. 5 (gage height, 7.10 ft); minimum, 11 cfs Sept. 9 (gage height, 1.40 ft); minimum daily, 14 cfs Sept. 3.
1948-60: Maximum discharge, 44,000 cfs Aug. 19, 1955 (gage height, 16.48 ft, from floodmark), from rating curve extended above 5,600 cfs on basis of slope-area measurement of peak flow; minimum, 0.2 cfs Sept. 14, 1957; minimum daily, 0.3 cfs Sept. 14, 1957; minimum gage height, 0.29 ft Aug. 8, 1955.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Ordinary flow regulated by powerplant upstream.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	11	3.0	252
1.6	22	4.0	620
1.8	36	5.0	1,200
2.1	66	6.0	2,080
2.5	132	6.9	3,140

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	273	288	b115	81	b125	*1,670	173	120	100	303	48
2	62	215	244	b120	*85	b115	1,150	241	117	36	187	39
3	35	160	216	b880	84	b110	861	188	96	54	109	14
4	31	153	198	775	82	b120	2,200	154	431	98	100	20
5	62	164	*174	441	79	138	3,110	140	458	65	184	22
6	46	154	146	305	112	132	1,520	119	354	49	187	50
7	96	379	751	253	150	b120	a800	108	230	40	94	39
8	203	352	540	214	145	113	a640	90	*157	36	126	39
9	324	277	356	165	130	b110	a580	259	117	20	92	19
10	224	219	275	b120	118	b105	a500	190	101	24	532	*23
11	137	176	224	b150	1,190	99	a430	172	62	58	478	22
12	140	172	419	b150	1,010	b105	420	159	62	41	263	874
13	85	130	888	b150	500	88	420	163	103	52	174	916
14	91	132	496	b140	329	96	374	138	77	144	107	418
15	78	216	339	b140	276	93	350	*113	292	*254	133	238
16	61	196	282	b120	238	95	315	135	385	112	180	159
17	39	167	252	119	206	94	285	121	221	60	159	103
18	42	173	224	159	196	87	302	169	191	81	120	76
19	60	139	198	128	222	101	305	193	140	55	96	109
20	48	111	159	135	203	91	244	130	125	85	107	747
21	49	101	155	151	170	111	214	106	96	71	68	486
22	48	83	144	114	184	107	198	78	81	53	83	292
23	48	105	b135	b95	163	101	174	126	69	27	*85	211
24	756	144	b110	b85	b143	96	303	173	88	62	94	146
25	652	693	b115	b105	139	79	295	226	124	79	55	113
26	363	422	b120	b100	167	71	232	314	83	55	74	113
27	238	282	122	100	166	76	214	202	95	110	36	121
28	167	583	160	104	146	138	203	121	59	276	36	105
29	119	595	177	100	*143	236	170	96	62	153	61	87
30	105	389	164	95	-------	336	138	85	150	606	40	106
31	123	-------	131	77	-------	1,750	-------	120	-------	565	57	-------
Total	4,556	7,355	8,202	5,905	6,857	5,238	18,617	4,802	4,746	3,581	4,420	5,755
Mean	147	245	265	190	236	169	621	155	158	116	143	192
Cfsm	1.74	2.90	3.14	2.25	2.80	2.00	7.36	1.84	1.87	1.37	1.69	2.27
In.	2.01	3.24	3.62	2.59	3.02	2.31	8.21	2.12	2.09	1.58	1.95	2.53

Calendar year 1959: Max 1,370 Min 7.8 Mean 161 Cfsm 1.91 In. 25.85
Water year 1959-60: Max 3,110 Min 14 Mean 219 Cfsm 2.59 In. 35.27

Peak discharge (base, 1,300 cfs).--Oct. 24 (3 p.m.) 1,600 cfs (5.50 ft); Jan. 3 (2 p.m.) 1,830 cfs (5.75 ft); Feb. 11 (3 p.m.) 1,930 cfs (5.87 ft); Mar. 31 (1 p.m.) 2,190 cfs (6.09 ft); Apr. 5 (6 a.m.) 3,410 cfs (7.10 ft); Sept. 12 (6 p.m.) 2,240 cfs (6.16 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated.
b Stage-discharge relation affected by ice.

1880. Burlington Brook near Burlington, Conn.

Location.--Lat 41°47'10", long 72°57'55", on left bank 1¼ miles north of Burlington, Hartford County, 3 miles upstream from mouth, and 3 miles southwest of Collinsville.

Drainage area.--4.12 sq mi.

Records available.--September 1931 to September 1960.

Gage.--Water-stage recorder and sharp-edged square orifice and rectangular weir. Datum of gage is 714.00 ft above mean sea level, datum of 1929.

Average discharge.--29 years, 8.26 cfs.

Extremes.--Maximum discharge during year, 303 cfs Sept. 12 (gage height, 4.81 ft); minimum, 1.06 cfs Sept. 8, 10 (gage height, 0.48 ft); minimum daily, 1.13 cfs Sept. 9, 10. 1931-60: Maximum discharge, 1,690 cfs Aug. 19, 1955 (gage height, 9.22 ft), from rating curve extended above 100 cfs on basis of one current-meter measurement and form of theoretical rating; minimum, 0.13 cfs (regulated) June 21, 1933; minimum daily, 0.46 cfs July 18, 1957.

Remarks.--Records excellent except those for periods of ice effect or backwater from debris and those for period of no gage-height record, which are good. Occasional regulation at low flow.

Revisions (water years).--WSP 1171: Drainage area. WSP 1301: 1933-45(M).

Rating table, water year 1959-60, except periods of ice effect or backwater from debris (gage height, in feet, and discharge, in cubic feet per second)

0.5	1.13	1.7	29.0
.7	1.85	2.1	53
1.0	3.11	2.8	106
1.1	4.55	3.3	150
1.3	10.3		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.45	13.0	10.3	7.13	5.77	b6.03	79	13.6	7.71	2.89	4.55	3.01
2	2.76	8.0	9.27	7.13	5.52	b6.03	48.4	12.2	5.52	5.26	3.11	1.77
3	1.97	6.85	8.95	76	5.26	b6.03	34.0	8.95	5.52	3.57	2.76	1.52
4	1.70	6.30	8.63	32.3	5.02	b6.03	*76	8.00	90	5.52	2.67	1.58
5	1.70	5.77	8.00	16.9	5.02	b6.03	78	7.13	40.2	3.11	3.94	1.66
6	1.81	6.24	8.00	12.6	18.2	6.03	37.3	6.85	*14.6	2.67	3.57	1.37
7	4.57	23.9	51	11.5	16.9	*6.03	23.7	6.57	9.27	2.42	2.58	1.37
8	5.26	16.4	20.3	10.7	10.3	6.03	27.7	6.57	7.71	2.13	2.52	1.23
9	25.5	9.60	12.6	9.27	8.63	b5.52	26.4	14.8	6.30	2.08	2.67	1.13
10	7.71	8.00	*10.3	b8.6	8.00	5.52	18.7	11.1	5.77	1.85	8.20	1.13
11	5.52	7.13	8.95	b8.0	72	b5.02	15.6	8.95	5.26	1.97	6.57	2.36
12	7.13	6.57	27.2	b7.1	36.1	5.52	16.0	9.60	5.77	1.89	3.93	83
13	4.13	6.03	52	8.00	b15.6	5.02	13.4	10.7	6.30	1.70	3.11	32.3
14	5.52	7.13	18.7	7.41	b11.1	5.02	12.2	*8.32	5.26	10.0	2.80	12.2
15	5.02	11.1	12.6	7.13	b9.93	5.02	12.2	7.41	8.95	6.03	2.76	c6.03
16	3.57	7.41	12.2	7.41	8.63	5.02	12.2	6.57	8.00	3.11	4.55	c4.13
17	3.11	10.2	10.7	6.85	8.63	5.52	10.7	5.77	6.30	2.42	2.67	3.42
18	2.97	8.95	10.3	6.57	9.27	5.77	11.9	*9.27	6.82	2.13	2.09	3.20
19	c2.67	7.13	11.5	7.13	*b14.2	6.30	11.5	9.27	5.26	2.05	*2.37	12.3
20	c2.54	6.03	8.63	6.30	12.6	6.30	9.93	6.57	4.13	2.01	3.57	65
21	2.42	5.77	7.41	6.30	9.60	6.30	9.60	5.77	3.57	1.82	2.54	17.8
22	2.37	5.77	8.00	6.03	7.71	6.03	8.63	5.26	3.42	1.97	2.05	9.60
23	3.25	5.52	b7.71	5.77	8.32	5.52	8.63	8.32	3.29	*1.70	2.01	7.41
24	95	11.5	b8.63	b5.52	8.00	5.52	11.9	9.60	4.33	1.54	1.70	6.03
25	36.4	49.7	8.00	b5.26	7.13	6.03	9.60	8.32	4.13	1.40	1.47	5.26
26	16.4	18.0	7.13	5.26	16.4	b4.55	8.63	10.3	3.11	1.29	1.49	*4.55
27	12.2	11.5	7.41	5.26	14.2	5.77	8.63	6.57	2.80	2.89	1.54	4.13
28	10.3	26.8	8.95	6.57	9.27	10.4	8.32	5.52	2.46	3.11	1.66	3.93
29	8.5	22.6	11.5	8.00	8.32	17.4	7.71	4.55	2.54	2.05	1.40	4.13
30	7.5	12.6	8.95	7.41	-------	31.4	7.13	4.13	3.07	36.6	1.33	6.57
31	7.0	-------	8.00	6.30	-------	150	-------	8.00	-------	15.8	2.05	-------
Total	299.95	351.50	411.82	331.71	377.63	362.71	663.61	254.54	287.37	134.98	90.23	309.12
Mean	9.68	11.7	13.3	10.7	13.0	11.7	22.1	8.21	9.58	4.35	2.91	10.3
Cfsm	2.35	2.84	3.23	2.60	3.16	2.84	5.36	1.99	2.33	1.06	0.706	2.50
In.	2.71	3.17	3.72	3.00	3.41	3.27	5.98	2.29	2.60	1.22	0.81	2.79

Calendar year 1959: Max 101 Min 0.81 Mean 8.22 Cfsm 2.00 In. 27.08
Water year 1959-60: Max 150 Min 1.13 Mean 10.6 Cfsm 2.57 In. 34.97

Peak discharge (base, 140 cfs).--Oct. 24 (2:30 p.m.) 218 cfs (4.00 ft); Jan. 3 (1 p.m.) 185 cfs (3.67 ft); Mar. 31 (10:30 a.m.) 235 cfs (4.17 ft); June 4 (6:30 p.m.) 243 cfs (4.25 ft); Sept. 12 (6:30 p.m.) 303 cfs (4.81 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
c Backwater from debris on control.
Note.--No gage-height record Oct. 29 to Nov. 2; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

1890. Pequabuck River at Forestville, Conn.

Location.--Lat 41°40'23", long 72°54'04", on left bank 700 ft upstream from station of New York, New Haven and Hartford Railroad at Forestville, Hartford County, a quarter of a mile downstream from Copper Mine Brook, and 6½ miles upstream from mouth.
Drainage area.--45.2 sq mi.
Records available.--July 1941 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 197.72 ft above mean sea level, datum of 1929 (levels by Connecticut State Water Commission).
Average discharge.--19 years, 88.4 cfs (adjusted for storage and diversion).
Extremes.--Maximum discharge during year, 2,260 cfs Sept. 12 (gage height, 5.53 ft); minimum, 14 cfs Sept. 4, 5, 11 (gage height, 0.90 ft).
1941-60: Maximum discharge, 11,700 cfs Aug. 19, 1955 (gage height, 13.22 ft, from high-water mark in gage house), from rating curve extended above 2,100 cfs on basis of slope-area measurements at gage heights 7.3 and 13.22 ft; minimum, 6.5 cfs Sept. 21, 22, 1941 (gage height, 0.64 ft).
Flood in September 1938 reached a stage of about 7.3 ft, from floodmarks (discharge, 3,800 cfs, on basis of slope-area measurement of peak flow and computation of peak flow over dam).
Remarks.--Records excellent. Flow regulated by Whigville Reservoir (see p. 248) and mills upstream. Diversion for municipal water supply of city of New Britain from Copper Mine Brook.
Revisions (water years).--WSP 971: 1941-42. WSP 1111: 1947.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Oct. 24				Oct. 25 to Sept. 30			
0.9	18	1.5	101	0.9	14	1.8	189
1.0	23	2.0	262	1.1	35	2.4	470
1.1	30	2.4	455	1.4	84	3.3	980
1.3	60						

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	117	117	90	73	112	*552	122	71	39	49	38
2	26	92	107	84	71	*105	292	112	*62	39	*35	25
3	23	78	103	694	65	94	230	*92	66	34	33	18
4	22	71	99	344	65	105	516	80	161	34	29	17
5	23	71	94	179	65	105	*698	74	164	27	41	17
6	92	79	94	143	258	97	402	73	92	24	33	18
7	66	208	447	124	167	94	265	71	73	23	27	*18
8	43	157	207	119	*117	90	362	74	60	23	28	20
9	161	115	140	105	115	84	245	126	55	23	27	19
10	50	94	117	94	107	78	189	105	46	22	52	18
11	59	84	105	92	567	74	170	92	39	25	39	28
12	55	78	239	*90	332	74	173	97	45	25	31	712
13	40	73	434	94	170	74	146	97	52	23	28	324
14	52	92	207	92	143	74	137	92	36	77	23	119
15	40	119	154	92	122	80	129	90	45	39	29	78
16	36	94	151	92	115	80	124	90	57	27	31	65
17	33	99	129	84	112	90	119	69	49	23	29	57
18	29	99	129	84	115	92	124	93	54	27	27	54
19	29	84	132	86	241	92	115	92	41	29	29	132
20	28	74	110	78	170	92	101	76	35	32	29	459
21	27	71	94	74	129	92	92	69	29	25	23	176
22	27	71	99	73	122	94	92	67	34	24	28	112
23	30	65	90	71	115	76	88	102	*35	24	25	90
24	446	127	*88	65	105	78	99	97	41	22	23	78
25	294	370	88	65	97	86	94	90	38	25	23	71
26	135	173	90	65	274	78	94	121	27	27	20	67
27	117	122	92	65	183	82	90	80	28	56	31	62
28	97	233	127	110	140	119	84	69	28	38	27	94
29	78	200	149	97	129	143	80	62	28	29	23	76
30	73	137	117	88	-------	220	74	60	28	322	80	78
31	90	-------	99	74	-------	932	-------	82	-------	122	46	-------
Total	2,356	3,547	4,448	3,707	4,484	3,786	5,976	2,716	1,619	1,329	998	3,140
Mean	76.0	118	143	120	155	122	199	87.6	54.0	42.9	32.2	105
(†)	+8.6	+7.5	+7.5	+7.3	+7.6	+7.6	+7.3	+7.2	+7.4	+8.5	+7.6	+8.1
Mean	84.6	126	150	127	163	130	206	94.8	61.4	51.4	39.8	113
Cfsm	1.87	2.79	3.32	2.81	3.61	2.88	4.56	2.10	1.36	1.14	0.881	2.50
In.	2.16	3.11	3.83	3.24	3.89	3.32	5.09	2.42	1.52	1.31	1.02	2.79

Adjusted for diversion and change in reservoir contents

	Observed			Adjusted		
Calendar year 1959:	Max 988	Min 21	Mean 82.4	Mean 90.1	Cfsm 1.99	In. 27.06
Water year 1959-60:	Max 932	Min 17	Mean 104	Mean 112	Cfsm 2.48	In. 33.70

Peak discharge (base, 660 cfs).--Oct. 6 (7:30 p.m.) 792 cfs (3.03 ft); Oct. 24 (11:30 a.m.) 980 cfs (3.52 ft); Jan. 3 (8 a.m.) 1,400 cfs (4.17 ft); Feb. 11 (10 a.m.) 855 cfs (3.06 ft); Mar. 31 (8 a.m.) 1,260 cfs (3.83 ft); Apr. 5 (3 p.m.) 855 cfs (3.05 ft); July 30 (11:30 a.m.) 1,000 cfs (3.37 ft); Aug. 30 (2 p.m.) 955 cfs (3.23 ft); Sept. 12 (3:30 p.m.) 2,260 cfs (5.53 ft); Sept. 20 (6 a.m.) 830 cfs (3.01 ft).

* Discharge measurement made on this day.
† Change in contents in Whigville Reservoir, diversion for municipal supply of city of New Britain from Whigville Reservoir, at Whites Bridge pumping plant, equivalent in cubic feet per second.

1895. Salmon Brook near Granby, Conn.

Location.--Lat 41°56'14", long 72°46'36", on right bank 50 ft upstream from New York, New Haven and Hartford Railroad bridge, 0.5 mile downstream from confluence of East Branch and West Branch, 1.2 miles southeast of Granby, Hartford County, and 1.9 miles upstream from mouth.

Drainage area.--66.8 sq mi.

Records available.--July 1946 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 147.54 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 131 cfs.

Extremes.--Maximum discharge during year, 3,180 cfs Sept. 12 (gage height, 8.90 ft); minimum, 22 cfs Oct. 1; minimum gage height, 2.34 ft Oct. 21-23.
1946-60: Maximum discharge, about 40,000 cfs Aug. 19, 1955, from a comparison of unit runoff of tributary and nearby streams; maximum gage height, 23.58 ft Aug. 19, 1955 (prior to destruction of railroad bridge); minimum discharge, about 5 cfs Aug. 18, 1957; minimum gage height, 1.42 ft Aug. 26, 1949.

Remarks.--Records fair. Occasional regulation at low flow.

Revisions.--WSP 1431: Drainage area.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	92	126	*b102	78	134	1,180	148	108	65	146	42
2	39	81	111	b95	77	b124	818	167	97	73	94	39
3	31	73	105	486	75	*110	580	142	90	61	73	41
4	30	68	99	431	74	115	1,090	129	547	66	65	41
5	29	64	93	282	74	120	*1,480	121	552	60	85	38
6	28	63	91	205	130	115	857	115	258	53	101	38
7	39	123	411	167	181	b110	535	111	175	49	72	37
8	52	131	266	148	139	b105	445	111	*131	43	65	35
9	93	96	181	b120	123	b108	418	127	142	41	62	35
10	71	84	139	b100	123	b102	368	137	101	41	187	36
11	58	76	118	b103	940	b105	318	121	94	44	233	35
12	54	72	207	b106	880	b105	305	120	91	44	142	808
13	47	70	509	b97	468	100	285	127	94	43	106	792
14	46	68	280	b100	342	100	255	118	87	226	96	272
15	46	83	215	100	b265	99	239	111	119	184	90	181
16	42	76	*169	99	217	99	223	*102	137	101	80	134
17	41	77	144	95	195	101	217	96	95	80	74	108
18	38	85	131	94	189	106	209	129	90	*70	70	99
19	36	77	129	94	*290	118	215	142	76	63	68	110
20	35	72	113	91	278	121	195	114	69	63	72	492
21	35	70	100	87	223	123	177	102	64	58	65	*286
22	34	68	b102	86	197	117	181	95	59	53	59	183
23	37	65	b99	84	177	108	171	101	56	51	58	142
24	398	75	b100	b80	161	107	203	111	59	49	54	118
25	314	334	b91	b77	153	110	203	111	70	48	53	106
26	175	213	88	b76	241	b101	171	148	56	46	52	*99
27	117	142	91	77	227	105	163	111	54	49	48	93
28	93	224	110	80	181	144	153	96	51	80	46	88
29	82	246	142	83	157	211	144	90	50	64	*43	87
30	76	153	120	84	------	275	132	86	76	409	41	91
31	73	------	108	b78	------	1,300	------	95	------	364	41	------
Total	2,313	3,221	4,788	4,007	6,855	4,898	11,930	3,634	3,748	2,741	2,541	4,706
Mean	74.6	107	154	129	236	158	398	117	125	88.4	82.0	157
Cfsm	1.12	1.60	2.31	1.93	3.53	2.37	5.96	1.75	1.87	1.32	1.23	2.35
In.	1.29	1.79	2.67	2.23	3.82	2.73	6.64	2.02	2.09	1.53	1.41	2.62

Calendar year 1959: Max 1,300 Min 14 Mean 110 Cfsm 1.65 In. 22.30
Water year 1959-60: Max 1,480 Min 24 Mean 151 Cfsm 2.26 In. 30.84

Peak discharge (base, 1,000 cfs).--Feb. 11 (8 p.m.) 1,910 cfs (7.84 ft); Mar. 31 (4:30 p.m.) 2,030 cfs (8.00 ft); Apr. 5 (5:30 p.m.) 1,730 cfs (7.60 ft); June 4 (8 p.m.) 1,480 cfs (7.15 ft); July 30 (6:30 p.m.) 1,020 cfs (6.26 ft); Sept. 15 (10 p.m.) 3,180 cfs (8.90 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1900. Farmington River at Rainbow, Conn.

Location.--Lat 41°54'41", long 72°41'16", on left bank at Rainbow, Hartford County, 300 ft from Stevens Paper Mill, 0.4 mile downstream from Farmington River Power Co. dam, 1.3 miles upstream from Poquonock, 6.4 miles downstream from Salmon Brook, and 8 miles upstream from mouth.

Drainage area.--591 sq mi.

Records available.--August 1928 to September 1960. Prior to 1940, published as "at Tariffville."

Gage.--Water-stage recorder. Datum of gage is 35.36 ft above mean sea level, datum of 1929. Prior to July 1, 1939, at site 5½ miles upstream at datum 94.85 ft higher.

Average discharge.--32 years, 1,089 cfs (adjusted to present site; adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 10,700 cfs Apr. 6 (gage height, 8.42 ft); minimum daily, 17 cfs July 24.

1928-60: Maximum discharge, 69,200 cfs Aug. 19, 1955 (gage height, 23.5 ft, from floodmarks), by computation of flow over dam 0.4 mile upstream; minimum daily, 5.1 cfs Mar. 5, 1944, Oct. 28, Nov. 11, 1945, Feb. 22, 1947.

Remarks.--Records good. Flow regulated by powerplant, by Otis, Barkhamsted, East Branch, Nepaug, and Whigville Reservoirs, having a combined capacity of about 6,720,000,000 cu ft (see p. 248), and by diversions for domestic water supply from Barkhamsted, Nepaug, and Whigville Reservoirs, and Whites Bridge pumping plant. Flow affected by Hogback Reservoir, constructed by Water Bureau of Hartford Metropolitan District Commission during 1959 and 1960 (see p. 248). Records of water temperatures for the water year 1960 are given in WSP 1741.

Revisions (water years).--WSP 851: 1936. WSP 1051: 1945(m). WSP 1301: 1937-43 (adjusted figure of monthly and yearly discharge and runoff). WSP 1431: Drainage area.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
1.5	200	5.0	4,090	0.9	12	2.0	490
2.0	490	7.8	9,280	1.0	25	3.0	1,400
3.0	1,400			1.2	71	5.0	4,090
				1.5	190	7.6	8,840

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	448	607	1,960	*805	596	1,010	5,860	996	594	865	1,960	500
2	538	1,590	1,580	1,040	811	733	5,860	1,400	886	774	1,430	444
3	372	1,060	976	1,310	670	*786	4,070	1,600	866	517	759	186
4	220	868	1,380	4,780	453	611	4,260	863	1,690	384	612	249
5	273	740	1,160	3,540	592	875	6,940	972	3,920	748	538	120
6	302	994	1,180	2,300	774	808	9,130	830	2,830	520	478	194
7	752	1,270	1,410	1,960	1,230	1,030	*8,860	662	1,960	480	443	323
8	750	1,560	3,620	1,460	1,320	910	6,700	811	*1,650	221	717	308
9	1,190	1,510	2,380	1,070	1,080	794	4,940	1,140	1,440	98	434	344
10	1,300	1,330	1,960	892	1,070	792	3,670	946	1,310	137	677	256
11	736	1,500	1,440	852	1,900	630	2,680	970	1,110	254	1,450	262
12	688	1,050	1,400	739	*5,600	652	2,600	959	1,050	251	1,960	1,360
13	516	998	3,130	1,070	4,580	539	3,020	794	1,000	330	1,730	4,070
14	676	764	3,670	992	2,270	556	2,700	1,010	808	196	1,100	3,060
15	620	898	2,780	968	1,960	806	2,600	978	1,070	900	1,040	1,840
16	426	1,210	2,060	880	1,690	861	2,510	*855	1,500	500	1,120	982
17	541	1,230	1,960	804	1,180	852	2,510	778	1,670	400	1,170	864
18	358	1,120	1,960	768	993	782	2,560	751	1,540	*486	590	161
19	331	960	1,460	798	1,280	684	1,960	859	1,140	588	755	686
20	572	948	1,460	907	1,740	580	2,020	1,140	1,110	718	588	1,480
21	295	717	1,170	867	1,750	856	1,870	985	1,120	433	268	*2,250
22	437	642	1,180	868	1,210	918	1,260	790	1,080	448	538	2,380
23	501	674	920	522	1,120	764	1,350	594	884	398	502	1,320
24	1,910	1,180	603	348	1,170	774	1,170	820	1,080	17	487	930
25	3,120	1,550	750	664	1,230	708	1,690	836	1,070	130	496	272
26	2,980	2,900	720	699	1,200	548	1,930	936	937	304	429	606
27	2,370	2,080	964	829	1,400	381	1,550	1,280	864	443	344	741
28	1,060	1,960	1,130	882	1,750	673	1,270	721	540	444	186	693
29	874	3,070	1,420	800	982	1,360	1,330	717	856	798	*282	624
30	728	2,700	1,320	627	---------	1,520	1,340	488	652	1,380	248	712
31	868	--------	1,060	686	--------	3,750	--------	820	--------	1,960	372	--------
Total	26,752	39,660	50,063	35,727	43,601	27,543	100,210	28,301	38,227	15,922	23,703	28,217
Mean	863	1,322	1,615	1,152	1,503	888	3,340	913	1,274	514	765	941
(†)	+15	+77	+146	+142	+291	+140	+623	+87	-290	+56	-20	+370

Adjusted for diversion and change in reservoir contents

Mean	878	1,399	1,761	1,294	1,794	1,028	3,963	1,000	984	570	745	1,311
Cfsm	1.49	2.37	2.98	2.19	3.04	1.74	6.71	1.69	1.66	0.964	1.26	2.22
In.	1.72	2.64	3.44	2.52	3.28	2.01	7.49	1.95	1.85	1.11	1.45	2.48

	Observed			Adjusted			
Calendar year 1959:	Max 7,080	Min 77	Mean 997	Mean 1,045	Cfsm 1.77	In. 24.02	
Water year 1959-60:	Max 9,130	Min 17	Mean 1,251	Mean 1,386	Cfsm 2.34	In. 31.94	

* Discharge measurement made on this day.

† Change in contents in Otis, Hogback, Barkhamsted, East Branch, Nepaug, and Whigville Reservoirs, and diversion from Barkhamsted, Nepaug, and Whigville Reservoirs and Whites Bridge pumping plant, equivalent in cubic feet per second; furnished by The Collins Co., Water Bureau of Hartford Metropolitan District Commission and board of Water Commissioners of New Britain.

1901. Piper Brook at Newington Junction, Conn.

Location.--Lat 41°42'43", long 72°44'15", on right bank just upstream from Willard Avenue Bridge at Newington Junction, 0.6 mile south of Hartford-Newington town line, 1¼ miles northwest of Newington, Hartford County, 0.6 mile upstream from Mill Brook, and 1.4 miles upstream from mouth.

Drainage area.--14.4 sq mi.

Records available.--May 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 58.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 935 cfs Sept. 12 (gage height, 8.40 ft); minimum, less than 0.1 cfs Oct. 5 (gage height, 1.11 ft).
1958-60: Maximum discharge, that of Sept. 12, 1960; minimum, that of Oct. 5, 1959.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Occasional regulation at low flow from unknown source upstream.

Revisions (water years).--WSP 1621: 1958.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31

1.14	0.1	2.0	46
1.2	2.6	3.0	108
1.3	8.4	4.0	200
1.4	14	5.1	331
1.6	26		

Apr. 1 to Sept. 30

1.2	2.0
1.5	18
2.0	4.6

Note.--Same as preceding table above 2.6 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	36	39	15	23	*36	60	32	13	17	13	9.5
2	5.5	30	36	14	*22	b34	42	20	*9.5	15	12	8.0
3	.3	28	36	218	20	b29	44	15	26	12	10	4.0
4	.1	*27	*35	52	22	b24	99	14	30	9.7	10	3.0
5	.3	25	33	40	22	30	160	13	10	7.0	17	3.0
6	78	29	31	*34	104	29	93	12	9.5	7.0	8.0	13
7	87	95	155	27	44	31	70	*9.5	8.5	8.5	5.5	7.0
8	19	44	40	24	33	30	69	9.5	8.5	7.0	9.6	8.0
9	111	36	24	17	36	b29	55	18	8.5	4.5	8.0	12
10	18	32	22	12	33	27	42	12	7.0	4.5	27	8.5
11	13	30	20	13	199	b26	38	12	4.5	5.5	*11	a7.0
12	29	30	73	14	61	24	36	13	30	6.0	9.0	a270
13	10	28	110	14	40	24	32	12	7.0	*7.0	5.5	a73
14	16	34	40	13	38	26	31	11	8.5	71	4.0	54
15	8.4	63	36	14	37	26	*28	10	15	13	7.5	53
16	6.7	33	33	12	36	27	26	10	9.0	6.5	*8.0	44
17	4.4	41	28	11	36	34	25	10	9.6	5.0	7.5	40
18	4.4	35	25	11	36	38	30	22	7.9	6.0	8.0	38
19	5.5	26	25	14	138	35	28	12	4.5	6.5	9.0	*80
20	11	16	16	12	46	34	23	10	5.5	11	6.5	139
21	11	14	15	11	37	36	15	8.5	6.0	6.0	4.0	*45
22	11	12	15	10	38	32	16	8.0	6.5	5.0	8.8	20
23	14	14	14	6.7	36	29	12	24	7.0	4.5	7.5	17
24	322	49	12	6.7	33	30	16	14	14	4.0	7.5	12
25	86	107	11	8.4	31	30	15	11	5.5	5.0	7.5	10
26	34	43	13	9.0	144	23	14	29	4.5	5.5	7.0	11
27	42	40	14	8.4	49	23	13	13	6.0	32	4.6	10
28	36	78	35	46	42	29	12	9.0	7.0	20	3.5	14
29	32	46	43	24	41	31	11	8.0	9.7	7.0	6.5	12
30	30	39	24	26	-------	36	9.5	7.0	9.0	169	30	14
31	36	-------	19	22	-------	161	-------	20	-------	30	12	-------
Total	1,110.6	1,160	1,072	759.2	1,477	1,053	1,164.5	428.5	307.2	517.7	295.0	1,039.0
Mean	35.8	38.7	34.6	24.5	50.9	34.0	38.8	13.8	10.2	16.7	9.52	34.6
Cfsm	2.49	2.69	2.40	1.70	3.53	2.36	2.69	0.958	0.708	1.16	0.661	2.40
In.	2.87	3.00	2.77	1.96	3.81	2.72	3.01	1.11	0.79	1.34	0.76	2.68

Calendar year 1959: Max 322 Min 0.1 Mean 25.1 Cfsm 1.74 In. 23.66
Water year 1959-60: Max 322 Min 0.1 Mean 28.4 Cfsm 1.97 In. 26.82

Peak discharge (base, 350 cfs).--Oct. 6 (11 p.m.) 400 cfs (5.62 ft); Oct. 24 (5 p.m.) 837 cfs (8.02 ft); Jan. 3 (1 p.m.) 492 cfs (6.22 ft); July 30 (4 p.m.) 430 cfs (5.85 ft); Sept. 12 (about 5 p.m.) 935 cfs (8.40 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

1902. Mill Brook at Newington, Conn.

Location.--Lat 41°42'16", long 72°43'34", on left bank just upstream from culvert under Dowd Street, half a mile north of Newington, Hartford County, and 1.2 miles upstream from mouth.

Drainage area.--4.51 sq mi.

Records available.--April 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 47.58 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 460 cfs Sept. 12 (gage height, 6.70 ft), from rating curve extended above 180 cfs by logarithmic plotting; minimum, 0.8 cfs Oct. 1, 2, 3-6; minimum gage height, 0.74 ft July 9.
1958-60: Maximum discharge, that of Sept. 12, 1960; minimum, 0.8 cfs all or part of each day Sept. 19 to Oct. 6, 1959; minimum gage height, that of July 9, 1960.
Flood of Aug. 19, 1955, reached a stage of 6.5 ft, from floodmarks, reported by Greater Hartford Flood Commission (discharge, 420 cfs).

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
0.8	0.7	2.5	50	0.75	0.6	2.0	28
1.0	3.7	3.0	80	.8	1.3	2.5	50
1.5	14	3.5	117	.9	2.9	3.0	80
2.0	28			1.2	8.1	3.9	150
				1.5	14		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	3.7	3.7	3.1	3.6	*3.2	9.2	5.0	2.6	1.8	2.1	2.6
2	.8	2.9	3.7	2.7	*3.6	2.8	5.3	4.3	*1.9	2.8	1.4	1.9
3	1.0	2.4	3.2	*71	3.2	2.4	4.8	2.6	3.1	1.9	1.2	1.8
4	.8	*2.3	*2.9	8.6	3.4	2.1	16	2.2	12	2.2	1.0	1.8
5	.8	2.4	2.4	4.9	3.8	2.6	24	2.1	3.9	1.3	2.1	1.6
6	9.0	3.2	1.8	3.9	25	3.4	8.2	1.9	2.2	1.0	1.4	1.4
7	22	19	24	3.6	8.1	3.4	6.1	1.9	1.8	1.0	1.0	1.4
8	4.1	8.8	4.8	3.6	4.6	3.1	7.2	1.9	1.4	1.0	1.0	1.4
9	20	4.1	3.5	2.9	5.3	2.9	7.0	2.6	1.3	.9	.9	1.4
10	6.4	3.2	*3.2	2.4	5.1	2.8	4.8	2.2	1.3	.9	2.5	1.4
11	2.6	2.9	2.9	2.4	*51	2.4	3.9	2.2	1.3	1.0	*2.1	1.9
12	4.1	2.9	15	2.2	10	3.4	4.1	*2.2	1.6	1.0	1.7	143
13	2.1	2.4	31	2.6	5.1	3.2	3.8	2.2	1.6	*1.5	1.2	44
14	3.1	4.4	5.1	2.4	4.1	3.2	3.8	2.2	1.4	9.5	1.0	4.8
15	2.3	14	3.9	2.6	3.9	3.4	*3.6	2.2	2.8	4.1	1.5	2.9
16	1.7	4.2	3.7	2.9	4.1	3.8	3.2	2.1	2.6	1.8	*1.2	2.4
17	1.7	*4.7	3.4	2.9	4.6	4.4	3.1	2.1	1.9	1.3	1.0	2.1
18	1.5	4.4	3.1	2.6	4.4	6.1	3.4	3.4	1.9	1.2	1.2	1.9
19	1.5	3.4	3.7	2.9	32	6.5	3.4	2.8	1.6	1.2	1.2	*8.8
20	1.5	2.9	2.4	2.8	6.5	6.0	2.9	2.1	1.3	1.8	1.3	21
21	1.4	2.1	2.0	2.6	4.6	5.3	2.8	1.9	1.3	1.2	1.2	6.2
22	1.1	2.4	2.3	2.4	4.1	3.9	3.1	1.9	1.3	1.2	1.4	3.6
23	1.5	2.0	2.3	2.4	3.6	3.8	3.1	2.8	1.3	1.0	1.4	2.9
24	119	7.5	2.0	2.2	3.1	3.8	2.9	2.8	1.9	1.0	1.2	2.4
25	22	25	2.0	2.2	2.6	3.6	3.6	2.3	1.6	1.0	1.2	2.2
26	5.1	7.2	2.6	2.4	26	2.8	3.1	5.7	1.3	1.0	1.0	2.1
27	4.4	4.4	2.9	2.4	6.0	2.9	3.1	2.8	1.2	3.1	1.0	2.1
28	3.9	12	6.1	6.8	4.1	3.1	2.8	2.1	1.2	4.0	1.0	2.4
29	2.9	7.8	9.0	6.0	3.8	3.2	2.4	2.1	1.0	1.8	1.0	2.4
30	2.4	5.0	4.4	5.8	-------	3.8	2.2	2.1	1.2	38	22	2.9
31	3.2	-------	3.5	3.8	-------	34	-------	2.6	-------	9.3	7.0	-------
Total	254.9	173.6	166.5	172.0	249.3	141.3	156.9	79.3	62.8	101.8	67.4	278.7
Mean	8.22	5.79	5.37	5.55	8.60	4.56	5.23	2.56	2.09	3.28	2.17	9.29
Cfsm	1.82	1.28	1.19	1.23	1.91	1.01	1.16	0.568	0.463	0.727	0.481	2.06
In.	2.10	1.43	1.37	1.42	2.06	1.17	1.29	0.65	0.52	0.84	0.56	2.30

Calendar year 1959: Max 119 Min 0.8 Mean 4.58 Cfsm 1.02 In. 13.78
Water year 1959-60: Max 143 Min 0.8 Mean 5.20 Cfsm 1.15 In. 15.71

Peak discharge (base, 60 cfs).--Oct. 24 (4 p.m.) 375 cfs (6.04 ft); Dec. 13 (2 a.m.) 73 cfs (2.90 ft); Jan. 3 (11 a.m.) 200 cfs (4.44 ft); Feb. 11 (10 a.m.) 111 cfs (3.42 ft); Feb. 19 (6 a.m.) 73 cfs (2.90 ft); Mar. 31 (10 a.m.) 74 cfs (2.92 ft); July 30 (2:30 p.m.) 89 cfs (3.13 ft); Sept. 12 (5 p.m.) 460 cfs (6.70 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Aug. 12-15, Aug. 28 to Sept. 1; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

1903. Trout Brook at West Hartford, Conn.

Location.--Lat 41°46'13", long 72°44'15", on left bank 250 ft upstream from Fern Street Bridge and three-quarters of a mile northeast of West Hartford, Hartford County.

Drainage area.--14.7 sq mi.

Records available.--May 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 78.39 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,020 cfs Sept. 12 (gage height, 6.90 ft), from rating curve extended above 440 cfs by logarithmic plotting; minimum, 4.6 cfs Oct. 4 (gage height, 1.11 ft); minimum daily, 4.8 cfs Oct. 3.
1958-60: Maximum discharge, that of Sept. 12, 1960; minimum, 2.1 cfs May 31, 1959 (gage height, 1.08 ft); minimum daily, 3.8 cfs Sept. 25, 1959.
Flood of Aug. 19, 1955, reached a stage of 12.2 ft, from floodmarks, reported by Greater Hartford Flood Commission.

Remarks.--Records excellent except those for periods of ice effect, which are good. Some regulation by dams upstream and by storage and diversion at Hartford water-supply reservoirs on headwater streams.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 12				Sept. 13-30			
1.1	4.3	2.5	100	1.4	12	3.0	161
1.3	10	3.0	161	1.7	29	3.2	190
1.6	26	4.0	320	2.0	51		
2.0	53	4.3	380				

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	20	31	31	34	*29	146	48	23	14	28	6.2
2	6.2	17	29	36	*26	b24	76	40	*18	11	14	5.9
3	4.8	14	29	268	25	b23	76	20	46	19	14	5.6
4	6.7	*12	*23	141	24	b24	169	16	159	34	14	5.9
5	7.6	14	25	*66	26	b34	231	15	77	18	19	32
6	12	15	36	51	97	37	152	12	40	9.1	24	14
7	14	54	162	42	75	34	100	11	21	7.6	24	8.8
8	13	55	66	40	56	24	103	11	18	6.2	23	7.0
9	45	35	39	34	38	20	100	20	15	5.9	10	11
10	18	22	32	30	34	18	93	17	17	5.6	34	7.9
11	24	17	29	b30	*277	b17	70	14	16	5.6	*27	26
12	16	16	94	b29	170	17	53	*15	22	5.6	17	377
13	9.4	14	136	31	76	18	43	15	27	*5.9	16	179
14	12	19	100	b28	67	28	41	14	16	32	29	*41
15	8.8	25	47	33	55	24	*42	24	18	12	22	24
16	8.8	19	47	28	37	26	51	21	18	7.0	*9.1	18
17	7.9	25	44	27	36	30	53	12	12	6.2	7.9	18
18	6.5	31	41	29	39	33	46	16	14	7.9	7.9	30
19	6.5	19	42	30	145	36	36	16	21	13	7.9	65
20	7.3	16	b38	28	76	49	34	12	18	19	7.6	153
21	8.5	13	b35	26	59	47	24	10	9.1	16	7.0	70
22	9.4	12	34	26	57	36	20	17	7.9	9.1	11	39
23	8.2	12	b32	24	36	26	19	27	7.6	7.6	7.0	30
24	270	38	b34	23	32	22	28	20	8.5	16	5.9	29
25	146	105	43	27	29	23	33	17	12	14	5.6	36
26	44	57	45	24	129	22	21	30	32	6.2	5.6	29
27	27	51	42	22	79	28	19	16	18	20	9.7	16
28	22	80	58	45	58	31	18	20	6.5	20	8.3	20
29	18	78	56	36	47	29	18	30	7.3	16	16	28
30	15	47	42	31	-------	33	16	30	12	131	11	20
31	18	-------	36	28	-------	211	-------	30	-------	66	7.9	-------
Total	828.3	952	1,547	1,344	1,939	1,053	1,931	616	736.9	566.5	450.4	1,352.3
Mean	26.7	31.7	49.9	43.4	66.9	34.0	64.4	19.9	24.6	18.3	14.5	45.1
Cfsm	1.82	2.16	3.39	2.95	4.55	2.31	4.38	1.35	1.67	1.24	0.986	3.07
In.	2.10	2.41	3.91	3.40	4.91	2.66	4.89	1.56	1.86	1.43	1.14	3.42

Calendar year 1959: Max 350 Min 3.8 Mean 29.0 Cfsm 1.97 In. 26.83
Water year 1959-60: Max 377 Min 4.8 Mean 36.4 Cfsm 2.48 In. 33.69

Peak discharge (base, 400 cfs).--Oct. 24 (4 p.m.) 860 cfs (6.29 ft); Jan. 3 (10:30 a.m.) 625 cfs (5.38 ft); Feb. 11 (10 a.m.) 440 cfs (4.57 ft); July 30 (12 m.) 450 cfs (4.64 ft); Sept. 12 (4 p.m.) 1,020 cfs (6.90 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1905. South Branch Park River at Hartford, Conn.

Location.--Lat 41°44'02", long 72°42'51", on left bank at upstream side of bridge on Newfield Avenue in Hartford, Hartford County, 0.7 mile downstream from confluence of Trout Brook and Piper Brook, and 3.3 miles upstream from confluence with North Branch.

Drainage area.--40.6 sq mi.

Records available.--October 1936 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 31.07 ft above mean sea level, datum of 1929 (levels by Department of Engineering, city of Hartford).

Average discharge.--24 years, 73.4 cfs.

Extremes.--Maximum discharge during year, 2,720 cfs Sept. 12; maximum gage height, 13.60 ft Sept. 12; minimum discharge, 16 cfs Oct. 4 (gage height, 1.68 ft).

1936-60: Maximum discharge, 5,000 cfs Aug. 19, 1955, from rating curve extended above 800 cfs on basis of records for North Branch Park River and Park River at Hartford; maximum gage height, 19.65 ft Aug. 19, 1955, from floodmarks; minimum daily discharge, 7 cfs Sept. 2, 1957 (gage height, 1.47 ft).

Flood of Mar. 12, 1936, reached a stage of 12.1 ft, as determined by Hartford city engineers, from floodmarks.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Some regulation by dams upstream and by storage and diversion at Hartford water-supply reservoirs on headwater streams.

Revisions (water years).--WSP 1201: 1939-40(P), 1941(M), 1943-44(P), 1950. WSP 1431: 1955.

Rating table, water year 1959-60, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 7, 24-26, Nov. 7, 8, 24-26, 28, 29, Dec. 7, 8, 12-14, Jan. 3, 4, Feb. 6, 7, 11-13, 26, 27, Mar. 31 to Apr. 2, Apr. 4-6, June 4, July 30, 31, Sept. 12-14, 20, 21)

1.7	17	5.0	212
2.0	28	6.0	300
3.0	76	7.0	465
4.0	142	9.8	1,180

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	69	88	60	*74	82	308	102	48	29	*55	30
2	28	55	79	59	68	*68	149	81	38	58	36	24
3	18	50	76	768	64	64	132	46	115	31	34	21
4	17	48	*68	350	64	75	368	39	200	60	33	20
5	19	47	65	146	68	79	502	37	117	37	56	36
6	63	50	72	*110	337	79	324	35	62	27	36	*34
7	201	225	477	91	199	79	205	32	40	26	35	28
8	57	152	167	85	124	68	202	31	35	24	38	24
9	233	88	82	72	104	60	202	52	32	21	30	27
10	60	65	*68	54	94	58	156	41	32	19	100	26
11	45	56	60	56	709	55	*124	38	31	21	50	42
12	62	54	245	54	376	52	102	37	37	22	35	1,170
13	32	50	435	58	160	54	88	38	44	23	28	1,050
14	43	64	157	54	135	64	79	35	33	161	31	146
15	30	149	102	60	118	62	76	43	42	49	37	93
16	26	65	97	56	97	64	82	42	38	26	24	71
17	24	88	88	54	94	79	85	34	32	22	23	64
18	22	80	80	52	97	97	88	52	32	23	25	72
19	22	60	85	58	464	97	71	41	32	27	25	182
20	26	44	70	55	190	104	64	35	32	37	25	465
21	28	40	65	48	124	107	48	31	26	33	22	166
22	30	37	60	48	121	85	45	32	24	26	25	76
23	29	37	58	44	94	70	41	63	23	22	26	58
24	949	94	58	41	79	64	55	52	30	26	22	52
25	618	397	66	46	74	64	61	39	24	28	23	54
26	108	151	69	46	436	55	48	79	36	21	22	52
27	84	111	68	42	192	58	44	42	34	72	35	40
28	68	228	118	144	128	68	40	35	23	69	34	45
29	56	182	163	96	114	68	39	42	*22	34	30	52
30	51	114	93	88	-------	79	36	44	30	473	92	48
31	61	-------	73	68	-------	523	-------	*59	-------	250	40	-------
Total	3,150	2,950	3,552	3,063	4,998	2,687	3,864	1,409	1,344	1,797	1,127	4,268
Mean	102	98.3	115	98.8	172	86.7	129	45.5	44.8	58.0	36.4	142
Cfsm	2.51	2.42	2.83	2.43	4.24	2.14	3.18	1.12	1.10	1.43	0.897	3.50
In.	2.89	2.70	3.25	2.81	4.58	2.46	3.54	1.29	1.23	1.65	1.03	3.91

Calendar year 1959: Max 949 Min 16 Mean 78.5 Cfsm 1.93 In. 26.24
Water year 1959-60: Max 1,170 Min 17 Mean 93.5 Cfsm 2.30 In. 31.34

Peak discharge (base, 650 cfs).--Oct. 24 (7:30 p.m.) 2,100 cfs (12.02 ft at 9 p.m.); Dec. 7 (6 a.m.) 715 cfs (7.62 ft, 12:30 to 1:30 p.m.); Dec. 13 (1 a.m.) 665 cfs (7.52 ft, 3 to 5 a.m.); Jan. 3 (2:30 p.m.) 1,300 cfs (9.94 ft, 5 to 6 p.m.); Feb. 11 (12:30 p.m.) 965 cfs (8.70 ft, 2 to 4 p.m.); Mar. 31 (9:30 a.m.) 702 cfs (7.78 ft, 1 to 3:30 p.m.); July 30 (3:30 p.m.) 965 cfs (8.50 ft, 8 to 9:30 p.m.); Sept. 12 (8:30 p.m.) 2,720 cfs (13.60 ft, 10 to 11 p.m.)

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 10-27. No gage-height record Aug. 5 to Sept. 1; discharge estimated on basis of records for stations on nearby streams.

1906. Wash Brook at Bloomfield, Conn.

Location.--Lat 41°49'31", long 72°44'23", on right bank just upstream from bridge on Gabb Road, 0.4 mile south of Bloomfield, Hartford County.

Drainage area.--5.66 sq mi.

Records available.--April 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 103.66 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 465 cfs June 4 (gage height, 5.44 ft), from rating curve extended above 230 cfs by logarithmic plotting; minimum, 0.21 cfs Oct. 5, 6 (gage height, 0.42 ft).

1958-60: Maximum discharge, that of June 4, 1960; minimum, 0.04 cfs Aug. 28, 29, 1959; minimum gage height, 0.35 ft Sept. 5-7, 1958, Aug. 28, 29, 1959.

Flood of Aug. 19, 1955, reached a stage of 11.7 ft, from floodmarks, reported by Greater Hartford Flood Commission.

Revisions.--The maximum discharge during period April to September 1958 has been revised to 70 cfs Sept. 27, 1958 (gage height, 2.53 ft), superseding figure published in WSP 1551 and the maximum discharge for the water year 1959 has been revised to 308 cfs Mar. 6, 1959 (gage height, 4.33 ft), superseding figure published in WSP 1621.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Infrequent regulation at low flow.

Revisions (water years).--Revised figures of discharge, in cubic feet per second for the period April to September 1958 and water year 1959 superseding those published in WSP 1551 and 1621, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1958		1958-Con.		1959-Con.	
Apr. 23	26	Nov. 29	72	Mar. 5	22
28	42			6	135
29	28	1959		7	54
30	30	Jan. 21	20	Apr. 2	36
Sept. 27	29	22	122	3	92
28	30	Feb. 15	51		
Nov. 28	12	Mar. 4	50		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
September 1958.....	155.09	30	0.22	5.17	0.913	1.02
November.....	247.8	72	3.4	8.26	1.46	1.63
January 1959.....	349.6	122	1.6	11.3	2.00	2.31
February.....	195.5	51	1.2	6.98	1.23	1.28
March.....	587.3	135	4.6	18.9	3.34	3.85
April.....	449.4	92	4.2	15.0	2.65	2.96
Water year 1958-59.....	-	122	.05	6.93	1.22	16.63

Revised peak discharge.--1958: Apr. 28 (2:30 p.m.) 62 cfs (2.38 ft); Sept. 27 (3:30 p.m.) 70 cfs (2.53 ft).
1958-59: Jan. 22 (9 a.m.) 225 cfs (3.82 ft); Mar. 6 (7 p.m.) 308 cfs (4.33 ft).

1906. Wash Brook at Bloomfield, Conn.--Continued

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.48	8.1	7.8	b8.4	6.3	*b7.5	42	10	4.1	4.3	5.8	1.0
2	.90	6.0	7.2	6.9	*6.0	b5.5	19	12	*3.1	6.6	3.4	1.0
3	.42	4.3	*6.6	*102	b4.8	b4.5	16	6.6	.11	3.8	2.7	.95
4	.36	*3.4	6.0	36	b5.0	b4.5	53	4.8	198	3.2	2.7	.95
5	.30	3.4	5.8	b15	b5.0	7.8	*81	4.3	96	2.3	3.8	.85
6	2.8	4.1	6.0	b9.7	30	b7.5	37	3.6	17	2.3	4.3	.8
7	2.9	26	55	b8.4	36	b7.0	18	3.6	8.7	1.6	2.7	.75
8	2.9	19	20	b7.5	b21	b5.5	24	3.6	6.3	1.6	3.8	.75
9	17	8.4	10	b7.5	15	b4.5	27	6.9	5.0	1.4	2.3	.7
10	8.4	6.0	*8.1	4.8	17	b4.0	16	7.2	4.3	1.4	13	.7
11	3.6	4.8	6.9	4.3	*157	b3.5	12	5.3	4.1	1.4	*15	.7
12	2.9	4.6	28	b4.0	53	b4.0	13	*5.3	3.8	1.3	6.0	99
13	1.8	4.1	50	b3.5	b17	5.8	11	6.0	4.3	*1.1	3.6	114
14	2.6	4.8	17	b4.5	11	6.6	9.7	5.3	3.4	16	3.1	*12
15	2.3	11	11	5.5	b9.0	6.0	*9.0	5.0	4.6	16	2.9	6.8
16	1.6	6.0	10	b5.0	b8.1	6.9	9.0	3.6	4.6	4.1	2.9	4.8
17	1.3	7.5	9.0	b4.5	13	8.1	10	3.1	3.4	2.2	2.5	4.3
18	1.4	8.7	8.1	5.5	15	13	10	7.0	3.4	1.8	2.0	4.1
19	1.3	5.5	b10	6.3	62	18	10	7.8	2.5	1.7	1.8	*9.3
20	1.2	4.6	b6.9	5.5	31	18	7.5	4.3	2.2	2.2	2.3	*66
21	1.2	4.3	4.8	5.3	b15	17	6.9	3.2	1.8	1.6	1.8	*24
22	1.1	4.1	4.8	5.0	13	11	6.6	2.9	1.8	1.2	1.7	9.8
23	1.4	4.1	4.8	4.8	10	b7.8	5.5	4.6	2.0	1.3	1.6	7.2
24	112	11	4.6	b4.3	8.1	b7.0	12	6.9	2.3	1.3	1.6	6.0
25	65	44	4.8	b4.1	7.5	b6.0	10	5.3	2.5	1.0	1.3	5.3
26	14	18	5.5	4.1	50	b5.5	7.2	5.3	1.8	1.0	1.3	4.8
27	7.8	9.7	6.9	4.1	31	b5.6	6.9	3.4	1.6	2.2	1.4	4.6
28	6.0	24	17	8.1	14	b8.0	6.3	2.7	1.6	4.1	1.3	4.6
29	4.6	23	23	11	12	11	5.3	2.3	1.7	2.2	1.2	4.8
30	3.6	10	15	b10	-------	16	4.8	2.2	3.7	40	1.1	6.0
31	4.3	-------	b10	b7.8	-------	79	-------	4.3	-------	32	1.0	-------
Total	274.46	302.5	390.6	323.4	682.8	322.1	505.7	158.4	410.6	163.7	101.9	406.55
Mean	8.85	10.1	12.6	10.4	23.5	10.4	16.9	5.11	13.7	5.28	3.29	13.6
Cfsm	1.58	1.78	2.23	1.84	4.15	1.84	2.99	0.903	2.42	0.933	0.581	2.40
In.	1.80	1.99	2.57	2.12	4.48	2.12	3.34	1.04	2.70	1.08	0.67	2.68

Calendar year 1959: Max 122 Min 0.05 Mean 7.88 Cfsm 1.39 In. 18.92
Water year 1959-60: Max 198 Min 0.30 Mean 11.0 Cfsm 1.94 In. 26.59

Peak discharge (base, 150 cfs).--Oct. 24 (7 p.m.) 270 cfs (4.10 ft); Jan. 3 (4 p.m.) 202 cfs (3.63 ft); Feb. 11 (2 p.m.) 262 cfs (4.05 ft); June 4 (6 p.m.) 465 cfs (5.44 ft); Sept. 12 (time unknown) 368 cfs (4.75 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Aug. 29 to Sept. 13; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

1910. North Branch Park River at Hartford, Conn.

Location.--Lat 41°47'03", long 73°42'31", on right bank 60 ft downstream from stone-arch bridge on Albany Avenue, Hartford, Hartford County, and 3 miles upstream from confluence with South Branch.
Drainage area.--25.3 sq mi.
Records available.--October 1936 to September 1960.
Gage.--Water-stage recorder and masonry control. Datum of gage is 34.20 ft above mean sea level, datum of 1929 (levels by Department of Engineering, city of Hartford).
Average discharge.--24 years, 38.6 cfs.
Extremes.--Maximum discharge during year, 1,880 cfs Sept. 12; maximum gage height, 9.20 ft Sept. 12; minimum discharge, 0.7 cfs Sept. 8 (gage height, 0.96 ft).
1936-60: Maximum discharge, 10,000 cfs Aug. 19, 1955, from rating curve extended above 1,600 cfs on basis of slope-area measurement of peak flow 2.6 miles upstream; maximum gage height, 18.8 ft Aug. 19, 1955, from floodmark; minimum discharge, 0.04 cfs Sept. 24, 25, 1943 (gage height, 0.75 ft); minimum daily, 0.4 cfs Sept. 24, 1943.
Flood of Mar. 12, 1936, reached a stage of 11.2 ft as determined from floodmarks by city engineers of Hartford (discharge, about 2,800 cfs).
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Some regulation at small dams upstream and by storage and diversion at a Hartford water-supply reservoir on headwater stream.
Revisions (water years).--WSP 891: 1939. WSP 1201: 1937(M), 1938, 1939(M), 1940, 1941(M), 1942(P), 1943, 1944(M), 1945, 1946(P), 1947(M), 1948-49(P), 1950. WSP 1501: 1956.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Rate of change in stage used as a factor Oct. 24, 25, Dec. 7, 13, Jan. 3, Mar. 31, Apr. 5, 6, June 4, 5, July 30, 31, Sept. 12, 13, 20)

1.0	0.9	2.3	67
1.1	1.6	2.6	119
1.2	3.0	3.0	215
1.4	7.4	3.5	340
1.7	18	5.5	740
2.0	36		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.1	28	40	29	*24	35	256	30	16	24	*29	9.6
2	7.0	22	35	23	26	*18	107	*35	13	28	18	7.4
3	5.4	18	*29	676	21	b17	70	22	93	16	15	5.2
4	4.1	17	27	281	26	17	305	17	679	19	14	3.4
5	4.8	16	25	70	27	29	482	15	443	5.6	16	7.7
6	12	16	24	*b45	210	27	218	14	74	8.7	16	*3.7
7	21	131	322	b33	155	b25	103	13	31	8.3	12	2.5
8	16	77	107	b27	96	b18	116	15	21	7.4	14	1.1
9	83	36	53	b20	56	b15	130	22	16	6.5	12	5.4
10	26	25	*40	19	79	b14	76	20	14	5.9	42	6.5
11	15	20	32	b17	*610	b15	*56	16	12	6.1	44	6.6
12	17	19	163	b16	325	b16	44	16	11	13	22	694
13	10	18	325	b12	115	20	35	17	14	5.4	16	613
14	14	19	88	b17	35	22	30	16	12	52	13	74
15	12	52	50	20	32	21	28	16	13	42	12	32
16	8.6	25	46	b19	38	23	27	13	14	18	14	18
17	6.3	31	38	b16	46	27	28	13	13	12	12	13
18	6.3	31	34	20	76	47	28	21	12	9.6	10	12
19	5.9	22	40	22	280	66	30	24	10	10	9.9	45
20	6.7	19	b25	20	160	60	34	15	9.3	11	10	348
21	6.3	18	b22	19	86	55	33	12	9.0	9.0	9.3	84
22	5.9	18	20	18	39	37	33	10	8.3	7.0	9.0	42
23	5.9	18	20	18	36	b30	30	13	9.0	7.0	7.6	32
24	728	46	18	17	33	b24	46	21	14	7.0	5.9	22
25	382	299	18	17	40	b21	42	17	14	5.4	8.0	18
26	57	76	19	16	215	20	35	21	10	4.3	9.2	15
27	35	46	22	16	160	20	22	14	9.0	12	3.6	14
28	26	150	50	35	82	29	18	11	5.0	18	3.8	14
29	20	110	94	46	56	33	17	9.3	*11	12	1.0	16
30	18	56	57	40	-------	48	16	7.7	22	258	8.8	16
31	18	-------	40	30	-------	442	-------	*16	-------	133	22	-------
Total	1,589.3	1,479	1,923	1,674	3,184	1,291	2,495	522.0	1,631.6	781.2	439.1	2,181.1
Mean	51.3	49.3	62.0	54.0	110	41.6	83.2	16.8	54.4	25.2	14.2	72.7
Cfsm	2.03	1.95	2.45	2.13	4.35	1.64	3.29	0.664	2.15	0.996	0.561	2.87
In.	2.34	2.17	2.83	2.46	4.68	1.90	3.67	0.77	2.40	1.15	0.65	3.21

Calendar year 1959: Max 728 Min 2.3 Mean 39.5 Cfsm 1.56 In. 21.18
Water year 1959-60: Max 728 Min 1.0 Mean 52.4 Cfsm 2.07 In. 28.23

Peak discharge (base, 500 cfs).--Oct. 24 (6 p.m.) 1,720 cfs (8.64 ft at 9 p.m.); Dec. 7 (10 a.m.) 500 cfs (4.29 ft at 11:30 a.m.); Dec. 13 (3 a.m.) 510 cfs (4.32 ft at 4 a.m.); Jan. 3 (2 p.m.) 1,320 cfs (7.75 ft at 3:30 p.m.); Feb. 11 (3 p.m.) about 1,100 cfs (7.11 ft); Mar. 31 (12 m.) 680 cfs (5.22 ft at 1 p.m.); Apr. 5 (2 p.m.) 640 cfs (4.96 ft at 3 p.m.); June 4 (7 p.m.) 1,440 cfs (8.01 ft at 10 p.m.); July 30 (3 p.m.) 520 cfs (4.35 ft at 5 p.m.); Sept. 12 (9 p.m.) 1,880 cfs (9.20 ft at 11 p.m.); Sept. 20 (11 a.m.) 530 cfs (4.44 ft at 1 p.m.).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 2 to Mar. 2; discharge estimated on basis of records for stations on nearby streams.

1915. Park River at Hartford, Conn.

Location.--Lat 41°45'36", long 72°41'42", on left bank at downstream side of plate-girder footbridge on Riverside Street in Hartford, Hartford County, 1,300 ft downstream from confluence of North and South Branches, 1,300 ft upstream from Capitol Avenue Bridge, 0.9 mile upstream from inlet of Park River conduit, and 2.0 miles upstream from mouth.

Drainage area.--74.0 sq mi.

Records available.--October 1936 to September 1960.

Gage.--Water-stage recorder above spillway of timber dam. Datum of gage is 27.13 ft above mean sea level, datum of 1929 (levels by Department of Engineering, city of Hartford).

Average discharge.--24 years, 123 cfs.

Extremes.--Maximum discharge during year, 3,630 cfs Sept. 13 (gage height, 7.80 ft); minimum, 22 cfs Oct. 4; minimum gage height, 2.32 ft June 29, Sept. 4.

1936-60: Maximum discharge, 14,000 cfs Aug. 19, 1955 (gage height, 16.36 ft, from floodmark in gage house), from rating curve extended above 3,600 cfs on basis of slope-area measurement of peak flow; minimum, about 4 cfs Sept. 23, 1937; minimum gage height, 1.58 ft July 23, Aug. 15, 1943, result of temporary diversions upstream; minimum daily discharge, 11 cfs Oct. 6, 1941, Aug. 18, 1957.

Flood of Mar. 12, 1936, reached a stage of 9.0 ft, as determined from floodmarks by city engineers of Hartford (discharge, 5,400 cfs). A stage of 10.7 ft, from floodmarks, was caused by backwater from Connecticut River on Mar. 21, 1936.

Remarks.--Records good except those for period of no gage-height record, which are fair. Some regulation by dams upstream and by storage and diversion at Hartford water-supply reservoirs on small headwater streams.

Revisions (water years).--WSP 1431: 1955.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.3	20	3.5	465
2.4	37	4.0	715
2.6	86	5.0	1,320
3.0	223	6.0	2,050

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	112	151	109	*103	*115	682	143	83	63	*100	42
2	46	89	125	95	98	100	301	*147	63	101	60	34
3	27	70	112	1,220	89	90	222	76	250	54	51	27
4	23	65	*100	823	92	102	702	70	669	95	46	23
5	25	*63	92	249	100	119	964	65	666	55	81	46
6	76	73	103	*172	475	115	675	63	165	37	60	*44
7	295	399	750	137	475	114	365	55	86	37	51	37
8	100	303	397	125	246	95	360	51	65	34	60	28
9	412	158	165	100	183	84	395	90	53	32	46	32
10	121	112	131	92	183	80	254	86	48	28	153	37
11	86	95	115	83	*1,230	77	*203	63	46	30	115	44
12	98	81	376	81	917	75	172	60	48	37	65	1,130
13	53	78	848	81	292	82	134	65	68	34	46	2,000
14	68	85	312	81	203	93	121	60	51	258	46	268
15	53	245	179	86	183	92	115	65	60	124	55	131
16	42	115	165	86	158	96	118	65	65	48	42	95
17	35	131	147	78	158	117	125	53	51	35	37	73
18	32	147	134	81	172	158	128	85	51	35	37	78
19	30	103	147	92	813	180	118	83	46	42	37	223
20	35	81	125	83	440	181	112	60	46	55	37	753
21	35	68	100	76	215	179	92	48	37	48	34	332
22	37	63	92	76	199	136	92	44	34	37	37	128
23	44	63	89	70	165	111	83	88	34	32	37	95
24	1,310	130	86	63	141	97	115	92	46	37	30	78
25	1,440	729	92	68	131	93	118	65	37	42	34	73
26	204	312	98	68	689	84	95	118	48	32	34	73
27	137	172	100	65	455	87	76	65	48	96	42	58
28	125	424	180	197	215	109	68	53	32	112	42	60
29	92	373	330	169	176	111	65	58	*34	53	34	73
30	81	203	183	144	-------	140	58	60	53	590	80	70
31	92	-------	134	109	-------	929	-------	*92	-------	530	94	-------
Total	5,314	5,142	6,158	5,059	8,996	4,241	7,128	2,288	3,083	2,843	1,723	6,185
Mean	171	171	199	163	310	137	238	73.8	103	91.7	55.6	206
Cfsm	2.31	2.31	2.69	2.20	4.19	1.85	3.22	0.997	1.39	1.24	0.751	2.78
In.	2.67	2.58	3.09	2.54	4.52	2.13	3.58	1.15	1.55	1.43	0.87	3.11

Calendar year 1959: Max 1,440 Min 21 Mean 130 Cfsm 1.76 In. 23.81
Water year 1959-60: Max 2,000 Min 23 Mean 159 Cfsm 2.15 In. 29.22

Peak discharge (base, 1,000 cfs).--Oct. 24 (11 p.m.) 2,980 cfs (7.07 ft); Dec. 7 (3 p.m.) 1,040 cfs (4.57 ft); Dec. 13 (7:30 a.m.) 1,040 cfs (4.56 ft); Jan. 3 (7 p.m.) 2,290 cfs (6.28 ft); Feb. 11 (6:30 p.m.) 1,930 cfs (5.85 ft); Feb. 19 (3 p.m.) 1,070 cfs (4.58 ft); Mar. 31 (4 p.m.) 1,280 cfs (4.95 ft); Apr. 5 (6 p.m.) 1,220 cfs (4.85 ft); June 4 (11:30 p.m.) 1,390 cfs (5.08 ft); July 30 (10 p.m.) 1,160 cfs (4.74 ft); Sept. 13 (1 a.m.) 3,630 cfs (7.80 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Mar. 3-30; discharge estimated on basis of records for North and South Branch Park Rivers.

1925. Hockanum River near East Hartford, Conn.

Location.--Lat 41°46'59", long 72°35'16", on left bank 700 ft downstream from dam at Case Bros., Inc., papermill, 1½ miles downstream from Hop Brook, and 2¾ miles east of East Hartford, Hartford County.

Drainage area.--74.5 sq mi.

Records available.--September 1919 to September 1921, July 1928 to September 1930.

Gage.--Water-stage recorder. Datum of gage is 54.5 ft above mean sea level, datum of 1929 (levels by Department of Engineering, city of Hartford).

Average discharge.--34 years, 118 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,240 cfs Sept. 12 (gage height, 7.13 ft); minimum, 35 cfs Oct. 5 (gage height, 1.30 ft); minimum daily, 37 cfs Oct. 5.
1919-21, 1928-60: Maximum discharge, 5,160 cfs Sept. 21, 1938 (gage height, 13.78 ft, from floodmark), by computation of flow over dam just above gage; practically no flow at times caused by regulation; minimum daily discharge, 1.2 cfs Sept. 2, 1920.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. Flow regulated by Shenipsit Lake (see p. 248), other small reservoirs and industrial plants upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 851: 1934(M), 1936(M). WSP 1051: 1920-21, 1928-45 (monthly and yearly discharge and runoff). WSP 1201: 1920(M), 1929(M), 1931, 1932-34(m), 1944.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 25 to Jan. 2, July 28 to Aug. 7)

1.3	35	3.0	230
2.0	87	4.9	625
2.5	157		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	80	161	135	116	189	510	146	107	76	110	75
2	59	70	152	120	112	170	400	168	87	95	82	67
3	50	71	146	592	107	173	340	149	105	73	78	59
4	46	*70	142	480	105	178	450	147	162	84	82	50
5	37	63	136	300	107	182	565	156	290	*67	94	50
6	51	74	132	240	222	173	600	140	*310	59	96	55
7	101	218	265	212	270	172	*480	131	240	49	80	51
8	81	186	240	204	178	165	430	117	188	53	71	50
9	125	125	178	178	153	152	440	129	143	52	66	50
10	97	102	161	167	163	148	360	146	122	52	113	49
11	72	94	152	163	304	139	310	122	92	*49	122	49
12	78	89	211	140	360	137	270	119	82	52	89	432
13	68	80	450	135	260	139	217	140	83	60	75	*557
14	75	81	*290	125	223	*140	204	136	79	183	69	246
15	70	230	217	120	204	129	192	132	85	138	67	140
16	63	136	202	140	192	122	188	123	90	82	84	115
17	60	*124	170	125	192	129	185	123	79	65	68	110
18	59	130	164	115	196	133	186	148	78	59	60	114
19	55	121	186	125	612	135	181	161	70	61	59	138
20	52	121	182	120	450	133	167	140	68	65	60	230
21	52	116	172	110	300	143	*152	109	64	57	59	146
22	53	114	174	105	260	139	149	58	62	57	55	110
23	59	112	154	105	240	129	146	58	61	59	60	101
24	312	125	120	100	216	124	169	52	75	57	61	96
25	325	290	100	96	196	137	167	56	79	52	60	92
26	150	225	100	92	373	121	162	89	77	49	58	90
27	117	182	115	*108	340	118	155	88	62	72	59	86
28	101	136	145	136	250	132	140	85	59	*170	62	87
29	83	209	250	143	217	147	135	80	59	101	*60	87
30	75	176	200	131	-------	152	129	76	76	256	62	88
31	74	-------	165	119	-------	494	-------	90	-------	206	85	-------
Total	2,754	4,010	5,632	5,181	6,918	4,874	8,179	3,614	3,234	2,610	2,306	3,670
Mean	88.8	134	182	167	239	157	273	117	108	84.2	74.4	122
(†)	+10.7	+21.4	-9.1	-5.7	+10.3	+9.7	+3.1	-0.9	-6.4	-2.8	-10.1	-2.7

Adjusted for change in contents in Shenipsit Lake

Mean	99.5	155	173	161	249	167	276	116	102	81.4	64.3	119
Cfsm	1.34	2.08	2.32	2.16	3.34	2.24	3.70	1.56	1.37	1.09	0.863	1.60
In.	1.54	2.32	2.68	2.49	3.60	2.58	4.13	1.80	1.53	1.26	0.99	1.78

	Observed	Adjusted
Calendar year 1959:	Max 691 Min 35 Mean 127	Mean 128 Cfsm 1.72 In. 23.38
Water year 1959-60:	Max 612 Min 37 Mean 145	Mean 146 Cfsm 1.96 In. 26.70

Peak discharge (base, 900 cfs).--Sept. 12 (10:30 p.m.) 1,240 cfs (7.13 ft).

* Discharge measurement made on this day.
† Change in contents, equivalent in cubic feet per second, in Shenipsit Lake; furnished by Rockville Water & Aqueduct Co.
Note.--No gage-height record Dec. 24 to Jan. 2, Jan. 12-26; discharge estimated on basis of recorded range in stage, weather records, and records for stations on nearby streams.

1935. Salmon River near East Hampton, Conn.

Location.--Lat 41°33'11", long 72°26'57", on right bank of Old Comstock Bridge, a short distance downstream from New London-Middlesex County line, 0.6 mile downstream from Dickinson Creek, and 3½ miles southeast of East Hampton, Middlesex County.

Drainage area.--105 sq mi.

Records available.--July 1928 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 69.50 ft above mean sea level, datum of 1929.

Average discharge.--32 years (1928-60), 182 cfs.

Extremes.--Maximum discharge during year, 2,520 cfs Jan. 3 (gage height, 4.40 ft); minimum, 5.2 cfs Sept. 11 (gage height, 0.52 ft).
1928-60: Maximum discharge, 12,400 cfs Sept. 21, 1938 (gage height, 10.96 ft), by computation of flow over dam half a mile upstream; minimum, 1.0 cfs Oct. 31, 1935 (gage height, -0.17 ft); minimum daily, about 1 cfs Oct. 13, 1929.

Remarks.--Records excellent except those for periods of ice effect, which are good. Slight regulation at low flow by mills upstream.

Revisions (water years).--WSP 1021: 1929.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31, July 30 to Sept. 12				Apr. 1 to July 30, Sept. 13-30			
0.5	4	1.5	195	0.6	9.3	2.0	355
.6	10	2.0	380	.7	18	2.5	590
.7	19	2.5	615	.8	30	3.0	930
.8	32	3.0	940	1.0	61	3.5	1,420
1.0	65	4.0	2,000	1.5	180		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	218	293	263	205	*274	*967	199	*100	*29	*112	*16
2	31	189	256	228	192	235	515	*287	93	238	61	14
3	27	152	238	1,440	173	221	395	210	119	121	49	11
4	22	135	225	1,160	170	208	889	174	160	126	*41	9.4
5	19	122	208	560	170	228	1,210	152	152	76	38	10
6	27	117	202	425	446	238	932	142	100	49	44	10
7	93	362	534	360	515	235	579	134	72	41	35	9.4
8	88	502	496	328	340	221	485	139	61	33	31	8.2
9	158	324	336	278	296	212	495	*183	52	29	28	7.6
10	164	235	270	b249	300	206	408	214	49	25	42	6.4
11	100	195	238	b246	487	189	343	172	44	22	65	7.0
12	189	173	534	b246	570	192	339	180	46	18	49	568
13	117	158	1,460	b246	364	192	312	220	58	16	38	797
14	104	152	*695	b242	300	189	284	201	49	51	34	262
15	95	274	461	b246	b263	186	270	166	49	98	29	134
16	76	*238	384	b256	b238	180	256	147	52	52	62	87
17	61	215	340	b238	249	195	242	129	*46	36	47	70
18	56	232	312	228	256	218	234	196	47	29	35	61
19	51	192	308	232	1,340	242	238	256	44	24	28	124
20	46	167	270	228	768	256	214	174	37	25	29	383
21	44	155	228	b202	470	263	198	139	33	24	26	270
22	40	152	221	195	380	238	195	124	30	18	22	163
23	40	144	205	186	332	206	189	129	28	16	22	126
24	554	203	198	164	289	208	217	158	31	17	18	102
25	729	712	212	b152	263	235	217	147	34	14	14	91
26	360	515	218	b150	770	189	198	126	30	11	14	78
27	246	336	221	*b150	650	192	189	112	24	20	13	67
28	221	458	296	246	425	238	180	93	20	80	11	80
29	170	525	555	312	348	285	160	84	19	56	10	102
30	141	368	416	270	-------	308	149	78	26	182	11	126
31	135	-------	320	218	-------	1,430	-------	82	-------	266	16	-------
Total	4,220	7,920	11,150	9,944	11,569	8,109	11,479	4,947	1,705	1,842	1,074	3,800.0
Mean	136	264	360	321	399	262	383	160	56.8	59.4	34.6	127
Cfsm	1.30	2.51	3.43	3.06	3.80	2.50	3.65	1.52	0.541	0.566	0.330	1.21
In.	1.49	2.81	3.95	3.52	4.10	2.87	4.07	1.75	0.60	0.65	0.38	1.35

Calendar year 1959: Max 2,120 Min 9 Mean 200 Cfsm 1.90 In. 25.81
Water year 1959-60: Max 1,460 Min 6.4 Mean 212 Cfsm 2.02 In. 27.54

Peak discharge (base, 1,300 cfs).--Dec. 13 (7 a.m.) 1,760 cfs (3.78 ft); Jan. 3 (5 p.m.) 2,520 cfs (4.40 ft); Feb. 19 (1 p.m.) 1,700 cfs (3.75 ft); Mar. 31 (3 p.m.) 2,060 cfs (4.07 ft); Apr. 5 (5 to 7 p.m.) 1,480 cfs (3.55 ft); Sept. 12 (5:30 p.m.) 1,420 cfs (3.52 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1940. Eightmile River at North Plain, Conn.

Location.--Lat 41°26'30", long 72°20'00", at center of span on downstream side of bridge on State Highway 82 at North Plain, Middlesex County, 500 ft downstream from Strongs Brook, 0.8 mile upstream from confluence with East Branch, and 6 miles upstream from mouth.

Drainage area.--18.6 sq mi.

Records available.--September 1937 to September 1960. Prior to October 1938, published as West Branch Eightmile River near North Lyme, October 1938 to September 1954 published as West Branch Eightmile River at North Plain.

Gage.--Wire-weight gage and, since Nov. 2, 1952, crest-stage gage; gage read once daily. Datum of gage is 57.74 ft above mean sea level, datum of 1929. Prior to May 1, 1939, staff gage at bridge 0.7 mile downstream at datum 12.17 ft lower.

Average discharge.--23 years, 40.4 cfs (adjusted to present site).

Extremes.--Maximum discharge during year, 750 cfs Dec. 12 (gage height, 5.82 ft); minimum observed, 1.3 cfs Aug. 28, Sept. 9, 10 (gage height, 1.81 ft).
1937-60: Maximum discharge, 2,350 cfs Oct. 15, 1955 (gage height, 7.72 ft), from rating curve extended above 1,200 cfs on basis of computation of peak flow through highway bridge and over road; minimum observed, 0.05 cfs Sept. 12, 1944 (gage height, 1.60 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Revisions (water years).--WSP 1141: 1948. WSP 1331: 1940-41(M), 1943(M), 1948(M), 1951(M), 1952-53(P).

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13

1.8	1.0	3.0	50
1.9	2.3	3.5	87
2.0	4.2	4.0	154
2.1	7.0	4.5	265
2.5	23	5.2	485

Dec. 14 to Sept. 30

1.8	1.2	2.2	11
1.9	2.6	2.5	23
2.0	4.9		

Note.--Same as preceding table above 2.5 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	36	66	53	45	63	196	39	20	5.7	15	3.7
2	4.5	28	56	b48	44	53	109	49	23	34	11	2.6
3	3.6	22	50	251	40	*b51	104	39	20	22	7.8	2.0
4	2.5	21	47	196	38	a45	306	34	19	26	6.2	1.7
5	1.9	19	42	116	38	53	292	30	17	15	*6.0	2.1
6	2.0	15	41	87	94	a52	218	30	15	11	5.4	1.7
7	2.7	53	110	74	82	a49	137	26	*12	7.2	4.9	1.7
8	8.2	56	86	70	56	a48	109	24	10	6.0	5.4	1.6
9	22	38	63	56	56	a43	92	37	9.2	5.2	5.2	*1.4
10	11	30	56	b50	56	a42	82	40	8.1	3.9	6.0	1.3
11	6.2	24	50	b43	78	a37	70	34	7.5	3.7	8.5	a1.4
12	9.8	24	369	b41	92	a38	*70	50	a9.5	3.9	6.6	112
13	7.0	22	463	b43	66	a38	63	49	14	2.9	5.2	109
14	9.0	21	*196	b40	a60	a39	60	42	10	12	4.2	46
15	9.4	32	122	46	b57	38	56	36	11	19	4.2	29
16	7.8	*32	97	53	53	38	53	33	10	9.2	7.6	18
17	5.6	30	82	49	50	a41	50	30	7.8	6.2	7.8	13
18	5.6	a33	74	45	73	49	50	36	9.5	5.4	6.6	11
19	5.3	26	70	48	338	50	49	42	7.5	5.2	6.0	25
20	4.8	24	60	46	154	a53	44	33	6.6	4.2	5.7	47
21	4.8	23	53	43	97	53	42	30	5.7	3.1	4.2	32
22	4.2	21	a50	39	78	50	43	27	5.4	3.1	3.9	23
23	4.2	20	48	38	70	47	39	33	5.4	2.6	3.5	18
24	91	52	46	36	63	44	43	36	5.4	2.6	2.6	15
25	88	194	47	36	62	49	41	32	5.7	1.8	2.3	12
26	53	97	48	34	208	47	37	28	4.9	1.4	1.8	10
27	38	70	48	*30	130	42	37	26	3.9	4.4	1.4	8.8
28	35	104	62	56	97	47	36	25	*3.3	6.9	1.3	8.1
29	26	122	116	66	78	50	34	20	2.6	4.9	1.4	8.5
30	22	82	87	56	------	56	32	18	3.9	26	1.4	13
31	21	------	66	50	------	321	------	19	------	25	4.8	------
Total	518.8	1,371	2,871	1,939	2,453	1,726	2,594	1,027	292.9	289.5	163.9	579.6
Mean	16.7	45.7	92.6	62.5	84.6	55.7	86.5	33.1	9.76	9.34	5.29	19.3
Cfsm	0.898	2.46	4.98	3.36	4.55	2.99	4.65	1.78	0.525	0.502	0.284	1.04
In.	1.04	2.74	5.74	3.88	4.90	3.45	5.19	2.05	0.59	0.58	0.33	1.16

Calendar year 1959: Max 540 Min 1.0 Mean 40.7 Cfsm 2.19 In. 29.72
Water year 1959-60: Max 463 Min 1.3 Mean 43.2 Cfsm 2.32 In. 31.65

Peak discharge (base, 350 cfs).--Dec. 12 (about 6 p.m.) 750 cfs (5.82 ft); Jan. 3 (about 12 m.) 415 cfs (5.04 ft); Feb. 19 (about 5 a.m.) 450 cfs (5.08 ft); Mar. 31 (about 8 a.m.) 415 cfs (5.03 ft); Apr. 5 (about 5 p.m.) 382 cfs (4.90 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations on nearby streams.
b Stage-discharge relation affected by ice.

1945. East Branch Eightmile River near North Lyme, Conn.

Location.--Lat 41°25'40", long 72°20'05", on left bank at bridge on State Highway 156, 0.4 mile upstream from mouth, 1.1 miles north of North Lyme, New London County, 1.2 miles south of North Plain, and 5½ miles upstream from mouth of Eightmile River.

Drainage area.--22.0 sq mi.

Records available.--September 1937 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 55.21 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 46.5 cfs.

Extremes.--Maximum discharge during year, 600 cfs Dec. 13 (gage height, 3.80 ft); minimum, 1.5 cfs Sept. 10 (gage height, 0.12 ft).
1937-60: Maximum discharge, 2,950 cfs Sept. 21, 1938 (gage height, 7.00 ft), computed on basis of study of flow at contracted control section; no flow Sept. 3, 1938, result of regulation; minimum daily, about 0.03 cfs Oct. 2, 1941.

Remarks.--Records good except those for period of no gage-height record, which are fair. Occasional regulation at low flow.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 13				Dec. 14 to Sept. 30			
0.3	3.3	1.5	116	0.1	1.4	0.9	45
.4	6.1	2.0	182	.2	2.1	1.2	76
.5	12	3.0	345	.3	3.4	1.5	115
.7	26	3.6	510	.4	6.5	2.0	182
1.0	51			.5	12	3.0	345
				.7	28	3.6	510

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	40	78	64	50	77	230	36	21	4.1	30	3.1
2	4.7	31	63	55	45	64	139	55	20	21	16	3.2
3	4.7	24	56	151	40	*56	101	45	20	23	11	2.6
4	4.7	23	50	246	39	46	208	36	21	30	*8.0	2.5
5	4.4	21	46	137	37	59	276	32	18	21	6.5	2.5
6	4.1	17	43	97	76	62	254	*29	14	12	6.1	2.2
7	4.4	35	71	82	125	57	168	27	*12	7.5	5.0	1.9
8	7.5	65	148	73	76	56	142	27	10	*6.1	4.6	1.7
9	17	40	87	65	62	50	122	36	9.0	5.0	4.6	*1.6
10	23	33	63	55	63	49	101	67	8.5	4.6	5.4	1.6
11	16	27	54	47	73	43	87	58	7.5	4.1	8.0	1.8
12	14	25	134	46	116	44	82	58	8.5	3.4	6.5	30
13	14	24	490	49	83	45	80	51	16	3.1	6.1	116
14	13	23	*255	45	66	45	69	45	12	13	5.0	62
15	14	35	162	50	66	44	65	38	11	34	4.6	27
16	11	*32	130	59	61	42	60	34	11	21	4.6	17
17	8.6	30	108	59	56	47	57	29	9.7	11	5.4	12
18	7.5	32	92	50	57	58	54	36	9.0	8.0	4.6	9.0
19	6.1	28	83	52	235	62	54	60	9.0	6.5	3.9	10
20	6.1	25	76	52	212	64	49	43	7.0	5.8	3.9	40
21	5.3	22	63	45	128	65	45	32	6.1	4.6	3.6	49
22	5.3	22	58	40	96	61	43	29	5.4	3.9	3.4	31
23	5.3	22	52	38	82	53	40	34	4.6	3.4	3.2	21
24	51	39	49	34	72	50	45	42	5.4	3.4	2.8	16
25	225	196	50	34	65	55	45	36	6.1	3.0	2.4	12
26	83	166	53	32	179	49	40	31	5.0	2.6	2.2	9.7
27	45	94	55	*32	196	45	40	26	4.4	2.6	2.1	8.0
28	37	91	65	56	123	49	40	23	3.9	5.8	1.9	7.5
29	29	170	129	98	94	55	34	21	3.4	5.8	1.8	7.0
30	24	119	125	74	-------	57	32	19	3.6	23	1.7	11
31	23	-------	82	57	-------	185	-------	20	-------	50	2.2	-------
Total	721.0	1,551	3,070	2,074	2,673	1,794	2,802	1,155	302.1	352.3	177.1	519.9
Mean	23.3	51.7	99.0	66.9	92.2	57.9	93.4	37.3	10.1	11.4	5.71	17.3
Cfsm	1.06	2.35	4.50	3.04	4.19	2.63	4.25	1.70	0.459	0.518	0.260	0.786
In.	1.22	2.62	5.19	3.51	4.52	3.03	4.74	1.95	0.51	0.60	0.30	0.88

Calendar year 1959: Max 470 Min 1.6 Mean 45.9 Cfsm 2.09 In. 28.30
Water year 1959-60: Max 490 Min 1.6 Mean 47.0 Cfsm 2.14 In. 29.07

Peak discharge (base, 300 cfs).--Dec. 13 (10:30 a.m.) 600 cfs (3.80 ft); Jan. 4 (1:30 a.m.) 335 cfs (2.97 ft); Feb. 19 (7 p.m.) 325 cfs (2.92 ft); Mar. 31 (10:30 p.m.) 315 cfs (2.86 ft); Apr. 6 (1 a.m.) 315 cfs (2.83 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 27 to Nov. 15; discharge estimated on basis of recorded range in stage and records for stations on nearby streams.

Reservoirs in Connecticut River basin

1280. First Connecticut and Second Connecticut Lakes on Connecticut River are operated as a unit for storage of water for power. The reservoirs, in downstream order and usable capacity of each, are as follows: Second Lake, 12 miles northeast of Pittsburg, N. H., 506,000,000 cu ft; First Lake, 5 2/3 miles northeast of Pittsburg, N. H., 3,230,000,000 cu ft. Records furnished by New England Power Co.

1290. Lake Francis on Connecticut River at Pittsburg, N. H., completed in March 1940, used for storage of water for power, has usable capacity of 4,326,000,000 cu ft. Records furnished by New Hampshire Water Resources Board.

1325. Moore Reservoir and Comerford Station Pond on Connecticut River are operated as a unit for storage of water for hydroelectric power development. The reservoirs, in downstream order and usable capacity of each, are as follows: Moore Reservoir, 4½ miles northwest of Littleton, N. H., filled in April 1956, 4,970,000,000 cu ft; Comerford Station Pond, 4½ miles northeast of Barnet, Vt., completed in 1930, 1,279,000,000 cu ft. Records furnished by New England Power Co.

1410. Union Village Reservoir on Ompompanoosuc River, 1¼ miles north of Union Village, Vt., completed in 1949 for flood control, has usable capacity of 1,660,000,000 cu ft. Records furnished by Corps of Engineers.

1500. Lakes and ponds in Mascoma River basin.--These reservoirs are operated as a unit for storage of water for power. The reservoirs and usable capacity of each are as follows: Goose Pond, 5¼ miles northeast of Mascoma, N. H., 509,000,000 cu ft; Grafton Pond, 8½ miles southeast of Mascoma, 144,000,000 cu ft; Crystal Lake, 5¾ miles southeast of Mascoma, 75,000,000 cu ft; Mascoma Lake at Mascoma, 337,000,000 cu ft; total usable capacity of the four reservoirs, 1,060,000,000 cu ft. Records furnished by New England Power Co.

1520. Sunapee Lake on Sugar River at Sunapee, N. H., used for recreation and storage of water for power, has usable capacity of 862,000,000 cu ft. Records collected by Geological Survey.

1575. Surry Mountain Reservoir on Ashuelot River, 4½ miles north of Keene, N. H., completed in 1942 for flood control, has usable capacity of 1,420,000,000 cu ft. Records furnished by Corps of Engineers.

1585.5. Otter Brook Reservoir on Otter Brook, 2½ miles northeast of Keene, N. H., completed in 1958 for flood control, has usable capacity of 798,000,000 cu ft. Records furnished by Corps of Engineers.

1635. Birch Hill Reservoir on Millers River, 1 mile east of South Royalston, Mass., completed in 1941 for flood control, has usable capacity of 2,180,000,000 cu ft. Records furnished by Corps of Engineers.

1645. Tully Reservoir on East Branch Tully River, 3½ miles north of Athol, Mass., completed in 1948 for flood control, has usable capacity of 958,000,000 cu ft. Records furnished by Corps of Engineers.

1680. Somerset and Harriman Reservoirs in Deerfield River basin are operated as a unit for storage of water for hydroelectric power development. The downstream order and usable capacity of each are as follows: Somerset Reservoir on East Branch Deerfield River, 2½ miles northeast of Somerset, Vt., 2,500,000,000 cu ft; Harriman Reservoir on Deerfield River at Davis Bridge, Vt., 5,060,000,000 cu ft. Records furnished by New England Power Co.

1724. Barre Falls Reservoir on Ware River, 4 miles east of Barre, Mass., completed in 1958 for flood control, has usable capacity of 1,050,000,000 cu ft. Records furnished by Corps of Engineers.

1750. Quabbin Reservoir on Swift River, 3¼ miles east of Belchertown, Mass., completed in August 1939 for storage of water for municipal supply, has usable capacity of 55,700,000,000 cu ft. Records furnished by Water Division, Metropolitan District Commission.

1765. Ludlow Reservoir in Chicopee River basin, 3½ miles northwest of Three Rivers, Mass. completed in 1875 for storage of water for municipal supply, has usable capacity of 201,000,000 cu ft. Records furnished by Board of Water Commissioners, Springfield, Mas

1775. Watershops Pond on Mill River in Springfield, Mass., completed in 1857 for storage of water for power, has usable capacity of 70,600,000 cu ft. Records furnished by Ordnance Department, Department of the Army.

1790. Knightville Reservoir on Westfield River, 4 miles north of Huntington, Mass., completed in 1941 for flood control, has usable capacity of 2,130,000,000 cu ft. Records furnished by Corps of Engineers.

1825. 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, 3½ miles south of Blandford, Mass., 344,000,000 cu ft; Cobble Mountain Reservoir on Westfield Little River, 6½ miles west of Westfield, Mass., 3,050,000,000 cu ft. Records furnished by Board of Water Commissioners, Springfield, Mass.

Reservoirs in Connecticut River basin--Continued

1850. Otis Reservoir in Farmington River basin, lat 42°09'35", long 73°03'33", 1 mile northeast of Cold Spring, Berkshire County, Mass. Drainage area, 17.2 sq mi. Completed in 1865 for storage of water for power. Usable capacity, 780,000,000 cu ft. Records available, April 1913 to September 1960. Records furnished by The Collins Co., Collinsville, Conn.

1859. Hogback Reservoir on West Branch Farmington River at The Hogsback, lat 41°59'22", long 73°01'15", 2.0 miles west of Hartland, Hartford County, Conn., and 2.0 miles north of Riverton. Drainage area, 126 sq mi. Completed in April 1960 for future storage of water for municipal supply. Total capacity, 869,000,000 cu ft. Presently used to compensate for water diverted by Metropolitan Water Bureau of Hartford from East Branch Farmington River. Records available April to September 1960. Records furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn.

1875. Barkhamsted Reservoir on East Branch Farmington River in Farmington River basin, lat 41°54'38", long 72°57'15", 1¼ miles south of Barkhamsted, Litchfield County, Conn. Drainage area, 53.8 sq mi. Completed in 1939 for storage of water for municipal supply. Total capacity, 4,250,000,000 cu ft. Records available, March 1940 to September 1960. Records furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn.

1876. East Branch Reservoir on East Branch Farmington River in Farmington River basin, lat 41°52'49", long 72°57'30", 1 mile east of New Hartford, Litchfield County, Conn. Drainage area, including Barkhamsted Reservoir, 61.2 sq mi. Completed in 1919 for storage of water to compensate for water diverted from the river. Total capacity, 400,000,000 cu ft. Records available, August 1928 to September 1960. Records furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn.

1879. Nepaug Reservoir on Nepaug River in Farmington River basin, lat 41°49'37", long 72°56'34", 1½ miles northwest of Collinsville, Hartford County, Conn. Drainage area, 32.0 sq mi. Completed in 1918 for storage of water for municipal supply. Total capacity, 1,280,000,000 cu ft. Records available, August 1928 to September 1960. Records furnished by Water Bureau, Metropolitan District Commission, Hartford, Conn.

1885. Whigville Reservoir on Whigville Brook in Pequabuck River basin, lat 41°44'08", long 72°57'02", at Whigville, Hartford County, Conn. Drainage area, 3.95 sq mi. Completed in 1908 for storage of water for domestic water supply. Total capacity, 8,650,000 cu ft. Records available, July 1928 to September 1960. Records furnished by Board of Water Commissioners, New Britain, Conn.

1920. Shenipsit Lake on Hockanum River, lat 41°52'06", long 72°25'59", three-quarters of a mile east of Rockville, Tolland County, Conn. Drainage area, 16.5 sq mi. Dam raised to its present crest elevation in 1871, providing a usable capacity of 250,000,000 cu ft for municipal supply and power; total capacity of lake, 730,000,000 cu ft. Capacities based on lake survey by Connecticut Board of Fisheries and Game. Records available, September 1919 to September 1921, July 1928 to September 1960. Records furnished by Rockville Water & Aqueduct Co.

Month-end usable contents, in millions of cubic feet, water year October 1959 to September 1960

Date	First and Second Connecticut Lakes	Lake Francis	Moore Reservoir and Comerford Station Pond	Union Village Reservoir	Lakes and ponds in Mascoma River basin	Sunapee Lake
Sept.30, 1959.....	2,894.4	3,471.7	5,741.2	1.9	809.7	258
Oct. 31.....	2,952.9	3,604.1	6,003.5	21.1	1,033.0	422
Nov. 30.....	3,678.0	4,489.0	6,197.4	120.9	1,246.9	517
Dec. 31.....	2,413.6	3,179.3	5,920.0	12.7	1,035.9	425
Jan. 31, 1960.....	1,232.3	1,875.0	4,146.2	13.7	757.8	374
Feb. 29.....	679.5	920.9	3,137.4	9.2	493.5	425
Mar. 31.....	119.2	581.9	1,507.9	58.2	373.8	425
Apr. 30.....	2,248.1	2,820.9	5,762.2	9.1	1,169.4	734
May 31.....	3,198.1	3,366.4	6,020.6	7.4	1,216.3	698
June 30.....	3,695.4	3,761.7	5,949.5	5.0	1,106.4	634
July 31.....	3,330.5	3,880.3	5,852.8	7.7	999.3	551
Aug. 31.....	2,778.6	3,376.9	5,604.3	1.6	776.5	445
Sept.30.....	2,659.0	3,288.8	5,578.0	2.7	793.6	493

	Surry Mountain Reservoir	Otter Brook Reservoir	Birch Hill Reservoir	Tully Reservoir	Somerset and Harriman Reservoirs	Barre Falls Reservoir
Sept.30, 1959.....	58.6	29.0	1.8	0	4,849.7	1.8
Oct. 31.....	209.1	147.5	8.5	9.9	6,268.7	2.6
Nov. 30.....	270.0	129.7	117.0	95.2	6,821.2	3.4
Dec. 31.....	64.5	34.8	3.9	19.0	6,074.3	36.5
Jan. 31, 1960.....	82.2	34.8	3.0	20.0	5,000.3	35.6
Feb. 29.....	68.1	34.4	3.9	26.0	3,834.5	42.5
Mar. 31.....	121.1	70.4	57.6	18.0	2,107.1	89.3
Apr. 30.....	318.4	212.2	11.8	21.5	6,339.1	2.2
May 31.....	82.0	32.3	6.0	.3	6,701.8	2.4
June 30.....	59.8	12.6	2.3	.1	5,946.2	.7
July 31.....	24.0	28.4	7.0	.2	5,848.7	2.6
Aug. 31.....	19.8	33.7	2.0	.1	5,206.4	.7
Sept.30.....	146.8	34.4	6.5	.4	5,704.7	2.2

Reservoirs in Connecticut River basin--Continued

Month-end usable contents, in millions of cubic feet, water year October 1959 to September 1960

Date	Quabbin Reservoir†	Ludlow Reservoir	Watershops Pond	Knightville Reservoir	Borden Brook and Cobble Mountain Reservoirs	Otis Reservoir
Sept.30, 1959.....	49,257	175.8	71.8	0.2	2,008.3	669
Oct. 31.....	49,188	188.5	52.2	3.9	2,175.0	616
Nov. 30.....	50,378	188.5	55.1	60.8	2,513.1	451
Dec. 31.....	51,998	186.6	55.1	11.1	2,815.2	325
Jan. 31, 1960.....	52,737	184.9	55.1	9.4	2,830.5	282
Feb. 29.....	53,362	184.9	55.1	10.5	2,403.4	340
Mar. 31.....	53,726	188.5	55.6	136.5	2,125.4	451
Apr. 30.....	55,653	184.9	69.7	1.1	3,072.0	661
May 31.....	55,379	181.1	69.7	1.2	3,139.3	700
June 30.....	55,086	179.4	68.9	.3	3,071.0	700
July 31.....	54,629	179.4	68.9	.6	2,996.8	688
Aug. 31.....	53,555	172.2	68.9	.2	2,951.4	692
Sept.30.....	53,437	179.4	68.9	.8	2,863.4	684

Date	Hogback Reservoir	Barkhamsted, East Branch and Nepaug Reservoirs	Whigville Reservoir	Shenipsit Lake		
Sept.30, 1959.....	0	4,331	4.0	625.4		
Oct. 31.....	0	4,215	8.7	654.0		
Nov. 30.....	0	4,392	8.7	709.4		
Dec. 31.....	0	4,720	8.7	685.0		
Jan. 31, 1960.....	0	4,980	8.2	669.8		
Feb. 29.....	0	5,477	8.7	695.5		
Mar. 31.....	0	5,552	9.1	721.6		
Apr. 30.....	869	5,912	8.7	729.6		
May 31.....	869	5,912	8.3	727.2		
June 30.....	0	5,815	8.3	710.5		
July 31.....	0	5,745	7.8	703.0		
Aug. 31.....	0	5,469	5.2	675.9		
Sept.30.....	535	5,679	7.1	668.8		

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

1950. Menunketesuck River near Clinton, Conn.

Location.--Lat 41°18'10", long 72°31'00", on right bank at Fairy Dell, 100 ft downstream from Cobb's Bridge, 1.7 miles north of Clinton, Middlesex County, 2.4 miles downstream from Kelseytown Reservoir, and 4.9 miles upstream from mouth.
Drainage area.--11.6 sq mi.
Records available.--June 1941 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 23.64 ft above mean sea level, datum of 1929.
Average discharge.--19 years, 22.3 cfs (adjusted).
Extremes (unadjusted for storage or diversion).--Maximum discharge during year, 395 cfs Dec. 13 (gage height, 4.61 ft); minimum, 0.01 cfs Sept. 10, 11 (gage height, 0.76 ft).
1941-60: Maximum discharge, 1,500 cfs Sept. 11, 1954 (gage height, 8.51 ft), from rating curve extended above 270 cfs on basis of computation of peak flow over Kelseytown Dam; no flow at times during August and September 1944, July and August 1957.
Remarks.--Records excellent except those for periods of backwater from leaves or aquatic vegetation, which are good, and those below 4.0 cfs, which are poor. The daily discharge record for all periods except those of low flow is a summation of daily flow at gaging station and daily diversion from Kelseytown Reservoir as measured by venturi meter. During periods of low flow, diversions from Kelseytown Reservoir are compensated for by release of water from Killingworth Reservoir which is located about 2.5 miles upstream from Kelseytown Reservoir on a small tributary of Menunketesuck River. The drainage area of Killingworth Reservoir is so small that its yield is considered negligible during periods of low flow when it becomes necessary to draw upon it. Therefore, the daily-discharge record for periods of low flow Oct. 1-9, 18-24, June 21-30, July 1-3, 17-30, Aug. 7-31, and Sept. 1-12 is a summation of daily flow at gaging station and daily diversion from Kelseytown Reservoir, minus daily draft on Killingworth Reservoir adjusted for daily change in contents in Kelseytown Reservoir. Change in contents in Kelseytown Reservoir and draft on Killingworth Reservoir are determined from a continuous chart record of Kelseytown Reservoir water surface. No account is taken of evaporation from the reservoir surfaces. Flow at recording gage station regulated by Killingworth and Kelseytown Reservoirs and by diversion for domestic water supply from Kelseytown Reservoir.
Cooperation.--Venturi-meter records and some other data furnished by the Guilford-Chester Water Co.
Revisions (water years).--WSP 1301: 1942-44(M).

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	19	28	31	21	35	128	18	9.0	2.2	13	2.2
2	1.0	17	24	25	20	28	61	32	12	5.0	9.6	2.0
3	.9	13	22	79	18	26	45	22	10	6.3	7.3	1.7
4	.9	10	20	110	16	27	124	19	9.3	7.8	*5.9	1.6
5	.8	10	18	57	16	27	178	16	9.1	9.0	4.9	1.5
6	.8	9.3	18	41	39	25	146	*13	8.0	7.4	4.6	1.4
7	2.0	15	53	35	57	22	78	14	*6.6	6.4	4.5	*1.3
8	3.0	41	57	31	37	22	62	13	4.7	5.6	4.4	1.2
9	3.8	25	37	27	31	20	49	14	4.3	5.2	4.2	1.1
10	4.6	18	29	22	33	20	42	17	4.0	4.7	4.1	1.0
11	3.3	16	24	20	42	18	36	15	3.7	4.6	4.8	1.3
12	3.4	15	69	20	63	17	*37	15	3.9	4.2	3.9	19
13	3.6	14	297	20	41	18	34	18	4.8	4.2	4.1	82
14	4.2	13	122	*19	35	18	29	18	5.3	4.5	3.7	30
15	3.8	24	65	21	32	18	28	14	5.5	5.1	3.5	18
16	3.8	*20	50	27	27	17	26	12	5.7	6.4	4.3	13
17	3.6	18	41	24	26	20	24	11	5.1	6.2	4.1	9.2
18	3.3	23	35	20	27	28	22	12	4.8	4.8	3.4	6.2
19	3.0	18	35	27	180	29	23	18	5.7	4.3	2.9	7.0
20	2.7	15	29	24	111	30	20	14	4.9	3.9	2.9	13
21	2.4	14	24	20	59	30	18	12	4.3	3.0	3.2	15
22	2.0	14	24	18	44	28	18	10	3.9	2.4	4.7	11
23	1.7	12	22	16	38	24	16	10	3.3	2.1	3.8	7.6
24	10	19	19	15	32	21	19	17	4.3	1.9	3.2	5.9
25	43	100	19	14	29	27	20	20	3.6	1.8	2.7	4.9
26	23	70	19	14	126	21	18	18	2.9	1.7	2.4	3.7
27	17	41	21	13	102	19	18	14	*2.3	1.6	2.1	3.3
28	16	39	29	*26	58	21	17	11	2.0	4.8	2.0	2.7
29	12	52	68	39	*44	25	15	9.0	1.7	4.3	1.9	3.1
30	10	36	59	32	-------	25	14	8.3	2.0	6.6	1.8	4.3
31	9.1	-------	39	24	-------	130	-------	9.1	-------	23	1.9	-------
Total	199.7	750.3	1,416	911	1,404	836	1,365	459.4	156.7	161.0	129.8	275.2
Mean	6.44	25.0	45.7	29.4	48.4	27.0	45.5	14.8	5.22	5.19	4.19	9.17
Cfsm	0.555	2.16	3.94	2.53	4.17	2.33	3.92	1.28	0.450	0.447	0.361	0.791
In.	0.64	2.41	4.54	2.92	4.50	2.69	4.37	1.48	0.50	0.52	0.42	0.88

Calendar year 1959: Max 297 Min 0.8 Mean 21.3 Cfsm 1.84 In. 24.89
Water year 1959-60: Max 297 Min 0.8 Mean 22.0 Cfsm 1.90 In. 25.87

Peak discharge (base, 200 cfs, unadjusted for storage and diversion).--Dec. 13 (6:30 a.m.) 395 cfs (4.61 ft); Feb. 19 (2 p.m.) 280 cfs (4.00 ft); Mar. 31 (8 p.m.) 258 cfs (3.83 ft); Apr. 5 (10 p.m.) 220 cfs (3.60 ft).

* Discharge measurement made on this day.
Note.--Backwater from leaves or aquatic vegetation Oct. 1-8, May 28 to Sept. 30.

1965. Quinnipiac River at Wallingford, Conn.

Location.--Lat 41°26'58", long 72°50'29", on right bank 0.8 mile downstream from Quinnipiac Street Bridge in Wallingford, New Haven County, and 2 miles upstream from Worton Brook.

Drainage area.--109 sq mi.

Records available.--October 1930 to September 1960.

Gage.--Water-stage recorder and timber control. Datum of gage is 20.24 ft above mean sea level, datum of 1929.

Average discharge.--30 years, 209 cfs.

Extremes.--Maximum discharge during year, 2,130 cfs Sept. 12 (gage height, 7.50 ft); minimum, 37 cfs Sept. 11 (gage height, -0.06 ft).
1930-60: Maximum discharge, 5,230 cfs Sept. 21, 1938 (gage height, 9.55 ft), by computation of flow over dam 1 mile upstream; minimum, 8 cfs Nov. 2, 1930; minimum gage height observed, -0.16 ft Aug. 10, 21, 1957.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Low flow regulated by mills upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 851: 1933, 1936. WSP 971: 1940-42. WSP 1171: 1947 (calendar year mean). WSP 1201: 1931(M), 1932, 1934-35, 1937, 1949-50(M). WSP 1381: 1936, 1938, 1940-41, 1943-44, 1949.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31				Apr. 1 to Sept. 30			
0.0	45	3.0	540	0.1	47	3.0	540
1.0	136	5.0	1,030	1.0	131	5.0	1,030
1.5	205	5.8	1,300	1.5	210	6.5	1,580
2.0	325			2.0	320		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	250	320	235	192	325	1,160	221	135	85	309	61
2	59	220	270	201	187	268	707	295	*125	186	158	58
3	54	180	240	858	175	250	500	244	220	120	*117	53
4	50	140	220	1,100	171	223	684	202	270	143	100	49
5	48	120	192	713	*172	278	859	178	228	106	90	48
6	100	110	184	540	475	260	875	167	158	84	92	50
7	150	200	420	450	661	*250	645	155	131	72	80	51
8	120	500	500	370	445	248	530	151	115	67	78	*54
9	230	350	369	300	350	228	510	202	106	64	72	50
10	200	250	268	252	338	219	450	246	99	63	94	49
11	170	210	232	221	732	205	408	208	90	61	108	49
12	160	190	390	215	1,000	198	358	*178	104	63	92	796
13	150	180	982	228	652	201	320	185	130	62	76	*1,560
14	150	170	652	219	460	203	290	173	116	114	70	805
15	160	350	455	228	420	201	275	157	130	173	69	372
16	120	270	362	235	400	200	258	148	145	118	83	274
17	100	240	318	219	362	215	248	139	119	89	67	75
18	80	300	290	209	338	252	252	145	115	88	64	93
19	75	220	288	223	737	275	254	164	105	74	62	200
20	70	170	258	215	696	295	232	151	93	70	64	454
21	65	150	219	194	490	295	218	134	85	70	64	416
22	60	130	213	182	410	268	214	123	83	67	63	278
23	60	120	198	176	338	238	204	158	*82	66	61	208
24	1,300	200	191	166	302	228	222	217	86	62	58	175
25	1,100	1,000	187	162	275	245	234	225	89	59	56	155
26	*500	700	187	162	686	213	218	222	82	55	54	141
27	330	450	192	160	699	200	214	183	74	95	54	132
28	250	500	253	250	485	219	200	147	73	184	54	158
29	200	600	472	305	400	245	188	127	72	102	54	161
30	180	400	*388	265	-------	270	182	112	72	337	60	180
31	200	-------	290	219	-------	1,050	-------	118	-------	520	59	-------
Total	6,551	8,870	10,000	9,472	13,048	8,265	11,909	5,475	3,532	3,519	2,582	7,205
Mean	211	296	323	306	450	267	397	177	118	114	83.3	240
Cfsm	1.94	2.72	2.96	2.81	4.13	2.45	3.64	1.62	1.08	1.05	0.764	2.20
In.	2.24	3.04	3.41	3.24	4.45	2.82	4.06	1.87	1.20	1.21	0.88	2.46

Calendar year 1959: Max 1,820 Min 48 Mean 208 Cfsm 1.91 In. 25.86
Water year 1959-60: Max 1,560 Min 48 Mean 247 Cfsm 2.27 In. 30.86

Peak discharge (base, 900 cfs).--Oct. 24 (time unknown) 1,460 cfs (6.18 ft); Nov. 25 (time unknown) about 1,200 cfs Dec. 13 (5 a.m.) 1,220 cfs (5.60 ft); Jan. 3 (4:30 p.m.) 1,540 cfs (6.39 ft); Feb. 12 (11 a.m.) 1,060 cfs (5.11 ft); Mar. 31 (1 p.m.) 1,420 cfs (6.10 ft); Apr. 5 (7 p.m.) 970 cfs (4.78 ft); Sept. 12 (9 p.m.) 2,130 cfs (7.50 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 3 to Dec. 4, Jan. 7, 8; discharge estimated on basis of recorded range in stage, weather records, engineers' notes, and records for stations on nearby streams.

1970. East Branch Housatonic River at Coltsville, Mass.

Location.--Lat 42°28'10", long 73°11'49", on right bank at Coltsville, Berkshire County, 1¼ miles upstream from Unkamet Brook and 2 miles northeast of Pittsfield.

Drainage area.--57.1 sq mi.

Records available.--March 1936 to September 1960. Prior to October 1945, published as Housatonic River at Coltsville.

Gage.--Water-stage recorder. Datum of gage is 993.49 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 117 cfs (adjusted for diversion).

Extremes.--Maximum discharge during year, 1,920 cfs Sept. 12 (gage height, 7.05 ft); minimum daily, 21 cfs Sept. 4, 5.
1936-60: Maximum discharge, 6,400 cfs Sept. 21, 1938 (gage height, 10.80 ft), from rating curve extended above 2,300 cfs on basis of computation of peak flow over dam; minimum daily, 4.4 cfs Aug. 15, 1936.
Maximum stage known since at least 1755, that of Sept. 21, 1938.

Remarks.--Records good. Flow regulated by powerplants above station and, since 1949, by Cleveland Brook Reservoir. Diversion above station from Cleveland Brook Reservoir for municipal supply of Pittsfield since May 1950.

Revisions (water years).--WSP 851: 1936(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.0	17	3.5	267
2.1	23	4.0	412
2.3	39	5.0	800
2.6	77	6.0	1,260
3.0	152	7.0	1,880

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	297	197	90	76	74	962	146	127	40	70	26
2	49	209	169	85	77	72	686	177	97	38	35	26
3	38	148	156	736	76	71	552	131	68	43	31	23
4	32	*115	146	572	76	76	1,150	111	61	90	31	21
5	32	117	131	276	76	76	1,650	98	61	51	29	21
6	39	125	127	182	82	70	841	90	91	38	29	24
7	126	400	398	148	93	71	422	76	66	38	28	24
8	222	298	373	133	79	70	336	70	56	36	30	24
9	327	182	*206	93	90	66	308	85	47	34	29	26
10	211	139	156	90	87	66	264	95	44	32	66	31
11	93	119	133	91	490	64	275	88	43	33	86	29
12	80	109	206	83	518	65	369	173	40	38	48	611
13	61	98	594	*91	311	64	469	148	48	36	34	783
14	56	182	326	90	220	66	486	107	40	54	36	280
15	55	588	191	98	150	65	618	97	93	*58	53	128
16	48	274	165	95	139	64	493	115	135	43	35	82
17	46	193	152	87	*121	65	328	97	74	34	31	72
18	47	177	135	88	117	66	426	128	119	34	28	74
19	44	131	127	95	107	65	456	160	66	38	27	76
20	39	113	100	90	111	62	250	107	54	49	28	521
21	35	106	95	90	104	66	188	90	50	45	27	338
22	34	97	102	88	102	65	211	68	43	73	52	165
23	40	100	65	88	95	64	186	80	40	38	93	115
24	745	130	71	83	90	*61	230	88	50	34	60	97
25	841	471	76	80	83	61	228	106	91	59	36	83
26	336	326	85	82	90	60	175	125	62	28	33	82
27	160	182	87	79	88	61	*245	90	46	25	29	80
28	109	575	142	82	80	82	272	72	41	34	26	79
29	90	602	137	82	80	117	184	58	39	29	26	79
30	80	283	117	79	---	193	146	54	39	60	26	148
31	143	---	104	72	---	870	---	71	---	125	*26	---
Total	4,299	6,886	5,269	4,218	3,908	3,058	13,406	3,201	1,931	1,407	1,218	4,168
Mean	139	230	170	136	135	98.6	447	103	64.4	45.4	39.3	139
(†)	12.6	12.4	12.5	12.9	12.8	12.9	12.4	12.5	12.5	12.8	12.4	12.0

	Observed			Adjusted for diversion		
Calendar year 1959:	Max 1,210	Min 22	Mean 113	Mean 123	Cfsm 2.15	In. 29.28
Water year 1959-60:	Max 1,650	Min 21	Mean 145	Mean 157	Cfsm 2.75	In. 37.49

Peak discharge (base, 1,150 cfs).--Oct. 24 (6 p.m.) 1,710 cfs (6.76 ft); Jan. 3 (1:30 p.m.) 1,280 cfs (6.04 ft); Mar. 31 (9 p.m.) 1,200 cfs (5.87 ft); Apr. 5 (2 p.m.) 1,790 cfs (6.87 ft); Sept. 12 (8:30 p.m.) 1,920 cfs (7.05 ft).

* Discharge measurement made on this day.
† Diversion above station from Cleveland Brook Reservoir for municipal supply of Pittsfield, equivalent in cubic feet per second. Records furnished by city of Pittsfield.

1975. Housatonic River near Great Barrington, Mass.

Location.--Lat 42°13'55", long 73°21'19", on left bank at upstream side of highway bridge at Van Deusenville, 0.5 mile upstream from Williams River and 2 miles north of Great Barrington, Berkshire County.

Drainage area.--280 sq mi.

Records available.--May 1913 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 683.04 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1931, staff gage at same site and datum.

Average discharge.--47 years, 530 cfs.

Extremes.--Maximum discharge during year, 6,550 cfs Apr. 5, 6 (gage height, 9.66 ft); minimum daily, 74 cfs Sept. 11.
1913-60: Maximum discharge, 12,200 cfs Jan. 1, 1949 (gage height, 12.08 ft), from rating curve extended above 5,300 cfs on basis of computations of flow over dams at gage heights 11.72 and 12.08 ft; minimum daily, 1.0 cfs Oct. 18, 1914.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Flow regulated by powerplants above station.

Revisions (water years).--WSP 415: 1913-14. WSP 781: 1928(M). WSP 1051: 1938, 1933. WSP 1301: 1914-15(M), 1917-27(M), 1929-31(M).

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 5)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
2.5	97	5.0	1,520	2.3	69	5.0	1,570
3.0	220	6.0	2,200	2.6	119	7.0	3,010
3.5	445	8.0	3,820	3.0	255	9.0	5,500
4.0	790	10.0	6,680	3.5	510	9.5	6,280
				4.0	830		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*161	600	1,510	512	363	434	4,120	893	460	262	520	180
2	150	850	1,120	487	355	412	3,600	984	564	313	385	107
3	182	*680	995	1,310	345	406	3,010	914	499	123	256	198
4	119	510	886	2,820	340	370	3,580	788	466	285	*212	178
5	186	410	798	2,510	340	440	5,850	702	292	370	201	86
6	157	400	685	1,600	365	396	*6,200	643	482	300	204	196
7	189	500	1,030	1,160	434	372	4,480	582	472	260	141	153
8	504	1,150	1,510	934	390	396	*2,960	477	328	224	239	*113
9	715	1,040	1,350	738	390	375	2,380	534	325	180	167	140
10	918	760	*1,050	598	385	365	1,930	582	310	187	246	104
11	557	620	830	531	1,450	350	1,640	570	300	*215	522	74
12	431	540	894	*544	2,680	343	1,510	708	124	173	433	510
13	313	500	1,720	524	2,280	302	1,610	747	298	173	370	1,960
14	287	450	1,930	512	1,540	338	1,730	676	211	219	163	2,240
15	255	1,040	1,530	505	1,060	345	1,850	540	339	286	302	1,540
16	220	1,420	1,160	505	*958	340	1,920	570	600	235	296	879
17	250	1,100	972	463	870	345	1,790	540	540	194	251	630
18	156	830	862	445	730	350	1,600	588	479	210	201	324
19	230	720	798	451	798	365	1,790	802	415	215	201	464
20	270	640	655	475	760	322	1,620	688	416	212	198	1,110
21	220	600	598	440	662	326	1,250	576	355	273	90	1,770
22	240	560	544	423	633	360	1,100	433	291	201	170	1,560
23	300	520	481	418	598	345	1,050	518	268	201	270	1,050
24	680	500	370	375	531	326	1,390	528	268	140	390	767
25	1,560	560	380	330	505	*326	1,540	552	414	212	355	624
26	1,200	1,300	401	401	505	308	1,280	618	321	208	250	594
27	1,000	1,420	423	380	524	253	*1,250	612	369	177	198	494
28	800	1,310	642	375	463	362	1,390	516	247	201	114	466
29	700	2,210	902	370	445	544	1,230	279	241	201	202	428
30	400	2,160	738	385	-------	870	1,020	335	229	295	170	494
31	350	-------	581	290	-------	2,470	-------	405	-------	598	180	-------
Total	13,700	25,900	28,345	21,811	21,699	13,856	67,670	18,900	10,923	7,343	7,897	19,433
Mean	442	863	914	704	748	447	2,256	610	364	237	255	648
Cfsm	1.58	3.08	3.26	2.51	2.67	1.60	8.06	2.18	1.30	0.846	0.911	2.31
In.	1.82	3.44	3.76	2.90	2.88	1.84	8.99	2.51	1.45	0.98	1.05	2.58

Calendar year 1959: Max 3,120 Min 27 Mean 501 Cfsm 1.79 In. 24.28
Water year 1959-60: Max 6,200 Min 74 Mean 703 Cfsm 2.51 In. 34.20

Peak discharge (base, 2,400 cfs).--Jan. 4 (7 to 10 p.m.) 2,960 cfs (7.11 ft); Feb. 12 (7 to 8 p.m.) 2,760 cfs (6.85 ft); Apr. 1 (1 to 4 p.m.) 4,210 cfs (8.34 ft); Apr. 5 (11 p.m.) to Apr. 6 (1 a.m.) 6,550 cfs (9.66 ft); Sept. 14 (10 a.m.) 3,060 cfs (7.05 ft).

* Discharge measurement made on this day.
Note.--Doubtful or no gage-height record Oct. 16, Oct. 19 to Nov. 29; discharge estimated on basis of 1 discharge measurement, recorded stage graph, weather records, recorded range in stage when available, and records for station at Falls Village, Conn.

1980. Green River near Great Barrington, Mass.

Location.--Lat 42°11'31", long 73°23'28", on left bank 250 ft downstream from Seekonk Road highway bridge, 0.2 mile downstream from Seekonk Brook, 1½ miles west of Great Barrington, Berkshire County, and 3 miles upstream from mouth.

Drainage area.--52.5 sq mi.

Records available.--October 1951 to September 1960.

Gage.--Water-stage recorder. Altitude of gage is 690 ft (from topographic map).

Average discharge.--9 years, 91.6 cfs.

Extremes.--Maximum discharge during year, 2,120 cfs Mar. 31 (gage height, 7.83 ft), minimum, 4.6 cfs Oct. 1.
1951-60: Maximum discharge, that of Mar. 31, 1960; minimum, 3.0 cfs Sept. 2-5, 1953.
Revisions.--The maximum discharge for the water year 1956 has been revised to 2,010 cfs Apr. 17, 1956 (gage height, 7.65 ft), superseding figure published in WSP 1431.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30			
2.24	4.6	3.5	160	2.1	9.2	3.5	160
2.3	7.0	4.0	285	2.3	19	4.0	285
2.4	13	5.0	660	2.6	40	5.0	660
2.7	41	7.0	1,620	3.0	79	7.0	1,620
3.0	77						

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.0	a140	232	90	50	b69	1,070	150	86	26	52	13
2	5.4	a110	202	77	48	b65	795	150	82	26	39	12
3	5.0	*90	179	739	44	63	746	127	71	27	33	11
4	5.0	80	160	520	44	68	1,340	115	63	41	*34	11
5	5.0	76	143	332	43	63	1,460	106	60	30	30	11
6	5.4	75	134	245	45	58	a880	100	65	24	28	11
7	9.0	180	237	202	54	b56	a560	92	60	22	24	10
8	23	158	192	177	b52	54	*401	88	48	20	24	*9.6
9	59	130	158	b140	52	b51	a370	92	42	18	23	9.2
10	44	118	*139	127	54	b48	a320	88	39	18	46	9.6
11	27	106	125	116	632	b47	a310	83	36	17	57	10
12	22	98	176	*104	a620	b46	282	82	34	*16	40	147
13	18	91	343	106	a360	b46	237	82	33	16	34	274
14	17	94	216	98	a260	b46	204	77	32	20	31	117
15	17	289	181	94	a200	b44	186	72	52	24	28	77
16	15	175	168	91	*160	b43	177	69	58	19	28	60
17	14	162	150	84	a140	45	162	63	44	17	26	51
18	14	152	139	80	a125	45	205	75	57	16	23	47
19	14	132	130	80	a140	49	240	88	45	15	21	44
20	13	116	109	74	a125	46	175	74	39	15	20	319
21	12	108	96	70	a110	44	154	66	36	14	18	183
22	11	100	91	69	a100	42	145	60	32	13	18	127
23	a13	92	78	65	a94	39	136	61	30	16	21	102
24	a300	105	b69	63	a88	38	297	91	31	29	19	87
25	a250	291	72	b56	a84	*38	a200	86	64	21	17	74
26	a150	214	70	58	91	b36	a160	104	45	16	16	67
27	a100	177	72	53	88	36	*210	92	36	15	15	61
28	a80	396	141	56	81	64	190	79	31	18	14	56
29	a68	387	147	54	77	102	160	72	28	15	13	52
30	a58	279	113	52	-------	207	145	64	28	74	13	78
31	a80	-------	100	49	-------	*1,350	-------	65	-------	112	13	-------
Total	1,458.8	4,721	4,562	4,221	4,061	3,050	11,917	2,713	1,407	770	818	2,140.4
Mean	47.1	157	147	136	140	98.4	397	87.5	46.9	24.8	26.4	71.3
Cfsm	0.897	2.99	2.80	2.59	2.67	1.87	7.56	1.67	0.893	0.472	0.503	1.36
In.	1.03	3.34	3.23	2.99	2.88	2.16	8.44	1.92	1.00	0.55	0.58	1.52

Calendar year 1959: Max 894 Min 4.6 Mean 82.3 Cfsm 1.57 In. 21.27
Water year 1959-60: Max 1,460 Min 5.0 Mean 114 Cfsm 2.17 In. 29.64

Peak discharge (base, 750 cfs).--Jan. 3 (4:30 p.m.) 1,600 cfs (6.97 ft); Feb. 11 (6 to 7 p.m.) 1,160 cfs (6.10 ft); Mar. 31 (2:30 p.m.) 2,120 cfs (7.83 ft); Apr. 4 (10:30 a.m.) 2,010 cfs (7.65 ft).

* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

1985. Blackberry River at Canaan, Conn.

Location.--Lat 41°01'26", long 73°20'32", on right bank downstream from bridge on U. S. Highway 44, 0.7 mile southwest of Canaan, Litchfield County, and 1¼ miles upstream from mouth.

Drainage area.--48.2 sq mi.

Records available.--July 1949 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 645.72 ft above mean sea level, datum of 1929.

Average discharge.--11 years, 87.1 cfs.

Extremes.--Maximum discharge during year, 1,900 cfs Sept. 12 (gage height, 8.23 ft); minimum, 8.2 cfs Oct. 6 (gage height, 1.83 ft).
1949-60: Maximum discharge, 14,200 cfs Aug. 19, 1955 (gage height, 13.01 ft), from rating curve extended above 2,400 cfs on basis of slope-area measurement of peak flow; minimum, 2.2 cfs Aug. 28, 1949, July 25, 26, 27, 28, 1957; minimum gage height, 1.12 ft Aug. 28, 1949; minimum daily discharge, 2.3 cfs Aug. 28, 1949.
Flood of Dec. 31, 1948, reached a stage of 12.0 ft, from floodmarks (discharge, 7,000 cfs, from slope-area measurement at East Canaan, 2.5 miles upstream, adjusted for intervening drainage area).

Remarks.--Records good. Infrequent regulation at low flow.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	172	160	60	49	b57	*726	98	55	45	75	22
2	24	108	132	61	47	b52	493	105	49	42	45	20
3	15	81	118	705	49	54	385	85	*44	38	31	18
4	12	67	108	358	47	55	874	*75	142	45	28	21
5	9.2	57	103	184	45	64	1,450	69	158	37	66	25
6	8.8	63	92	127	63	63	636	66	135	28	72	23
7	44	233	322	106	91	*62	372	62	82	24	45	22
8	102	222	264	98	71	56	300	59	60	23	40	21
9	143	132	164	79	66	b56	270	71	47	21	35	20
10	79	103	132	72	73	b53	222	76	41	19	347	20
11	42	85	115	70	842	b52	185	68	37	19	250	21
12	29	75	204	70	518	b52	*178	69	35	29	104	652
13	24	64	505	68	229	52	170	*72	39	27	68	544
14	26	61	234	70	171	50	155	68	33	37	55	190
15	25	175	158	70	b150	52	148	65	165	70	154	110
16	20	131	*140	70	143	52	141	58	170	46	213	80
17	17	106	125	64	107	50	131	52	80	29	108	66
18	17	118	112	60	*101	52	144	73	82	25	72	61
19	16	89	108	62	b117	56	148	79	62	22	58	63
20	14	75	82	60	110	53	118	61	49	22	57	593
21	13	67	81	58	*b94	53	104	52	42	*20	49	241
22	12	63	67	56	88	51	100	46	36	17	42	*145
23	13	58	68	55	79	50	93	52	31	16	*68	110
24	327	84	60	54	b74	47	157	67	35	36	47	91
25	424	473	60	59	70	47	137	78	51	*29	38	79
26	172	283	*67	52	80	44	106	119	43	19	33	70
27	99	166	65	52	b81	47	109	82	33	21	29	59
28	73	395	79	52	b70	100	104	59	29	57	27	56
29	58	394	89	54	b65	134	90	49	29	31	23	53
30	42	208	74	52	-------	259	81	42	57	158	22	70
31	63	-------	68	54	-------	1,220	-------	52	-------	183	22	-------
Total	1,974.0	4,408	4,156	3,112	3,790	3,145	8,327	2,129	1,951	1,235	2,323	3,566
Mean	63.7	147	134	100	131	101	278	68.7	65.0	39.8	74.9	119
Cfsm	1.32	3.05	2.78	2.07	2.72	2.10	5.77	1.43	1.35	0.826	1.55	2.47
In.	1.52	3.40	3.20	2.39	2.93	2.42	6.44	1.65	1.51	0.95	1.79	2.76

Calendar year 1959: Max 944 Min 5.9 Mean 77.9 Cfsm 1.62 In. 21.94
Water year 1959-60: Max 1,450 Min 8.8 Mean 110 Cfsm 2.28 In. 30.96

Peak discharge (base, 800 cfs).--Jan. 3 (3 p.m.) 1,480 cfs (7.75 ft); Feb. 11 (4 p.m.) 1,330 cfs (7.5 ft); Mar. 31 (2 p.m.) 1,600 cfs (7.88 ft); Apr. 5 (8 a.m.) 1,680 cfs (8.00 ft); Aug. 10 (3 p.m.) 820 cfs (6.43 ft); Sept. 12 (8 p.m.) 1,900 cfs (8.23 ft); Sept. 20 (9 a.m.) 1,160 cfs (7.22 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1990. Housatonic River at Falls Village, Conn.

Location.--Lat 41°56'56", long 73°22'05", on left bank 0.6 mile downstream from hydroelectric plant of Connecticut Power Co. at Falls Village, Litchfield County, 2 miles downstream from Hollenbeck River, and at mile 75.3.

Drainage area.--632 sq mi.

Records available.--July 1912 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 522.34 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--48 years, 1,083 cfs.

Extremes.--Maximum discharge during year, 12,400 cfs Apr. 6 (gage height, 16.00 ft); minimum, 123 cfs Oct. 30, 31, Nov. 14 (gage height, 1.00 ft); minimum daily, 172 cfs Sept. 11.
1912-60: Maximum discharge, 23,900 cfs Jan. 1, 1949 (gage height, 22.9 ft, from floodmarks); practically no flow at times when powerplant was shut down; minimum daily, 24 cfs Oct. 15, 1914, Sept. 18, 1932.

Remarks.--Records good. Low flow completely regulated by powerplant of Connecticut Power Co. Records of water temperatures for the water year 1960 are given in WSP 1741.

Revisions (water years).--WSP 781: Drainage area.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.4	222	6.0	2,650	1.1	160	6.0	2,670
2.0	445	10.0	5,750	1.5	295	12.0	7,600
3.0	955	15.0	11,100	2.5	800	16.0	12,400

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	1,290	3,420	1,220	730	972	7,200	1,940	1,000	568	1,370	334
2	379	1,550	2,650	1,080	753	836	8,040	1,990	954	524	902	382
3	325	1,480	2,170	2,240	698	920	7,200	1,940	*958	579	673	261
4	234	1,190	1,930	4,740	686	708	7,500	*1,720	1,110	430	468	328
5	252	986	1,820	4,660	714	906	10,700	1,460	1,600	674	579	293
6	276	940	1,710	3,940	737	996	*12,300	1,240	1,400	586	664	273
7	351	1,360	1,820	2,930	967	950	10,900	1,220	1,220	474	492	312
8	682	2,050	2,720	2,290	950	941	7,820	1,030	918	456	428	300
9	1,080	2,050	2,590	1,880	862	812	5,660	1,050	760	364	410	268
10	1,370	1,820	2,290	1,480	856	818	4,580	1,210	644	354	1,180	245
11	1,240	1,450	1,930	1,370	2,510	784	3,700	1,190	614	372	1,900	172
12	826	1,200	1,880	1,360	5,300	754	3,210	1,220	564	419	1,690	1,060
13	606	1,080	3,130	1,290	4,660	758	2,930	1,270	379	326	1,040	3,350
14	540	1,050	3,560	1,320	3,860	666	2,860	1,280	606	502	750	3,140
15	589	1,420	3,140	1,240	2,720	719	2,860	1,200	964	668	590	2,730
16	492	1,990	2,650	1,230	2,140	693	2,930	1,020	1,570	581	1,360	2,090
17	386	2,110	2,230	1,130	1,930	698	2,930	945	1,310	444	974	1,520
18	394	1,930	1,930	1,060	*1,820	721	2,730	1,020	1,140	368	698	1,140
19	353	1,820	1,820	1,060	1,730	715	2,930	1,260	1,080	358	578	816
20	431	1,400	1,700	1,060	1,820	744	2,790	1,370	830	371	488	2,080
21	338	1,220	1,330	1,000	1,700	732	2,550	1,170	786	394	402	3,280
22	386	1,140	1,270	948	1,440	678	2,190	1,010	665	412	365	*2,930
23	376	1,060	1,200	920	1,380	724	1,990	944	526	338	506	2,430
24	1,040	1,090	1,190	916	1,230	700	2,190	1,080	544	341	553	1,940
25	2,110	1,940	1,100	866	1,180	677	2,670	1,190	724	*386	635	1,500
26	2,410	2,930	*1,080	829	1,140	620	2,550	1,370	786	360	570	1,260
27	2,230	2,650	1,060	835	1,220	638	2,310	1,450	526	346	*420	1,220
28	1,660	2,720	960	852	1,180	754	2,430	1,190	718	524	361	1,010
29	1,040	3,780	1,790	830	1,030	1,250	2,310	1,020	558	368	330	909
30	819	3,780	1,760	825	-------	1,700	2,090	679	486	646	348	942
31	779	-------	1,480	782	-------	4,780	-------	762	-------	1,570	358	-------
Total	24,262	52,476	61,310	48,183	47,943	29,364	135,050	38,440	25,940	15,103	22,082	38,515
Mean	783	1,749	1,978	1,554	1,653	947	4,502	1,240	865	487	712	1,284
Cfsm	1.24	2.77	3.13	2.46	2.62	1.50	7.12	1.96	1.37	0.771	1.13	2.03
In.	1.43	3.09	3.61	2.84	2.83	1.73	7.94	2.26	1.53	0.89	1.30	2.26

Calendar year 1959: Max 4,820 Min 116 Mean 1,070 Cfsm 1.69 In. 22.99
Water year 1959-60: Max 12,300 Min 172 Mean 1,472 Cfsm 2.33 In. 31.71

Peak discharge (base, 3,600 cfs).--Nov. 29 (6 p.m.) 4,020 cfs (7.90 ft); Dec. 14 (1 a.m.) 3,700 cfs (7.52 ft); Jan. 4 (5 p.m.) 5,060 cfs (9.19 ft); Feb. 12 (4 a.m.) 5,480 cfs (9.74 ft); Apr. 6 (6 a.m.) 12,400 cfs (16.00 ft); Sept. 13 (1 p.m.) 3,780 cfs (7.55 ft).

* Discharge measurement made on this day.

1994.2. Tenmile River near Wassaic, N. Y.

Location.--Lat 41°46'45", long 73°33'34", on right bank at downstream side of county highway bridge, about 1,000 ft east of State Highway 22, 0.2 mile downstream from confluence of Wassaic and Webatuck Creeks, and 1.6 miles south of Wassaic, Dutchess County.

Drainage area.--120 sq mi.

Records available.--May to November 1959, April to October 1960 (discontinued). Low-flow partial-record station 1956-58.

Gage.--Water-stage recorder. Crest-stage gage since October 1959. Altitude of gage is 415 ft (from topographic map).

Extremes.--1959: Maximum discharge during period May to September, 800 cfs July 21 (gage height, 3.50 ft); minimum, 8.0 cfs Sept. 28, 29, 30 (gage height, 0.44 ft).
1959-60: Maximum discharge during water year, 1,400 cfs Sept. 12 (gage height, 4.44 ft), from rating curve extended above 430 cfs by logarithmic plotting; minimum, 8.0 cfs Oct. 1 (gage height, 0.44 ft).

Remarks.--Records good except those for period of no gage-height record, which are fair.

Rating table, May 27, 1959, to Oct. 14, 1960 (gage height, in feet, and discharge, in cubic feet per second)

0.4	5.8	1.0	53	2.5	360
.5	11	1.5	134	3.0	560
.7	26	2.0	229	3.8	970

Discharge, in cubic feet per second, May to September 1959

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	43	51	33	52
2								-	*65	75	30	34
3								-	250	67	26	79
4								-	165	49	24	124
5								-	120	40	70	57
6								-	95	37	85	39
7								-	75	36	60	31
8								-	65	34	48	*28
9								-	55	31	54	24
10								-	50	29	60	22
11								-	42	29	50	22
12								-	38	28	39	20
13								-	48	27	33	18
14								-	65	28	29	17
15								-	55	28	26	16
16								-	48	27	24	18
17								-	46	25	20	16
18								-	50	22	17	16
19								-	55	22	17	15
20								-	60	94	17	15
21								-	50	532	17	14
22								-	46	161	16	13
23								-	80	115	16	13
24								-	55	86	17	*13
25								-	50	72	20	11
26								-	55	57	17	10
27								67	60	49	15	9.6
28								63	80	43	15	8.6
29								56	*70	*39	20	8.0
30					-------			52	67	36	21	8.0
31		-------			-------		-------	49	-------	34	34	-------
Total								-	2,083	2,003	970	771.2
Mean								-	69.4	64.6	31.3	25.7
Cfsm								-	0.578	0.538	0.261	0.214
In.								-	0.65	0.62	0.30	0.24

Calendar year	: Max	Min	Mean	Cfsm	In.
Water year	: Max	Min	Mean	Cfsm	In.

Peak discharge (base, 600 cfs).--July 21 (7 to 8 a.m.) 800 cfs (3.50 ft).

* Discharge measurement made on this day.
Note.--No gage-height record June 3-29, 1959; discharge estimated on basis of weather records and records for Tenmile River near Gaylordsville, Conn., downstream station.

1994.2. Tenmile River near Wassaic, N. Y.--Continued

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	141					-	200	*110	72	138	64
2	43	115					-	221	98	80	*97	53
3	30	98					-	176	85	73	80	49
4	24	86					-	*161	266	77	72	48
5	19	81					-	147	369	63	136	53
6	17	97					-	138	295	53	162	46
7	56	-					-	129	205	49	107	41
8	128	-					-	127	161	43	95	39
9	155	-					-	165	136	39	81	37
10	108	-					-	166	120	39	212	38
11	70	-					-	145	107	37	277	44
12	64	-					498	147	103	36	183	377
13	52	-					*414	148	117	35	148	962
14	56	-					364	138	100	165	131	320
15	54	-					328	132	214	117	177	221
16	49	-					316	126	267	67	348	176
17	44	-					302	115	161	51	180	147
18	39	-					302	120	163	43	143	132
19	37	(*)					334	127	134	43	129	*147
20	*34	-					264	112	119	64	127	872
21	33	-					242	105	102	45	112	776
22	30	-					229	97	86	39	100	465
23	31	-					211	157	80	38	107	357
24	138	-					225	240	102	39	97	289
25	170	-					229	187	120	34	*81	248
26	110	-					203	172	88	30	73	*223
27	88	-					213	150	*75	36	70	203
28	75	-					207	124	66	54	72	189
29	66	-					180	107	59	39	67	181
30	61	-			-------		166	97	80	278	69	201
31	84	-------			-------		-------	103	-------	358	67	-------
Total	1,985	-	-	-	-	-	-	4,479	4,188	2,236	3,938	6,998
Mean	64.0	-	-	-	-	-	-	144	140	72.1	127	233
Cfsm	0.533	-	-	-	-	-	-	1.20	1.17	0.601	1.06	1.94
In.	0.62	-	-	-	-	-	-	1.39	1.30	0.69	1.22	2.17

Calendar year : Max Min Mean Cfsm Ir.
Water year : Max Min Mean Cfsm Ir.

Peak discharge (base, 600 cfs).--Nov. 29 (1 to 4 a.m.) 660 cfs (3.22 ft); June 4 (4 p.m.) 700 cfs (3.30 ft); July 30 (11 to 12 p.m.) 675 cfs (3.25 ft); Sept. 13 (5 a.m.) 1,400 cfs (4.44 ft); Sept. 19 (7 to 8 p.m.) 1,260 cfs (4.25 ft).

* Discharge measurements made on this day.

Discharge, in cubic feet per second, 1960

Oct. 1	191	Oct. 8	120
2	163	9	115
3	152	10	105
4	141	11	100
5	132	12	92
6	131	13	86
7	132	14	86

Peak discharge (base, 600 cfs).--No peak above base.

2000. Tenmile River near Gaylordsville, Conn.

Location.--Lat 41°39'32", long 73°31'44", on right bank 0.1 mile downstream from Deuel Hollow Brook, 1.2 miles upstream from New York-Connecticut State line, 1.7 miles upstream from mouth, and 2½ miles northwest of Gaylordsville, Litchfield County.

Drainage area.--204 sq mi.

Records available.--October 1929 to September 1960. Monthly discharge only for October to December 1929, published in WSP 1301.

Gage.--Water-stage recorder. Datum of gage is 304.4 ft above mean sea level, datum of 1929 (levels by Connecticut Light & Power Co.).

Average discharge.--31 years, 300 cfs.

Extremes.--Maximum discharge during year, 3,510 cfs Apr. 5 (gage height, 6.66 ft); minimum, 30 cfs Oct. 1 (gage height, 0.82 ft); minimum daily, 43 cfs Oct. 1.

1929-60: Maximum discharge, 17,400 cfs Aug. 19, 1955 (gage height, 14.9 ft, from high-water mark), from rating curve extended above 9,800 cfs by logarithmic plotting; minimum, 5 cfs Sept. 8, 1957; minimum gage height, 0.52 ft Sept. 24, 26, 1938; minimum daily discharge, 7 cfs Oct. 7, 1957.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1431	1956	Oct. 16, 1955	9,620	10.95
1501	1957	Apr. 6, 1957	1,300	4.28
1551	1958	Apr. 7, 1958	2,960	6.25
1621	1959	Jan. 22, 1959	4,720	7.70

Remarks.--Records excellent except those for periods of ice effect, which are good. Infrequent regulation at low flow. Records for chemical analyses and water temperatures for the water year 1960 are published in WSP 1741.

Revisions (water years).--WSP 1201: 1939. Revised figures of discharge, in cubic feet per second, for high-water periods in water years 1955, 1956, 1958, and 1959, superseding those published in WSP 1381, 1420, 1431, 1551, and 1621, are given herewith. Figures of discharges at indicated time, Aug. 20-23, Oct. 15-22, 1955, published in WSP 1420, are too low.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1955		1955-Con.		1955-Con.		1959	
Aug. 20	5,840	Oct. 19	2,690	Apr. 7	2,120	Jan. 22	3,500
21	3,530	20	2,300	8	1,660	Feb. 10	1,700
22	2,270	21	1,580			11	1,640
23	1,540	22	1,240	1958		Mar. 6	1,460
Oct. 15	2,220			Apr. 6	1,350	7	1,650
16	7,960	1956		7	2,750		
17	5,680	Apr. 5	2,450	8	2,260		
18	3,620	6	2,850	9	1,540		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
August 1955	31,212	10,700	12	1,010	4.95	5.71
Water year 1954-55	144,471	10,700	12	396	1.94	26.36
October 1955	37,890	7,960	121	1,222	5.99	6.91
Calendar year 1955	-	10,700	12	499	2.45	33.26
April 1956	32,960	2,850	370	1,099	5.39	6.01
Water year 1955-56	-	7,960	24	459	2.25	30.65
Calendar year 1956	-	2,850	24	304	1.49	20.33
April 1958	28,913	2,750	389	964	4.73	5.28
Water year 1957-58	-	2,750	7	301	1.48	20.06
Calendar year 1958	-	2,750	27	352	1.73	23.40
January 1959	10,340	3,500	70	334	1.64	1.89
February	10,611	1,700	110	379	1.86	1.94
March	15,397	1,650	170	497	2.44	2.81
Water year 1958-59	-	3,500	27	272	1.33	18.08

Revised peak discharge.--1956: Oct. 16 (7 a.m.) 9,620 cfs (10.95 ft); Apr. 6 (8 a.m.) 3,510 cfs (6.72 ft).
1958: Dec. 21 (4 to 5 p.m.) 1,940 cfs (5.15 ft); Apr. 7 (5 to 6 p.m.) 2,960 cfs (6.25 ft).
1959: Jan. 22 (2 p.m.) 4,720 cfs (7.70 ft); Feb. 10 (12 p.m.) 3,070 cfs (6.29 ft); Mar. 6 (7 p.m.) 2,650 cfs (5.94 ft).

2000. Tenmile River near Gaylordsville, Conn.--Continued

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 11

0.9	37	4.0	1,110
1.5	125	5.0	1,820
2.0	242	6.2	2,960
3.0	600		

Feb. 12 to Sept. 30

1.0	57	2.0	260
1.5	138	3.0	600

Note.--Same as preceding table above 3.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	309	600	365	262	389	1,820	324	*220	134	395	107
2	87	279	544	306	250	b310	1,320	389	198	142	284	97
3	76	238	500	1,040	b200	b270	1,030	320	180	142	222	89
4	60	214	468	1,880	b200	b240	1,650	287	255	168	185	84
5	53	196	428	1,160	b190	b325	2,860	*255	539	134	241	89
6	47	189	404	855	b310	b330	*2,850	242	431	114	312	87
7	82	357	710	705	492	b300	1,840	228	359	100	222	80
8	184	440	713	640	400	*b285	1,440	228	281	92	190	76
9	274	365	584	b550	354	b250	1,260	329	240	84	170	73
10	259	321	520	b450	368	b250	1,080	359	210	80	275	67
11	194	288	*464	b415	1,300	b220	905	305	190	77	465	66
12	191	264	550	b375	1,750	b230	805	293	184	76	329	396
13	154	248	1,000	*b380	1,020	248	705	281	205	74	269	1,090
14	147	248	848	b365	780	238	620	266	192	138	240	604
15	141	324	690	376	660	230	572	255	299	259	225	448
16	127	318	636	378	584	228	540	242	470	165	457	359
17	121	309	588	340	*536	238	524	222	326	124	308	296
18	104	354	544	321	528	242	512	218	320	100	*242	250
19	96	312	524	321	804	293	560	230	275	97	218	270
20	84	288	456	309	780	299	468	210	235	*132	218	980
21	89	262	376	291	620	308	425	195	205	114	195	1,050
22	72	250	362	279	572	278	407	185	178	90	178	705
23	70	237	303	267	496	252	383	272	160	80	178	*592
24	205	253	340	b230	452	252	374	464	215	78	170	504
25	362	576	b320	b215	419	258	386	435	240	76	147	431
26	282	620	327	b220	532	225	353	365	198	66	132	386
27	232	508	330	b205	620	222	350	314	170	74	124	359
28	211	582	370	276	512	306	353	260	145	111	118	329
29	186	815	560	321	460	492	317	218	126	104	113	308
30	169	680	476	300	-------	580	290	205	132	379	111	332
31	182	-------	416	267	-------	1,440	-------	218	-------	724	109	-------
Total	4,584	10,645	15,951	14,400	16,451	10,028	26,999	8,614	7,374	4,328	7,042	10,604
Mean	148	355	515	465	567	323	900	278	246	140	227	353
Cfsm	0.725	1.74	2.52	2.28	2.78	1.58	4.41	1.36	1.21	0.686	1.11	1.73
In.	0.84	1.94	2.90	2.63	3.00	1.82	4.92	1.57	1.35	0.79	1.28	1.93

Calendar year 1959: Max 3,500 Min 27 Mean 273 Cfsm 1.34 In. 18.18
Water year 1959-60: Max 2,860 Min 43 Mean 374 Cfsm 1.83 In. 24.97

Peak discharge (base, 1,400 cfs).--Jan. 4 (6 a.m.) 2,220 cfs (5.47 ft); Feb. 12 (3 a.m.) 2,080 cfs (5.30 ft); Apr. 1 (5 a.m.) 2,040 cfs (5.25 ft); Apr. 5 (10 p.m.) 3,510 cfs (6.63 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

2005. Housatonic River at Gaylordsville, Conn.

Location.--Lat 41°39'11", long 73°29'25", on left bank 0.4 mile downstream from hydroelectric plant of Connecticut Light & Power Co., 0.5 mile upstream from bridge on U. S. Highway 7 at Gaylordsville, Litchfield County, 1½ miles downstream from Tenmile River, and at mile 50.6.

Drainage area.--994 sq mi.

Records available.--October 1900 to December 1904 (fragmentary), January 1905 to December 1908 (gage heights only), January 1909 to December 1912 (fragmentary), January 1913 to October 1914 (gage heights only), November 1914 (fragmentary), July 1940 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 236.78 ft above mean sea level, datum of 1929. October 1900 to November 1914, chain gage on covered bridge 0.6 mile downstream at different datum.

Average discharge.--20 years (1940-60), 1,682 cfs.

Extremes.--Maximum discharge during year, 17,100 cfs Apr. 5 (gage height, 11.17 ft); minimum daily, 284 cfs Oct. 1.

1900-14, 1940-60: Maximum discharge, 51,800 cfs Aug. 19, 1955 (gage height, 18.58 ft); minimum observed, about 30 cfs Oct. 28, 1914 (gage height, 2.18 ft, site and datum then in use); minimum daily since July 1940, about 60 cfs Aug. 31, 1944, Sept. 20, 1949.

Flood in May 1854 reached a stage of 21 ft 3 in., former site and datum; reported by observer in 1902. Flood of Sept. 22, 1938, reached a stage of 14.5 ft, from floodmarks, at present site (discharge, 37,000 cfs, by computation of peak flow over dam 2½ miles upstream adjusted for flow from intervening area).

Remarks.--Records good. Ordinary flow regulated by powerplants upstream. Records of chemical analyses and water temperatures for the water year 1960 are given in WSP 1741.

Revisions (water years).--WSP 1301: 1949.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.5	260	4.0	1,920
2.0	450	6.0	4,600
2.5	680	8.0	8,450
3.0	1,000	11.0	16,500

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	284	1,840	4,600	1,860	1,220	1,660	10,300	2,550	*1,210	743	1,960	543
2	494	2,080	3,820	1,600	1,140	1,420	10,600	2,610	1,240	839	1,440	460
3	495	1,980	3,180	3,870	1,080	1,380	9,580	2,430	1,280	799	1,080	446
4	422	1,680	2,800	7,380	1,020	1,120	10,800	2,250	1,540	818	940	386
5	302	1,450	2,550	6,570	1,060	1,380	15,200	*1,920	2,430	693	854	476
6	342	1,330	2,490	5,450	1,230	1,610	16,500	1,810	2,200	834	1,200	450
7	470	2,060	3,060	4,440	1,610	1,480	14,400	1,610	1,810	642	1,020	408
8	790	2,770	3,820	3,460	1,680	1,410	11,000	1,560	1,460	644	781	415
9	1,400	2,800	3,670	2,860	1,510	1,330	8,450	1,610	1,200	566	715	422
10	1,690	2,490	3,250	2,200	1,460	1,330	6,770	1,760	1,080	496	1,150	402
11	1,530	2,060	2,730	2,080	4,560	1,220	5,450	1,710	1,040	508	2,630	436
12	1,330	1,790	2,990	1,810	8,010	1,240	4,600	1,610	934	510	2,320	1,540
13	1,000	1,630	4,930	1,920	6,380	1,140	4,280	1,710	923	548	1,500	4,930
14	798	1,560	5,100	1,860	5,270	1,230	4,120	1,710	727	628	1,250	4,280
15	814	1,860	4,440	1,860	4,120	1,140	3,970	1,610	1,330	1,050	1,060	3,530
16	718	2,490	3,970	1,860	3,180	1,110	3,970	1,420	2,370	918	2,170	2,860
17	660	2,730	3,390	1,760	2,920	1,120	3,970	1,420	1,920	740	1,570	2,030
18	572	2,670	2,920	1,660	2,800	1,130	3,970	1,330	1,710	650	*1,180	1,510
19	579	2,370	2,730	1,560	3,120	1,190	3,970	1,510	1,510	546	1,080	1,210
20	538	1,930	2,490	1,610	3,120	1,260	*3,740	1,610	1,310	600	960	3,440
21	526	1,730	2,030	1,510	2,800	1,230	3,460	1,510	1,170	*619	864	4,930
22	476	1,660	1,950	1,460	2,250	1,220	2,990	1,330	976	478	708	4,120
23	597	1,560	1,590	1,420	2,250	1,120	2,670	1,380	889	515	674	*3,530
24	1,260	1,500	1,690	1,330	1,980	1,160	2,730	1,810	928	488	760	2,800
25	2,730	3,090	1,660	1,280	945	1,160	3,390	1,870	1,040	505	698	2,250
26	2,990	3,970	1,650	1,240	2,140	1,070	3,320	1,860	1,070	482	896	1,810
27	2,800	3,670	1,740	1,240	2,200	970	2,990	1,860	1,010	464	745	1,660
28	2,200	3,820	1,710	1,280	2,080	1,160	3,060	1,660	819	684	584	1,610
29	1,510	5,100	2,570	1,420	1,810	2,120	2,920	1,380	780	688	518	1,380
30	1,300	5,100	2,610	1,400	-------	2,720	2,670	1,180	768	1,060	512	1,420
31	1,170	-------	2,250	1,230	-------	7,200	-------	1,080	-------	2,590	527	-------
Total	32,787	72,770	90,380	72,480	74,945	47,030	185,840	52,670	38,674	22,325	34,346	55,684
Mean	1,058	2,426	2,915	2,338	2,584	1,517	6,195	1,699	1,289	720	1,108	1,856
Cfsm	1.06	2.44	2.93	2.35	2.60	1.53	6.23	1.71	1.30	0.72	1.11	1.87
In.	1.22	2.72	3.38	2.71	2.80	1.76	6.95	1.97	1.45	0.83	1.28	2.08

Calendar year 1959: Max 7,620 Min 170 Mean 1,593 Cfsm 1.60 In. 21.74
Water year 1959-60: Max 16,500 Min 284 Mean 2,131 Cfsm 2.14 In. 29.15

Peak discharge (base, 4,500 cfs).--Nov. 29 (9 p.m.) 5,270 cfs (6.41 ft); Dec. 13 (12 p.m.) 5,450 cfs (6.49 ft); Jan. 4 (10 a.m.) 7,590 cfs (7.57 ft); Feb. 12 (6 a.m.) 8,450 cfs (8.05 ft); Apr. 5 (12 p.m.) 17,100 cfs (11.17 ft).

* Discharge measurement made on this day.

2015. Still River near Lanesville, Conn.

Location.--Lat 41°31'12", long 73°25'07", on left bank at upstream side of highway bridge, a quarter of a mile east of U. S. Highway 7, 1.1 miles south of Lanesville, Litchfield County, 3 miles upstream from mouth, and 4 miles south of New Milford.

Drainage area.--68.5 sq mi.

Records available.--October 1931 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 213.05 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--29 years, 122 cfs.

Extremes.--Maximum discharge during year, 725 cfs Feb. 12 (gage height, 7.29 ft); minimum, 23 cfs Oct. 5, 6; minimum gage height, 1.15 ft Sept. 11; minimum daily discharge, 24 cfs Oct. 5.

1931-60: Maximum discharge, 7,980 cfs Oct. 16, 1955 (gage height, 14.11 ft, from floodmarks), from rating curve extended above 3,000 cfs by logarithmic plotting; minimum, 5 cfs Oct. 20, 1946; minimum daily, 8 cfs Sept. 27, 1948; minimum gage height, 0.77 ft Aug. 10, 1939.

Remarks.--Records good except those for periods of ice effect or backwater from aquatic vegetation, which are fair. Some diurnal fluctuation caused by mills at Brookfield and Danbury.

Revisions (water years).--WSP 781: Drainage area. WSP 801: 1931-35. WSP 851: 1936. WSP 871: 1938. WSP 1031: 1944. WSP 1081: 1946. WSP 1301: 1944(M). WSP 1331: 1936(M), 1938(M), 1941(M).

Rating tables, except periods of ice effect and backwater from aquatic vegetation (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to July 31, Sept. 14-30				Aug. 1 to Sept. 13			
1.3	23	4.0	173	1.2	30	3.0	120
1.5	29	5.0	268	1.5	42	4.0	189
2.0	49	6.0	386	2.0	65	5.3	302
3.0	101	7.1	635				

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	98	157	169	107	209	455	98	64	41	296	37
2	37	95	134	141	101	178	400	141	58	56	180	35
3	31	83	127	260	92	145	268	134	59	68	153	34
4	26	76	120	530	89	141	337	113	56	69	126	32
5	24	72	113	459	89	161	*465	*89	58	76	111	30
6	28	73	107	290	176	161	595	73	*53	53	99	30
7	67	135	238	233	274	141	475	78	49	43	96	31
8	66	223	373	204	238	134	393	80	47	40	84	31
9	102	169	249	182	169	124	360	118	45	37	*70	30
10	176	120	173	149	*165	*120	296	153	45	35	70	30
11	92	101	*149	b130	319	113	248	149	43	31	81	30
12	116	92	186	b120	626	110	238	130	40	31	*77	124
13	98	86	380	b115	498	110	214	110	53	33	74	455
14	76	86	438	b120	360	107	191	95	54	54	67	480
15	73	127	281	127	296	107	182	92	51	113	59	*195
16	58	134	214	134	243	107	191	83	54	92	56	115
17	51	113	186	127	214	110	149	76	53	64	55	86
18	45	134	173	120	196	120	145	72	76	44	54	70
19	42	113	173	120	218	138	153	73	68	40	50	75
20	41	95	157	116	430	141	141	68	54	39	52	186
21	41	89	127	107	360	141	134	68	50	38	53	310
22	38	83	b115	101	274	134	124	65	48	35	49	193
23	38	81	b110	95	238	120	116	82	47	31	50	122
24	120	89	b105	86	209	113	107	116	*49	29	49	95
25	379	262	b100	b81	182	113	104	134	60	26	45	89
26	324	351	b105	b78	269	107	107	120	48	25	43	83
27	168	210	b115	b76	400	98	107	101	42	30	40	78
28	127	178	145	128	325	104	104	83	41	64	39	66
29	101	233	262	186	243	113	98	67	40	62	37	64
30	86	200	296	157	------	127	89	58	40	108	36	68
31	78	------	233	120	------	236	------	60	------	309	36	------
Total	2,776	4,001	5,841	5,061	7,400	4,083	6,986	2,979	1,545	1,816	2,387	3,304
Mean	89.5	133	188	163	255	132	233	96.1	51.5	58.6	77.0	110
Cfsm	1.31	1.94	2.74	2.38	3.72	1.93	3.40	1.40	0.752	0.855	1.12	1.61
In.	1.51	2.16	3.16	2.74	4.01	2.22	3.79	1.61	0.84	0.99	1.29	1.80

Calendar year 1959: Max 934 Min 20 Mean 106 Cfsm 1.55 In. 21.02
Water year 1959-60: Max 626 Min 24 Mean 132 Cfsm 1.93 In. 26.12

Peak discharge (base, 600 cfs).--Jan. 4 (5 p.m.) 615 cfs (7.05 ft); Feb. 12 (1 p.m.) 725 cfs (7.29 ft); Apr. 6 (12 m.) 635 cfs (7.10 ft); Sept. 13 (10 p.m.) 655 cfs (7.13 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Backwater from aquatic vegetation May 6 to July 30.

2025. Shepaug River at Woodville, Conn.

Location.--Lat 41°43'24", long 73°17'37", at left end of dam at outlet of Shepaug Reservoir, 1 mile north of Woodville, Litchfield County, and 3.5 miles upstream from Bantam River.

Drainage area.--38.0 sq mi.

Records available.--October 1935 to September 1960.

Gage.--Nonrecording gage at dam or at auxiliary artificial control below dam; read usually once daily.

Average discharge.--25 years, 86.6 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 2,040 cfs Mar. 31; minimum, 2.4 cfs on many days (result of regulation).
1935-60: Maximum discharge observed, 13,800 cfs Aug. 19, 1955; no flow at times (result of regulation).
Revisions.--The maximum discharge for the water year 1951 has been revised to 2,500 cfs Mar. 31, 1951, superseding figure published in WSP 1201.

Remarks.--Records good. Discharge computed on basis of flow over spillway, through floodgates, and through fountain at toe of dam. Rating curves for floodgates and fountain computed by means of a temporary sharp-crested weir below dam. Rating curve for spillway computed for discharges below 18.5 cfs by means of same weir, and for discharges above 18.5 cfs by a formula selected to fit the spillway-crest sections. At times of ice effect on spillway, flow computed from gage readings at permanent artificial control below the dam, which was calibrated with the sharp-crested weir. Water diverted from Shepaug River for municipal supply of Waterbury. Flow regulated since September 1933 by Shepaug Reservoir (see p. 274).

Cooperation.--Records furnished by Bureau of Engineering, city of Waterbury.

Revisions (water years).--WSP 971: 1936-42. WSP 1231: 1937(M), 1940-41(M), 1943-45(M), 1947, 1948(M), 1950(M). WSP 1301: 1936.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	210	165	57	42	49	902	78	26	2.4	158	2.4
2	2.4	138	138	49	40	44	625	98	20	2.4	90	2.4
3	2.4	98	122	397	37	44	416	67	12	2.4	57	2.4
4	2.4	64	110	400	33	42	878	57	163	2.4	51	2.4
5	2.4	59	98	250	35	42	1,120	51	198	2.4	51	2.4
6	2.4	59	92	158	82	44	635	44	98	2.4	90	2.4
7	2.4	209	251	131	101	46	385	38	69	2.4	49	2.4
8	2.4	226	250	107	64	46	284	38	53	2.4	24	2.4
9	2.4	138	162	84	59	44	279	98	38	2.4	7.9	2.4
10	2.4	104	131	69	55	42	218	113	31	2.4	82	2.4
11	2.4	90	101	58	987	38	180	71	26	2.4	198	2.4
12	2.4	90	278	48	693	35	155	67	24	2.4	84	2.4
13	2.4	71	666	50	302	35	145	71	38	2.4	46	334
14	2.4	69	284	52	202	35	125	64	29	2.4	35	173
15	2.4	76	214	55	155	33	110	53	93	2.4	29	119
16	2.4	101	173	62	131	33	104	53	238	2.4	46	76
17	2.4	128	145	59	116	33	98	42	119	2.4	38	53
18	2.4	128	125	53	98	37	95	18	110	2.4	38	42
19	2.4	82	101	51	113	38	98	35	71	2.4	33	53
20	2.4	76	79	49	119	38	84	21	53	2.4	44	348
21	2.4	64	71	46	98	38	71	38	40	2.4	38	284
22	2.4	64	67	44	79	37	71	35	13	2.4	29	173
23	2.4	53	57	42	67	35	67	55	8.8	2.4	24	113
24	83	86	53	40	62	31	67	92	21	2.4	21	90
25	385	450	51	38	59	31	76	92	33	2.4	18	74
26	218	328	51	38	92	28	64	84	13	2.4	2.4	59
27	145	202	67	38	107	28	67	64	5.3	2.4	2.4	53
28	107	348	84	44	84	74	59	38	2.4	2.4	2.4	44
29	87	371	101	46	64	155	53	28	2.4	2.4	2.4	42
30	64	226	84	44	-------	230	46	20	2.4	2.4	2.4	46
31	92	-------	67	44	-------	1,440	-------	24	-------	324	2.4	-------
Total	1,236.2	4,408	4,438	2,703	4,176	2,925	7,577	1,747	1,650.3	396.0	1,395.3	2,204.8
Mean	39.9	147	143	87.2	144	94.4	253	56.4	55.0	12.8	45.0	73.5
(†)	+25.9	0	-0.7	-0.1	+0.1	+2.7	-2.8	+4.5	+6.4	+25.6	+6.6	+11.2

Adjusted for diversion and change in contents in Shepaug Reservoir

Mean	65.8	147	142	87.1	144	97.1	250	60.9	61.4	38.4	51.6	84.7
Cfsm	1.73	3.87	3.74	2.29	3.79	2.56	6.58	1.60	1.62	1.01	1.36	2.23
In.	1.99	4.32	4.31	2.64	4.09	2.95	7.34	1.84	1.81	1.16	1.57	2.49

	Observed			Adjusted			
Calendar year 1959:	Max 808	Min 2.4	Mean 74.5	Mean 82.8	Cfsm 2.18	In. 29.58
Water year 1959-60:	Max 1,440	Min 2.4	Mean 95.2	Mean 102	Cfsm 2.68	In. 36.51

† Diversion from, and change in contents, equivalent in cubic feet per second, in Shepaug Reservoir.

2030. Shepaug River near Roxbury, Conn.

Location.--Lat 41°32'59", long 73°19'49", on right bank at downstream side of Wellers Bridge on Wellers Bridge road, half a mile south of Roxbury Station, 1½ miles southwest of village of Roxbury, Litchfield County, and 2.4 miles upstream from Jack's Brook.

Drainage area.--133 sq mi.

Records available.--October 1930 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 281.98 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--30 years, 251 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 2,740 cfs Apr. 5 (gage height, 6.55 ft); minimum, 19 cfs Sept. 11 (gage height, 1.14 ft).

1930-60: Maximum discharge, 50,300 cfs Aug. 19, 1955 (gage height, 17.2 ft, from floodmarks), from rating curve extended above 3,500 cfs on basis of computation of flow over dam at gage heights 10.77 and 12.8 ft and slope-area measurement of peak flow; minimum, 2 cfs Oct. 6, 1951; minimum gage height, 1.01 ft Aug. 14, 15, 18-21, 1957.

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1501	1957	Apr. 6, 1957	1,240	4.52
1551	1958	Dec. 21, 1957	2,560	6.35
1621	1959	Mar. 6, 1959	2,920	6.85

Remarks.--Records excellent except those for periods of ice effect, which are good. Diurnal fluctuations from an unknown cause during low flow. Water diverted from Shepaug Reservoir for municipal supply of city of Waterbury. Flow regulated by Shepaug Reservoir (see p. 274).

Revisions (water years).--WSP 801: 1931-36. WSP 971: 1936, 1939-40, 1942. WSP 1301: 1936(M), 1947(M). Revised figures of discharge for the water years 1958-59, superseding those published in WSP 1551 and 1621, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1958		1958-Con.		1958-Con.		1959-Con.	
Apr. 6	1,140	May 16	354	Nov. 9	321	Mar. 21	695
7	1,960	17	333	10	327	22	638
8	1,360	18	306	11	306	23	406
9	1,040	19	309	12	279	24	357
10	870	20	297	13	261	25	354
11	870	21	273	14	249	26	360
12	870	22	246	15	240	27	367
13	895	23	231	16	237	28	309
14	920	24	208	17	225	29	279
15	795	25	297	18	240	30	282
16	720	26	384	19	231	31	364
17	670	27	294	20	216	Apr. 1	426
18	590	28	246	21	202	2	587
19	550	29	213	22	192	3	1,250
20	490	30	192	23	182	4	745
21	446	31	175	24	178	5	590
22	412	Oct. 1	374	25	172	6	530
23	530	2	462	26	185	7	474
24	550	3	306	27	228	8	430
25	446	4	252	28	272	9	423
26	392	5	219	29	995	10	486
27	354	6	190	30	524	11	795
28	599	7	175			12	630
29	670	23	188	1959		13	510
30	920	24	264	Mar. 4	558	14	454
May 1	650	25	255	5	533	15	409
2	550	26	1,060	6	1,570	16	378
3	506	27	795	7	942	17	360
4	570	28	550	8	454	18	345
5	530	29	458	9	374	19	333
6	510	30	406	10	348	20	454
7	650	31	364	11	294	21	486
8	670	Nov. 1	333	12	264	22	392
9	610	2	306	13	261	23	348
10	498	3	540	15	225	24	327
11	446	4	510	16	528	25	306
12	409	5	454	17	446	26	297
13	374	6	406	18	367	27	330
14	342	7	364	19	327	28	381
15	336	8	333	20	693	29	434
						30	374

2030. Shepaug River near Roxbury, Conn.--Continued

Revised figures of monthly discharge, in cubic feet per second, 1958-59

Month	Observed				Adjusted†		
	Cfs-days	Maximum	Minimum	Mean	Mean	Per square mile	Runoff in inches
April 1958	22,619	1,960	354	754	754	5.67	6.33
May	12,009	670	178	387	386	2.90	3.34
Water year 1957-58	-	1,960	8.5	248	260	1.95	26.51
October 1958	8,116	1,060	71	262	262	1.97	2.27
November	9,508	995	172	317	319	2.40	2.68
Calendar year 1958	-	1,960	12	277	282	2.12	28.77
March 1959	13,060	1,570	140	421	424	3.19	3.68
April	14,284	1,250	297	476	476	3.58	3.99
Water year 1958-59	-	1,570	14	221	228	1.71	23.21

Revised peak discharge.--1957-58: Dec. 21 (11 a.m.) 2,560 cfs (6.35 ft); Dec. 27 (5 a.m.) 1,800 cfs (5.41 ft); Apr. 7 (3 a.m.) 2,400 cfs (6.25 ft).
1958-59: Oct. 26 (3 p.m.) 1,390 cfs (4.76 ft); Jan. 22 (11 a.m.) 1,420 cfs (4.82 ft); Feb. 10 (10 a.m.) 2,320 cfs (6.12 ft); Mar. 6 (8 p.m.) 2,920 cfs (6.85 ft); Apr. 3 (4 a.m.) 1,630 cfs (5.17 ft).

† Adjusted for diversion and change in contents in Shepaug Reservoir.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	15	2.5	350
1.2	24	3.0	550
1.4	51	4.0	1,040
1.7	111	5.0	1,540
2.0	190	6.2	2,400

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	454	510	b260	175	b250	1,580	263	168	52	303	48
2	48	374	462	b240	170	b230	1,250	312	128	67	225	44
3	36	315	423	1,160	b165	b220	1,040	252	121	55	185	38
4	32	279	395	952	b160	b210	*1,700	216	854	79	165	32
5	31	264	367	630	b150	b200	*2,350	*195	700	60	170	30
6	45	258	348	530	290	b210	1,900	180	*423	50	205	25
7	83	456	713	458	324	b220	1,330	168	348	44	165	24
8	62	494	610	*420	258	b210	1,120	172	300	42	137	22
9	250	384	498	b360	240	b195	1,020	303	261	35	*110	21
10	128	342	434	b310	*246	b190	845	300	228	36	186	20
11	117	312	*392	b270	1,640	b185	720	246	205	34	337	21
12	148	297	629	b230	1,290	b180	630	225	216	33	219	438
13	100	273	1,240	b240	790	b175	550	225	225	26	172	640
14	104	297	795	b250	630	168	498	219	192	79	148	356
15	102	354	630	b265	530	160	450	202	225	114	260	*273
16	81	309	570	b265	470	160	412	190	384	75	162	222
17	81	328	510	b240	423	162	384	152	270	65	185	190
18	79	354	458	b225	402	170	382	148	264	60	160	172
19	73	303	450	231	550	172	384	155	222	55	148	250
20	69	273	384	b210	462	175	342	140	178	56	150	662
21	67	255	b330	b195	398	175	318	135	135	36	138	508
22	60	246	b310	b185	370	160	306	140	111	30	175	374
23	64	237	b290	b180	339	160	282	166	89	28	161	315
24	459	291	b260	b175	315	150	279	252	*124	26	121	273
25	745	878	b270	b185	291	160	285	264	135	23	102	243
26	454	638	270	b170	484	135	261	249	96	21	71	222
27	374	490	270	b160	426	152	261	210	79	38	67	200
28	327	729	323	210	351	222	240	178	54	91	62	188
29	288	805	406	210	b315	338	225	150	51	46	58	178
30	261	590	321	202	--------	435	205	135	57	306	53	188
31	274	--------	b270	b180	--------	1,630	--------	148	--------	524	50	--------
Total	5,074	11,879	14,138	9,798	12,654	7,559	21,559	6,290	6,843	2,286	4,850	6,217
Mean	164	396	456	316	436	244	719	203	228	73.7	156	207
(†)	+25.9	0	-0.7	-0.1	+0.1	+2.7	-2.8	+4.5	+6.4	+25.6	+6.6	+11.2
Adjusted for diversion and change in contents in Shepaug Reservoir												
Mean	190	396	455	316	436	247	716	208	234	99.3	163	218
Cfsm	1.43	2.98	3.42	2.38	3.28	1.86	5.38	1.56	1.76	0.747	1.23	1.64
In.	1.65	3.32	3.94	2.74	3.54	2.14	6.00	1.80	1.96	0.86	1.42	1.83

	Observed			Adjusted				
Calendar year 1959:	Max 1,570	Min 14	Mean 239	Mean 247	Cfsm 1.86	In. 25.23
Water year 1959-60:	Max 2,350	Min 20	Mean 298	Mean 305	Cfsm 2.29	In. 31.20

Peak discharge (base, 1,500 cfs).--Jan. 3 (4 p.m.) 1,760 cfs (5.34 ft); Feb. 11 (7 p.m.) 2,560 cfs (6.38 ft); Mar. 31 (5 to 6 p.m.) 2,240 cfs (5.96 ft); Apr. 5 (2 to 4 p.m.) 2,740 cfs(6.55 ft); June 4 (5 p.m.) 1,940 cfs (5.55 ft).

* Discharge measurement made on this day.
† Diversion from, and change in contents, equivalent in cubic feet per second, in Shepaug Reservoir.
b Stage-discharge relation affected by ice.

2040. Pomperaug River at Southbury, Conn.

Location.--Lat 41°28'50", long 73°13'30", on right bank 200 ft upstream from highway bridge, 800 ft downstream from Bullet Hill Brook, 0.6 mile west of Southbury, New Haven County, and 5.8 miles upstream from mouth.

Drainage area.--75.3 sq mi.

Records available.--June 1932 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 165.60 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--28 years, 130 cfs.

Extremes.--Maximum discharge during year, 2,010 cfs Jan. 3 (gage height, 8.03 ft); minimum, 10 cfs Oct. 1 (gage height, 2.61 ft).
1932-60: Maximum discharge, 29,400 cfs Aug. 19, 1955 (gage height, 21.8 ft, from floodmarks), from rating curve extended above 1,200 cfs by computation of flow over dam at gage height 16.0 ft and by slope-area measurement of peak flow; minimum, 3.3 cfs Aug. 27, 1949; minimum gage height, 2.31 ft Aug. 10, 1957.

Remarks.--Records excellent. Occasional regulation at low flow by mill upstream.

Revisions (water years).--WSP 781: Drainage area. WSP 851: 1934(M), 1936(M). WSP 1201: 1933-34, 1935(M), 1937(M).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

2.6	10	4.0	206
2.8	20	4.5	337
3.0	40	5.0	515
3.5	111	6.1	1,020

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	193	213	152	109	185	626	165	88	28	80	23
2	23	141	196	141	103	156	360	166	73	48	57	20
3	17	111	185	927	89	137	293	125	66	38	46	19
4	15	100	181	536	89	152	*790	106	185	49	40	18
5	12	95	156	328	95	157	1,020	*95	176	34	43	19
6	37	94	152	260	426	144	615	88	*111	29	57	18
7	102	282	471	228	278	135	440	80	80	27	38	17
8	57	238	289	210	183	133	435	83	66	25	32	15
9	215	173	*224	179	*173	120	391	210	58	23	*29	14
10	110	144	193	152	183	*116	315	169	52	23	67	14
11	74	128	173	146	896	103	273	142	46	22	80	16
12	142	120	426	139	497	103	262	128	56	20	53	522
13	73	106	721	146	325	105	228	130	83	19	43	335
14	80	130	357	144	252	103	210	116	60	49	38	137
15	66	203	275	146	219	101	196	111	62	52	42	*90
16	53	142	252	156	196	100	185	98	63	32	261	73
17	46	168	224	135	193	105	173	88	56	26	103	60
18	43	174	208	128	191	118	179	95	95	23	69	53
19	34	137	217	128	499	139	175	103	62	23	60	117
20	32	121	177	120	321	139	154	84	49	33	62	794
21	29	114	154	109	245	137	144	77	48	27	53	303
22	27	111	152	105	224	120	139	73	36	21	46	191
23	28	103	133	101	206	106	132	116	34	19	61	152
24	462	162	130	92	185	108	133	148	*40	19	44	125
25	354	640	130	90	173	121	128	185	40	17	34	106
26	196	313	132	88	522	93	120	168	33	16	29	94
27	156	235	146	86	353	99	123	123	29	32	27	84
28	137	382	200	154	250	146	116	95	26	72	26	83
29	111	349	311	154	219	185	103	83	25	36	23	80
30	100	245	210	142	-------	246	95	73	27	269	23	103
31	103	-------	173	120	-------	850	-------	95	-------	171	21	-------
Total	2,946	5,654	7,161	5,742	7,694	4,762	8,553	3,618	1,925	1,322	1,687	3,695
Mean	95.0	188	231	185	265	154	285	117	64.2	42.6	54.4	123
Cfsm	1.26	2.50	3.07	2.46	3.52	2.05	3.78	1.55	0.853	0.566	0.722	1.63
In.	1.46	2.79	3.54	2.84	3.80	2.35	4.22	1.79	0.95	0.65	0.83	1.82

Calendar year 1959: Max 1,160 Min 9.6 Mean 121 Cfsm 1.61 In. 21.81
Water year 1959-60: Max 1,020 Min 12 Mean 150 Cfsm 1.99 In. 27.04

Peak discharge (base, 1,400 cfs).--Jan. 3 (4 p.m.) 2,010 cfs (8.03 ft); Sept. 12 (8:30 p.m.) 1,470 cfs (7.03 ft); Sept. 20 (10:30 a.m.) 1,420 cfs (6.88 ft).

* Discharge measurement made on this day.

2048. Copper Mill Brook near Monroe, Conn.

Location.--Lat 41°21'46", long 73°13'08", on right bank just upstream from twin culverts on Hammertown Road, 700 ft upstream from mouth, 1¼ miles west of Connecticut Highway 111, 2.2 miles northwest of Monroe, Fairfield County, and 2.2 miles east of Bottsford.

Drainage area.--2.50 sq mi.

Records available.--June 1958 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 331.05 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 283 cfs Sept. 12 (gage height, 5.84 ft), from rating curve extended above 40 cfs by logarithmic plotting; minimum, 0.21 cfs Oct. 3-6, Sept. 10, 11 (gage height, 0.42 ft).
1958-60: Maximum discharge, that of Sept. 12, 1960; minimum, 0.12 cfs Aug. 28, 29, 1959 (gage height, 0.39 ft).

Remarks.--Records good. Infrequent regulation at low flow.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

0.4	0.16	1.2	10.5
.5	.53	1.6	21
.6	1.2	2.2	46
.7	2.1	2.8	78
.9	4.8		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.24	2.2	4.8	5.4	4.4	6.4	19	8.9	*2.0	1.9	1.8	0.63
2	.35	1.6	3.8	4.8	4.0	5.4	13	6.8	1.7	3.2	1.4	.43
3	.24	1.2	4.2	54	3.8	4.0	10	3.9	1.8	2.7	1.1	.35
4	.21	1.0	4.2	17	3.3	5.6	27	3.4	6.5	4.4	.79	.31
5	.24	1.0	4.4	9.6	3.9	5.6	36	2.9	2.8	1.6	.79	.43
6	.24	1.3	4.4	7.7	26	5.6	17	2.8	2.0	.92	.92	.43
7	.35	12	27	7.2	12	5.4	14	2.7	1.4	.79	.79	.31
8	.53	5.4	9.4	7.2	6.4	5.1	12	3.2	1.1	.63	1.2	.27
9	2.7	3.1	*6.4	5.9	*7.0	*5.1	10	*10	1.0	.53	.92	.27
10	1.0	2.1	5.6	4.8	7.4	4.8	7.5	5.9	.92	.53	2.2	.27
11	1.0	1.8	4.8	4.5	29	4.6	6.1	5.0	.79	.48	1.8	.35
12	2.1	1.7	20	5.0	14	4.4	7.9	4.0	1.7	.48	1.2	76
13	.79	1.6	32	5.4	8.1	4.0	*7.4	4.5	2.0	.43	1.0	15
14	1.6	4.3	11	5.1	7.7	4.0	7.2	3.9	1.4	2.0	.92	*4.4
15	.92	13	8.1	5.4	7.0	4.0	7.0	3.6	2.0	1.4	.85	2.6
16	.73	4.4	7.7	6.2	6.1	4.0	6.1	2.7	1.7	.85	.79	2.1
17	.63	4.8	7.0	5.0	6.4	4.8	5.8	2.3	1.4	.73	.73	1.8
18	.58	4.4	6.6	4.8	6.8	5.9	6.4	2.9	1.7	.53	.63	1.9
19	.48	3.0	7.4	5.8	43	6.4	5.9	2.7	1.2	.73	.92	7.0
20	.43	2.7	5.3	4.8	15	6.6	5.3	2.1	.92	.48	1.0	16
21	.43	2.6	4.2	4.0	9.6	5.9	4.8	2.8	.85	.39	.79	6.1
22	.39	2.5	4.8	3.9	8.3	5.4	4.4	2.3	.68	.39	.85	3.8
23	.58	2.3	4.4	3.8	7.4	4.6	4.4	8.5	.94	.48	.79	3.1
24	21	8.2	3.8	3.3	6.4	5.4	4.0	6.4	2.7	.48	.63	2.8
25	7.4	27	3.9	3.3	5.9	5.8	4.0	5.4	1.4	.39	.53	2.3
26	2.2	8.3	4.4	3.1	37	4.0	4.6	3.9	.92	.31	.48	2.1
27	1.9	5.8	6.1	3.2	13	4.8	4.2	2.6	1.0	2.3	.48	1.9
28	1.7	12	*9.4	11	9.0	6.6	3.8	2.1	.58	2.0	.43	2.5
29	1.3	8.3	20	8.1	7.7	6.4	3.3	1.9	.53	.92	.31	2.9
30	1.2	5.6	9.0	6.1	-------	8.8	2.7	1.7	*.63	28	.48	4.4
31	1.6	-------	7.0	4.8	-------	72	-------	2.3	-------	5.5	.79	-------
Total	55.06	155.2	261.1	230.2	325.6	231.4	270.8	124.1	46.26	66.47	28.31	162.75
Mean	1.78	5.17	8.42	7.43	11.2	7.46	9.03	4.00	1.54	2.14	C.913	5.42
Cfsm	0.712	2.07	3.37	2.97	4.48	2.98	3.61	1.60	0.616	0.856	C.365	2.17
In.	0.82	2.31	3.88	3.42	4.83	3.44	4.05	1.84	0.69	0.99	0.42	2.42

Calendar year 1959: Max 85 Min 0.14 Mean 4.49 Cfsm 1.80 In. 24.37
Water year 1959-60: Max 76 Min 0.21 Mean 5.35 Cfsm 2.14 In. 29.09

Peak discharge (base, 100 cfs).--Jan. 3 (12 m.) 146 cfs (3.86 ft); Mar. 31 (9 a.m.) 143 cfs (3.78 ft); Sept. 12 (4:30 p.m.) 283 cfs (5.84 ft).

* Discharge measurement made on this day.

2055. Housatonic River at Stevenson, Conn.

Location.--Lat 41°23'05", long 73°10'05", on left bank in New Haven County, 0.2 mile downstream from dam of Connecticut Light & Power Co. at Stevenson, Fairfield County, 0.2 mile upstream from Eightmile Brook, and at mile 19.2.
Drainage area.--1,545 sq mi.
Records available.--August 1928 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 24.98 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).
Average discharge.--32 years, 2,625 cfs (adjusted for storage and diversion).
Extremes.--Maximum discharge during year, 30,100 cfs Apr. 5 (gage height, 15.7 ft); minimum, 13 cfs July 17 (gage height, 0.05 ft); minimum daily, 80 cfs July 23.
1928-60: Maximum discharge, 75,800 cfs Oct. 16, 1955 (gage height, 24.50 ft), from rating curve extended above 35,000 cfs on basis of computations of flow at Stevenson and Derby Dams and slope-area measurements at gage heights 21.5 and 23.5 ft; practically no flow at times, result of regulation.
Remarks.--Records excellent except those for periods of no gage-height record, which are good. Ordinary flow completely regulated by Stevenson hydroelectric plant. Flow regulated by Lake Candlewood, Lake Lillinonah, Lake Zoar, and Shepaug Reservoir, having a combined usable capacity of 6,840,000,000 cu ft (see p. 274), and by small diversion from basin at Shepaug Reservoir.
Revisions (water years).--WSP 711: 1929(M). WSP 781: Drainage area. WSP 1231: 1951. WSP 1301: 1933-34(M), 1936-37.

Rating tables, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 1

0.9	82	3.0	660	10.0	11,200
1.0	94	4.0	1,250	12.0	16,600
1.5	170	5.0	2,130	14.8	26,500
2.0	285	7.0	4,860		

June 2 to Sept. 30

0.9	70	1.5	160
1.0	81	2.0	285

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	3,220	6,800	1,380	2,640	a2,900	15,700	2,670	*2,000	1,760	2,650	1,280
2	264	2,820	6,120	2,070	2,570	a3,100	11,400	4,620	2,120	166	2,820	692
3	240	2,800	5,120	9,330	2,160	a3,000	13,000	3,850	1,980	646	2,590	144
4	87	2,360	4,880	10,400	2,050	a2,400	16,900	3,160	2,150	867	2,950	186
5	364	2,190	4,150	9,080	2,100	a3,200	26,500	3,150	3,290	1,520	1,900	168
6	138	2,640	2,620	7,820	2,280	a3,700	21,000	2,710	3,410	1,360	990	676
7	930	4,160	5,510	7,200	2,670	a3,800	14,500	1,140	3,140	1,200	1,040	454
8	1,070	4,390	6,410	6,420	3,430	a2,600	14,200	1,130	3,210	1,070	1,080	706
9	3,790	3,770	*5,800	2,900	2,760	a3,000	10,400	4,480	2,960	1,420	1,040	800
10	3,100	3,520	5,940	2,450	*3,260	*2,400	7,400	*3,080	2,460	332	1,100	1,430
11	268	2,950	5,310	3,280	6,770	2,180	7,400	2,930	118	1,040	1,720	*379
12	940	2,690	5,340	3,140	15,100	785	6,800	2,620	1,070	1,860	2,950	5,820
13	688	2,600	8,480	3,340	8,260	96	7,000	4,170	1,750	922	3,580	6,940
14	1,560	1,180	7,000	3,750	7,400	2,050	7,000	794	1,970	1,210	1,040	6,420
15	723	3,510	7,000	4,050	7,400	2,580	5,520	104	1,970	1,240	1,620	5,690
16	792	3,340	7,400	1,850	6,060	2,590	4,500	2,640	1,880	165	2,210	2,740
17	1,270	3,650	6,800	872	a4,280	a2,900	4,480	2,470	2,060	196	2,790	244
18	89	4,380	6,600	4,080	a4,100	a2,700	4,390	2,580	2,170	1,100	1,810	342
19	1,130	3,920	2,860	4,230	6,490	a620	5,220	3,080	1,880	788	3,260	1,480
20	878	4,040	1,750	2,320	6,420	a1,600	5,220	888	1,930	852	1,110	5,660
21	1,050	1,380	3,810	3,010	a5,200	a2,300	4,870	3,860	2,050	1,220	549	5,600
22	905	1,320	3,830	2,890	a4,500	a3,100	5,170	364	1,800	*1,100	877	6,300
23	854	2,730	3,560	1,690	a3,750	a2,300	4,760	3,440	1,430	80	1,800	6,210
24	3,420	3,660	2,080	918	a3,900	a2,100	2,050	3,340	1,430	149	1,810	3,760
25	4,200	5,680	301	2,480	a4,050	a3,100	4,230	3,330	1,140	1,160	1,300	980
26	4,840	5,210	2,170	1,920	a4,500	a640	4,950	3,500	338	1,170	461	951
27	4,120	6,260	1,910	2,320	a4,100	a330	4,880	3,430	1,370	1,130	706	2,930
28	3,590	3,980	4,460	2,980	a4,000	a1,600	3,970	962	1,500	1,430	310	3,310
29	2,560	7,000	4,590	2,180	a3,300	a3,400	4,730	862	1,340	1,280	1,850	2,120
30	2,010	7,000	5,210	554	--------	4,750	3,660	211	1,310	4,360	1,720	1,250
31	914	--------	4,870	1,160	--------	13,400	--------	3,000	--------	2,040	1,560	--------
Total	47,824	108,350	148,681	112,064	135,500	85,221	251,800	78,565	57,226	34,833	53,193	75,662
Mean	1,543	3,612	4,796	3,615	4,672	2,749	8,393	2,534	1,908	1,124	1,716	2,522
(†)	+199	+33	-135	+110	-90	-128	-28	-19	+14	0	+14	+14
Adjusted for diversion and change in reservoir contents												
Mean	1,742	3,645	4,661	3,725	4,582	2,621	8,365	2,515	1,922	1,124	1,730	2,534
Cfsm	1.13	2.36	3.02	2.41	2.97	1.70	5.41	1.63	1.24	0.728	1.12	1.64
In.	1.30	2.63	3.48	2.78	3.20	1.96	6.04	1.88	1.38	0.84	1.29	1.83

	Observed			Adjusted				
Calendar year 1959:	Max 13,600	Min 86	Mean 2,482	Mean 2,487	Cfsm 1.61	In. 21.87		
Water year 1959-60:	Max 26,500	Min 80	Mean 3,248	Mean 3,250	Cfsm 2.10	In. 28.61		

* Discharge measurement made on this day.
† Change in contents in Candlewood, Lillinonah, and Zoar Lakes, Shepaug Reservoir, and small diversion from basin at Shepaug Reservoir, equivalent in cubic feet per second; furnished by Connecticut Light & Power Co., and city of Waterbury.
a No gage-height record; discharge estimated on basis of power generated at Stevenson hydroelectric plant upstream.

2056. West Branch Naugatuck River at Torrington, Conn.

Location.--Lat 41°48'03", long 73°07'26", on right bank at upstream side of Prospect Street Bridge in Torrington, Litchfield County, half a mile upstream from confluence with East Branch, and 3 miles downstream from Stillwater Pond.

Drainage area.--33.4 sq mi.

Records available.--August 1956 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 543.54 ft above mean sea level, datum of 1929. Prior to Nov. 9, 1959, wire-weight gage (crest-stage gage since Dec. 18, 1956), on downstream side of bridge at datum 3.00 ft lower. Nov. 9, 1959, to May 23, 1960, wire-weight gage and crest-stage gage at present site and datum.

Extremes.--Maximum discharge during year, 3,600 cfs Sept. 12 (gage height, 7.46 ft); minimum, 4.9 cfs June 28, 29, July 13 (gage height, 1.23 ft).
1956-60: Maximum discharge, that of Sept. 12, 1960; minimum observed, 4.4 cfs July 14, 20, 21, Aug. 3, 11, 1957.
Maximum discharge known occurred on Aug. 19, 1955 (discharge, 11,900 cfs, by computation of peak flow over dam 3 miles upstream; drainage area, 24.2 sq mi).

Remarks.--Records good except those for periods of no gage-height record, which are fair. City of Torrington diverts an average of about 4,000,000 gal of water per day for municipal supply from North Pond, and Reuben Hart and Hatchaloosie Reservoirs. Regulation at low flow by Stillwater Pond.

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	63	74	46	38	29	614	53	34	29	46	14
2	23	36	72	46	32	24	396	76	26	34	28	14
3	10	34	64	576	28	23	348	51	23	26	23	13
4	9.0	31	63	*281	32	37	847	41	347	24	20	14
5	10	27	59	123	32	40	938	37	214	17	33	16
6	9.0	27	64	86	56	34	386	32	125	14	53	15
7	24	132	184	73	79	32	190	30	64	11	28	14
8	27	79	141	64	64	30	173	29	43	10	26	31
9	132	77	86	56	54	24	159	49	33	9.8	21	43
10	74	60	72	52	59	28	141	54	26	8.6	158	43
11	34	53	62	54	787	26	*113	51	23	8.6	145	46
12	38	48	227	54	471	28	119	44	25	8.2	68	442
13	25	*48	*425	54	145	30	105	51	26	12	41	*310
14	27	80	152	49	129	27	90	45	22	112	36	95
15	24	69	108	51	82	25	85	37	86	*64	33	53
16	20	52	97	44	66	21	80	39	136	26	57	43
17	17	67	73	44	*64	31	73	29	60	17	43	34
18	16	64	73	43	*61	28	80	*35	57	14	31	31
19	16	51	77	46	106	30	79	49	43	12	*26	63
20	14	45	49	40	78	32	63	35	31	33	30	340
21	14	48	46	40	63	33	56	35	23	21	26	152
22	13	42	45	38	55	28	56	24	19	12	24	90
23	15	36	38	38	55	26	50	45	17	11	24	72
24	300	*125	39	36	47	27	73	51	36	10	22	59
25	127	446	42	33	44	26	74	66	36	8.2	17	49
26	84	156	*42	32	73	27	56	72	25	7.0	14	46
27	55	99	54	28	70	26	53	48	20	24	18	43
28	44	473	72	36	51	63	49	34	13	100	20	41
29	*42	178	64	41	*48	106	43	28	10	28	16	42
30	36	105	60	39	-------	167	35	24	34	218	14	36
31	40	-------	49	34	-------	*1,010	-------	*34	-------	140	14	-------
Total	1,343.0	2,851	2,773	2,277	2,969	2,118	5,624	1,328	1,677	1,069.4	1,155	2,304
Mean	43.3	95.0	89.5	73.5	102	68.3	187	42.8	55.9	34.5	37.3	76.8
Cfsm	1.30	2.84	2.68	2.20	3.05	2.04	5.60	1.28	1.67	1.03	1.12	2.30
In.	1.50	3.17	3.09	2.54	3.29	2.35	6.25	1.48	1.86	1.19	1.29	2.57

Calendar year 1959: Max 680 Min 9.0 Mean 58.2 Cfsm 1.74 In. 23.63
Water year 1959-60: Max 1,010 Min 7.0 Mean 75.1 Cfsm 2.25 In. 30.58

Peak discharge (base, 1,200 cfs).--Mar. 31 (about 12 m.) 1,280 cfs (5.1 ft); Sept. 12 (about 4 p.m.) 3,600 cfs (7.46 ft).

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-24, Dec. 12, 13, Feb. 11, 12; discharge estimated on basis of weather records and records for East Branch and Naugatuck River at Thomaston.

2057. East Branch Naugatuck River at Torrington, Conn.

Location.--Lat 41°48'12", long 73°07'06", on upstream side of Wall Street Bridge in Torrington, Litchfield County, 0.3 mile downstream from Troy Brook and 0.6 mile upstream from confluence with West Branch.

Drainage area.--13.8 sq mi.

Records available.--August 1956 to September 1960.

Gage.--Wire-weight gage, read twice daily, and crest-stage gage. Datum of gage is 539.26 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,070 cfs Sept. 12 (gage height, 4.17 ft); minimum observed, 2.7 cfs Oct. 4 (gage height, 1.05 ft).

1956-60: Maximum discharge, 1,130 cfs Mar. 6, 1959 (gage height, 4.33 ft); minimum observed, 0.5 cfs Oct. 20, 1956.

Flood of Aug. 19, 1955, reached a peak discharge of 6,210 cfs at a point 1½ miles upstream, drainage area, 10.2 sq mi.

Remarks.--Records good except those for periods of ice effect, which are fair. Some regulation at low flow.

Revisions (water years).--WSP 1621: 1958(P).

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	1.8	1.7	52
1.1	3.6	2.0	115
1.2	6.6	2.3	205
1.3	11	2.8	385
1.5	25	3.0	465

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	22	36	23	18	23	196	40	*13	11	17	8.8
2	6.6	15	32	25	17	17	115	27	11	16	12	6.3
3	3.2	11	30	*302	17	17	91	23	11	9.7	11	4.8
4	2.9	12	29	80	16	21	291	20	329	10	9.2	4.2
5	3.1	19	25	46	17	20	306	20	95	6.0	24	4.2
6	4.8	20	27	37	40	21	142	19	43	6.6	15	4.2
7	6.6	76	136	33	35	15	87	17	30	5.7	9.2	3.9
8	9.7	37	56	31	30	16	93	19	23	5.4	10	3.9
9	40	27	37	23	26	13	85	35	22	5.4	10	3.6
10	10	22	31	20	24	12	65	22	20	4.8	137	3.2
11	6.3	20	29	21	318	11	*56	22	19	6.0	40	20
12	9.2	19	139	16	114	14	56	18	21	6.0	25	441
13	6.0	*15	140	18	70	14	46	19	20	16	22	*125
14	7.0	19	56	22	49	13	43	*16	18	85	20	25
15	6.0	23	43	25	*48	12	38	14	49	*24	20	24
16	5.1	23	40	23	43	11	43	13	35	12	32	22
17	4.5	40	49	25	32	11	40	12	23	9.2	36	22
18	3.6	31	46	22	32	14	46	23	25	7.5	25	21
19	4.2	20	37	19	56	14	37	17	19	7.5	*25	55
20	3.6	19	32	19	37	15	32	13	17	20	22	147
21	3.6	19	29	16	31	14	30	12	16	10	17	49
22	3.4	17	30	19	30	14	31	11	16	6.6	16	36
23	4.5	17	30	19	29	13	27	24	13	6.0	16	30
24	184	88	29	19	31	14	46	22	22	5.1	15	27
25	44	164	25	17	27	13	35	19	18	5.4	15	24
26	19	46	23	16	48	15	27	29	15	4.8	15	23
27	15	35	22	16	35	18	25	16	13	6.6	13	22
28	11	153	32	20	27	37	23	12	10	19	13	22
29	10	74	*35	19	23	46	21	11	8.8	10	13	23
30	9.2	43	29	18	-------	112	20	9.2	16	121	13	23
31	15	-------	24	18	-------	453	-------	16	-------	43	13	-------
Total	476.1	1,126	1,358	1,027	1,320	1,053	2,193	590.2	990.8	521.3	680.4	1,228.1
Mean	15.4	37.5	43.8	33.1	45.5	34.0	73.1	19.0	33.0	16.8	21.9	40.9
Cfsm	1.12	2.72	3.17	2.40	3.30	2.46	5.30	1.38	2.39	1.22	1.59	2.96
In.	1.29	3.04	3.66	2.77	3.56	2.84	5.91	1.59	2.67	1.41	1.83	3.30

Calendar year 1959: Max 430 Min 1.5 Mean 25.0 Cfsm 1.81 In. 24.66
Water year 1959-60: Max 441 Min 2.9 Mean 34.3 Cfsm 2.49 In. 33.87

Peak discharge (base, 500 cfs).--Jan. 3 (about 11 a.m.) 595 cfs (3.30 ft); Mar. 13 (about 3 a.m.) 740 cfs (3.55 ft); June 4 (about 6 p.m.) 840 cfs (3.78 ft); Sept. 12 (about 7 p.m.) 1,070 cfs (4.17 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 21-26, Jan. 2, 10-14, 21, 22, Jan. 24 to Feb. 5, Mar. 1-27.

2064. Leadmine Brook near Harwinton, Conn.

Location.--Lat 41°43'46", long 73°03'13", on left bank just upstream from bridge on Poverty Hollow Road at Roraback Lodge, 300 ft downstream from Rock Brook, 2.8 miles upstream from mouth, and 3.0 miles south of Harwinton, Litchfield County.

Drainage area.--18.9 sq mi.

Records available.--February 1959 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 514.58 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,520 cfs June 4 (gage height, 8.13 ft), from rating curve extended above 200 cfs by logarithmic plotting; minimum, 0.8 cfs Oct. 1; minimum gage height, 0.83 ft July 27.
1959-60: Maximum discharge, that of June 4, 1960; minimum, 0.4 cfs Sept. 28, 1959; minimum gage height, that of July 27, 1960.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Occasional regulation at low flow.

Rating tables, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3				Jan. 4 to Sept. 30			
1.2	1.9	2.5	67	0.8	1.1	2.0	30
1.3	3.2	3.0	123	1.0	2.5	3.0	123
1.4	4.8	4.0	280	1.2	4.8	4.0	280
1.6	8.8	5.0	500	1.4	8.5	6.0	780
2.0	29			1.6	14		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	49	52	a29	a25	b32	373	45	*30	9.8	28	4.4
2	6.6	31	44	a28	23	b28	204	46	23	19	17	3.3
3	4.2	24	39	a394	*a20	b24	142	32	23	14	13	2.7
4	3.1	19	37	193	b21	b28	359	26	488	19	9.5	2.5
5	2.6	18	33	92	b21	b29	429	24	222	11	14	2.7
6	3.0	17	33	62	57	25	211	22	92	7.0	16	2.3
7	7.4	82	225	50	77	25	130	22	53	5.3	9.8	2.1
8	11	66	108	45	52	b24	126	22	38	4.3	7.8	2.9
9	70	39	63	b40	40	b23	119	50	30	4.2	8.0	1.9
10	31	31	50	b35	40	b23	83	44	25	3.1	51	1.5
11	19	26	40	b33	463	b23	65	37	23	3.0	44	1.9
12	24	24	148	a30	220	b23	64	33	23	*2.7	23	393
13	14	*21	254	a32	96	b23	54	35	26	2.3	16	*188
14	16	26	104	a31	64	b22	49	*34	22	44	13	68
15	14	44	*67	a29	b54	b22	46	33	25	37	12	37
16	9.2	30	58	a30	46	b21	44	27	28	16	*15	26
17	8.1	37	50	a28	41	22	41	23	24	9.3	11	20
18	6.7	38	46	a27	45	23	43	35	27	6.4	7.4	17
19	7.2	29	50	a29	70	26	42	40	19	4.8	7.4	50
20	6.3	25	38	a27	62	26	35	28	16	4.8	12	356
21	6.0	21	b35	a26	49	28	33	24	12	3.9	9.5	126
22	a5.6	21	33	a26	44	b25	32	21	11	3.0	7.4	67
23	a11	20	a29	a24	40	b23	32	34	9.3	*2.8	6.8	46
24	a246	48	a28	a23	38	b22	38	42	14	2.4	5.3	36
25	119	218	a30	a22	35	b21	35	36	17	1.9	4.2	29
26	54	95	a30	a22	74	b20	31	47	11	1.6	3.5	25
27	36	58	a29	a22	70	b22	30	32	7.6	5.4	3.6	24
28	28	135	a38	a34	48	48	28	24	5.8	*16	9.6	21
29	21	128	a52	a33	*40	102	26	20	5.4	*7.0	5.1	*20
30	19.	67	a40	34	-------	196	23	18	8.0	122	4.9	27
31	28	-------	a32	a28	-------	726	-------	31	-------	82	4.5	-------
Total	839.3	1,487	1,915	1,558	1,975	1,725	2,967	987	1,358.1	475.0	399.3	1,604.2
Mean	27.1	49.6	61.8	50.3	68.1	55.6	98.9	31.8	45.3	15.3	12.9	53.5
Cfsm	1.43	2.62	3.27	2.66	3.60	2.94	5.23	1.68	2.40	0.810	0.683	2.83
In.	1.65	2.93	3.77	3.07	3.89	3.39	5.84	1.94	2.67	0.93	0.79	3.16

Calendar year 1959: Max - Min - Mean - Cfsm - In. -
Water year 1959-60: Max 726 Min 1.5 Mean 47.2 Cfsm 2.50 In. 34.03

Peak discharge (base, 500 cfs).--Jan. 3 (1 p.m.) 900 cfs (6.40 ft); Feb. 11 (12:30 p.m.) 840 cfs (6.15 ft); Mar. 31 (9 a.m.) 1,050 cfs (6.88 ft); Apr. 4 (7 a.m.) 575 cfs (5.29 ft); June 4 (4 p.m.) 1,520 cfs (8.13 ft); Sept. 12 (5 p.m.) 1,200 cfs (7.29 ft); Sept. 20 (7 a.m.) 675 cfs (5.65 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, 1 discharge measurement, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

2069. Naugatuck River at Thomaston, Conn.

Location.--Lat 41°40'25", long 73°04'12", on left bank at downstream side of bridge on U. S. Highways 6 and 202 at Thomaston, Litchfield County, 1½ miles downstream from Thomaston Reservoir, 2½ miles upstream from Branch Brook, and at mile 29.5.

Drainage area.--105 sq mi.

Records available.--October 1959 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 354.39 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 5,140 cfs Mar. 31 (gage height, 6.25 ft); minimum, 20 cfs Oct. 1 (gage height, 1.61 ft); minimum daily, 26 cfs Oct. 4.
Flood of Aug. 19, 1955, reached a stage of 27.0 ft, as determined from floodmarks by Corps of Engineers (discharge, 55,000 cfs, at Thomaston Reservoir at site 1½ miles upstream).

Remarks.--Records excellent. Slight diurnal fluctuation at low flow. Flow affected by Thomaston Reservoir, constructed by the Corps of Engineers during 1959 and 1960.

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.6	19	3.5	880
1.8	37	4.0	1,440
2.0	64	4.5	2,090
2.2	104	5.0	2,830
2.5	200	5.5	3,670
3.0	470		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	300	280	160	120	157	2,310	210	127	77	145	44
2	66	192	245	145	114	142	1,260	255	97	100	91	37
3	32	139	225	1,910	100	125	840	168	91	71	71	33
4	26	122	210	*1,260	104	151	2,320	142	1,430	88	66	32
5	27	120	188	464	104	164	2,970	127	1,370	58	97	32
6	30	117	180	330	231	154	1,680	*117	410	47	122	33
7	67	426	987	275	315	133	717	109	260	42	77	32
8	75	410	562	245	215	130	666	112	180	38	71	35
9	373	240	340	188	184	122	626	203	145	35	64	56
10	185	180	275	172	176	117	484	192	122	32	356	54
11	89	154	235	172	1,940	109	398	164	112	32	339	63
12	109	145	634	157	1,770	117	392	151	112	*33	160	1,320
13	73	130	1,640	172	491	112	350	160	122	31	109	1,660
14	78	155	570	160	356	112	310	145	104	314	93	300
15	71	265	*380	160	*300	109	285	133	173	218	97	172
16	56	180	330	160	260	104	260	117	296	86	142	130
17	50	214	300	145	230	114	255	97	164	56	109	109
18	49	235	280	142	235	120	260	142	157	49	82	97
19	48	160	285	145	374	130	265	160	117	44	77	226
20	43	142	215	139	325	130	210	117	95	60	91	1,540
21	41	130	180	136	260	133	188	97	80	60	73	617
22	38	125	180	136	230	122	184	91	71	42	66	315
23	45	120	164	117	200	117	168	144	68	37	64	*225
24	1,010	230	160	107	184	117	220	180	102	34	58	188
25	925	1,200	168	109	172	117	225	180	109	37	52	148
26	300	524	168	107	354	102	180	210	75	29	47	142
27	192	305	*164	104	320	114	172	148	64	71	45	130
28	151	766	220	145	230	235	160	112	56	139	64	117
29	*117	746	300	151	*200	415	142	91	45	75	48	120
30	112	368	225	148	-------	632	130	78	71	602	49	139
31	141	-------	180	125	-------	*3,580	-------	*124	-------	472	48	-------
Total	4,683	8,540	10,470	8,086	10,094	8,236	18,627	4,476	6,425	3,109	3,073	8,146
Mean	151	285	338	261	348	266	621	144	214	100	99.1	272
Cfsm	1.44	2.71	3.22	2.49	3.31	2.53	5.91	1.37	2.04	0.952	0.944	2.59
In.	1.66	3.02	3.71	2.87	3.57	2.92	6.59	1.58	2.28	1.10	1.09	2.89

Calendar year 1959: Max - Min - Mean - Cfsm - In. -
Water year 1959-60: Max 3,580 Min 26 Mean 257 Cfsm 2.45 In. 33.28

* Discharge measurement made on this day.

2085. Naugatuck River at Beacon Falls, Conn.

Location.--Lat 41°26'32", long 73°03'47", on left bank at downstream side of Bridge Street highway bridge at Beacon Falls, New Haven County, 0.4 mile upstream from Bronson Brook and at mile 10.1.

Drainage area.--261 sq mi.

Records available.--June 1918 to September 1924, September 1928 to September 1955 (published as "near Naugatuck"), October 1955 to September 1960.

Gage.--Water-stage recorder. Datum of gage is 117.28 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1955, water-stage recorder at site 2.5 miles upstream at datum 37.89 ft higher. Oct. 1, 1955, to Mar. 21, 1957, wire-weight or chain gage at present site and datum.

Average discharge.--38 years (1918-24, 1928-60), 479 cfs (adjusted for storage and diversion).

Extremes.--Maximum discharge during year, 7,870 cfs Sept. 12 (gage height, 9.75 ft); minimum, 89 cfs Oct. 5 (gage height, 1.59 ft); minimum daily, 95 cfs Sept. 4, 5, 7.
1918-24, 1928-60: Maximum discharge, 106,000 cfs Aug. 19, 1955 (gage height, 25.7 ft, from floodmarks), from rating curve extended above 9,000 cfs on basis of slope-area measurements at gage heights 12.4 and 25.7 ft (site and datum then in use); minimum, 24 cfs Oct. 21, 1935; minimum daily, 40 cfs Oct. 5, 12, 1930, Sept. 7, 1936; minimum gage height (present site and datum), 1.43 ft Oct. 6, 1957.
Flood in November 1927 reached a stage of 14 ft, site and datum then in use (discharge, about 26,000 cfs).

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Flow regulated by industrial plants upstream during low stages, and by Pitch, Morris, and Wigwam Reservoirs having a combined capacity of 550,000,000 cu ft (see p. 274). Flow increased by diversion from Shepaug Reservoir into Naugatuck River basin. Flow affected by Thomaston Reservoir, constructed by Corps of Engineers during 1959 and 1960.

Revisions (water years).--WSP 781: Drainage area. WSP 1171: 1918-24, 1928-49. WSP 1501: 1956(P).

Rating table, water year 1959-60 (gage height, in feet, and discharge, in cubic feet per second)

1.6	90	2.1	161	3.0	445	5.0	1,670	7.0	3,690
1.8	113	2.5	257	4.0	970	6.0	2,580	8.2	5,270

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	142	702	900	486	372	610	*3,530	560	472	203	490	120
2	165	575	800	432	349	530	2,080	740	*350	259	*305	110
3	123	432	700	3,270	312	510	1,590	*505	320	202	240	100
4	98	388	650	2,540	302	495	3,270	418	945	236	216	95
5	101	368	620	1,230	305	575	4,510	364	1,890	175	229	95
6	351	366	590	940	1,070	520	3,130	337	740	159	282	100
7	545	1,020	1,980	790	1,020	*486	1,750	312	490	145	226	95
8	254	900	1,450	740	*688	463	1,580	364	356	135	202	*110
9	746	700	910	635	630	418	1,550	765	285	123	192	140
10	514	550	765	525	605	418	1,260	690	246	109	346	138
11	311	460	690	510	2,980	368	1,060	555	219	114	678	138
12	450	420	1,310	468	3,020	368	1,060	510	258	124	368	2,840
13	269	400	2,920	515	1,270	380	940	510	302	126	251	3,000
14	279	450	1,380	486	1,000	376	850	463	246	320	212	1,000
15	246	900	970	495	850	360	790	454	246	522	216	655
16	202	550	880	525	740	356	765	396	473	229	376	515
17	169	750	765	454	690	396	715	322	326	156	288	436
18	157	700	715	432	690	432	715	345	330	138	232	392
19	154	500	740	450	1,400	463	740	454	260	130	209	662
20	152	450	610	418	1,130	463	625	356	222	138	209	2,760
21	145	400	510	376	850	486	585	341	199	148	186	1,510
22	141	380	510	368	765	432	560	322	183	127	192	910
23	145	370	463	349	675	400	510	500	*177	111	186	680
24	1,650	600	460	305	620	396	595	715	209	102	181	555
25	1,960	1,800	470	312	585	432	625	765	392	101	165	468
26	840	2,500	480	305	1,480	345	545	910	173	101	154	427
27	625	1,100	*460	291	1,200	360	515	660	165	224	138	380
28	530	1,400	614	507	850	941	490	486	159	291	135	464
29	396	1,800	940	510	715	865	440	384	157	202	152	440
30	341	1,100	690	486	-------	1,120	364	337	157	1,180	150	454
31	364	-------	575	396	-------	5,190	-------	463	-------	1,250	130	-------
Total	12,565	23,031	26,517	20,546	27,163	19,954	37,739	15,303	10,947	7,580	7,536	19,789
Mean	405	768	855	663	937	644	1,258	494	365	245	243	660
(†)	-0.4	+0.5	+1.8	-3.1	+1.6	+3.5	-4.6	-2.7	-12.3	-18.1	-16.0	-5.6

Adjusted for diversion and change in reservoir contents

Mean	405	768	857	660	939	648	1,253	491	353	227	227	654
Cfsm	1.55	2.94	3.28	2.53	3.60	2.48	4.80	1.88	1.35	0.870	0.870	2.51
In.	1.79	3.28	3.78	2.92	3.88	2.86	5.36	2.17	1.51	1.00	1.00	2.80

	Observed			Adjusted			
Calendar year 1959:	Max 4,330	Min 85	Mean 490	Mean 482	Cfsm 1.85	In. 25.06
Water year 1959-60:	Max 5,190	Min 95	Mean 625	Mean 620	Cfsm 2.38	In. 32.35

Peak discharge (base, 4,000 cfs).--Jan. 3 (6 p.m.) 5,720 cfs (8.53 ft); Feb. 11 (7 p.m.) 4,710 cfs (7.85 ft); Mar. 31 (1:30 p.m.) 7,160 cfs (9.40 ft); Apr. 5 (4 p.m.) 4,990 cfs (8.05 ft); Sept. 12 (4 p.m.) 7,870 cfs (9.75 ft).

* Discharge measurement made on this day.

† Diversion from Shepaug Reservoir and change in contents in Wigwam, Morris, and Pitch Reservoirs, equivalent in cubic feet per second; furnished by city of Waterbury.

Note.--No gage-height record Nov. 8 to Dec. 5, Dec. 24-27, June 2, 3, Aug. 30 to Sept. 8; discharge estimated on basis of weather records and records for station at Thomaston.

Reservoirs in Housatonic River basin

2010. Lake Candlewood (Rocky River Reservoir) on Rocky River, lat 41°35'00", long 73°26'00", 2 miles west of New Milford, Litchfield County, Conn. Drainage area, 40.4 sq mi. Completed in 1928 for storage of water for power; impounds water pumped from the Housatonic River during offpeak power periods. Usable capacity, 6,210,000,000 cu ft. Records available, August 1928 to September 1960. Records furnished by The Connecticut Light & Power Co.

2020. Shepaug Reservoir on Shepaug River, lat 41°43'24", long 73°17'37", 1 mile north of Woodville, Litchfield County, Conn. Drainage area, 38.0 sq mi. Completed in 1933 for storage of water for municipal supply. Usable capacity, 77,000,000 cu ft. Records available, February 1933 to September 1960. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

2035. Lake Lillinonah on Housatonic River, lat 41°26'52", long 73°17'49", in Litchfield County, 2.3 miles north of Newtown, Fairfield County, Conn. Drainage area, 1,392 sq mi. Completed in 1955 for storage of water for power. Usable capacity, 219,000,000 cu ft. Records available, February 1955 to September 1960. Records furnished by The Connecticut Light & Power Co.

2050. Lake Zoar on Housatonic River, lat 41°23'05", long 73°09'55", at Stevenson, Fairfield County, Conn. Drainage area, 1,545 sq mi. Completed in 1919 for storage of water for power. Usable capacity, 331,000,000 cu ft. Records available, August 1928 to September 1960. Records furnished by The Connecticut Light & Power Co.

2070. Pitch Reservoir on Branch Brook, lat 41°41'34", long 73°09'04", 4 miles northwest of Thomaston, Litchfield County, Conn. Drainage area, 5.74 sq mi. Completed in 1943 for storage of water for municipal supply. Total capacity, 190,000,000 cu ft. Records available, November 1943 to September 1960. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

2075. Morris Reservoir on Branch Brook, lat 41°40'29", long 73°08'39", 3½ miles west of Thomaston, Litchfield County, Conn. Drainage area, including Pitch Reservoir, 13.3 sq mi. Completed in 1913 for storage of water for municipal supply. Total capacity, 265,000,000 cu ft. Records available, May 1918 to September 1924, September 1928 to September 1960. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

2080. Wigwam Reservoir on Branch Brook, lat 41°39'50", long 73°07'41", 3 miles west of Thomaston, Litchfield County, Conn. Drainage area, including Pitch and Morris Reservoirs, 18.1 sq mi. Used for storage of water for municipal supply. Total capacity, 97,000,000 cu ft. Records available, May 1918 to September 1924, September 1928 to September 1960. Records furnished by Bureau of Engineering, city of Waterbury, Conn.

Month-end contents, water year October 1959 to September 1960

Date	Contents (m.c.f.)	Change in contents (equivalent in cfs)	Contents (m.c.f.)	Change in contents (equivalent in cfs)	Contents (m.c.f.)	Change in contents (equivalent in cfs)
	Lake Candlewood (Rocky River Reservoir)		Shepaug Reservoir		Lake Lillinonah	
Sept.30	5,678	-	51.5	-	2,958	-
Oct. 31	6,028	+130.7	99.8	+18.0	3,057	+37.0
Nov. 30	6,088	+23.1	99.7	0	3,018	-15.0
Dec. 31	6,016	-26.9	97.8	-.7	2,805	-79.5
Calendar year 1959	-	+6.9	-	0	-	-10.0
Jan. 31	6,088	+26.9	97.4	-.1	3,018	+79.5
Feb. 29	5,955	-53.1	97.7	+.1	2,935	-33.1
Mar. 31	5,762	-72.1	104.8	+2.7	2,694	-90.0
Apr. 30	5,955	+74.5	97.5	-3.8	2,884	+73.3
May 31	5,955	0	97.0	-.2	3,026	+53.0
June 30	5,919	-13.9	93.9	-1.2	2,980	-17.7
July 31	5,931	+4.5	100.1	+2.3	3,072	+34.3
Aug. 31	5,654	-103.4	90.9	-3.4	2,749	-120.6
Sept.30	5,750	+37.0	97.6	+2.6	2,855	+40.9
Water year 1959-60	-	+2.3	-	+1.5	-	-3.3

	Lake Zoar		Pitch, Morris, and Wigwam Reservoirs	
Sept.30	294.1	-	526.9	-
Oct. 31	307.9	+5.1	546.9	+7.5
Nov. 30	372.6	+25.0	548.2	+.5
Dec. 31	298.7	-27.6	552.9	+1.8
Calendar year 1959	-	-.3	-	+.5
Jan. 31	307.9	+3.4	544.6	-3.1
Feb. 29	298.7	-3.7	548.7	+1.6
Mar. 31	381.9	+31.1	558.1	+3.5
Apr. 30	307.9	-28.5	546.1	-4.6
May 31	258.0	-18.6	551.4	+2.0
June 30	294.1	+13.9	539.2	-4.7
July 31	294.1	0	553.2	+5.2
Aug. 31	330.8	+13.7	537.5	-5.9
Sept.30	368.0	+14.4	545.4	+3.0
Water year 1959-60	-	+8.0	-	+.6

2095. Saugatuck River near Westport, Conn.

Location.--Lat 41°10'15", long 73°22'00", on left bank on old Ford Road (Clinton Ave.), 400 ft downstream from West Branch, 600 ft downstream from Aspetuck River and dam of Dorr Co., 2 miles north of Westport, Fairfield County, and 5½ miles upstream from mouth.
Drainage area.--77.5 sq mi.
Records available.--September 1932 to September 1960.
Gage.--Water-stage recorder. Datum of gage is 18.16 ft above mean sea level, datum of 1959.
Average discharge.--28 years, 143 cfs (adjusted for storage in and diversion from Saugatuck Reservoir since October 1941).
Extremes.--Maximum discharge during year, 970 cfs Feb. 19 (gage height, 5.58 ft); minimum daily, 7 cfs July 26.
1932-60: Maximum discharge, 14,800 cfs Oct. 16, 1955 (gage height, 15.93 ft, from high-water marks in gage house), from rating curve extended above 2,400 cfs on basis of computation of peak flow over dam at gage height 10.28 ft and contracted-opening measurement of peak flow; minimum, 0.2 cfs Oct. 19, 1953; minimum gage height, 1.92 ft Oct. 19, 1953, July 9, 1957; minimum daily discharge, 1.0 cfs Aug. 11, 1939.
Remarks.--Records excellent except those for period of no gage-height record, which are poor. Flow regulated by storage and diversion at Saugatuck Reservoir (total capacity, 11,900,000,000 gal) and Aspetuck Reservoir. At Aspetuck Reservoir, Bridgeport Hydraulic Co. diverts an indeterminable amount of water for domestic supply from about 17 sq mi of Saugatuck River basin through Hemlocks Reservoir in Mill River basin. Occasional regulation at dam of Dorr Co.
Revisions (water years).--WSP 781: Drainage area. WSP 1301: 1936.

Rating table, water year 1959-60, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	3.0	2.7	45	5.0	700
2.2	6.2	3.0	88	5.3	830
2.3	10	3.5	195		
2.5	25	4.0	335		

Discharge, in cubic feet per second, water year October 1959 to September 1960

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.4	21	69	b195	124	254	696	129	44	12	49	8.8
2	8.4	19	55	b160	105	b200	445	180	33	19	30	8.4
3	8.4	16	49	590	93	b180	366	122	*34	19	23	7.9
4	8.4	17	43	695	80	b200	663	*95	62	37	18	7.9
5	8.4	16	40	431	*78	195	826	86	61	19	16	7.9
6	7.9	15	40	335	254	b175	*692	75	38	14	15	7.9
7	8.4	48	211	282	335	b160	520	69	27	12	14	7.9
8	10	62	195	254	234	*b150	455	72	20	10	*15	7.9
9	22	57	*113	221	188	126	405	173	16	9.6	14	7.9
10	18	44	80	182	182	124	344	180	15	9.2	19	7.9
11	13	34	65	178	597	107	293	146	14	8.8	21	8.4
12	17	30	165	146	712	105	288	122	17	8.8	*18	228
13	14	23	706	158	465	103	245	116	28	8.8	16	217
14	16	25	534	148	385	107	213	103	19	12	14	*76
15	14	94	382	146	305	98	200	103	19	14	12	41
16	12	80	314	163	256	93	200	86	20	12	12	30
17	10	59	265	146	234	105	180	71	16	9.6	11	25
18	9.6	66	234	137	226	124	182	68	16	8.8	11	23
19	8.8	45	240	170	808	135	165	71	15	8.4	12	40
20	8.8	34	b190	135	632	148	139	61	14	8.4	14	142
21	8.8	30	b155	111	438	158	122	61	13	8.4	12	100
22	8.8	30	b135	98	360	133	116	54	13	8.4	12	64
23	9.6	30	b115	88	299	116	102	82	13	a8	12	43
24	43	48	b105	83	254	103	102	113	24	a10	10	37
25	65	279	105	78	221	b85	102	105	19	a8	9.6	31
26	34	195	116	72	622	b85	96	85	14	a7	8.8	29
27	27	116	156	69	544	b91	103	68	13	a10	8.8	27
28	22	105	204	158	376	107	95	57	14	a18	8.8	28
29	19	131	456	178	320	122	85	48	11	a13	8.8	28
30	16	100	350	163	-------	148	74	43	*11	136	8.8	42
31	16	-------	256	135	-------	725	-------	50	-------	100	8.8	-------
Total	500.7	1,869	6,143	6,105	9,727	4,762	8,514	2,894	673	587.2	462.4	1,339.8
Mean	16.2	62.3	198	197	335	154	284	93.4	22.4	18.9	14.9	44.7
(†)	+37.3	+87.5	+51.8	-1.1	+2.1	+2.7	-5.1	-1.4	+7.1	-1.9	+23.8	+47.3

Adjusted for diversion and change in contents in Saugatuck Reservoir

Mean	53.5	150	250	196	337	157	279	92.0	29.5	17.0	38.7	92.0
Cfsm	0.690	1.94	3.23	2.53	4.35	2.03	3.60	1.19	0.381	0.219	0.499	1.19
In.	0.80	2.16	3.72	2.92	4.69	2.34	4.02	1.37	0.43	0.25	0.58	1.33

	Observed			Adjusted		
Calendar year 1959:	Max 1,040	Min 5.9	Mean 95.6	Mean 118	Cfsm 1.52	In. 20.76
Water year 1959-60:	Max 826	Min 7	Mean 119	Mean 140	Cfsm 1.81	In. 24.61

Peak discharge (base, 900 cfs).--Jan. 3 (8 to 9 p.m.) 945 cfs (5.53 ft); Feb. 11 (9 p.m.) 945 cfs (5.56 ft); Feb. 19 (2 p.m.) 970 cfs (5.58 ft).

* Discharge measurement made on this day.
† Change in contents and diversion, equivalent in cubic feet per second, from Saugatuck Reservoir for domestic water supply.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

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 generally presented in two tables. However, no records at crest-stage partial-record stations are available for the 1960 water year. A table of discharge measurements at low-flow partial-record stations is given first followed by a table of measurements made at miscellaneous sites for both low flow and high flow.

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 when continuous records are available, will give a picture of the low-flow potentiality of 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 1960

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Thames River basin				
1231	Mountain Brook near Brimfield, Mass.	Lat 42°07'10", long 72°13'08", at bridge on U.S. Route 20, 0.9 mile west of Brimfield.	1.37	1960	8-27-60 9- 8-60 9-28-60	0.24 .10 .48
1231.5	East Brook near Brimfield, Mass.	Lat 42°08'18", long 72°11'24", at bridge, 500 ft east of Sherman Pond and 1.2 miles north of Brimfield.	4.14	1960	8-27-60 9- 8-60 9-28-60	.50 .24 1.85
1232	Stevens Brook at Holland, Mass.	Lat 42°03'41", long 72°09'45", 100 ft above bridge on Mashapaug Rd., and 0.3 mile south of Holland.	4.44	1960	8-27-60 9- 9-60 9-27-60	.67 .42 3.04
1232.5	Quinebaug River tributary near Brookfield, Mass.	Lat 42°09'57", long 72°08'38", at culvert on Brimfield-Brookfield road, 4 miles southwest of Brookfield.	2.07	1960	8-26-60 9- 8-60 9-28-60	.28 .16 1.19
1233	Quinebaug River tributary near Fiskdale, Mass.	Lat 42°08'52", long 72°07'55", at culvert on Sturbridge Rd., 2¼ miles northwest of Fiskdale.	5.49	1960	8-26-60 9- 8-60 9-28-60	.69 .53 2.87
1234.5	Hamant Brook near Sturbridge, Mass.	Lat 42°05'21", long 72°05'56", 800 ft above unnamed pond and 2 miles southwest of Sturbridge.	3.45	1960	8-26-60 9- 9-60 9-27-60	1.29 .90 2.55
1237	McKinstry Brook at Southbridge, Mass.	Lat 42°05'30", long 72°02'43", 100 ft below Plimpton Street Bridge, at Southbridge.	7.76	1960	8-26-60 9- 9-60 9-27-60	.94 .24 2.60
1238	Lebanon Brook near Southbridge, Mass.	Lat 42°03'20", long 72°01'10", at bridge on State Highway 169, 1¼ miles southwest of Southbridge.	9.41	1960	8-26-60 9- 9-60 9-27-60	1.57 .45 7.82
1241	Tufts Branch near Dudley, Mass.	Lat 42°01'42", long 71°56'19", 200 ft above bridge on State Highway 197 and 1¼ miles southwest of Dudley.	2.21	1960	8-26-60 9- 9-60 9-27-60	.09 .02 .63
1248	Sucker Brook near Webster, Mass.	Lat 42°04'01", long 71°51'16", at bridge on Mine Brook Rd., 1½ miles northeast of Webster.	2.54	1960	8-26-60 9- 9-60 9-27-60	.20 .06 1.55
		Connecticut River basin				
1721	West Wachusett Brook near Princeton, Mass.	Lat 42°29'01", long 71°55'31", 700 ft above Bickford Pond and 3½ miles northwest of Princeton.	≈ 1.88	1960	8-26-60 9- 8-60 9-28-60	0.04 0 .61
1726	Canesto Brook near Williamsville, Mass.	Lat 42°28'24", long 72°03'08", at culvert on Williamsville Rd., 1.4 miles east of Williamsville.	4.48	1960	8-26-60 9- 8-60 9-27-60	.66 .38 3.08
1727	Natty Pond Brook at Hubbardston, Mass.	Lat 42°28'41", long 72°01'26", at bridge on Williamsville Rd., 0.9 mile west of Hubbardston.	2.51	1960	8-26-60 9- 8-60 9-28-60	1.28 .89 2.55
1728	Natty Pond Brook near Hubbardston, Mass.	Lat 42°27'06", long 72°01'48", at bridge on Hale Rd., 0.8 mile above mouth and 2.0 miles southwest of Hubbardston.	5.50	1960	8-26-60 9- 8-60 9-28-60	1.28 .85 3.92
1729	Potash Brook near Barre, Mass.	Lat 42°24'16", long 72°02'41", at culvert on old road between Coldbrook Springs and Barre Falls, a quarter of a mile above mouth and 3½ miles southeast of Barre.	.52	1960	8-27-60 9- 9-60 9-28-60	0 0 0

Discharge measurements made at low-flow partial-record stations during water year 1960--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Connecticut River basin--Continued				
1730.5	Pleasant Brook at Barre, Mass.	Lat 42°25'10", long 72°05'22", 0.35 mile above mouth and 0.8 mile east of Barre.	2.46	1960	8-26-60 9- 8-60 9-28-60	0.34 .16 .94
1731	Galloway Brook near Barre, Mass.	Lat 42°24'29", long 72°05'56", at culvert on State Highway 32, 1.0 mile south of Barre.	1.88	1960	8-26-60 9- 8-60 9-28-60	.23 .06 .57
1731.5	Smith Brook near South Barre, Mass.	Lat 42°23'52", long 72°06'17", at culvert on Loring Rd., 1.0 mile north of South Barre.	.57	1960	8-27-60 9- 8-60 9-28-60	.21 .03 .47
1732	Bell Brook at Barre Plains, Mass.	Lat 42°22'24", long 72°05'56", at culvert on Woods Rd., 0.4 mile south of Barre Plains.	3.57	1960	8-27-60 9- 9-60 9-27-60	.67 .55 1.58
1732.3	Pine Hill Brook at Barre Plains, Mass.	Lat 42°22'16", long 72°07'39", at bridge on Glazer Rd., 0.5 mile southwest of Barre Plains.	2.62	1960	8-27-60 9- 9-60 9-27-60	.30 .01 .61
1732.6	Moose Brook near Barre, Mass.	Lat 42°23'52", long 72°08'51", at culvert on Hardwick Rd., 2¾ miles southwest of Barre.	4.54	1960	8-27-60 9- 9-60 9-27-60	2.16 .59 3.33
1733	Winimusset Brook at Wheelwright, Mass.	Lat 42°20'33", long 72°08'44", at culvert on Hardwick Rd., ¾ mile south of Wheelwright and 3 miles southwest of Barre Plains.	5.69	1960	8-27-60 9- 9-60 9-27-60	2.16 1.97 2.93
1733.5	Danforth Brook near Gilbertville, Mass.	Lat 42°19'42", long 72°12'19", at culvert on State Highway 32, 1.1 miles north of Gilbertville.	4.01	1960	8-27-60 9- 9-60 9-27-60	1.40 .39 2.31
1734	Muddy Brook near Hardwick, Mass.	Lat 42°22'06", long 72°13'16", at culvert on Greenwich Rd., 1¾ miles northwest of Hardwick.	4.34	1960	8-27-60 9- 9-60 9-27-60	.65 .15 2.19
1734.5	Flat Brook near Ware, Mass.	Lat 42°14'56", long 72°15'53", at culvert on State Highway 32, 1.4 miles southwest of Ware.	6.50	1960	8-26-60 9- 8-60 9-27-60	1.56 .81 2.22
1756	Caruth Brook near Paxton, Mass.	Lat 42°19'00", long 71°58'16", at culvert on Spring St., 2.2 miles west of Paxton.	2.35	1960	8-26-60 9- 9-60 9-28-60	.06 0 .59
1756.4	Shaw Brook near Spencer, Mass.	Lat 42°16'16", long 71°57'32", at bridge on Moose Hill Rd., 2½ miles northeast of Spencer.	a4.47	1960	8-27-60 9- 9-60 9-28-60	.87 .19 1.51
1756.7	Sevenmile River near Spencer, Mass.	Lat 42°15'54", long 72°00'19", 50 ft above bridge on Cooney Rd., and 1½ miles north of Spencer.	8.58	1960	8-27-60 9- 9-60 9-28-60	1.44 .68 3.40
1757	Maynard Brook near Oakham, Mass.	Lat 42°19'27", long 72°02'44", at culvert on North Brookfield Rd., 2.0 miles south of Oakham.	1.88	1960	8-27-60 9- 9-60 9-28-60	.05 .04 .36
1757.3	Great Brook near East Brookfield, Mass.	Lat 42°12'09", long 72°03'04", 40 ft above bridge on Podunk St. and 1.6 miles south of East Brookfield.	4.34	1960	8-27-60 9- 8-60 9-28-60	.36 .15 .73
1757.6	Trout Brook near Brookfield, Mass.	Lat 42°10'51", long 72°06'09", just above mouth, 2¼ miles south of Brookfield.	2.59	1960	9- 8-60 9-28-60	.12 .93
1757.9	Coys Brook at West Brookfield, Mass.	Lat 42°14'01", long 72°08'05", at bridge on State Highway 9, at West Brookfield.	7.88	1960	8-26-60 9- 8-60 9-27-60	.65 .47 2.80
1758.2	Meadow Brook near New Braintree, Mass.	Lat 42°17'31", long 72°08'09", at bridge on West Brookfield Rd., 1¾ miles south of New Braintree.	7.30	1960	8-26-60 9- 9-60 9-27-60	1.40 .59 4.14
1758.5	Mill Brook near West Brookfield, Mass.	Lat 42°15'50", long 72°09'33", at bridge on Shay Rd., 0.8 mile above Wickaboag Pond and 2¼ miles northwest of West Brookfield.	11.9	1960	8-26-60 9- 9-60 9-27-60	3.86 2.29 6.60
1758.8	Lamberton Brook near West Brookfield, Mass.	Lat 42°14'07", long 72°10'27", at culvert on Old Warren Rd., 1.5 miles west of West Brookfield.	4.47	1960	8-26-60 9- 8-60 9-27-60	1.30 .75 1.60
1759.1	Cheney Brook at Warren, Mass.	Lat 42°12'56", long 72°12'24", at bridge on State Highway 67, 0.6 mile west of Warren.	1.29	1960	8-26-60 9- 8-60 9-27-60	.02 .02 .32
1759.4	O'Neil Brook at West Warren, Mass.	Lat 42°12'58", long 72°13'14", at bridge on State Highway 67, 0.8 mile east of West Warren.	2.07	1960	8-26-60 9- 8-60 9-27-60	.09 .03 .62
1759.7	School Street Brook at West Warren, Mass.	Lat 42°12'49", long 72°14'30", at culvert on School St., at West Warren.	1.22	1960	8-26-60 9- 8-60 9-27-60	.17 .06 .45

a Excludes area above Shaw Pond.

Discharge measurements made at low-flow partial-record stations during water year 1960--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Connecticut River basin--Continued				
1761	Blodgett Mill Brook at West Brimfield, Mass.	Lat 42°10'13", long 72°15'41", at Boston & Albany RR. culvert, 0.3 mile south of West Brimfield and 3½ miles northeast of Palmer.	7.72	1960	8-27-60 9- 9-60 9-27-60	2.74 2.00 4.92
1762	Kings Brooks near West Brimfield, Mass.	Lat 42°09'41", long 72°16'08", at culvert on State Highway 67, 1 mile south of West Brimfield and 3 miles east of Palmer.	3.87	1960	8-27-60 9- 9-60 9-27-60	1.42 1.18 2.47
1763	Foskett Mill Stream near Fentonville, Mass.	Lat 42°07'43", long 72°15'31", 30 ft above bridge on Old Palmer Rd., 1.2 miles southeast of Fentonville, and 3¾ miles southeast of Palmer.	6.65	1960	8-27-60 9- 8-60 9-28-60	5.26 4.33 6.58
1764	Chicopee Brook near South Monson, Mass.	Lat 42°05'01", long 72°18'57", at culvert on Maple St., at South Monson, 1½ miles south of Monson.	4.68	1960	8-27-60 9- 8-60 9-27-60	3.00 2.75 3.73
		Housatonic River basin				
1994	Webatuck Creek near South Amenia, N. Y.	Lat 41°46'48", long 73°33'12", at bridge on Pump House Rd., 200 ft above confluence with Wassaic Creek and 1.6 miles southwest of South Amenia.	81.0	1956-60	9-26-60	152
1944.1	Wassaic Creek at Wassaic, N. Y.	Lat 41°47'36", long 73°33'06", at bridge, 0.7 miles southeast of Wassaic and 1.0 mile above confluence with Webatuck Creek.	36.6	1956-60	9-26-60	67.9

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 (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1960

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Merrimack River basin						
Hancock Branch.	East Branch Pemigewasset River.	Lat 44°03'10", long 71°34'30", 1.4 miles above mouth and 4½ miles northeast of Lincoln, N. H.	17.2		10-24-59	†5,600
East Branch Pemigewasset River.	Pemigewasset River.	Lat 44°03'40", long 71°37'00", 1 1/8 miles below Hancock Branch and 2¾ miles northeast of Lincoln, N. H.	104	1929-53‡	10-25-59	†24,200
Hubbard Brook	....do.....	Lat 43°56'30", long 71°42'25", 1 mile northwest of West Thornton, N. H., and 2.4 miles above mouth.	11.5		10-24-59	†4,700
Danvers River basin						
Beaver Brook.	Crane River..	Lat 42°34'02", long 70°56'42", at Pickering Street Bridge, at Danvers, Mass.	2.05	1959	7-13-60 8-29-60	*0.30 *.14
Charles River basin						
Fuller Brook.	Charles River	Lat 42°17'45", long 71°17'18", at Brook Street Bridge, at Wellesley, Mass.	4.12	1959	7-13-60 8-30-60	*0.94 *.73
Neponset River basin						
Traphole Brook.	Neponset River.	Lat 42°09'36", long 71°11'46", at Sumner Street Bridge, at East Walpole, Mass.	3.33	1959	7-13-60 8-30-60	*1.64 *1.88
Purgatory Brook.	....do.....	Lat 42°12'54", long 71°11'24", at bridge on State Highway 1A, at Islington, Mass.	1.24	1959	7-13-60 8-30-60	*.08 *.01
Weymouth Back River basin						
Old Swamp River.	Weymouth Back River.	Lat 42°10'57", long 70°56'08", below Pine Street Bridge, at South Weymouth, Mass.	3.70	1959	7-13-60 8-30-60	*0.36 *.28
Weir River basin						
Plymouth River.	Hingham Bay (Atlantic Ocean)	Lat 42°11'54", long 70°54'19", at Plymouth River Road Bridge, 1½ miles southeast of East Weymouth, Mass.	2.86	1959	7-22-60 8-30-60	*0.62 *.26
Thames River basin						
Roaring Brook	Willimantic River.	Lat 41°59'05", long 72°13'48", at abandoned bridge beside Bradway Rd., near Saffordville, Conn.	5.47		9-13-60	32.2
Merrick Brook	Shetucket River.	Lat 41°43'08", long 72°05'13", at bridge on Kasecek Rd., near Scotland, Conn.	6.39		9-13-60	45.3
Quanduck Brook.	Moosup River.	Lat 41°46'18", long 71°47'48", at bridge on Dark Lantern Rd., at North Sterling, Conn.	8.22		9-14-60	19.4
Connecticut River basin						
Stony Brook..	Connecticut River.	Lat 41°57'38", long 72°42'39", at bridge on South Grand St., near West Suffield, Conn.	10.4		9-16-60	9.40
Gillette Brook.	Scantic River	Lat 41°59'30", long 72°26'05", at culvert on Battle St., at Somers, Conn.	3.42		9-16-60	2.93
Blackledge River.	Salmon River.	Lat 40°41'46", long 72°27'22", at bridge on State Highway 94, near Gilead, Conn.	6.89		9-13-60	77.2
Housatonic River basin						
Brown Brook..	Hollenbeck River.	Lat 41°55'35", long 73°16'49", at bridge on State Highway 63, at Lower City, Conn.	5.55		9-15-60	19.1
Webatuck Creek.	Tenmile River	Lat 41°54'24", long 73°30'37", just downstream from Kelsey Brook, at Millerton, N. Y.	17.2		8-29-60	*9.26
Mill Brook...	Webatuck Creek.	Lat 41°49'27", long 73°30'22", at bridge on State Highway 41, 1 mile upstream from mouth at Amenia Union, N. Y.	11.3		8-29-60	*8.04
Millbrook School Creek.	Wassaic Creek	Lat 41°50'43", long 73°35'51", 20 ft upstream from mouth and 2 miles west of Amenia, N. Y.	11.6		8-29-60	*4.44

* Base flow.
† Peak flow.
‡ Operated as a continuous-record gaging station.

Discharge measurements made at miscellaneous sites during water year 1960-Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Housatonic River basin--Continued						
Amenia Creek..	Wassaic Creek	Lat 41°48'21", long 73°33'33", 90 ft below upstream bridge and 1,500 ft upstream from mouth, at Wassaic, N. Y.	11.2		8-29-60	*4.06
Burton Brook..	Swamp River..	Lat 41°38'37", long 73°35'31", 300 ft downstream from bridge on Wingdale-Clove School road, 1¼ miles west of Wingdale, N. Y., and 2 miles upstream from mouth.	6.79		8-30-60	*2.04
Mill River....	....do.....	Lat 41°41'26", long 73°35'30", 30 ft below bridge on old Dover Furnace-Dover Plains road, ⅜ mile upstream from mouth, and ½ mile northwest of Dover Furnace, N. Y.	14.5		8-30-60	*4.92
Swamp River...	Tenmile River	Lat 41°41'56", long 73°35'03", 60 ft downstream from county highway bridge, 0.2 mile upstream from State Highway 22, 0.4 mile downstream from Mill River, about 1.7 miles upstream from mouth, and 2.9 miles south of Dover Plains, N. Y.	47.6	1959	8-30-60	*13.2
Butternut Brook.	Bantam River.	Lat 41°44'35", long 73°13'14", at bridge on Ripley Rd., near Litchfield, Conn.	2.39		9-15-60	2.35
Jacks Brook...	Shepaug River	Lat 41°31'39", long 73°18'32", at bridge on River Rd., near Roxbury Falls, Conn.	7.77		9-15-60	4.14
Hancock Brook.	Naugatuck River.	Lat 41°39'40", long 73°00'12", at bridge on Waterbury Rd., at corner of South Main St., near Terryville, Conn.	1.20		9-15-60	1.70

* Base flow.

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